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HORTUS SUBURBANUS CALCUTTENSIS.

A

CATALOGUE OF THE PLANTS

WHICH HAVE BEEN CULTIVATED

IN THE

HON. EAST INDIA COMPANY'S BOTANICAL GARDEN,
CALCUTTA,

AND IN THE

SERAMPORE BOTANICAL GARDEN,

Generally known as Dr. Carey's Garden,

*FROM THE BEGINNING OF BOTH ESTABLISHMENTS (1786 AND 1800)
TO THE END OF AUGUST 1841;*DRAWN UP ACCORDING TO THE JUSSIEUAN ARRANGEMENT,
AND MOSTLY IN CONFORMITY WITH THE SECOND EDITION (1836) OF
LINDLEY'S NATURAL SYSTEM OF BOTANY.

BY THE LATE J. O. VOIGT,

SURGEON TO THE DANISH GOVERNMENT, SERAMPORE:

PRINTED UNDER THE SUPERINTENDENCE OF

W. GRIFFITH, F.L.S.

MEMB. IMP. ACAD. NATUR. CURIOS.,—ROYAL NATISH. BOTAN. SOC.,—CORR. MEMB. HORT. SOC.,—
ROYAL ACAD. TURIN,—ASSIST. SURGEON, MADRAS ESTABLISHMENT.

CALCUTTA:

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1845



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PREFACE.

IN presenting this Catalogue to the Public, it has been deemed necessary to explain briefly the circumstances connected with its publication, and the causes of the delay that has occurred in its appearance, as well as to furnish a short sketch of the Life of the Compiler.

Mr. J. O. Voigt, the son of Dr. John Henry Voigt, was born March 22nd 1798, at Nordborg in Sleswick, a few miles distant from that portion of Jutland in Denmark, whence the Angles of ancient days passed over to England—still known as the province of Angeln. He received his early education in one of the Royal public schools, where he was as much distinguished for the bold and enterprising spirit with which he entered into every scheme of fun and frolic, as for the energy and perseverance with which he applied to the more sober pursuits of his class.

At the age of sixteen, he passed with much credit from the school to the Royal University of Copenhagen, where he became an inmate in the family of his uncle, Dr. Giesseman, Professor of Anatomy there, and Physician to the Queen; and although he had been educated with a view to his entering the Church, circumstances soon determined him to make Physic his study. Towards the close of his collegiate course, whilst steadily pursuing his studies, and surrounded by every comfort that affluence could secure, he was suddenly reduced to considerable straits by the death of his uncle and his father, within a very short period of each other. His mother and an only sister were left in circumstances, not indeed of affluence, but of perfect comfort—yet such was his sense of honor, that he determined at once to withdraw *his* claim on their resources, and to create at all risks the means of his own support; at the same time he carefully concealed from his bereaved



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parent the hardships his resolution entailed upon him. He now had recourse therefore to the only means open to a student, and devoted several hours of each day to imparting to others the knowledge he had himself attained in various branches of study, particularly in medicine; and it may here be mentioned that he so won the hearts of those who at this time enjoyed the benefit of his instructions by the peculiar openness and urbanity of his disposition, apart from the respect which the propriety of his conduct, and the high order of his attainments always commanded from them though scarcely his inferiors in age, that, when brighter days came, they could not allow their connection to close, without presenting him with a most handsome and flattering testimonial of their regard, accompanied by a little ode of no small merit, expressive of their deep respect and gratitude. During the first six weeks of his new occupation the ordeal was such as he found it difficult to stand; for to make both ends meet, to keep up the appearance of a gentleman, and yet to pursue his own course of study with unbroken zeal, he was often constrained to content himself with a hasty meal by the fireside of his own little study at the close of the day, preparatory to kindling the nightly lamp over which he pored to an early hour of each succeeding morning. In after-life he was accustomed facetiously to refer to this period of his life with unaffected satisfaction, as having been equally one of high moral benefit, and of genuine enjoyment.

At the age of twenty-one he quitted the University with high honors,—according to continental phraseology, with “the best character”—and, soon after, obtaining a commission in the King’s service, he was appointed to a post immediately under Professor Withusen, successor to his uncle in Frederick’s Hospital, where his own medical studies had been previously pursued. This he held for some years, but becoming at length weary of the incessant toil, and entire want of leisure, which the heavy duties of his situation entailed upon him, and having from early youth had a great desire to go abroad, he determined on accepting the post of Surgeon to *this* colony of Denmark, which had just become vacant, and arrived in Serampore early in 1827, having left his native land in the previous autumn with the intention of being absent for the term of only *five* years. Before the expiration of this period, however, he had formed connections in India which considerably changed his views. He so



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highly estimated the delights of the domestic circle in which he now found himself, and which his warm and generous heart was formed so fully to appreciate, that he at once relinquished the idea of an early return to his native land. At the same time he so much valued the opportunities and advantages for intellectual and scientific pursuits, which the leisure of his situation afforded him, that although the emoluments it presented fell far below those his talents and skill might have commanded in a larger sphere, he refused to exchange it for the more lucrative prospects that were repeatedly offered him through the medium of the Honorable Company's Service.

Mr. Voigt had made Botany a study before he left Denmark, but was not induced to devote much time to it, until the society and Botanic Garden of the late eminent Dr. Carey, by presenting him with peculiar advantages, led him to turn his thoughts more particularly to that science; and the intercourse with this great man, to which his determination naturally led, became to him a source of abundant delight.

On Dr. Carey's death in 1834, his garden came immediately under Mr. Voigt's superintendence, and he entered on the duties and enjoyments with which it furnished him with energy and spirit peculiarly his own. Whatever his hand found to do, he may truly be said to have done with all his might. His day was portioned out with so much method that every hour had its allotted occupation, and yet time was found for every thing. That which was not employed in the ordinary duties and cares that usually devolve on the medical practitioner in India, was devoted to study, particularly to Botany; or to a renewal of acquaintance with his favourite authors among the classics, with all of whom he was particularly at home; or to exploring the rich field of English literature, which, having to his twenty-eighth year been to him as a sealed book, united to its other charms that of novelty. Yet the claims of the garden were never forgotten. Mr. Voigt was a very early riser, and a great advocate for air and exercise. His father had from his earliest childhood inured him to the most hardy and almost violent use of the latter, and so far agreed with Locke in the rules he lays down for the treatment of children, as to carry them out in the training of his son to the fullest extent—or, as Mr. Voigt used to remark, "to perfect his medical skill, by experiments at home."



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After a ride of several miles on horseback, the exercise to which he was most partial, and which from his uncommon strength of body, and buoyancy of spirit, he was well fitted to enjoy, *two* and sometimes *three* hours were devoted to the garden, preparatory to entering on the duties of the day.

Early in 1836, an Hospital was founded in Serampore at the suggestion of the late Dr. Marshman, for the relief of the Native poor, under the auspices of the Queen of Denmark. To this Mr. Voigt immediately offered his gratuitous services, and thus enlarged in no small degree the sphere of his labors; but the energy of his mind was equal to every emergency, and rendered all things light that came within the sphere of duty; and in the discharge of *gratuitous* service, he was always peculiarly in his element. To be needy and friendless, was to possess a claim on his attention, and the opportunities his professional skill afforded him of being serviceable to others, and particularly to the widow and the orphan, were regarded as the chief redeeming qualities of a profession to which he was never particularly partial. With a mind of great strength and firmness, united in the discharge of professional duty, with uncommon calmness and self-possession, he combined such genuine kindness and generosity of feeling, and so humble an estimate of his own worth, that in these instances, he always felt *himself* the person obliged. Numerous instances might here be adduced to shew his ready attention to the calls of humanity, his firm integrity of purpose, his unbending independence of mind, the simplicity and sincerity of his character, his disinterested and faithful discharge of duty, his sterling worth as a man and a friend, and the ardour of his affection in the more tender relations of life—but the brief nature of this sketch forbids it.

Dr. Carey's garden had furnished Mr. Voigt with so rich and varied a field of information and delight, that a sense of gratitude united with the deep veneration with which he cherished the memory of its philanthropic founder, led him to feel it his duty to place on record the results of the Botanical labors of this eminent man, embracing as they did, a period of upwards of *thirty* years; and he was subsequently induced by the advice of friends, to add to this, a sketch of the successful operations of the H. C. Botanic Garden, and to determine on publishing the *whole* Catalogue.



This was accomplished by the end of 1841, and placed by Mr. Voigt at the disposal of the Agricultural and Horticultural Society, who generously engaged to defray the expenses of the publication. After the first *sixteen* pages had passed through the Press however, obstacles arose to the acceptance of the Society's offer, and the printing of the work was suspended; so that when in 1842 the temporary charge of the H. C. Botanic Garden furnished him with opportunities for making additions to the work, he eagerly improved them to the utmost of his power. These were completed only the week before he was attacked with the distressing and severe illness which rendered recourse to a more salubrious climate immediately necessary.

He accordingly left India early in 1843, in the hope that restored health would enable him to carry the Catalogue through the Press either in England or in Denmark—but his lamented death in London on the 22nd June 1843, only a few weeks after his arrival in England, and when just on the eve of departure for his native land, at once frustrated every plan.

The manuscripts were after this detained by mistake in London, instead of being forwarded to Copenhagen. From thence they were brought back to India, and by the advice of the late Mr. Wm. Griffith, once more put to Press at the commencement of 1844, and it is solely to the kindness of this valued friend, that they owe their appearance, he having generously offered his invaluable services in superintending their progress through the Press.

The printing of the Catalogue was completed a few days before Mr. Griffith's removal to Malacca, but his departure prevented his preparing a Review of the work, which, with the Indexes and other parts necessary to its publication, he had kindly promised to furnish. These he proposed to forward from the Straits, but his melancholy and premature death soon deprived his friends and the interests of science of the invaluable services of this eminent Botanist. A few remarks which he made therefore in writing to a friend on receiving the manuscripts whilst at the H. C. Botanic Garden, are all that can now be given to shew his opinion of their merits.

"The MSS." he says "are very valuable indeed, and the arrangements so clear, the writing so lucid, the whole tendency



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“so practical, the mass of information so great, that it would be a
“*mortal* sin not to publish them. The work will do Voigt very
“great credit—it must have cost him great labour, and I can
“answer for it, that it will perpetuate his name as an Indian
“Botanist. You know such works are the statistics of Botanical
“Systematic Science.

“The Catalogue would certainly command an European sale,
“as it would be essential to all real Botanists. Indeed I know of
“none, which would contain so much interesting information. The
“present size perhaps had better be adopted; it is a common one
“on the Continent, and is not altogether unwieldy. To complete
“it, you must give a short outline of Voigt’s life. * * * * *

“I hope the work will be profitable pecuniarily, for I should
“like to see a handsome monument erected to Voigt, if possible,
“in these gardens, where, as his memory would then be associated
“with that of Roxburgh, Jack, and I hope Buchanan, it would be
“in good company.*

“The MSS. when printed will be a mass of information avail-
“able to the Public. They give exact references to the native
“country, the Bengalee name, the medical or economical proper-
“ties, date of introduction and flowering season, and whether or
“no the fruits are ripened, also the description of plant, whether
“shrub, tree, etc. etc.

“It will be on the ground of its being a Genera of Plants of
“Lower Bengal, and its great practical utility, that I shall be
“delighted to recommend it as the systematic hand-book of the
“Botanical class, as such it will constitute era the second in
“Bengal Botany.”†

The Indexes and other parts necessary to the publication of the Catalogue were still untouched when Mr. Griffith’s death frustrated

* Dr. Griffith was so bent on seeing the wish here mentioned accomplished, that he selected a monument himself some time before his departure for Malacca, and on the day of his embarkation desired that “it might still be reserved as he had originally directed for erection in the Garden on some future day in memory of Dr. Voigt.” It is a melancholy fact, that the same monument has since been purchased by his friends for erection on his own remains at Malacca.

† The number of Genera described is 1737, distributed under 278 orders, which with the number of species is enumerated in a subsequent page, as showing at a glance the contents of the work.



the hopes of any further help from his valuable pen. In these circumstances, the late Rev. Mr. Mack, with his accustomed generosity, kindly offered to aid in their preparation, but he had not proceeded far, when his sudden death deprived society in India of one of its brightest ornaments.

These circumstances will, it is hoped, in some measure, excuse the delay that has occurred in the appearance of the Catalogue. It is now presented to the public under all these disadvantages, with the hope that some apology for the defects that may be apparent in its *final* completion, will be admitted from the consideration that this task has devolved on one who feels herself wholly unequal to the performance, and has yet been impelled by the strongest feelings of conjugal affection to undertake it.*

RACHEL S. VOIGT.

Serampore, 30th July, 1845.

* Since the above was written, an unfinished letter has been found among Mr. Griffith's papers addressed to Mr. Marshman, containing some directions regarding the completion of this Volume, and expressing his opinion of the merits of the work, of which the following is an extract. "As regards the merits of the work," he says :

"It is the most comprehensive and scientific Catalogue of the kind that has appeared, 'Roxburgh's Hortus Bengalensis' the only other one being, at this advanced period of Botany, incomplete, and arranged according to an Artificial not a Natural System. In this Catalogue, with the name of the plant you have access to all known information regarding it, either directly in the book itself, at least as regards valuable properties, or indirectly, through the copious list of Synonymes. Therefore characters only require to be supplied to make this a complete Flora of the Environs of Calcutta.

"It gives the general Geographical distribution of each of the Families, two hundred and seventy-eight in number, and a good deal of information regarding the specific distribution of the Indian species. And as each habitat is given to each species,—not a vague one of India Orientalis, but very generally specific ones,—from it a complete Catalogue, as far as yet known of the distribution of Indian forms, may be compiled.

"It gives a sufficiently copious and select Synonymy and reference to plates, so that as I have said, the possession of the name of the plant puts you in the way of possessing all known information regarding it, by merely turning to the books which are quoted.

"It gives, wherever the properties are tolerably uniform, the characteristic ones under each family, and in all cases the properties (the knowledge of which constitutes that very economic branch of Botany, Economic Botany,



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well worthy the attention of Government) under each plant, with the authorities for the same.

"It gives the habit of the Plant, with some information regarding the flower, the native country, and time of flowering and seeding, from consultation of the last parts of which much instruction may be derived as to the selection of species for introduction, the necessity of changing the mode of cultivation, etc.

"It gives in all definable cases the vernacular names, and these appear to have been obtained by no common care, and consequently to lose in a great measure the usual inapplicability.

"Lastly. It gives a list of desiderata for introduction, generally founded on those principles without which introductions of plants become of no avail. To this the attention of all Indian Horticulturalists should be chiefly guided."



ENUMERATION OF THE ORDERS, GENERA AND SPECIES IN THIS VOLUME.

No.	Orders.	Gen.	Sp.	P.	No.	Orders.	Gen.	Sp.	P.
1.	Ranunculaceæ, ..	9	30	1	44.	Frankeniaceæ, ..			80
2.	Papaveraceæ, ..	6	12	5	45.	Passifloraceæ, ..	3	24	80
	S. O. Fumariaceæ, ..	2	6	7	46.	Papayaceæ, ..	1	1	82
3.	Nymphaeaceæ, ..	2	6	8	47.	Flacourtiaceæ, ..	2	12	83
4.	Nelumbiaceæ, ..	1	1	9	48.	Pangiaceæ, ..	1	2	84
5.	Myristicaceæ, ..	1	5	10	49.	Turneraceæ, ..	1	2	85
6.	Magnoliaceæ, ..	5	11	11	50.	Bixaceæ, ..	1	1	85
7.	Winteraceæ, ..	1	1	13	51.	Garciniaceæ, ..	5	17	86
8.	Anonaceæ, ..	6	31	13	52.	Canellaceæ, ..	1	1	88
	Schizandraceæ, ..	2	3	17	53.	Caryocaraceæ, ..			88
9.	Dilleniaceæ, ..	4	9	17	54.	Maregraviaceæ, ..			89
10.	Apiaceæ, ..	24	33	19	55.	Hypericaceæ, ..	3	7	89
11.	Hederaceæ, ..	4	11	24	56.	Ternstroemiaceæ, ..	7	10	90
12.	Grossulaceæ, ..	1	1	25	57.	Aceraceæ, ..	2	3	92
13.	Escalloniaceæ, ..	1	1	26	58.	Sapindaceæ, ..	14	42	92
14.	Berberaceæ, ..	2	4	26		S. O. Millingtoniaceæ, ..	1	3	96
15.	Vitaceæ, ..	2	27	37	59.	Cesulaceæ, ..	1	2	97
16.	Pittosporaceæ, ..	3	5	30	60.	Polygalaceæ, ..	4	6	97
17.	Olacaceæ, ..	4	6	31	61.	Krameriaceæ, ..			98
18.	Francoaceæ, ..	1	1	32	62.	Vochysiaceæ, ..			99
19.	Ceanothaceæ, ..	5	17	32	63.	Elatinaceæ, ..	1	2	99
	S. O. Trapaceæ, ..	1	2	34	64.	Linaceæ, ..	1	9	100
	S. O. Haloragaceæ, ..	1	4	35	65.	Hugoniaceæ, ..	1	1	101
20.	Combretaceæ, ..	7	32	35	66.	Chlenaceæ, ..			101
21.	Alangiaceæ, ..	2	3	40	67.	Cistaceæ, ..	1	3	101
22.	Rhizophoraceæ, ..	5	9	40	68.	Reaumuriaceæ, ..			102
23.	Memecylaceæ, ..	1	2	42	69.	Sterculiaceæ, ..	40	69	102
24.	Melastomaceæ, ..	6	7	43	70.	Malvaceæ, ..	16	112	111
25.	Myrtaceæ, ..	12	55	45	71.	Elaeocarpaceæ, ..	3	9	122
	S. O. Barringtoniaceæ, ..	3	7	51	72.	Dipterocarpaceæ, ..	4	10	123
26.	Lecythidaceæ, ..			52	73.	Tiliaceæ, ..	5	32	126
27.	Philadelphaceæ, ..	1	1	55	74.	Lythraceæ, ..	11	21	129
28.	Hamamelidaceæ, ..	1	1	53	75.	Meliaceæ, ..	17	26	132
29.	Cornaceæ, ..	1	1	53	76.	Cedrelaceæ, ..	6	7	136
30.	Iloranthaceæ, ..	1	2	53	77.	Humiriaceæ, ..			138
31.	Cucurbitaceæ, ..	13	33	54	78.	Citraceæ, ..	16	36	138
	S. O. Nandirobeæ, ..	1	1	60	79.	Spondiaceæ, ..	2	7	143
32.	Loasaceæ, ..			60	80.	Rhamnaceæ, ..	10	28	144
33.	Cactaceæ, ..	6	48	64	81.	Chaillotiaceæ, ..	1	1	148
34.	Homaliaceæ, ..	1	4	64	82.	Burseraceæ, ..	7	14	148
35.	Mesembryanthemaceæ, ..	2	3	64	83.	Euphorbiaceæ, ..	14	143	151
36.	Begoniaceæ, ..	1	9	65	84.	Empetraceæ, ..			165
37.	Brassicaceæ, ..	40	88	66	85.	Fouquieriaceæ, ..			165
38.	Capparidaceæ, ..	7	17	73	86.	Celastraceæ, ..	6	26	165
39.	Resedaceæ, ..	1	6	75		S. O. Hippocrateæ, ..	2	8	167
40.	Violaceæ, ..	3	9	76		S. O. Trigoniæ, ..			169
	S. O. Sauvagesiaceæ, ..			77	87.	Staphyleaceæ, ..	1	1	169
41.	Samydaceæ, ..	1	6	78	88.	Malpighiaceæ, ..	9	17	169
42.	Moringaceæ, ..	1	1	78		S. O. Erythroxyleæ, ..	1	4	171
43.	Droseraceæ, ..	2	2	79	89.	Portulacaceæ, ..	6	13	172
	S. O. Parnassiæ, ..			80	90.	Silenaceæ, ..	7	43	174



List of the Orders, Genera and Species in this Volume.

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No.	Orders.	Gen.	Sp.	P.
91.	Alsinaceae, ..	6	9	177
92.	Tamariaceae, ..	1	2	178
93.	Illecebraceae, ..	4	7	179
94.	Ochnaceae, ..	2	3	180
95.	Simarubaceae, ..	1	1	181
96.	Rutaceae, ..	2	4	182
97.	Zygophyllaceae, ..	2	3	183
98.	Xanthoxylaceae, ..	5	17	184
99.	Geraniaceae, ..	4	22	185
100.	Balsaminaceae, ..	2	3	119
	S. O. Tropaeolae, ..	1	1	190
101.	Oxalidaceae, ..	3	12	190
102.	Coriariaceae, ..	1	1	192
103.	Surianaceae, ..			193
104.	Limnanthaceae, ..			192
105.	Rosaceae, ..	8	37	193
	S. O. Pomae, ..	7	15	197
	S. O. Amygdaleae, ..	4	8	199
	S. O. Sanguisorbeae, ..	1	2	201
106.	Fabaceae, ..	114	515	201
107.	Connaraceae, ..	2	4	264
108.	Chrysobalanaceae, ..	2	2	265
109.	Calycanthaceae, ..	2	2	266
110.	Canoniaceae, ..			266
111.	Saxifragaceae, ..	3	3	267
112.	Crassulaceae, ..	3	7	267
113.	Amyridaceae, ..	1	2	269
114.	Anacardiaceae, ..	12	37	269
115.	Quercaceae, ..	2	14	276
116.	Betulaceae, ..			278
117.	Scepaceae, ..	1	1	278
118.	Hemslaviaceae, ..			279
119.	Trewiaceae, ..	1	2	279
120.	Urticaceae, ..	18	102	279
	S. O. Ceratophylleae, ..	1	1	293
121.	Ulmaceae, ..	3	6	293
122.	Antidesmaceae, ..	2	10	294
123.	Myricaceae, ..	2	3	295
124.	Juglandaceae, ..	2	2	296
125.	Casuarinaceae, ..	1	5	297
126.	Datisicaceae, ..	1	1	297
127.	Lacisternaceae, ..			298
128.	Chloranthaceae, ..	1	2	298
129.	Saururaceae, ..	1	1	298
130.	Piperaceae, ..	1	13	299
131.	Salicaceae, ..	1	2	300
132.	Platanaceae, ..			301
133.	Balsamaceae, ..			301
134.	Monimaceae, ..	1	1	302
135.	Atherospermaceae, ..			302
136.	Podostemaceae, ..			302
137.	Callitrichaceae, ..			302
138.	Santalaceae, ..	1	1	303
139.	Elaeagnaceae, ..	1	5	303
140.	Thymelaceae, ..	2	3	304
141.	Hernandiaceae, ..	2	2	305
142.	Aquilariaceae, ..	1	1	305
143.	Proteaceae, ..	2	2	306
144.	Lauraceae, ..	11	34	306
145.	Illiciaceae, ..	1	1	311
146.	Cassythaceae, ..	1	1	311
147.	Penaceae, ..			312
148.	Nepenthaceae, ..	1	1	312
149.	Aristolochiaceae, ..	2	12	312
150.	Amarantaceae, ..	13	45	314
151.	Chenopodiaceae, ..	9	24	319
152.	Tetragoniaceae, ..	2	2	322
153.	Phytolaccaceae, ..	3	6	323
154.	Polygonaceae, ..	7	29	324
155.	Petiveriaceae, ..	1	1	327
156.	Scleranthaceae, ..	1	1	327
157.	Nyctaginaceae, ..	5	9	328
158.	Menispermaceae, ..	7	20	329

No.	Orders.	Gen.	Sp.	P.
159.	Lardizabalaceae, ..	1	1	332
160.	Brexiaceae, ..	1	2	332
161.	Ericaceae, ..	1	1	333
162.	Vacciniaceae, ..	2	6	333
163.	Epacridaceae, ..			334
164.	Primulaceae, ..	5	7	334
165.	Myrsinaceae, ..	10	39	335
166.	Sapotaceae, ..	7	16	339
167.	Diospyraceae, ..	3	23	343
	S. O. Styracae, ..	2	6	346
168.	Illiciaceae, ..	4	4	347
169.	Nolanaceae, ..	1	4	348
170.	Cuscutaceae, ..	1	4	349
171.	Convolvulaceae, ..	17	99	
172.	Polemoniaceae, ..	4	6	365
173.	Cobaeaceae, ..			366
174.	Hydroleaceae, ..	2	2	366
175.	Lobeliaceae, ..	4	8	
176.	Campanulaceae, ..	5	24	368
177.	Sphenocleaceae, ..	1	1	371
178.	Stylidiaceae, ..	1	1	371
179.	Goodeniaceae, ..	1	1	372
180.	Scaevolaceae, ..	1	1	372
181.	Cinchonaceae, ..	42	145	373
182.	Lygodysoideaceae, ..			396
183.	Loniceraceae, ..	3	11	397
184.	Galiaceae, ..	5	7	399
185.	Calyceae, ..			400
186.	Matricariaceae, ..	128	233	400
187.	Dipsacaceae, ..	2	4	433
188.	Valerianaceae, ..	4	7	434
189.	Brunoniaceae, ..			436
190.	Plantaginaceae, ..	1	15	436
191.	Globulariaceae, ..			438
192.	Salvadoraceae, ..			438
193.	Plumbaginaceae, ..	2	4	438
194.	Hydrophyllaceae, ..			439
195.	Cordiaceae, ..	2	12	439
196.	Boraginaceae, ..	16	38	442
197.	Lamiaceae, ..	45	111	447
198.	Verbenaceae, ..	19	95	464
199.	Myoporaceae, ..	1	2	474
200.	Selaginaceae, ..	1	1	474
201.	Pedaliaceae, ..	3	3	474
202.	Bignoniaceae, ..	11	37	475
203.	Cyrtandraceae, ..	3	3	480
204.	Acanthaceae, ..	41	110	480
205.	Pinguiculaeae, ..	1	5	494
206.	Gesneraceae, ..	3	4	494
207.	Orobanchaceae, ..	2	4	496
208.	Scrophulariaceae, ..	30	83	496
209.	Solanaceae, ..	11	63	508
210.	Cestraceae, ..	1	2	518
211.	Gentianaceae, ..	6	13	519
212.	Spigeliaceae, ..			522
213.	Apocynaceae, ..	33	60	522
214.	Retziaceae, ..	1	1	533
215.	Asclepiaceae, ..	34	66	533
216.	Loganiaceae, ..	2	2	545
217.	Potaliaceae, ..			546
218.	Oleaceae, ..	7	28	546
219.	Jasminaceae, ..	2	37	549
220.	Gnetaceae, ..	1	2	553
221.	Cycadaceae, ..	2	5	554
222.	Pinaceae, ..	8	26	555
223.	Taxaceae, ..	4	8	559
224.	Equisetaceae, ..	1	1	560
225.	Zingiberaceae, ..	14	119	561
226.	Marantaceae, ..	4	30	574
227.	Musaceae, ..	4	15	578
228.	Amaryllidaceae, ..	36	154	580
229.	Haemodioraceae, ..	1	2	599
230.	Burmanniaceae, ..	1	1	599



List of the Orders, Genera and Species in this Volume.

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No.	Orders.	Gen.	Sp.	P.
231.	Taccaceae, ..	1	4	600
232.	Iciaceae, ..	31	171	601
233.	Bromeliaceae, ..	5	23	614
234.	Hydrocharaceae, ..	5	6	617
235.	Orchiaceae, ..	59	202	619
236.	Apostasiaceae, ..			635
237.	Coccolaceae, ..	23	58	635
238.	Pontederaceae, ..	1	5	644
239.	Melanthaceae, ..	8	8	645
240.	Smilacaceae, ..	9	33	647
241.	Gilliesiaceae, ..			651
242.	Dioscoreaceae, ..	2	17	651
243.	Liliaceae, ..	41	226	653
244.	Commelynacae, ..	5	19	676
245.	Butomaceae, ..	1	2	679
246.	Alismaceae, ..	2	8	679
247.	Juncaceae, ..	1	1	681
248.	Philydraceae, ..			682
249.	Pandanaceae, ..	1	11	682
250.	Cyclanthaceae, ..	1	1	683
251.	Araceae, ..	21	56	684
252.	Lemnaceae, ..	2	5	692
253.	Typhaceae, ..	1	2	693
254.	Najaceae, ..	3	9	693
255.	Triglochinaceae, ..			695
256.	Panicaceae, ..	82	240	695

No.	Orders.	Gen.	Sp.	P.
257.	Cyperaceae, ..	16	69	720
258.	Desvauxiaceae, ..			729
259.	Restiaceae, ..	2	2	729
	S. O. Eriocauloneae, ..	1	5	730
260.	Xyridaceae, ..	1	1	731
261.	Rafflesiaceae, ..			732
262.	Cytinaceae, ..			732
263.	Balanophoraceae, ..			732
264.	Cynomoriaceae, ..			732
265.	Polypodiaceae, ..	13	33	734
266.	Gleicheniaceae, ..	1	1	735
267.	Osmundaceae, ..	1	4	736
268.	Danæaceae, ..			737
269.	Ophioglossaceae, ..	2	4	737
270.	Lycopodiaceae, ..	2	7	738
271.	Marsileaceae, ..	1	1	739
272.	Salvinaceae, ..	1	3	739
273.	Bryaceae, ..	2	2	740
274.	Marchantiaceae, ..			741
275.	Characeae, ..	1	3	742
276.	Agaricaceae, ..	2	2	742
277.	Parmeliaceae, ..			743
278.	Fucaceae, ..			745

Total of		
Orders.	Genera.	Species.
278	1737	5515



PRINCIPAL ABBREVIATIONS EMPLOYED IN THIS VOLUME.

5 A tree. 5 A small tree. 5 A shrub. 5 An undershrub.
4 A perennial. ♂ A biennial. ⊙ An annual. ∪ A climber.
∩ A twining plant. ~ A Creeper. Fl. Flowers. Fr. Fruit.
H. S. Hot season. R. S. Rainy season. C. S. Cold season. 0. None.

- Ach.*—Acharius. A Swedish professor and writer on Lichens.
Adans.—Adanson. A French systematic botanist.
Afzel.—Afzelius. A Swedish professor.
Ait.—Aiton. Superintendent of the King's Garden at Kew.
Ait. Hort. Kew.—Aiton, Hortus Kewensis.
All. (pedem.)—Allioni, (Carolus) Flora Pedemontana, 3 vols. 1785.
Amm. ruth.—Amman, (Johan.) Stirpium rariorum in Imperio Rutheno sponte provenientium Icones et Descriptiones, 1739.
+ *Andr. B. Repos.*—The Botanist's Repository, by Henry Andrews, 10 vols. 4to. London, 1797, et seq.
+ *Ann. mus.*—Annales du Muséum d'Histoire Naturelle, 24 vols. 4to. Paris, 1802, et seq.
Arn.—Arnott, (G. A. Walker.)
Arth. Hamilt. Mon.—A Monograph by Arth. Hamilton.
+ *Asiat. Reser.*—Asiatic Researches.
Aubl.—Aublet. A French traveller in Guiana.
+ *B. Cab.*—Botanical Cabinet, by Conrad Loddiges and Sons, 14 vols.
+ *B. Mag.*—Botanical Magazine, (Curtis's) formerly conducted by Sims, now by Sir William Hooker.
+ *B. Misc.*—Botanical Miscellany, (by W. J. Hooker.)
+ *B. Reg.*—Botanical Register, (Ker's) now conducted by Professor Lindley.
+ *Balbis.*—Balbis, (Joh. Baptist.) A French Professor of Botany.
Balb-diss.—Balbis. Miscellanea Botanica, 4to. 1804.
+ *Banks. Herb.*—Banksian Herbarium.
+ *Bartl.*—Bartling, (Th. Fr.); Ord. Nat. Plantarum.
Barton's Coll. mat. med.—Barton's Collection, Materia Medica.
Bauer Ill. fl. norf.—Bauer, (Ferdin.) Illustrationes Floræ Novæ Hollandiæ, fol. 1813.
Bauh.—Bauhin brothers, (Johannes and Caspar.) Professors of medicine—published 1620-1650.
+ *J. Bauh.*—Bauhin, (Johannes.)



Principal Abbreviations employed in this Volume.

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CSL¹⁰

- Baum.*—Baumgarten, (J. C.) M.D. of Schasburgh in Transylvania. A botanist.
- Beauv-agrost.*—Beauvois, (Palisot de) *Essai d'une nouvelle Agrostographie*, 1 vol. Paris, 1812.
- Beech. voy. pt. pl.*—Beechey. A well known English navigator. Plants described in the account of his voyage, &c.
- Bennet.*—Bennet. Asst. Conservator of the Banksian Herbarium.
- Benth.*—Bentham, (Geo.) F. L. S.
- Benth. Lab. gen. and sp.*—Bentham. *Labiatarum Genera et Species*.
- Benth. scrophul. ind.*—Bentham. *Scrophularinæ Indicæ*.
- Berg.*—Bergius, (P. J.)
- + *Bernh.*—Bernhardi. A German botanist.
- Bertol.*—Bertolini. A writer upon the Flora of Italy.
- Bieb.*—Bieberstein. A Russian botanist of note.
- + *Bivon.*—Bivona. A Sicilian botanist.
- + *Bl. Bijdr.*—Blume, (C. L.) *Bijdragen tot de Flora von Nederlandsche Indië*.
- + *Bl. Cat.*—Blume's (C. L.) Catalogue.
- Bl. in Diar. batav.*—Blume, (C. L.) in the Batavian Diary.
- Bl. Java.*—Blume's (C. L.) Flora of Java.
- Bl. Rumph.*—Blume, (C. L.) Rumphia.
- *Blackw. herb.*—Blackwell, (Eliz.) A curious Herbal, containing 600 cuts of the useful plants, 2 vols. fol. London, 1737.
- Blane.*—Blane, (Gilbert.)
- Bocc.*—Boccone, (Paolo) 1697.
- Boerh.*—Boerhaave, (Hermannus.) A Dutch botanist, 1710.
- + *Booth.*—Booth, (Dr.)
- Bork.*—Borckhausen. A writer on the Flora of Hesse Darmstadt.
- + *Bosc.*—Bosc. A French botanist and traveller in N. America.
- Bojer. Hort. Maurit.*—Bojer's Hortus of the Mauritius.
- Br. (or R. Br.)*—Brown, (Robert.) The first botanist of the age.
- Brown pr. fl. norf.*—Brown. *Prodromus Floræ Novæ Hollandiæ*.
- Browne. jam.*—Browne's (Patrick) Civil and Natural History of Jamaica.
- Brid.*—Bridel.
- Brongn.*—Brongniart, (Adolphe.) A French botanist.
- Brot. fl. lusit.*—Brotero. *Flora Lusitanica*.
- + *Buch.*—Dr. Francis Hamilton, (formerly Buchanan.)
- + *Buch. Herb.*—Buchanan's Herbarium.
- + *Buch. MSS.*—Buchanan's Manuscripts.
- Buch. journ. Mysore.*—Buchanan's Mysore Journal.
- Buchoz.*—Buchoz, (Pierre Joseph) *Collection des Fleurs*. Paris.
- Bull. champ.*—Bulliard. *Histoire des Champignons de la France*, 1798.
- Bull. herb.*—Bulliard. *Herbier de la France*, 1780.
- Bunge. enum. pl. chin.*—Bunge's plants of China.
- + *Burch.*—Burchell, (Wm.) A South African traveller and botanist.



Principal Abbreviations employed in this Volume.

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- Burm. afric.*—Burmans's (Johannes) African plants.
↓ *Burm. zeyl.*—Thesaurus Zeylanicus, by J. Burmann.
+ *Burm. Ind.*—Flora Indica, by N. L. Burmann.
- C. G. H.*—Cape of Good Hope.
Cass.—Cassini. A French botanist.
Catal. Ceyl. pl.—Catalogue of Ceylon plants.
Cat. Car.—Catesby, (Marsh) Natural Hist. of Carolina, Florida, &c. 2 vols. London, 1741.
Cavan. ic.—Cavanilles, (Ant. Jos.) Icones et Descriptiones plantarum quæ aut sponte in Hispania crescunt aut in Hortis hospitantur, 6 vols. fol. Madrid, 1791-1800.
Cham. and Schlect.—Chamisso and Schlectendal.
Chois.—Choisy. A Swiss botanist.
Clarke and Guss.—Clarke and Gussone of Naples.
+ *Colebr.*—Colebrooke, (H. T.) A well known English writer on Indian plants.
Commel. Hort. Am.—Commelyn, (Caspar) Horti Medici Amstelodamensis rariorum Plantarum Descriptio et Icones, 2 vols. 1703.
Commers. in Poir. Encyl.—Commerson in Poiret's Encyclopedia.
Crantz.—Crantz. An Austrian botanist.
Cunningh.—Cunningham.
Curt. Lond.—Curtis, (William) Flora Londinensis, 1777.
+ *Cyrl.*—Cyrilli. An Italian botanist.
- DC.*—De Candolle, (Prof. Aug. Pyr.)
DC. pr.—De Candolle. Prodrômus Systematis Naturalis Regni Vegetabilis.
DC. Cat. Hort. Monspel.—De Candolle, (Prof. Aug. Pyr.) Catalogus Horti Monspelienensis, 1777.
DC. fl. fr.—De Candolle, (Prof. Aug. Pyr.) et Lamarck, Flore Française.
DC. leg. mem.—De Candolle, (Prof. Aug. Pyr.) Memoirs sur les Légumineuses.
DC. pl. grass.—De Candolle, (Prof. Aug. Pyr.) Plantarum historia succulentarum, 1799.
DC. reg. veg.—De Candolle, (Prof. Aug. Pyr.) Regni Vegetabilis Systema Naturale.
DC. (Alph.)—De Candolle, (Alphonse) son to A. P. De C.
Delarb.—Delarbre, (Antoine.)
Deless. ic. Select.—Delessert, (Benj.) Icones Selectæ plantarum in system. univers. descriptarum, 1820.
Desf. fl. atl.—Desfontaine. (René Louiche) Flora Atlantica, 2 vols. 4to. Paris, 1798—1799.
Desf. mem. Mus par.—Desfontaine. (René Louiche) Memoires de l'Académie Royale des Sciences, 4to. Paris.
Desv. Journ.—Desvaux. Journal Botanique, 8vo. 1808.
+ *Dicks.*—Dickson. An English Cryptogamic botanist.
Dietr.—Dietrich, A German gardener.



- Dill. elth.*—Dillenius, (John Jac.) Hortus Elthamensis, 2 vols. 1732.
Dill. Musc.—Dillenius, (John Jac.) Historia Muscorum, 4to. Oxon. 1741.
+ *D. Don. pr. fl. Nep.*—Don. (D.) Prodromus Floræ Nepalensis.
+ *G. Don. in Mill. Diet.*—Don. (G.) in Miller's Dictionary.
+ *Donn. Hort. Cantab.*—Donn. Hortus Cantabrigiensis, 1796.
• *Dougl.*—Douglas. A collector of plants.
Dryand.—Dryander. A Swedish botanist.
+ *Dub.*—Duboisi. A French botanist.
Duf.—Dufresne. A French writer upon Valerians.
Dum. cours. bot. cult.—Dumont Courset, Le Botaniste cultivateur, 5 vols. 1802.
Dun.—Dunal, (Mich. Felix.) [naccées.
• *Dun. Anon.*—Dunal, (Mich. Felix.) Monographie de la Famille des Anno-

E. B.—English Botany, by Sowerby, 36 vols.
+ *Ehret.*—Ehret, (Geo. Dion.)
Ehrh.—Ehrhart. A German botanist.
Ell. fl. car.—Elliot, Flora of Carolina.
Endl. gen. pl.—Endlicher. Genera plantarum.
Endl. ichnogr.—Endlicher. Iconographia.

+ *Fenill.*—Feniller. A Chilian botanist.
Fisch.—Fischer. A Russian botanist.
+ *Fl. Dan.*—Flora Danica, by Oeder, Vahl, Hornemann, Liebmann and others; 1761, et seq.
Fl. Wett.—Flora der Wetterau, 1799.
Forsk. descr.—Forskaol's descriptions, etc.
Forsk. fl. Egypt. Arab.—Forskaol, Flora Ægyptiaco-Arabica, 4to. 1745.
Forst. fl. nov.—Forster's Flora, etc.
Forst. gen. pl.—Forster's Characteres generum plantarum quas in Itinere ad Insulas Maris Australis, etc. —4to. 1776.
Fraz.—Frazer. A gardener and collector of plants in North America.

Gaertn. fr.—Gaertner, (Josephus) De fructibus et seminibus plantarum, 2 vols. 4to. 1788.
Garc. ab. hort. arom.—Ab. Horto seu del hearto, (Garcias,) aromatum et simplicium aliquot medicamentorum historia, 1567.
Gat. fl. Mont.—Gaterau, Description des Plantes qui croissent aux environs de Montauban, 1789.
Ger.—Gerard, (John) 1797.
Gilib.—Gilibert. A Lithuanian botanist.
Gmel.—Gmelin. A Russian botanist and traveller in Siberia.
• *Gooden.*—Goodenough, Bishop of Carlisle. An English botanist.
+ *Grah.*—Graham, (Dr. J.) Professor of Botany at Edinburgh.
+ *Grah. Cat. B. J. pl.*—Graham's (J.) Catalogue of Bombay plants.



CSL

Principal Abbreviations employed in this Volume.

- ~~Griff. Assam Reser.~~—Griffith (W.) ~~Assam Researches.~~
~~Gronov.~~—Gronovius. A botanist of Leyden.
- + *Habl.*—Hablizl. A Russian botanist.
Hall.—Haller. A Swiss botanist.
- + *Ham.*—Hamilton, (Dr. Francis) formerly Buchanan.
Hænke.—Hænke. A German botanist.
Haw. suppl. pl. succ.—Haworth, (A. H.) Synopsis Plantarum succulentarum, 1812.
- + *Hb. Madr.*—Herbarium, (Madras,) by Drs. Klein, Heyne, and Rottler.
Hb. Maurit.—Herbarium Mauritianum. *Hb. Calc.*—Herbarium Calcuttense
Hb. Lamb.—Herbarium, (Lambert's.)
H. B. Kth.—Humboldt, Bompland, and Kunth.
H. C. G.—Honorable Company's Garden.
Hedw.—Hedwig. A German Cryptogamic botanist.
Heist.—Heister. A German botanist.
Herb. Amaryll.—Herbert's Amaryllideæ.
Herm. in herb. L'Herit.—Hermann in L'Heritier's Herbarium.
Hervey. gen. of S. African pl.—Hervey's genera of South African plants.
Hill.—Hillaire, (Aug. St.)
Hoffm. and Lk.—Hoffmanseg and Link, Flore Portugaise, 1806.
Hooker's bot. misc.—Hooker's Botanical Miscellany.
Hooker's exot. fl.—Hooker's Exotic flora, 3 vols. 8vo. 1825-1827.
Hook and Grev. ic. filic.—Hooker and Greville. Icones Filicum; Lond. 1829.
Hornem.—Hornemann. An eminent Danish botanist and professor.
Horsford pl. Jav.—Horsford's plants of Java.
Hort. Gotting.—Hortus Gottingensis.
Hortul.—Catalogi Hortulanorum.
Host Gram.—Host, (Nicot Thom) Icones et Descriptiones Graminum Austriacorum, 3 vols. 1801.
Houtt. Lin. pfl. syst.—Houttuyn, (Martin) des Ritters von Linné Pflanzen-system nach der Anleitung des Houttuynschen Werkes, 14 vols. 1777.
Huds.—Hudson. An English writer upon British plants.
- + *Jack.*—Jack, (Dr. William.) A most distinguished botanist.
• *Jacq. Amer.*—Jacquin, (Nicolas Jos. von) stirpium Americanarum Historia, 1763.
Jacq. austr.—Jacquin, (Nicolas Jos. von) Floræ Austriacæ Icones, 5 vols. 1793.
Jacq. collect.—Jacquin, (Nicolas Jos. von) Collectanea ad Botanicum, 5 vols. 1786.
Jacq. ecl. Gram.—Jacquin, (Nicolas Jos. von) Eclogæ Botanicae, 1811.
Jacq. fragm. bot.—Jacquin, (Nicolas Jos. von) Fragmenta Botanica, 1800.
Jacq. hort. schonbr.—Jacquin, (Nicolas Jos. von) Plantarum rariorum Horti Cæsarei Schönbrunensis, 4 vols. 1797.



Jacq. hort. vind.—Jacquin, (Nicolas Jos. von) Hortus Botanicus Vindobonensis.

Jacq. icon.—Jacquin, (Nicolas Jos. von) Icones Plantarum Rariorum, 3 vols. 1781.

Jacq. Stap.—Jacquin, (Nicolas Jos. von.) *Stapeliae cultae*, 1806.

Juss.—Jussieu.

Juss. Adr.—Jussieu, (Adrien de.)

Kamp. amoen.—Kämpfer, (Engelbert) *Amœnitates Exoticæ*, 1712.

Kaulf.—Kaulfuss.—A German writer upon Ferns.

Ker in recens. bot. repos.—Ker, (John Bellenden) *Recensio Plantarum hucusque in Repositorio Botanicorum depictarum*.

+ *Koch.*—Koch. Professor at Erlang.

+ *Koen.*—Koenig, (John Gerard.) A Danish botanist, and pupil of Linnæus, Physician to the Tranquebar Mission, 1768.

Kol. Gram.—Koeler, (G. L.) *Descriptio Graminum in Gallia et Germania nascentium*.

+ *Kth.*—Kunth. An eminent Prussian botanist.

+ *Kunze.*—Kunze. A German Cryptogamic botanist.

l. c.—locus citatus.

L. act. holm.—Linnæus in Kongl Soenska Vetenskaps akademiens Handlingar; Stockholm, 1739.

L. Amoen. acad.—Linnæi *Amœnitates Academicæ*, 1749.

L. Hort. Cliff.—Linnæus, Hortus Cliffortianus, 1737.

L. fl. zeyl.—Linnæus. Flora Zeylanica.

L. Mant.—Linnæus. Mantissa Plantarum, 1767.

L. spec.—Linnæus. Species plantarum, 1753.

L. fil. suppl.—Linnæus, (Carolus filius) Supplementum plantarum, 1781.

Labill.—Labillardiere.

Lag.—Lagasca, (Mariano) 1816-17.

Lam. dict.—Lamarck, (J. B. Monet de) *Encyclopédie methodique Botanique*; Paris, 1783, et seq.

+ *Lam. fl. Fr.*—Lamarck, (J. Be Monet de) *Flore Française*, 3 vols. 1778.

+ *Lam. fl.*—Lamarck, (J. B. Monet de) *Illustration des genres*.

Lamb.—Lambert, (Aylmer Bourke.)

Lamb. pin.—Lambert, (Aylmer Bourke) *Description of the genus Pinus*, 1803.

Lapeyr.—Lapeyrouse. A French writer upon the plants of the Pyrenees.

+ *Laxm.*—Laxmann. A writer on Siberian plants.

Ledeb.—Ledebour.

Lehm. nicot.—Lehmann. *Generis Nicotianarum Historia*, 1818.

+ *Lesch.*—Leschenault de la Tour.

L' Herit Stirp. nov.—L' Heritier. *Stirpes novæ aut minus cognitæ*; 1784, Paris.



Principal Abbreviations employed in this Volume.

CSL

L'Herit. Sert. angl.—L'Heritier. Sertum Anglicum, sive plantæ rariores ; 1788.

Lindl. Nat. Syst.—Lindley's Natural System of Botany.

Lindl. suppl.—Lindley's Supplement.

Lindl. gen. and spec.—Lindley's Genera and Species of Orchideous plants.

Lk. and Otto.—Link and Otto.

Lk. Abbild.—Link and Otto, Abbildungen und Beschreibungen seltener Pflanzen im Berliner garten.

Lob.—Lobelius.

+ *Lockh.*—Lockhart, (W.) Superintendent of the Trinidad botanical garden.

Lodd.—Loddiges.

Loisel.—Loiseleur. A French botanist.

Loud. Hort. Brit.—Loudon's Hortus Britannicus.

Loud. encl. of pl.—Loudon's Encyclopedia of plants.

Lour. fl. cochinch.—Loureiro's Flora Cochinchinensis, 1790.

Mart. sp.—Martius, (Carl. Phil. Fr. von) Genera et Species Palmarum Brasiliensium.

Mart. nov. gen.—Martius, (Carl. Phil. Fr. von) Nova Genera et Species Plantarum Brasiliensium.

Mass.—Masson, (Francis.) A collector of plants at the Cape and elsewhere.

Medik.—Medikus, (Fred. C.)

Meerb.—Meerburg.

Meisn.—Meisner.

Merat and Cass.—Merat and Cassini. French botanists.

Michx.—Michaux.

Mikan.—Mikan. A German writer on Brazilian plants.

Mirb.—Mirbel. A French Physiological botanist.

Moc. and Sessé.—Mocino and Sessé. Mexican botanists.

+ *Moen.*—Moench. A German botanist.

Monch. meth.—Moench. Methodus Plantas Horti et Agri Marburgensis describendi.

+ *Moris. hist.*—Morison, (Robt.) Historia Plantarum Universalis.

Müll.—Muller, (Otto Fred.) A Danish botanist.

Murr. comm. gott.—Murray, (Johannes Andreas) Prodrromus Designationis Stirplum Gottingensium, 1770.

Nees.—Nees von Esenbeck, (C. G.)

o. c.—opus citatus.

Opiz.—Opiz, (P. M.)

Ort.—Ortega, (Caspar Gomez de.) A Spanish botanist.

Palis. flor. d'Oware.—Palisot de Beauvois. Flore des Royaumes d'Oware et de Benin.



- Pall.*—Pallas, (Peter Simon.) *Flora Rossica*, 1784.
Pers. Sgn.—Persoon's, (Chas. Henry) *Synopsis Plantarum seu Enchiridion Botanicum*, 2 vols. 1805.
Pet. Th.—Petit Thouars, (Du.)
Pet. Th. gen. madag.—Petit Thouars, (Du.) *Genera Nova Madagascariensia*.
Plenck. icon.—Plenck, (Jos. Jac.) *Icones Plantarum Medicinalium*, 1803, et seq.
Plum. et Burm.—Plumier, (Chas.) and J. Burmanno. *Plantæ Americanæ*.
Plum. fil.—Plumier. *Traité des Fougères de l'Amérique*, 1705.
Pluk. alm.—Plukenet, (Leonard) *Almagestum Botanicum*, 1796.
Pohl. pl. braz.—Pohl's Brazilian plants.
Poir. dict.—Poiret. *Encyclopédie methodique Dictionnaire de Botanique*.
Pourr.—Pourret. A French botanist.
Pros. Alp. Egypt.—Prosper Alpinus, de *Plantis Egypti liber*, 1592.

Raddi.—Raddi, (Joseph.) An Italian Cryptogamic botanist, and traveller in Brazil.
Rafin.—Rafinesque, (C.) A modern writer on Botany.
Ramat.—Ramatuelle.
Red. pl. lil.—Redouté, (P. J.) *Les Liliacées*, 1802.
Rees' Cyclop.—Rees' Cyclopaedia.
Reichenb.—Reichenbach, (Lodov.)
Retz. obs.—Retzius, (And. J.) *Observationes Botanicae*, 1774.
Rheed. auct.—Rheede. Author of *Hortus Malabaricus*.
Rich. cat. h. med.—Richard, (Louis Claude) *Catalogue; Hortus Medicus*.
Rich. (A.)—Richard Achille, son to L. C. Richard.
Richt.—Richter, (Geo. Gott.)
Risso and Poit.—Risso and Poiteau.
Rohr skrift. naturh. selkh.—Rohr in "Skrifter af Naturhistorie Selskabet" of Copenhagen.
Röm and Sch.—Römer, (Joh. Jac.) and Schultes, (Joh. Aug.) Authors of *Linnaei Systema Vegetabilium*.
Roth nov. spec.—Roth, (Alb. Will.) *Novæ Plantarum species præsertim Indiæ Orientalis*.
Rottb. nov. act. hafn.—Rottboli, (C. F.) *Descriptiones et Icones Plantarum rariorum. Hafniæ*, 1773.
Rottl.—Rottler, (Dr.) of Tranquebar.
Roscoe.—Roscoe. An English botanist and writer upon Scitamineæ.
Royle, Ill.—Royle's Illustrations.
Roxb. Corom.—Roxburgh's Plants of the Coast of Coromandel.
Roxb. fl. ind. ed Carey.—Roxburgh's *Flora Indica*, edited by the Rev. Dr. Carey.
Roxb. H. Bengl.—Roxburgh's *Hortus Bengalensis*.
Rudg.—Rudge, (Edw.) An English writer on Botany.
Rumph. Amb.—Rumphius, (G. Ev.) *Herbarium Amboinense*.



Principal Abbreviations employed in this Volume.

CSL

Ruiz. and Pav.—Ruiz, (Hipp) and Pavon, (Jos.) Authors of the *Flora Peruviana et Chilensis*.

Sab.—Sabine.

Salisb. par Lond.—Salisbury, (Rich. Ant.) *Paradisus Londinensis*, 2 vols. London, 1805.

Salm. Dyck.—Salm Dyck, (the Prince of.) A noble German amateur.

Salz.—Salzmann.

Salt. trav.—Salt's travels.

Schmidt.—Schmidt. A Bohemian botanist.

Schott.—Schott. A traveller in Brazil.

Schousb. moroc.—Schousboe, (P. K. A.) *Jagttagelser over væxtriget i Morocco*. Copenhagen, 1800.

Schleiden.—Schleiden. An eminent German physiologist and botanist.

Schkuhr. hand.—Schkuhr's (Christ.) *Botanisches Handbuch*, 3 vols. 1791.

Scop. carn.—Scopoli, (Joh. Ant.) *Flora Carniolica*, 1760.

Sm. and Sibth. fl. græc.—Smith and Sibthorp's *Flora Græcæ*, 6 vols. Lond. 1806.

Sloane, hist. jām.—Sloane, (Hans.) *Voyage to Madeira, Barbadoes, Nevis, St. Christopher's, and Jamaica*, 2 vols. 1707.

Sm. spicil.—Smith, (Jas. Edw.) *Spicilegium Botanicum*, 1791.

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Sprengl. syst.—Sprengel. *Systema Vegetabilium*. 5 vols.

Soland.—Solander. A Swedish botanist.

Sonnerat.—Sonnerat, (P.) *Voyage a la Nouvelle Guinée*, 1776.

Sut. fl. helv.—Satter. *Flora Helvetica*.

Steinh. Ann. sc. nat.—Steinhausen, *Annales des Sciences Naturelles*.

Swt. Brit. flower garden.—Sweet's (R.) *British flower garden*, 1823.

Swz. fl. occid.—Swartz, *Flora Indiæ Occidentalis*, 3 vols. 1797.

Sower.—Sowerby. An English botanist and artist.

Tabern.—Tabernaemontanus, (Jac. Theod.) 1588.

Telf.—Telfair.

Ten.—Tenore. A Neapolitan botanist.

Thib.—Thibaud de Chanvalon, 1763. A French botanist.

Thore.—Thore. A French botanist.

Thonin.—Thonin. A French botanist.

Thuill.—Thuillier. A French botanist.

Till.—Tilli, (Mich. Aug.)

Thunb.—Thunberg, (Car. Petr.)

Thunb. fl. cap. ed. Schult.—Thunberg, (Car. Petr.) *Flora Capensis*, edited by Schultes.

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- Tournef.*—Tournefort, (Pitton de.) A French botanist and traveller in Greece and Asia Minor, 1717.
- + *Trans. Linn. Soc.*—Transactions of the Linnæan Society.
- Trans. Med. Phys. Soc. Cal.*—Transactions of the Medical and Physical Society of Calcutta.
- Trin.*—Trinius. A writer on Grasses.
- Turp.*—Turpin. A French botanist and draughtsman.
- + *Tussc.*—Tussac. A French writer on the Flora of the Antilles.
- + *Vahl.* ~~enun.~~—Vahl. (Prof. Martin) of Copenhagen.—Enumeratio Plantarum.
- Vahl. Symb.*—Vahl. (Prof. Martin.) Symbolæ Botanicæ, 1790.
- Vail.*—Vaillant. A French botanist and traveller.
- Vent. jard. de Cels.*—Ventenat, (Etienne Pierre) Description des Plantes nouvelles ou peu connues du Jardin de J. M. Cels; Paris, 1800.
- Vent Malm.*—Ventenat, (Etienne Pierre) Jardin de la Malmaison, 1803.
- Vill. dauph.*—Villars, (D.) Histoire des Plantes du Dauphiné, 1786.
- + *Wall. Cat.*—Wallich's Catalogue.
- Wall. pl. as. rar.*—Wallich. Plantæ Asiaticæ Rariores.
- Wall. rept.*—Wallich's Report.
- Wall. tent. pl. Nep.*—Wallich. Tentamen Floræ Nepalensis.
- Waldst. and Kit. pl. rar. hung.*—Waldstein and Kitaibel. Descriptiones et Icones Plantarum rariorum Hungariæ, 3 vols. 1802.
- Wallr.*—Waller. A writer on the Flora of Carolina.
- Walth.*—Walther, (Aug. Fred.)
- Wats. dendr. brit.*—Watson, (P. W.) Dendrologia Britannica, 1825.
- Wein.*—Weinmann, (J. Gul.)
- Wendl. coll.*—Wendland, (John Christ.) Collectio Plantarum; Hanover, 1805.
- Wern. Soc.*—Wernerian Society of Edinburgh.
- Wight contrib.*—Wight's Contributions.
- + *Wight icon.*—Wight's Icones.
- + *Wight ill.*—Wight's Illustrations of Indian Botany.
- + *W. and A. prod.*—Wight and Arnott. Prodrum Floræ Peninsulæ Indiæ Orientalis.
- Willd. enum.*—Willdenow, (Prof. Chas. Lud.) of Berlin, Enumeratio Plantarum horti Berolensis.
- Willd. fl. maurit.*—Willdenow, (Prof. Chas. Lud.) Description of Ammerson's plants from the Mauritius.
- Zucc.*—Zuccarini, (Professor.)



THE CATALOGUE IS FOUNDED ON

1. *Dr. Carey's (Roxburgh's) Hortus Bengalensis*, 3: a catalogue of about 3500 plants, which was the amount of species introduced into the Hon'ble Company's Garden, from its commencement to 1814.
2. *Dr. Carey's Garden Receipt-Book*, in which he was accustomed to put down the names of the plants introduced into his garden, and afterwards to affix marks of their success. A present from the late Mrs. Dr. Carey.
3. *Several printed Sheets*, (80 quarto pages,) embracing nearly the whole of the six first Linnæan Classes, limited to those species which had been cultivated in the Hon'ble Company's and the Serampore Gardens. This, Dr. Carey's last botanical work, was discontinued only by his death.
4. *Mr. Masters's Private Catalogue* of the Hon'ble Company's Garden.
5. *Dr. Wallich's Report to Government*, 21st Dec. 1840, enumerating such plants as had been distributed from the Hon'ble Company's Garden, from the beginning of 1836 to the end of November 1840.
6. A number of *Dried Specimens of Plants*, collected, with the Superintendent's permission, in the Hon'ble Company's Garden; and lastly,
7. *Private Papers* on botanical subjects, begun in 1830 and continued both during the life-time of Dr. Carey, and after his death, when the Superintendence of the Serampore Garden, in compliance with his wish, devolved on the Compiler.

THE CATALOGUE WILL CONTAIN

1. Remarks on each order, their general properties, and geographical (especially Indian) distribution.
2. The generic and specific names of the plants enumerated, with reference to the best authors and plates.
3. The Bengalee names of such plants as are indigenous, or commonly cultivated in Lower Bengal. These, though generally considered of little value, have been found very useful, *when shown, in their original dress*, to native gardeners, directed to go in search of particular plants.
4. The habit, flowering, and fruit-time, and the flowers of each individual plant.
5. Their habitats, properties, and use, as far as these are known. And, lastly,
6. An Appendix(*) to each order of such plants, as are thought desirable *and likely* to thrive in Lower Bengal. This has been added to aid horticulturists otherwise amply occupied in their selections, and if possible, to put an end to those injudicious and disappointing consignments, so frequently arriving from the nurseries in Europe.



CSL¹⁵

CLASS FIRST.
EXOGENÆ, DC.

LINDL. NAT. SYST. p. 1.

OR FLOWERING PLANTS.



HORTUS SUBURBANUS CALCUTTENSIS.

ORDER I.—RANUNCULACEÆ, DC. Lindl. Nat. Syst. p. 5.

THE CROW-FOOT TRIBE.

THIS chiefly herbaceous, rarely shrubby order, abounding in species, is extensively diffused throughout the cold and temperate parts of the globe. Their total amount may, perhaps, be estimated at 700, of which the greater part are found in Europe, Siberia, and the Levant. About 80 species have been discovered in N. America; 32 in S. America; 30 in China; 21 in Australasia; 15 in N. Africa; 20 in S. Africa; 6 in Mexico; 5 in the W. Indies; and a few in Japan, Cochin China, and Sierra Leone. In the tropics, they are found in mountainous regions, from the highest Alpine ranges down to such vallies of hilly tracts as are sufficiently elevated to compensate for low latitude; and though a few species straggle down to the plains, as, in India, *Ranunculus sceleratus* and *aquatilis*, Wight (*Ill. p. 3.*) is, no doubt, right in asserting, that wherever, within the tropics, we meet with herbaceous forms of Ranunculaceæ, we may feel assured of having attained an elevation sufficient to place us beyond the influence of jungle fever. In 1818, according to De Candolle, the Indian forms of this order amounted only to 19. At present their number has risen to 135; viz. 32 species of *Clematis*; 3 of *Naravelia*; 18 of *Thalictrum*; 16 of *Anemone*; 1 of *Adonis*; 32 of *Ranunculus*; 3 of *Caltha*; 1 of *Trollius*; 1 of *Coptis*; 2 of *Isopyrum*; 2 of *Aquilegia*; 14 of *Delphinium*; 7 of *Aconitum*; 1 of *Actæa*; 1 of *Cimicifuga*; and 1 of *Pæonia*. Eight of these also belong to Europe.

“Acridity, causticity, and poison, are the general characters of this suspicious order, which, however, contains species in which these qualities are so little developed as to be innoxious. The caustic principle is, according to Kropfen, as cited by De Candolle, of a very singular nature; it is so volatile that, in most cases, simple drying, infusion in water, or boiling, are sufficient to dissipate it; it is neither acid nor alkaline; it is increased by acids, sugar, honey, wine, spirit, &c. and is only effectually destroyed by water and vegetable acids.” (*Lindl.*) Notwithstanding their caustic



and poisonous properties, many species of this tribe have been used in medicine, as well internally as externally; they are, however, now obsolete. One of the Himalayan species, *Aconitum ferox*, Wall., commonly called **फिफ** Bish, is a most virulent poison, used in the northern part of Hindoosthan for destroying tigers by means of poisoned arrows, shot from bows fixed near the tracks leading to their watering places. (Colebrooke.)

CLEMATIS, L. (DC. prodr. 1, p. 2;—W. and A. prodr. 1, p. 1.) *Virgin's Bower*.

1. *Flammula*, L. (DC. l. c.) 5 ∪ S. Europe.—Fl. smallish, white,—May and June; fr. 0.
2. *Gouriana*, Roxb. (Fl. Ind. 2, p. 670;—DC. pr. 1, p. 3;—W. and A. pr. 1, p. 2;—J. Grah. Cat. B. pl. p. 1.) L. 5 ∪ India, from Dindygul and the Neelgherries up to Deyra Dhoon, along the foot of the Himalayas. Fl. smallish, white,—Septbr.; fr. Jan. and Feb.
3. *Vitalba*, L. (DC. pr. 1, p. 3;—Jacq. fl. austr. t. 308;—E. B. 9, t. 612.) 5 ∪ Middle and South Europe, Tauria.—Fl. middle-sized, white, fragrant,—R. S., but rare; fr. 0.
4. *Wightiana*, Wall. (W. and A. pr. 1, p. 2;—J. Grah. Cat. B. pl. p. 1.) 5 ∪ Neelgherries, Mahableshwur, and the adjoining Ghauts. Has been introduced into H. C. G. Fl. ?
5. *grata*, Wall. (Pl. as. rar. 1, t. 98.) 5 ∪ Nepal. Fl. small, yellowish, fragrant. Introduced here in 1840, but has not fl. yet.
6. *cylindrica*, Sims. (B. M. 29, t. 1160;—DC. pr. 1, p. 7.) 5 ∪ N. America. Fl. large, blue,—June; fr. 0.
7. *Viorna*, L. (DC. pr. 1, p. 7;—Jacq. ecl. 1, p. 50, t. 32.) 5 ∪ Virginia, Carolina. Fl. large, blue,—June, but rare.
8. *reticulata*, Walt. (DC. pr. 1, p. 7.—C. cordata, B. M. 43, t. 1816.) 5 ∪ S. Carolina, Georgia. Fl. largish, pale purplish,—July; fr. 0.
9. *integrifolia*, L. (DC. pr. 1, p. 8;—B. M. 2, t. 65.) 4. Hungary, Carniolia, Siberia, Pyrenees. Fl. large, indigo-coloured,—May and June; fr. August.
10. *ochroleuca*, Ait. (DC. pr. 1, p. 8.) 4. Pennsylvania, Carolina. Fl. large, yellowish,—June, but rare: fr. 0.
11. *florida*, Thunb. (Flor. jap. p. 240;—DC. pr. 1, p. 8;—B. M. 22, t. 834.) 5 ∪ Japan. Fl. very large, white,—C. S. Introduced in 1819, but has not fl. during the last twelve years.
12. *Viticella*, L. (DC. pr. 1, p. 9;—B. M. 16, t. 565.) 5 ∪ Warmer parts of Europe. Fl. very large, beautifully purple, with dark veins. Introduced in 1825. Has not fl.

NARAVELIA, DC. (pr. 1, p. 10;—W. and A. pr. 1, p. 2.)

1. *Zeylanica*, DC. (L. c.,—W. and A. l. c.,—J. Grah. Cat. B. pl. p. 1.—*Atragene zeylanica*, L.;—Roxb. Corom. 2, t. 188; fl. ind. 2, p. 670.) **ছাগলবাটী** *Chhagul-batee*. 4. ∪ Ceylon. Both Peninsulas of India, Bengal, (Serampore,) &c. Fl. middle-sized, yellowish,—R. S.;—fr. C. S.



THALICTRUM, L. (DC. *pr.* 1, p. 11;—*W. and A. pr.* 1, p. 2.) *Meadow Rue*.

—From 1817, up to the present time, 34 species of this genus—one of the surest indicators of a cold climate—have been introduced into the Serampore Garden, but only the following two have flowered:—

1. *foliolosum*, DC. (*l. c.* p. 12.) ♀. Nepal, Kemaon, Khassya Mountains. Fl. small, yellowish,—August. Herb bitter; used by the Natives in fever.

2. *flexuosum*, Jacq. (*Loud. hort. brit.* p. 229, No. 14,529.) ♀. Native place unknown. Fl. small, yellowish,—May and June; fr. Aug.—Seeds received from the Liverpool Botanic Garden.

T. bracteatum, Roxb. (*Fl. ind.* 2, p. 671.) ♀. N. Bengal. Introduced in 1797. Fl. C. S. (Roxb.) No doubt a species of *Clematis*.

RANUNCULUS, L. (DC. *pr.* 1, p. 26;—*W. and A. pr.* 1, p. 3.) *Crow-foot*.

1. *sceleratus*, L. (DC. *pr.* 1, p. 34;—*E. B.* 10, t. 681.—*R. indicus*, (Roxb. *fl. ind.* 2, p. 671.) ☉ Europe, Siberia, Cochin China, India, (Serampore, Calcutta, &c.) Fl. small, yellow, and fr. C. S.—A very acrid plant; when applied fresh, quickly producing a blister.—Besides *Ranunculus aquatilis*, L., a variety of which has been found about Saharanpore, this is the only species of *Crow-foot* hitherto discovered in the plains of tropical India. The Natives have no name for it, nor do they use it.

2. *bulbosus*, L. (DC. *pr.* 1, p. 41;—*E. B.* 8, t. 515;—*Roxb. H. B.* p. 43.) ♀. Europe, America, Kunawur. Fl. largish, bright yellow,—March and April; fr. May. The whole plant, but especially the unripe fruit, very acrid.

3. *arvensis*, L. (DC. *pr.* 1, p. 41;—*E. B.* 2, t. 135.) ☉ Middle and South Europe, Suen mountains, Kemaon. Fl. small, yellow,—Febr. and March; fr. April. Poisonously acrid.

4. *muricatus*, L. (DC. *pr.* 1, p. 42;—*Sibth. fl. græc.* t. 522.) ☉ S. Europe, along the Mediterranean. Fl. smallish, yellow,—Febr. and March; fr. April.

5. *nodiflorus*, L. (DC. *pr.* 1, p. 43;—*Waldst. and Kit. pl. rar. hung.* 2, p. 192, t. 176.) ☉ France, Hungary. Fl. small, yellow,—Febr. and March; fr. April.

Eight other perennial species of *Ranunculus*, introduced between 1816 and 1828, could scarcely be kept alive during the hot season.

COPTIS, Salisb. (DC. *pr.* 1, p. 47.)

1. *Teeta*, Wall. (*Notes on the Drugs called Mishmee Teeta and Pūcha Pat. Med. and phys. soc. Calcutta, vol. 8, p. 85.*—*W. Twining; Notes on the medical properties of the root of the Mishmee Teeta, l. c.*) ♀. Mishmee mountains. Introduced into H. C. G. Fl. ?—Root pure bitter, tonic, and as such recommended by Twining.

ISOPYRUM, L. (DC. 1, *pr.* 1, p. 48.)

1. *fumarioides*, L. (DC. *l. c.*—*Schkuhr. handb.* 2, No. 1531, t. 153.) ☉ Siberia. Fl. small, white,—Febr. and March; fr. April.



NIGELLA, L. (DC. pr. 1, p. 48.) *Fennel Flower*.

1. *sativa*, L. (DC. l. c. p. 49.)

♂ *indica*, DC. (l. c.—N. *indica*, Roxb. fl. ind. 2, p. 646.) कान्जिरा *Kaljira*. ☉ S. Europe, Asia Minor, Syria. Acclimated in the gardens of India. Domesticated about Serampore. Fl. largish, white, and fr. C. S.—Seeds formerly used as pepper. The Natives esteem them as a condiment and stomachic.

2. *hispanica*, L. (DC. l. c.,—B. M. 31, t. 1265.) ☉ Spain, Barbary. Fl. large, blue, sometimes white,—Febr. and March; fr. April.

3. *orientalis*, L. (DC. l. c.,—B. M. 31, t. 1264.) ☉ Aleppo. Fl. largish, greenish-yellow, dotted with scarlet,—Febr. and March; fr. April.

4. *damascena*, L. (DC. l. c.,—B. M. 1, t. 22.) ☉ Countries along the Mediterranean. Fl. large, pale, blue,—Febr. and March; fr. April.

AQUILEGIA, L. (DC. pr. 1, p. 50.) *Columbine*.

1. *vulgaris*, L. (DC. l. c.;—E. B. 5, t. 297.) 4. Europe.—Fl. large, bluish purple, and fr. C. S.—Plant astringent.

DELPHINIUM, L. (DC. pr. 1, p. 51;—W. and A. pr. 1, p. 4.) *Larkspur*.

1. *Ajacis*, L. (DC. l. c.;—W. and A. l. c.;—Roxb. H. B. p. 43;—J. Grah. Cat. B. pl. p. 1.) ☉ Tauria. Acclimated in India.—Fl. largish, of various colours, and fr. C. S.—Seeds very acrid.

2. *Consolida*, L. (DC. l. c.;—E. B. 26, t. 1839.) ☉ Europe, N. America.—Fl. large, purplish blue,—Febr. and March; fr. April.

3. *Oliverianum*, (DC. l. c.) ☉ Bagdad.—Fl. large, bluish purple,—Febr. and March; fr. April.

No *ACONITUM* or *PEONIA* has ever flowered here.

* *Clematis orientalis*, L. 5 1/2 Levant. *C. chinensis*, Retz. 5 1/2 China. *C. havanensis*, H. B. and Kth. 5 1/2 Havannah. *C. balcarica*, Rich. (C. *calycina*, Ait; B. M. 24, t. 959.) 5 1/2 Minorca. *C. caripensis*, Humb. 5 1/2 Trinidad. *C. dioica*, L. 5 1/2 Jamaica. *C. zanzibariensis*, Bojer. 5 1/2 Zanzibar. *C. pedicellata*, Swt. (C. *cirrhusa*, Sims; B. M. 27, t. 1070.) 5 1/2 Majorca. *C. chlorantha*, Lindl.; B. Reg. 15, t. 1234. 5 1/2 Sierra Leone. *C. Munroiana*, Wight; ill. t. 1, Neelgherries. *C. hedyarifolia*, DC.; B. Reg. 7, t. 599. 5 1/2 Burma. *C. smilacifolia*, Wall. Cat. 5 1/2 Khassya Mountains.—*Ranunculus hirsutus*, Ait; E. B. 21, t. 1504. ☉ Europe. *R. trilobus*, Desf. ☉ Greece.—*Ficaria ranunculoïdes*, Mönch. (*Ranunculus Ficaria*, L.; E. B. 9, t. 584.) 4. Europe.—*Garidella Nigellastrum*, L.; B. M. 31, t. 1266. ☉ France, Italy.—*Delphinium pubescens*, DC. ☉ Mediterranean. *D. Aconiti*, L. ☉ Levant. *D. peregrinum*, Willd. ☉ Italy. *D. ambiguum*, L. ☉ Barbary. *D. Virgatum*, Poir. ☉ Syria. *D. Staphisagria*, L. ♂ S. Europe.



Of the Sub-Order, *Podophylleæ*, Lindl. Nat. Syst. p. 7, only one species has been found in India, viz. *Podophyllum Emodi*, Wall. in Sirmore and Gossainthan.

ORDER II.—PAPAVERACEÆ, Juss.—Lindl. Nat. Syst. p. 7.

THE POPPY TREE.

Annual or perennial herbs, rarely under-shrubs, with a milky juice. The total amount of species is about 66, of which 28 have been found in Europe; 7 in the Levant; 9 in N. America; 5 in Mexico; 5 in India; 3 in Persia; 2 in Siberia; 2 in N. Africa; 3 in China and Japan; 1 in N. Holland; and 1 in S. Africa. Most of them are annuals, 21 perennials and chiefly mountainous, and 2 shrubby.—Of the five Indian species, two belong to *Papaver*, and three to *Meconopsis*. One of the latter, *M. nepalensis*, DC., especially its root, is according to *D. Don*. (*Pr. fl. nep.* p. 98), very poisonous.—The medicinal properties of the juice of the poppy (*opium*) are well known, and their narcotic character is more or less traced throughout the whole order. The *Sanguinaria canadensis*, L. is, however, given in large doses, emetic and purgative, and, in smaller ones, stimulant, sudorific, and expectorant. (*Barton's coll. mat. med.* 1. p. 37.)

PAPAVER, L. (*DC. pr.* 1, p. 117;—*W. and A. pr.* 1, p. 17.) *Poppy*.

1. *hybridum*, L. (*DC. l. c.* p. 118;—*E. B.* 1, t. 43.) ☉ W. and S. of Europe. Fl. largish, deep red.—Febr. and March; fr. April.
2. *Argemone*, L. (*DC. l. c.*,—*E. B.* 9, t. 643.) ☉ Europe. Fl. largish, scarlet.—Febr. and March; fr. April.
3. *dubium*, L. (*DC. l. c.*,—*E. B.* 9, t. 644.) ☉ Europe. Fl. large, palish scarlet.—Febr. and March; fr. April.
4. *Rhœas*, L. (*DC. l. c.*,—*E. B.* 9, t. 645;—*J. Grah. Cat. B. pl.* p. 6.) ☉ γ. Europe. Fl. large, scarlet.—Febr. and March; fr. April.
5. *somniferum*, L. (*DC. l. c.* p. 119.) *Opium-Poppy*. ☉ Morea, Egypt, hotter parts of Asia. Fl. large.—Febr. and March; fr. April and May.

α. *nigrum*. Fl. purplish. Seeds black.

β. *album*. Fl. and seeds white. (*Papaver somniferum*, *E. B.* 30, t. 2145;—*Roxb. fl. ind.* 2, p. 571;—*W. and A. pr.* 1, p. 17;—*J. Grah. Cat. B. pl.* p. 6.) ☉ Posto.—Extensively cultivated in India. The juice expressed from the seeds, held to be very useful in chronic diarrhœa. (*Dr. Gibson*.) Their oil pure, sweet, for culinary purposes almost as good as olive oil.

Several varieties of α and β occur in our gardens, f. ex. fimbriato-rubrum, album and nigrum; pleno-rubrum; purpureum; pleno-album, &c.



ARGEMONE, L. (*DC. pr. 1, p. 120*;—*W. and A. pr. 1, p. 17.*) *Prickly Poppy*.

1. *mexicana*, L. (*DC. l. c.*,—*W. and A. l. c.*,—*Roxb. fl. ind. 2, p. 571*;—*B. M. 7, t. 243*;—*J. Grah. Cat. B. pl. p. 6*;—*Wight ill. 1, t. 11.*)

बड़शैलकाटे। *Byro-shelkanta*. ☉ Mexico.—Domesticated all over tropical India. Fl. large, yellow,—fr. Jan., Febr. and March,—*Seeds* narcotic, especially when smoked with tobacco. (*Gardener's mag. 6, p. 315*;)—In the W. Indies, they are used for many purposes, seemingly without much benefit.—Lamp oil extracted from the seeds, employed by the poor in the Concans. (*Dr. Gibson.*)

ROMERTA, Medik. (*DC. pr. 1, p. 122.*)

1. *hybrida*, (*DC. l. c.*—*Chelidonium hybridum*, L.,—*E. B. 3, t. 201.*) *Violet horned Poppy*. ☉ S. Europe, along the Mediterranean, England. Fl. large, purple,—Febr. and March; fr. April

GLAUCIUM, Tournef. (*DC. pr. 1, p. 122.*) *Horn Poppy*.

1. *corniculatum*, Curt. (*Lond. 6, t. 32*;—*DC. l. c.*)
a. *phæniceum*, DC. (*l. c.*—*Glaucium phæniceum*, Sm.,—*E. B. 20, t. 1433.*) ☉ England, France. Fl. large, scarlet,—Febr. and March; fr. April.

CHELIDONIUM, L. (*DC. pr. 1, p. 122.*) *Celandine*.

1. *majus*, L. (*DC. l. c. p. 123*;—*E. B. 22, t. 1581.*) ♀ Europe. Fl. smallish, yellow,—C. S.; but very rare.
2. *laciniatum*, Mill. (*DC. l. c.*) ♀ Germany, England. Introduced in 1820. Fl. ?

CHRYSEIS, Lindl. (*B. Reg. 23, t. 1948*,—not Cass. nor Less.—*Eschscholzia*, Cham.,—*DC. pr. 3, p. 344.*)—Chamisso's name being merely a misspelling of *Elsholtzia*, a labiate genus, established by Willdenow in memory of Elsholtz, the father, must be excluded, though it was meant for Elsholtz, the son.—*Chryseis*, Less. is a synonyme of *Amberboa*, DC., and *Cryseis*, Cass. a section of it.

1. *californica*, Lindl. (*Eschscholzia californica*, Cham.;—*DC. l. c.*;—*B. Reg. 14, t. 1168*;—*B. M. 56, t. 2887.*) ☉ California. Fl. large, yellow,—Febr. and March; fr. April.
2. *crocea*, Lindl. (*Eschscholzia crocea*, Benth.;—*B. Reg. 20, t. 1677*;—*B. M. 63, t. 3495.*) ☉ California. Fl. large, yellow,—Febr. and March; fr. April.

* *Papaver persicum*, Lindl.; *B. Reg. 19, t. 1570.* ☉ Persia. *P. amoenum*, Lindl.; *B. Reg. app. of 1839, p. 56.* N. India. Seeds from Dr. Falconer. *P. glabrum*, Royle ill. p. 67. ☉ Himalaya. *P. orientale*, L.; *B. M. 2, t. 57.* ☉ Levant.—*Argemone mexicana*, L. ♂ *ochroleuca*, Lindl.; *B. Reg. 16, t. 1343.* ☉ *T. albiflora*, Lindl. (*A. albiflora*, Sims; *B. M. 49, t. 2342.*) ☉ *A. grandiflora*, Swt.; *B. Reg. 15, t. 1264*; *B. M. 58, t. 3073.* ☉ Mexico.—*Glaucium flavum*, Crantz; *E. B. 1, t. 8.* ♂ Europe. *G. fulvum*, Sm. ♂ ♀ S. Europe.—*Chryseis compacta*, Lindl.; *B. Reg. 23, t. 1948.* ☉ California.—



Hunnemannia fumariifolia, Swt.; B. M. 58, t. 3061. ☉ Mexico.—
Platystemon californicus, Benth; B. M. 64, t. 3579. ☉ California.
P. leiocarpus, F. and M.—B. M. 66, t. 3750. ☉ California.—*Platystigma lineare*, Benth.—B. M. 64, t. 3575. ☉ California.

SUB-ORDER.—FUMARIÆ, Lindl. Nat. Syst. p. 9.

THE FUMITORY TRIBE.

Herbaceous, mostly annual plants, inhabiting chiefly the temperate latitudes of the northern hemisphere. In all, they amount to about 70 species, of which 18 have been found in Europe; 18 in India; 11 in Siberia; 10 in N. America; 4 in S. Africa; 4 in Japan; 3 in the Levant; 2 in N. Africa; and 1 in Persia. The Indian species, besides 2 that are common to other countries, consist of 16 of *Corydalis*; 1 of *Dactylocapnos*; and 1 of *Maccropnos*.

The herbs belonging to this tribe are filled with a watery, not milky, juice, and are bitterish, scentless, sudorific, and aperient. Their juice, formerly prescribed against abdominal obstructions, is now only used occasionally in cutaneous diseases. (DC.)

CORYDALIS, Vent. (DC. pr. 1, p. 128.)

1. *capnoides*, Pers. (DC. l. c. p. 129.)

β. *lutea*, DC. (l. c.—*Fumaria lutea*, Sm; E. B. 9, t. 588.) 4.
Europe. Fl. largish, yellow,—and fr. C. S.

2. *glauca*, Pursh. (DC. pr. 1, p. 128.—*Fumaria glauca*, Curt., B. M. 5, t. 179.) ☉ Canada. Fl. largish, rosy yellow,—Febr. and March; fr. April.

3. *claviculata*, DC. (l. c. p. 129.—*Fumaria claviculata*, L., E. B. 2, t. 103.) ☉ Europe. Fl. small, yellowish-white,—Febr. and March; fr. April.

4. *aurea*, Willd. (DC. l. c. p. 128.—*Fumaria aurea*, Muhl.; B. Reg. 1, t. 66.) ☉ Shady rocks in Pennsylvania, Virginia and Canada. Fl. largish, gold-coloured,—Febr. and March; fr. April.

FUMARIA, L. (DC. pr. 1, p. 129;—W. and A. pr. 1, p. 18.) *Fumitory*.

1. *parviflora*, Lam. (DC. l. c. p. 130;—W. and A. l. c.;—Roab. fl. ind. 3, p. 217;—J. Grah. Cat. B. pl. p. 6;—E. B. 9, t. 590;—Wight ill. 1, t. 11,* A.) बनसुल्फा *Bansulpha*. ☉ Europe, Neelgherries, Candesh, Bombay, Bengal, (Serampore), &c. Nepal, Kemaon, Fl. very small, pale rose-coloured, dark purple tipped;—and fr. C. S.

2. *officinalis*, L. (DC. l. c.;—W. and A. l. c.;—E. B. 9, t. 589.) ☉ Europe. Fl. like those of No. 1;—and fr. C. S.

* *Sarcocapnos crassifolius*, DC. 4. N. Africa.—*Fumaria capreolata*, L. ☉ S. Europe. *F. media*, Lois. (*F. capreolata*, Lightf. E. B. 14, t. 493.) ☉ Europe.



ORDER III.—NYMPHÆACEÆ, Salisb.—Lindl. Nat. Syst. p. 10.

THE WATER-LILY TRIBE.

Floating plants, dispersed over various parts of the world, all perennial, and distinguished generally by large, beautiful flowers. Their number amounts to 29 species, of which 7 inhabit India; 6 N. America; 4 Europe; 3 S. America; 2 Egypt; 2 Siberia; 1 China; 1 Japan; 1 Madagascar; 1 S. Africa; and 1 the W. Indies. Of the 7 Indian forms, 1 belongs to *Euryale*; to *Barclaya*; and 5 to *Nymphaea*.

Their stems are bitter and astringent, and contain a considerable quantity of fæcula, which may be used as food. (DC.)

EURYALE, Salisb. (DC. pr. 1, p. 114.)

1. *ferox*, Salisb. (DC. l. c.,—B. M. 35, t. 1447.—*Anneslea* (not Wall.) *spinosa*, Andr.; B. Repos. 9, t. 618;—Roxb. fl. ind. 2, p. 573.) 4. Luknow, Tippera, Chittagong, Saharunpore. Fl. small, bluish-purple. R. S., fr. C. S.—Seeds farinaceous, and, after having been heated in hot sand and husked, eaten by the Natives. (Roxb.)

NYMPHÆA, L. (DC. pr. 1, p. 114;—W. and A. pr. 1, p. 16.) *Water Lily*,

1. *pubescens*, Willd. (DC. l. c. p. 115;—W. and A. l. c.—J. Grah. Cat. B. pl. p. 6.—N. Lotus, Burm.,—Roxb. fl. ind. 2, p. 577,—not L.—Rheed. 11, t. 26. বড়শালুক *Buro-shaluk*. 4. Africa. Both Peninsulas of India, Bengal, (Serampore), &c.; in short, like the other species, except *N. rubra*, found in every part of India, from 8° to 32° N. Lat. (Royle.) Fl. large, white, of a vinous smell,—R. and C. S.;—fr. H. S.

2. *rubra*, Roxb. (Fl. ind. 2, p. 576;—DC. l. c.,—W. and A. l. c. p. 17;—J. Grah. Cat. B. pl. p. 5;—B. M. 31, t. 1280;—Wight, ill. 1, t. 10.) বড়রক্তকম্বল *Buro-rukto-kumbul*. 4. Both Peninsulas of India, Bengal, (Serampore). Fl. large, intensely red,—H. and R. S.,—fr. R. S.

β. *rosea*. (Roxb. l. c.,—B. M. 33, t. 1364.) ছোটরক্তকম্বল *chhoto-rukto-kumbul*. 4. Bengal, (Serampore.) Fl. large, rose-coloured,—H. and R. S.,—fr. R. S.

3. *versicolor*, Roxb. (Fl. ind. 2, p. 577;—DC. l. c.,—B. M. 29, t. 1189.) বড়শাঁধি *Buro-sundhi*. 4. Bengal, (Serampore), &c. Fl. large, rose-coloured, or bluish white,—H. and R. S.,—fr. R. S.

β. *alba*, Bengal, (Serampore). Fl. white.

4. *edulis*, (DC. pr. l. c.—N. *esculenta*, Roxb. fl. ind. 2, p. 578.) ছোটশাঁধি *Chhoto-sundhi*. 4. Bengal, (Serampore), &c. Fl. large, white,—H. and R. S.,—fr. R. S. The underground stems (roots) especially of this, but also of the other species, are much sought after by the Natives, both as an article of food and medicine. The capsules and seeds are either pickled, or made up with their curries, or ground and mixed with flour to make cakes. (Roxb.)



5. *stellata*, Willd. (DC. l. c.,—*W. and A. pr.* 1, p. 17;—*Roxb. fl. ind.* 2, p. 579;—*J. Grah. Cat. B. pl.* p. 5;—*Wight. icon.* 1, t. 178.—*Rheede*, 11, t. 27.) ছোটনীলপদ্ম *Chhoto-neelpudmo*. ২. Peninsula of India, Bengal, (Serampore), &c. Fl. smallish, blue,—H. and R. S.; fr. R. S.
- β. *major* (*N. cyanea*, *Roxb. fl. ind.* 2, p. 577;—*B. M.* 46, t. 2058.) বড়নীলপদ্ম, *Buroneel-pudmo*. ২. Bengal, (Serampore). Fl. largish, blue,—H. and R. S; fr. R. S.

- * *Barclaya oblonga*, Wall. ২. Rangoon. *Victoria regia*, Lindl., B. Reg. 1838, app. p. 9—14. ২. Guiana.—*Cabomba aquatica*, Aubl. ২. Guiana.

ORDER IV.—NELUMBIACEÆ, Lindl. Nat. Syst. p. 13.

THE SACRED-BEAN TRIBE.

Herbaceous plants, with very large leaves and flowers, inhabiting stagnant and quiet waters in N. America, Jamaica, the Caspian region, India, and formerly in Egypt. The order comprehends but one genus with five species; three of which are insufficiently known. The remaining two belong to India and N. America.

NELUMBIUM, Juss. (DC. *pr.* 1, p. 113;—*W. and A. pr.* 1, p. 16.)

1. *speciosum*, Willd. (DC. l. c.,—*W. and A. l. c.*,—*Roxb. fl. ind.* 2, p. 647;—*J. Grah. Cat. B. pl.* p. 5.) ২. All India, Persia, China, Cochinchina, Japan. Fl. very large, nearly inodorous, H. and R. S.; fr. R. S. The *underground stems* are eaten by the Natives, boiled, or in their curries,—and the *seeds* raw, roasted, or boiled. The *leaves* are used as a substitute for plates. (*Roxb.*)—In China the roots are not only served up in summer with ice, but they are also laid up in salt and vinegar for the winter. (*Loud. enc. of pl.* p. 479.) Kent of Clapton, says, that the seeds will keep forty years, vegetate freely, and flower the first year. (*Hort. trans.* 3, p. 36.)
- α. *rubrum*, (*B. M.* 23, t. 903.—*Rheede*, 11, t. 30.—*Rumph.* 6, t. 73.) রক্তপদ্ম, *Rukto-pudmo*. Fl. rose-coloured.
- β. *album*. (*Wight. ill.* 1, t. 9.—*Rheede*, 11, t. 31.) শ্বেতপদ্ম, *Shwet-pudmo*. Fl. white.

- * *N. luteum*, Willd. ২. N. America.



ORDER V.—MYRISTICACEÆ, Lindl. Nat. Syst. p. 15.

THE NUTMEG TRIBE.

Trees often yielding a red juice, (*R. Br.*) and arranged under three genera, *Myristica*, L., *Virola*, Aubl., and *Knema*, Lour. According to our materials, these contain 48 species, of which 29 are described, and 19 only named. *Myristica* numbers 46 species; 27 inhabiting the Moluccas, Cochin-China, Java, Ceylon, and the ultra-gangetic Peninsula of India; 4, the intra-gangetic Peninsula of India; 3, S. America; 2, Madagascar; 1, Aleppo; 1, Mauritius; 2, Chittagong; 2, the Khassya Mountains; and 2 New Holland. *Virola* and *Knema* have each but one species, the first a native of Guiana, the second found in Penang.

As to the properties of this order, all that can be said is this: 'The bark (of the well known species) abounds in an acrid juice, which is viscid and stains red; the rind of the fruit is caustic; the aril and albumen, the former known under the name of *Mace*, the latter of *Nutmeg*, are important aromatics, abounding in a fixed oil of a consistence analogous to fat, which, in a species called *Virola sebifera*, Aubl. is so copious as to be extracted easily by immersing the seeds in hot water. The common Nutmeg is the produce of *Myristica moschata*, but an aromatic fruit is also borne by other species. The Nutmeg of Santa Fé is the *Myristica Otoba*, Humb.' (*Lindl.*)

MYRISTICA, L. (*Spreng. syst.* 3, p. 6, No. 2382;—*R. Br. pr.* p. 399 and 400.)

1. *moschata*, Thunb. (*Spreng. o. c.* p. 64;—*Roxb. fl. ind.* 3, p. 843;—*J. Grah. Cat. B. pl.* p. 175.—*M. officinalis*, L., *Gärtn. fr.* 1, p. 194, t. 41, f. 1. *Hook. exot. fl.* t. 155-6;—*B. M.* 54, t. 2756-57.—*M. aromatica*, Lam.,—*Roxb. Corom.* 3, t. 267.—*Nux Myristica*, *Rumph.* 2, t. 4.) True Nutmeg Tree.—b. 25 feet.—Moluccas. Successfully cultivated in Sumatra, Bencoolen, and Penang. Fl. small, pale yellow, inodorous. In H. C. G. some old trees, introduced in 1797, fl. R. S.; fr. H. and R. S. (*Roxb.*)—Mace.—*देकती, Jytree.*—Albumen (Nutmeg) *कायूरुल, Juyphul*. The nut contains a volatile, as well as a fixed oil.
2. *tomentosa*, Thunb. (*Spreng. o. c.* p. 65;—*J. Grah. Cat. B. pl.* p. 175.—*Rheede*, 4, t. 5.)—*M. malabarica*, Lam. b. Moluccas, Malabar, S. Concan. Fl. small, yellowish. In H. C. G. Fl. ?
3. *peltata*, Roxb. (*Fl. ind.* 3, p. 846.) b. Mountains of the Moluccas. Introduced into H. C. G. in 1798, and the ♂ there fl. H. S. (*Roxb.*)
4. *spicata*, Roxb. (*Fl. ind.* 3, p. 847.) b. Moluccas. Introduced into H. C. G. in 1798. In 1804, the ♀ fl. R. S., but proved abortive. No part of the tree possesses any fragrance. (*Roxb.*)



parviflora. Roxb. (*l. c.*) 5 Moluccas. Introduced into H. C. G., where ♀ fl. R. S, but the fl. proved abortive. (*Roxb.*)

- * *Myristica fatua*, Swz. 5. Guiana, W. Indies, Surinam. *M. Oloba*, Humb. 5. New Granada. *M. Horsfieldii*, Spreng. 5. Ceylon, Java. *M. amygdalina*, Wall. pl. as. rar. 1, t. 90. 5. Moulmein. *M. sphaerocarpa*, Wall. pl. as. rar. 1, t. 89. 5. Martaban. *M. sylvestris*, Telf. 5. Mauritius.—*Virola sebifera*, Aubl. 5. Guiana.—*Knema glaucescens*, Jack. 5. Penang.

ORDER VI.—MAGNOLIACEÆ, DC.—Lindl. Nat. Syst. p. 16.

THE MAGNOLIA TRIBE.

Fine trees or shrubs, with large, beautiful, often strongly odoriferous flowers. Their number amounts to 47 species, of which 9 belong to N. America; 1 to Mexico; 29 to the E. Indies; and 8 to Cochinchina, China, and Japan. R. Brown remarks, "that no species have been found on the continent of Africa, or any of the adjoining islands." (*Lindl.*) Of the 8 Asiatic species of *Magnolia*, enumerated by DC., in the section *Gwillimia*, Röttl., 2 have been removed to *Michelia*, and 1 to *Talauma*. Three other *Magnolias*, (*M. conspicua*, Salisb., obovata, Thunb., *gracilis*, Salisb.), though with introrse anthers, cannot be joined to *Michelia*, Bl. having terminal flowers, and their fruit, besides, being unknown. The 2 remaining species (*M.?* *Coco* and ? *inodora*, DC.) are only known from Loureiro's very deficient descriptions. The Indian species are ranged under five genera,—*Michelia*, L.; *Manglietia*, Bl.; *Aromadendron*, Bl.; *Sphenocarpus*, Wall. Cat.; and *Talauma*, Juss. The first of these numbers 22 forms, or, if Wallich's *Magnolia punduana*, be no *Michelia*, only 21; viz. 7 from Nepal; 5 from Java; 3 from Ceylon; 2 from the Khassya Mountains; 1 from the Neelgherries; 1 from the Pulney Mountains; 1 from Malabar; 1 from Pegu; 1 from Amboyna; and 1 from Chilmori. *Manglietia* has 3 species; one from Nepal, and two from Java; *Aromadendron* and *Sphenocarpus* each 1 species, the first Javanese, the latter Khassyan; and *Talauma*, 2 Javanese—Molucca forms. Blume is of opinion, that *Magnoliaceæ* are absolutely known from *Dilleniaceæ* by their bitter and aromatic properties. Their fragrant flowers act decidedly on the nerves, some of them producing sickness, headache, and paroxysms of fever. The bark of the root of *Magnolia glauca* is an important tonic. (*Bart.*)

MICHELIA, L. Bl. (*Wight ill. p. 11, from Bl.*)

1. *Doltsopa*, Buch. (DC. pr. 1, p. 79;—Wall. *tént. fl. nep.* p. 7, t. 3;—*Wight. ill.* 1, p. 13.) 5. Forests of Nepal. In H. C. G. Fl. ? Wood fragrant, excellent, used in Nepal for house-building. (*D. Don. pr. fl. nep.* p. 226.) Another Nepalese species, *M. excelsa*,

Bl. (*Magnolia excelsa*, Wall.) yields valuable timber, of a fine texture; at first greenish, but soon changing into pale yellow. Wall. *tent. fl. nep.*)

2. *Champaca*, L. (*Wight. ill.* 1, p. 13;—*Bl.*—*DC. pr.* 1, p. 79, partly;—*Roxb. fl. ind.* 2, p. 656.) চাঁপা *Champa*. b. Moluccas, Java. Cultivated in Bengal, (Calcutta, Serampore, &c.) Fl. large, deep yellow, intensely fragrant,—H. and R. S.; fr. C. S. Indeed, it fl. and fr. nearly throughout the year.—*Flowers* highly esteemed by the Natives, especially for the use they make of them in their religious ceremonies.
3. *Kisopa*, Buch. (*DC. l. c.*—*Wall. tent. fl. nep.* p. 8. t. 4.,—*Wight, l. c.*) b Forests of Nepal. In H. C. G. Fl.?
4. *aurantiaca*, Wall. (*Pl. as. rar.* 2, t. 147.) L. b. Pegu. Fl. large, orange-coloured, fragrant,—C. S.; fr. June and July.
5. *fuscata*, Bl. (*Wight. ill.* 1, p. 11.—*Magnolia fuscata*, *Andr. B. Repos.* 4, t. 229;—*B. M.* 25, t. 1008;—*DC. pr.* 1, p. 81;—*Roxb. fl. ind.* 2, p. 655.) ঝা. China. Fl. largish, cream-coloured, purple-edged, fragrant,—March and April; fr. 0
6. *oblonga*, Wall. Cat. b. Khassya Mountains. In H. C. G. Fl.?

MAGNOLIA, L. (*DC. pr.* 1, p. 79.)

? 1. *obovata*, Thunb. (*DC. o. c. p.* 81.)

β *discolor*, DC. (*l. c.*—*M. discolor*, *Vent.*—*M. purpurea*, *Curt.*, *B. M.* 11, t. 390. *M. obovata*, *Roxb. fl. ind.* 2, p. 655.) ঝা. Japan, China. Fl. large, dark, purple, rose-coloured, inodorous,—R. S.; fr. 0. (*Roxb.*)

? 2. *conspicua*, Salisb. (*Par. t.* 38.—*B. M.* 39, t. 1621.—*M. Yulan*, *DC. pr.* 1, p. 81.) ঝা China. Introduced in 1840.

SPHENOCARPUS, Wall. Cat. Sine caractere! (*Lindl. Nat. Syst.* p. 16.)

1. *grandiflorus*, Wall. Cat. (*Liriodendron grandiflorum*, *Roxb. fl. ind.* 2, p. 653. *L. indicum*, *Spreng. syst.* 2, p. 642. *Magnolia pterocarpa*, *Roxb. Corom.* 3, t. 266.) দুর্লাচাঁপা, *Doolee-champa*. b. Chittagong, Sylhet. Fl. large, white, fragrant,—April and May; fr. C. S.

What may be *Liriodendron Lilifera*, *Roxb.* (*Fl. ind.* 2, p. 654.) ডেবচাঁপা, *Ouva-champa*, a large tree from the Khassya Mountains, introduced into H. C. G. before 1814, is not easy to say. It is mentioned neither in Wall. Cat., nor in Royle Ill., and to Mr. Griffith, who is familiar with Bhootan, Assam, and the Khassya Mountains, it is entirely unknown.

TALAUHA, Juss. (*G. Don's Mill. dict.* 1, p. 85.)

1. *pumila*, Bl. (*G. Don.*, *l. c.*—*Magnolia pumila*, *Andr. B. Repos.* 3, t. 227;—*B. M.* 25, t. 977;—*DC. pr.* 1, p. 81.; *Roxb. fl. ind.* 2, p. 655;—not *Spreng.*) ঝা China, Mountains of Amboyna and Java. Fl. largish, white, fragrant,—nearly throughout the year; fr. 0.

LIRIODENDRON, L. (*DC. pr.* 1, p. 82.)

1. *tulipifera*, L. (*DC. l. c.*—*B. M.* 8, t. 275.) *Tulip Tree*. b. N. America. Introduced in 1840.



Michelia Rheedii, Wight.,—Rheede, 1, t. 19. 5. Malabar. Pulney Mountains, Shavagery Hills. *M. Walkeri*, Wight. 5. Ceylon. *M. ovalifolia*, Wight. 5. Ceylon. *M. glauca*, Wight. 5. Ceylon. *M. nilagirica*, Zenker, Neelgherries. *M. pulneyensis*, Wight. ill. t. 5. L. 5. Pulney Mountains. *M. lanuginosa*, Wall. 5. Nepal. *M. lactea*, Buch. Chilmori. *M. macrophylla*, Don, Nepal.—*Manglietia insignis*, Arn. (*Magnolia insignis*, Wall. pl. as. rar. 2, t. 182.) 5. Nepal.—*Aromadendron elegans*, Bl. 5. Java.—*Talauma Rumphii*, Bl. 5. Moluccas. *T. Candollii*, Bl.,—B. Reg. 20, t. 1709. 5. Java.

ORDER VII.—WINTERACEÆ, Lindl. Nat. Syst. p. 17.

THE WINTER'S BARK TRIBE.

Shrubs or small trees, containing, under four genera, twelve species; viz. 2, inhabiting New Holland; 2, Chili; 2, Florida; 1, the vallies about the Magellan Straits; 1, New Granada; 1, Mexico; 1, Japan and China; 1, found by Mr. Griffith, on the Khassya Mountains; and 1, New Zealand.

The general properties of this order are stimulant and aromatic. The well-known Star Anise is the fruit of *Illicium anisatum*, L. Winter's Bark, the product of *Drimys Winteri*, Forst., and formerly much used in medicine, is now nearly neglected.

ILICIMUM, L. (DC.) pr. 1, p. 77.)

1. *floridanum*, Ell. (DC. l. c.,—B. M. 13, t. 439.) 5 E. Florida. Introduced into H. C. G. Fl.?

* *Illicium anisatum*, L. 5. China, Japan. *I. parviflorum*, Michx. 5 E. Florida.—*Drimys mexicana*, Moç and Sessé. Mexico.

ORDER VIII.—ANONACEÆ, Rich. Lindl. Nat. Syst. p. 18.

THE CUSTARD-APPLE TRIBE.

With few exceptions, a tropical order, chiefly inhabiting America and the East Indies, and comprehending upwards of 200 species. Nine of these have been found in tropical Africa; 1 in Egypt; 3 in Madagascar and Mauritius; 6 in China and Japan; 1 in New Caledonia; 1 in New Holland; 5 in Carolina and Florida;—and about 95 in the East Indies. Of the latter, there are 42 species of *Uvaria*; 23 of *Unona*; 17 of *Guatteria*; 5 of *Artabotrys*; 2 of *Orophea*; 1 of *Polyalthia*; 1 of *Miliusia*; 1 of *Hyalostemma*; 1 of *Lobocarpus*; 2 of *Pattonia*; and 1 of *Saccopetalum*.

All trees or shrubs, the roots, bark, leaves, and especially capsular fruits of which are distinguished by their powerful aromatic taste and smell.



The fleshy fruits are edible, and much esteemed in the tropics. (DC.)—Blume remarks, that the Javanese species require, owing to their powerful properties, to be employed with caution; for if they are administered for too great a length of time, or in too large doses, they produce vertigo, hæmorrhage, or even abortion. (Lindl.)

ANONA, L. (DC. pr. 1, p. 83;—W. and A. pr. 1, p. 7.)

1. *squamosa*, L. (DC. o. c. p. 85;—W. and A. l. c.,—Roxb. fl. ind. 2, p. 657;—B. M. 58, t. 3095;—J. Grah. Cat. B. pl. p. 2.—Rheed. 3, t. 29.—Rumph. 1, t. 46.) **अति** *Ata Custard-Apple*. 5. No doubt a native of tropical America, notwithstanding St. Hilaire's reasonings, which would make it of Asiatic origin. No Anona has, on any good authority, been found wild in Asia, and it is, perhaps, questionable, whether *A. senegalensis*, *grandiflora* and *amplexicaulis*, are true natives of Senegal and Madagascar.—Completely domesticated in India. Fl. largish, yellowish green,—H. S.; fr. July—October.—Fruit delicious. Leaves with a heavy smell. Seeds acrid, fatal to insects, and therefore by the Natives powdered, mixed with gram flour, and thus occasionally used for washing their hair. (Royle.) The fruit has, on some occasions of famine, literally proved to the Natives the staff of life. (Grah. l. c.)

2. *reticulata*, L. (DC. pr. 1, p. 85;—W. and A. pr. 1, p. 7;—Roxb. fl. ind. 2, p. 657;—B. M. 56, t. 2911-12;—J. Grah. Cat. B. pl. p. 3.—Rheede, 3, t. 30, 31.) **नौवा**, *Nona. Bullock's Heart*. 5 W. Indies.—Domesticated in India. Fl. largish, yellowish-green, of a vinous smell,—H. S.; fr. July—November.

3. *muricata*, L. (DC. pr. 1, p. 84;—Roxb. H. B. p. 43;—J. Grah. Cat. B. pl. p. 3.) *Sour Sep*. 5 W. Indies. Cultivated in India. Fl. large, yellowish-green, of a vinous smell,—September; fr. H. S.

4. *Cherimolia*, Mill. (DC. l. c.,—B. M. 45, t. 2011,—J. Grah. Cat. B. pl. p. 3.) 5 Peru, New Granada. Introduced in 1820. Has not fl. here.—Its dark purple fruit is much esteemed in S. America.

5. *Suriffa*, Roxb. (H. B. p. 43.) *b. Sylhet*.—Introduced into H. C. G. in 1794, where it fl. Feb.—April. (Roxb.)—What this species may be, we cannot determine, never having seen it. It is not mentioned in Wall. Cat., and to Mr. Griffith it is unknown. Royle Ill. p. 60, gives *Shurifa* as the Persian name for *Anona squamosa*, L., with which, however, Roxb. could not have confounded his *A. Suriffa*.

UVARIA, L. (DC. pr. 1, p. 88;—W. and A. pr. 1, p. 7.)

1. *odorata*, Lam. (W. and A. o. c. p. 8;—Roxb. fl. ind. 2, p. 661.—*Unona odorata*, Dun.—DC. o. c. p. 90.—Rumph. 2, t. 65.) 5 China, Sunda Islands, Martaban, Moluccas. Fl. large, yellowish-green, fragrant, nearly throughout the year; fr. C. S.

2. *grandiflora*, Roxb. (Fl. ind. 2, p. 665;—W. and A. pr. 1, p. 9;—Wall. pl. as. rar. 2, t. 121.—U. purpurea, Bl.;—Wall. rept.—*Unona grandiflora*, Leschen;—DC. pr. 1, p. 90.) 5 Sumatra. Fl.



large, crimson, changing to dark purple,—June and July; fr. C. S.

3. *macrophylla*, Roxb. (*Fl. ind.* 2, p. 663;—*Wall. pl. as. rar.* 2, t. 122.) 5 Silhet, Chittagong. Fl. large, dull reddish,—July and Aug.; fr. 0.

4. *bicolor*, Roxb. (*Fl. ind.* 2, p. 662.) 5 Silhet. Introduced in 1826. Fl. largish, brown red,—April; fr. R. S. (*Roxb.*)

5. *ventricosa*, Roxb. (*Fl. ind.* 2, p. 658.) 5 Tippera. Fl. greenish-white, fragrant,—March; fr. July.

6. *bracteata*, Roxb. (*Fl. ind.* 2, p. 660.) 5 Sylhet. Fl. small, pale yellowish-white. Introduced into H. C. G. in 1811. Fl. April and May; fr. Aug. and Sept. (*Roxb.*)

7. *tripetala*, Roxb. (*Fl. ind.* 2, p. 667,—not Lam.;—*Unona tripetala*, DC.) 5 Moluccas. Fl. largish, greenish-yellow, inodorous,—March, April, and May; fr. 0.

8. *elongata*, Roxb. (*H. B.* p. 43.) 5 Chittagong. Introduced into H. C. G. in 1806, and there fl. R. S. (*Roxb.*)

9. *heteroclita*, Roxb. (*Fl. ind.* 2, p. 663.) 5 Garrow Hills. Introduced into H. C. G. in 1812. Fl. June and July; fr. Oct. and Nov. (*Roxb.*)

UNONA, L. (*DC. pr.* 1, p. 88; *W. and A. pr.* 1, p. 9.)

1. *discolor*, Vahl. (*DC. o. c. p.* 91;—*W. and A. l. c.*,—*Roxb. fl. ind.* 2, p. 669;—*J. Grah. Cat. B. pl.* p. 3.—*Uvaria monilifera*, *Gärtn. fr.* 2, p. 156, t. 114, f. 2.) 5 Circars, Chittagong, Penang, Tavoy. Fl. large, yellowish. Introduced in 1840.—*Wood* chiefly used for rafters. (*Roxb.*)

2. *longiflora*, Roxb. (*Fl. ind.* 2, p. 668.) 5 Silhet. Fl. large, yellow, orange,—April and May; fr. 0.

3. *undulata*, Wall. (*Pl. as. rar.* 3, t. 295.—*Uvaria undulata*, *Roxb. H. B.* p. 43,—not Dun.) 5 Silhet, Chittagong. Fl. very large, greenish-yellowish, fragrant,—H. S.; fr. Nov.

4. *dumosa*, Roxb. (*Fl. ind.* 2, p. 670.) 5 Silhet. Fl. large.—In H. C. G.,—fl. April and May; fr. Sept. and Oct. (*Roxb.*)

5. *Dasymaschala*, Bl. (*Wall. Cat.*) 5 Singapore. In H. C. G. Fl. June; fr. —

6. *lavigata*, Wall. (*Rept.*) 5 Native place? Introduced in 1840.

7. *penduliflora*, Moç. and Sessé. (*DC. pr.* 1, p. 89.) 5 Mexico.—Introduced in 1840.

ARTABOTRYS, R. Br. (*B. Reg.* 5, t. 423;—*W. and A. pr.* 1, p. 9.)

1. *odoratissimus*, R. Br. (*B. Reg. l. c.*,—*W. and A. o. c. p.* 10;—*J. Grah. Cat. B. pl.* p. 4.—*Uvaria odoratissima*, *Roxb. fl. ind.* 2, p. 666.—*U. uncatata*, *Lour. Roxb. l. c. excl. No.* 15.—*Unona esculenta* and *uncinata*, *DC. pr.* 1, p. 90—*Rheede*, 7, t. 46.) 5 China, Cochin-China, both Peninsulas of India, Bengal, (Serampore), &c. Fl. large, greenish-yellow, fragrant,—H. and R. S.; fr. C. S.



2. *densiflorus*, Wall. (*Rept.*) 5 ~ Native place? Introduced in 1840.
- GUATTERIA, Ruiz. and Pav. (*DC. pr. 1, p. 93;—W. and A. pr. 1, p. 10.*)
1. *longifolia*, Wall. (*W. and A. l. c.,—J. Grah. Cat. B. pl. p. 4;—Wight ic. 1, t. 1.—Uvaria longifolia, Lam.;—Roxb. fl. ind. 2, p. 664, —not Bl.—Unona longifolia, Dun.;—DC. pr. 1, p. 90.*) देवदारि Debdaree.—*Mast-tree*. L. 5. Java, Tanjore, Patna. Commonly cultivated about Calcutta and Serampore. Fl. small, green,—Feb. and March; fr. R. S.—*Wood* soft and useless. (*Roxb.*)
2. *cerasoides*, Dun. (*DC. pr. 1, p. 93;—W. and A. pr. 1, p. 10;—J. Grah. Cat. B. pl. p. 4.—Uvaria cerasoides, Roxb. Corom. 1, t. 33;—fl. ind. 2, p. 666.*) L. 5. Circars, Bombay Presidency, Tull Ghaut, Jowar Forests, Monghyr. Fl. small,—April; fr. —
3. *suberosa*, Dun. (*DC. l. c.,—W. and A. l. c.,—J. Grah. l. c.—Uvaria suberosa, Roxb. fl. ind. 2, p. 667.*) বড়চাঁল, Buro-chali. 5. Peninsula of India. Mountains of Khasya, Monghir and Morung. Bengal, (Serampore). Fl. small, greenish-white,—throughout the year; fr. C. S.
4. *villosa*, (G. *velutina, Alph. DC.—Uvaria velutina, Dun. anon. 1817. —Uvaria villosa, Roxb. H. B. p. 43; (1814,) fl. ind. 2, p. 664.*) L. 5. Monghyr Mountains. Introduced into H. C. G. in 1796, and there fl. March and April; fr. July and Aug.
5. *sesquipedalis*, Colebr. (*Wall. pl. as. rar. 3, t. 266.*) 5. Khasya Mountains. Fl. middle-sized, dull yellowish. Introduced here in 1827. Fl. H. S., but rare.
6. *Badajamba*, Wall. (*Rept.—Uvaria Badajamba, Roxb. H. B. p. 43.*) 5. Chittagong.—Fl. in June and July, in H. C. G., where it was introduced in 1810.
7. *fasciculata*, Wall. (*Rept.*) Introduced here in 1827. Native place? —Fl. and fr.
- HYALOSTEMMA, Wall. (*Cat. Sine caractere!—Lindl. Nat. Syst. p. 439, No. 2.*)
1. *Roxburghianum*, Wall. (*L. c.—Uvaria dioeca, Roxb. fl. ind. 2, p. 659.*) 5 Khasya Mountains, Singapore. Has been introduced into H. C. G. Fl. and fr.—Introduced here in 1840.

* *Anona purpurea*, Moç. and Sessé. 5. Mexico. *A. laurifolia*, Dun., B. Reg. 16, t. 1328. 5 W. Indies. *A. longifolia*, Aubl. 5 Guiana. *A. palustris*, L. 5 Jamaica. *A. punctata*, Aubl. 5. Guiana. *A. paludosa*, Aubl. 5 Guiana. *A. obtusifolia*, Tuss. 5. W. Indies.—*Lobocarpus Candollianus*, W. and A. Peninsula of India—*Pattonia Walkeri*, Wight, Ceylon.—*Monodora Myristica*, Dun., B. M. 58, t. 3059. (American Nutmeg.) Equatorial Africa. Cultivated in Jamaica.—*Uvaria narum*, W. and A.; Wight ill. 1, t. 5. Peninsula of India.—*Artia*



botrys suaveolens, Bl. Penang.—*Orophea polycarpa*, Alph. DC. Banks of the Saluen river.—*Polyalthia fruticans*, Alph. DC. Tavoy. *Guatteria ananæfolia*, Alph. DC. Tavoy. *G. cinnamomea*, Alph. DC. Singapore.

SCHIZANDREÆ, Bl.—Lindl. Nat. Syst. p. 19.

With one exception, (*Villarezia*), trailing shrubs, containing 4 genera; viz. *Kadsura*, Juss.; *Sphaerostema*, Bl.; *Schizandra*, Michx.; and *Villarezia*, Ruiz and Pav. The first genus, with one species, is a Native of Japan and the Khassya Mountains; the second, with four forms, inhabits Java and Nepal. The third and fourth, each with only one species, belong to N. America and Chili.—*Leaves* aromatic. (*Lindl. B. Reg.*, not *Nat. Syst.* l. c. in which it is said, that *Schizandreæ* have no aromatic or bitter properties.) *KADSURA*, Juss. (*DC. pr.* 1, p. 83.—*Sarcocarpon*, Bl.)

1. *japonica*, Dun. (*DC. l. c.*—*Kämpf. amoen. t.* 477;—*Uvaria japonica*, L.) ♂ ∩ Japan, Khassya Mountains, Nepal.—Introduced in 1827, but has not fl. here.

SPHÆROSTEMA, Bl. (*B. Reg.* 20, t. 1688.)

1. *propinquum*, Bl. (*B. Reg. l. c.*—*Kadsura propinqua*, Wall. *tent. fl. nep. p.* 11, t. 15.) ♂ ∩ Nepal. Has been introduced into H. C. G. Fl. ?

2. *grandiflorum*, Bl. (*Kadsura grandiflora*, Wall. *tent. fl. nep. t.* 14.) ♂ ∩ Nepal.—Has been introduced into H. C. G.—Fl. ?

* *Sphaerostema axillare*, Bl. Java. *S. elongatum*, Bl. Java.—*Schizandra coccinea*, Michx.; B. M. 34, t. 1413. ♂ ∩ Carolina, Georgia.

ORDER IX.—DILLENIACEÆ, DC.—Lindl. Nat. Syst. p. 20.

Handsome trees, shrubs, or undershrubs, rarely herbs, amounting to about 115 species, of which 47 belong to New Holland and Van Diemen's Land; 42 to the E. Indies; about 30 to S. America; 3 to Madagascar; 2 to Guinea; and 1 to New Caledonia.—The Indian forms are ranged under nine genera; viz. 12 under *Tetracera*; 5-6 under *Delima*; 3 under *Wormia*; 1 under *Actinidia*; 4 under *Colbertia*; 11 under *Dillenia*; 1 under *Capellia*; 3 under *Acrotrema*; and 1 under *Schumacheria*.—With a few exceptions, the properties of the order are unknown.

TETRACERA, L. (*DC. pr.* 1, p. 67;—*W. and A. pr.* 1, p. 20.)

1. *Rheedii*, DC. (*o. c. p.* 68;—*W. and A. l. c.*—*J. Grah. Cat. B. pl. p.* 1;—*Wight ic.* 1, t. 70;—*Rheed.* 5, t. 8.) ♂ ∩ Travancore, S. Concan. Fl. middle-sized, white, fragrant. Introduced into H. C. G.—Fl. ?



DELIMA, L. (DC. pr. 1, p. 69.)

1. *hebecarpa*, DC. (o. c. p. 70; *Delessert*, ic. sel. 1. t. 72.—*Tetracera sarmentosa*, Roxb. fl. ind. 2, p. 645;—not L. 5. Java, Penang. Introduced here in 1840. Has not fl.
2. *odorata*, Wall. (Rept.) 5. Native place? Introduced here in 1840. Fl.?

DILLENIA, L. (DC. pr. 1, p. 75;—*W. and A. pr.* 1, p. 5.)

1. *speciosa*, Thunb. (DC. o. c. p. 76;—*W. and A. l. c.*,—Roxb. fl. ind. 2, p. 650;—*J. Grah. Cat. B. pl.* p. 2;—*D. indica*, L.—*Rheed.* 3, t. 38, 39.—*Rumph.* 2. t. 45.) চাঁফিচাঁফি, *Chalila*. L. 5. Moluccas, Java, Ceylon, Peninsula of India, Bengal, Chittagong, Assam. Cultivated about Serampore. Fl. very large, white, fragrant, July; fr. Feb.—*Wood* hard, tough, used to make gun-stocks. (Roxb.) *Leaflets of the calyx* agreeably acid; by the Natives eaten either raw or in curries, or used to make a sort of lemonade. *Leaves* hard, rough; and, like those of the other species, employed for polishing.
2. *scabrella*, Roxb. (Fl. ind. 2, p. 653;—*Wall. pl. as. rar.* 1, t. 22.) L. 5. Chittagong. Fl. an inch, gold-coloured, sweet-scented, January; fr.—*Calyx-leaflets* used at Chittagong, like those of No. 1. (Wall.) *Timber* good.
3. *pentagyna*, Roxb. (Corom. 1, t. 20; fl. ind. 2, p. 652; *W. and A. pr.* 1, p. 5;—*J. Grah. Cat. B. pl.* p. 2.—*Colbertia coromandeliana*, DC., pr. 1, p. 75.) L. 5. Coromandel. Banks of the Gutpurba, South Mahratta Country. Assam. Fl. 9 lines, gold-coloured, sweetish-scented, March and April; fr. Dec.—*Wood* close-grained, used for canoes in Assam. (Robinson.) *Leaves* much employed, at Poona, as a substratum for chuppered-roofs, and sold in the bazar. (J. Grah.)
4. *angusta*, Roxb. (Fl. ind. 2, p. 652.) L. 5. Garrow Hills. Introduced into H. C. G. in 1810. Fl.?
5. *pilosa*, Roxb. (Fl. ind. 2, p. 652.) L. 5. Assam near Goalpara, on the banks of the Megna. Introduced into H. C. G. in 1810.—Fl.?
Wood hard, tough, much used for canoes. (Robinson.)

WORMIA, Rottb. (DC. pr. 1, p. 75.)

1. *dentata*, DC. (L. c.) 5. Ceylon. Introduced in 1840.

* *Doliocarpus Calinea*, Grm. 5. Guiana.—*Curatella americana*, L. 5. S. America. *C. alata*, Vent. 5 Guiana.—*Tetracera malabarica*, Lam. Penang. *T. volubilis* L. 5. Barbadoes. *T. jamaicensis*, DC. 5 Jamaica.—*Davilla brasiliiana*, DC. 5 Brazil.—*Delima sarmentosa*, L.; B. M. 58, t. 3058. 5. Silhet. *D. guianensis*, Rich. 5. Guiana.—*Pleurantha bracteata*, R. Br. 5. Port Jackson. *P. nitida*, R. Br. 5. P. Jackson. *P. stricta*, R. Br. 5. Port Jackson.—*Adrastæa salicifolia*, DC. 5. Botany Bay.—*Hibbertia volubilis*, Andr. (*Dillenia speciosa*, B. M. 13, t. 449,—not Thunb.) 5. Port Jackson. *H. virgata*, R. Br. 5. Port Jackson. *H. pedunculata*, R. Br. B. Reg. 12, t.



1001. 5 Port Jackson.—*Wormia madagascariensis*, DC. 5 Madagascar.—*Dillenia ornata*, Wall. pl. as. rar. 1, t. 23. 5 Banks of the Attaran.—*Acrotrema costatum*, Jack. 4. Penang. *A. Arnottianum*, Wight. ill. 1, t. 3. 4. Malabar; wet ditches.—*Schumacheria castaneifolia*, Vahl.; Wight. ill. 1, t. 4. 5 Ceylon.

ORDER X.—APIACEÆ, Lindl. Nat. Syst. p. 21.

(Umbelliferae, Juss.)

THE CELERY TRIBE.

Herbaceous, rarely shrubby, plants, "natives chiefly of the northern hemisphere, inhabiting groves, thickets, plains, marshes, and waste places. They appear to be extremely rare in all tropical countries, except at considerable elevations, where they gradually increase in number as the other parts of vegetation acquire an extra-tropical, or mountain character. Hence, although they are hardly known in the plains of India, they abound on the mountains of the Himalaya." (Lindl.) According to DC, pr. they amounted, in 1830, to about 1000 species, of which 360 inhabit Europe; 136, S. America; 113, Caucasus and the Levant; 71, N. America; 59, S. Africa; 49, N. Africa; 38, New Holland; 31, Siberia; 11, Java; 7, New Zealand; 6, the Canaries; 6, China and Japan; 4, the Mascarenhas Islands; 3, Van Diemen's Land; 2, Tristan da Cunha; 1, St. Helena; and 1 Arabia. Twenty were common to several countries, and 18 unknown as to their native place.—The Indian species, enumerated by DC. l. c., amounted to about 74, but have now, as far as we can calculate, risen to 105; viz. 6—8 of *Hydrocotyle*; 1 of *Sanicula*; 4 of *Helosciadium*; 2 of *Laserpitium*; 5 of *Ptychotis*; 1 of *Falcaria*; 3 of *Sison*; 2 of *Ammi*? 2 of *Carum*; 3 of *Pimpinella*; 1 of *Sium*; 11 of *Bupleurum*; 2 of *Oenanthe*; 3 of *Dasyloma*; 1 of *Feniculum*; 1 of *Eriocyclus*; 1 of *Seseli*; 1 of *Cnidium*; 1 of *Trachydium*; 2 of *Hymenidium*; 3 of *Athanasia*; 3 of *Ligusticum*; 5 of *Selinum*? 1 of *Archangelica*; 1 of *Palimbia*; 3 of *Peucedanum*; 1 of *Anethum*; 1 of *Cortia*; 2 of *Pastinaca*; 8 of *Heracleum*; 1 of *Tordyliopsis*; 1 of *Torilis*; 4 of *Cherophyllum*; 1 of *Pycnocycla*; 1 of *Osmorrhiza*; 1 of *Ozodia*; 1 of *Prangos*; 1 of *Vicatia*; 1 of *Pleurospermum*; and 9 of *Hymenolana*. Royle (Ill. p. 228.) says that the whole number is 127 species for the Indian Flora, of which eleven are found in the plains and at the foot of the hills, seven only in a cultivated state, and the remainder in the mountains, with the exception of a few in the Peninsula; but if we deduct from his herbarium those forms it has in common with Wallich's Cat. and some European species, our estimation is, we suppose, pretty correct. The S. African Apiaceæ having since 1830 increased to 120 species, (Harvey's gen. of S.



African pl. 1838,) a similar augmentation has no doubt taken place, from later discoveries, in other parts of the world.

Though, according to structure, this is one of the most natural orders, yet we find its properties very different. Some species abound in resins containing a large quantity of an essential aromatic oil, and, therefore, act more or less as aromatics and stimulants, f. ex. the fruits of *Pimpinella Anisum*, (Anise,) *P. magna*, *P. Saxifraga*, *Carum Carvi*, (Caraway,) *Anethum graveolens*, (Dill,) *Faniculum vulgare*, (Fennel,) *F. Panmori*, *Cuminum Cyminum*, (Cumin,) *Coriandrum sativum*, (Coriander,) &c. The leaves of *Petroselinum sativum*, (Parsley,) *Apium graveolens*, (Celery,) *Anthriscus Cerefolium*, (Chervil,) &c.; the roots of *Celery*, *Meum athamanticum*, *Pastinaca sativa*, (Parsnip,) *Archangelica officinalis*, (Garden Angelica,) *Imperatoria Ostruthium*, (Masterwort,) *Crithmum maritimum*, (Samphire,) *Levisticum officinale*, *Sium Sisarum*, &c.—as well as the root of *Daucus Carota*, (Carrot,) *Arracacha esculenta*, *Oenanthe pimpinelloides*, *Carum Bulbocastanum*, *Chaerophyllum tuberosum*, *Eryngium campestre* and *aquaticum*, &c. are especially, when cultivated, wholesome articles of food, while the leaves of *Prangos pabularis* yield abundant fodder for cattle.

Other umbelliferæ, in which the abounding essential oil and mucilage change, the former to resin, the latter to gum, yield from wounds in the stem, or from the top of the root, dense juices well known under the name of fetid gum-resins, and some of them medicinally invaluable, f. ex. *Galbanum officinale*, D. Don; *Opoponax Chirionium*, Koch; *Ferula Asafetida* L.; *F. persica*, Willd.; *Dorema Ammoniacum*, D. Don, &c.—Others, lastly, in which a bitterish principle without aroma predominates, are generally speaking, suspicious, and offer in a high degree narcotically poisonous, f. ex. *Oenanthe crocata*, L.; *O. Phellandrium*, Lam.; *Conium maculatum*, L.; (Common Hemlock), *Æthusa Cynapium*, L. (Fool's Parsley); *Cicuta viciosa*, L. (Water Hemlock); &c. Of the Indian species of this order none has been found poisonous.

HYDROCOTYLE, Tourn. (*DC. pr.* 4, p. 59. *W. and A. pr.* 1, p. 366.)

1. *asiatica*, L. (*DC. pr.* 4, p. 54;—*W. and A. pr.* 1, c.;—*Roxb. fl. ind.* 2, p. 88;—*J. Grah. Cat. B. pl.* p. 84.—*Rheed*, 10, t. 46.) थलकूडी *Thulkooree*, १. Asia, Africa, America.—Fl. small, purplish red, R. and CS.—fr. C. S.

2. *rotundifolia*, Roxb. (*fl. ind.* 2, p. 88;—*DC. pr.* 4, p. 64.) १. Silhet. In H. C. G.; fl. R. S.; fr. C. S.

ASTRANTIA, Tourn. (*DC. pr.* 4, p. 86.)

1. *helleborifolia*, Salisb. (*DC. o. c. p.* 87.—*A. maxima*, Pall.—*B. M.* 38. t. 1553.) १. Caucasus. Fl. largish, pale rose-coloured, C. S.

APIUM, Hoffm. (*DC. pr.* 4, p. 100;—*W. and A. pr.* 1, p. 367.) *Celery*.

1. *graveolens*, L. (*DC. o. c. p.* 101.—*W. and A. l. c.*;—*Roxb. H. B.* p. 22;—*J. Grah. Cat. B. pl.* p. 84;—*E. B.* 17, t. 1210.) *Common Celery*. ♂. Whole of Europe down to Caucasus. Falkland-Islands. Cultivated in India. Fl. small, greenish-white, Feb.; fr. March and April.



PETROSELINUM, Hoffm. (DC. *pr.* 4, p. 102.) *Parsley*.

1. *sativum*, Hoffm. (DC. *l. c.*—*Apium* Petroselinum, L. *Roxb. H. B.* p. 22;—*J. Grah. Cat. B.* pl. p. 84.) *Common Parsley* বিজাতিপিউসিলি Bilati Pitursilli. ♂ Sardinia; Greece; Turkey, near Constantinople, &c. Fl. small, yellowish, C. S.; fr. H. S. Cultivated in India.

2. *segetum*, Koch. (DC. *pr.* 4, p. 102.—*Sison segetum*, L.; *E. B.* 4, t. 228.) ♂ England, France, Switzerland. Fl. very small, pale rose-coloured, C. S.; fr. H. S.

HELOSCIADIUM, Koch. (DC. *pr.* 4, p. 104;—*W. and A. pr.* 1, p. 367.)

1. *Heyneanum*, DC. (o. c. p. 106;—*W. and A. o. c. p.* 368.—*Anethum trifoliatum*, *Roxb. fl. ind.* 2, p. 96.) ☉ Circars. Fl. C. S.

PTYCHOTIS, Koch. (DC. *pr.* 4, p. 107;—*W. and A. pr.* 1, p. 368.)

1. *Ajowan*, DC. (o. c. p. 109;—*W. and A. l. c.*—*J. Grah. Cat. B.* pl. p. 84.—*Ligusticum Ajowan*, *Roxb. fl. ind.* 2, p. 91.) বড়ষোআন Boro-joan. ☉ Native place? Cultivated all over India. Fl. small, white, C. S.; fr. H. S.—*Seeds* of an aromatic smell, a warm, pungent taste; much used by the natives for medicinal and culinary purposes.

SISON, L. (DC. *pr.* 4, p. 110.)

1. *Amomum*, L. (DC. *l. c.*;—*E. B.* 14, t. 954.) ♂ ☉ England, France, Geneva, Italy, Greece. Fl. small, white, C. S.; fr. H. S. *Seeds* pungent, aromatic.

CARUM, Koch. (DC. *pr.* 4, p. 114.)

1. *Carvi*, L. (DC. *o. c. p.* 115;—*E. B.* 21, t. 1503.) *Common Caraway*. ♀ Europe. Fl. small, whitish, C. S., but rare; fr. 0.

PIMPINELLA, L. (DC. *pr.* 4, p. 119; *W. and A. pr.* 1, p. 368.)

1. *Anisum*, L. (DC. *l. c. p.* 122.) ☉ Island of Scio, Egypt. Cultivated in Europe. Fl. small, white, C. S.; fr. H. S. *Seeds* (common *Aniseeds*) aromatic, pungent, sweetish.

- ? 2. *involutrata*, *W. and A. (Pr.* 1, p. 369;—*Wight. icon.* 2, t. 335.) *Apium involutratum*, *Roxb. H. B.* p. 22.—*Apium*, *Roxb. fl. ind.* 2, p. 97. *Ptychotis Roxburghiana*, DC. *pr.* 4, p. 109.) রাধনী Radhune. ☉ Cultivated all over Bengal, at Singapore, Prome, &c. Native place? Fl. small, white, Febr.; fr. March and April. *Seeds* used by the natives for culinary and medicinal purposes. The *leaves*, though of an unpleasant smell, are now and then used as a substitute for Parsley by Europeans.

ORNANTHE, Lam. (DC. *pr.* 4, p. 136.)

1. *Phellandrium*, Lam. (DC. *l. c. p.* 138.—*Phellandrium aquaticum*, L. *E. B.* 10, t. 684.) *Water Hemlock*. ♂ Watery places of Europe, Tauria, Siberia. Fl. small, white, C. S.; fr. 0, ☉. *Leaves* and *seeds* smelling and tasting somewhat like those of Chervil, but suspicious, if not really dangerous.
2. *stolonifera*, DC. (*pr.* 4, p. 138.—*Phellandrium stoloniferum*, *Roxb. fl. ind.* 2, p. 93.) পাণতোঁরাসি Pantorasee, ♀ Bengal. Fl. small, white,



C. and H. S.; fr. H. S. Leaves and seeds somewhat unpleasantly aromatic. Not used among the natives. (Roxb.)

DASYLOMA, DC. (Pr. 4, p. 140.)

1. *bengalense*, DC. (L. c.—*Seseli bengalense*, Roxb. fl. ind. 2, p. 94.)

© Bengal.—In H. C. G. fl. Feb.; fr. H. S.

2. *glaucum*, DC. (L. c.) India? Cultivated in H. C. G. (DC.)

ARTHUSA, L. (DC. pr. 4, p. 141.)

1. *Cynapium*, L. (DC. l. c.;—E. B. 17, t. 1192.) *Fool's Parsley*. © Europe. Fl. small, white C. S.; fr. O. The whole plant has a dull dark green appearance, and nauseous garlick-scent. It is a deadly poison.

FOENICULUM, Adans. (DC. pr. 4, p. 142;—W. and A. pr. 1, p. 370.)

1. *vulgare*, Gärtn. (DC. l. c.;—W. and A. o. c. p. 371;—J. Grah. Cat. B. pl. p. 84.—*Anethum Foeniculum*, L.; Roxb. H. B. p. 22;—E. B. 17, t. 1208.) *Common Fennel*. ♂ Europe. Fl. small, yellow, Febr.; fr. March and April.

2. *Panmori*, DC. (Pr. 4, p. 142.—*Anethum Panmori*, Roxb. fl. ind. 2, p. 94.) পানমুহুরি *Pan-muhoree*. © Native place? Cultivated in Bengal. Fl. small, bright-yellow, Febr.; fr. March and April. Seeds of a pleasant, sweet, warmish taste, used for culinary and medicinal purposes, especially among the natives.

CNIDIUM, Cusson. (DC. pr. 4, p. 152.)

1. *diffusum*, DC. (o. c. p. 153.—*Ligusticum diffusum*, Roxb. fl. ind.

2, p. 92.) বনযোআন *Bunjoan*. © Lower Bengal. (Serampore.) Fl. small, white, C. S.; fr. H. S. Seed used as a medicine for cattle. (Roxb.)

ANETHUM, L. (DC. pr. 4, p. 185;—W. and A. pr. 1, p. 371.)

1. *Sowa*, Roxb. (Fl. ind. 2, p. 96;—DC. o. c. p. 186;—W. and A. o. c. d. 372.) শুলফা *Soolpha*. © Peninsula of India. Bengal, (Serampore.) Cultivated. Fl. small, yellow, Febr.; fr. March and April. Seeds aromatic, used for culinary and medicinal purposes among the natives.

2. *graveolens*, L. (DC. pr. 4, p. 96;—Roxb. H. B. p. 22;—Fl. dan. t. 1572.) *Dill*. © S. Europe, Astracan, Egypt. Fl. small, yellow, Feb.; fr. March and April.

3. *segetum*, L. (DC. pr. 4, p. 96.) © France, Portugal, Sardinia, Greece, Persia. Fl. small, yellow, C. S.; fr. February and March.

PASTINACA, L. (DC. pr. 4, p. 188.)

1. *sativa*, L. (DC. l. c.;—Roxb. H. B. p. 22;—J. Grah. Cat. B. pl. p. 84.)

a. *sylvestris*. (E. B. 8, t. 556.) *Wild Parsnip*. ♂ Europe, down to Caucasus. Fl. small, pale yellow, C. S.

β. *edulis*. *Cultivated Parsnip*.

TORDYLIUM, L. (DC. pr. 4, p. 197.)

1. *officinale*, L. (DC. o. c. p. 198;—E. B. 34, t. 2440.) © England, Portugal, S. France, Italy, Greece. Fl. smallish, white, C. S.; fr. H. S.



ARUBERA, Hoffm. (DC. pr. 4, p. 199.)

1. *leptophylla*, Hoffm. (DC. l. c.) ☉ Canaries, Madeira, Spain, Portugal, Greece, &c. Fl. small, white, Feb.; fr. March and April.

CUMINUM, L. (DC. pr. 4, p. 201;—W. and A. pr. 1, p. 373.)

1. *Cuminum*, L. (DC. l. c.—W. and A. l. c.—Roxb. fl. ind. 2, p. 92;—J. Grah. Cat. B. pl. p. 84.) Cumin. Jeera. ☉ Upper Egypt, Æthiopia. Fl. small, white, C. S.;—fr. —

DAUCUS, L. (DC. pr. 4, p. 209.—W. and A. pr. 1, p. 374.)

1. *Carota*, L. (DC. o. c. p. 211.—E. B. 17, t. 1174.)—Wild Carrot. ♂ Europe, Tauria, Caucasus, &c. Fl. small, cream-coloured,—C. S. fr. H. S.

β. *sativa*, W. and A. l. c.;—Roxb. fl. ind. 2, p. 90;—J. Grah. Cat. B. pl. p. 84. Cultivated Carrot. गाजर Gajur, Fl. C. S.—fr. H. S.—Forms a staple article of food in the eastern parts of the Deccan, during the cold season. (Dr. Gibson.)

TORILIS, Spr. (DC. pr. 4, p. 218;—W. and A. pr. 1, p. 374.)

1. *Anthriscus*, Gmel. (DC. l. c.—W. and A. l. c.—Caucalis Anthriscus, Scop.; E. B. 14, t. 987.) ☉ Europe. Fl. small, white, tipped with purple, Feb.; fr. March.

SCANDIX, L. (DC. pr. 4, p. 220.)

1. *Pecten Veneris*, L. (DC. o. c. p. 221;—E. B. 20, t. 1397.) Needle Chervil. ☉ Europe, Levant. Fl. small, white, C. S; fr. H. S.

ANTHRISCUS, Hoffm. (DC. pr. 4, p. 222.)

1. *vulgaris*, Pers. (DC. o. c. p. 224.—Scandix Anthriscus, L.; E. B. 12, t. 818.) Rough Chervil. ☉ Europe, down to Tauria. Fl. small, white, C. S; fr. H. S.

2. *Cerefolium*, Hoffm. (DC. o. c. p. 223.—Scandix Cerefolium, L.; E. B. 18, t. 1268.) Garden Chervil. ☉ Europe. Fl. small, white, C. S.; fr. H. S.

CORIANDRUM, L. (DC. pr. 4, p. 250.)

1. *sativum*, L. (DC. l. c. Roxb. fl. ind. 2, p. 94;—J. Grah. Cat. B. pl. p. 85;—E. B. 1, t. 67.) Coriander. धनिया Dhunya. ☉ Greece, Levant, Tartary. Cultivated in India. Fl. small, white, C. S.; fr. H. S.

* *Didiscus coeruleus*, Hook. B. M. 55, t. 2875. ☉ N. Holl. *Spananthe paniculata*, Jacq. ☉ Caracas. *Trinia Kitaibelii*, Bieb. ♂ Tauria. *Ptychotis heterophylla*, Koch. ♂ S. Europe. *P. verticillata*, Duby. ☉ Portugal. *P. coptica*, DC. ☉ Egypt. *Amni majus*, L. ☉ ♂ S. Europe. *A. Visnaga*, Lam. ☉ ♂ (Herb aux cure-dents.) S. Europe. *Hasselquistia ægyptica*, L. ☉ Egypt. *Tordylium maximum*, L. E. B. 17, t. 1173. ☉ England, S. Europe. *Arracacha esculenta*, DC. B. M. 58, t. 3092. 4. Sta Fé de Bogota. *Smyrniolum Olusatrum*, L.; E. B. 4, t. 230. ♂ England. S. Europe.



ORDER XI.—HEDERACEÆ, A. Rich. (Bot. med.—as to the name.)

Araliaceæ, A. Rich. Dict. class. d'hist. nat.—Lindl. nat. syst. p. 25.

THE IVY TRIBE.

Trees, shrubs, (sometimes climbing) rarely herbs, according to DC. pr. (1830) containing 14 genera and 123 species: 46 from the E. Indies; 42 from S. America; 8 from N. America; 5 from N. Zealand; 4 from the W. Indies; 3 from China; 3 from Japan; 3 from S. Africa; (5 *Harvey*) 3 from Mauritius and Bourbon; 1 from Madagascar; 2 from New Holland and the Sandwich Islands; 2 from Europe; and 1 unknown, as to its native place.—The E. Indian forms have since risen to 75; viz. 22 of *Panax*; 1 of *Gilbertia*? 1 of *Toricellia*; 2 of *Aralia*; 10 of *Sciodaphyllum*; 27 of *Hedera*; 9 of *Paratropia*; and 3 of *Arthrophyllum*. The greatest number of these inhabit the Moluccas, Java, and the Himalayas; the rest have been discovered on the Khassya mountains, in the two Peninsulas of India, Ceylon and Cochin China.—We are not acquainted with Endlicher's genus, *Botryodendron*.

"The plants of this family are not possessed of very decided medical properties, though the *Ginseng*, produced by *Panax quinquefolia*, L., has been more celebrated than plants of greater value. This plant, produced in the mountains of Chinese Tartary, between 39° and 47°, was recognized from the description in Canada and Virginia, whence it is now exported to China. Subsequently the same plant, or a species so closely allied to it, that Dr. Wallich had called it *Panax Pseudo-Ginseng*, (Pl. as. rar. 2, t. 137), was discovered by him on Sheopore, at an elevation of 9000 to 10,000 feet, an additional instance of the existence of similar plants in the mountains of China, N. America, and the Himalayas." (*Royl. ill. p. 233* and 234.) *Aralia nudicaulis*, L. is used in N. America as a substitute for Sarsaparilla.

PANAX, L. (DC. pr. 4, p. 252;—*W. and A. pr.* 1, p. 376.) *Panax*, acis, f. Lucret.

1. *aculeata*, Ait. (DC. l. c.;—*Jacq. icon. rar.* 3. t. 634.) 5. China. Fl. small, greenish, C. S.
2. *cochleata*, DC. (o. c. p. 253;—*J. Grah. Cat. B. pl.* p. 85. *Panax conchifolium*, *Roxb. fl. ind.* 2, p. 77.—*Rumph.* 4. t. 31.) 5. Moluccas, Java. Does not fl. in Bengal, and rarely in the Moluccas. *Whole plant*, when dried, strongly smelling of Celery.
3. *fragrans*, Roxb. (*Fl. ind.* 2. p. 76;—DC. pr. 4, p. 254;—*J. Grah. Cat. B. pl.* p. 85.) 5. Khassya Mountains, Nepal. Fl. small, fragrant C. S; fr. H. S.
4. *fruticosa*, L. (DC. pr. 4, p. 254;—*Roxb. fl. ind.* 2, p. 76;—*W. and A. pr.* 1, p. 376;—*J. Grah. Cat. B. pl.* p. 85;—*B. Repos.* 9. t. 595.—*Rumph.* 4. t. 33.) 5. Moluccas, Java. Fl. small, brownish green,



May and June; fr. C. S. *Pulp of berries* stains paper of a dark violet colour. *Whole plant*, especially dried, smelling strongly of Celery.

5. *digitata*, Roxb. (*Fl. ind.* 2, p. 75.) 5. Silhet. Fl. small, greenish-yellow. In H. C. G.—fl. C. S.; fr. H. S. (*Roxb.*)

6. *palmata*, Roxb. (*Fl. ind.* 2, p. 74.) 5. Chittagong. Fl. small, white. In H. C. G.—fl. Sept. and Oct.; fr. Nov. (*Roxb.*)

SCIODAPHYLLUM, P. Browne. (*DC. pr.* 4, p. 259.)

? 1. *pulchrum*, Wall. 5. Native place? In H. C. G. fl. Feb.

PARATROPIA, DC. (*Pr.* 4, p. 265;—*W. and A. pr.* 1, p. 377.)

1. *digitata*, (P. venulosa, *W. and A. l. c.*;—*Wight. ill.* 2, t. 118;—*J. Grah. Cat. B. pl.* p. 85.—*Aralia digitata*, *Roxb. fl. ind.* 2, p. 107.—*not Willd. Rheed.* 7, t. 28.) 5. Circars, Lukshmepur. Fl. small, greenish-yellow, April and May; fr. R. S. *Leaves*, when rubbed, smelling of turpentine.

2. *umbraculifera*, Wall. (*Rept.*—*Aralia umbraculifera*, *Roxb. fl. ind.* 2, p. 108.—*Rumph.* 1. t. 53, p. 1.) 5. Moluccas. Fl. small, greenish, April.

HEDERA, L. (*DC. pr.* 4, p. 261;—*W. and A. pr.* 1, p. 376.) *Ivy.*

1. *palmata*, Wall. Cat. (*Gastonia palmata*, *Roxb. fl. ind.* 2, p. 407;—*B. Reg.* 11. t. 894. *Gilibertia palmata*, *DC. pr.* 4, p. 256.) 5. Chittagong, Nepal. Fl. largish, white.—In H. C. G. Fl.?

2. *heterophylla*, Wall. Cat. Penang. In H. C. G. Fl.?

* *P. attenuata*, Swz. 5 W. Indies. *P. chrysophylla*, Vall. 5. Guiana,—*Paratropia Wallichiana*, W. and A. 5. Courtallum. *Gastonia cutispongia*, Lam. 5. Bourbon. (*Bois d'éponge.*) *Hedera repanda*, W. and A. (*Gilibertia repanda*, DC.) 5. Mauritius. *H. paniculata*, W. and A. (*Gilibertia paniculata*, DC.) 5. Mauritius. *H. terebinthacea*, Vall. Penang. Courtallum.

ORDER XII.—GROSSULACEÆ, Mirb. Lindl. Nat. Syst. p. 26.

THE CURRANT TRIBE.

Shrubs, unarmed or thorny, arranged under 5 genera (*Spach.*) containing, according to DC. pr. (1828), 53 species, of which 49 inhabit N. America; 6 Siberia; 5 Europe; 2 Caucasus; 1 Syria; 11 Mexico, Chili and Peru; and 1 the vicinity of the Straits of Magellan. Three of these are common to several countries, and 1 unknown, as to its native place. Six or more have since been added from N. America, and 4 from the *Himalayas*. To this order belong *Ribes Grossularia*, L. (Gooseberry); *R. rubrum*, L. (Red Currant); and *R. nigrum*, L. (Black Currant.) Their refreshing flavour is well known, whereas the fruit of the other species is unpleasantly acrid.



Ribes, L. (DC. *pr.* 3, p. 477.)

1. *Grossularia*, L. (*E. B.* 18, t. 1291. *R. uva crispa*, L. ξ *sativum*, DC. o. c. p. 478.) ξ Europe, Siberia. Cultivated. This is the only species of the order, which has fl. here, and that only once in the H. S. Wall. Cat. mentions it as an inhabitant of Buddrinath, near the almost inaccessible sources of the Ganges; Royle, however, puts it down as a distinct species, under the name of *R. Himalense*.

* *Ribes orientale*, Poir. ξ Syria.

ORDER XIII.—ESCALLONIACEÆ, Lindl. Nat. Syst. p. 27.

Handsome shrubs, of 7 genera, and 34 species: 23 in S. America, at elevations of 6,000 to 14,760 feet (*Humb.*); 2 in N. America; 1 in Bourbon; 2 in New Holland; 1 in Van Diemen's Land, and 5 in the E. Indies. (*Polyosma*).—Properties unknown.

Itea, L. (DC. *pr.* 4, p. 6.)

1. *virginica*, L. (DC. l. c.;—*B. M.* 50, t. 2409.) ξ Pennsylvania.—Lately introduced.

* *Forgesia borbonica*, Pers. 5 Bourbon.—*Polyosma fragrans*, Bennet. (*Itea*? *fragrans*, Wall.) ξ Singapore. *P. Wallichii*; Bennet. ξ Khas-sya mountains.

ORDER XIV.—BERBERACEÆ, Lindl. Nat. Syst. p. 29.

THE BERBERRY TRIBE.

Shrubs or perennial herbs, of 10 genera, and more than 60 species: 23 S. American; 6 N. American; 5 European; 3 Siberian; 4 from the Levant; 2 from China; 5 or more from Japan; and 9 (*Berberis*) from India. Of the latter, 6 are Himalayan; 2 from the Neelgherries; and 1 from Kunawur.—The common Berberry is well known.—Properties of the rest of no great importance.

Berberis, L. (DC. *pr.* 1, p. 105; *W. and A. pr.* 1, p. 15.)

1. *asiatica*, Roxb. (*Fl. ind.* 2, p. 182;—DC. o. c. p. 107;—*Deless. icon. sel.* 2, t. 1.) ξ Nepal, Kemaon. Fl. small, yellow, February and March; fr. R. S.
2. *Leschenaultii*, Wall. (*W. and A. pr.* 1, p. 16.—*Mahonia Napaulensis*, DC. β . *Roxburghii*, DC. *pr.* 1, p. 109.—*Berberis pinnata*, *Roxb. fl. ind.* 2, p. 184.) ξ Neelgherries, alt. 8000 f. Munipore. (*Roxb.*) Fl. smallish, bright yellow, January.



B. aristata, DC. (pr. 1, p. 106;—*B. M.* 52, t. 2549.—*B. Chitria*, Buch. *B. Reg.* 9, t. 726.) 5 Nepal, Kemaon, Mussooree.—Introduced into H. C. G. Fl. ?

NANDINA, Thunb. (*DC. pr.* 1, p. 109.)

1. *domestica*, Thunb. (*DC. l. c.*;—*Roxb. fl. ind.* 2, p. 184;—*B. M.* 28, t. 1109.) 5 Japan.—Has not fl. here, though cultivated for many years.

* *Berberis ruscifolia*, Lam. 5. Buenos Ayres. *B. Lycium*, Royle. 5. Mussooree, 3000 f. alt. *B. tinctoria*, Lesch. Wight. icon. 1, t. 8. 5. Neelgherries. *B. Nepalensis*, Spr. 5. Nepal. *B. dealbata*, Lindl. *B. Reg.* 21, t. 1750. = 5. Mexico. *B. tenuifolia*, Lindl. 5. Vera Cruz.

ORDER XV.—VITACEÆ, Lindl. Nat. Syst. p. 30.

THE VINE TRIBE.

Climbing, sarmentose, sometimes simple shrubs, rarely herbs. Excluding 8 of DC's untenable species, his pr. (1824) enumerates, under 5 genera, 102 forms; viz. 32 E. Indian; 20 S. American; 11 N. American; 11 W. Indian; 4 from Madagascar, Bourbon and Mauritius; 4 S. African; 4 from Guinea; 1 from Zanguebar; 4 Arabian; 3 Syrian and Armenian; 2 Japanese; 2 from Timor; 1 from New Holland; and 3 unknown, as to their native place. Since then, the number of forms has been considerably increased, f. ex. in S. Africa to 16, (*Harvey*.) and in the E. Indies to 108. Of the latter, 87 species belong to (*Vitis*; *Vitis*, *Cissus* and *Ampelopsis*, Auct.) 20 to *Leea*; and 1 to *Pterisanthes*. There can, however, be no doubt, that upon a strict examination of authentic specimens, the number will be much reduced, as the leaves, from which their specific characters are chiefly drawn, are but little to be relied on either in *Vitis* or *Leea*.

The properties of the grape and its products are well known. The leaves of several species are acrid, or astringent, or sometimes with the young shoots and fruit so acrid, that according to Wight. (*Ill.* 1, p. 151.) the mere taste of a berry, is sufficient to cause in a short time the most insufferable sense of burning all over the mouth and fauces, lasting for several hours. With the exception of, perhaps, the N. American Fox-grapes, the grape-vine would seem to be the only species of Vitaceæ possessed of valuable properties.

VITIS, L. (*R. Br., W. and A. pr.* 1, p. 125.) Vine.

1. *quadrangularis*, Wall. (*W. and A. l. c.*; *Wight. icon.* 1, t. 51. *Cissus quadrangularis*, L. *DC. pr.* 1, p. 628.—*Roxb. fl. ind.* 1, p. 407; *ed. Carey*, 1, p. 426;—*J. Grah. Cat. B. pl. p.* 33;—*Rheed.* 4, t. 41;—*Rumph.* 5, t. 44, f. 2.) *হুজুরা* *Hurjora*. 4. Both Peninsulas of India, Bengal, (Serampore.) Fl. small, white, R. S.; fr. C. S. *Tender leaves and young shoots* eaten by the natives. *Berries* very acrid.

2. *pallida*, W. and A. (*pr.* 1, p. 125;—*Wight. icon.* 1, t. 50.—*Cissus vitiginea*, *Roxb. fl. ind.* 1, p. 406; *ed. Carey*, 1, p. 424, not L.;—*J. Grah. Cat. B. pl.* p. 33.) গোড়াঝিরা Gooliya-luta. 5 ~ Peninsula of India. Bengal (Serampore.) fl. small, red, R. S.; fr. C. S.
3. *cordata*, (*Cissus cordata*, *Roxb. fl. ind.* 1, p. 407. excl. syn. *Rheed.*;—*ed. Carey*, 1, p. 425;—*J. Grah. Cat. B. pl.* p. 32;—*Rumph.* 5, t. 164. f. 1.) 5 ~ Amboyna. Fl. small, purplish. In H. C. G. fl. R. S. (*Roxb.*) Leaves very acrid.
4. *glauca*, W. and A. (*pr.* 1, p. 126.—*Cissus glauca*, *Roxb. fl. ind.* 1, p. 406; *ed. Carey*, 1, p. 425;—*DC. pr.* 1, p. 628;—*J. Grah. Cat. B. pl.* p. 32.) গুরগোয়া Gur-goalya. 5 ~ Travancore, Permacoil. The Concans. Bengal, (Serampore.) Fl. small, H. S.; fr. R. S.
5. *adnata*, Wall. (*W. and A. pr.* 1, p. 126;—*Wight. icon.* 1, t. 144. *Cissus adnata*, *Roxb. fl. ind.* 1, p. 405; *ed. Carey*, 1, p. 423;—*DC. pr.* 1, p. 627.—*Cissus latifolia*, *Vahl.*—*DC. o. c.* p. 628; not Lam.;—*J. Grah. Cat. B. pl.* p. 32, excl. syn. *Rumph.*) 5 ~ Both Peninsulas of India. Bengal, (Serampore.) Fl. small, green, May and June; fr. Sept.
6. *pentagona*, (*Cissus pentagona*, *Roxb. fl. ind.* 1, p. 408; *ed. Carey*, 1, p. 426.) 5 ~ Chittagong. In H. C. G. Introduced in 1810, but had not fl. up to 1814.
7. *carnosa*, Wall. (*W. and A. pr.* 1, p. 127;—*Wight. icon.* 1, t. 171.—*Cissus carnosia*, *Roxb. fl. ind.* 1, p. 409; *ed. Carey*, 1, p. 427.—*J. Grah. Cat. B. pl.* p. 33.—*Rheed.* 7, t. 9. *Rumph.* 5, t. 166. f. 2.) 5 ~ Both Peninsulas of India. Bengal, (Serampore.) Plains of N. India. Fl. small, green, R. S.; fr. C. S. The tender leaves are according to Rumphius, eaten as a pot-herb in Amboyna. In Bengal no use is made of the plant, nor is there a native name for it.
8. *elongata*, Wall. (*W. and A. pr.* 1, p. 128.—*Cissus elongata*, *Roxb. fl. ind.* 1, p. 411; *ed. Carey*, 1, p. 429;—*DC. pr.* 1, p. 631.) ধেনা Dhenā. 5 ~ Mountains of Coromandel. Bengal, (Serampore.) Fl. small, purplish-green, H. S.; fr. R. S.
9. *angustifolia*, Wall. (*Wight. icon.* 1, t. 176.—*Cissus angustifolia*, *Roxb. fl. ind.* 1, p. 408;—*ed. Carey*, 1, p. 427.) 5 ~ Fl. small, greenish-yellow.—In H. C. G. fl. Feb.; fr. Sept. (*Roxb.*)
10. *lanceolaria*, Wall. (*W. and A. pr.* 1, p. 128;—*Wight. icon.* 1, t. 28, and 177.—*Cissus lanceolaria*, *Roxb. fl. ind.* 1, p. 412; *ed. Carey*, 1, p. 430;—*DC. pr.* 1, p. 632;—*J. Grah. Cat. B. pl.* p. 33.) 5 ~ Both Peninsulas of India; Silhet; Nepal. Fl. small, pale yellow, Feb. and March.
11. *pedata*, Wall. (*W. and A. pr.* 1, p. 128.—*Cissus pedata*, *Lam.*;—*Vahl.*;—*Roxb. fl. ind.* 1, p. 413;—*ed. Carey*, 1, p. 431;—*DC. pr.* 1, p. 632;—*J. Grah. Cat. B. pl.* p. 33;—*Rheed.* 7, t. 10.) 5 ~ Both Peninsulas of India. Bengal, (Serampore.) as far as Monghyr. Fl. small, green, R. S.; fr. C. S.



12. *auriculata*, Wall. (*W. and A. pr.* p. 129;—*Wight. icon.* 1, t. 145.—*Cissus auriculata*, *Roxb. fl. ind.* 1, p. 411;—*ed. Carey.* 1, p. 430;—*J. Grah. Cat. B. pl.* p. 246;—*DC. pr.* 1, p. 632.) ५ ∪ Both Peninsulas of India. Rajmahl.—Fl. small, green, and fr. throughout the year.
13. *serrulata*, Wall. (*Cat.*—*Cissus serrulata*, *Roxb. fl. ind.* 1, p. 414;—*ed. Carey.* 1, p. 432;—*DC. pr.* 1, p. 632.) ५ ∪ Chittagong. In H. C. G. fl. April and May. (*Roxb.*)
14. *vinifera*, L. (*DC. pr.* 1, p. 633;—*W. and A. pr.* 1, p. 130;—*J. Grah. Cat. B. pl.* p. 33;—*Roxb. H. B.* p. 18;—*Jacq. icon, rar.* 1, t. 50.) *Grape Vine*. অঙ্গুরের গাছ *Angoorer-gachh*. ५ ∪ Country round the Caspian Sea, Armenia, Caramania; cultivated in India. Fl. small, greenish, Feb. and March; at Serampore good grapes are to be had in April and May.
15. *latifolia*, *Roxb.* (*Fl. ind.* 1, p. 661; *ed. Carey.* 2, p. 474;—*W. and A. pr.* 1, p. 130;—*Rheed.* 7, t. 11?) ২. ∪ Hills of Coromandel, Bengal, (Serampore). Kheree jungles. Fl. small, reddish-brown, May and June; fr. July and August.
16. *lanata*, *Roxb.* (*Fl. ind.* 1, p. 660; *ed. Carey.* 2, p. 474;—*W. and A. pr.* 1, p. 131;—*V. Heyneana*, *DC. pr.* 1, p. 634.) ৫ ∪. Circars, Bengal, (Serampore.) Assam, Khasia Mountains, Sirmore, Kemaon, Deyra Dhoon. Fl. small, green, April and May; fr. R. S.
17. *indica*, L. (*DC. pr.* 1, p. 634;—*Roxb. fl. ind.* 1, p. 660; *ed. Carey.* 2, p. 473;—*W. and A. pr.* 1, p. 131;—*J. Grah. Cat. B. pl.* p. 33;—*Rheed.* 7, t. 6.) আমলৌকা *Amclouka*. ৫ Peninsula of India, Bengal, (Serampore.) Fl. small, yellowish, March and April; fr. June, July, and August.
18. *parvifolia*, *Roxb.* (*Fl. ind.* 1, p. 662;—*ed. Carey.* 2, p. 475.) ৫. Khasia Mountains, Nepal, Sirmore. Fl. minute, green. In H. C. G. fl. March and April. (*Roxb.*)
19. *glandulosa*, Wall. (*Roxb. fl. ind. ed. Carey.* 2, p. 479.) ৫ ∪ Nepal. Fl. small, in H. C. G., May and June. (*Wall.*)
- Vitis capensis* has been many years in the garden here, but has never fl.
- LEE, L. (*DC. pr.* 1, p. 635;—*W. and A. pr.* 1, p. 131.)
1. *macrophylla*, *Roxb.* (*Fl. ind.* 1, p. 653; *ed. Carey.* 2, p. 465;—*J. Grah. Cat. B. pl.* p. 247;—*not DC.*) ঢোলমুদ্রিয়া *Tolsmoodriya*. ২. Bengal, (Serampore.) Both Concans. Towards the Ghauts. Fl. small, white, R. S.; fr. C. S.—*Root* astringent, mucilaginous. (*Roxb.*) Reputed to be a remedy for the Guinea-worm. (*J. Grah. l. c.*)
2. *crispa*, L. (*DC. pr.* 1, p. 635;—*Roxb. fl. ind.* 1, p. 654, *ed. Carey.* 2, p. 467, excl. syn. *Rheede.* L. pinnata, *Andr. B. Repos.* 5, t. 355.) বনচালিতা *Bun-chalita*. ২. Silhet, Burma, Lower Bengal, (Serampore.) Fl. small, white, R. S.; fr. C. S.
3. *robusta*, *Roxb.* (*Fl. ind.* 1, p. 655; *ed. Carey.* 2, p. 468;—*W. and A. pr.* 1, p. 132.) ৫. Circars, Java. Fl. small, green, R. S.; fr. December and March.



4. *hirta*, Banks. (*Roxb. fl. ind.* 1, p. 656, ed. Carey, 2, p. 469.) ककुब्ज *Kokajongha*. 5 Lower Bengal, (Serampore.) Fl. small, greenish, R. S.; fr. C. S.
 5. *Staphylea*, Roxb. (*Fl. ind.* 1, p. 658; ed. Carey, 2, p. 471;—*W. and A. pr.* 1, p. 132;—*J. Grah. Cat. B. pl.* p. 33.—*L. Ottilis, DC. pr.* 1, p. 636.—*Staphylea?* *indica, Burm. ind. t.* 24, f. 2.—*Gilibertia Nalugu, DC. pr.* 4, p. 256.) कुकुरजिह्वा *Kookoor-jihva*. 5 Both Peninsulas of India, Sirmore, Nepal, Lower Bengal, (Serampore.) Fl. small, pale-green, R. S.; fr. C. S.
 6. *sambucina*, Willd. (*DC. pr.* 1, p. 635? *Roxb. fl. ind.* 1, p. 657; ed. Carey, 2, p. 470;—*Rumph. 4, t.* 45.) 5 Moluccas, Penang. Fl. small, yellow, R. S.; fr. C. S.
 7. *parallela*, Wall. Cat. Pegu.
 8. *sanguinea*, Wall. MSS. lawawaddi.
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- * *Vitis semicordata*, Wall. 5 Nepal. *Pterisanthes cissoides*, Blum. 5 Java. *Leea integrifolia*, Roxb. 5 Circars. *L. arborea*, Telf. 5 Mauritius.

ORDER XVI.—PITTOSPORACEÆ, Lindl. Nat. Syst. p. 31.

Trees or shrubs, simple or twining, of 6 genera, and about 35 species: viz., 15 from New Holland; 2 from Van Diemen's Land; 2 from Australasia; 2 from Mauritius; 1 from Japan and China; 1 from the Moluccas; 1 from S. Africa; 2 from the Canaries; 1 from Madeira; 1 from Guinea; and 5 from India. The latter (species of *Pittosporum*) have been found in Ceylon, on the Neelgherries, at Mussooree, and in the Kheree Pass.

"The wood of *Senacia undulata*, Lam. is handsomely veined. The berries of *Billardiera* are eatable, but they have a resinous odour, and a bitter sub-acrid taste. The bark of *Pittosporum Tobira*, Ait. has a resinous smell." (*Lindl.*) "The seeds of the Indian species are covered with a fragrant resinous fluid, which, however, soon dries on exposure to the air, and loses its smell." (*Wight.*)

PITTOSPORUM, Banks. (*DC. pr.* 1, p. 346;—*W. and A. pr.* 1, p. 153.)

1. *ferrugineum*, Ait. (*DC. l. c.*;—*B. M.* 46, t. 2075.) 5 Guinea. Fl. small, whitish, Feb.; fr. —
2. *verticillatum*, Wall. (*Rept. P. floribundum, W. and A. pr.* 1, p. 154;—*Royle. ill.* p. 77.—*Celastrus verticillata, Roxb. fl. ind.* 1, p. 624; ed. Carey, 2, p. 393.—*Senacia Nepalensis, DC. pr.* 1, p. 347.) 5. Peninsula of India, Nepal, Kheree Pass. alt. 2000 f. Fl. small, whitish, January and June; fr. April and September.
3. *Tobira*, Ait. (*DC. pr.* 1, p. 346; *Roxb. fl. ind.* 1, p. 631; ed. Carey, 2, p. 416; *B. M.* 34, t. 1396. 5 Japan. Has not fl. here, though cultivated for more than twenty years.



BALARDIERA, Sm. (*DC. pr. 1, p. 345.*)

1. *scandens*, Sm. (*Exot. bot. t. 1*;—*DC. l. c.*;—*B. M. 21, t. 801.*) 5 New Holland. Fl. ?

SOLLVA, Lindl. (*B. Reg. 17, t. 1466.*)

1. *heterophylla*, Lindl. (*l. c.*;—*B. M. 63, t. 3523.*) 5 New Holland. Fl. in December.

* *P. neelgherrense*, W. and A.; Wight. ill. 1, t. 70. Neelgherries. *P. eriocarpum*, Royle, Mussooree. *Senecia undulata*, Lam. 5. Mauritius. ("Bois de joli cœur.")

ORDER XVII.—OLACACEÆ, Lindl. Nat. Syst. p. 32.

Trees or shrubs, sometimes climbing of 12 genera, containing about 29 species: 3 from New Holland; 2 are common to several countries; 1 from Martinique; 1 from Guiana; 1 from Guinea; 1 from Jamaica; 2 from Madagascar; 1 from Mauritius; and 17 from the E. Indies. Of the latter, which chiefly inhabit the Peninsula of India, but of which species are also found in Lower Bengal, Chittagong, Silhet, the Khassya Mountains, Ceylon and Java, 10 belong to *Olex*; 1 to *Ximenia*; 1 to *Opilia*; 1 to *Stemonurus*; 3-4 to *Gomphandra*; and 1 to *Balanites*.

With the exception of the wood of *Heistera coccinea*, Jacq. (*Partridge wood* of the Cabinet-makers), the properties of the order would seem to be unimportant.

OLAX, L. (*DC. pr. 1, p. 531*;—*W. and A. pr. 1, p. 88.*)

1. *scandens*, Roxb. (*Corom. 2, t. 102*;—*fl. ind. 1, p. 163*; *ed. Carey, 1, p. 168*;—*DC. pr. 1, p. 532*;—*W. and A. pr. 1, p. 89*;—*J. Grah. Cat. B. pl. p. 20.*) 5 Coromandel-Forests. Fl. small, white, H. S.; fr. C. S.

2. *imbricata*, Roxb. (*fl. ind. 1, p. 164*; *ed. Carey, 1, p. 169*;—*DC. pr. 1, p. 532.*) 5 Chittagong. In H. C. G. fl. H. S. (*Roxb.*)

3. *phoenicarpa*, Roxb. (*H. B. p. 4.*) मयूचल *Moicha*. 5. Silhet. Lower Bengal, (Serampore.) Fl. small, greenish-white, March; fr. R. S.

XIMENIA, Plum. (*DC. pr. 1, p. 533*;—*W. and A. pr. 1, p. 89.*)

1. *americana*, L. (*DC. l. c.*;—*Roxb. fl. ind. 2, p. 252*;—*W. and A. l. c.*) 5 W. Indies, Guiana, Circars. Fl. small, whitish. Introduced into H. C. G. in 1803, but had not fl. up to 1814.

GOMPHANDRA, Wall. (*Wight. ill. 1, p. 102.*)

1. *axillaris*, Wall. (*Lasianthera*? *tetrandra*, Wall.—*Roxb. fl. ind. ed. Carey, 2, p. 328.*) 5 Khassya Mountains. Fl. small, white. Introduced into H. C. G. Fl. ?

BALANITES, Delile. (*DC. pr. 1, p. 708*;—*Wight. ill. 1, p. 103.*)

1. *egyptiaca*, Delile, (*DC. l. c. Ximenia americana, L.*) 5. Hotter parts of Africa. Cultivated in Egypt.



β. indica (*Balanites ægyptiaca*, *J. Grah. Cat. B. pl. p. 23.*—*Ximenia ægyptiaca*, *Roxb. fl. ind. 2, p. 253.*) हिङ्गन *Hingon*. Deccan, Gozerat, Circars, &c. Fl. small, green, April and May; fr. 0.

- * *Opilia amentacea*, *Roxb*; *Wight. ill. 1, t. 40.* 5 Circars, Madras.—*Gomphandra coriacea*, *Wight. Pulney Hills.* *Heisteria coccinea*, *Jacq.* 5. W. Indies. *Fissilia psittacorum*, *Lam.* 5 Mauritius.

ORDER XVIII.—FRANCOACEÆ, *Ad. Juss. Lindl. Nat. Syst. p. 33.*

Found in the temperate parts of S. America. Properties unknown. (*Lindl.*)

FRANCOA, *Cav. (Spreng. syst. 2, p. 176, No. 1519.)*

1. *ramosa*, *Hook. (B. M. 67, t. 2824.)* 4. Valparaiso. Introduced into H. C. G. Fl. ?

- * *Francoa appendiculata*, *Cav.*;—*B. Reg. 19, t. 1645.* 4. Chili.—*Tetilla hydrocotylæfolia*, *DC.* 4. Chili.

ORDER XIX.—CENOTHERACEÆ, (*ONAGRACEÆ*, *Lindl. Nat. Syst. p. 35.*)

THE EVENING PRIMROSE TRIBE.

Shrubs or herbs, (annual or perennial) under 24 genera, (*Lindl. o. c. p. 523.*) amounting to about 252 species; viz. 80 from N. America; 60 from S. America; 28 from Mexico; 7 from the W. Indies; 14 from Europe; 1 from Siberia; 8 from S. Africa; 1 from Guinea; 2 from Senegal; 1 from Egypt; 1 from Madagascar; 1 from Mauritius; 2 from N. Zealand; 1 from N. Holland; 2 from Caucasus; 1 from Persia; and 28 from the E. Indies. Six are common to several countries, and of seven, the native places unknown.—Of the E. Indian species, 14 belong to *Epilobium*; (2 common to other countries); 7 to *Ludwigia*; 5 to *Jussieua*; and 1 to *Vanhallia*. The *Epilobiums* are all Himalayan; the rest tropical.—Properties nearly unknown.

OENOTHERA, *L. (DC. pr. 3, p. 45.) Evening Primrose.*

1. *biennis*, *Lindl. (B. Reg. 19, t. 1604.)* ♂ N. America. Fl. large, bright, yellow, Febr. and March; fr. H. S.
a. *biennis*, *L. (DC. l. c. p. 46.*;—*E. B. 22, t. 1534*;—*J. Grah. Cat. B. pl. p. 75.*) Root edible. Cultivated.
β. grandiflora, *Ait. (DC. l. c.*;—*B. M. 46, t. 2068.*;—*B. Reg. 19, t. 1604.*;—*J. Grah. Cat. B. pl. p. 75.*;—*Roxb. H. B. p. 28.* O. suaveolens, *Desf.*—*DC. l. c.)*



- γ. *muricata*, (*Oenothera muricata*, L. DC. o. c. p. 47.)
2. *Simsiana*, Ser. (DC. pr. 3, p. 47.—*O. corymbosa*, Sims.—B. M. 45, t. 1974; not Lam.) ♂ Mexico. Fl. large, deep yellow, Feb. and March; fr. H. S.
3. *longiflora*, Jacq. (DC. pr. 3, p. 47;—B. M. 11, t. 365;—Roxb. H. B. p. 28.) ♂ Buenos Ayres. Fl. large, pale yellow, Feb. and March; fr. H. S.
4. *sinuata*, Michx. (DC. pr. 3, p. 48;—Roxb. H. B. p. 28.) ⊙ Fl. small, yellow, January, February, and March; fr. H. S.
5. *purpurea*, Curt. (B. M. 10, t. 352;—DC. pr. 3, p. 49.) ⊙ N. America. Fl. large, purple, March; fr. H. S.
6. *Romanzowii*, Ledeb. (DC. pr. 3, p. 49;—B. Reg. 7, t. 562.) ⊙ N. America. Fl. large, violet, Feb. and March; fr. H. S.
7. *Lindleyi*, Dougl. (B. M. 55, t. 2832.) ⊙ Western part of N. America. Fl. largish, purple spotted on a lilac ground, Feb. and March; fr. H. S.
8. *tetraptera*, Cav. (DC. pr. 3, p. 50;—Roxb. H. B. p. 28;—B. M. 13, t. 468.) ♀ New Spain. Fl. large, white-rose, nearly the whole year; fr. C. S.
9. *fruticosa*, Hook. (B. M. 64, t. 3545.) ♀ N. America. Fl. large, yellow, C. S. and Feb.; fr. H. S.
- α. *vera*, (*O. fruticosa*, L.)
- β. *ambigua*, (B. M. 64, t. 3545.—*O. ambigua*, Spr.;—DC. pr. 3, p. 50.—*O. canadensis*, Goldie;—DC. o. c. p. 52.)
- γ. *Phyllopus*, (*O. fruticosa*, Curt.;—B. M. 10, t. 332; not L.—*O. serotina*, Swt.;—B. Reg. 22, t. 1840.)
- δ. *incana*, (*O. incana*, Nutt.;—DC. pr. 3, p. 52.)
- ε. *Fraseri*, (*O. Fraseri*, Pursh.;—DC. o. c. p. 51;—B. M. 40, t. 1674.)
10. *rosea*, Ait. (DC. pr. 3, p. 51;—B. M. 10, t. 347.) ♀ Mexico. Fl. small, rose-coloured,—and fr. nearly throughout the year.
- CLARKIA, Pursh. (DC. pr. 3, p. 52.)
1. *pulchella*, Pursh. (DC. l. c.;—B. Reg. 13, t. 1100;—B. M. 56, t. 2918.) ⊙ California. Fl. largish, deep-rose, March.
2. *elegans*, Dougl. (B. Reg. 19, t. 1575;—B. M. 64, t. 3592.) ⊙ California. Fl. largish, rose-purple, March.
- JUSSIEUA, L. (DC. pr. 3, p. 52;—W. and A. pr. 1, p. 335.)
1. *repens*, L. (DC. o. c. p. 54;—W. and A. l. c.;—Roxb. fl. ind. 2, p. 401;—J. Grah. Cat. B. pl. p. 75;—Rheed. 2, t. 51.) কেসারাদাম Kesara-dam. ⊙ Cochin China, Java, both Peninsulas of India, Bengal, (Serampore,) &c. Fl. largish, reddish-white, R. S.; fr. C. S.
2. *villosa*, Lam. (DC. pr. 3, p. 57;—W. and A. pr. 1, p. 336;—J. Grah. Cat. B. pl. p. 75.—J. exaltata, Roxb. fl. ind. 2, p. 401;—Rheed. 2, t. 50.) লালবোনঙ্গা Lal-baulunga. ♀ Cochin China, both Peninsulas of India, Bengal, (Serampore,) Monghir. Fl. largish, yellow, R. S.; fr. C. S.



LUDWIGIA, Roxb. (*DC. pr.* 3, p. 58;—*W. and A. pr.* 1, p. 336.)

1. *parviflora*, Roxb. (*Fl. ind.* 1, p. 419; *ed. Carey*, 1, p. 440;—*DC. pr.* 3, p. 59;—*W. and A. l. c.*;—*Wight. ill.* 2, t. 101;—*J. Grah. Cat. B. pl.* p. 75;—*Rheed.* 2, t. 49.) बनलवङ्ग। *Bun-lubunga*. ☉ Both Peninsulas of India. Bengal, (Serampore.) Fl. small, yellow, and fr. R. S.

2. *prostrata*, Roxb. (*Fl. ind.* 1, p. 420; *ed. Carey*, 1, p. 441;—*DC. pr.* 3, p. 59.) ☉ Pegu. Fl. very small, yellow, and fr. R. S. (Roxb.)

LOPEZIA, Cav. (*DC. pr.* 1, p. 62.)

1. *racemosa*, Cav. (*DC. l. c.*;—*B. M.* 8, t. 254;—*L. cordata*, Horn;—*DC. l. c.*—*L. coronata*, Andr.;—*B. Repos.* 8, t. 551;—*DC. l. c.*—*L. oppositifolia*, Lag.;—*DC. l. c.*) ☉ Mexico, New Spain. Fl. small, deep rose-coloured, Feb. and March; fr. April.

* *Spharostigma cheiranthifolium*, Ser. (*Oenothera cheiranthifolia*, Horn; *B. R.* 12, t. 1040.) ☉ Chili. *Oenothera cespitosa*, Sims. *B. M.* 39, t. 1593. ♀ N. America. *O. macrocarpa*, Pursh. (*O. missouriensis*, Sims.; *B. M.* 39, t. 1592.) ♀ N. America. *O. glauca*, Michx.; *B. Reg.* 18, t. 1511. ♀ N. America. *O. mollissima*, L. ☉ Buenos Ayres. *O. odorata*, Jacq.; *B. M.* 50, t. 2403. ♂ S. America. *O. tenella*, Cav.; *B. M.* 50, 2424. ☉ Chili. *O. viminea*, Dougl.; *B. Reg.* 15, t. 1220. ☉ California. *O. decumbens*, Dougl.; *B. Reg.* 15, t. 1221. ☉ California. *O. roseo-alba*, Bernh. ☉ N. America. *O. Drummondi*, Hook.; *B. M.* 61, t. 3361. Texas. *O. quadrivulvata*, Dougl.; *B. Reg.* 13, t. 1119. ☉ N. America. *O. bifrons*, Lindl.; *B. Reg.* 17, t. 1405. ☉ Hybrid. *O. densiflora*, Lindl.; *B. Reg.* 19, t. 1593. ☉ N. America. *O. humifusa*, Nutt.; *B. Reg.* 22, t. 1829. ☉ N. America.—*Godetia lepida*, Spach.; *B. Reg.* 22, t. 1849. ☉ California. *G. vinosa*, Spach.; *B. Reg.* 22, t. 1880. ☉ California. *Clarkia rhomboidea*, Dougl.; *B. Reg.* 23, t. 1981. ☉ California. *Eucharidium concinnum*, F. and M.; *B. Reg.* 23, t. 1962. ☉ California.—*Gaura tripetala*, Cav. ☉ Mexico. *G. mutabilis*, Cav. (*Oenothera anomala*, Cart.; *B. M.* 11, t. 388.) ♀ New Spain. *G. parviflora*, Dougl.; *B. M.* 63, t. 3506. Texas. *Jussieuva ovalifolia*, Sims.; *B. M.* 52, t. 2530. ♀ Madagascar.

SUB-ORDER.—TRAPEÆ, (HYDROCARYES, Link.; Lindl. *Nat. Syst.* p. 36.)

THE WATER-NUT TRIBE.

Floating plants, of 1 genus, and 5 species: 1 from Europe and Siberia; 3 from the E. Indies; and 1 from China.



TRAPA, L. (DC. *pr.* 3, p. 63;—*W. and A. pr.* 1, p. 337.) *Water Caltrops.*

1. *hispinosa*, L. (DC. *o. c.* p. 64;—*W. and A. l. c.*;—*Roxb. Corom.* 3, t. 234; *fl. ind.* 1, p. 428; *ed. Carey*, 1, p. 449;—*J. Grah. Cat. B. pl.* p. 75;—*Rheed.* 11, t. 33.) *পানীফল Panee-phul. सिङ्गारा Singara.* ☉ Both Peninsulas of India, Bengal, (Serampore,) Nepal. Fl. smallish, white, May and June; fr. C. S.—*Fruit* sold in the bazar, and eaten by the Natives. In Guzerat it forms an important article of food. During the *Hooly* festival a red dye is made of it, mixed with a yellow dye procured from the flowers of *Butea frondosa*, Roxb.
2. *quadrispinosa*, Roxb. (*Fl. ind.* 1, p. 430; *ed. Carey*, 1, p. 451.) ☉ Silhet. In H. O. G. fl. R. S.; fr. C. S. (*Roxb.*) The *Kernels* of this species are also eaten by the Natives.

SUB-ORDER.—HALORAGÆ, R. Br.—Lindl. Nat. Syst. p. 37.

Herbaceous, or more rarely shrubby plants, generally growing in damp places, ditches, and stagnant waters, occasionally on hills, of 10 genera, comprising 36 species: 7 N. American; 3 S. American; 2 European; 8 from New Holland and the South Sea Islands; 1 from Australasia; 2 from China and Japan; 1 from Bourbon; 2 from S. Africa; and 7 from India. Of the latter, 4 belong to *Myriophyllum*; 1 to *Haloragis*; and 2 to *Serpicula*.—We are not acquainted with the distribution of *Mejonectes*, R. Br.; *Riesenbachia*, Presl., and *Gongylocarpus*, Schlecht.—Properties unimportant.

MYRIOPHYLLUM, L. (DC. *pr.* 3, p. 68;—*W. and A. pr.* 1, p. 338.) *Water-Milfoil.*

1. *verticillatum*, L. (DC. *l. c.*;—*Roxb. H. B.* p. 12;—*E. B.* 4, t. 218.) ☉ Europe, N. America, Bengal, (Serampore.) Fl. small, yellow, R. and C. S.; fr. C. S.
2. *indicum*, Willd. (DC. *l. c.*;—*W. and A. pr.* 1, p. 339.) ☉ Ceylon, Coromandel, Bengal, (Serampore.) Fl. minute, R. S.; fr. C. S.
3. *tetrandrum*, Roxb. (*Fl. ind.* 1, p. 451; *ed. Carey*, 1, p. 470;—DC. *pr.* 3, p. 69;—*J. Grah. Cat. B. pl.* p. 76.) ☉ Peninsula of India, Bengal, (Serampore.) Fl. minute, white, R. S.; fr. C. S.
4. *tuberculatum*, Roxb. (*Fl. ind.* 1, p. 451; *ed. Carey*, 1, p. 471.) ☉ Bengal, (Serampore.) Fl. minute, bright red, R. and C. S.; fr. C. S.

ORDER XX.—COMBRETACEÆ, R. Br.—Lindl. Nat. Syst. p. 38.

THE MYROBALAN TRIBE,

Trees or shrubs, simple or climbing, of 22 genera, and about 140 species: 44 inhabiting S. America, Mexico, and the W. Indies; 6 Senegal;



15 Guinea; 2 S. Africa; 4 Madagascar; 2 Bourbon and Mauritius; 1 the Society Islands; 2 China; and 64 the E. Indies. Of the latter, 23 belong to *Terminalia*; 25 to *Combretum*; 2 to *Poiraea*; 2 to *Getonia*; 2 to *Quisqualis*; 4 to *Anogeissus*; 2 to *Lumnitzera*; 1 to *Bobua*; 1 to *Sphalanthus*; 1 to *Ceratostachys*; and 1 to *Agatisanthus*.

Astringency seems to be the chief characteristic of the order. *Bucida Buceras*, L. yields a bark, in the W. Indies employed for tanning. The same is the case in Brazil with the bark of *Laguncularia racemosa*, Gärtn. The seeds of a species of this tribe are recommended as an efficacious vermifuge by Dr. Oxley of Malacca, who gives them pounded and mixed with a little jam or honey. "The dose," says he, "may be as large as you can get a child to take; but I believe four or five good nuts are sufficient. The natives sometimes eat them by handfuls, so they are perfectly harmless. I have known one dose discharge, without any other medicine given after it, twenty-nine lumbrici." (*Trans. med. and phys. soc. Calcutta*, vol. 7, p. 489.) Dr. Wallich who only saw the fruit, referred it to *Quisqualis indica*, L. To judge from a flowering branch, lately received from Dr. Oxley, of the plant in question, it is, however, a species of *Combretum*.

TERMINALIA, L. (*DC. pr.* 3, p. 10;—*W. and A. pr.* 1, p. 312.)

1. *angustifolia*, Jacq. (*DC. o. c.* p. 11;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 69;—*T. Benzoin*, L.—*Catappa Benzoin*, Gärtn. fr. 2, t. 127.) b. Peninsula of India. Fl. small, green, odoriferous, March and April. A milky juice flows out from this tree, which being fragrant on drying and resembling *Benzoin*, is used in Churches at the Mauritius as a kind of incense. (*Royle*.) Fruit used like that of *T. Chebula*.
2. *Catappa*, L. (*DC. pr.* 3, p. 11;—*W. and A. pr.* 1, p. 313;—*Roxb. fl. ind.* 2, p. 430;—*J. Grah. Cat. B. pl.* p. 69;—*B. M.* 57, t. 3004;—*Wight. icon.* 1, t. 172.—*T. moluccana*, Lam.—*DC. l. c.* not *Roxb.*—*Rheed.* 4, t. 3-4;—*Rumph.* 1, t. 68.) বাদাম *Badam*. Country Almond tree. L. b Moluccas. Both Peninsulas of India, Bengal, (Serampore.) Fl. small, purplish-green, H. S.; fr. R. S.—Wood good. Kernels (*Country Almonds*) palatable.
3. *procera*, Roxb. (*Corom.* 3, t. 244;—*fl. ind.* 2, p. 429;—*DC. pr.* 3, p. 12.) L. b Andaman Islands. Fl. small, white. In H. C. G., fl. Feb. and March; fr. R. S. (*Roxb.*)
4. *bialata*, Wall. (*Rept.*—*Pentaptera bialata*, *Roxb. fl. ind.* 2, p. 441;—*DC. pr.* 3, p. 15.) L. b Mountainous parts of India. Fl. small, greenish-yellow. In H. C. G. fl. H. S.; fr. Jan. and Feb.
5. *Bellerica*, Roxb. (*Corom.* 2, t. 198;—*fl. ind.* 2, p. 431;—*DC. pr.* 3, p. 12;—*W. and A. pr.* 1, p. 313;—*Wight. ill.* 1, t. 91;—*J. Grah. Cat. B. pl.* p. 69;—*Rheed.* 4, t. 10.) বহুরা *Buhura*, L. b Peninsula of India, Goalparrah, Sukanaghur, Goruckpur, Dhomtola, Morung Mountains. Fl. small, greyish-green, offensively smelling, H. S.; fr. C. S.—Wood white, softish, durable, (*Roxb.*) Bark, when wounded, gives



- out a large quantity of an insipid gum, resembling *Gum arabic*. Fruit (*Beleric myrobalans*) astringent, tonic. *Kernels*, tasting like filberts, eaten by the natives, and held to be intoxicating, when eaten in abundance. (*Roxb.*)
6. *moluccana*, *Roxb.* (*Fl. ind.* 2, p. 432; non *Lam.*) 5 *Khassya* Mountains, Assam, &c. Fl. small, dull yellowish brown, unpleasantly smelling. In H. C. G. fl. April and May; fr. March. α , *macrocarpa*, largish-fruited; β , *microcarpa*, small-fruited. Both kinds of fruit sold in the bazar under the name of बहुरा (*Buhura*.)
7. *Chebula*, *Retz.* (*DC. pr.* 3, p. 12;—*W. and A. pr.* 1, p. 313;—*Roxb. Corom.* 2, t. 197;—*fl. ind.* 2, p. 435;—*J. Grah. Cat. B. pl.* p. 69.) हरीतकी *Hareetukee*, *L.* 5 Both Peninsulas of India, Bengal, Monghir up to Lower Nepal. Fl. small, whitish, offensively smelling, H. S.; fr. Jan. and Feb.—Fruit, as well as the galls of this species, very astringent and much used by dyers. With alum they give a durable yellow, used on the Coromandel Coast by Chintz-painters, and with ferruginous mud an excellent black, employed by harness-makers for preparing ink, &c. (*Ainslie. Roxb.*) Unripe fruit, according to age, known under the name of *black*, *yellow* and *chebule myrobalans*, and thought to be gently laxative. (*Royle.*)
8. *citrina*, *Roxb.* (*Fl. ind.* 2, p. 435;—*DC. pr.* 3, p. 12.—*Myrobalanus citrina*, *Gärtn. fr.* 2, p. 91, t. 97.) *L.* 5 Assam, *Khassya* Mountains, &c. Fl. small, yellowish. In H. C. G. fl. H. S.; fr. Jan. and Feb.—Wood very hard, shunned by insects. (*Roxb.*) Fruit used as that of *T. Chebula*.
9. *Fatreea*, *DC.* (*pr.* 3, p. 12.) 5 Madagascar. Introduced in 1840.
10. *Berryi*, *W. and A.* (*pr.* 1, p. 314.—*Pentaptera angustifolia*, *Roxb. fl. ind.* 2, p. 437;—*J. Grah. Cat. B. pl.* p. 69;—*DC. pr.* 3, p. 15.) *L.* 5 Peninsula of India. Balla-ghaut Mountains. Banks of the rivers Kalinadi and Gutpurba. In H. C. G. fl. April and May; fr. Dec. (*Roxb.*) Timber good.
11. *Arjuna*, *W. and A.* (*pr.* 1, p. 314, *ann.*—*Pentaptera Arjuna*, *Roxb. fl. ind.* 2, p. 438;—*DC. pr.* 3, p. 14;—*J. Grah. Cat. B. pl.* p. 69.) आरुणि *Arjooni*, *L.* 5 Bengal, Jungles in the S. E. of Surat. Fl. small, greenish-white, April and May; fr. Dec.—Timber good.—Bark in great repute among the Natives as a tonic internally, and a vulnerary applied externally; it is sold by most Druggists. (*Dr. Gibson.*)
12. *crenulata*, *W. and A.* (*pr.* 1, p. 314.—*Pentaptera crenulata*, *Roxb. fl. ind.* 2, p. 438; not *DC.*) *L.* 5 Coromandel. In H. C. G. fl. H. S.; fr. C. S. (*Roxb.*) Timber good.
13. *glabra*, *W. and A.* (*pr.* 1, p. 314.—*Pentaptera glabra*, *Roxb. fl. ind.* 2, p. 440;—*DC. pr.* 3, p. 15.—*P. crenulata*, *DC. l. c.*—*P. obovata*, *DC. o. c. p.* 14.) *L.* 5 Peninsula of India, Monghir, Silhet, Rajmahal. In H. C. G. fl. H. S.; fr. C. S. (*Roxb.*) Timber good.



14. *tomentosa*, W. and A. (pr. 1, p. 314;—*Wight. icon.* 1, t. 195. *Pentaptera tomentosa*, Roxb. *fl. ind.* 2, p. 440;—*DC. pr.* 3, p. 14;—*J. Grah. Cat. B. pl.* p. 69.) আশান *Ashan*, পিয়াসাল *Piysahal*, L. 5 Monghir, Rajmahl, Oude. Common on the Ghauts and in the Concans. Fl. small, greenish-white, April, May and June; fr. C. S. —*Timber* very valuable. Much used for making shafts of Gigs, and other things where toughness of fibre is required. (*Dr. Gibson*.) *Bark* astringent and dyeing black.
15. *coriacea*, W. and A. (pr. 1, p. 315.—*Pentaptera coriacea*, Roxb. *fl. ind.* 2, p. 438;—*DC. pr.* 3, p. 15.) L. 5. Mountains of Coromandel. Fl. small, dull yellow. In H. C. G. fl. H. S.; fr. C. S. (Roxb.) *Wood* strong, hard, heavy, made into solid wheels for buffalo carts. (*Dr. Berry*.)
16. *paniculata*, W. and A. (pr. 1, p. 315.—*Pentaptera paniculata*, Roxb. *fl. ind.* 2, p. 442;—*DC. pr.* 3, p. 14;—*J. Grah. Cat. B. pl.* p. 70.) L. 5. Courtallum, Malabar, Vallies of the Concan Rivers near their sources. Abounding in the jungles, S. E. of Surat. (*J. Grah.*) Fl. small. In H. C. G. fl. Nov. and Dec.; fr. May and June. (Roxb.) *Timber* good.
17. *gangetica*, Roxb. (*fl. ind.* 2, p. 437. T. [by a mistake] *bengalensis*, *DC. pr.* 3, p. 12.) হুড় *Hur*. 5. Banks of the Ganges. In H. C. G. fl. H. S.; fr. C. S. *Fruit* used like chebulic myrobalans.—This tree is not alluded to in *Wall. Cat.*, and is only mentioned in *Royl. ill.*
- GETONIA, Roxb. (*DC. pr.* 3, p. 15;—*W. and A. pr.* 1, p. 315.)
1. *nutans*, Roxb. (*fl. ind.* 2, p. 428;—*DC. l. c.*) 5 ~ Rajmahl. Fl. smallish, greenish, H. S.; fr. C. S.
- ANOGEISSUS, *DC. (pr.* 3, p. 16, under *Conocarpus*.—*Wall. Cat.*)
1. *latifolius*, Wall. (*Cat.*—*Conocarpus latifolius*, Roxb. *fl. ind.* 2, p. 442;—*DC. o. c. p.* 17;—*W. and A. pr.* 1, p. 316;—*J. Grah. Cat. B. pl.* p. 70;—*Royl. ill. t.* 45, f. 1.) L. 5. Chillaune, Islamabad, Kenerny jungles, Vallies of the Concan Rivers near their sources, Inland Deccan Hills, Deyra-Dhoon. Fl. small, pale greenish, Jan. and Feb.; fr. H. S. *Timber* good, durable, if kept dry. (Roxb.)
2. *acuminatus*, Wall. (*Cat.*—*Conocarpus acuminatus*, Roxb. *fl. ind.* 2, p. 443;—*DC. pr.* 3, p. 17;—*W. and A. pr.* 1, p. 316.) L. 5. Nopalry. Fl. small, pale-greenish, C. S.; fr. H. S. *Timber* good, durable, fit, like that of *No. 1*, for house-building. (Roxb.)
- POIVREA, Commers. (*DC. pr.* 3, p. 17;—*W. and A. pr.* 1, p. 317.)
1. *Roxburghii*, *DC. (o. c. p.* 18;—*W. and A. l. c.* *Combretum decandrum*, Roxb. *Corom.* 1, t. 59;—*fl. ind.* 2, p. 232; not *Jacq.*) 5 ~ Mountains of Coromandel, Khassya Mountains, Nepal, Sirmore. Fl. small, pale greenish, C. S.; fr. R. S.
2. *pilosa*, W. and A. (pr. 1, p. 317, *annot.*—*Combretum pilosum*, Roxb. *fl. ind.* 2, p. 231.) 5 ~ Khassya Mountains, Assam. Fl. small, greenish-yellow, Feb. and March; fr. R. S.



3. *coccinea*, DC. (pr. 3, p. 18.—*Cristaria coccinea*, Sonner.—*Combretum coccineum*, Lam.—*C. purpureum*, Vahl.;—*Roxb. fl. ind.* 2, p. 233;—*B. Reg.* 5, t. 429;—*B. M.* 46, t. 2102.) ॐ Madagascariensis. Fl. smallish, crimson, C. S. but very rare; fr. O.
- COMBRETUM, Lföfl. (DC. pr. 3, p. 18;—*W. and A. pr.* 1, p. 317.)
1. *ovalifolium*, Roxb. (*fl. ind.* 2, p. 226;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 70.) ॐ Tanjore, Elephanta, Jungly tracts of the Concan, Guzerat. Fl. small, yellowish-white. In H. C. G. fl. March and April; fr. R. S. (*Roxb.*)
 2. *rotundifolium*, Roxb. (*fl. ind.* 2, p. 226;—not Rich.) ॐ Khas-sya Hills. Fl. small, pale yellow. In H. C. G.?
 3. *costatum*, Roxb. (*fl. ind.* 2, p. 227.) ॐ Silhet. Fl. small, dull yellow. In H. C. G. fl. March and April. (*Roxb.*)
 4. *acuminatum*, Roxb. (*fl. ind.* 2, p. 228.) ॐ Silhet. Fl. small, greenish-white, fragrant, Feb. and April; fr. July and Aug. (*Roxb.*)
 5. *chinense*, Roxb. (*fl. ind.* 2, p. 230.) ॐ China. Fl. small, greenish, C. S.; fr. R. S.
 6. *extensum*, Roxb. (*fl. ind.* 2, p. 229.) ॐ Amboyna. Fl. small, greenish-white-reddish. In H. C. G. fl. C. S.; fr. H. S. (*Roxb.*)
- LUMNITZERA, Willd. (DC. pr. 3, p. 22;—*W. and A. pr.* 1, p. 316;—not Jacq.)
1. *racemosa*, Willd. (DC. l. c.;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 70. *Petaloma alternifolium*, *Roxb. fl. ind.* 2, p. 372.—*Bruguiera madagascariensis*, DC. pr. 3, p. 23;—*Rheed. 6. t.* 37.) ॐ Kripa, L. b Madagascariensis. Both Peninsulas of India, Banks of salt-water creeks in S. Concan, Soonderboons. Fl. small, white. Lately introduced. Wood strong, durable, used for posts and other parts of the houses of the natives, but chiefly for fuel in Calcutta. (*Roxb.*)
 2. *littorea*, (L. *coccinea*, *W. and A. pr.* 1, p. 316. *annot.*—*Pyrrhanthus littoreus*, Jack, *malay miscel.* 2, p. 57.) ॐ Pulo Dinding, Penang. Fl. small, crimson. Introduced into H. C. G. Fl.?
- QUISQUALIS, Rumph. (DC. pr. 3, p. 22;—*W. and A. pr.* 1, p. 318.)
1. *indica*, L. (DC. o. c. p. 23;—*W. and A. l. c.*;—*Roxb. fl. ind.* 2, p. 427;—*J. Grah. Cat. B. pl.* p. 70;—*B. Reg.* 6, t. 492;—*B. M.* 46, t. 2033;—*Wight. ill.* 1, t. 92.—*Q. pubescens*, *Burm. ind. t.* 35. f. 2.—*Q. glabra*, *Burm. ind. t.* 28. f. 2;—DC. l. c.—*Q. villosa*, *Roxb. fl. ind.* 2, p. 426;—DC. l. c.;—*Rumph. 5, t.* 38.) ॐ Moluccas, Moulmein, Singapore, Malacca, Pegu, &c. Fl. large, white, then rose-coloured, at last deep red, sweet-scented, H. C.; fr. C. S. Fruit used against worms in Amboyna. (*Rumph.*)
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- * *Bucida Buceras*, L. B. Reg. 11. t. 907. 5. W. Indies. (Olive Bark Tree) *Agathisanthes javanica*, Bl. ॐ Java ('Hirung')—*Terminalia mauritiana*, Lam. ॐ Bourbon, Mauritius. *T. Arbuscula*, Swz. 5 Jamaica, *T. Saja*, Buch. Morung—*Laguncularia racemosa*, Gärtn. ॐ Cayenne,



W. Indies.—*Guiera senegalensis*, Lam.—5 Senegambia.—*Poirrea alternifolia* DC.—5 Banks of Orinoco. ('*Bejuco de Guayca*.) *P. aculeata*, DC.—5 Senegambia, *P. eriopetala*, DC.—5. St. Domingo.—*Combretum grandiflorum*, G. Don; B. Reg. 19, t. 1631.—5 ♂ Sierra Leona. A most splendid species. *C. comosum*, G. Don; B. Reg. 14. t. 1165. 5 ♂ Sierra Leona.

ORDER XXI.—ALANGIACEÆ, Lindl. Nat. Syst. p. 39.

Common in S. India, whence they extend along the Malayan Peninsula to Cochin-China, northward along the forest-clad base of the Himalaya, (Royle.) Only the following 4 species have as yet been discovered.

ALANGIUM, Lam. (DC. pr. 3, p. 203.—*W. and A. pr.* 1, p. 325.)

1. *decapetalum*, Lam. (DC. l. c.;—*W. and A. l. c.*;—*J. Griseb. Cat. B. pl.* p. 72;—*Wight. icon* 1, t. 194.—*A. hexapetalum*, *Roxb. fl. ind.* 2, p. 502; not Lam.—*A. tomentosum*, Lam.—DC. o. c. p. 204;—*Rheed.* 4, t. 17.) বাঁহ অন্ধড়া *Bagh-ankra*. 5 Coromandel, Cochin, Bombay, Guzerat, Malay Peninsula, Cochin-China, Assam, Khassya Mountains, &c. up to the base of the Himalaya. Fl. middle sized, whitish-yellowish, fragrant, H. S.; fr. R. S.—*Wood* beautiful, (*Roxb.*) *Fruit* edible, somewhat astringent.

STYLIDIUM, R. Br.

1. *begonifolium*, R. Br. (*S. chinense*, Lour.—*Marlea begonifolia*, *Roxb. Cor.* 3, t. 283;—*fl. ind.* 2, p. 261;—DC. pr. 4, p. 267;—*B. Reg.* 24. t. 61.) 5 Assam, China, Khassya Hills, extending northwards beyond 30° of N. L. Fl. middle sized, white, with large yellow anthers, March and April; fr. July and August. *Timber* employed by the natives in the construction of their houses. (*Roxb.*)
2. *barbatum*, R. Br. 5 Khassya Hills.

* *Alangium hexapetalum*, L. *Wight. ill.* 2, t. 96. 5 S. India, spreading up the Western bank of the Ganges to Allahabad. Khassya Mountains.

ORDER XXII.—RHIZOPHORACEÆ, Lindl. Nat. Syst. p. 40.

(*W. Griffith*, On the family of Rhizophoraceæ; in *Trans. med. and phys. soc. Calcutta*, vol. 8, p. 1—13. With a plate.—*Arnott*; in *Ann. of nat. hist.* 1, p. 359—374, incl. and in *Wight. ill.* 1, p. 207—211.)

THE MANGROVE TRIBE.

Trees, rarely shrubs, natives of salt swamps and marshes of the tropics, where they root in the mud, forming dense, most unhealthy jungles down



to the very edge of the ocean. There are 6 genera, 26 species; 2 of these are common to several parts of the world (*Rhizophora mucronata*, Lam. and *Ceriops Candollianus*, Arn.) 6 are found in America; 1 in Madagascar; 1 in New Holland; 1 in China; and 15 in the E. Indies. Of the latter, 1 belongs to *Rhizophora*; 1 to *Ceriops*; 1 to *Kandelia*; 8 to *Bruguiera*; and 4 to *Carallia*.—Properties unimportant.

RHIZOPHORA, Lam. (*Arn. l. c.*;—*Wight. l. c. p.* 209.)

1. *mucronata*, Lam. (*Arn. l. c.*;—*DC. pr. 3, p. 32*;—*Wight. icon. 1, t. 238*;—*R. Mangle, L. ? ex pte.*—*Roxb. fl. ind. 2, p. 459*;—*R. Candelaria, W. and A. pr. 1, p. 310*, not DC.;—and excl. syn. *Rheed.* and *Rumph.*;—*J. Grah. Cat. B. pl. p. 68*.—*R. macrorrhiza, Griff. o. c. p. 8.*—) ॐॐॐ *Bhora*, L. ॐ Mauritius, Madagascar, Ceylon, Java, Arabia Felix, Malabar, Soonderboons, &c. Fl. largish, white, sweet-scented. In H. C. G. fl. April and May; fr. C. S.—Wood dark reddish, hard and durable. (*Roxb.*)

2. *conjugata*, L. (*Arn. l. c.*;—*DC. pr. 3, p. 33*;—*Roxb. H. B. p. 36*.—*R. Candelaria, DC. o. c. p. 32*;—*Griff. o. c. p. 7*.—*Rheed. 6, t. 34*;—*Rumph. 3, t. 71-72*.) ॐ Ceylon, Java, Malabar, Tenasserim, &c.—Fl. middle-sized, white, faintly scented. Introduced into H. C. G. in 1796, but had not fl. up to 1814.

CERIOPS, Arnott. (*Wight. ill. p.* 209.)

1. *Roxburghianus*, Arn. (*l. c. Rhizophora decandra, Roxb. H. B. p. 36*.—*Bruguiera decandra, Griff. o. c. p. 10*.) ॐॐॐ *Goran*. ॐ Penang, Martaban, Tavoy, Soonderbuns.—Fl. small, greenish-white, H. S.; fr. C. S.

KANDELIA, W. and A. (*pr. 1, p. 310*.)

1. *Rheedii*, W. and A. (*l. c. Griff. o. c. p. 9*;—*Wight. ill. t. 89*.—*Rhizophora Candel, L.*;—*DC. pr. 3, p. 32*;—*Roxb. H. B. p. 36*;—*J. Grah. Cat. B. pl. p. 68*;—*Rheed. 6, t. 35*.) ॐ Malabar, Tenasserim, Soonderboons, &c. Fl. largish, white and green. Introduced into H. C. G. before 1814.—Fl. ?

BRUGUIERA, L'Herit. (*Arn. l. c.*;—*Wight. l. c.*)

1. *Rheedii*, Bl. ? (*Arn. l. c.*;—*Wight. o. c. p. 210*;—*Wight. icon. 1, t. 239*. *A.*—*B. gymnorhiza, Lam.*; (as to the flowers) *ill. t. 397. fig. a, b, c. and perhaps d. f.*;—*W. and A. pr. 1, p. 311*, partly—*Griff. o. c. p. 10*.—*Rhizophora gymnorhiza, L.* partly;—*Roxb. fl. ind. 2, p. 460*;—*J. Grah. Cat. B. pl. p. 68*;—*Rheed. 6, t. 31, 32*;—*Rumph. 3, t. 69*, according to Bl. and consequently also *Rhizophora* ? Palun, *DC. pr. 3, p. 33*.) ॐॐॐ *Kankra*. ॐ Cochin-China, Moluccas, Java, Tenasserim, Penang, &c. Soonderbuns. Malabar. Fl. largish, red. In H. C. G. fl. H. S. fr. C. S.—Wood hard, durable, yellowish. (*Roxb.*)

2. *parviflora*, W. and A. (*pr. 1, p. 311, annot.*;—*Griff. o. c. p. 10*;—*Arn. in Wight. ill. 1, p. 210*.—*Rhizophora parviflora, Roxb. fl. ind. 2, p. 461*;—*J. Grah. Cat. B. pl. p. 68*; excl. syn. DC. and Rumph.—*R.*



cylindrica, Roxb. *H. B.* p. 36.) 5 Mergui, Soonderbuns, Salsette. Fl. small, greenish-yellow, somewhat scented. C. S.; fr. O.

CARALLIA, Roxb. (*DC. pr.* 3, p. 33;—*W. and A.* 1, p. 311.)

1. *lucida*, Roxb. (*Corom.* 3, t. 211; *fl. ind.* 2, p. 481;—*DC. l. c.*;—*W. and A. o. c.* p. 312.—*C. integerrima*, *DC. l. c.*—*C. integrifolia*, *Grah. Cat. B. pl.* p. 68.) Malabar, Circars, Mergui, Chittagong, Silhet, Kemaon.—Fl. very small, greenish-white, nearly inodorous, Feb. and March; fr. O. It is only the younger trees that have the leaves sharply serrulate; in old ones they are perfectly entire, and varying from oval to obovate, as well as in size.
2. *lanceafolia*, Roxb. (*fl. ind.* 2, p. 481;—*DC. pr.* 3, p. 33.) 5 Sumatra. Fl. small, greenish, Feb. and March; fr. O.
3. *garcinifolia*, Wall. 5 Khasya Hills.

* *Cassipourea guianensis*, Aubl. 5 Guiana.—*Richiea madagascariensis*, Pet. Th. 5 Madagascar.—*Rhizophora Mangle*, L. 5 W. Indies.—*Ceriops Candollianus*, Arn. 5. Quilon.—*Bruguiera gymnorrhiza*, Bl. Java, Moluccas.—*B. cylindrica*, Bl. Java.—*B. eriopetala*, W. and A.; Wight. icon. t. 239. B.—Quilon, Tenasserim.—*B. caryophylloides*, Bl. Singapore, Penang.—*B. malabarica*, Arn. Malabar.—*Carallia zeylanica*, Arn. Ceylon.

ORDER XXIII.—MEMECYLACEÆ.—Lindl. Nat. Syst. p. 40.

Fine shrubs, of 3 (5) genera, containing 36 species; 26 from the E. Indies; 3 from Mauritius and Bourbon; 1 from Madagascar; 2 from Brazil; 1 from Guiana; 1 from Mexico; 1 from the W. Indies; and 1, as to its native country, unknown. Of the E. Indian forms, 2 belong to *Scutula*, a genus nearly unknown; and 24 to *Memecylon*. Two of these have been found on the Khasya Mountains; the rest in the two Peninsulas of India, Ceylon, Java and Cochin-China. *Memecylon grande*, Retz. has been traced as far northwards as Monghir. We are unacquainted with *Guildingia*, Hook. and *Fenzlia*, Endl. Properties unimportant.

MEMECYLON, L. (*DC. pr.* 3, p. 5;—*W. and A. pr.* 1, p. 319.)

1. *ramiflorum*, Lam. (*DC. o. c.* p. 6;—*W. and A. l. c.*—*M. tinctorium*, Kön.—*W. and A. l. c.*;—*Wight. ill.* t. 93;—*J. Grah. Cat. B. pl.* p. 71, excl. syn. Roxb.) 5 Malay Peninsula, Coromandel, Mahableshwur, Kundalla and along the Ghauts, Silhet. Fl. small, blue, H. S. Leaves used in dyeng yellow.
2. *capitellatum*, L. (*DC. pr.* 3, p. 6.—*M. edule*, *Roxb. Corom.* 1, t. 82; *fl. ind.* 2, p. 260;—*DC. l. c.*) 5 Ceylon, Coromandel, &c. Fl. small, blue, H. S.—Ripe berries astringent, eaten by the natives.



* *Memecylon Heyneanum*, Benth. ♂ Courtallum, Wight. icon. 1, t. 278.—*M. amplexicaule*, Roxb. Wight. icon. 1, t. 279. ♂ Travancore, Malabar, Penang, Singapore. *M. jambosoides*, Wight. icon. 1, t. 277. *M. cordatum*, Lam. ♂ Peninsula of India, Mauritius.—*Mouriria guianensis*, Aubl. ♂ Forests of Guiana. *M. myrtilloides*, Poir. ♂ Jamaica.

ORDER XXIV.—MELASTOMACEÆ, D. Don.—Lindl. Nat. Syst.
p. 41.

Trees, shrubs, (rarely climbing,) or herbs, sometimes annual, in 1828, according to DC., under 69 genera amounting to 718 species; viz. 625 American; 18 African; 3 Chinese; and 72 E. Indian. According to Lindl. (o. c. p. 42-43,) the genera had, in 1836, risen to 93, containing, says Wight, at least 1000 species. The E. Indian forms, with the additions from Wallich's and Wight's herbaria, have now risen to 133; 2 of *Oxyspora*; 18 of *Sonerila*; 29 of *Osbeckia*; 1 of *Tristemma*; 72 of *Melastoma*; 1 of *Triplettrum*; 4 of *Pternandra*; 1 of *Medinilla*; 1 of *Sarcopyramis*; 1 of *Kibessia*; and 2 of *Astronia*. To these must, however, be added Blume's new genera: *Olanthera*, *Lachnospodium*, *Pogonanthera*, *Allomorphia*, *Pachysentria*, *Ochthocharis*, *Dissocheta*, *Aplectrum*, *Marumia*, *Creochiton*, *Phyllagathis*, and *Ewyckia*. The number of their species we have not been able to ascertain, but Wight says, that if the other genera are somewhat in proportion to *Medinilla*, of which Java produces 21 species, Blume must nearly have doubled the Indian list of Melastomaceæ.

Far the greater part of the Indian forms are tropical, but few extending towards the Khassya Mountains and the foot of the Himalayas in Nepal. These are *Melastoma malabathricum*, L.; *M. normale*, Don.; *M. Wallichii*, DC.; *Oxyspora paniculata*, DC.; *Sonerila angustifolia*, Roxb.; *S. squarrosa*, Wall.; *S. tenera*, R. Br.; *S. arguta*, R. Br.; *S. maculata*, Roxb.; *Osbeckia angustifolia*, Don.; *O. nepalensis*, Hook.; *O. stellata*, Don.; *O. ternifolia*, Don.; *O. pulchella*, Benth.; *O. campestris*, Buch.; *O. longicollis* and *crinita*, Benth.; *O. nutans*, Wall.; *O. capitata*, Benth.; *Medinilla erythrophylla*, Lindl.; and *Sarcopyramis nepalensis* and *lanceolata*, Wall.

The order, "though one of the most extensive known, is entirely destitute of any unwholesome properties." (Lindl.) Astringency is said to be its prevailing character.

MELASTOMA, Burm. (DC. pr. 3, p. 144;—W. and A. pr. 1, p. 324.)

1. *malabathricum*, L. (DC. o. c. p. 145;—W. and A. l. c.,—Roxb. fl. ind. 2, p. 405;—J. Grah. Cat. B. pl. p. 71;—B. Reg. 8, t. 672;—Wight. ill. 1, t. 95;—Rheed. 4, t. 42;—Rumph. 4, t. 72.)
বড়ফুটিকা *Buro-phoptika*. ♂ Moluccas, Sumatra, Cochin-China,



Malay Islands, Both Peninsulas of India, Orissa, Jellasore, Khassya Mountains, Nepal.—Fl. large, red; and fr. whole year. *Berries* dye black.

2. *amoenum*, Wall. (*Rept.*) Tenasserim.

OSBECKIA, L. (*DC. pr. 3, p. 138*;—*W. and A. pr. 1, p. 322.*)

1. *aspera*, Blum. (*W. and A. o. c. p. 323*;—*Wight. icon. 2, t. 377.*)

Melastoma asperum, L. *DC. pr. 3, p. 145*;—*Roxb. H. B. p. 33.*)

ছোটফুটিকা *Choto phootika*. 5 Malabar, Travancore, Trincomalee, Bengal. In H. C. G., fl. C. S. (*Roxb.*)

ARTHROSTEMMA, Pav. (*DC. pr. 3, p. 135.*)

1. *lineatum*; D. Don. (*DC. 3, p. 138.*) 5 Peru. C. S. 1840.

OXYSPORA, DC. (*pr. 3, p. 123.*)

1. *vagans*, Wall. (*Pl. as. rar. under 1. t. 88.*—*Melastoma vagans*, *Roxb. fl. ind. 2, p. 404.*) 5 Chittagong, Khassya Mountains.

Fl. small, bright red. In H. C. G. fl. May, June and July. (*Roxb.*)

MEDINILLA, Gaudich. (*DC. pr. 3, p. 167.*)

1. *erythrophylla*, Lindl. (*B. Reg. 24, app. p. 85.*—*Melastoma* ? *erythrophyllum*, Wall. *MSS.*) 5 Khassya Mountains. Has not fl. here.

SONERILA, Roxb. (*W. and A. pr. 1, p. 321.*)

1. *maculata*, Roxb. (*Fl. ind. 1, p. 177*; *ed. Carey, 1, p. 180*;—*W. and A. pr. 1. c.*) ♂ Courtallum, Goalpara, Khassya Mountains, Nepal. Fl. red. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)

- * *Arthrostemma versicolor*, DC.; B. M. 65, t. 3678. 5 Brazil, near the sea. *A. nitidum*, Grah., B. M. 59, t. 3142. 4. Buenos Ayres. —*Lasiandra Fontanesiana*, DC. (*Melastoma granulosum*, Desr.; B. M. 51, t. 2441.) 5 Rio Janeiro. *L. argentea*, DC. (*Rhexia holose. ricea*, Bonpl.; B. Reg. 4, t. 423.) 5 Rio Janeiro.—*Chalogastra gracilis*, DC.; B. M. 63, t. 3481. 4. Rio Janeiro. *Melastoma macrocarpum*, Don. (*M. malabathricum*, Sims.; B. M. 15, t. 529.) 5 China. *M. sanguineum*, Sims.; B. M. 48, t. 2241. 5 Sunda. —*M. afzelianum*, Don. 5 S. Leona.—*M. cymosum*, DC. (*M. corymbosum*, Sims.; B. M. 23, t. 904.) 5 S. Leona.—*M. vimineum*, Don. (*Rhexia viminea*, Don.; B. Reg. 8, t. 664.) 5 Brazil. *M. heteromallum*, Don.; B. Reg. 8, t. 644. 5 Brazil. *M. ? villosum*, Sims.; B. M. 53, t. 2630. 5 S. America ?—*Aciotis discolor*, Don. 4. St. Vincent. *A. aquatica*, Don. 5. Guiana. *Clidemia hirta*, Don. (*Melastoma hirtum*, L.; B. M. 45, t. 1971.) 5. Jamaica. *C. elegans*, Don. 5 Cayenne, Brazil. *C. spicata*, Don. 5 Guiana. *C. agrestis*, Don. 4. Banks of river Cayenne. *Tococa Aubletii*, Don. 5 Guiana. *T. lanata*, Don. 5 Trinidad. *Miconia grandifolia*, Don. 5 Trinidad. *M. decussata*, Don. 5 Guiana. *M. longifolia*, Don. 5 Guiana. *M. purpurascens*, Don. 5 Guiana, &c. *Oxyspora paniculata*, Wall. pl. as. rar. 1—88. 5 Nepal. *Pternandra capitellata*, Jack. 5 Penang, Singapore. *Sarcopyramis nepalensis*, Wall.



© Nepal. *S. lanceolata*, Wall. Khasiya Mountains. *Melostoma decemfidum*, Roxb. 5 Penang, Singapore. *M. glaucum*, Jack. Penang. *M. fallax*, Jack. Penang. *Osbeckia pulchella*, Benth. (*Melastoma pulchellum*, Roxb.) 5 Chittagong, Khasiya Mountains. *O. nepalensis*, Hook. Khasiya Mountains. *O. stellata*, Don. Nepal. *Scaevola moluccana*, Roxb. 4. Penang. *S. grandiflora*, R. Br. Neelgherries, &c.

ORDER XXV.—MYRTACEÆ, R. Br.—Lindl. Nat. Syst. p. 43.

THE MYRTLE TRIBE.

Trees or shrubs, of 45 genera, amounting to 670 species, the greatest number of which belong to S. America, New Holland and the South Sea Islands and the E. Indies. The latter contain, according to our materials, about 131 forms; viz. 2 of *Melaleuca*; 3 of *Metrosideros*, (Roxb.); 1 of *Fabricia*, (Roxb.); 1 of *Buckea*; 3 of *Sonneratia*; 1 of *Nelitris*; 1 of *Psidium*; 1 of *Jossinia*?; 1 of *Myrtus*; 1 of *Monoxera*; Wight, (*Myrtus spectabilis*, Bl.); 110 of *Eugenia*, (*Wight. ill.* 2, p. 13:) —, of *Rhodamnia*; 2 of *Glaphyria*, and 2 of *Myrtus*? Wall. Three have been found in Cochinchina, but are nearly unknown; 14 in Madagascar, Bourbon, Mauritius, and the Sechelles; 2 in Guinea and Senegal; 3 in S. Africa, (*Harvey*); and 1 (*Myrtus communis*, L.) in S. Europe.—*Buckea frutescens*, L., a Chinese shrub has been discovered on Mount Ophir, near Malacca, by Dr. Oxley.

"The pellucid dotting of the leaves and other parts indicates the presence of a fragrant aromatic or pungent volatile oil, which gives the principal quality to the produce of the order." (*Lindl.*) The properties of the Indian Myrtaceæ will be adverted to under the different species.

TRISTANIA, R. Br. (*Hort. Kew. ed. alt.* 4, p. 417;—*DC. pr.* 3, p. 210.)

1. *megaphylla*, Cunningham. 5 Australasia, C. S. 1839.

MELALEUCA, L. (*DC. pr.* 3, p. 211;—*W. and A. pr.* 1, p. 326.)

1. *Cajuputi*, Roxb. (*Fl. ind.* 3, p. 394;—*W. and A. l. c.*—*M. minor Sm.*;—*DC. o. c. p.* 212.) 5 Moluccas, &c. Fl. small, white, especially C. S.—Yields the well-known *Cajuputi-oil*.

2. *Leucadendron*, L. (*DC. pr.* 3, p. 212;—*Roxb. fl. ind.* 3, p. 397;—*Rumph.* 2, t. 16.) 5 Moluccas, Malacca. Fl. small, white, C. S.; fr. H. S.

3. *nodosum*, Sm. (*Exot. bot.*—*Ait. Hort Kew. ed. alt.* 4, 413.) N. Holland, December 1839.

CALLISTEMON, R. Br. (*DC. pr.* 3, p. 222.)

1. *linearis*, DC. (*l. c.*—*Metrosideros linearis*, Sm.;—*Roxb. fl. ind.* 2, p. 479.) 5 N. Holland. Fl. small, greenish, April and May; fr. Feb. and March.



2. *lophanthus*, Swt. (*G. Don. Mill: dict.* 2, p. 822.—*C. salignus*, Sims.;—*B. M.* 43, t. 1821, not DC.) 5 N. Holland. Has been introduced into H. C. G. Fl.?
- METROSIDEROS, Rumph. (*DC. pr.* 3, p. 224.)
1. *verus*, Rumph. (*Herb. amb.* 3, t. 7.—*DC. l. c.*;—*Roxb. fl. ind.* 2, p. 477.) 5 Amboina, Java. Fl. small, white, H. and R. S.; fr. Sept. and Oct.
- NELITRIS, Gärtn. (*DC. pr.* 3, p. 231.)
1. *paniculata*, Lindl. (*DC. l. c.*—*N. polygama*, Spreng.—*Eugenia polygama*, *Roxb. fl. ind.* 2, p. 491.) 5 Penang. Has been introduced into H. C. G.?
- PSIDIUM, L. (*DC. pr.* 3, p. 232;—*W. and A. pr.* 1, p. 328.) *Guava tree*.
1. *pumilum*, Vahl. (*DC. l. c.*;—*W. and A. l. c.*;—*P. Cujavillus*, *Burm. Rumph.* 1, t. 49.) 5 Ceylon, Moluccas. Fl. middle-sized, white, fragrant, March; fr. R. S., delicious.
2. *pyriferum*, L. (*DC. pr.* 3, p. 333;—*W. and A. l. c.*;—*Roxb. fl. ind.* 2, p. 480;—*J. Grah. Cat. B. pl.* p. 72;—*B. Reg.* 13, t. 1079;—*Rheed.* 3, t. 34;—*Rumph.* 1, t. 47.) 5 W. Indies, Tropical S. America. Domesticated in India. *পেয়ারা Peyara*. Fl. largish, white, sweetish scented, H. S.; fr. R. S.
3. *pomiferum*, L. (*DC. pr.* 3, p. 334;—*W. and A. pr.* 1, p. 328;—*Roxb. fl. ind.* 2, p. 480;—*J. Grah. Cat. B. pl.* p. 72;—*Rheed.* 3, t. 35;—*Rumph.* 1, t. 48.) *লালপেয়ারা Lal-peyara*. 5 W. Indies, Mexico. Tropical S. America. Domesticated in India. Fl. largish, white, sweetish scented, H. S.; fr. R. S.
4. *guineense*, Swz. (*DC. pr.* 3, p. 235.) 5 W. Indies, introduced, it is said, from Guinea. Fl. small, white, H. S.; fr. R. S. *Fruit* of a fine flavour, fulvous, red inside.
5. *polycarpon*, Lamb. (*DC. pr.* 3, p. 235;—*B. Reg.* 8, t. 653.) 5 Trinidad.—Introduced into H. C. G.—Fl. ? *Fruit* about the size of a plum, yellow inside, of a delicate taste.
- JOSSINIA, Commers. (*DC. pr.* 3, p. 337.)
1. *buxifolia*, (*DC. o. c. p.* 338.—*Eugenia buxifolia*, *Lam.*) 5 Bourbon.—Introduced into H. C. G. Fl.?
- MYRTUS, L. (*DC. pr.* 3, p. 238;—*W. and A. pr.* 1, p. 328.)
1. *communis*, L. (*DC. o. c. p.* 239;—*Roxb. fl. ind.* 2, p. 497;—*J. Grah. Cat. B. pl.* p. 73.) *Common Myrtle*. *বিলাতিমেন্দী Bilati-mendee*. 5 S. Europe. Common in gardens. Fl. smallish, white, fragrant, H. S.; fr. 0. Used as a hedge-plant in Egypt. (*Mucullough*.) *Berries* eaten in Syria.
2. *tomentosa*, Ait. (*DC. pr.* 3, p. 240;—*W. and A. pr.* 1, p. 328;—*Roxb. fl. ind.* 2, p. 498;—*B. M.* 7, t. 250.—*M. canescens*, *Lowr.*; *Roxb. l. c. excl. No. 3.*) 5 China, Cochin-China, Neelgherries, Penang, Singapore. Fl. large rose-coloured, with crimson filaments.—Introduced into H. C. G. in 1798; but had not fl. up to 1814. *Berries* eaten on the Neelgherries.

3. *melastomoides*, Cunningh. 5 Moreton Bay.PIMENTA, Lindl. (*Loud. encycl. of plants*, p. 418, No. 1123.)

1. *vulgaris*, Lindl. (*Loud. enc. l. c.* Wight. *ill.* 2, p. 13.—*Eugenia* Pimenta, DC. pr. 3, p. 285, *a. longifolia*. *Myrtus* Pimenta, L. *a longifolia*, Roxb. *H. B.* p. 37; *B. M.* 30, t. 1236.) 5 Jamaica, &c. Fl. small, white, March and April; fr. July and August. The dried fruit of this tree is imported into Europe from the W. Indies in large quantities, and sold in shops under the name of *Allspice* or *Jamaica Pepper*. *Leaves* aromatic.
2. *acris*. Wight. (*Ill.* 2, p. 13, *Eugenia acris*, *W. and A.* pr. 1, p. 331;—*J. Grak. Cat. B. pl.* p. 74.—*E. Pimenta*, DC. pr. 3, p. 285. β *ovalifolia*.—*Myrtus* Pimenta, L. β *latifolia*, Roxb. *H. B.* p. 37.—*Myrcia acris*, DC. pr. 3, p. 243;—*B. M.* 59, t. 3153.—*M. pimentoides*, DC. l. c.) 5 Jamaica, &c. Fl. small, white, March and April; fr. July and August.—*Wild Cinnamon* or *Wild Clove-tree*. *Timber* hard, red and heavy, capable of being polished and used for mill-cogs and other purposes, where much friction is to be sustained. *Bark* brown, then ash-coloured, finally white, astringent, somewhat aromatic. *Leaves* sweetly aromatic, agreeably astringent, often used in sauce. *Berries* aromatic, agreeable for culinary purposes. (*Lamar. Hort. Jamaica*.)

EUGENIA, L. (*Wight. ill.* 2, p. 12.)Sub-genus I.—*Eueugenia*, Wight. (*o. c. p.* 13.)

1. *bracteata*, Roxb. (*fl. ind.* 2, p. 490;—DC. pr. 3, p. 264;—*W. and A.* pr. 1, p. 331.—*E. zeylanica*, Roxb. l. c., not Willd.) *হিজলিমেন্দী Hijolee-mendee*. 5 Ceylon, Peninsula of India. Fl. as large as those of the common myrtle, white; and fr. throughout the year.
2. *Michellii*, Lam. (DC. pr. 3, p. 263.—*Plinia pedunculata*, L. *fil.*;—*B. M.* 14, t. 473.) 5 Brazil. Fl. small, white, fragrant, H. S.; fr. R. S.

Sub-genus II.—*Jambosa*, DC. (*Wight. ill.* 2, p. 14.)

3. *Jambos*, L. (*Wight. ill.* 2, p. 14, t. 435;—Roxb. *fl. ind.* 2, p. 494;—*B. M.* 41, t. 1696.—*Jambosa vulgaris*, DC. pr. 3, p. 286;—*W. and A.* pr. 1, p. 332;—*J. Grak. Cat. B. pl.* p. 74;—*B. M.* 61, t. 3356;—*Rheed.* 1, t. 17.) *গোলাব জাম Golab-jam*. *Rose apple*. 5 Both Peninsulas of India, Bengal, Sirmore. Cultivated.—Fl. large; greenish-white, Feb.; fr. R. S.
4. *aquea*, Roxb. (*Wight. ill.* 2, p. 14;—Roxb. *fl. ind.* 2, p. 492.—*Jambosa aquea*, DC. pr. 3, p. 288;—*W. and A.* pr. 1, p. 332;—*Wight. icon.* 1, t. 216;—*Rumph.* 1, t. 38, f. 2, and t. 39 ?) *জাম্বো Jambō*. 5 Moluccas. Cultivated. Fl. large, greenish-white, H. and R. S.; fr. R. S. *Fruit* somewhat aromatic.
a, rhodocarpa. *Fruit* rose-coloured.
β, leucocarpa. *Fruit* white.
5. *lanceafolia*, Roxb. (*fl. ind.* 2, p. 494.) L. 5 Silhet. Fl. middle-sized, white, Nov.; fr. Feb.
6. *malaccensis*, L. (*Wight. ill.* 2, p. 14;—Roxb. *fl. ind.* 2, p. 483.—*Jam-*



- bosa malaccensis, DC. pr. 3, p. 286;—*W. and A. pr. 1, p. 332*;—*J. Grah. Cat. B. pl. p. 74*.—*J. purpurascens*, DC. t. c. excl. syn. Roxb.—*J. domestica*, DC. o. c. p. 288.—*Rheed. 1, t. 18*;—*Rumph. 1, t. 37, and t. 38, f. 1.*) *मलकाअमरूल Malaka-amrool*. 5 Moluccas. Cultivated. Fl. large crimson, H. S.; fr. R. S.
7. *purpurea*, Roxb. (*Wight. ill. 2, p. 14*;—*Roxb. Fl. ind. 2, p. 483*.—*Jambosa purpurea*, *W. and A. pr. 1, p. 333, unnot.*) 5 Malay Islands. Fl. large, purple, H. S.; fr. R. S.
8. *ternifolia*, Roxb. (*Wight. ill. 2, p. 14*;—*Roxb. Fl. ind. 2, p. 489*.) L. 5 Chittagong. Fl. large; white or red, April; fr. June and July.
9. *amplexicaulis*, Roxb. (*fl. ind. 2, p. 483*;—*Wight. ill. 2, p. 14*.—*Jambosa amplexicaulis*, DC. pr. 3, p. 287.) L. 5 Chittagong. Fl. middle-sized, greenish-white. In H. C. G. fl. and fr. at different periods through the year. (*Roxb.*)
10. *alba*, Roxb. (*Fl. ind. 2, p. 493*;—*Wight. ill. 2, p. 14*.—*Jambosa alba*, *W. and A. pr. 1, p. 332*.—*J. macrophylla*, DC. pr. 2, p. 286. excl. syn. Lam. and Rumph.) *अमरूल Amrool*. 5 Malay Islands. Cultivated. Fl. largish, greenish-white, H. and R. S.; fr. R. S.
11. *polyptala*, Wall. Cat. (*Wight. ill. 2, p. 14*.—*E. angustifolia*, *Roxb. fl. ind. 2, p. 490*; not Lam.) 5 Chittagong, Silhet.—In H. C. G. fl. H. S.; fr. R. S.
12. *laurifolia*, Roxb. (*Fl. ind. 2, p. 489*;—*Wight. ill. 2, p. 14*.—*Jambosa laurifolia*, DC. pr. 3, p. 287.) 5 Native Place? Fl. white, H. S.; fr. R. S.
- Sub-genus III.—*Caryophyllus*, L. (*Wight. ill. 2, p. 14*.)
13. *caryophyllata*, Thunb. (*Roxb. fl. ind. 2, p. 495*.—*Caryophyllus aromaticus*, L.;—DC. pr. 3, p. 262;—*B. M. 54, t. 2749-50*.—*Myrtus Caryophyllus*, Spreng;—*Rumph. 2, t. 1, 2, 3.*) *लवङ्ग Luvunga*. Clove-tree. 5 Moluccas. Cultivated in Ceylon, the Southern parts of India, the Malayan Peninsula, Mauritius, Bourbon, Cayenne, &c. In Royle's illus. it is said, that the Clove-tree grows freely in H. C. G.; this is a mistake. It has not only not flowered in lower Bengal, but can scarcely be kept alive throughout the year.
- Sub-genus IV.—*Acmena*, DC. (*Wight. ill. 2, p. 14*.)
14. *claviflora*, Roxb. (*Fl. ind. 2, p. 488*;—*Wight. ill. 2, p. 15*.—*Syzygium claviflorum*, Wall. Cat.) L. 5 Chittagong. In H. C. G. fl. Feb. and March; fr. May and June. (*Roxb.*)
15. *oblata*, Roxb. (*Fl. ind. 2, p. 493*;—*Wight. ill. 2, p. 15*.—*Syzygium oblatum*, Wall. Cat.) 5 Chittagong. In H. C. G. fl. March; fr. June and July. (*Roxb.*)
16. *pulchella*, Roxb. (*Fl. ind. 2, p. 496*.—*Syzygium pulchellum*, Wall. Cat.) 5 Molucca Islands, Penang, Amherst, Tavoy, Moulmein. Fl. small, greenish white, March and April; fr. R. S.
- Sub-genus V.—*Syzygium*, Gärtn. (*Wight. ill. 2, p. 15*.)
17. *myrtifolia*, Roxb. (*H. B. (1814), p. 37*.—*Fl. ind. 2, p. 490*;—



- Wight. ill. 2, p. 15, not DC. (1828.) Syzygium myrtifolium, DC. pr. 3, p. 261.)* 5 Sumatra, Singapore. Fl. very small, greenish-white, somewhat sweet-scented, March and April; fr. May and June.
18. *oleina*, Wight. (*Ill. 2, p. 15.*—*Syzygium oleinum, Wall. MSS.*) In H. C. G.
19. *Jambolana*, Lam. (*Wight. ill. 2, p. 16;—Roxb. fl. ind. 2, p. 484.*—*Syzygium Jambolana, DC. pr. 3, p. 269.*—*W. and A. pr. 1, p. 329;—J. Grah. Cat. B. pl. p. 73.*—*S. caryophyllifolium, DC. o. c. p. 270.*—*Eugenia obtusifolia, Roxb. o. c. p. 485.*—*E. caryophyllifolia, Lam. not Roxb.;—Rheed. 5, t. 29;—Rumph. 1, t. 42.)* কাঁজাম *Kalo-jam*, L. 5 Moluccas, Peninsula of India, Bengal, (Serampore,) Kemaon, &c.—Fl. small, white, March; fr. July and August. Wood hard, close-grained, durable. Bark strongly astringent, dyes excellent durable browns of various shades, according to the corrosive employed or the strength of the decoction. Fruit subacid, astringent, eatable. (*Roxb.*)
20. *caryophyllifolia*, Roxb. (*fl. ind. 2, p. 486; not Lam.*) ছোটকাঁজাম *Chhoto-jam*, L. 5 Bengal, (Serampore,) &c. Fl. small, white, March and April; fr. May and June. Wood whitish, strong, close-grained, hard and durable. (*Roxb.*) Fruit unpleasantly acid, astringent, not eaten by the natives.
21. *fruticosa*, Roxb. (*fl. ind. 2, p. 487;—Wight. ill. 2, p. 16.*—*Syzygium fruticosum, DC. pr. 3, p. 260.*) 5 Chittagong. Fl. small, white, Dec.; fr. H. S.
22. *balsamea*, Wall. (*MSS. 1836;—Wight. ill. 2, p. 16; not E. balsamica, Jacq.*—*Syzygium balsameum, Wall. Cat.*) 5 Assam. Fl. small, white, H. S.; fr. R. S.
23. *operculata*, Roxb. (*fl. ind. 2, p. 486;—Wight. ill. 2, p. 16.*—*Syzygium nervosum, DC. pr. 3, p. 260.*) 5 Moluccas. Fl. very small, white, March and April; fr. May and June.
24. *tetragona*, Wight. (*Ill. 2, p. 16.*—*Syzygium tetragonum, Wall. Cat.*) 5 Silhet. In H. C. G.
25. *rubens*, Roxb. (*fl. ind. 2, p. 496;—Wight. ill. 2, p. 17.*) L. 5 Chittagong. In H. C. G.?
26. *inophylla*, Roxb. (*fl. ind. 2, p. 496;—Wight. ill. 2, p. 17.*—*Syzygium inophyllum, DC. pr. 3, p. 260.*) 5 Sumatra. In H. C. G.?
27. *grandis*, Wight. (*Ill. 2, p. 17.*—*E. cymosa, Roxb. fl. ind. 2, p. 462, not Lam.*) L. 5 Silhet. In H. C. G. fl. Dec. Timber very useful. (*Roxb.*)
28. *lonchophylla* (*E. lanceolaria, Roxb. fl. ind. 2, p. 494; not E. lanceifolia, Roxb.; nor lanceolata, Lam. nor lancea, Poir.*) L. 5 Silhet. In H. C. G. fl. April and May. (*Roxb.*)
29. *acuminata*, Roxb. (*H. B. 1814, p. 37; fl. ind. 2, p. 492; not Link.*) 5 Moluccas.—In H. C. G. fl. March; fr. June and July. (*Roxb.*)



30. *brachiata*, Roxb. (*fl. ind.* 2, p. 488.) 5 Moluccas. In H. C. G. fl. May ; fr. July. (*Roxb.*)
31. *venusta*, Roxb. (*fl. ind.* 2, p. 491.) 5 Tippera. Introduced into H. C. G. before 1814. Fl. ?
32. *macrocarpa*, Roxb. (*fl. ind.* 2, p. 497.) L. 5 Chittagong. Introduced into H. C. G. in 1811. Fl. ?

? *SONNERATIA*, L. (*DC. pr.* 3, p. 231 ;—*W. and A. pr.* 1, p. 327.)

1. *acida*, DC. (*l. c.* ;—*W. and A. l. c.* ;—*Roxb. fl. ind.* 2, p. 506 ;—*J. Grah. Cat. B. pl.* p. 72 ;—*Wight. icon.* 2, t. 340 ;—*Rheed.* 3, t. 40 ;—*Rumph.* 3, t. 74.) ওড়চাকা *Orchaka*. 5 Soonderbuns, Martaban Rivers, Penang, Singapore, Malacca Straits, Salsette, Delta of the Indus, &c. Fl. large, purple.—In H. C. G. fl. H. and R. S. ; fr. C. S. (*Roxb.*)—It is probably identical with the "*Tewar*," noticed by Dr. Heddle in his MSS. Report on Scinde, as being a better substitute for coal in Steamers, than any other kind of wood. The supply is stated to be inexhaustible in the Delta of the Indus. (*J. Grah. l. c.*)
2. *apetula*, Buch. (*DC. pr.* 3, p. 231 ;—*W. and A. pr.* 1, p. 327 ;—*Roxb. fl. ind.* 2, p. 506 ;—*J. Grah. Cat. B. pl.* p. 72.) কেওড়া *Keora*. 5 Soonderbuns, Bombay, &c.—In H. C. G. fl. H. S. (*Roxb.*)

? *PUNICA*, L. (*DC. pr.* 3, p. 3 ;—*W. and A. pr.* 1, p. 327.)

1. *Granatum*, L. (*DC. l. c.* ;—*W. and A. l. c.* ;—*Roxb. fl. ind.* 2, p. 499 ;—*J. Grah. Cat. B. pl.* p. 72 ;—*B. M.* 43, t. 1832, A. B. ;—*Wight. ill.* 2, t. 97.) ডালিম *Dalim*. আনার *Anar*. Common Pomegranate Tree. 5 N. Africa. Cultivated in India. Fl. large, scarlet and fr. at different periods of the year.—The roots of this tree were already known in the time of Celsus as a remedy against worms, but have since 1804 performed such wonders in this respect, that they may almost be considered specific against *tape-worms* ; two ounces of the bark of the dried root, cut into pieces, are boiled in a pint and a half of water till half a pint remains, four table spoonsful of the strained decoction are then given (to grown-up persons) every half hour, till general discomfort is produced, when the worms soon appear.—To infants it has been found preferable to give, twice a day, half a tea spoonful of the expressed juice of the young roots, mixed with a table spoonful of curds (দই) and a little sugar, till the worm is expelled. The flowers and the rind of the fruit are tonic and astringent, and as well as a decoction of the bark of the root, used in dysenteric and other affections of the bowels. (*Trans. med. phys. Soc. Calcutta*, vol. 1, p. 363-64. β , *flore pleno*. Flowers double.
2. *nana*, L. (*DC. pr.* 3, p. 4 ;—*B. M.* 17, t. 634.) ঝ. W. Indies, Guiana. Fl. large, scarlet, nearly throughout the year.

* *Melaleuca viridiflora*, Gärtn. 5 Singapore. *Callistemon microstachys*, Lindl. ; B. Reg. ann. 1838, t. 7. ঝ N. Holl. *C. viridiflorus*,



DC. 5 N. Holland. *C. speciosus*, DC. (*Metrosideros speciosus*, Sims.; B. M. 42, t. 1761.) 5 N. Holland. *Bæcken frutescens*, L.; B. M. 55, t. 2802. 5 China, Malacca. *Psidium Cattlejanum*, Sabine; B. M. 51, t. 2501. 5 China, no doubt introduced from Brazil. *P. cordatum*, Sims. B. M. 43, t. 1779. 5 Guadalupe. *Jossinia mespiloides*, DC. ("Bois de Pêche marron." "Bois de Nefle a grandes feuilles.") 5 Bourbon. *J. lucida*, DC. ("Bois de Cloux.") 5 Mauritius. *Myrcia punctata*, DC. 5 St. Cruz. *M. coriacea*, DC. 5 W. Indies. *Eugenia formosa*, Wall. pl. as. rar. 2, t. 108. 5 Moulmein. *E. bifaria*, Colebr. Wall. pl. as. rar. 2, t. 161. Khassya Mountains. *E. disticha*, DC. (*Myrtus disticha*, Swz.; B. M. 22, t. 867.) 5 Jamaica. *E. fragrans*, Willd. (*Myrtus fragrans*, Vahl.; B. M. 31, t. 1242.) 5 Jamaica. *E. caryophyllæa*, Wight. 5 Peninsula of India.

SUB-ORDER?—BARRINGTONIÆ, DC.—Lindl. Nat. Syst. p. 46.

With the exception of one perennial herb,—trees, of 7 genera, and 19 species: 9 S. American; 9 E. Indian; and 1 from the Mauritius. The latter forms the genus *Fœtidia*. Of the former, 7 belong to *Gustavia*; 1 to *Catinga*; and 1 to *Coupoui*; and of the E. Indian species, 5 are ranged under *Barringtonia*; 3 under *Careya*; and 1 under *Gustavia*.—Properties unimportant.

BARRINGTONIA, Forst. (DC. pr. 3, p. 288;—*W. and A. pr. 1, p. 333.*)

1. *speciosa*, L. (DC. l. c.;—*W. and A. l. c.*;—*Roxb. fl. ind. 2, p. 636*;—*Rumph. 3, t. 114.*) L. 5 Moluccas, Java, Penang, Singapore, &c. Fl. largish, deep rose-coloured, H. S. Seeds, mixed with bait, inebriate fish.
2. *racemosa*, Roxb. (*fl. ind. 2, p. 634*;—DC. pr. 3, p. 288;—*W. and A. pr. 1, p. 333*;—*J. Grah. Cat. B. pl. p. 74*;—*B. M. 67, t. 3813*;—*Wight. icon. 1, t. 152*;—*Rheed. 4, t. 6.*) Fl. largish, white, with a tinge of rose, May; fr. Nov. L. 5 Soonderbuns, Coromandel, Penang, Concans, &c.
3. *acutangula*, Gärtn. (*W. and A. pr. 1, p. 333*;—*Roxb. fl. ind. 2, p. 635*;—*J. Grah. Cat. B. pl. p. 74*.—*Stravadium rubrum* and *coccineum*, DC. pr. 3, p. 289;—*Rheed. 4, t. 7*;—*Rumph. 3, t. 116?*) *হিজল Hijul*, L. 5 Both Peninsulas of India, Bengal, (Serampore,) Morung, Saharanpore. Fl. smallish, reddish-white, with scarlet filaments, April and May; fr. C. S.

CAREYA, Roxb. (DC. pr. 3, p. 295;—*W. and A. pr. 1, p. 334.*)

1. *herbacea*, Roxb. (DC. l. c.;—*Roxb. Corom. 3, t. 217*;—*fl. ind. 2, p. 638.*) *ভুই ডালিম Bhooi-dalim*. 4. Interior of Bengal. Fl. large, reddish greenish-white, Feb. and March; fr. June and July.



2. *spharica*, Roxb. (*fl. ind.* 2, p. 636.) L. 5. Mountains of Chittagong. Fl. large, greenish-white, with some deep red filaments, April; fr. July.
3. *arborea*, Roxb. (*Corom.* 3, t. 218; *fl. ind.* 2, p. 638;—*DC. pr.* 3, p. 295;—*W. and A. pr.* 1, p. 334;—*J. Grah. Cat. B. pl.* p. 74;—*Wight. ill.* 2, p. 99 and 100;—*Rheed.* 3, t. 36.) Both Peninsulas of India, extending as far north as the Jumna, along the foot of the Himalayas. L. 5. Fl. large, greenish-white, March; fr. July.
- FOETIDIA, Commers. (*DC. pr.* 3, p. 295.)
1. *mauritiana*, Lam. (*DC. L. c.*;—*J. Grah. Cat. B. pl.* p. 73.) 5 Mauritius, where it is called "*bois puant*." Fl. pale greenish, largish, with white filaments, fragrant, R. and C. S; fr. O.

* *Gustavia augusta*, L. 5 Surinam. *G. speciosa*, DC. 5 New Granada.

ORDER XXVI.—LECYTHIDACEÆ, Lindl. Nat. Syst. p. 46.

Large trees, of 6 genera, containing 27 species, all natives of the hottest parts of S. America, especially of Guiana and Brazil.

- * *Lecythis ollaria*, L. 5 "The most gigantic tree in the ancient forests of Brazil." (Lindl.)—*L. minor*, Jacq. 5 Carthagenæ. Fl. large, white, fragrant.—*Bertholletia excelsa*, H. and Bonpl. 5 S. America; cultivated in Brazil and Guiana. "The well known Brazil nuts of the shops of London, are the seeds of this tree." (Lindl.)—*Couroupita guianensis*, Aubl. B. M. 59, t. 3158-9. This ever-flowering, most magnificent tree, a native of the forests near Cayenne, is cultivated successfully in St. Vincent. We have no tree in this country to rival its beauty.

ORDER XXVII.—PHILADELPHACEÆ, Lindl. Nat. Syst. p. 47.

THE SYRINGA TRIBE.

Deciduous shrubs, arranged under 3 genera, containing 18 species: 11 from N. America; 5 from the Himalayas; 1 from S. Europe, and 1 from Japan. The Indian forms are, 2 of *Philadelphus*, and 3 of *Deutzia*. Properties unknown.

PHILADELPHUS, L. (*DC. pr.* 3, p. 205.)

1. *coronarius*, L. (*DC. L. c.*;—*B. M.* 11, t. 391.) Common *Philadelphus*; *Mock Orange*. 5 S. Europe. Fl. large, cream-coloured, fragrant; March; but only once.

* *Decumaria barbarea*, L. 5 S. Carolina.



ORDER XXVIII.—HAMAMELIACEÆ, Lindl. Nat. Syst. p. 48.

THE WITCH-HAZEL TRIBE.

Shrubs, seldomer trees, of seven genera, containing nine species: 2 N. American; 1 S. African; 1 from Madagascar; 1 Persian; 1 Chinese; 1 Japanese; and 2 from the Khassya Mountains and Upper Assam. The latter *Bucklandia populnea*, R. Br. and *Liquidambar cerasifolia*, Griff. (*Sedgwickia cerasifolia*, Wall. et. Griff.) Properties unknown. BUCKLANDIA, R. Br. (*Wall. Cat.*;—*W. Griffith, As. Res.* 19, pt. 1, p. 94.) 1. *populnea*, R. B. (*L. c. Griff. l. c.*) L. 5 Khassya Mountains, from Cherra Poonjee to Surureem. Fl. small, greenish. Has been introduced into H. C. G. Fl.?

* *Hamamelis chinensis*, R. Br. 5 Nankin, Chusan.—*Dicoryphe stipulacea*, Jaum. 5 Madagascar.

ORDER XXIX.—CORNACEÆ, Lindl. Nat. Syst. p. 49.

THE DOGWOOD TRIBE.

Trees or shrubs, seldom herbs, of 6 genera and 28 species: 8 from N. America; 3 from Europe and N. Asia; 4 from Mexico; 2 from Japan; 1 from Guiana; 2 unknown, as to their native place; 3 from Nepal; and 5 from Java. Of the E. Indian forms, 2 belong to *Cornus*, 1 to *Benthamia*, and 2 to *Mastixia*. Properties of little importance.

AUKUBA, Kämpf. (*DC. pr.* 4, p. 274.)

1. *japonica*, Thunb. (*DC. l. c.*;—*B. M.* 30, t. 1197.) 5. Japan.—Has not fl.

* *Votomita guienensis*, Aubl. 5. French Guiana.

ORDER XXX.—LORANTHACEÆ, Lindl. Nat. Syst. p. 49.

Parasitical undershrubs, arranged, according to Lindl., under 12 genera, and, as far as we can judge from DC. (*Pr.* 4, p. 277, &c. with add.), W. and A. (*Pr.* 1, p. 379, &c.) and Wight. (*Ill.* p. 67,) containing 338 species (upwards of 400, *Wight.*),—all referred by DC. to four genera. 186 species have been found in S. America, Mexico and the W. Indies; 103 in the E. Indies; 15 in S. Africa, (*Harvey*); 3 in Mauritius and Bourbon; 9 in New Holland and the South Sea Islands; 7 in Guinea and Senegal; 4 in N. America; 3 in Abyssinia; 2 in Europe; 2 in Japan; 1 in Madagascar; 1 near Tiflis; 1 in China; and 1 in Caramania. Of the Indian forms, 22 belong to *Viscum*; 78 to *Loranthus*; and 2 to *Schöpfia*, chiefly inha-



biting Java, the mountains of the two Peninsulas of India, the Khassya Mountains, and Nepal. A few only have been found in Lower Bengal, Ceylon, and Luzon. Properties nearly unknown.

Several species of *Loranthus* have been introduced into H. C. G. as well as here, but they have not succeeded.

LORANTHUS, L. (*DC. pr.* 4, p. 286;—*W. and A. pr.* 1, p. 381.)

1. *longiflorus*, Desr. (*DC. o. c. p.* 304;—*W. and A. o. c. p.* 384;—*Wight icon.* 1, t. 302;—*Roxb. fl. ind. ed. Carey*, 2, p. 217.—*L. bicolor*, *Roxb. Corom.* 2, t. 139;—*fl. ind.* 1, p. 548, and 2, p. 185; *ed. Carey*, 2, p. 205;—*DC. o. c. p.* 307;—*Rheed.* 10. t. 4.) बड़मन्दा *Burumunda*. Parasitic, S. Peninsula of India, Bengal, (Serampore.) &c. Fl. large, greenish orange-scarlet, and fr. nearly throughout the year.
2. *globosus*, *Roxb. (fl. ind.* 1, p. 550, and 2, p. 187; *ed. Carey*, 2, p. 206;—*DC. pr.* 4, p. 297. excl. syn. *Rheed.*) ছোটমন্দা *Chhoto-munda*. Parasitic, S. Bengal. (Serampore.) Fl. small, greenish-orange, and fr. nearly the whole year.

ORDER XXXI.—CUCURBITACEÆ,—Juss. *Lindl. Nat. Syst.* p. 51;
(partly) *Wight. ill* 2, p. 24—33.

THE GOURD TRIBE.

Annual or perennial, climbing or creeping herbs, rarely undershrubs, chiefly natives of hot countries in both hemispheres, ranged by Meisner under 35, by Endlicher under 28 genera. Of species, *DC.* (1828) assigns for S. America, Mexico and the W. Indies 40; for N. America 5; Europe 4; Egypt and Arabia 7; Senegal 2; Abyssinia 1; Tunis 1; Guinea 3; Mozambique 1; Astrachan 1; Persia 1; Levant 2; Canaries 3; China and Japan 5; and the Society Islands 1. The S. African forms amount to 15, (*Harvey*), and those of unknown origin to as many. In the E. Indies have been discovered about 130 species; viz. 1 of *Bryonopsis*; 4 of *Achmandra*; 1 of *Melothria*? 1 of *Pilogyne*; 2 of *Zehneria*; 2 of *Karivia*; 1-2 of *Mukia*; 31 of *Bryonia*; 2 of *Citrullus*; 12 of *Momordica*; 16 of *Luffa*; 1 of *Benincasa*; 1 of *Lagenaria*; 25 of *Trichosanthes*; 2 of *Gymnopetalum*; 12 of *Cucumis*; 4 of *Cucurbita*; 1 of *Coccinia*; 2 of *Sicyos*; 1 of *Erythralum*; and 1 of *Herpetospermum*. To these must, however, be added about 20 species (including common forms), enumerated by *Blume* since 1828. *DC.* then assigned to this author 26, but *Wight (Ill.* 2, p. 26,) now informs us that *Blume* in all, enumerates 46 Javanese species; thus increasing the E. Indian Cucurbitaceæ to 160. The generic distribution of his additions we are not acquainted with.

“Acrimony and drastic tendency pervade many species, the fruit of some of which” (f. ex. the *Colocynth*), “afford cathartics of remarkable power, acting, in even small doses, with great energy on nearly the whole line of



the alimentary canal. This intensity of power is, however, of rare occurrence, though the property is found more or less active in every part of the plants, mildly in the roots of some, and the leaves and young shoots of others, but in greatest intensity in the pulp surrounding the seed. The seeds themselves do not partake of this property, being nearly all mild and oily. There is reason to believe that some at least, if not all of the edible sorts, owe their freedom from this property to cultivation, as some of them in their wild state are found to possess it in great intensity. The fruit of many of the species of *Cucumis*, are powerfully cathartic, among which *C. Hardwickii* and *Pseudo-Colocynthis*, Royl., may be mentioned as the chief ones, but even the common Cucumber, especially the less highly cultivated varieties of this country, are sometimes known to prove strongly aperient in susceptible constitutions. But of all those yet mentioned, none approach the *Elaterium* (Spirting Cucumber) in the concentrated virulence of this quality, a few grains of the pulp being known occasionally to bring on symptoms of poisoning. Notwithstanding these drawbacks this is certainly a most useful family of plants, owing to the great size of their fruit, and the large quantity of nutritious matter which the edible sorts afford, and which on that account are extensively cultivated in every part of India. Those unfit for food, supply many useful medicines; but even the best known ought to be used cautiously when not ameliorated in their qualities by cultivation." *Wight. ill.* 2, p. 26-27.

KARIVIA, Arn. (*Wight. ill.* 2, p. 30.)

1. *umbellata*, Arn. (l. c.—*Bryonia umbellata*, Klein;—*DC. pr.* 3, p. 305;—*W. and A. pr.* 1, p. 345;—*J. Grah. Cat. B. pl.* p. 78.—*Momordica umbellata*, Roxb. *fl. ind.* 3, p. 710;—*Rheed.* 8, t. 26.) राखलसुसा *Rakhalsusa*. ५ Both Peninsulas of India, Bengal, (Serampore,) Khassya Mountains, Sirmore. Fl. small yellowish, R. and C. S.; fr. C. S. The ripe and unripe fruit, as well as the boiled roots eaten by the Natives.

MUKIA, Arn. (*Wight. ill.* 2, p. 30.)

1. *scabrella*, Arn. (*Wight. l. c.*—*Bryonia scabrella*, L.;—*DC. pr.* 3, p. 306;—*W. and A. pr.* 1, p. 345;—*Wight. icon.* 2, p. 501;—*Roxb. fl. ind.* 3, p. 724;—*J. Grah. Cat. B. pl.* p. 78;—*Rheed.* 8, t. 13.) अगमुकि *Agumuki*. ५ Both Peninsulas of India, Bengal, (Serampore,) interior of the mountains of N. India. Fl. small, yellowish; and fr. throughout the year.

BRYONIA, L. (*Wight. ill.* 2, p. 30; from Schrader.)

1. *laciniosa*, L. (*DC. pr.* 3, p. 308;—*W. and A. pr.* 1, p. 345;—*Roxb. fl. ind.* 3, p. 728;—*Wight. icon.* 2, t. 500;—*J. Grah. Cat. B. pl.* p. 78;—*Rheed.* 8, t. 19) माला *Mala*. ५ Peninsula of India, Goalpara, Bengal, (Serampore,) Deyra Dhoon, Cashmere. Fl. small, yellowish-green; and fr. throughout the year.

CITRULLUS, Schrad. (*Wight. ill.* 2, p. 30.)

1. *Cucurbita*, Schrad. (*Cucurbita Citrullus*, L.;—*W. and A. pr.* 1, p.



- 351;—*Roxb. fl. ind.* 3, p. 719;—*J. Grah. Cat. B. pl. p.* 79.—*Cucumis Citrullus*, Ser.; *DC. pr.* 3, p. 301;—*Rumph.* 5, t. 146, f. 1.) *ভরুয়া Turmus. Water-Melon.* ☉ Cultivated. Fl. large, yellowish, Jan. and Feb.; fr. H. S.
2. *Colocynthis*, Schrad. (*Cucumis Colocynthis*, L.;—*DC. pr.* 3, p. 302;—*W. and A. pr.* 1, p. 342;—*Wight. icon.* 2, t. 498;—*Roxb. fl. ind.* 3, p. 719;—*J. Grah. Cat. B. pl. p.* 77.) *মাকাল Makhal. Colocynthis plant.* ☉ Peninsula of India, Banks of the Jumna, Kemaon, Japan. Fl. yellow, R. S.; fr. C. S.
- MOMORDICA, L. (*Wight. ill.* 2, p. 30; from Schrader.)
1. *Charantia*, L. (*DC. pr.* 3, p. 311;—*W. and A. pr.* 1, p. 348;—*Roxb. fl. ind.* 3, p. 707;—*Wight. icon.* 2, t. 504;—*J. Grah. Cat. B. pl. p.* 78; *B. M.* 51, t. 3455;—*Rheed.* 8, t. 9;—*Rumph.* 5, t. 151.) *করলা Kurula.* ☉ Cultivated in all the warmer parts of Asia. Fl. middle-sized, pale yellow, R. and C. S.; fr. C. S. *Fruit* bitter, wholesome, while unripe eaten in curry by the Natives. It requires to be steeped in salt water, before it is cooked. (*Dr. Gibson.*)
- β. *muricata*, W. and A. (*pr.* 1, p. 348.—*Momordica muricata*, L.;—*DC. pr.* 3, p. 311;—*Roxb. fl. ind.* 3, p. 707;—*Rheed.* 8, t. 10.) *উচ্ছা Oochhya.* ☉ Cultivated by the Natives even more than α. Fl. middle-sized, pale yellow, R. and C. S.; fr. C. S. *Fruit* smaller than that of α, but more esteemed.
2. *dioeca*, Roxb. (*fl. ind.* 3, p. 709;—*DC. pr.* 3, p. 312;—*W. and A. pr.* 1, p. 348;—*J. Grah. Cat. B. pl. p.* 78. Female, *Wight. icon.* 2, t. 505;—*Rheed.* 8, t. 12. Male, *Wight. icon.* 2, t. 506;—*Rheed.* 8, t. 18.) ২. Both Peninsulas of India, Bengal, (Serampore.) Fl. large, yellow, R. and C. S.; fr. C. S. Tender green fruit and tuberous roots of the female plant (weighing from 2-3 pounds,) eaten by the Natives.
3. *cochinchiensis*, Spreng. (*Syst.* 3, p. 14;—*M. mixta*, *Roxb. fl. ind.* 3, p. 709;—*W. and A. pr.* 1, p. 349.—*Muricia cochinchinensis*, *Lour.*) *গোলকঁকড়া Golkankra.* ২. Bengal, (Serampore.) Fl. large, cream-coloured, R. S.; fr. C. S.
- LUFFA, Cav. (*Wight. ill.* 2, p. 31;—from Schrader.)
1. *pentandra*, Roxb. (*fl. ind.* 3, p. 712;—*W. and A. pr.* 1, p. 343;—*J. Grah. Cat. B. pl. p.* 77;—*Wight. icon.* 2, t. 499.—*L. Catupicina*, Ser.; *DC. pr.* 3, p. 303.—*L. Petola*, Ser.; *DC. l. c.*;—*Rheed.* 8, t. 8;—*Rumph.* 5, t. 147.) *ধুন্ধুল Dhoondool*, Hind. *Porol.* ☉ Cultivated all over India. Fl. large, yellow, R. and C. S.; fr. C. S.—Unripe fruit eaten by the Natives.
- β, *amara*—Hind. *Tita porol*; a wild variety.
2. *fetida*, Cav. (*DC. pr.* 3, p. 302;—*B. M.* 40, t. 1638.—*L. acutangula*, *Roxb. fl. ind.* 3, p. 713;—*DC. l. c.*;—*W. and A. pr.* 1, p. 343;—*J. Grah. Cat. B. pl. p.* 77;—*Rheed.* 8, t. 7;—*Rumph.* 5, t. 149.) *ঝিঙ্গা Jhinga*. Hind. *Torooi.* ☉ Cultivated. Fl. large, yellow,

R. and C. S.; fr. C. S.—The half-grown *fruit* is one of the best Native vegetables we have in India. The Natives use it much in their curries. Peeled, boiled and dressed with butter, pepper, and salt, it is little inferior to green peas. (Roxb.)

3. *amara*, Roxb. (*fl. ind.* 3, p. 715;—*W. and A. pr.* 1, p. 343;—*J. Grah. Cat. B. pl. p.* 77.—L. Plukenetiana, *Ser.*—*DC. pr.* 3, p. 302.) তিত ধুন্দুল *Tito-dhoondool*. Hind. *Kerula*. ☉ Peninsular of India, Bengal, (Serampore.) Fl. large, yellow. R. S.; fr. C. S.—Bitter in every part. *Fruit* violently cathartic and emetic. *Juice* of the young roasted fruit applied by the Natives to their temples to cure headache. *Seeds* in substance or infusion, used as an emeto-cathartic. (Roxb.)
- ? 4. *clavata*, Roxb. (*fl. ind.* 3, p. 714.) ☉ Hindoostan. Fl. large, yellow. In H. C. G. fl. R. and C. S.; fr. C. S.—The young unripe *fruit* eaten by the Natives in their curries. (Roxb.)

- ? 5. *graveolens*, Roxb. (*fl. ind.* 3, p. 716.) ☉ Rajmahl.—In H. C. G. fl. R. S.; fr. C. S. The whole plant has a most disagreeable, heavy smell. (Roxb.)

BENINCASA, Savi. (*Wight. ill.* 2, p. 31;—from Schrader.)

1. *cerifera*, Savi. (*DC. pr.* 3, p. 303;—*W. and A. pr.* 1, p. 344;—*J. Grah. Cat. B. pl. p.* 77.—*Cucurbita cerifera*, Fisch.—C. Pepo, Roxb. *fl. ind.* 3, p. 718;—*Rheed.* 8, t. 3.) কুমড়া *Koomra*. Pumpkin. White Gourd. ☉ Cultivated. Fl. large, yellow. R. S.; fr. C. S.—The young unripe *fruit* universally eaten by the Natives in their curries. (Roxb.)

LAGENARIA, Ser. (*Wight. ill.* 2, p. 31;—from Schrader.)

1. *vulgaris*, Ser. (*DC. pr.* 3, p. 299;—*W. and A. pr.* 1, p. 341;—*J. Grah. Cat. B. pl. p.* 76.—*Cucurbita Lagenaria*, L.; Roxb. *fl. ind.* 3, p. 718;—*Rheed.* 8, t. 1, 4, 5;—*Rumph.* 5, t. 144.) কুড় *Kodoo*. লাউ *Lao*.—Bottle-Gourd. White Pumpkin. ☉ Cultivated. Fl. large, white. R. and C. S.; fr. C. S.—The hard rind of the fruit used as a bottle for containing honey, &c. (*Fukeer's bottles*); a variety of it for making the stringed instrument, called *sitar*; another variety as a buoy for swimming across rivers, transporting baggage, &c. (Royle. *J. Grah.*)—The fruit of a wild variety তিতলাউ *Tita-lao*,) considered poisonous.

TRICHOSANTHES, L. (*Wight. ill.* 2, p. 31;—from Schrader.)

1. *anguina*, L. (*DC. pr.* 3, p. 314;—*W. and A. pr.* 1, p. 350;—*Roxb. fl. ind.* 3, p. 701;—*J. Grah. Cat. B. pl. p.* 78;—*B. M.* 19, t. 722;—*Rumph.* 5, t. 148.) চিচিংগা *Chichinga*. Snake-Gourd. ☉ Cultivated. Fl. large, white. R. S.; fr. C. S. *Fruit* universally eaten by the Natives.
2. *cucumerina*, L. (*DC. pr.* 3, p. 315;—*W. and A. pr.* 1, p. 350;—*Roxb. fl. ind.* 3, p. 702;—*J. Grah. Cat. B. pl. p.* 79;—*Rheed.* 8, t. 15.) বনপটোল *Ban-potol*. ☉ Both Peninsulas of India. Bengal, (Serampore.) Fl. small, white. R. S. and C. S.—Unripe *fruit* very bitter, eaten by the Natives in their curries. (Roxb.)

3. *lobata*, Roxb. (*fl. ind.* 3, p. 703.) बनचिचिंगा *Bun-chichinga*. ॐ Bengal, (Serampore.) Fl. small, white, R. and C. S.; fr. C. S.—Not eaten by the Natives, though it appears to be a useful species. (*Roxb.*)
 4. *dioeca*, Roxb. (*fl. ind.* 3, p. 701.) बनपटोल *Bun-patol*.—Hind. *Pul-wal*. ॐ Bengal, (Serampore.) Fl. large, white; and fr. R. S.—Much cultivated, on account of the unripe fruit and tender tops, which are eaten in curries, and reckoned very wholesome. (*Roxb.*)
 5. *cordata*, Roxb. (*fl. ind.* 3, p. 703.) झुईकूमड़ा *Bhoim-Koomra*;—(which is also the name of *Batatas paniculatum*, Choisy.) ॐ Banks of the Megna, where the inhabitants use the root as a substitute for Calumba-root. It has been sent to England as the real Calumba of Mozambique.—Fl. large, white. In H. C. G. fl. R. S. (*Roxb.*)
 6. *bracteata*, (T. *palmata*, *Roxb. fl. ind.* 3, p. 704;—*W. and A. pr.* 1, p. 350;—*Wight. ill.* 2, t. 104-5;—*J. Grah. Cat. B. pl.* p. 79.—*Modecca bracteata*, *Lam.*;—*DC. pr.* 3, p. 337.) बड़मकाल *Buro-makal*. ॐ Both Peninsulas of India, Bengal, (Serampore,) Khas-sya Mountains, Deyra-Dhoon. Fl. large, white, R. S.; fr. C. S.—Root reckoned poisonous (*Roxb.*); with the stem much esteemed in diseases of cattle, as inflammation of the lungs, &c. (*Dr. Gibson.*)
 7. *heteroclita*, Roxb. (*fl. ind.* 3, p. 705.) ॐ Silhet. Fl. large, pale yellowish-white; on the outside tinged with brown.—In H. C. G. fl. H. S.; fr. R. S. (*Roxb.*)
- CUCUMIS, L. (*Wight. ill.* 2, p. 31;—from Schrader.)
1. *Melo*, L. (*DC. pr.* 3, p. 300;—*W. and A. pr.* 1, p. 341;—*Roxb. fl. ind.* 3, p. 720;—*J. Grah. Cat. B. pl.* p. 77.) खुरबुज *Khur-buj. Melon*. ॐ Persia, Kabul. Cultivated.—Fl. largish, yellow, and fr. H. S.
 2. *Momordica*, Roxb. (*fl. ind.* 3, p. 725;—*W. and A. pr.* 1, p. 341;—*J. Grah. Cat. B. pl.* p. 77.) फूँटी *Phoontee*. ॐ Cultivated. Fl. largish, yellow, Feb.; fr. H. S. Fruit much eaten; when young, a good substitute for the common cucumber; when ripe, (after bursting spontaneously) with a little sugar little inferior to the melon, and reckoned very wholesome. (*Roxb.*)—Seed now and then ground into a kind of meal. (*Royle.*)
 3. *sativus*, L. (*DC. pr.* 3, p. 300;—*W. and A. pr.* 1, p. 342;—*Roxb. fl. ind.* 3, p. 720;—*J. Grah. Cat. B. pl.* p. 77.) मसुरा *Susa*. Hind. *Keera*. Common Cucumber. ॐ Cultivated. Fl. largish, yellow; and fr. nearly throughout the year.
 4. *utilissimus*, Roxb. (*fl. ind.* 3, p. 721;—*W. and A. pr.* 1, p. 342;—*J. Grah. Cat. B. pl.* p. 77.) कंकूर *Kankoor*. Hind. *Kakni*. ॐ Cultivated. Fl. largish, yellow, H. and R. S.; fr. C. S.—Fruit, when half-grown, pickled; when ripe, as large as an ostrich-egg, melon-flavored, and, if hung up, keeping good for several months. Seeds, like those of other species of the Gourd-tribe, containing much farinaceous matter, mixed with a large proportion of mild oil. The meal



is an article of diet with the Natives, and the oil is used for the lamp. Powder of the *toasted seeds* diuretic, and serviceable in promoting the passage of gravel. (Roxb.)

5. *pubescens*, Willd. (DC. pr. 3, p. 301;—W. and A. pr. 1, p. 342;—Wight. icon. 2, t. 496;—Royle ill. t. 47. f. 1.—C. maderaspatanus, Roxb. fl. ind. 3, p. 723.) बनगर Bua-gumuk. ○ ~ Coromandel, Bengal, (Serampore,) Saharunpore, Delhi, &c. Fl. largish yellow, R. and C. S.; fr. C. S.—Fruit much esteemed by the Natives, though they do not cultivate the plant. (Roxb.) On ripening it becomes aromatic.
6. *turbinatus*, Roxb. (fl. ind. 3, p. 723;—W. and A. pr. 1, p. 342.) ○ ~ Coromandel. Fl. largish, yellow, R. and C. S.; fr. S. C.—Fruit eaten by the Natives.
7. *trigonus*, Roxb. (fl. ind. 3, p. 722;—W. and A. pr. 1, p. 342;—Wight. icon. 2, t. 497.) ○ ~ Coromandel. Fl. small, yellow, R. and C. S.; fr. C. S.
8. *integrifolius*, Roxb. (fl. ind. 3, p. 724.) ○ ~ Bengal. Fl. large, white; and fr. R. S.

CUCURBITA, L. (Wight. ill. 2, p. 31;—from Schrader.)

1. *maxima*, Duch. (DC. pr. 3, p. 316;—W. and A. pr. 1, p. 351;—Wight. icon. 2, t. 507;—J. Grah. Cat. B. pl. p. 79.—C. Melopepo, Roxb. fl. ind. 3, p. 719. L. ?) मकरिकुम्भड़ा Suphuree-koomra. Squash-Gourd. Red Gourd. ○ ~ Cultivated. Fl. very large, yellow, R. and C. S.; fr. C. S.—Flesh of the fruit, when boiled, tasting somewhat like a young carrot.

COCCINIA, W. and A. (pr. 1, p. 347;—Wight. ill. p. 31;—from Schrader.)

1. *grandis*, (C. indica, W. and A. l. c.;—J. Grah. Cat. B. pl. p. 78.—Bryonia grandis, L.; DC. pr. 3, p. 305.—B. ? Moimoi, Ser; DC. l. c.—Momordica monadelpha, Roxb. fl. ind. 3, p. 708;—Rheed. 8. t. 14;—Burm. zeyl. t. 19. f. 1, 2;—Bumph. 5. t. 166. f. 1.) তেলাকুচা Tela-koocha. ২. ~ Both Peninsulas of India, Bengal, (Serampore,) Saharunpore, Delhi. Fl. large, white; and fr. the whole year.—Ripe fruit eaten raw by the Natives, and greedily devoured by birds; while green used in curries.

JOLLIFIA, Bojer. (DC. pr. 3, p. 316.)

1. *africana*, Delile. (DC. l. c. Feuillea pedata, Sm. ♀ B. M. 53, t. 2681. Telfairia pedata, Hook; ♂ B. M. 54, t. 2751.2; J. Grah. Cat. B. pl. p. 79.) ২. ~ Pemba, near the shores of Zanzibar. Introduced into H. C. G.; fl. ? The oil of the fruit equal to that of the finest olives.

* *Cucurbita ovifera*, L. ○ Astrachan. This species (Vegetable Marrow,) is considered one of the most nourishing and wholesome of the whole tribe. *Ceratosanthes tuberosa*, Spreng. *Trichosanthes tuberosa*, Willd.;—B. M. 53, t. 2703. ৫ ~ W. Indies.



SUB-ORDER.—NHANDIROBEÆ, St. Hil.

Wight. ill. 2, p. 28, annot.

This small tribe consists but of 2 genera of undershrubby, climbing plants: *Fevillea* with 5 W. Indian and S. American species; and *Zanonina*, with 9 E. Indian ones. Of the latter, 6 have been found in Nepal, Assam, the Khassya Mountains, Prome and Taong Dong; 1 in the Peninsula of India, and 2 in Java. Properties unknown.

ZANONIA, L. (DC. pr. 3, p. 298;—W. and A. pr. 1, p. 340.)

1. *clavigera*, Wall. Cat. 5 ∪ Khassya Mountains. Introduced here in 1836.—Has not fl.

* *Fevillea punctata*, Poir. 5 ∪ St. Domingo.—*F. trilobata*, L. 5 ∪ Brazil.—*F. tamnifolia*, H. B. and Kth. 5 ∪ S. America.—*Zanonina indica*, L. 5 ∪ Malabar.

ORDER XXXII.—LOASACEÆ, Lindl. Nat. Syst. p. 53.

Annual or perennial, seldom climbing herbs, of 11 genera, embracing more than 40 species, natives of the more temperate regions or the tropics of America. Properties unknown.

* *Kluprothia mentzelioides*, H. Kth. ☉ S. America.—*Mentzelia hispida*, Willd.; B. M. 59, t. 3205. ♀ Mexico.—*M. strigosa*, H. B. Kth. ♀ Mexico.—*Loasa nitida*, Lam.; B. M. 50, t. 2372. ☉ Peru. *L. Placai*, Lindl.; B. Reg. 19, t. 1599. ☉ Chili.—*L. lateritia*, Hook; B. M. 65, t. 3632. ☉ ∪ Tucuman.

ORDER XXXIII.—CACTACEÆ, Lindl. Nat. Syst. p. 53.

THE INDIAN FIG TRIBE.

Of this order of succulent, polymorphous plants, which, under 9 genera, contains about 250 species, "America is the station, no species appearing to be natives of any other part of the world. The species, which are said to be either wild or naturalized in Europe, Mauritius, and Arabia," (India and China) "have been introduced from America, and having found themselves in situations suitable to their habits, have taken possession of the soil like actual natives.—Hot, dry, exposed places are the favorite stations of Cactaceæ, for which they are peculiarly adapted, in consequence of the imperfect evaporating pores which they possess, as compared with other plants; a circumstance, which, as De Candolle has satisfactorily shown, will account for the excessively succulent state of their tissue." (Lindl.)



The chief importance of this order, is, that some of its species supply the food on which the cochineal insect lives.

MAMMILLARIA, Haw. (*DC. pr. 3, p. 458.*)

1. *simplex*, Haw. (*DC. o. c. p. 459*;—*Cactus mammillaris*, L.;—*Roxb. H. B. p. 37.*) 5. W. Indies. Fl. smallish, white, Feb. and March; fr. 0.
2. *pusilla*, DC. (*pr. 3, p. 459.*) 5. Hot parts of America. Fl. small, yellowish-red, March, but rare; fr. 0.
3. *stellata*, Haw. (*Loud. Hort. Brit.*)
p. 194, no. 12531.) 5 S. America.
4. *coronaria*, Haw. (*DC. pr. 3, p. 458.*) 5. Mexico.
5. *flavescens*, DC. (*pr. 3, p. 459.*) 5
Hot parts of America.

Introduced into H. C. G. Fl. ?

ECHINOCACTUS, Lk. and Otto. (*DC. pr. 3, p. 461.*)

1. *Ottonis*, Lk. (*B. M. 58, t. 3107.*)
5 Brazil.
2. *Eyriesii*, Otto. (*B. Reg. 20, t. 1707*; *B. M. 62, t. 3411.*) 5
Mexico.
3. *cornigerus*, DC. (*pr. 3, p. 461.*) 5 Mexico.—Introduced into H. C. G. Fl. ?

Introduced in 1840. Have not fl.

CEREUS, DC. (*Pr. 3, p. 463.*)

1. *multangularis*, Haw. (*DC. l. c.*) 5
S. America.
2. *peruvianus*, Tabern. (*DC. pr. 3, p. 464.*) 5 Peru.
β *monstrosus*, DC. (*l. c.*) 5 S. America ?
3. *hexagonus*, Haw. (*DC. pr. 3, p. 470.*—*Cactus hexagonus*, L.; *Roxb. H. B. p. 37*;—*B. Repos. 8, t. 513.*) 5 Surinam. Fl. very large, white, fragrant, R. S.; fr. 0.
4. *tetragonus*, Haw. (*DC. pr. 3, p. 466.*—*Cactus tetragonus*, L.; *Roxb. H. B. p. 37.*)—5 Fl. large, white, R. S.; fr. 0. (*Roxb.*)
5. *speciosissimus*, DC. (*pr. 3, p. 468.*—*Cactus speciosissimus*, Desf.;—*B. Reg. 6, t. 486*;—*B. M. 49, t. 2306.*) 5 Mexico.—In H. C. G. Fl. ?
6. *repandus*, Haw. (*DC. pr. 3, p. 468.*—*Cactus repandus*, L.; *B. Reg. 4, t. 336.*) 5 W. Indies. Has been introduced into H. C. G. Fl. ?
7. *columnaris*, Lodd. MSS. 5. Introduced in 1840.
8. *grandiflorus*, Mill. (*DC. pr. 3, p. 468*;—*J. Grah. Cat. B. pl. p. 82*;—*B. M. 62, t. 3381.*—*Cactus grandiflorus*, L.;—*Roxb. H. B. p. 37.*)
5 W. Indies. Fl. very large, white, fragrant, R. S., but rare; fr. 0.
9. *triangularis*, Haw. (*DC. pr. 3, p. 468*;—*J. Grah. Cat. B. pl. p. 83*;—*B. Reg. 21, t. 1807.*—*Cactus triangularis*, L.;—*Roxb. H. B. p. 37*;



- B. M.* 44, *t.* 1884.) 5 Mexico, W. Indies.—Fl. very large, white, fragrant, R. and C. S.; fr. 0.
10. *reptans*, Haw. 5 S. America? Introduced in 1839.—Has not fl.
11. *setosus*, Salrn. (*Lodd. Cab.* 9, 1887.) 5 Brazil. Introduced in 1840.
12. *phyllanthoides*, DC. (*pr.* 3, *p.* 469.—*Cactus phyllanthoides*, DC.;—*B. M.* 46, *t.* 2092.) 5 Mexico. Introduced in 1838. Has not fl.
13. *truncatus*, DC. (*pr.* 3, *p.* 470.—*Cactus truncatus*, *Lk.*—*B. Reg.* 9, *t.* 696;—*B. M.* 52, *t.* 2562.) 5 Brazil. Has been introduced into H. C. G. Fl. ?
14. *Ackermanni*, Lindl. (*B. Reg.* 16, *t.* 1831, under *Cactus*) 5 Mexico. Fl. large, scarlet, R. S.; fr. 0.
15. *ovatus*, G. Don. 5 Chili.
16. *decorus*, Lodd. MSS. 5.
17. *nycticalthus*, Lodd. MSS. 5. } Introduced in 1840.
- OPUNTIA, Tournef. (*DC. pr.* 3, *p.* 471;—*W. and A. pr.* 1, *p.* 363.)
1. *cylindrica*, DC. (*l. c.*—*B. M.* 61, *t.* 3301.—*Cactus cylindricus*, *Lam.*—*Roxb. H. B. p.* 37.) 5 Peru. Fl. largish, (1 inch in diameter) scarlet.—Has not fl. with me. In H. C. G. it was introduced in 1806, but had not fl. in 1814. In England it was introduced in 1799, but it does not fl. there either. The figure in *B. M.* is from a plant, cultivated at Madeira.
2. *curassavica*, Haw. (*DC. pr.* 3, *p.* 472.—*Cactus curassavicus*, *L.*; *Roxb. H. B. p.* 37.) 5 Curaçao. Fl. yellow, large (1½ inch across.) R. S.; fr. 0. (*Roxb.*)
3. *spinosissima*, Haw. ? (*DC. pr.* 3, *p.* 472.) *L.* 5. Jamaica. Fl. smallish ½ inch in diameter,) deep orange, several times a year; fr. 0.
4. *Dillenii*, Haw. (*DC. pr.* 3, *p.* 472;—*W. and A. pr.* 1, *p.* 363;—*Wight. ill.* 2, *t.* 114;—*J. Grah. Cat. B. pl. p.* 88.—*Cactus Dillenii*, *Ker.*; *B. Reg.* 3, *t.* 255.—*C. indicus*, *Roxb. fl. ind.* 2, *p.* 475.) *बागिकेनी Nag-phena*; *Hedge Prickly-Pear*. 5 S. America.—Domesticated all over India. Fl. large, (two inches in diameter,) bright yellow, and fr. throughout the year.—"Upon this plant the Cochineal insects lately brought from America, thrive and multiply abundantly." (*Roxb.*)
5. *Roxburghiana*, (*Cactus chinensis*, *Roxb. fl. ind.* 2, *p.* 476.) *L.* 5. This plant was introduced into H. C. G. before 1793, and in the course of twenty years only flowered once.—No doubt also of S. American origin.
6. *Tuna*, Haw. (*DC. pr.* 3, *p.* 472.—*Cactus Tuna major*, *Roxb. H. B. p.* 37.) 5 S. America. Fl. large, reddish, R. S.—The favorite food of the Cochineal in Mexico and Brazil.
7. *elatio*r, Haw. (*DC. pr.* 3, *p.* 472.—*Cactus Tuna elatio*r, *Willd.*—*Roxb. H. B. p.* 37.) 5 S. America. Fl. large, purplish-yellow, R. S.; fr. R. and C. S.



8. *nigricans*, Haw. (DC. *pr.* 3, p. 473.—Cactus Tuna, *β. nigricans*, B. M. 38, t. 1557.) ♀ S. America. Has not fl. here.
9. *triacantha*, DC. (*l. c.*) ♀ S. America. Has been in the garden here many years, without fl.
10. *cochinillifera*, Haw. (DC. *l. c.*;—J. Grah. *Cat. B. pl.* p. 83.—Cactus cochinillifer, L.; B. M. 54, t. 2741-42;—Roxb. *H. B. p.* 37.) ♀ S. America. Fl. long, with the petals bright rose-coloured at several periods of the year; fr. 0.—Employed in the W. Indies successfully for rearing the Cochineal.
11. *Ficus-indica*, Haw. (DC. *pr.* 3, p. 473.—Cactus Ficus-indica, L.; Roxb. *H. B. p.* 37.) ♀ S. America. Fl. large, sulphur, R. S.
12. *tomentosa*, Salm. (DC. *l. c.*) ♀ S. America.—Introduced into H. C. G. Fl. ?
13. *rubescens*, Salm. (DC. *pr.* 3, p. 474.) ♀ Brazil.—Introduced in 1840. Has not fl.
14. *vulgaris*, Haw. (DC. *l. c.*—Cactus Opuntia, L.; B. M. 50, t. 2393.) ♀ Southern states of N. America, and now cultivated in S. Europe, where the fruit is highly esteemed, and known under the name of *Indian Fig*. Has never fl. in Lower Bengal.
15. *brasiliensis*, DC. (*pr.* 3, p. 474;—B. M. 61, t. 3293.) L. ♀ Brazil. Fl. largish, greenish-yellow, R. S.; fr. 0.
16. *leucantha*, Hort. Berol. (DC. *l. c.*) Introduced into H. C. G. Fl. ?
- PERESKIA, Plum. (DC. *pr.* 3, p. 474.)
1. *aculeata*, Haw. (DC. *l. c.*;—B. Reg. 23, t. 1928;—J. Grah. *Cat. B. pl.* p. 83.—Cactus Pereskia, L. Roxb. *H. B. p.* 37.) *West Indian Gooseberry*. ♀ W. Indies. Fl. largish, white. Here it does not fl.; at Bombay in R. S.; in England very seldom.
2. *Bleo*, H. B. Kth. (DC. *pr.* 3, p. 475;—B. Reg. 17, t. 1473;—B. M. 63, t. 3478.) ♀ New Granada, Mexico. Fl. largish, deep-rose. R. S.
- RHIPSALIS, Gärtn. (DC. *pr.* 3, p. 475.)
1. *salicornioides*, Haw. (DC. *l. c.*;—B. M. 51, t. 2461.) ♀ S. America. Fl. smallish, gold-coloured, but never appearing here.
2. }
3. } New species from Rio Janeiro, (Lodd. MSS.) One of these has
4. } fl. twice. Fl. very small, white, C. S.
5. }
- * *Mammillaria Lehmanni*, Hort. Berol.; B. M. 65, t. 3634. ♀ México. *M. tenuis*, DC.; B. Reg. 18, t. 1523. ♀ México.—*Melocactus depressus*, Hook.; B. M. 65, t. 3691. ♀ Pernambuco.—*M. tubiflorus*, Hort. Angl. Pfeiff.; B. M. 65, t. 3627. ♀ México.—*Cereus Napoleonis*, Hook. B. M. 63, t. 3458. ♀ W. Indies?—*C. serpentinus*, Lag.; B. M. 64, t. 3566. ♀ S. America.—*C. pentaplophus*, DC.; B. M. 65, t. 3651. ♀ México.—*C. Martianus*, Zucc.; B. M. 66, t. 3768. ♀ México.—*C. Hookeri*, (Cactus Phyllanthus, Sims, B. M. 53, t. 2692. not L.) ♀ Su-



rinam.—*C. alatus*. (Cactus alatus, Swz. B. M. 55. t. 2820.) 5 Rio Janeiro.—*Opuntia polyantha*, Haw. (Cactus polyanthos, Sims; B. M. 53, t. 2691.) 5 S. America.—*Lepismium myosurus*, Pfeiff.; B. M. 66. t. 3755. 5 Brazil.—*L. commune*, Pfeiff.; B. M. 66. t. 3763. 5 Brazil.

ORDER XXXIV.—HOMALIACEÆ.—Lindl. Nat. Syst. p. 55.

Trees or shrubs, of 9 genera, embracing 28 species: 12 from Madagascar and Mauritius; 3 from S. Africa; 6 from S. America, and the W. Indies; 1 from China; and 5 from the E. Indies. The latter all belong to *Blackwellia*.—Properties unknown.

BLACKWELLIA, Commers. (DC. pr. 2, p. 54.)

1. *spiralis*, Wall. (DC. l. c. p. 55;—Wall. As. Research, 13, p. 400, with a plate.) L. 5 Pegu. Fl. very small, whitish, January and Feb.; fr. 0.
2. *fetida*, Wall. (*Ludia fetida*, Roxb. fl. ind. 2, p. 508.) 5 Amboina. Fl. small, whitish, R. S.; fr. 0.
3. *propinqua*, Wall. Cat. 5 Penang. In H. C. G., fl. Feb.
4. *cochinchinensis*, R. Br. (*Astranthus cochinchinensis*, Lour.;—DC. pr. 2, p. 55;—B. M. 53, t. 2659.) 5 Cochin-China. Fl. small, whitish. Introduced into H. C. G. Fl.

* *B. nepalensis*, Wall. (Pl. as. rar. 2, t. 179.) 5 Deyra Dhoon.—*B. paniculata*, Lam. ("Bois à écorce blanche.") 5 Bourbon.—*B. padiflora*, Lindl.; B. Reg. 16. t. 1308. 5 China. The finest species of the genus,—*Homalium racemosum*, Jacq.; B. Reg. 6, t. 519. 5 Jamaica.

ORDER XXXV.—MESEMBRYANTHEMACEÆ.

MESEMBRYACEÆ.—Lindl. Nat. Syst. p. 56.

Shrubby or herbaceous plants, rarely annual, referred by Lindl. to 4 genera: *Mesembryanthemum*, *Glinus*, *Orygia*, and *Kolleria*. Excluding from Harvey's genera 21 species, they contain of S. African forms alone, 477. Only a few have been found in N. Holland, Van Diemen's Land, China, Chili, Peru, S. Europe, N. Africa, and the E. Indies. The latter consist of 3-4 species of *Glinus*.—Properties, as far as they are known, of no importance.

MESEMBRYANTHEMUM, L. (DC. pr. 3, p. 415.) *Fig-marygold*.—Nearly all natives of C. G. H.

1. *crystallinum*, L. (DC. o. c. p. 448.) ☉ ♂ C. G. H. Fl. small, white, H. S.; fr. 0.—Also a native of the Canaries.
2. *cordifolium*, L. (DC. o. c. p. 449;—Jacq. ic. rar. 4, t. 487.) 5 C. G. H. Fl. smallish, crimson, nearly throughout the year; fr. 0.



GLINUS, L. (DC. *pr.* 3, p. 455;—*W. and A. pr.* 1, p. 362.)

1. *dictamnoides*, L. (DC. *l. c.*;—*W. and A. l. c.*—*Pharnaceum pentagynum*, *Roxb. fl. ind.* 2, p. 103;—*Burm. ind. t.* 36, f. 1.) দৈত্মি শাক *Dosura-shak*. ☉ Both Peninsulas of India. Bengal, (Serampore.) Fl. small, greenish-red, R. and C. S.; fr. C. S.—The tender shoots are eaten by the Natives in their curries.

* *Mesembrianthemum dolabriforme*, L.; B. M. 1, t. 32. 5—*M. coccineum*, Haw.; B. M. 2, t. 59. 5—*M. pinnatifidum*, L.; B. M. 2, t. 67. ☉—*M. barbatum*, L.; B. M. 2, t. 70. 5—*M. aureum*, L.; B. M. 8, t. 262. 5—*M. edule*, L. 5—*M. viridiflorum*, Ait; B. M. 10, t. 326. 5—All Cape plants.

ORDER XXXVI.—BEGONIACEÆ, R. BR.—Lindl. Nat. Syst. p. 56.

Shrubby or herbaceous, rarely annual plants, amounting, as far as we can judge from Spreng. syst., B. M., B. Reg., and Wall. Cat., to 124 species, of which 1 belongs to Eupetalum, Lindl., and the rest to Begonia. The greater part of them inhabit S. America, Mexico and the W. Indies; 30 have been found in the E. Indies, chiefly in Nepal, the Khassya Mountains, the Neelgherries, and Tavoy; 2 in Madagascar; 1 in Mauritius; 1 in China; 1 in Japan, and 1 in the Island of Johanna.—Eupetalum is a Brazilian genus.—Properties apparently unimportant.

BEGONIA, L. (*Spreng. Syst.* 2, p. 565, No. 1998.)

1. *humilis*, Dryand. (*Spreng. o. c. p.* 626;—*B. Reg.* 4, t. 284.) ♂ W. Indies. Fl. small, whitish, H. S.; fr. R. S.
2. *nitida*, Ait. (*Spreng. syst.* 2, p. 625.) 5 Jamaica. Fl. smallish, white, H. S.
3. *argyrostigma*, Fisch. (*B. Reg.* 8, t. 666.) 5 Brazil. Fl. largish, white, R. S.; fr. 0.
4. *papillosa*, Grah. (*B. M.* 55, t. 2846.) 5 Brazil? Fl. large, rose-coloured. R. S.; fr. 0.
5. *reniformis*, Dryand. (*Spreng. syst.* 2, p. 625;—*B. M.* 60, t. 3225.) 5 Brazil. Fl. smallish, white, C. S.; fr. 0.
6. *malabarica*, Dryand. (*Roxb. fl. ind.* 3, p. 648;—*J. Grah. Cat. B. pl.* p. 172;—*Rheed.* 9, t. 86.) 4 Goalpara, Chittagong. S. Concan. Fl. largish, pale rose-coloured, fragrant. In H. C. G. fl. H. and R. S. (*Roxb.*)
7. *laciniata*, Roxb. (*fl. ind.* 3, p. 649.) ♂ 4 Garrow Hills, Khassya Mountains, Nepal.—In H. C. G. fl. R. S. (*Roxb.*)
8. *porrecta*, Wall. Assam.
9. *heracleifolia*, Schlecht. (*B. R.* 20, 1668;—*B. M.* 62, 3444.)—Mexico. March 1842.



- * *B. undulata*, Schott.; B. M. 54, t. 2723. 5 Brazil.—*B. insignis*, Grah.; B. M. 56, t. 2900; B. Reg. 23, t. 1996. 5 S. America. *B. semperflorens*, Lodd.; B. M. 56, t. 2920. 5 Brazil.—*B. diversifolia*, Grah.; B. M. 57, t. 2966. 4 Mexico.—*B. longipes*, Hook; B. M. 57, t. 3001. Mexico.—*B. geraniifolia*, Hook; B. M. 62, t. 2387. Peru.—*B. sanguinea*, Radd; B. M. 63, t. 3520. 5 Brazil.—*B. octopetala*, L'Herit.; B. M. 64, t. 3559. Lima.—*B. monoptera*, Hook; B. M. 64, t. 3564. Brazil.—*B. platanifolia*, Schott; B. M. 64, t. 3591. Brazil?—*B. parvifolia*, Schott; B. M. 66, t. 3720. Brazil.—*B. sinuata*, Grah.; B. M. 66, t. 3731. Brazil.—*B. acuminata*, Dryand; B. Reg. 5, t. 364. Jamaica.—*B. villosa*, Lindl.; B. Reg. 15, t. 1252. Brazil.—*B. discolor*, R. Br. (B. Evansiana, Andr.; B. M. 36, t. 1473.) China.—*B. dipetala*, Grah.; B. M. 55, t. 2849. Bombay.—*B. picta*, Sm.; B. M. 57, t. 2962. Nepal.—*B. pedunculosa*, Wall. pl. as. rar, 1, t. 97. Khaasya Mountains.—*Eupetatum Lindleyi*, (Begonia petalodes, Lindl.; B. Reg. 21, t. 1757.) Brazil.

ORDER XXXVII.—BRASSICACEÆ, Lindl. Nat. Syst. p. 58.

THE CABBAGE TRIBE.

Herbs, annual, biennial, or perennial, very seldom under-shrubs. Exclusive of species that are uncertain, or common to several different countries, it appears that about 100 are found in the southern hemisphere, and about 800 in the northern, and of these 91 in the new and the rest in the old world.

This calculation will, however, require considerable modification, especially in the Asiatic and N. American numbers, (Lindl.) and we shall, perhaps, not err much, if we take the amount of species of the whole order to be upwards of 1200. The Indian forms according to our materials, are 48: 7 of *Nasturtium*; 2 of *Turritis*; 2 of *Arabis*; 8 of *Cardamine*; 2 of *Pteroncuron*; 1 of *Farsetia*; 6 of *Draba*; 1 of *Cochlearia*? 1 of *Thlaspi*; 1 of *Capsella*; 1 of *Hesperis*; 1 of *Sisymbrium*; 1 of *Alliaria*; 1 of *Lepidium*; (Roxb.) 1 of *Tauscheria*; 9 of *Sinapis*; 1 of *Eruca*; and 1 of *Crambe*. Fourteen of these are common to several parts of the world; 16 have been found in the Himalayas; 5 on the Neelgherries; 2 in Cochinchina; 4 in Java; 8 in Kunawar; and 11 in the plains, chiefly of Bengal.

Acrimony and bitterness form the grand characteristics of this useful order, to which we owe most of our antiscorbutic herbs, and a number of our Kitchen-vegetables. The principle of acidity seems to be a volatile oil, that soon evaporate, and, therefore, is greatly diminished by drying. It abounds in the Horse-radish, Common Cress, Radish, (especially the black Spanish Radish,) &c. which renders it necessary that these should be eaten fresh. In others the acrimony is mitigated by an abundance of mucilage,



various parts of such plants becoming wholesome food, f. ex. Turnip, Cabbage, Sea-kale, and the stems of several species of the Cabbage-tribe. The seeds retain their pungent qualities for a longer period of time, such as those of the white mustard, which have been highly esteemed for their tonic qualities. A great deal of azot enters into the nature of the whole tribe; hence perhaps their animal odour, when in a state of decomposition.

MATHIOLA, R. Br. (DC. pr. 1, p. 132.)

1. *annua*, Swt. (DC. o. c. p. 133.) *Ten-week Stock*. ☉ Sea shores of S. Europe. Fl. largish, red, white, or double, Feb. and March; fr. March and April.
 2. *longipetala*, DC. (pr. 1, p. 134.) ☉ Bagdad. Fl. largish, yellowish-purple.
 3. *parviflora*, R. Br. (DC. pr. p. 135.) ☉ S. Spain, Morocco. Fl. small and purple.
- } Fl. and fr. with No. 1.

CHEIRANTHUS, L. (DC. pr. 1, p. 135.)

1. *Cheiri*, L. (DC. l. c.;—*J. Grak. Cat. B. pl. p. 7.*) *Garden-Wall-flower*. बाह्योद्गीर्णः *Lahoree-suboo*. ♂ Walls, and stony places in Europe. Fl. largish, orange, Feb. and March; fr. April.

NASTURTIUM, R. Br. (DC. pr. 1, p. 137;—*W. and A. pr. 1, p. 19.*)

1. *officinale*, R. Br. (DC. l. c.;—*J. Grak. Cat. B. pl. p. 7.*—*Sisymbrium Nasturtium*, L.;—*E. B. 12, t. 855.*) *Water Cress*. ♀ Rivulets and ponds all over the world. Cultivated in our gardens. Has not fl. here.
2. *coronopifolium*, DC. (pr. 1, p. 138.) ☉ N. Africa. Fl. small, pale yellow, Feb. and March; fr. April.

LEPTOCARPAEA, DC. (pr. 1, p. 140.)

1. *Löselii*, DC. (l. c.) ☉ Germany. Fl. small, yellow, Feb. and March.

NOTOCNEAS, R. Br. (DC. pr. 1, p. 140.)

1. *hispanicum*, DC. (l. c.) ☉ S. Spain. Fl. minute, yellowish, and fr. H. S.

TURRITIS, Dill. (DC. pr. 1, p. 141.)

1. *glabra*, L. (DC. o. c. p. 142;—*E. B. 11, t. 777.*) ☉ Europe, Himalaya. Fl. small, sulphur, and fr. H. S.

ARABIS, L. (DC. pr. 1, p. 142.)

1. *verna*, R. Br. (DC. l. c.) ☉ S. Europe. Fl. small, purple, Feb. and March.
2. *Thaliana*, L. (DC. o. c. p. 144;—*E. B. 13, t. 901.*) ☉ Europe. Fl. small, white, Feb. and March.

CARDAMINE, L. (DC. pr. 1, p. 149;—*W. and A. pr. 1, p. 19.*)

1. *hirsuta*, L. (DC. o. c. p. 152;—*W. and A. o. c. p. 20.*—*E. B. 7, t. 492.*) ☉ Europe, Tauria, Persia, Neelgherries. Fl. small, white, Feb. and March; fr. March.

RICOTIA, L. (DC. pr. 1, p. 157.)

1. *egyptiaca*, L. (R. Lunaria, DC. l. c.) ☉ Egypt, Syria. Fl. small, purplish, March.



FARSETIA, Turr. (*DC. pr. 1, p. 157.*)

1. *cheiranthifolia*, DC. (*o. c. p. 158.*) ☉ Levant. Fl. small, yellow, Feb. and March.

ALYSSUM, L. (*DC. pr. 1, p. 160.*)

1. *campestre*, L. (*DC. o. c. p. 163.*) ☉ S. Europe. Fl. small, yellow, Feb. and March.

KONIGA, R. Br. (*in Clappert, narrat. p. 214.*)

1. *maritima*, R. Br. (*Alyssum maritimum*, Lam.;—*DC. pr. 1, p. 164*;—*E. B. 25, t. 1729. A. halimifolium*, L.;—*B. M. 3, t. 101*; not Willd.)
2. England, S. Europe. Fl. small, white, Jan., Feb. and March; fr. March and April.

CLYPEOLA, Gärtn. (*DC. pr. 1, p. 165.*)

1. *Jonthlaspi*, L. (*DC. l. c.*) ☉ S. Europe, Persia. Fl. very small, yellow, Feb. and March.

DRABA, L. (*DC. pr. 1, p. 166.*)

1. *muralis*, L. (*DC. o. c. p. 171*;—*E. B. 13, t. 912.*) ☉ Europe. Fl. small, white, Feb.

ERIOPHILA, DC. (*pr. 1, p. 172.*)

1. *vulgaris*, DC. (*l. c.*—*Draba verna*, L.;—*E. B. 9, t. 586.*) ☉ Europe. Fl. very small, white, Feb.

COCHLEARIA, Tournef. (*DC. pr. 1, p. 172.*)

1. *Armoracia*, L. (*DC. o. c. p. 173*;—*E. B. 33, t. 2323.*) *Horse-radish*.
2. Europe.—Has been in the garden here more than ten years without flowering, but without the root having lost any of its pungency.
2. *anglica*, L. (*DC. pr. 1, p. 173*;—*E. B. 8, t. 552.*) *English Scurvy-grass*. ☉ France, England, Denmark, &c. Fl. white, small, Feb. and March.
3. *danica*, L. (*DC. pr. 1, p. 173*;—*E. B. 10, t. 696.*) *Danish Scurvy-grass*. ☉ Sea-shores of N. Europe. Fl. small, white, Feb. and March.
4. *officinalis*, L. (*DC. pr. 1, p. 173*;—*E. B. 8, t. 551.*) *Common Scurvy-grass*. ☉ Sea-shores of N. Europe. Fl. small, white, Feb. and March.

THLASPI, Dill. (*DC. pr. 1, p. 175.*)

1. *arvene*, L. (*DC. l. c.*;—*E. B. 24, t. 1659.*) *Penny-Cress*. ☉ Europe, Nepal. Fl. small, white, Feb. and March.

CAPSELLA, Vent. (*DC. pr. 1, p. 177*;—*W. and A. pr. 1, p. 20.*)

1. *Bursa pastoris*, Mönch. (*DC. l. c.*;—*W. and A. l. c.*;—*Thlaspi Bursa pastoris*, L.;—*E. B. 21, t. 1485.*) *Common Shepherd's Purse*. ☉ Europe, India, Japan, Persia, Nepal, C. G. H. N. America, &c. Fl. small, white, Feb. and March.

HUTCHINSIA, R. Br. (*DC. pr. 1, p. 177.*)

1. *procumbens*, Desv. (*DC. o. c. p. 178.*) ☉ S. Europe. Fl. small, white, Feb. and March.

TEESDALIA, R. Br. (*DC. pr. 1, p. 178.*)

1. *nudicaulis*, R. Br. (*T. Iberis*, *DC. l. c.*—*Iberis nudicaulis*, L.;—*E. B. 5, t. 327.*) ☉ Europe. Fl. small, white, Feb. and March.



IBERIS, L. (DC. pr. 1, p. 178.)

1. *umbellata*, L. (DC. o. c. p. 179 ;—B. M. 3, t. 106.) *Purple Candy-tuft*. ☉ Spain, Italy, Candia. Fl. largish, pale rose-purplish, March ; fr. April.
2. *amara*, L. (DC. pr. 1, p. 180 ;—E. B. 1, t. 52.) *Bitter Candy-tuft*. ☉ Europe. Fl. small, white, March ; fr. April.
3. *odorata*, L. (DC. l. c. ;) *Sweet-scented Candy-tuft*. ☉ Candia. Fl. small, white, March ; fr. April.
4. *Lagascana*, DC. (pr. 1, p. 179.) ☉ Spain. Fl. small, white, March ; fr. April.
5. *violacea*, R. Br. (DC. l. c.) Native place unknown. ☉ Fl. violet, small, March ; fr. April.

BISCUTELLA, L. (DC. pr. 1, p. 181.)

1. *ciliata*, DC. (o. c. p. 182.) ☉ Italy, Spain. Fl. small, yellow, March ; fr. April.

CAKILE, Tournef. (DC. pr. 1, p. 185.)

1. *maritima*, Scop. (DC. l. c.—*Bunias Cakile*, L. ;—E. B. 4, t. 231.) *Sea Rocket*. ☉ Sea-shores of Europe. Fl. smallish, pale, purple, Feb. and March.

MALCOLMIA, R. Br. (DC. pr. 1, p. 186.)

1. *maritima*, R. Br. (DC. o. c. p. 187.—*Cheiranthus maritimus*, L. ;—B. M. 5, t. 166.) ☉ Sea shores of S. Europe. Fl. largish, purplish-rose, March ; fr. April.
2. *africana*, R. Br. (DC. pr. 1, p. 187.) ☉ S. Europe, N. Africa. Fl. largish, purple, March ; fr. April.

HESPERIS, L. (DC. pr. 1, p. 188.)

1. *putchella*, DC. (o. c. p. 189.) ☉ Levant. Fl. smallish, purplish-rosy, Feb. ; fr. April.

SISYMBRIUM, L. (DC. pr. 1, p. 190.)

1. *officinale*, Scop. (DC. o. c. p. 191.—*Erysimum officinale*, L. ;—E. B. 11, t. 735.) *Common Hedge-mustard*. ☉ Europe, N. Africa. Fl. very small, yellow, Jan. and Feb. ; fr. March.
2. *Columnæ*, Jacq. (DC. pr. 1, p. 192.) ☉ S. Europe. Fl. small, yellow, Feb. and March ; fr. April.
3. *pannonicum*, Jacq. (DC. pr. 1, p. 193.) ☉ Europe. Fl. small, pale yellow, Feb. and March.
4. *bursifolium*, L. (DC. pr. 1, p. 195.) ☉ Sicily. Fl. small, white, Feb. and March ; fr. April.
5. *fugax*, Lag. (DC. pr. 1, p. 196.) ☉ Spain. Fl. small, yellow, Feb. and March ; fr. April.

CAMELINA, Crantz. (DC. pr. 1, p. 201.)

1. *sativa*, Crz. (DC. l. c.—*Alyssum sativum*, L. ;—E. B. 18, t. 1254.) ☉ Europe. Fl. very small, yellowish, Feb. and March.

SENEBIERA, Poir. (DC. pr. 1, p. 202.)

1. *pinnatifida*, DC. (o. c. p. 203.—*Lepidium didymum*, L. ;—E. B. 4,



- t. 248.) © Europe. Fl. minute, yellowish, and fr. C. S. Domesticated in our gardens.
2. *Coronopus*, Poir. (DC. l. c.—*Coronopus Ruellii*, Gärtn. ;—E. B. 24, t. 1660.) © Europe. Fl. minute, white, Feb. and March ; fr. April.
- LEPIDIUM, L. (DC. pr. 1, p. 203.)
1. *glastifolium*, Desf. (DC. o. c., p. 204.) © N. Africa. Fl. small, white, Feb. and March ; fr. April.
2. *sativum*, L. (DC. pr. 1, p. 204 ;—*Roxb. fl. ind.* 3. p. 116—*J. Grah. Cat. B. pl.* p. 7.) Garden Cress. *हार्दिम Halim.* © Persia, Cyprus. Fl. small, white ; and fr. C. S.
3. *campestre*, R. Br. (DC. pr. 1, p. 204.—*Thlaspi campestre*, L. ;—E. B. 20, t. 1385.) © Europe. Fl. minute, white, Feb. and March ; fr. March.
4. *rudemale*, L. (DC. pr. 1, p. 205 ;—E. B. 23, t. 1595.) © Europe. Fl. minute, white, Feb. and March ; fr. March.
5. *incisum*, Roth. (DC. l. c.) © Caucasus. Fl. minute, white, Feb. and March ; fr. March.
- ISATIS, J. Bauhin. (DC. pr. 1, p. 210.)
1. *tinctoria*, L. (DC. o. c. p. 211 ;—E. B. 2, t. 97.) Wood. ♂ England. S. Europe. Fl. small, bright yellow, C. S. ; fr. March.
2. *lusitanica*, Brot. (DC. pr. 1, p. 210.) © Portugal. Fl. small, yellow, Feb. and March ; fr. April.
- MYAGRUM, L. (DC. pr. 1, p. 212.)
1. *perfoliatum*, L. (DC. l. c.) © M. and S. Europe. Fl. small, pale yellow, Feb. and March ; fr. April.
- BRASSICA, L. (DC. pr. 1, p. 213.)
1. *oleracea*, L. (DC. l. c. ;—E. B. 9. t. 637.) Sea Cabbage. ♂ Europe. Fl. small, yellow, Feb. and March ; fr. April.—*कोफि Kofi.*
- α. *acephala*, DC.
- αα. *ramosa* ; (Cavalier Cabbage.)
- ββ. *vulgaris* ; (Common green Cole-wort.)
- γγ. *quercifolia* ; (Oak-leaved Cabbage.)
- δδ. *sabellica* ; (Scotch Kale.)
- β. *bullata*, DC.
- αα. *major* ; (Savoy Cabbage.)
- ββ. *gemmifera* ; (Brussels' Sprouts.)
- δ. *capitata*, DC.
- αα. *depressa* ; (Drumhead Cabbage.)
- ββ. *sphærica* ; (Great round Scotch Cabbage.)
- γγ. *obovata* ; (Penton Cabbage.)
- δδ. *elliptica* ; (Early York Cabbage.)
- εε. *conica* ; (Sugar-loaf Cabbage.)
- ρρ. *rubra* ; (Red Cabbage.)
- ε. *caulo-rapa*, DC. ; (Kohl-rabi.)
- ρ. *botrytis*, DC.



aa. cauliflora; (*Cauliflower*. ফুলকোপি *Phool-kopi*.)

ββ. asparagoïdes; (*Broccoli*.)

2. *campestris*, L. (*DC. pr.* 1, p. 214;—*E. B.* 32, t. 2234.) *Field Cabbage*. ☉ N. Europe. Fl. small, yellowish, Feb. and March; fr. April.
3. *Rapa*, L. (*DC. pr.* 1, p. 214;—*E. B.* 31, t. 2176.) *Turnip শালগুম Shalgrum*. ♂ Europe. Fl. small, yellow, Feb. and March; fr. April.
4. *Napus*, L. (*DC. pr.* 1, p. 214;—*E. B.* 30, t. 2146.) *Rape*; *Wild Cabbage*; *Cole seed*. ♂ Native country unknown, much cultivated in Europe. Fl. small, yellow, Feb. and March; fr. March.
5. *Erucastrum*, L. (*DC. pr.* 1, p. 216.) ☉ France, Italy, Switzerland, &c. Fl. small, yellow, Feb. and March; fr. April.
- SINAPIS, L. (*DC. pr.* 1, p. 217;—*W. and A. pr.* 1, p. 20.)
 1. *nigra*, L. (*DC. o. c. p.* 218;—*E. B.* 14, t. 969.) *Black Mustard*. ☉ Europe. Fl. small, yellow, Feb. and March; fr. April.
 2. *lævigata*, L. (*DC. pr.* 1, p. 218.) ☉ Spain and Portugal. Fl. small, yellow, Feb. and March; fr. April.
 3. *integrifolia*, Willd. (*DC. l. c.*) ☉ China. Fl. small, yellow, Feb. and March; fr. April.
 4. *brassicata*, L. (*DC. pr.* 1, p. 219;—*Roxb. fl. ind.* 3, p. 120.) ☉ China. Fl. small, yellow, Feb. and March; fr. April.
 5. *arvensis*, L. (*DC. l. c.*;—*E. B.* 25, t. 1748.) *Charlock*. ☉ Europe. Fl. small, yellow, Feb. and March; fr. March.
 6. *orientalis*, L. (*DC. pr.* 1, p. 219.) ☉ Levant. Fl. small, yellow, Jan. and Feb.; fr. March.
 7. *alba*, L. (*DC. pr.* 1, p. 220;—*E. B.* 24, t. 1677.) ☉ England. S. Europe. Fl. smallish, yellow, Feb.; fr. March.
 8. *dissecta*, Lag. (*DC. pr.* 1, p. 220.) ☉ Spain. Fl. small, yellow, Feb. and March; fr. March.
 9. *foliosa*, Willd. (*DC. l. c.*) ☉ Levant. Fl. small, yellow, Feb. and March.
 10. *dichotoma*, Roxb. (*fl. ind.* 3, p. 117.) সর্ষা *Sursha*. ☉ Bengal, (Serampore.) Cultivated on account of the oil of the seeds. Fl. smallish, yellow, C. S.; fr. Feb.
 11. *glauca*, Roxb. (*fl. ind.* 3, p. 118.) শ্বেতরাই *Shwet-rai*. ☉ Cultivated as a field-crop in all the northern parts of India. Fl. smallish, bright yellow, Jan. and Feb. *Seeds* used for many economical purposes, especially on account of the oil. (*Roxb.*)
 12. *ramosa*, Roxb. (*fl. ind.* 3, p. 119.) বড়রাই *Boro-rai*. ☉ Bengal, (Serampore.) Cultivated on account of the oil of its seeds. Fl. largish, yellow, Dec.; fr. Feb.
 13. *trilocularis*, Roxb. (*fl. ind.* 3, p. 121.) ☉ Nepal. Fl. large, yellow, C. S. (*Roxb.*)
 14. *cuneifolia*, Roxb. (*fl. ind.* 3, p. 121.) ☉ Thibet. Fl. small, yellow. In H. C. G. fl. March; fr. April. (*Roxb.*)



15. *rugosa*, Roxb. (*fl. ind.* 3, p. 122.) ☉ Nepal. Fl. bright-yellow. In H. C. G. fl. C. S.; fr. March. (*Roxb.*)
16. *erysimoides*, Roxb. (*fl. ind.* 3, p. 123.) ☉ Wynaad.—In H. C. G. fl. Feb. and March; fr. April. (*Roxb.*)
17. *divaricata*, Roxb. (*fl. ind.* 3, p. 123.) বনরাই *Bun-rai*. ☉ Bengal. (Serampore.) Fl. very small, yellow; and fr. the greater part of the year.
18. *patens*, Roxb. (*fl. ind.* 3, p. 124.) বিলরাই *Bil-rai*. ☉ Bengal. (Serampore.) Fl. very small, yellow. R. S.; fr. C. S.
19. *pusilla*, Roxb. (*fl. ind.* 3, p. 125.) ☉ Cofomandel? Fl. minute, yellow. In H. C. G. fl. C. S. (*Roxb.*)

ERUCA, Tournef. (*DC. pr.* 1, p. 223.)

1. *sativa*, Lam. (*DC. l. c.* Brassica erucoides, *Horn.*—*Roxb. fl. ind.* 3, p. 117.) শ্বেতসূরশা *Shwet-sursha*. ☉ S. Europe, N. Africa, Patna. Fl. small, pale yellow, Feb. Cultivated in India on account of the oil of its seeds.

CARRICHTERA, DC. (*pr.* 1, p. 224.)

1. *Vella*, DC. (*l. c.*—*Vella annua*, L.;—*E. B.* 21, t. 1442.) ☉ England, S. Europe. Fl. small, pale yellow, purple-veined, Feb.; fr. March.

CRAMBE, Tournef. (*DC. pr.* 1, p. 225.)

1. *hispanica*, L. (*DC. o. c. p.* 226.) ☉ Spain. Fl. small, white, March; fr. April.

RAPHANUS, L. (*DC. pr.* 1, p. 228.)

1. *sativus*, L. (*DC. l. c.*;—*Roxb. fl. ind.* 3, p. 126;—*J. Grah. Cat. B. pl.* p. 7.) मूला *Moola*. Common garden-radish. ☉ ♂ China, Japan, W. Asia. Fl. purplish-white, Feb. and March; fr. April.

a *radicula*; Root more or less fleshy, white, rose-coloured or red,—round or oblong.

β *niger*; Root fleshy, compact, hardish, of a very sharp taste. (*Black Spanish Radish*.) This sort, cut raw into slices, and shaken with a little salt between two plates, till the salt is dissolved, has been found an excellent stomachic and diuretic.

2. *Raphanistrum*, L. (*DC. pr.* 1, p. 229;—*E. B.* 12, t. 856.) Wild radish. ☉ Europe. Fl. largish, yellow (white-blackish streaked or purplish.) Feb. and March.

3. *maritimus*, Sm. (*E. B.* 23, t. 1643;—*DC. l. c.*) Sea-radish. ♂ Fl. largish, yellow, C. S.

4. *caudatus*, L. (*DC. pr.* 1, p. 228;—*J. Grah. Cat. B. pl.* p. 7.) ☉ Java. Fl. pale purple, Feb. and March. Much cultivated in Guzerat, (*J. Grah.*)

BUNIAS, L. (*DC. pr.* 1, p. 229.)

1. *Erucago*, L. (*DC. o. c. p.* 230.) ☉ S. Europe. Fl. smallish, yellow, Feb.; fr. March.

ERUCARIA, Gärtn. (*DC. pr.* 1, p. 230.)

1. *crassifolia*, Delile. (*DC. l. c.*) ☉ Egypt. Fl. largish, purplish-white, Feb. and March.



HELIOPHILA, N. Burm. (DC. pr. 1, p. 231.)

1. *arabioïdes*, Curt. (*B. M.* 14, t. 496;—*H. pilosa*, Lam.;— β *incisa*, DC. o. c. p. 233.) $\odot$ C. G. H. Fl. largish, blue, Feb.; fr. March.
2. *stricta*, Sims. (*B. M.* 52, t. 2526.) $\odot$ C. G. H. Fl. small, indigo-coloured, Feb.; fr. March.

* *Schizopetalon Walkeri*; Sims. *B. M.* 50, t. 2379. $\odot$ Chili.—*Streptanthus obtusifolius*, Hook. *B. M.* 61, t. 3317. Arkansa.—*S. hyacinthoides*, Hook. *B. M.* 63, t. 3516. $\odot$ Texas.

ORDER XXXVIII.—CAPPARIDACEÆ, Lindl. Nat. Syst. p. 61.

THE CAPER TRIBE.

Annual and perennial herbs, shrubs, (rarely climbing,) or trees, placed by Lindl. (*o. c. p.* 62.) in 26 genera, and, according to DC. (pr.) amounting to about 100 species for S. America, Mexico and the W. Indies; 23 for Africa, excluding the south; 11 for Arabia; 10 for New Holland and the South Sea Islands; 4 for Persia and Iberia; 4 for the Levant; 4 for N. America; 3 for Europe; 3 for Madagascar; 2 for Tauria; 2 for Timor; 1 for Mauritius; and 1 for China. For S. America, Sprengel, (syst.) adds 5 species. S. Africa contains 20 forms, (Harvey;) and the E. Indies 64. Of the latter, 1 belongs to *Gynandropsis*; 4 to *Cleome*; 4 to *Polanisia*; 4 to *Grateva*; 2 to *Niebuhria*; 2 to *Cadaba*; 46 to *Capparis*; and 1 to *Roydsia*. Of these, 2 only (*Capparis nepalensis*, DC. and *C. obovata*, Buch.) have been found in the Himalayas; the rest are all tropical. Properties unimportant. *Capers* are the flower-buds of *Capparis spinosa*, L., a S. European shrub.

GYNANDROPSIS, DC. (pr. 1, p. 237;—*W. and A. pr.* 1, p. 21.)

1. *pentaphylla*, DC. (*o. c. p.* 238;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 7.—*Cleome pentaphylla*, L.;—*Roxb. fl. ind.* 3, p. 126;—*B. M.* 40, t. 1681;—*Rheed.* 9, t. 24;—*Rumph.* 5, t. 96, f. 3.) কান[ন]া Kanala, শাদাহু[র] Shada Hoorhooriya. $\odot$ W. Indies. Tropical America. Peninsula of India. Bengal, (Serampore,) Seharunpore, Nepal. Fl. middle-sized, white, with crimson filaments, and fr. nearly the whole year. Leaves eaten by the Natives in their curries; bruised and applied to the skin, they act as a rubefacient.

CLEOME, L. (DC. pr. 1, p. 238;—*W. and A. pr.* 1, p. 21.)

1. *monophylla*, L. (DC. o. c. p. 239;—*W. and A. l. c.*;—*Roxb. fl. ind.* 3, p. 129;—*J. Grah. Cat. B. pl.* p. 7.—*C. cordata*, DC. l. c.;—*Rheed.* 9, t. 34;—*Burm. zeyl.* t. 100.) $\odot$ C. G. H. Ceylon. Peninsula of India. Fl. small, pale rose-coloured. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)
2. *heptaphylla*, L. (DC. pr. 1, p. 238.) $\odot$ W. Indies.—In H. C. G. fl. and fr. the whole year. (*Roxb.*)



POLANISIA, Rafin. (*DC. pr. 1, p. 242*;—*W. and A. pr. 1, p. 22.*)

1. *Chelidonii*, DC. (*l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 7*;—*Wight. icon. 2, t. 319.*—*Cleome Chelidonii*, L.;—*Roxb. fl. ind. 3, p. 127.*) ☉ Peninsula of India. Fl. large, rose-coloured; and fr. R. S. —*Seeds* pungent, when powdered used by the Natives in their curries.

2. *icosandra*, W. and A. (*pr. 1, p. 22*;—*Wight. icon. 1, t. 2*;—*J. Grah. Cat. B. pl. p. 8.*—*P. viscosa*, β. DC. *pr. 1, p. 242.*—*Cleome icosandra*, L. C. *dodecandra*, L. ex. pte. et. excl. syn.—*C. viscosa*, L. excl. syn.; *Roxb. fl. ind. 3, p. 128.*—*Rumph. 5, t. 96, f. 2.*) হুহুহুহু Hoorhooriya. ☉ Both Peninsulas of India, Bengal, (Serampore,) Saharunpore, Nepal. Fl. smallish, yellow, and fr. nearly the whole year. *Leaves*, bruised and applied to the skin, act as a sinapism. *Seeds* pungent, used by the Natives in their curries.

CRATZEVA, L. (*DC. pr. 1, p. 242*;—*W. and A. pr. 1, p. 23.*)

1. *Rozburghii*, R. Br. (*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 7.*—*Capparis trifoliata*, *Roxb. fl. ind. 2, p. 571.*) তিক্তশাক Tikto-shak. 5. Both Peninsulas of India. Bengal, (Serampore,) Saharunpore. Fl. large, white, becoming cream-coloured, with purple filaments, Feb. and March; fr. R. S.
2. *Nurvala*, Buch. (*W. and A. pr. 1, p. 23*;—*Rheed. 3, t. 42.*) 5 Malabar, Mysore. Introduced in 1839. Has not fl.—Does it really differ from No. 1.?
3. *obovata*, Vahl. (*Symb. 3, p. 61.*) 5 Madagascar.

NIEBUHRIA, DC. (*pr. 1, p. 243*;—*W. and A. pr. 1, p. 23.*)

1. *linifolia*, (N. *linearis*, DC. *pr. 1, p. 244*;—*W. and A. l. c.*;—*Wight. icon. 1, t. 174.*—*Capparis linifolia*, *Roxb. H. B. (1814.) p. 41.*) 5 Coromandel. Fl. greenish-dark-purple, small, April; fr. 0.
2. *oblongifolia*, DC. (*pr. 1, p. 244*;—*W. and A. pr. 1, p. 23*;—*J. Grah. Cat. B. pl. p. 7.*—*Capparis oblongifolia*, *Forsk.*—*C. heteroclita*, *Roxb. fl. ind. 2, p. 570.*)—5 Peninsula of India. Agra, Delhi. Fl. small, pale green, Dec. Jan. and Feb.; fr. 0.

CAPPARIS, L. (*DC. pr. 1, p. 245*;—*W. and A. pr. 1, p. 24.*)

1. *brevispina*, DC. (*o. c. p. 246*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 8.* C. *acuminata*, *Roxb. fl. ind. 2, p. 566*; not Willd. nor Lindl.) কাকেরা Kalokera. 5 Malabar, Bengal, (Serampore.) Fl. largish, yellowish-white, C. S.; fr. R. S.
2. *Heyniana*, Wall. (*W. and A. pr. 1, p. 25*;—*J. Grah. Cat. B. pl. p. 9*;—*Rheed. 6, t. 57.*) 5 Courtallum, Cochin, S. Concan. In H. C. G. Fl.?
3. *urophylla*? Wall. North-east of Bengal.
4. *horrida*, L. (*DC. pr. 1, p. 246*;—*W. and A. pr. 1, p. 26*;—*Wight icon. 1, t. 173.*—*C. zeylanica*, *Banks.*;—*Roxb. fl. ind. 2, p. 567*; not L.) 5 Peninsula of India, Bengal, (Serampore,) Saharunpore. Fl. largish, white, becoming rose-coloured, H. S.; fr. R. S.



- b. septaria*, L. (DC. pr. 1, p. 247;—*W. and A. pr. 1, p. 26*;—*Roxb. fl. ind. 2, p. 568*;—*J. Grah. Cat. B. pl. p. 9*.) कंटोषुकाभादे *Kanta-goor-kanaee*. 5 Peninsula of India. Bengal, (Serampore.) Fl. small, white, H. S.; fr. R. S. An excellent hedge-plant. (*Roxb.*)
6. *aphylla*, *Roxb.* (*H. B. p. 41*;—*DC. pr. 1, p. 246*;—*W. and A. pr. 1, p. 27*;—*J. Grah. Cat. B. pl. p. 9*.) 5 Banks of the Jumna, Tinnevely, Deccan, Guzerat. On his journey to Cabul, the Honorable Mr. Elphinstone found it growing in the midst of the desert. Has not fl. either here or in H. C. G. (at least in 1814,) though it had then been there seven years. In Guzerat the berries are pickled by the Natives.
- ? *ROYDSIA*, *Roxb.* (*Spreng. syst. 2, p. 561, No. 1958*.)

1. *suaveolens*, *Roxb.* (*Spreng. o. c. p. 607*;—*Roxb. fl. ind. 2, p. 643*.) 5 Silhet. Fl. largish, yellow, fragrant. In H. C. G. fl. March; fr. August.

- * *Cleome pungens*, Willd.; B. M. 40, t. 1640. © W. Indies.—*C. pubescens*, Sims.; B. M. 43, t. 1857. © W. Indies?—*C. gigantea*, L.; B. M. 59, t. 3137. 5 Trinidad.—*C. dendroides*, Schult.; B. M. 61, t. 3296. 5 Brazil.—*C. rosea*, Vahl.; B. Reg. 12, t. 960. Rio Janeiro.—*C. speciosissima*, Deppe; B. Reg. 16, t. 1312. © Xalappa.—*Polanisia felina*, DC. Rheed. 9, t. 23. © Courtallum.—*Cratœva acuminata*, DC. 5 Guiana.—*C. fragrans*, Sims.; B. M. 16, t. 596. 5 S. Leona.—*Cadaba indica*, Lam; Burm. ind. t. 46, f. 3. 5 Coromandel.—*C. trifoliata*, W. and A. 5 Coromandel.—*Capparis Roxburghii*, DC. 5 Coromandel.—*C. grandis*, L. Wight. icon. 1, t. 21. 5 Mysore.—*C. floribunda*, Wight. ill. 1, t. 14. 5 Peninsula of India.

ORDER XXXIX.—RESEDACEÆ, DC.—Lindl. Nat. Syst. p. 62.

THE MIGNONETTE TRIBE.

Annual or perennial herbs, of 4 genera, (*Lindl. l. c.*) containing, according to *Spreng. syst.*, 22 species: 13 from Europe; 5 from N. Africa; 1 from S. Africa; 1 from the Canaries; 1 from China; and 1 from Cochin-China. One of the European species has been found on the Neelgherries.—Properties unimportant.

RESEDA, L. (*Spreng. syst. 2, p. 445, No. 1791*;—*W. and A. pr. 1, p. 28*.)

1. *Luteola*, L. (*Spreng. o. c. p. 463*;—*E. B. 5, t. 320*.) *Dyer's Weed*. © Europe. Fl. small, yellowish, Feb. and March; fr. April.—Yields a yellow dye.
2. *virescens*, Horn. (*Spreng. l. c.*) © Spain. Fl. small, greenish, Feb. and March; fr. April.



3. *odorata*, L. (Spreng. o. c. p. 464;—B. M. 1, t. 29;—J. Grah. Cat. B. pl. p. 9.) *Mignonette*. ☉ N. Africa. Fl. small, greenish, fragrant, Feb. and March; fr. April.
4. *Phyteuma*, L. (Spreng. l. c.) ☉ Austria, Switzerland, S. Europe. Fl. small, greenish, Feb. and March.
5. *lutea*, L. (Spreng l. c.;—E. B. 5, t. 321.) *Wild Mignonette*. ☉ Europe. Fl. small, yellowish, Feb. and March; fr. April.
6. *alba*, L. (Spreng. l. c.;—W. and A. pr. 1, p. 28;—Wight ill. 1, t. 15.) ♂ S. Europe, Neelgherries. Fl. small, white, C. S.

* *Ochradenus baccatus*, Delile. ♂ Egypt.

ORDER XL.—VIOLACEÆ, Lindl. Nat. Syst. p. 63.

THE VIOLET TRIBE.

Perennial, rarely annual herbs, under-shrubs or shrubs (sometimes climbing) or small trees, amounting, under 17 genera, (Lindl.) according to DC. pr., to 66 species for S. America, Mexico and the W. Indies; 34 for N. America; 27 for Europe; 6 for Siberia; 6 for N. Holland; 7 for Madagascar; 3 for Senegal; 2 for Caucasus; 1 for Altai; 1 for Persia; 1 for Arabia; and 1 for Manilla. S. Africa contains 3 species; (Harvey) and the E. Indies 27, viz. 11 from Nepal; 2 from the Khassya Mountains; 2 from the Neelgherries; 1 from Kunawur; 1 from Ceylon; 2 from Java; 2 from Penang; 1 from Oude; 4 from the plains of India; and 1 from Cochin-China; 19 of them belong to *Viola*; 3 to *Ionidium*; 3 to *Alsodeia*; and 1-2 to *Pentaloba*.

The roots of nearly all of the section *Violæ*, have an acrid, nauseous taste, and possess the property of acting as emetics, in a greater or smaller degree. This is especially the case with *Pombalia Ituba*, Ging., a S. American under-shrub, which with *Ionidium parviflorum*, Vent. is considered to form part of those plants that produce *Ipecacuanha*. In Europe, *Viola odorata*, *canina*, *tricolor* and *arvensis* are among the emetic plants, though not acting powerfully enough to be of use in medicine.

Viola, L. (DC. pr. 1, p. 291;—W. and A. pr. 1, p. 31.)

1. *cucullata*, Ell. (DC. o. c. p. 292; β *glaberrima*;—B. M. 43, t. 1795.) ♀, N. America. Fl. large, purplish-blue, C. S.; fr. 0.
2. *Roxburghiana*, (V. *primulifolia*, Roxb. fl. ind. 1, p. 650; ed. Carey, 2, p. 448; not L. nor Pursh. V. *mysorensis*, Wall. Cat. ?) ☉ Interior of Bengal, (Roxb.) Fl. smallish, indigo-coloured; and fr. throughout the year.
3. *odorata*, L. (DC. pr. 1, p. 296;—E. B. 9, t. 619.) *Sweet Violet*. ♀, Europe, Siberia, China. Fl. largish, violet, sweet-scented, C. S.
4. *serpens*, Wall. (DC. l. c.;—Roxb. fl. ind. ed. Carey, 2, p. 449;—



- Royle*, *ill.* t. 18, f. 1.) 4. Nepal, Khassya Mountains. Fl. smallish white, C. S.
5. *distans*, Wall. (*Cat.*;—*Trans. med. and phys. soc. Calcutt.* vol. 7, part 2, p. 227) 4. Khassya Mountains. Fl. small, palish-violet, C. S.
6. *tricolor*, L. (*DC. pr.* 1, p. 303;—*J. Grah. Cat. B.* pl. p. 10;—*E. B.* 18, t. 1287.) *Heart's-ease*. ☉ Europe, Siberia, N. America. Fl. largish, violet, variegated with white and yellow, Jan. Feb. and March. *Herb* successfully used against *crusta lactea*.
- IONIDIUM, Vent. (*DC. pr.* 1, p. 307;—*W. and A. pr.* 1, p. 32.)
1. *suffruticosum*, Ging. (*DC. o. c.* p. 311;—*W. and A. l. c.*;—*Wight, icon.* 1, t. 308;—*J. Grah. Cat. B.* pl. p. 10.—*Viola suffruticosa*, L.; *Roxb. fl. ind.* 1, p. 649; *ed. Carey*, 2, p. 447.—*Rheed.* 9, t. 60.)
হৃৎকোড়া *Noonbora*. 5 Peninsula of India. Bengal, (Serampore,) extending up the Gangetic Valley, nearly as far as Delhi. Fl. small, rose-coloured; and fr. nearly throughout the year.

ALSOIDEIA, Pet. Th. (*DC. pr.* 1, p. 313.)

1. *bengalensis*, Wall. (*Trans. med. and phys. soc. Calcutt.* vol. 7, part 2, p. 224.—*Pentaloba? bengalensis*, Wall. *Cat.*) 5 Khassya Mountains. Fl. very small, white, nearly throughout the year.
2. *Roxburghii*, Wall. (*l. c.*—*Vareca heteroclita*, *Roxb. fl. ind.* 1, p. 648; *ed. Carey*, 2, p. 446.—*Pentaloba? Roxburghii*, Wall. *Cat.*) 5 Lucknow, Amboina. Fl. small, white, C. S.

* *Calypttrion Aubletii*, Ging. 5 Guiana.—*C. pyrifolium*, Mart. 5 Brazil. *Noisetia longifolia*, H. and B. 5 Cayenne.—*Glossarrhen floribundus*, Mart. 5 Brazil.—*Viola præmorsa*, Dougl.;—*B. Reg.* 15, t. 1254. 4. California. Fl. large, gold-coloured.—*V. cornuta*, L.; *B. M.* 21, t. 791. 4. Spain.—*V. lactea*, Sm.; *E. B.* 7, t. 445. 4. Europe.—*V. palmata*, L.; *B. M.* 15, t. 535. 4. Virginia.—*V. pedata*, L.; *B. M.* 3, t. 89.—*V. biflora*, L.; *B. M.* 46, t. 2089. 4. S. Europe.—*V. Patrinii*, DC. *Wight. ill.* t. 18. Siberia, Neelgherries.—*V. canina*, L.; *E. B.* 9, t. 620.—*Solea concolor*, Ging. 4. Pennsylvania.—*Pombalia Ituba*, Ging. (*Ionidium Ipecacuanha*, β : *B. M.* 51, t. 2453.) 5 Guiana.—*Hybanthus havanensis*, H. B. and Kth. 5 Havanna.—*Alsodeia physiphora*, R. Br. 5 Brazil.—*Piparea dentata*, Aubl. 5 Cayenne.

SUB-ORDER.—SAUVAGESIÆ, Lindl. *Nat. Syst.* p. 64.

Shrubs or annual herbs, of 2 genera, and 9 species; 8 from tropical S. America, and 1 from Madagascar.—Properties unimportant.

* *Sauvagesia geminiflora*, Moc. and Sesse. 4. Mexico.—*S. erecta*, L. ☉ S. America.



ORDER XLI.—SAMYDACEÆ, Lindl. Nat. Syst. p. 64.

Shrubs or trees, of 3 genera, containing, to judge from DC. pr., Wall. Cat. and Rept. and Royl. ill., 60 species: 1 from New Caledonia; 1 from Mauritius; 37 from S. America, Mexico and the W. Indies; and 21 from the E. Indies. Of the latter, 18 belong to *Casearia*, and 3 are by R. Br. in Wall. Cat. put down as *Samidea*. They inhabit chiefly the Himalayas, the Circars, the Khassya Mountains, Assam, and Penang. 1 has been found in the Moluccas, and 3 in Java.—Properties unimportant.

CASEARIA, Jacq. (DC. pr. 2, p. 48.)

1. *Vareca*, Roxb. (*fl. ind.* 2, p. 418.—*Vareca*, Gärtn. fr. 1, t. 60.) 5 Khassya Mountains, Goalpara. Fl. small, greenish-yellow, May; fr. Sept. and Oct.
2. *glomerata*, Roxb. (o. c. p. 419.) 5 Silhet. Fl. small, greenish-yellow.—In H. C. G. fl. Dec.; fr. March. (Roxb.)
3. *Canziana*, Wall. (*Samyda Canziana*, Buch. in Wall. Cat.—*C. ovata*, Roxb. *fl. ind.* 2, p. 420. excl. syn. Rheed;—not Willd.) 5 Goalpara. Fl. small, greenish, March.
4. *glabra*, Roxb. (*fl. ind.* 2, p. 421.) L. 5 Moluccas. Fl. small, greenish. In H. C. G. fl. nearly throughout the year. (Roxb.)
5. *tomentosa*, Roxb. (*fl. ind.* 2, p. 421.) 5 Circars, Kemaon, Deyra-Dhoon. Fl. small, greenish, yellow, H. S.; fr. R. S.
6. *lanuginosa*, Buch. Goalpara.

* *Samyda rosea*, Sims.; B. M. 16, t. 550. 5 St. Domingo.

ORDER XLII.—MORINGACEÆ, Lindl. Nat. Syst. p. 65.

THE HORSE-RADISH-TREE TRIBE.

The only genus belonging to this order is:—

MORINGA, Burm. (DC. pr. 2, p. 478;—*W. and A. pr.* 1, p. 178.)

1. *pterygosperma*, Gärtn. (DC. l. c.;—*W. and A. l. c.*;—*Wight. ill.* 1, t. 77;—*J. Grah. Cat. B. pl.* p. 43.—*Hyperanthera Moringa*, Vahl;—*Roxb. fl. ind.* 2, p. 368;—*Rheed.* 6, t. 11;—*Rumph.* 1, t. 74.) *শাজিনা* *Sujina*. Horse-radish-tree. 5 Both Peninsulas of India. Bengal, (Serampore) Hindoosthan, &c. up to the Himalayas.—Domesticated in equatorial America. Fl. middle-sized, smelling of honey, Jan. Feb. and March; fr. H. S.—*Root* a substitute for Horse-radish, used medicinally by the Natives.—*Bark*, wounded, exudes a quantity of gum. *Leaves, flowers and immature capsules* eaten by the Natives in their curries, the latter forming, according to Dr. Gibson, a good substitute



for asparagus. Oil of the seeds in the W. Indies used as salad oil, and because it does not congeal or turn rancid, employed by watch-makers, and for retaining the aroma of delicate flowers.

β. rubriflora, Roxb. Fl. red.—Malda.

* *M. concanensis*, Nimmo; J. Grah. Cat. B. pl. p. 43. b South Concan.

Besides these two species, 3 additional ones (2 Indian, and 1 Arabian,) are mentioned, but they are very uncertain.

ORDER XLIII.—DROSERACEÆ, DC.—Lindl. Nat. Syst. p. 66.

THE SUNDEW TRIBE.

Herbaceous, rarely shrubby, bog or water-plants, of 6 genera amounting to 52 species: 13 from S. America; 6 from N. America; 4 from Europe; 12 from S. Africa; 1 from Madagascar; 8 from New Holland; 2 from Van Diemen's Land; 2 from China; and 4 from the E. Indies. One species, *Drosera Burmanni*, Vahl, grows on the mountains as well as on the plains, and one, *Drosophyllum lusitanicum*, Lk., lives on hills and on the barren sands of Portugal. Of the E. Indian forms, 1 belongs to *Aldrovanda*, and is, according to W. and A., identical with the S. European *A. vesiculosa*, L. The 3 others are species of *Drosera*. Properties unimportant. *Drosera communis*, St. Hil., of Brazil, is said to be poisonous to sheep. The same has been said of other species. *D. lunata*, Buch. might perhaps, according to Royle, yield a valuable dye, as the paper in which the plants were dried became of a pink colour.

DROSEERA, L. (DC. pr. 1, p. 317;—W. and A. pr. 1, p. 33.)

1. *Burmanni*, Vahl. (DC. o. c. p. 318;—W. and A. o. c. p. 34;—Roxb. fl. ind. 2, p. 113;—Wight. ill. 1, p. 42, t. 20;—J. Grah. Cat. B. pl. p. 11.—Burm. zeyl. t. 94, f. 2.) © Ceylon, Peninsula of India. Bengal, Silhet. Fl. very small, yellow; and fr. C. S.

ALDROVANDA, L. (DC. pr. 1, p. 319;—W. and A. pr. 1, p. 34.)

1. *vesiculosa*, L. (DC. l. c.;—W. and A. l. c.—*A. verticillata*, Roxb. fl. ind. 2, p. 112.) মালিকাঝাঁজি *Mulaka-jhanji*. © Standing water in S. Europe and Bengal. Fl. small, white. Has been introduced into H. C. G. The Bengalee name of the plant is familiar to some of my gardeners, but they have as yet not succeeded in procuring it from the neighbourhood.

* *Drosera indica*, L.; Wight. ill. 1, p. 42, t. 20, f. C. Ceylon, Peninsula of India, Tavoy.—*D. lunata*, Buch.; Wight. ill. 1, p. 42, t. 20, f. D. under the name of *D. peltata*.



SUB-ORDER.—PARNASSIÆ. Arn.—Wight ill. 1, p. 43.

A small tribe of herbaceous perennial herbs, of 1 genus, and 12 species : 1 European ; 1 Siberian ; 5 N. American ; and 5 Indian. Of the latter, 1 has been found on the Mountains in the south of the Peninsula of India ; 1 in Mysore ; the rest in the Himalayas. Properties unimportant. *Parnassia palustris*, L. was formerly used in diseases of the eye, and liver.

* *Parnassia mysorensis*, Heyne. Wight. ill. 1, p. 45, t. 21. 2. Mysore.

ORDER XLIV.—FRANKENIACEÆ, St. Hil.—Lindl. Nat. Syst. p. 67.

Herbs, rarely annual, or under-shrubs, of 3 genera, containing 25 species ; 3 N. African ; 6 S. African ; 2 N. American ; 1 S. American ; 1 from the Canaries ; 1 from St. Helena ; 1 from Mogador ; 3 from New Holland ; 1 from Tauria ; and 5 common to several parts of the world.—Properties unknown.

* *Frankenia pulverulenta*, L.—E. B. 17, t. 1211. © Sea-shores of Europe.
Beatsonia portulacifolia, Roxb. 5. Shores of St. Helena.

ORDER XLV.—PASSIFLORACEÆ,—Lindl. Nat. Syst. p. 67.

THE PASSION-FLOWER TRIBE.

Herbs or shrubs, generally climbing, seldom erect, very rarely trees, of 14 genera, and more than 200 species. By far the greater part of these inhabit S. America, Mexico, and the W. Indies. 20 have been found in the E. Indies ; 7 in New Holland and Van Diemen's Land ; 4 in Madagascar ; 3 in Sierra Leona ; 2 in S. Africa ; 1-2 in N. America ; and 1 in Mauritius. Of the E. Indian forms, which chiefly have been found in Java and both Peninsulas of India, 1 belongs to *Tacsonia* ; 6 to *Passiflora* ; and 12 to *Modecca*.

“Nothing is known of the properties of this order further than that the succulent aril and pulp that surround the seed are fragrant, juicy, cooling, and pleasant, in several species.” (Lindl.)

PASSIFLORA, L. (DC. pr. 3, p. 322 ;—W. and A. pr. 1, p. 352.)

1. *minima*, Jacq. (DC. o. c. p. 325 ;—B. Reg. 2. t. 144 ;—Roxb. H. B. p. 49 ;—J. Grah. Cat. B. pl. p. 80.) 5 W. Indies. Fl. small, yellowish-green, fragrant ; and fr. the whole year.
2. *suberosa*, L. (DC. l. c. ;—Roxb. H. B. p. 49.) 5 W. Indies. Fl. white, fragrant, R. S.



3. *biflora*, Lam. (DC. *pr.* 3, p. 326.—*P. lunata*, Sm.;—*B. Reg.* 7, t. 577;—*B. M.* 49, t. 2354.) 5 ∪ Mexico, Jamaica. Fl. middle-sized, greenish-white, fragrant, throughout the year.
 4. *serratifolia*, L. (DC. *pr.* 3, p. 327;—*B. M.* 18, t. 651.) 5 ∪ Surinam. Fl. large, greenish-blue, purple, fragrant, R. S.
 5. *quadrangularis*, L. (DC. *pr.* 3, p. 328;—*B. M.* 46, t. 2041;—*B. Reg.* 1, t. 14.) 5 ∪ Jamaica. Fl. very large, whitish rose-coloured, variegated with blue, &c. fragrant, R. S.
 6. *alata*, Ait. (DC. *l. c.*;—*B. M.* 2, t. 66;—*B. Cab.* 3, t. 246.) 5 ∪ Peru, W. Indies. Fl. very large, rose-scarlet, variegated with several colours, fragrant, R. S.
 7. *laurifolia*, L. (DC. *l. c.*;—*Roxb. H. B.* p. 49;—*J. Grah. Cat. B. pl.* p. 80;—*B. Reg.* 1, t. 13.) 5 ∪ W. Indies, Surinam. Fl. large, blue, variegated with several colours, fragrant, R. S.; fr. C. S.
 8. *racemosa*, Brot. (DC. *pr.* 3, p. 329;—*B. Reg.* 4, t. 285;—*B. M.* 45, t. 2001.—*P. princeps*, *B. Cab.* 1, t. 84.) 5 ∪ Brazil. Fl. very large, intensely red, variegated with purple, scentless; at different periods of the year, but especially C. S.
 9. *coeruleo-racemosa*, Sab. (DC. *l. c.*;—*B. C.* 6, t. 573.) A Hybrid of *P. racemosa* (female) and *P. coerulea* (male.) 5 ∪ Fl. large, scentless, blue, R. S.
 10. *incarnata*, L. (DC. *pr.* 3, p. 329;—*B. M.* 65, t. 3697.) β *alba*. 5 ∪ Virginia. Introduced in 1840.
 11. *edulis*, Sims. (*B. M.* 45, t. 1989;—DC. *l. c.*—*P. incarnata*, β. *B. Reg.* 2, t. 152.) 5 ∪ Brazil. Fl. middle-sized, greenish-white, R. S., fr. C. S., eatable, of a grateful scent.
 12. *coerulea*, L. (DC. *pr.* 3, p. 330;—*B. M.* 1, t. 28;—*B. Reg.* 6, t. 488;—*Roxb. H. B.* p. 49.) 5 ∪ Brazil. Fl. large, pale-green, variegated with deep-green, blue, pale-rose and yellow, R. S.
 13. *foetida*, Cav. (DC. *pr.* 3, p. 331;—*B. Reg.* 4, t. 321;—*B. M.* 53, t. 2619;—*J. Grah. Cat. B. pl.* p. 80.) 2. Creeping. W. Indies. Fl. largish, greenish-white, R. S.; fr. C. S.—Whole plant fetid.
 14. *chinensis*, Wall. MSS. 5 ∪ China? Introduced in 1836. Fl. 1839.
 15. *Mayana*, Veitch. MSS. 5 ∪ Received from Killerton Nursery, Exeter. Has not fl. here.
 16. *phoenicea*, Lindl. (*B. Reg.* 19, t. 1603.) 5 ∪ S. America? Fl. in 1840.
 17. *holosericea*, L. (*ejusdem* *amoen* 226, t. 10, b. 15;—*B. Reg.* 1, t. 59;—*B. M.* 45, t. 2015.) Vera Cruz. Fl. 1840.
 18. *kermesina*, Lk. and Otto. (*B. Reg.* 19, t. 1633;—*B. M.* 63, t. 3503.) Fl. 1840.
- MURUCUA, Tournef. (DC. *pr.* 3, p. 333.)
1. *ocellata*, Pers. (DC. *l. c.*—*Passiflora Murucua*, L.; *B. Reg.* 7, t. 574.) 5 W. Indies. Fl. middle-sized, scarlet, R. S.
- MODECCA, Rheed. (DC. *pr.* 3, p. 336;—*W. and A. pr.* 1, p. 353.)
1. *palmata*, Lam. (DC. *l. c.*;—*W. and A. l. c.*;—*Wight. icon.* 1, t. 201.—



- M. tuberosa*, Roxb. *fl. ind.* 3, p. 134.—*M. integrifolia*, Lam.; *DC. l. c.*; —*Rheed.* 8, t. 20-23.) ५ ∪ Courtallum, Cochin. Fl. largish, yellowish-pale-green, scentless. In H. C. G. fl. R. S.; fr. Oct. (*Roxb.*)
2. *dubia*, Roxb. (*fl. ind.* 3, p. 135.) ५ ∪ Sumatra. Fl. small, pale greenish-yellow. In H. C. G. fl. Feb. (*Roxb.*)
3. *trilobata*, Roxb. (*Corom.* 3, t. 271;—*fl. ind.* 3, p. 132;—*Spreng. syst.* 3, p. 45.) ५ ∪ Chittagong. Fl. middle-sized, yellow. In H. C. G. fl. R. S.; fr. Sept. and Oct. (*Roxb.*)
4. *furfuracea*, Wall. Cat. ५ ∪ Prome. Introduced in 1839. Has not fl.
5. *extensa*, Wall. ५ ∪ Khassya Mountains. In H. C. G. fl. R. S.

* *Smeathmannia pubescens*, Soland. 5 S. Leona.—*Paropsia edulis*, Pet. Th. ५ Madagascar.—*Astraphea ovata*, Lindl. 5 Guiana.—*Passiflora onychina*, Lindl. B. R. t. 21; B. M. 67, t. 3820. ५ ∪ Rio Janeiro.—*P. Mooreana*, Hook.; B. M. 66, t. 3773. ५ ∪ Buenos Ayres.—*P. gossypifolia*, Desv.; B. Reg. 19, t. 1634. ५ ∪ Tropical America.—*P. tucumanensis*, Hook. B. M. 65, t. 3636. ५ ∪ Tucuman, St. Jago.—*P. nigelliflora*, Tweedie. B. M. 65, t. 3635. ५ ∪ St. Jago d'Estero.—*P. filamentosa*, Cav.; B. M. 46, t. 2023. ५ ∪ S. America.—*P. pallida*, L.; B. Reg. 8, t. 660. St. Domingo ५ ∪.—*P. angustifolia*, Swz.; B. Reg. 3, t. 188; B. M. 45, t. 1983. ५ ∪ W. Indies. *P. peltata*, Cav.; B. Reg. 6, t. 507. ५ ∪ W. Indies.—*P. perfoliata*, L.; B. Reg. 1, t. 78. ५ ∪ Jamaica.—*P. rubra*, L.; B. Reg. 2, t. 95. ५ ∪ W. Indies.—*P. capsularis*, L.; B. M. 55, t. 2868. ५ ∪ W. Indies.—*P. Maximiliana*, Bory. (*P. Vespertilio*, L.; B. Reg. 7, t. 597.) ५ ∪ Brazil.—*P. tuberosa*, Jacq.; B. Reg. 5, t. 432. ५ ∪ Tropical America.—*P. maliformis*, L.; B. Reg. 2, t. 94. ५ ∪ St. Domingo.—*P. ligularis*, Juss.; B. Reg. 16, t. 1339; B. M. 57, t. 2967. ५ ∪ Peru.—*P. albida*, Ker.; B. Reg. 8, t. 677. ५ ∪ Brazil.—*P. stipulata*, Aubl. (*P. glauca*, Ait.; B. Reg. 1, t. 88, not Humb.?) ५ Cayenne, Brazil.—*P. palmata*, Lodd. (*P. filamentosa*, β Ker. B. Reg. 7, t. 584) ५ ∪ Brazil.—*P. picturata*, Ker.; B. Reg. 8, t. 673. ५ ∪ Brazil.—*P. ciliata*, Ait.; B. M. 8, t. 288. ५ ∪ Jamaica.—*Disemma Herbertiana*, DC. (*Passiflora Herbertiana*, Ker.; B. Reg. 9, t. 737.) ५ ∪ N. Holland.—*D. coccinea*, DC. ५ ∪ N. Holland.—*Tacsonia sanguinea*, DC. ५ ∪ W. Indies.—*Ryancaea speciosa*, Vahl. ५ Trinidad, Cayenne.—*Patricia bicolor*, DC. 5 Cayenne.

ORDER XLVI.—PAPAYACEÆ,—Mart. Lindl. Nat. Syst. p. 69.

THE PAPAW TRIBE.

Trees, natives of S. America, arranged in 1 genus, containing according to Spreng. syst., 6 species.



CARICA, L. (Spreng. syst. 3, p. 895, No. 3190;—W. and A. pr. 1, p. 325.)

1. *Papaya*, L. (Spreng. o. c. p. 905;—Roxb. fl. ind. 3, p. 824;—W. and A. l. c.;—J. Gralh. Cat. B. pl. p. 80;—B. Reg. 6. t. 459. (male);—B. M. 56. t. 2898-9;—Wight. ill. 2, t. 106-7;—Rheed. 1, t. 15. f. 1, (male,) and 2 (female).—Rumph. 1, t. 50.) (पेपिया) *Pepiya*. b. S. America. Domesticated in India. Fl. middle-sized, pale yellow, fragrant; and fr. nearly the whole year.—Trees about Serampore either straight and without branches like a palm, or branched. Leaves employed by the negroes in the W. Indies to wash their linen, instead of soap. Fruit, when unripe, used in curries by the Natives, also pickled, and made into a preserve;—when ripe, the soft, yellow pulp, which is very delicious to many, is eaten without the addition of pepper and sugar, as in the W. Indies. It is certainly wholesome, more especially when some of the olive-coloured, pungent, caper-like seeds are partaken of at the same time. Juice of the pulp employed in the W. Indies against freckles, of the unripe fruit as an efficient vermifuge. "The tree has, moreover, the singular property of rendering the toughest animal substances tender, by causing a separation of the muscular fibre; its very vapour even does this; newly-killed meat suspended among the leaves, and even old hogs and old poultry, when fed on the leaves and fruit, become tender in a few hours.—A principal constituent of the juice of the unripe fruit is fibrine, a principle otherwise supposed peculiar to the animal kingdom and to fungi." (Lindl.)

* *C. citriformis*, Jacq. fil; B. M. 65, t. 3133. 5 Guiana.

ORDER XLVII.—FLACOURTIACEÆ.—Lindl. Nat. Syst. p. 70.

Bennet in Horsf. pl. jav. rar. 2, p. 189-190

Shrubs or small trees, forming 10-13 genera, *Flacourtia*, *Phoberos*, *Roumea*, *Banara*, *Zylosma*, *Prockia*, *Thiodia*, *Aphloia*, *Azara*, *Echinocarpus*, *Trichospermum*, *Ludia*? *Lætia*? from Madagascar; Guinea; Africa; Mauritius; New Holland; S. America. Fifteen species are from the E. Indies. Of those which inhabit Nepal, the Neelgherries, Java, Sumatra and the Moluccas, 9 belong to *Flacourtia*; and 9 to *Phoberos*.—Properties nearly unknown.

FLACOURTIA, L'Herit. (DC. pr. 1, p. 256;—W. and A. pr. 1, p. 29.)

1. *Ramontchi*, L'Herit. (DC. l. c.;—W. and A. l. c.;—Roxb. fl. ind. 3, p. 834;—Wight. icon. 1, t. 85;—J. Gralh. Cat. B. pl. p. 10.) 5 Madagascar. Introduced into H. C. G. Fl.?
2. *sapida*, Roxb. (Corom. 1, t. 69;—fl. ind. 3, p. 835;—DC. pr. 1, p. 256;—W. and A. pr. 1, p. 29;—J. Gralh. Cat. B. pl. p. 10.)
 ২২৫ *Boonch*. 5 Peninsula of India. Bengal, (Serampore,) Hindoos-

- than and northwards to Deyra-Dhoon. Fl. minute, greenish, C. S.; fr. H. S.—*Fruit* eaten by the Natives.
3. *sepiaria*, Roxb. (*Corom.* 1, t. 68;—*fl. ind.* 3, p. 835;—*DC. pr.* 1, p. 256;—*W. and A. pr.* 1, p. 29;—*J. Grah. Cat. B. pl.* p. 10;—*Rheed.* 5, t. 39.) 5 Peninsula of India, Bengal, Nepal, Kemoan. Fl. minute, greenish, C. S.; fr. H. S.
 4. *inermis*, Roxb. (*Corom.* 3, t. 222;—*fl. ind.* 3, p. 833;—*DC. pr.* 1, p. 256;—*W. and A. pr.* 1, p. 29.) 5 Moluccas, both Peninsulas of India, Silhet. Fl. minute, greenish, Feb. and March; fr. Nov. *Fruit* too sour to be eaten raw, but makes very good tarts. (*Roxb.*)
 5. *cataphracta*, Roxb. (*fl. ind.* 3, p. 834;—*DC. pr.* 1, p. 256.) पाणिजला *Paneejala*. 5 Assam, Moughir, Nepal. Fl. minute, greenish, C. S.—*Fruit* palatable, reckoned wholesome. (*Roxb.*)
 6. *ferox*, Wall. MSS.—In H. C. G. Fl.?
 7. *obcordata*, Roxb. (*fl. ind.* 3, p. 835.) 5 Chittagong. Has been introduced into H. C. G.?
 8. *cordifolia*, Roxb. (*H. B.* p. 73.) 5 Silhet. Introduced into H. C. G. in 1810, but had not fl. in 1814.
 9. *rotundifolia*, Roxb. (*l. c.*) 5 Coromandel. Introduced into H. C. G. in 1804, but had not fl. in 1814.
 10. *Campbelliana*, Roxb. (*l. c.*) 5 Sumatra.—Introduced into H. C. G. in 1800, but had not fl. in 1814.
- PROBEROS, Lour. (*W. and A. pr.* 1, p. 29.)
1. *chinensis*, Lour. (*Roumea chinensis*, Wall. Cat.) 5 Introduced in 1840.
 2. *Roxburghii*, Bennet. (in Pl. Jav. Rar. p. 182. sine caractere.—*Ludia spinosa*, *Roxb. fl. ind.* 2, p. 507.—*Flacourtia*? *Stigmarota*, Wall. Cat.) 5 Sumatra. Fl. small, reddish-white, March and April; fr. Sept. (*Roxb.*) The tree in the garden here unarmed.
- * ? *Erythrospermum macrophyllum*, Poir. 5 Mauritius. ?—*E. paniculatum*, Poir. 5 Mauritius. ?—*E. verticillatum*, Lam. 5 Mauritius.

ORDER XLVIII.—PANGIACEÆ, Lindl. Nat. Syst. p. 70.

Containing only the 3 following species:—

- HYDROCARPUS, Gärtn. (*DC. pr.* 1, p. 257;—*W. and A. pr.* 1, p. 30.)
1. *inebrians*, Vahl. (*DC. l. c.*;—*W. and A. l. c.*;—*Wight. ill.* 1, t. 16;—*J. Grah. Cat. B. pl.* p. 10.) 5 Ceylon, Malabar. Fl. small, white.—In H. C. G. Fl. ?—*Fruit* used at Ceylon for poisoning fish.
 2. *odoratus*, Lindl. (*Wight. ill.* 1, p. 37.—*Gynocardia odorata*, *Roxb. Cor.*—*Chacoolmoogra odorata*, *Roxb. fl. ind.* 3, p. 836.) L. 5 Assam, Silhet. Fl. large, pale yellow, fragrant. Has been in the garden



here for more than twelve years, without fl.—Seeds used by the Natives at Silhet in the cure of cutaneous disorders. Freed from their integuments, they are beaten up with clarified butter into a soft mass, and in this state applied thrice a day to the parts affected. (*Roxb.*)

* *Pangium Rumphii*, (Rumph. 2, t. 59.) 5 Java, Moluccas.

ORDER XLIX.—TURNERACEÆ, DC.—Lindl. Nat. Syst. p. 71.

Annual and perennial herbs, sometimes under-shrubs, all natives of S. America, Mexico and the W. Indies, of 2 genera and 31 species.—Properties unknown.

TURNERA, L. (*DC. pr. 3, p. 346.*)

1. *ulnifolia*, L. (*DC. l. c.*)

β. *angustifolia*, DC. (*T. angustifolia*, Curt.;—*B. M.* 8, t. 221.) 5 Jamaica. Fl. largish, uniformly yellow; and fr. the whole year. Domesticated about Serampore.

2. *trioniflora*, Sims. (*B. M.* 47, t. 2106;—*DC. pr. 3, p. 346.*) 4. Brazil, Trinidad, Mexico. Fl. large, cream-coloured with a dark purple-eye; and fr. the whole year. Domesticated about Serampore.

* *T. cuneiformis*, Juss. 5 Rio Janeiro—*T. brasiliensis*, Willd. 5 Brazil.—*T. acuta*, Spreng. 5 Jamaica.—*Piriqueta villosa*, Aubl. 5 Guiana.

ORDER L.—BIXACEÆ.—Lindl. Nat. Syst. p. 72.

THE ARNOTTO TRIBE.

Trees of only one genus, and 1-2 species.

BIXA, L. (*DC. pr. 1, p. 259*;—*W. and A. pr. 1, p. 31.*)

1. *Orellana*, L. (*DC. l. c.*) 5 Hot parts of America. Fl. largish, inodorous, R. S.; fr. C. S.

α *caribæa*, (*Bixa Orellana*, *B. M.* 35, t. 1456.) Cultivated in the W. Indies. Fl. rose-coloured; immature fr. dark reddish-brown.

β. *indica*, (*Bixa Orellana*, *Roxb. fl. ind. 2, p. 581*;—*W. and A. pr. 1, p. 31*;—*Wight. ill. 1, t. 17*;—*J. Grah. Cat. B. pl. p. 10*;—*Rumph. 2, t. 19.*) नटेकन *Lutkun*. Flowers white; immature fruit, green. Cultivated in India.

Bixa yields the substance *Arnotto*, in France called *Rocou*, which is the pulp of the seeds. Farmers use it to stain their cheeses, and dyers to obtain a reddish colour. The dye of the Indian variety is neither so abundant, nor so good, as that from the W. Indies; where also the bark of the tree is used for cordage.



ORDER LI.—GARCINIACEÆ (CLUSIACEÆ. Lindl. Nat. Syst. p. 74.)

THE MANGOSTEEN TRIBE.

Trees or shrubs, rarely climbing, sometimes (*Clusia*) parasitical, with the exclusion of *Xanthochymus*, contained, according to Lindl. (*l. c.*) in 22 genera. Of these our materials only assign 35 species to S. America, Mexico and the W. Indies, but their number must be considerably greater. Two species have been found in Madagascar; 1 in Mauritius; 1 in Guinea; 1 in Tongatabu; and 60 in the E. Indies. (Moluccas, Java, Ceylon. Both Peninsulas of India. The Khasiya Mountains, Silhet.) Of the latter, 30 belong to *Garcinia*; 20 to *Calophyllum*; 6 to *Mesua*; 1 to *Gynotroches*; 1 to *Kayea*; 1 to *Calysaccion*; and 1 to *Apoterium*.

A very good synopsis of the Indian Garciniaceæ (*Guttiferæ*) will be found in *Wight's. ill.* 1, p. 124-129.

"The species of this order, (*Guttiferæ*.) all abound in a viscid, yellow, acrid and purgative gum-resinous juice resembling *Gamboge*. This gum-resin is obtained by removing the bark, or by breaking the leaves and young shoots." (*Lindl.*) "The most important and finest qualities are generally considered to come from the kingdom of Siam, and are imported into England from China by way of Singapore. Among these the wholesale druggist distinguishes by name at least two, and generally three varieties—*Pine Gamboge*, *Cake or Lump Gamboge* and *Coarse Gamboge*." (*Graham in Companion to Bot. Mag.*) The first variety is well known under the name of Gum Gamboge.

GARCINIA, L. (*Wight. ill.* 1, p. 124.)

1. *Mangostana*, L. (*Wight. l. c.*;—*DC. pr.* 1, p. 560;—*Gürt. fr.* 2, t. 103;—*Roxb. fl. ind.* 2, p. 618;—*J. Grah. Cat. B. pl.* p. 26;—*Rumph.* 1, t. 43, female.) 5 Moluccas. Malay Islands. Fl. large, reddish green yellow. Has not fl. in Bengal, I believe; indeed, it can scarcely be kept alive.—Gives the well-known fruit, *Mangoosteen*, believed to be the most palatable of all known fruits.
2. *cornea*, L. (*Wight. ill.* 1, p. 124;—*DC. pr.* 1, p. 561;—*Roxb. fl. ind.* 2, p. 229;—*Wight. icon.* 1, t. 105;—*Rumph.* 3, t. 30.) 5 Moluccas. Penang. Moulmein. Fl. middle-sized, yellowish, Feb. and March; fr. May and June.
3. *Kydiana*, Roxb. (*H. B. p.* 42;—*Wight. ill.* 1, p. 125; *icon.* 1, t. 113.—*G. Kydia*, *Roxb. fl. ind.* 2, p. 623, not W. and A.) 5 Andaman Islands. Fl. middle-sized, yellowish.—In H. C. G. fl. Feb.; fr. July. Fruit very sharp but pleasantly acid, and, like the rest of the genus, the aril is by far the more palatable part. (*Roxb.*)
4. *pedunculata*, Roxb. (*fl. ind.* 2, p. 625;—*Wight. ill.* 1, p. 125;—*icon.* 1, t. 114. (female,) and 115, (male.)) L. 5 Rungpore.—In H. C. G. Fl. ?—Aril copious, firm, and of a very sharp, pleasantly acid taste. (*Roxb.*)



5. *paniculata*, Roxb. (*fl. ind.* 2, p. 628;—*Wight. ill.* 1, p. 125; *icon.* 1, t. 112.) 5 Silhet. Fl. small, white. In H. C. G. fl. C. S.; fr. July. Aril palatable, tasting somewhat like that of the Mangosteen. (*Roxb.*)
 6. *purpurea*, Roxb. (*fl. ind.* 2, p. 624;—*Wight. ill.* 1, p. 125;—*J. Grah. Cat. B. pl.* p. 25.) 5 Malabar. In H. C. G. Fl.?—Fruit agreeably acid, eaten by the Natives. Workers in iron use the acid juice as a mordant; a concrete oil is obtained from the seeds, which is well known and used at Goa for adulterating ghee. (*Bombay Courier*, 12th June, 1830.)
 7. *laucæfolia*, Roxb. (*fl. ind.* 2, p. 623;—*Wight. ill.* 1, p. 125;—*icon.* 1, t. 103. male.) 5 Silhet. In H. C. G. Fl.?—Cultivated at Silhet, on account of its fruit, of which the Natives are fond.
 8. *Roxburghii*, Wight. (*ill.* 1, p. 125;—*icon.* 1, t. 104;—*J. Grah. Cat. B. pl.* p. 26.—G. Cambogia, *Roxb. Corom.* 3, t. 298;—*fl. ind.* 2, p. 621; not Desrouss.—G. zeylanica, *Roxb. fl. ind.* p. 621.—G. Cowa, *Roxb. fl. ind.* 2, p. 622;—*W. and A. pr.* 1, p. 101.—G. affinis, *W. and A. l. c.*—*J. Grah. Cat. B. pl.* p. 25.) 5 Ceylon, Travancore, Malabar, Chittagong. Fl. small, sulphur-coloured, Feb.; fr. June. Fruit eatable, but very acid.
 9. *dioeca*, Sm. (*Rees' Cyclop.* vol. 15.) 5 In H. C. G. Fl.?
 10. *porrecta*, Wall. Ceylon. In H. C. G. Fl.?
- MAMMEA, L. (*DC. pr.* 1, p. 561.) *Mamree tree*.
1. *americana*, L. (*DC. l. c.*;—*Roxb. H. B.* p. 41.) 5 W. Indies.—In H. C. G. fl. H. S. (*Roxb.*) In the W. Indies the juice is employed to destroy the chiggers, little insects which attack the naked feet, introducing themselves into the flesh below the toe nails. (*Lindl.*)
- MESUA, L. (*DC. pr.* 1, p. 562;—*W. and A. pr.* 1, p. 102.)
1. *Roxburghii*, Wight. (*ill.* 1, p. 127.—*Mesua ferrea*, *Roxb. fl. ind.* 2, p. 605, not W. and A.?) নগদেবশুর *Nagkushur*. 5 Cultivated in Bengal. Fl. very large, fragrant, H. S.; fr. C. S. Flowers found in the bazars in a dried state, being used in medicine as well as esteemed for their fragrance. The grandees of Ava are said to stuff their pillows with the dried anthers of the flowers, on account of their fragrance. (*Roxb.*)
- CALOPHYLLUM, L. (*DC. pr.* 1, p. 562;—*W. and A. pr.* 1, p. 102.)
1. *Calophyllum*, L. (*DC. l. c.*;—excl. syn. Rumph.;—*W. and A. o. c.* p. 103; excl. syn. Rumph. and C. Bintagor, *Roxb.*;—*Roxb. fl. ind.* 2, p. 606;—*Wight. icon.* 1, t. 77;—*J. Grah. Cat. B. pl.* p. 26.) স্বনতানচাঁপা *Sultana-champa*. L. 5 Both Peninsulas of India. Fl. largish, white, fragrant, June and July; fr. C. S.
 2. *polyanthum*, Wall. 5 Khassya Mountains. In H. C. G.
 3. *angustifolium*, Roxb. (*fl. ind.* 2, 608.) 5 Penang.
 4. *Tucamahaca*, Wild. (*DC. pr.* 1, p. 562.) 5 Madagascar, Sechelles.

KAYBA, Wall. (*Wight, ill. 1, p. 129.*)

1. *floribunda*, Wall. (*Pl. as. rar. 3, t. 201*;—*Wight, l. c.*) L. 5 Khassya Mountains. Fl. largish, white, tinged with rose, fragrant. In H. C. G. Fl.?

* *Garcinia speciosa*, Wall. pl. as. rar. 3, t. 258. 5. Amherst.—*G. celebica*, L. Rumph. 1, t. 44. 5. Island of Celebes.—*G. cochinchinensis*, Choisy. Rumph. 3, t. 32. 5. China. Perhaps the very tree that yields the Pipe Gamboge.—*G. Cambogia*, Desrouss. Rheed. 1, t. 24. 5 Ceylon. Malabar. Courtallum.—*G. Gutta*, Wight. ill. 1, t. 44. 5 Ceylon.—*G. javanica*, Bl. 5 Java.—*G. Bhoomicowa*, Wall. Cat. 5 Silhet.—*Gynotroches axillaris*, Bl. 5 Java.—*Mesua speciosa*, Choisy. Rheed. 3, t. 53. 5. Malabar.—*M. ferrea*, L. Wight. icon. 1, t. 118. 5 Ceylon. *M. coromandelina*, Wight. icon. 1, t. 117. 5 Courtallum.—*M. pedunculata*, Wight. icon. 1, t. 119. 5 Mergui.—*Calophyllum Blumii*, Wight. 5 Java.—*C. Bintagor*, Roxb. Rumph. 2, t. 71. 5 Moluccas. Mauritius.—*C. tomentosum*, Wight. 5 Ceylon.—*C. decipiens*, Wight. Rheed. 4, t. 39. 5 Travancore. S. Concan.—*C. Moonii*, Wight. icon. 1, t. 111. 5 Ceylon.—*C. Burmanni*, Wight. icon. 1, t. 108. 5 Ceylon.—*Calysaccion longifolium*, Wight. 5 Bombay.—*Rheedia lateriflora*, L. 5 Martinique.—*Pentadesma butyracea*, R. Br. The Butter-tree of S. Leona.—*Moronobea coccinea*, Aubl. 5 Guiana.—*Micranthera clusiaefolia*, Choisy. 5 Cayenne.—*Quapoya scandens*, Aubl. 5 Guiana.—*Q. Panapanari*, Aubl. 5 Guiana.—*Clusia rosea*, L. 5 St. Domingo.—*C. alba*, L. 5 S. America.—*C. flava*, L. 5 Jamaica.—*Tavomita guianensis*, Aubl. 5 Guiana, Brazil.

ORDER LII.—CANELLACEÆ, Mart.—(Sub-Order? CANELLÆ, Lindl. Nat. Syst. p. 75.)

Trees, contained in 2 genera, *Platonia* Mart.; S. American, and *CANELLA*, P. Browne, (*DC. pr. 1, p. 563.*)

1. *alba*, Murr. (*DC. l. c.*;—*Trans. Linn. Soc. 1, p. 102, t. 8.* Winterrana Canella, L.) 5 W. Indies. Fl. small, glaucous-brown, fragrant, H. S.; fr. O. Bark stimulant, tonic, but now almost obsolete.

ORDER LIII.—CARYOCARACEÆ, (RHIZOBOLACEÆ.—DC. Lindl. Nat. Syst. p. 76.)

"Six large trees found in the forests of the hottest parts of S. America constitute the whole of the order.—Some of them are known for producing the *Souari* (vulgo Suwarrow) Nuts, of the shops, the kernel of



which is one of the most delicious fruits of the nut kind that is known. An oil is extracted from them not inferior to that of the Olive." (*Lindl.*)

- * *Caryocar nuciferum*, L. B. M. 54. t. 2727-8. *Souari*, or *Butter-nut*, Essequibo, Berbice. Flowers very large, purplish-brown.—*C. glabrum*, Pers. Guiana.—*C. tomentosum*, Willd. Guiana.—*C. butyrosam*, Willd. Guiana.

ORDER LIV.—MARCGRAAVIACEÆ, Juss.—*Lindl. Nat. Syst.* p. 77.

Shrubs, sometimes of a scrambling habit, (*Marcgraavia*) of 4 genera, containing 9 species: 1 from New Caledonia, and 8 from S. America and the W. Indies.—Properties unknown.

- * *Marcgraavia umbellata*, L. 5 Trinidad. *M. coriacea*, Vahl. 5 Guiana. *Norantea guianensis*, Aubl. 5 Guiana. *N. brasiliensis*, Choisy. 5 Brazil. *Ruyschia chusiofolia*, Jacq. 5 Guiana. *R. Souroubea*, Willd. 5 Guiana.

ORDER LV.—HYPERICACEÆ, *Lindl. Nat. Syst.* p. 77.

THE TUTSAN TRIBE.

Perennial herbs, undershrubs, shrubs, or trees, "very generally spread all over the earth, inhabiting mountains and vallies, marshes and dry plains, meadows and heaths, in N. America, Asia, S. America, Europe, Africa, and its neighbouring Islands, and New Holland," (*Lindl.*), who refers all of them to 13 genera.—"These are by *Spach* increased to 27, species of 23 of which were formerly united under the large and very complex genus *Hypericum*." (*Wight. ill.* 1, p. 111.) DC. (1824) enumerates 165 species, of which N. America contains the largest number, 38; Europe 28; S. America 20; the E. Indies 9, &c. The latter now amount to 45; 1 of *Ancistrolobus*; 4 of *Xanthochymus*; 7 of *Norysa*; 2 of *Brathys*; and, according to DC., Spreng, and Wall. Cat., 31 of *Hypericum*, and "*Hypericinea*,"—Most of these species have been found on the Himalayas, the Khassya Mountains, the Neelgherries, and at Penang and Singapore.—Properties unimportant.

ANCISTROLOBUS, *Spach. (Wight. ill.* 1, p. 111.)

1. *carneus*. Wall. (*Rept.*—*Hypericum carneum*, Wall. Cat.) 5 China. Fl. small, palish scarlet, March, April and May; fr. C. S.

XANTHOCHYMUS, Roxb. (*DC. pr.* 1, p. 562;—*W. and A. pr.* 1, p. 101)—Referred to this order conformably with the views of *Wight. ill.* 1, p. 122.

1. *pictorius*, Roxb. (*Corom.* 2, t. 196;—*fl. ind.* 2, p. 633;—*DC. pr.* 1, p. 562;—*W. and A. pr.* 1, p. 102.) L. 5 Circars. Penang, Silhet.



Fl. small, greenish-white, April; fr. C. S.—This beautiful tree yields a green fruit and a large quantity of indifferent gamboge. (*Roxb.*) Does not possess the elements of Gamboge. (*Wight.*)

2. *ovalifolius*, *Roxb.* (*fl. ind.* 2, p. 632;—*W. and A. pr.* 1, p. 102;—*J. Grah. Cat. B. pl.* p. 26.—*Stalagmites cambogioides*, *Moon's Cat. Ceylon, pl.*—*Cambogia Gutta*, *Burm. fl. ind. ex pte.*) 5 Ceylon. Fl. very small, greenish-white, H. S. fr. July.

3. *dulcis*, *Roxb.* (*fl. ind.* 2, p. 631;—*B. M.* 58, t. 3088;—*Wight. icon.* 1, t. 192.) 5 Moluccas, Penang. Fl. smallish, greenish-white, June and July; fr. C. S.

Nonyssa, *Spach.* (*in Wight. ill.* 1, p. 113.)

1. *chinensis*, (*Hypericum chinense*, *L.*;—*DC. pr.* 1, p. 545.—*H. monogynum*, *L.*;—*B. M.* 10, t. 334;—*Roxb. fl. ind.* 3, p. 400.) 5 China. Fl. large, gold-coloured, and fr. the greater part of the year.

2. *cernua* (*Hypericum cernuum*, *Roxb. fl. ind.* 3, p. 400.) 5 Hurdwar, Shreenagur. Fl. large, gold-coloured, Jan. Feb. and March; fr. O.

3. *patula*, (*Hypericum patulum*, *Thunb.*—*H. uralum*, *Buch.*;—*B. M.* 50, t. 2375.) 5 Nepal, Kemaon, Khassya Mountains.—Has been introduced into H. C. G. Fl. ?

* *Haronga madagascariensis*, *Choisy.* 5 Madagascar, Bourbon.—*Vismia sessilifolia*, *Pers.* 5 Guiana.—*V. reticulata*, *Choisy.* 5 Guiana.—*V. guianensis*, *Pers.* 5 Guiana.—*V. rufescens*, *Pers.* 5 Guiana.—*V. brasiliensis*, *Choisy.* 5 Brazil.—*V. cayennensis*, *Pers.* 5 Cayenne.—*Naryssa mysorensis*, *Arn.* 5 Mysore, Neelgherry.—*N. Hookeriana*, *Wight.* 5 Peninsula of India.—*Brathys japonica*, *Wight.* 5 Khassya Mountains, Martaban.—*B. Wightiana*, *Wight.* 5 Neelgherry.—? *Ochranthe arguta*, *Lindl.*; *B. Reg.* 21, t. 1819. 5 China.

ORDER LVI.—TERNSTRÖMIACEÆ, *DC.*—*Lindl. Nat. Syst.* p. 79.

Trees or shrubs, according to *Lindl.*, forming 28 genera, to which our materials refer 132 species: 56 for S. America, Mexico and the W. Indies; 57 for the E. Indies; 13 for China and Japan; 4 for N. America; and 1 for Guinea. Of the E. Indian forms, chiefly discovered in Java, Ceylon, both Peninsulas of India, the Khassya Mountains, Assam, and Nepal, 1 belongs to *Cochlospermum*; 9 to *Ternströmia*? 1 to *Anneslea*; 1 to *Adinandra*; 9 to *Eurya*; 4 to *Cleyera*; 12 to *Saurauja*; 9 to *Gordonia*; 7 to *Camellia*; 1 to *Thea*; 2 to *Schinus*; — to *Pyrenaria*; and 1 to *Reinwardtia*, *Geeria*. Bl. as perhaps not distinct, (*Wight.*) is here joined to *Eurya*.

The most remarkable plant of the tribe is the *Tea*, of which by far the best information will be found in *W. Griffith's Report on the Tea-plant of Upper Assam*.



ANNESLKA, Wall. (*Pl. as. rar.* 1, t. 5.)

1. *fragrans*, Wall. (*l. c.*) 5 Moulmein. Fl. smallish, whitish-yellow, fragrant.—Introduced into H. C. G. ?

EURYA, Thunb. (*DC. pr.* 1, p. 525;—*W. and A. pr.* 1, p. 86.)

1. *fasciculata*, Wall. (*Cat.*) 5 Silhet.—Has been introduced into H. C. G. fl. ?

SAURAUJA, Willd. (*DC. pr.* 1, p. 525.)

1. *fasciculata*, Wall. (*Pl. as. rar.* 2, t. 148.) 5 Nepal. Fl. smallish, white, rose-coloured, slightly sweet-scented. Introduced into H. C. G. Fl. ?

2. *Roxburghii*, Wall. (*Ternströmia serrata*, *Roxb. fl. ind.* 2, p. 521.) 5 Sylhet. Fl. small, rose-coloured. In H. C. G. fl. April and May; fr. July and Aug. (*Roxb.*)

GORDONIA, Ellis, (*DC. pr.* 1, p. 528;—*W. and A. pr.* 1, p. 87.)

1. *integrifolia*, Roxb. (*H. B. p.* 33,—*fl. ind.* 2, p. 572.—*G. Wallichii*, *DC. pr.* 1, p. 528.) L. 5 Khassya Mountains. Has been introduced into H. C. G. Fl. ?

2. *floribunda*, Wall. *Cat.* Martaban, Chappedong, Tavoy. Has been introduced into H. C. G. Fl. ?

CAMELLIA, L. (*DC. pr.* 1, p. 529.)

1. *Kissi*, Wall. (*Pl. as. rar.* 3, t. 256;—*DC. pr.* 1, p. 529.) 5 Nepal.
2. *caudata*, Wall. (*Pl. as. rar.* 3, p. 36.) 5 } In H. C. G. Fl. ?
Khassya Mountains.

THEA, L. (*DC. pr.* 1, p. 530.)

1. *chinensis*, Sims. (*DC. l. c.*)
β. *Bohea*, (*B. M.* 25, t. 998.) 5 China. In H. C. G. fl. C. S. (*Roxb.*)

COCHLOSPERMUM, Kth. (*DC. pr.* 1, p. 527;—*W. and A. pr.* 1, p. 87.)

1. *Gossypium*, DC. (*l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 22.—*Bombax Gossypium*, L. *Roxb. fl. ind.* 3, p. 169.) 5 Travancore, Coromandel, Hurdwar. Fl. large, bright-yellow, March and April; fr. R. S. The tree yields the gum, called *Kuteera*, which in the N. W. Provinces of India is substituted for *Tragacanth*. (*Royle.*)

* *Eurya Wightiana*, Wall. *Wight. ill.* 1, t. 38. 5 Peninsula of India. *E. tristyla*, W. and A. 5 Peninsula of India.—*E. chinensis*, R. Br. 5 China.—*Laplacea speciosa*, H. B. and Kth. 5 S. America.—*Ventenatia glauca*, Beauv. 5 Benin in Africa.—*Cochlospermum insigne*, A. St. Hil. 5.—*C. serratifolium*, DC. 5 Mexico.—*C. vitifolium*, Spreng. 5 N. Spain.—*C. tinctorium*, R. Br. 5 Senegambia.—*Archytea triflora*, Mart. 5 Brazil.—*Mahurea palustris*, Aubl. 5 Guiana, Brazil.—*Marila racemosa*, Swz. 5 W. Indies.—*Kielmeyera corymbosa*, Mart. Brazil.—*K. rosea*, Mart. Brazil.



ORDER LVII.—ACERACEÆ, Lindl. Nat. Syst. 1, p. 81.

THE SYCAMORE TRIBE.

Trees, under 3 genera, comprising 40 species; 10 from N. America; 9 from Nepal and the Himalayas; 9 from Europe; 6 from Japan; 1 from Iberia; 1 from the Levant; 1 from Tartary; 1 from Mexico; 1 from Cochinchina? and 1 of unknown origin. Of the Indian species, 8 belong to *Acer*, and 1 to *Dobinea*.

"The species are only known from the sugary sap of *Acer saccharinum* and others, from which sugar is extracted in abundance, and for their light useful timber." (Lindl.)

ACER, L. (DC. pr. 1, p. 593.)

1. *oblongum*, Wall. (DC. l. c.) L. 5 Nepal. Fl. very small, greenish, March; fr. 0.
2. *lævigatum*, Wall. (Pl. as. rar. 2, t. 104.) L. 5 Higher Mountains of Nepal, Kemaon. In H. C. G. Fl. ?

NEGUNDO, Mönch. (DC. pr. 1, p. 596.)

1. *frazinifolium*, Nutt. (DC. l. c.;—*Acer* Negundo, L.) 5 N. America. Has been in the garden many years, but does not fl.

* *Dobinea vulgaris*, Buch. 5 Nepal.

ORDER LVIII.—SAPINDACEÆ, Juss.—Lindl. Nat. Syst. p. 81.

THE SOAP-TREE TRIBE.

Trees or shrubs, often climbing and cirrhiferous, seldom climbing herbs. The order contains 43 genera, of which the greater number of species (150) inhabits S. America, Mexico and the W. Indies. One has been found in the southern parts of the United States; 2 in Senegal; 4 in Guinea; 10 in S. Africa; 1 in Madagascar; 9 in Bourbon and Mauritius; 2 in Japan; 4 in China; 2 in Timor; and about 10 in New Holland and the South Sea Islands. Our materials furnish us with only 50 forms for the E. Indies; 2 of *Cardiospermum*; 1 *Sioja*; 9 of *Schmidelia*; 1 of *Harpullia*; 3 of *Baccaurea*; 14 of *Sapindus*; 2 of *Cupania*; 1 of *Hedycarpus*; 10 of *Nephelium*; 1 of *Schleichera*; 2 of *Dodonaea*; 1 of *Eustathes*; and 1 of *Pedicella*.—What may be the amount of species discovered in Java, and of Wall's unpublished Sapindaceæ, we have no means of ascertaining, but the probability is, that they will at least double our Indian forms. Blume's new genera are *Irina*, *Lepisanthes*, *Mischocarpus*; (*Cupania*, Lindl.) and *Aphania*.

"It is singular that while the leaves and branches of many of these plants are unquestionably poisonous, the fruit of others is valuable as an article of



desert." (*Lindl.*) To the former belong some species of *Paullinia*, and, as regards fish, also of *Magonia* and *Serjania*; to the latter *Nephelium Lichi* and *Iappaceum*, *Pierardia sapida* and *dulcis*, *Hedycarpus malayanus*, *Schmidelia dulcis*, *Sapindus esculentus*, *Paullinia subrotunda*, *Cupania sapida*, &c. The fruit of several species of *Sapindus* is used instead of soap.

CARDIOSPERMUM, L. (*DC. pr. 1, p. 601*;—*W. and A. pr. 1, p. 109.*)

Heart-seed.

1. *Halicacabum*, L. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. fl. ind. 2, p. 292*;—*J. Grah. Cat. B. pl. p. 28*;—*Wight icon. 2, t. 508*;—*B. M. 26, t. 1049*;—*Rheed 8, t. 28*;—*Rumph. 6, t. 24, f. 2.*) शिबधूल Shihdhool. नखटेकी Nuphutkee. ☉ All over India. Fl. small, white; and fr. nearly the whole year. Root aperient. (*Ainslie.*)

2. *canescens*, Wall. (*pl. as. rar. 1, t. 14*;—*W. and A. pr. 1, p. 109.*) ☉ Banks of the Irawaddi. Fl. small, white; and fr. nearly all the year.

PAULLINIA, L. (*DC. pr. 1, p. 604.*)

1. *carthaginensis*, Jacq. (*DC. o. c. p. 606*;—*Roxb. H. B. p. 29.*) ॐ S. America. In H. C. G. fl. C. S. (*Roxb.*)

SIOJA, Buch.

1. *sanguinaria*, Buch.—(*Rumph. 5, t. 180.*) ॐ Goalpara. Ava. Silhet. Introduced into H. C. G. Fl. ?

SCHMIDELIA, L. (*DC. pr. 1, p. 610*;—*W. and A. pr. 1, p. 109.*)

1. *serrata*, DC. (*l. c.*;—*W. and A. o. c. p. 110.*—*Ornithophe serrata*, *Roxb. Corom. 1, t. 61*; *fl. ind. 2, p. 266.*) राखलफल Rakhalphul. ॐ Peninsula of India. Bengal, (Serampore.) Fl. small, white, R. S.; fr. C. S.—Root used by the Telinga physicians in substance to stop diarrhoeas. Fruit eaten by the Natives. (*Roxb.*)

2. *aporetica*, (*Ornithophe aporetica*, *Roxb. fl. ind. 2, p. 264*, excl. syn. *Forst. ?*) ॐ Silhet. Fl. small, yellowish, June and July; fr. C. S. (*Roxb.*)

3. *glabra*, (*Ornithophe glabra*, *Roxb. fl. ind. 2, p. 267*, excl. syn. *L. and Burm. ?*) ॐ Chittagong. Fl. small. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)

4. *villosa*, *Wight. (icon. 2, t. 401.* *Ornithophe villosa*, *Roxb. fl. ind. 2, p. 265.*) ॐ Chittagong. Introduced into H. C. G. in 1810, but had not fl. in 1814.

5. *dentata*, Wall. ॐ Assam. Fl. small, greenish-white, R. S.

SAPINDUS, L. (*DC. pr. 1, p. 607*;—*W. and A. pr. 1, p. 110.*) Soapberry Tree.

1. *Saponaria*, L. (*DC. l. c.*) ॐ W. Indies. Fl. small, white, H. S.; fr. C. S.

2. *laurifolius*, Vahl. (*DC. pr. 1, p. 608*;—*Roxb. fl. ind. 2, p. 278*;—*W. and A. pr. 1, p. 111*;—*J. Grah. Cat. B. pl. p. 29*;—*Rheed. 4, t. 19.*) ॐ Peninsula of India. Fl. small, white, Dec.; fr. April.—Berries saponaceous, and used by washermen.

3. *emarginatus*, Vahl. (*DC. pr. 1, p. 608*;—*Roxb. fl. ind. 2, p. 279*;—*W. and A. pr. 1, p. 111*;—*Wight. ill. 1, t. 51*;—*J. Grah. Cat. B. pl. p. 29.*) बुरु-रिठा *Buro-ritha*. 5 Peninsula of India. Bengal. Fl. small, white, Oct. and Nov.; fr. Feb. and March. Seeds used medicinally, and for washing the finer kinds of silk. (*Dr. Gibson.*)
 4. *detergens*, Roxb. (*fl. ind. 2, p. 280.*) रिठा *Ritha*. 5 Bengal. Fl. small, white, Feb. and March; fr. C. S. Fruit used for washing.
 5. *rubiginosus*, Roxb. (*Corom. 1, t. 62*; *fl. ind. 2, p. 282*;—*DC. pr. 1, p. 608*;—*W. and A. pr. 1, p. 112*;—*J. Grah. Cat. B. pl. p. 29.*—*S. fraxinifolius, DC. l. c.*) L. 5 Both Peninsulas of India. Fl. small, white, March and April; fr. C. S.—Timber large, straight, strong, durable. (*Roxb.*)
 6. *polyphyllus*, Roxb. (*H. B. p. 29.*) 5 Pegu. Fl. small, greenish-white, March; fr. O.
 7. *undulatus*, Wall. MSS. 5 Native place? Fl. small, whitish, Dec.; fr. O.
 8. *acuminatus*, Wall. (*Royle ill. p. 139.*) 5 Deyra-Dhoon and other Himalayan valleys, Bechiaco in Nepal, Khassya Mountains.—In H. C. G. Fl. ?
 9. *fruticosus*, Roxb. (*fl. ind. 2, p. 283*;—*J. Grah. Cat. B. pl. p. 29.*) 5 Moluccas. Fl. small, rose-coloured, March; fr. May and June.
 10. *Danura*, (*Scoytalia Danura, Roxb. fl. ind. 2, p. 274.*) दादुरा *Danoora*. 5 Soonderbuns. Fl. small, pale rose-coloured, H. S.
 11. *angustifolius*, Wall. 5 Khassya Hills. Introduced in 1829.
- CUPANIA, Plum. (*DC. pr. 1, p. 612*;—*W. and A. pr. 1, p. 112.*)
1. *canescens*, Pers. (*DC. o. c. p. 613*;—*W. and A. o. c. p. 113*;—*J. Grah. Cat. B. pl. p. 29.*—*Molinæa canescens, Roxb. Corom. 1, t. 60*; *fl. ind. 2, p. 243.*—*Sapindus tetraphyllus, Vahl.*;—*DC. pr. 1, p. 608.*) 5 Circars, Kandalla, in ravines, Koosur Ghaut. Fl. small, white, March.—Wood white, not so serviceable as that of *Sapindus rubiginosus, Roxb.*
 2. *lævis*, Pers. (*DC. pr. 1, p. 613.*—*Molinæa lævis, Willd.*;—*Roxb. fl. ind. 2, p. 244.*) 5 Bourbon. Mauritius. Fl. small, white, March.
 3. *Roxburghii*, Wight. (*icon. 2, t. 402.*—*Schleichera pentapetala, Roxb. fl. ind. 2, p. 275.*) L. 5 Silhet. Fl. small, greenish-yellow. In H. C. G. fl. H. S.; fr. Aug. and Sept. (*Roxb.*)
 4. *sapida*, Cambess. (*Blighia sapida, Kön. ann. bot. 1806. 2, t. 16, 17*;—*DC. pr. 1, p. 609*;—*Roxb. H. B. p. 29*;—*J. Grah. Cat. B. pl. p. 30.*) 5 Guinea. Cultivated in India. Fl. small, greenish-white. May and June; fr. C. S.—Fruit much esteemed in Guinea and the W. Indies.
 5. *madagascariensis*, G. Don. (*Tina madagascariensis, DC. pr. 1, p. 614.*) 5 Madagascar. Fl. 1837.
 6. *alternifolia*, Willd. (*Lam. ill. t. 305. f. 2.*) 5 Mauritius.

HARPULLIA, Roxb. (*Spreng. syst. c. p. p. 51.*)

1. *cupanioides*, Roxb. (*Spreng. o. c. p. p. 92*;—*Roxb. fl. ind. 1, p. 645*; ed. Carey, 2, p. 442.) 5 Chittagong. Fl. small, yellowish, H. and R. S.

BACCAUREA, Lour. (*Spreng. syst. 2, p. 174. No. 1787.*)

1. *Pierardi*, Buch. (*B. ramiflora*, Lour. *Coch. 2, p. 661* ? excl. syn. Rumph. 3, t. 9.—*Pierardia sapida*, Roxb. *fl. ind. 2, p. 254.*) 5 Tippera, Ava, Cochin-China. Fl. small, yellow, Feb.; fr. May. *Aril* subacid, edible. (*Roxb.*)

2. *dulcis*, Wall. (*Pierardia dulcis*, Jack; *Linn. Trans. 14, p. 120*;—*Spreng. syst. 2, p. 243.*) 5 Sumatra. Penang. Introduced in 1822.

NEPHELIUM, L. (*W. and A. pr. 1, p. 113.*)

1. *Lichi*, W. and A. (*l. c.*—*Wight icon. 1, t. 43*;—*J. Grah. Cat. B. pl. p. 29.*—*Euphoria Litchi*, Desf.;—*DC. pr. 1, p. 611.*—*E. punicea*, Lam. *ill. t. 306.*—*Litchi chinensis*, Sonner. *it. t. 129.*—*Scyotalia chinensis*, Gärtn. *fr. t. 42. f. 1.*—*S. Lichi*, Roxb. *fl. ind. 2, p. 269.*—*Dimocarpus Lichi*, Lour.—*Sapindus edulis*, Ait.) लिचि *Lichi*. 5 China. Cultivated in India &c. Fl. small, greenish-white, Feb. and March; fr. April and May.

2. *rimosum*, W. and A. (*pr. 1, p. 113. annot.*—*Scyotalia rimosa*, Roxb. *fl. ind. 2, p. 271.*) L. 5 Silhet. Fl. small, greenish.—In H. C. G. fl. March and April; fr. August. (*Roxb.*) Fruit edible. (*Roxb.*)

3. *lappaceum*, L. (*Euphoria Nephelium*, DC. *pr. 1, p. 612.*—*Scyotalia Ramboutan*, Roxb. *fl. ind. 2, p. 271.*—*Dimocarpus crinitus*, Lour.) Commonly called *Ramboutan*. 5 Malay Islands. Introduced into H. C. G. in 1798, but had not fl. in 1814.

4. *Longan*, Cambess. (*W. and A. pr. 1, p. 113*;—*J. Grah. Cat. B. pl. p. 29.*—*Euphoria Longana*, Lam.—*DC. pr. 1, p. 611*;—*B. Reg. 20. t. 1729.*—*Scyotalia Longan*, Roxb. *fl. ind. 2, p. 270.*—*Dimocarpus Longan*, Lour.) अशफुल *Ashphul*. 5 China, Cochin-China, both Peninsulas of India, Khassya Mountains, &c. Fl. small, yellow-white, Feb. and March; fr. April and May.—*Aril* of the fruit not very grateful, but reckoned wholesome.—*Wood*, as well as that of No. 1, hard, close-grained, and white. (*Roxb.*)

5. *rubrum*, Wight. (*Icon. 1, t. 24-25.*—*Scyotalia rubra*, Roxb. *fl. ind. 2, p. 272.*) 5 Silhet. Fl. small, dark purplish-red, Feb. and March; fr. April and May. *Aril* eaten by the Natives. (*Roxb.*)

6. *verticillatum*, Wall. (*Scyotalia verticillata*, Roxb. *fl. ind. 2, p. 273.*—*Euphoria verticillata*, Lindl.;—*B. Reg. 13, t. 1059.*) 5 Moluccas. Fl. small, yellowish, reddish, R. S.; fr. —

7. *variabile*, Wall, Khassya Mountains. In H. C. G.

SCHLEICHERA, Willd. (*W. and A. pr. 1, p. 114.*)

1. *trijuga*, Willd. (*W. and A. l. c.*;—*Roxb. fl. ind. 2, p. 277*;—*J. Grah. Cat. B. pl. p. 29.*—*Melicocca trijuga*, Juss.;—*DC. pr. 1, p. 615.*—*Cussambium pubescens*, Buch.—*Stadmannia trijuga*, Spreng. *syst.*

2, p. 243.—*Schleichera pubescens*, *Roth. Melicocca?* pubescens, *DC. l. c.*—Koon; *Gürt. fr. 2. t. 180.*) 5 Coromandel. The Ghauts. Salsette. Fl. small, greenish, Feb. and March; fr. May and June. —The Natives eat the fruit, and also make oil from it. (*J. Grah.*)

MELICOCCA, L. (*DC. pr. 1, p. 615.*)

1. *bijuga*, L. (*DC. l. c.*—*Roxb. H. B. p. 29.*) *Genip Tree* of the W. Indies. 5 Jamaica, &c. Fl. small, greenish, Feb. and March; fr. — *Kölreuttera*, Laxm. (*DC. pr. 1, p. 616*; not Murr.)

1. *paniculata*, Laxm. (*DC. l. c.*; *B. R. 4, t. 330.* *Sapindus chinensis*, L. fil.) 5 China. Fl. small, deep yellow. Has been introduced into H. C. G. Fl. ?

COSSIGNIA, Commers. (*DC. pr. 1, p. 614.*)

1. *borbonica*, DC. (*l. c.*—*C. pinnata*, Lam. dict. 2, p. 132. *ill. t. 256.* *C. triphylla*, Lam. l. c.) 5 Bourbon. Fl. small, white, Dec.; fr. 0.

DODONÆA, L. (*DC. pr. 1, p. 616*;—*W. and A. pr. 1, p. 114.*)

1. *Burmänniana*, DC. (*l. c.*;—*W. and A. l. c.*;—*Wight. ill. t. 52*;—*J. Grah. Cat. B. pl. p. 30.* *D. angustifolia*, *Roxb. fl. ind. 2, p. 256*; *Willd. ?*—*Ptelea viscosa*, *Burm. ind. p. 36*;—*Burm. zeyl. t. 23*;—*Rumph. 4, t. 50.*) 5 Coromandel. Pulney Mountains. Kandalla Ghaut. Hilly parts of the Concan. Belgaum. Fl. small, greenish, R. S; fr. C. S.

2. *dioeca*, *Roxb. (fl. ind. 2, p. 256*;—*DC. pr. 1, p. 617.*) 5 Hindoos-than. Fl. small, greenish. In H. C. G. fl. R. S; fr. C. S. (*Roxb.*)

* *Cardiospermum microcarpum*, H. B. Kth. 4, Orinoco.—*C. molle*, H. B. Kth. 4, Mexico.—*C. grandiflorum*, Swz. 5 Jamaica.—*Urvillea ferruginea*, Lindl.; B. Reg. 13, t. 1077. 4, 5 Brazil.—*Serjania sinuata*, Schum. 5 5 W. Indies.—*S. acapulcensis*, H. B. and Kth. 5 5 Mexico.—*S. divaricata*, Schum. 5 5 Jamaica.—*Toulicia guianensis*, Aubl. 5 Guiana.—*Paullinia Cucuru*, L. 5 5 W. Indies.—*P. pinnata*, L. 5 5 Brazil, Mexico, W. Indies.—*P. tetragona*, Aubl. 5 5 Guiana.—*P. barbadensis*, Jacq. 5 5 W. Indies.—*Sapindus stenopterus*, DC. 5 St. Domingo.—*Talisia guianensis*, Aubl. 5 Guiana.—*Schmidelia occidentalis*, Swz. 5 Hayti.—*S. guaranitica*; St. Hil. 5 Brazil.—*Matayba guianensis*, Aubl. 5 Guiana.

SUB-ORDER?—MILLINGTONIEÆ,—Lindl. Nat. Syst. p. 83.

A small tribe, with 1 genus, and 6 species, all arboreous, and natives of Nepal, the Khassya Mountains, the Neelgherries, and Ceylon.—Properties unknown.

MILLINGTONIA, *Roxb. (W. and A. pr. 1, p. 115.)*

1. *simplicifolia*, *Roxb. (Corom. 3, t. 254*;—*fl. ind. 1, p. 103*; *ed. Carey*,



- 1, p. 102;—*W. and A. l. c.*) 5 Madura, Khassya Mountains, Nepal. Fl. minute, yellow, Feb. and March; fr. July and Aug.
 2. *pinnata*, Roxb. (*fl. ind.* 1, p. 104;—*ed. Carey*, 1, p. 103.) 5 Silhet. Fl. small, white.—In H. C. G. fl. April. (*Roxb.*)
 3. *pungens*, Wall. 5 Neelgherries, Nepal, Khassya Hills.
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- * *M. dilleniefolia*, Wall. 5 Simla, Nepal.—*M. Arnottiana*, Wight. ill. 1, t. 53. 5 Ceylon. Neelgherries.
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ORDER LIX.—ÆSCULACEÆ,—Lindl. Nat. Syst. p. 84.

THE HORSE-CHESNUT TRIBE.

Trees or shrubs, of 4 genera, and 14 species: 9 from N. America; 2 from Nepal and the Khassya Mountains; 1 from N. India; (*DC.*) and 2 of unknown origin.—“The bulky seed of *Pavia indica*, containing a large proportion of fecula, though combined with some bitter principle, is eaten in the Himalayas, as those of the Horse Chesnut (*Æsculus Hypocastanum*, L.) have been in other parts of the world, in times of famine.” (*Royle.*) The bark of the latter has been used as a febrifuge, but with little success. *PAVIA*, Boerh. (*DC. pr.* 1, p. 598.)

1. *indica*, Colebr. L. 5 Kemaon, Sirmore, Gurhwal, Kunawar; alt. 8000—10,000 f.
 2. *khassyaana*, (P. punduana, Wall. Cat.) 5 Khassya Mountains; alt. 4500 f.—Does not exist at Pundua, (*Griff.*) Both of these trees have been introduced into H. C. G. Fl.?
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- * *Pavia macrostachya*, Herb. amat. t. 212. (*Macrothyrsus*?) 5 Banks of the rivers of Georgia.
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ORDER LX.—POLYGALACEÆ,—Lindl. Nat. Syst. p. 84.

THE MILK-WORT TRIBE.

Herbs or shrubs, rarely climbing or arboreous, ranged under 15 genera. *DC. pr.* and *Spreng. syst.* enumerate 92 species for S. America, Mexico and the W. Indies; 22 for N. America; 11 for Europe; 10 for New Holland and Van Diemen's Land; 4 for Guinea; 3 for Siberia; 2 for Japan; 2 for China; 1 for Arabia; 1 for Madagascar; 1 for the Canaries; and 1 for Armenia. The S. African forms amount to 100, (*Harvey*); and the E. Indian to 49. Of the latter, our materials furnish 29 of *Polygala*; 6 of *Salomonina*; 11 of *Xanthophyllum*; 1 of *Soulamea*; and 2 of *Securidaca*;—all, with a few exceptions, inhabiting mountainous or hilly places in Nepal, the Khassya Mountains, both Peninsulas of India, Ceylon, Java and the Moluccas.

The chief characteristic of the order is bitterness, but its qualities have not been thoroughly examined, and the praise which was formerly bestowed on the medicinal powers of some, has, in most cases, been found to be undeserved. Even *Polygala Senega* is now comparatively seldom used in diseases of the chest, and that only in chronic catarrhs, where all inflammation has ceased.

POLYGALA, L. (*DC. pr.* 1, p. 321;—*W. and A. pr.* 1, p. 36.)

1. *myrtifolia*, L. (*DC. o. c. p.* 322;—*B. Reg.* 8. t. 669.) १ C. G. Hope. Fl. largish, pale rose-coloured, purple-veined, nearly the whole year; fr. 0.
2. *telephioides*, Willd. (*DC. pr.* 1, p. 332;—*Roxb. fl. ind.* 3, p. 218;—*W. and A. pr.* 1, p. 36.) ॡ Peninsula of India, Bengal. Fl. small, greenish rose. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
3. *ciliata*, L. (*W. and A. pr.* 1, p. 38. *Salomonina?* *ciliata*, *DC. pr.* 1, p. 334.) ॢ *minor* (*P. prostrata*, Willd.;—*DC. o. c. p.* 333.—*P. arvensis*, *Roxb. fl. ind.* 3, p. 218; not Willd.) মেরাদু *Meradoo*. গারোডু *Garoodoo*. ॣ Peninsula of India, Bengal, (Serampore.) Fl. small, greenish white, with a tinge of rose, R. S.; fr. C. S.

SALOMONIA, Lour. (*DC. pr.* 1, p. 333;—*Wight. ill.* 1, p. 49.)

1. *cantonensis*, Lour. (*DC. o. c. p.* 334.) ⑤ Canton, Khassya Mountains. Fl. small, greenish rose-coloured; C. S.

XANTHOPHYLLUM, Roxb. (*W. and A. pr.* 1, p. 39.)

1. *virens*, Roxb. (*fl. ind.* 2, p. 221.) L. ॥ Khassya Mountains, Assam. Fl. small, yellowish-rose-coloured. In H. C. G. fl. Feb. March and April; fr. June and July.—*Wood* said to be remarkably hard, and useful to the Natives. (*Roxb.*)

SECURIDACA, L. (*DC. pr.* 1, p. 340.)

1. *scandens*, Buch. (*S. paniculata*, *Roxb. fl. ind.* 3, p. 219; not Lam.) L. ॥ Fl. smallish, red. In H. C. G. fl. R. S.; fr. March and April. (*Roxb.*)

- * *Polygala scoparia*, H. B. Kth. ॡ Mexico.—*P. hebeclada*, DC. १ Brazil.—*P. oxyphylla*, DC. १ Brazil.—*P. arillata*, Buch. १ Neelgherries, Khassya Mountains.—*P. crotalarioides*, Buch. १ Mussooree.—*Bredemeyera floribunda*, Willd. १ Caracas.—*Securidaca virgata*, Swz. १ ॥ Jamaica.—*S. volubilis*, L. १ ॥ S. America.—*S. hebeclada*, DC. १ ॥ Brazil.—*S. paniculata*, Lam. ॥ १ Cayenne.—*Xanthophyllum flavescens*, Roxb. ॥ Chittagong.—*X. angustifolium*, Wight. ill 1, t. 23. ॥ Courtallum.—*X. Roxburghianum*, Wight. ॥ Courtallum.

ORDER LXI.—KRAMERIACEÆ, Mart.—Lindl. Nat. Syst. p. 87.

Undershubs, of 1 genus, and 8 species, natives of S. America, Mexico, and the W. Indies.—“The genus is of an extremely anomalous structure, and remarkable for its tonic and excessively astringent qualities.



Its root is sold in Europe under the name of *Ratanhia*, and is one of the substances which, in conjunction with gum Kino, is used for adulterating port wine in England." (Lindl.)

- * *Krameria ixina*, L. 5 Cumana, St. Domingo.—*K. pauciflora*, Moq. and Sesse. 4. Mexico.—*K. triandra*, Ruiz and Pav. 5 Peru.

ORDER LXII.—VOCHYACEÆ,—Lindl. Nat. Syst. p. 87.

Trees, of 8 genera, and 37 species, all "natives of equinoctial America, where they inhabit ancient forests, by the banks of streams, sometimes rising up mountains to a considerable elevation. They are often trees with large spreading heads.—Properties unknown." (Lindl.)

- * *Callisthene major*, Mart. 5 Plains of Brazil.—*Amphilochia cordata*, Mart. 5 Brazil.—*Vochya guianensis*, Aubl. 5 Guiana.—*V. emarginata*, Vand. 5 Brazil.—*V. tetraphylla*, Lindl. 5 Guiana.—*Qualea rosea*, Aubl. 5 Guiana.—*Q. carulea*, Aubl. 5 Guiana.—*Erisma floribundum*, Rudg. 5 Guiana.—*E. violaceum*, Mart. 5 Brazil.

ORDER LXIII.—ELATINACEÆ,—Lindl. Nat. Syst. p. 88.

THE WATER-PRPPER TRIBE.

Marshy annuals, of 4, or perhaps 5 genera, containing 10 species: 4 European; 1 S. American; 1 common to several parts of the world; 1 S. African; and 4 Indian. Of the latter, all, with one Nepal exception, are natives of most parts of tropical India and Java; 2 belong to *Elatine*; 2 to *Bergia*; and 1 to *Anisadenia*. Properties unknown.

BERGIA, L. (DC. pr. 1, p. 390.)

1. *verticillata*, Willd. (DC. l. c.;—Roxb. fl. ind. 2, p. 456.—B. aquatica, Roxb. Corom. 2, t. 142.—B. capensis, L.—Elatine verticillata, W. and A. pr. 1, p. 41;—J. Grah. Cat. B. pl. p. 12.—E. luxurians, Delile;—Rheed, 9, t. 78.) লালকেশুৱী। Lal-Keshooreeya. © Banks of rivers and rice-fields all over India, (Serampore.) Egypt. Fl. very small, white, R. S.; fr. C. S.
2. *ammannioides*. Roxb. (fl. ind. 2, p. 457;—DC. pr. 1, p. 390.—B. pentandra, Camb.—Elatine ammannioides, W. and A. pr. 1, p. 41;—Wight ill. 1, t. 25 A.;—J. Grah. Cat. B. pl. p. 12.—Lechea verticillata, Willd.;—DC. pr. 1, p. 286.) © Banks of rivers and rice-fields all over India, (Serampore.) Fl. very small, rose-coloured, R. S.; fr. C. S.



ORDER LXIV.—LINACEÆ.—Lindl. Nat. Syst. p. 89.

THE FLAX TRIBE.

Annual and perennial herbs, undershrubs and shrubs, referred to 2 genera. According to DC. pr. and Spreng. syst., 32 species have been found in Europe; 9 in S. America and Mexico; 6 in N. Africa; 3 in N. America; 2 in Tauria and Iberia; 1 in Dahuria; 1 in Siberia; 1 in Syria; and 1 in New Zealand. The S. African forms amount to 10, (*Harvey*); and the Indian ones to 5, all natives of the Peninsulas, the Khasiya Mountains and Nepal, and all belonging to *Linum*.—The common flax (*Linum usitatissimum*, L.) is found everywhere in the plains, though perhaps only domesticated.

“The tenacity of their fibre, and the mucilage of their diuretic seeds, are striking characters of Linaceæ, which are also usually remarkable for the beauty of their flowers.” (*Lindl.*)

LINUM, L. (*DC. pr. 1, p. 423*;—*W. and A. pr. 1, p. 134.*)

1. *gallicum*, L. (*DC. l. c.*) © France. Fl. small, yellow, C. S.; fr. H. S.
2. *luteolum*, Bieb. (*DC. pr. 1, p. 424.*) © Tauria. Fl. small, yellow, C. S.; fr. March.
3. *narbonense*, L. (*DC. pr. 1, p. 426.*) © Spain, S. France, Italy. Fl. smallish, blue, C. S.
4. *usitatissimum*, L. (*DC. l. c.*;—*Roxb. fl. ind. 2, p. 110*;—*W. and A. pr. 1, p. 134*;—*J. Grah. Cat. B. pl. p. 33*;—*E. B. 19, t. 1357.*) Common Flax. मसिना *Musina*. © Europe. Fl. smallish, sky-blue; C. S.; fr. H. S. Much cultivated in N. India for the seeds, from which the natives extract the oil.
5. *angustifolium*, Huds. (*DC. pr. 1, p. 426*;—*E. B. 6, t. 381.*) 4. England, France, Italy. Fl. small, sky-blue, C. S.; fr. H. S.
6. *bicolor*, Schousb. (*DC. pr. 1, p. 428.*) © Tangier. Fl. small, yellowish, with a purple-streaked, blue eye, C. S.; fr. H. S.
7. *catharticum*, L. (*DC. l. c.*;—*E. B. 6, t. 382.*) *Purging Flax.* © Europe. Fl. very small, yellowish-white, C. S.; fr. H. S.
8. *tetragynum*, Colebr. (*B. Reg. 16, under t. 1326.*) 5 Khasiya Mountains, Nepal. Fl. largish, sulphur-coloured, C. S.; fr. H. S.
9. *trigynum*, Roxb. (*fl. ind. 2, p. 110*;—*DC. pr. 1, p. 425*;—*W. and A. pr. 1, p. 134*;—*J. Grah. Cat. B. pl. p. 34*;—*B. M. 27, t. 1100.*) गुवासिद्रु *Goolasruph*. 5 Mountains of the Peninsula of India. Commonly cultivated in gardens. Fl. large, gold-coloured, C. S.; fr. H. S.

* *L. Berendieri*, Hook; B. M. 63, t. 3480. © Texas.—*L. mexicanum*, Humb. B. Reg. 16, t. 1326. 4. St. Rosa in Mexico.—*L. arboreum*, L.; B. M. 7, t. 234. 5 Candia.—*L. flavum*, L.; B. M. 9, t. 312. 4. Austria.—*L. africanum*, L.; B. M. 12, t. 403. 5. C. G. H.—



L. quadrifolium, L.; B. M. 12, t. 431. 5 C. G. H.—*L. viscosum*, L.; B. M. 26, t. 1048. 4. S. Europe.—*L. hirsutum*, L.; B. M. 27, t. 1087. 4. S. Europe.—*L. anglicum*, Mill.; E. B. 1, t. 40. 4. England. *L. monogynum*, Forst.; B. M. 64, t. 3574. 5 N. Zealand.—*L. mysorensis*, Heyne. Wight. ill. 1, t. 60. ☉ Mysore. Mussooree.—*L. repens*, Don. 5 Nepal, resembles most *L. trigynum*, Roxb.—*Radiola linoides*, Gm. (R. Millegrana, Sm. E. B. 13, t. 893.) ☉ Europe.

ORDER LXV.—HUGONIACEÆ, Arn.—Lindl. Nat. Syst. p. 89.

The following are the only known species of this shrubby order, which consists of one genus:—

HUGONIA, L. (DC. pr. 1, p. 522;—*W. and A. pr.* 1, p. 72.)

1. *Mystax*, L. (DC. l. c.;—*W. and A. l. c.*;—*Wight. ill.* 1, t. 32;—*Rheed.* 2, t. 19.) 5 Malabar, Coromandel, Ceylon. Fl. large, yellow. Has been introduced into H. C. G.? Fl.?

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- * *H. ferruginea*, W. and A. 5 Ceylon.—*H. serrata*, Lam. 5 Mauritius.
—*H. tomentosa*, Cav. 5 Mauritius.

ORDER LXVI.—CHLENACEÆ,—Pet. Th.—Lindl. Nat. Syst. p. 90.

Trees or shrubs, of 4 genera, and 8 species, all natives of Madagascar.—Properties unknown.

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- * *Sarcolena grandiflora*, Pet. Th.—*Leptolena multiflora*, Pet. Th.—*Schizolena rosea*, Pet. Th.—*Rhodolena altivola*, Pet. Th.

ORDER LXVII.—CISTACEÆ, Lindl. Nat. Syst. p. 91.

THE ROCK-ROSE TRIBE.

Herbs and undershrubs, of 4 genera, and, according to DC., 160 species: 15 N. American; 6 S. American; 3 Syrian, and the rest all from S. Europe, N. Africa, and the Canaries.—Properties unimportant.

HELIANthemum, Tournef. (DC. pr. 1, p. 266.)

1. *eriocaulon*, Don. (DC. o. c. p. 271.) ☉ Spain, France. Fl. smallish, yellow, Feb. and March; fr. April.
2. *inconspicuum*, Thib. (DC. l. c.) ☉ Spain. Fl. minute, yellow, Feb. and March; fr. April.
3. *egyptiacum*, Mill. (DC. o. c. p. 273.) ☉ Egypt, Barbary, Spain. Fl. small, white, Feb. and March; fr. April.



H. guttatum, Mill; E. B. S. t. 544. © England. S. Europe.—*H. plantagineum*, Pers. © S. Europe. N. Africa.—*H. punctatum*, Willd. © France.—*H. ledifolium*, Mill, E. B. 84. t. 2414. © England.—*H. intermedium*, Thib. © Spain.—*H. denticulatum*, Thib. © S. France.—*H. salicifolium*, Pers. © Spain. Italy.—*H. sanguineum*, Lag. © Spain.

ORDER LXVIII.—REAUMURIACEÆ.—Lindl. Nat. Syst. p. 91.

Shrubs, of 2 genera, and a few species, belonging to Sicily, Egypt, and Syria.—Properties unimportant.

* *R. vermiculata*, L. 5 Egypt.

ORDER LXIX.—STERCULIACEÆ, Vent.—Lindl. Nat. Syst. p. 92.

Trees or shrubs, sometimes climbing or twining, referred to 82 genera. DC. pr. and Spreng. syst. enumerate about 115 species for S. America. Mexico and the W. Indies, which, however, have been much increased since 1827; 19 for Bourbon and Mauritius; 3 for Madagascar; 2 for St. Helena; 8 for Tropical Africa; 16 for New Holland and Van Diemen's Land; 2 for Timor; 1 for Arabia; 1 for Persia; and 3 for China. S. Africa exhibits 100 forms, (*Harvey*); and the E. Indies (in a great measure exclusive of Java) 111, viz., 1 of *Isora*; 15 of *Helicteres*; 1 of *Pterygota*; 3 of *Heritiera*; 1 of *Sterculia*; (Endl. and Schott.) 13 of *Sterculia*; (*Roxb. Wall. DC.*—partly); 9 of *Southwellia*, 2 of *Cavallium*; 2 of *Hildegardia*; 1 of *Scaphium*; 1 of *Erythropsis*; 1 of *Ophelus*; 2 of *Durio*; 1 of *Gossampinus*; 2 of *Salmaal*; 1 of *Pentapetes*; 3 of *Melhan*; 1 of *Trochetia*? 13 of *Pterospermum*; 4 of *Kydia*; 2 of *Wallichia*; 2 of *Abroma*; 2 of *Commersonia*; 8 of *Büttnera*; 1 of *Kleinhovia*; 1 of *Jürgensia*; 3 of *Lochennia*, Arn.; 1 of *Visenia*; and 1 of *Waltheria*.—By far the greater part of these inhabit the two Peninsulas of India, the Khassya Mountains, and Assam. Some few extend to Nepal.—“Excluding Bombaceæ, Java has, according to Blume, 22 species;” (*Wight*.) among which representatives are found of his new genera—*Prothesia*, *Visemia*, and *Maranthes*.

The whole order is chiefly remarkable for abundance of mucilage and tenacity of fibre. Its peculiar properties will be mentioned under the different species.

A. Helicterea, Schott. and Endl. (*Melet. bot.* p. 30.)

ISORA, Schott and Endl. (*l. c.*)

1. *corylifolia*, Schott. and Endl. (*l. C.*—*Wight icon.* 1, t. 150.—*Helicteres Isora*, L.; —DC. pr. 1, p. 475; —*Roxb. fl. ind.* 3, p. 143; —*W. and A. pr.* 1, p. 60; —*J. Grah. Cat. B. pl.* p. 16; —*B. M.* 46, t. 2061; —



Rheed. 6, t. 30;—Rumph. auct. t. 17, f. 1.) अणुनाडु *Antunora*. 5
Extends from one end of India to the other, particularly along the
foot of the Himalayas. (Serampore.) Fl. largish, brick-coloured,
R. and C. S.; fr. Feb. and March. *Fruit* used by the Natives in
dysenteries and bowel-complaints, from mere superstition. At Bom-
bay it is employed medicinally in diseases of the ear. (*Dr. Gibson.*)
HELICTERES, L. (*DC. pr. 1, p. 476; sect. Orthocarpæa.—Schott. and Endl.*
o. c. p. 31.)

1. *hirsuta*, Lour. (*DC. pr. 1, p. 476;—J. Grah. Cat. B. pl. p. 16.—H.*
spicata, Colebr.;—Roxb. H. B. p. 97.) 5 Cochin-China, Archipelago
of the Eastern Peninsula of India. Fl. largish, dark purplish brown,
throughout the year; fr. C. S.
2. *angustifolia*, L. (*DC. pr. 1, p. 476.*) 5 China. Fl. small, white-
purple, C. S.; fr. H. S.
3. *elongata*, Wall. Cat. 5 Taong-Dong. Fl. largish, pale yellow, C. S.;
fr. H. S.
4. *virgata*, Wall. Cat. (*G. Don's Mill. dict. 1, p. 508.*) 5 China. Fl.
small, C. S.; fr. H. S.
5. *pulchra*, Wall. 5 Burma. Fl. small, C. S.; fr. H. S.

B. *Sterculiæ*, Schott. and Endl.

PTERYGOTA, Schott. and Endl. (*o. c. p. 32.*)

1. *Roxburghii*, Schott. and Endl. (*l. c.—Sterculia alata, Roxb. fl. ind. 3,*
p. 182.) L. 5 Silhet. Chittagong. Fl. largish, ferrugineous, streaked
with crimson and yellow, Feb. and March; fr. Dec.—*Seeds* at Silhet
eaten by the Natives as a cheap substitute for opium. (*Roxb.*)

HERITIERA, Ait. (*DC. pr. 1, p. 484;—W. and A. pr. 1, p. 63;—Schott.*
and Endl. l. c.)

1. *minor*, Lam. (*DC. l. c.;—Roxb. fl. ind. 3, p. 142;—excl. syn. Rumph.—*
H. Fomes, Willd.;—Buch.;—DC. l. c.—Balanopteris minor, Gürtn. fr.
2, t. 98, f. 2.) सून्दरी *Soondree*. L. 5 Soonderbuns. Fl. small, dull
orange, March and April; fr. Sept. and Oct. Used in Calcutta, &c.,
for fire-wood.
2. *littoralis*, Ait. (*DC. pr. 1, p. 484; excl. syn. Rumph.—Roxb. fl. ind.*
1, p. 142;—W. and A. pr. 1, p. 63;—J. Grah. Cat. B. pl. p. 18.—
Balanopteris Tothila, Gürtn. fr. 2, t. 99;—Rheed. 6, t. 21.) 5 Mauri-
tius, Peninsula of India. Fl. small reddish.—Introduced into H. C.
G. in 1810, but had not fl. in 1814.
3. *macrophylla*, Wall. 5 Munipore. Fl. small, yellowish, H. S. fr. —
4. *acuminata*, Wall. 5 Hills N. E. of Bengal.

TRIPHACA, Lour.

1. *africana*, Lour. (*fl. cochin. 2, p. 577;—DC. pr. 1, p. 483.*) 5 Mozam-
bique. C. S. 1838.

STERCULIA, L. (*Schott. and Endl.*)

1. *fastida*, L. (*DC. pr. 1, p. 483;—Roxb. fl. ind. 3, p. 154;—W. and*
A. pr. 1, p. 63;—Wight. icon. 1, t. 181. and 2, t. 364;—J. Grah.

Cat. B. pl. p. 18;—*Sonner. it. 2, t. 132*;—*Rumph. 3, p. 169, t. 107.*)
जङ्गलीबादाम *Junglee-badam*. L. 5. Moluccas. Both Peninsulas of
India, Bengal. Fl. middle-sized, scarletish-sulphur, very fetid. March;
fr. R. S.—Seeds roasted, and eaten by the Natives. (*Roxb.*)

SOUTHWELLIA, Salisb. (*Schott. and Endl. l. c.*)

1. *Balanghas*, Schott. and Endl. (*l. c.*—*Sterculia Balanghas*, L.;—*DC. pr. 1, p. 482*;—*Roxb. fl. ind. 3, p. 144*;—*W. and A. pr. 1, p. 62*;—*ill. 1, t. 30*;—*J. Grah. Cat. B. pl. p. 17*;—*Rheed 1, t. 49.*) *China Chesnut*. 5 China. Both Peninsulas of India. Fl. small, flesh-coloured, faintly fragrant, H. S.; fr. R. S. Seeds considered wholesome, and, when roasted, nearly as palatable as chesnuts. (*Roxb.*)
2. *coccinea*, (*Sterculia coccinea*, *Roxb. fl. ind. 3, p. 151*;—*DC. pr. p. 1, 482.*) 5 Silhet, Penang. Fl. largish, greenish-yellow, tinged with rose, C. S.; fr. H. S.
3. *angustifolia*, (*Sterculia angustifolia*, *Roxb. fl. ind. 3, p. 148*;—*DC. pr. 1, p. 482*;—not Jack.) 5 Nepal, Penang. In H. C. G. fl. March. (*Roxb.*)
4. *parviflora* (*Sterculia parviflora*, *Roxb. fl. ind. 3, p. 147*;—*G. Don Mill. dict. 1, p. 516.*) 5 Tippera. Penang. In H. C. G. fl. Feb. March and April. (*Roxb.*)

CAVALLIUM, Schott. and Endl. (*l. c. p. 33.*)

1. *urens*, Schott. and Endl. (*l. c.*—*Sterculia urens*, *Roxb. Corom. 1, t. 24*;—*fl. ind. 3, p. 145*;—*DC. pr. 1, p. 483*;—*W. and A. pr. 1, p. 63*;—*J. Grah. Cat. B. pl. p. 18.*) L. 5 Peninsula of India. Fl. small, greenish, C. S.; fr. H. S.—Yields a gum resembling Tragacanth. Seeds roasted and eaten by the Natives, though they are said to be cathartic.—A kind of coffee may be made of them. (*Dr. Gibson.*) Native guitars are made of the wood of this tree, (*J. Grah.*) which is soft and spongy.
2. *comosum*, Schott. and Endl. (*l. c.*;—*Sterculia comosa*, *Wall. pl. as. rar. 2, t. 127.*) L. 5 Amboyna. Fl. small, purplish, sweet-scented. In H. C. G. Fl. ?

HILDEGARDIA, Schott. and Endl. (*l. c.*)

1. *populifolia*, Schott. and Endl. (*l. c.*;—*Sterculia populifolia*, *Roxb. fl. ind. 3, p. 148*;—*Wall. pl. as. rar. 1, t. 3*;—not DC.) 5 Coromandel. Fl. large, scarlet. Introduced into H. C. G. in 1800, but had not fl. in 1814.

ERYTHROPSIS, Lindl. (*Schott. and Endl. l. c.*)

1. *Roxburghiana*, Lindl. (*Sterculia colorata*, *Roxb. Corom. 1 t. 23*;—*fl. ind. 3, p. 146*;—*DC. pr. 1, p. 483*;—*W. and A. pr. 1, p. 83*;—*J. Grah. Cat. B. pl. p. 17.*) L. 5 Peninsula of India, Khassya Mountains, Hurdwar. Fl. large, red, C. S.; fr. H. S.

FIRMIANA, Marsigli.

1. *platanifolia*, Schott. and Endl. (*Sterculia platanifolia*, L. suppl. DC. pr. 1, p. 483.) 5 China, Japan—R. S. 1838.



Sterculiæ not referable to Schott. and Endl. genera l. c.

- a. villosa*, Roxb. (*fl. ind.* 3, p. 153;—*DC. pr.* 1, p. 483;—*W. and A. pr.* 1, p. 83;—*J. Grah. Cat. B. pl.* p. 18.) $\frac{1}{2}$ Peninsula of India. Forests from Hurdwar to the Jumna. Fl. smallish, pale yellow-scarlet, March; fr. 0.
- β . *guttata*, Roxb. (*fl. ind.* 3, p. 148;—*DC. pr.* 1, p. 482;—*W. and A. pr.* 1, p. 62;—*Wight. ic.* 2, t. 487;—*J. Grah. Cat. B. pl.* p. 17;—*Rheed.* 4, t. 61.) $\frac{1}{2}$ Peninsula of India. Fl. middle-sized, yellow, inside with purple glands, Dec.; fr. June. Bark fibres tough, adapted for cordage.—The Natives of the lower coasts of Wynaad contrive to make a sort of clothing from them. (*Roxb.*)
- γ . *lanceefolia*, Roxb. (*fl. ind.* 3, p. 150.—*S. Roxburghiana*, *Wall. pl. as. rar.* 3, t. 262.) $\frac{1}{2}$ Khassya Mountains. Fl. middle-sized, scarlet, C. S.; fr. H. S. (*Roxb.*)
- δ . *acerifolia*, Cunningh. (*S. heterophylla*, *Cunn. MSS.*;—*S. diversifolia*, *G. Don.*) $\frac{1}{2}$ Fl. middle-sized, whitish-sulphur, somewhat scented like the common Primrose, H. S.; fr. 0.
- ϵ . *pallens*, Wall. $\frac{1}{2}$ Nepal.
- ϕ . *campanulata*, $\frac{1}{2}$ Khassya Mountains. } Have not fl. here as yet.
- η . *ornata*, Wall. MSS. $\frac{1}{2}$ Burma. In H. C. G.

C. Bombææ (Bombacææ, Schott. and Endl. *l. c.* p. 34.)

OCHROMA, Swz. (*DC. pr.* 1, p. 480;—*Schott and Endl. l. c.*)

1. *Lagopus*, Swz. (*DC. l. c.*) $\frac{1}{2}$ Mountains of Jamaica, Portorico, Mexico. &c. In H. C. G. fl. April; fr. C. S. (*Roxb.*)

DURIO, L. (*DC. pr.* 1, p. 480;—*Schott. and Endl. l. c.*)

1. *zibethinus*, L. (*DC. l. c.*;—*Roxb. fl. ind.* 3, p. 398;—*J. Grah. Cat. B. pl.* p. 17;—*Linn. Trans.* 7, t. 14, 15 and 16.—*Rumph.* 1, t. 29.) *Durian Tree*. $\frac{1}{2}$ Moluccas, Indian Archipelago. Was introduced into H. C. G. in 1809, but had not fl. in 1814.—Fl. largish, white; fr. remarkably fetid, but its taste considered delicious.—Flowering specimens of a second species have lately been sent us from Malacca, by Dr. Oxley.

Gossampinus, Buch (*Scott. and Endl. l. c.*)

1. *Rumphii*, Schott. and Endl. (*l. c.*—*Eriodendron anfractuosum*, *DC. a. indicum*, *pr.* 1, p. 479;—*W. and A. pr.* 1, p. 61;—*J. Grah. Cat. B. pl.* p. 17;—*Wight. icon.* 2, t. 400.—*Bombax pentandrum*, L.; *Roxb. fl. ind.* 3, p. 165.—*Ceiba pentandra*, *Gärtn. fr.* 2, t. 133;—*Rheed.* 3, t. 49, 50, 51;—*Rumph.* 1, t. 80.) শ্বেতশিমূল *Shwet Shimool*, *White Cotton Tree*. L. $\frac{1}{2}$ Moluccas, both Peninsulas of India, Bengal, (Serampore,) Hindoosthan. Fl. largish, whitish, Feb. and March; fr. April and May. The woolly cotton that envelops the seeds of this species, as well of those of the Red Cotton Tree, is much esteemed for stuffing cushions and bedding, being unfit for the loom. The wood yields a gum, which is given with spices in certain stages of bowel complaints. (*Ainslie.*)

SALMALIA, Schott. and Endl. (*t. c.*)

1. *malabarica*, Schott. and Endl. (*l. c.*—*Bombax malabaricum*, DC. *pr.* 1, p. 479;—*W. and A. pr.* 1, p. 61;—*Wight. ill.* 1, t. 29, a, b;—*J. Grah. Cat. B. pl.* p. 16.—*B. heptaphyllum*, Cav.;—*Roxb. fl. ind.* 3, p. 167;—*Corom.* 3, t. 247;—*Rheed* 3, t. 52.) रुक्ताशिमूल *Rukto Shimool*. Red Cotton Tree, L. 5 Extends from one end of India to the other, particularly along the foot of the Himalayas. Fl. very large, deep red, Febr. and March; fr. April and May. Bark of the root used in Java as an emetic. (*Blume*).—Wood light, white, spongy, frequently used in India for floating rafters. (*Royle*.)
2. *insignis*, Schott. and Endl. (*l. c.*—*Bombax insignis*, Wall. *pl. as. rar.* 1, t. 79, 80.) 5 Yenangheun in Burma. Fl. very large, deep red. Has been introduced into H. C. G.?

BOMBAX, L. (*Schott. and Endl. l. c.*)

1. *Ceiba*, L. (DC. *pr.* 1, p. 478;—*Roxb. H. B.* p. 50;—*J. Grah. Cat. B. pl.* p. 17.) L. 5 Jamaica, &c. Was introduced into H. C. G. in 1808, but had not fl. in 1814.—In the W. Indies its immense trunk is commonly scooped out and converted into canoes.—Juice of the root aperient; bark emetic.

ADANSONIA, L. (DC. *pr.* 1, p. 478;—*Schott. and Endl. o. c. p.* 36.)

1. *digitata*, L. (DC. *l. c.*;—*W. and A. o. c. p.* 61;—*Roxb. fl. ind.* 3, p. 164;—*J. Grah. Cat. B. pl.* p. 16;—*B. M.* 55, t. 2791-2.) Baobab or Monkey-Bread Tree, L. 5 Senegal. Cultivated in India at Samulcotta, Madras, Negapatam, Bombay, Guzerat, &c. Fl. very large, white, May and June; fr. C. S.—The largest tree in the world in the diameter of its trunk, which is sometimes 30 feet. Its height is not in proportion. "It is emollient and mucilaginous in all its parts. The leaves dried and reduced to powder constitute *Lalo*, a favorite article with the Africans, which they mix daily with their food, for the purpose of diminishing the excessive perspiration to which they are subject in those climates, and even Europeans find it serviceable in cases of diarrhoea, fevers and other maladies. The fruit is perhaps the most useful part of the tree. Its pulp is slightly acid and agreeable, and frequently eaten; while the juice is expressed from it, mixed with sugar, and constitutes a drink, which is valued as a specific in putrid and pestilential fevers." (*Hook; B. M. l. c.*) The dried pulp is mixed with water, and administered, in Egypt, in dysentery. (*Delile*.) Along the sea-coast of Guzerat, the fishermen use the large fruit as a float for their nets. It is also used medicinally by the Natives, who, like the Africans, esteem it cooling. The leaves are eaten with their food, and are said to restrain excessive perspiration. (*J. Grah. l. c.*)

D. Dombeyæ. (*Dombeyæ*, DC.)

MONTEZUMA, Moc. and Sesse.

1. *specississima*, Moc. and Sesse. (DC. *pr.* 1, p. 477.) 5 Mexico. 1837.



RUIZIA, Cav. (DC. pr. 1. p. 497.)

1. *lobata*, Cav. (DC. l. c.) 5 Bourbon. Has been introduced into H. C. G. Fl. ?

PENTAPETES, L. (DC. pr. 1, p. 498 ;—W. and A. pr. 1, p. 67.)

1. *phenicea*, L. (DC. l. c. ;—W. and A. l. c. ;—Roxb. fl. ind. 3, p. 157 ;—J. Grah. Cat. B. pl. p. 19 ;—B. Reg. 7, p. 525 ;—Rheed. 10, t. 56 ;—Rumph. 5, t. 100, f. 1.) दुपहरिद्वी Doopahariya. © Both Peninsulas of India, Java, Moluccas, Bengal, (Serampore, &c. Fl. largish, scarlet, R. S. ; fr. C. S.
β. *albiflora*. Fl. white.

DOMBEYA, Cav. (DC. pr. 1, p. 498 ;—W. and A. pr. 1, p. 67.)

1. *palmata*, Cav. (DC. l. c. ;—W. and A. o. c. p. 68 ;—J. Grah. Cat. B. pl. p. 19 ;—Wall. pl. as. rar. 3, t. 235.) 5 Bourbon. Fl. middle-sized, greenish-white, C. S. ; fr. H. S.
2. *angulata*, Cav. (DC. pr. 1, p. 498 ;—J. Grah. Cat. B. pl. p. 19 ;—B. M. 56, t. 2905.—D. tiliaefolia, Roxb. fl. ind. 3, p. 157 ; Cav. ?—D. cordifolia, DC. o. c. p. 199.) 5 Bourbon. Fl. middle-sized, rose-coloured, C. S. ; fr. H. S.
3. *acutangula*, Cav. (DC. pr. 1, p. 498.) 5 Bourbon. Introduced into H. C. G. Fl. ?
4. *astrapeoides*, Bojer. 5 Bourbon: Mauritius.

MELHANIA, Forsk. (DC. pr. 1, p. 499.)

1. *Hamiltoniana*, Wall. (Pl. as. rar. 1, t. 77.) 5 Banks of the Irrawaddy, Taong Dong. Fl. smallish, sulphur-coloured, C. S. ; fr. H. S.

PTEROSPERMUM, Schreb. (DC. pr. 1, p. 500 ;—W. and A. pr. 1, p. 68.)

1. *suberifolium*, Lam. (W. and A. l. c. ;—J. Grah. Cat. B. pl. p. 19.—P. canescens, Roxb. fl. ind. 3, p. 162.) 5 Ceylon, Peninsula of India. Fl. large, white, fragrant, March, April and May ; fr. Nov. and Dec.
2. *Heynianum*, Wall. (W. and A. pr. 1, p. 69 ;—Wight. icon. 2, t. 489.—P. suberifolium, Willd. ;—DC. pr. 1, p. 500, excl. syn. L. ;—Roxb. fl. ind. 3, p. 160 ;—B. M. 37, t. 1526 ; not Lam.—Velago xylocarpa, Gärtn. fr. 2, p. t. 133, f. 2.) 5 Gingie Hills. Courtallum. Fl. large, white, fragrant.—C. and H. S. ; fr. C. S.
3. *acerifolium*, Willd. (DC. pr. 1, p. 500 ;—Roxb. fl. ind. 3, p. 158 ;—W. and A. pr. 1, p. 69 ;—J. Grah. Cat. B. pl. p. 20 ;—B. M. 17, t. 620.) कुमकुच्छा Kunuk-champa, L. 5 Peninsula of India, Assam. Fl. large, white, fragrant, March, April and May ; fr. C. S.
4. *aceroides*, Wall. Cat. 5 Martaban. Introduced in 1839.
5. *lanceifolium*, Roxb. (fl. ind. 3, p. 163 ;—DC. pr. 1, p. 500.) L. 5 Assam. Fl. large, white, fragrant, May and June ; fr. C. S.
6. *semisagittatum*, Buch. (Roxb. fl. ind. 3, p. 160 ;—DC. pr. 1, p. 500.) L. 5 Assam. Fl. large, white, fragrant, March, April, and May ; fr. Dec. and Jan.

ASTRAPEA, Lindl. (DC. pr. 1, p. 500.)

1. *Wallichii*, Lindl. (DC. l. c.;—B. Reg. 9, t. 691;—B. M. 51, t. 2503;—J. Grah. Cat. B. pl. p. 20.) 5 Madagascar. Fl. largish, scarletish-red, smelling of cheese, Feb.; fr. 0.

KYDIA, Roxb. (DC. pr. 1, p. 500;—W. and A. pr. 1, p. 69.)

1. *calycina*, Roxb. (Corom. 3, t. 215;—fl. ind. 3, p. 188;—DC. l. c.;—W. and A. o. c. p. 70;—J. Grah. Cat. B. pl. p. 20.) 5 Peninsula of India. Forests from Hurdwar to the Jumna. Nepal. Fl. smallish, white, R. and C. S.; fr. C. S. Bark mucilaginous, used in the N. W. Provinces of India to clarify sugar. (Royle.)
2. *fraterna*, Roxb. (Corom. 3, t. 216;—fl. ind. 3, p. 189;—DC. pr. 1, p. 501;—W. and A. pr. 1, p. 70.) 5 Circars. Fl. smallish, white. Has been introduced into H. C. G. Fl. ?

E. *Wallichiae*, DC. (Eriochlæna, Arn.)

ERIOCLÆNA, DC. (pr. 1, p. 501.—Eriochlæna, Spreng. syst. 3, p. 123.) (Λαῖνα, læna; i. q. Χλαῖνα, Riemer's Greek Dict.)

1. *Candollii*, Wall. (pl. as. rar. 1, t. 64.) L. 5. Prome Mountains. Fl. largish, yellow. Introduced into H. C. G. Fl. ?
2. *Wallichii*, DC. (pr. 1, p. 501.) 5 Nepal. Introduced into H. C. G. Fl. ?

WALLICHIA, DC. (pr. 1, p. 501;—not Roxb.—Microclæna, Wall. Cat.;—not R. Br.—Microchlæna, W. and A.)

1. *spectabilis*, DC. (l. c.;—Microclæna spectabilis, Wall. Cat.) 5 Nepal, Sirmore. Fl. largish, sulphur-coloured, March; fr.—Bark-fibres tough, adapted for cordage.

F. *Buttnereæ*, DC.

THEOBROMA, L. (DC. pr. 1, p. 484;—W. and A. pr. 1, p. 64.)

1. *Cacao*, L. (DC. l. c.;—W. and A. l. c.;—Roxb. H. B. p. 50;—J. Grah. Cat. B. pl. p. 18. Cacao sativa, Lam. ill. t. 655. C. minus, Gärtn. fr. 2, t. 122. f. 1.) Chocolate-nut Tree. 5 S. America. Fl. small yellowish-white, R. S.; fr. H. S.

ABROMA, L. (DC. pr. 1, p. 485;—W. and A. pr. 1, p. 65.)

1. *angustum*, L. (DC. l. c.;—W. and A. l. c.;—Roxb. fl. ind. 3, p. 156; excl. syn. Gärtn.—J. Grah. Cat. B. pl. p. 18;—B. Reg. 6, t. 518.—A angulatum, Lam. ill. t. 636-37.—A Wheeleri, Kön. Rumph. 4, t. 14.)  Oolut-kumbul. 5 Moluccas, Interior of the Peninsula of India. (Roxb.) Fl. middle-sized, dark-purplish brown, H. and R. S.; fr. C. S. Bark-fibres tough, adapted for cordage.

GUAZUMA, Plum. (DC. pr. 1, p. 485;—W. and A. pr. 1, p. 64.) Bastard Cedar.

1. *tomentosum*, H. B. and Kth. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 18.—Bubroma Guazuma, Willd.;—Roxb. H. B. p. 50.) L. 5 S. America. Cultivated in India. Fl. small, dark-purple, sweet-scented, H. and R. S.; fr. C. S. Young bark abounding in mucilage, and used in Martinique to clarify sugar.



COMMERSONIA, Forst. (DC. pr. 1, p. 486.)

1. *echinata*, Forst. (DC. l. c.;—Roxb. H. B. p. 22.—Rumph. 3, t. 119.) 5 Moluccas, Penang, Singapore. Fl. small, white, fr. nearly throughout the year.

BÜTTNERA, Löffl. (DC. pr. 1, p. 486;—W. and A. pr. 1, p. 65.)

1. *herbacea*, Roxb. (Corom. 1, t. 29;—fl. ind. 1, p. 619; ed. Carey, 2, p. 382;—DC. pr. 1, p. 486;—W. and A. pr. 1, p. 65;—J. Grah. Cat. B. pl. p. 19;—Wight. icon. 2, t. 488.) 4. Circars, Vellore, Bombay. Fl. small, yellowish-red. Introduced, into H. C. G.? Fl. ?
2. *pilosa*, Roxb. (fl. ind. 1, p. 618; ed. Carey, 2, p. 381.) L. 5 Chittagong, Silhet. Fl. small, yellowish-red, Sept.; fr. April.
3. *aspera*, Colebr. (Roxb. fl. ind. ed. Carey, 2, p. 383.—B. grandifolia, DC. pr. 1, p. 486.) L. 5 Chittagong, Silhet. Fl. small, yellowish-rose-coloured, C. and H. S.; fr. R. S.

4. *catalpifolia*, Jacq. (DC. pr. 1, p. 487.) 5 Caracas. Fl. small, white, Sept. and Oct.

5. *carthagenensis*, Jacq. (DC. pr. 1, p. 487.) 5 Carthagenæ. Fl. small, yellowish-green, and fr. nearly throughout the year.

KLEINHOVIA, L. (DC. pr. 1, p. 488;—W. and A. pr. 1, p. 64.)

1. *hospita*, L. (DC. l. c.;—W. and A. l. c.;—Roxb. fl. ind. 3, p. 141;—J. Grah. Cat. B. pl. p. 18;—Rumph. 3, t. 113.) 5. Moluccas, Penang, Peninsula of India, S. Concan. Fl. small, pale rose-coloured, somewhat scented, at different periods of the year; fr. C. S.

ACTINOPHORA, Wall. (sine caractere!)

1. *fragrans*, Wall. 5 Mauritius 1816.

G. *Hermannia*, Juss.

LOCHENNIA, Arn. (Wight. ill. 1, p. 73. annot.)

1. *supina*, Arn. (Riedleia supina, DC. pr. 1, p. 491;—W. and A. pr. 1, p. 66.) 5 Peninsula of India. Fl. small, deep rose-coloured, and fr. throughout the year.

2. *corchorifolia*, Arn. (Riedleia corchorifolia, DC. pr. 1, p. 401;—W. and A. pr. 1, p. 66;—J. Grah. Cat. B. pl. p. 19. Melochia corchorifolia L.;—Roxb. fl. ind. 3, p. 139;—Rheed. 9, t. 73.) টিকীওপড়া Tikee-opra. বিজপাটী Bil-pata. 5 Peninsula of India. Bengal, (Serampore) extending to the most northern parts of India. Fl. small, deep rose-coloured, with a yellow centre,—R. and C. S.; fr. C. S.

RIEDLEIA, Vent. (DC. pr. 1, p. 490;—W. and A. pr. 1, p. 65.)

1. *borbonica*, DC. (l. c. p. 491.) 5 Bourbon. Fl. small, whitish, red-veined, and fr. C. S.

2. *guazumafolia*, Rich. 5 Mauritius, 1840.

MELOCHIA, L. (DC. pr. 1, p. 490.)

1. *pyramidata*, L. (DC. l. c.) 5 W. Indies, Brazil. Fl. small, violet, C. S.

VISENIA, Bl. (G. Don's Mill. dict. 1, p. 538.)

1. *velutina*, (V. umbellata, Bl.;—G. Don. l. c.;—Wight. icon. 2, t. 509.

—*Riedleia velutina*, DC. *pr.* 1, p. 491.—*Glossospermum velutinum*, Wall. *Cat.*) 5 Java, Mauritius. Fl. small, pale rose-coloured, C. S.; fr. H. S.

WALTHERIA, L. (DC. *pr.* 1, p. 492;—*W. and A. pr.* 1, p. 66.)

1. *indica*, L. (DC. *o. c. p.* 493;—*W. and A. o. c. p.* 67;—*Roxb. H. B. p.* 49;—*J. Grah. Cat. B. pl. p.* 246;—*Jacq. icon. rar.* 1, t. 130.) 5 Both Peninsulas of India, Ceylon, Bengal, Deyra-Dhoon. Fl. small, lemon-coloured, C. S.; fr. H. S.

HERMANNIA, L. (DC. *pr.* 1, p. 493.)

1. *alceaefolia*, L. (DC. *l. c.*;—*B. M.* 9, t. 307.) 5 C. G. H. Fl. middle-sized, orange, C. S.
2. *scordifolia*, Jacq. (DC. *o. c. p.* 494.) 5 C. G. H. Fl. yellow, and fr. throughout the year. (*Roxb. H. B.*)

* *Quararibea guianensis*, Aubl. 5 Guiana.—*Myrodia turbinata*, Swz. 5 W. Indies.—*Matisia cordata*, H. and B. 5 N. Granada.—*Helicteres baruensis*, L. 5 Panama.—*H. mexicana*, H. B. and Kth. 5 Mexico.—*H. jamaicensis*, Jacq. 5 Jamaica.—*H. verbascifolia*, Lk.; B. Reg. 11, t. 902. 5 Brazil.—*H. ferruginata*, Lk. 5 Brazil.—*Isora grevillifolia*, Endl. 5 Timor.—*Reevesia thyrsoides*, Lindl.; B. Reg. 15, t. 1236. 5 China.—*Southwellia nobilis*; Salisb. 5 India.—*S. versicolor*, Endl. (*Sterculia versicolor*, Wall. *pl. as. rar.* 1, t. 59.) 5 Segae.—*S. lanceolata*, Endl. (*Sterculia lanceolata*, Cav.; B. Reg. 15, t. 1256.) 5 China.—*Hildegardia Candollii*; Endl. (*Sterculia populifolia*, DC.; not Roxb.) 5 Timor.—*H. macrophylla*, Endl. (*Sterculia macrophylla*, Vent.) 5 Pondicherry?—*Scaphium Wallichii*, Endl. (*Sterculia scaphigera*, Wall. *Cat.*) 5 Martaban.—*Firmiana platanifolia*, Endl. (*Sterculia platanifolia*, L. fl.) 5 China.—*Cheirostemon platanoides*, H. and B. 5 N. Spain.—*Ochroma tomentosum*, Willd. 5 S. America.—*Chorisia crispiflora*, H. B. and Kth. 5 Brazil.—*Eriodendron leiantherum*, DC. 5 Brazil.—*Bombax Mungaba*, Mart. 5 S. America.—*Carolinea insignis*, Swz. 5 Martini-que.—*C. minor*, Sims; B. M. 34, t. 1412. 5 Mexico.—*Ruisia cordata*, Cav. 5 Bourbon.—*R. variabilis*, Jacq. 5 Bourbon.—*As-sonia populnea*, Cav. 5 Bourbon.—*A. viburnoides*, DC. 5 Bourbon.—*Dombeya tomentosa*, Cav. 5 Madagascar.—*D. ferruginea*, Cav. 5 Mauritius.—*D. punctata*, Cav. 5 Bourbon.—*D. cannabina*, Hels. and Boj.; B. M. 64, t. 3619. 5 Madagascar.—*Brotera ovata*, Cav. 5 N. Spain.—*Melhania Erythroxydon*, R. Br. (*Pentapetes Erythroxydon*, Forst. B. M. 25, t. 1000.) 5 St. Helena.—*M. incana*, Heyne. 5 Mysore.—*M. abutiloides*, Arn.; Wight. *icon.* 1, t. 23. 5 Peninsula of India.—*Trochetia uniflora*, DC. 5 Bourbon.—*T. triflora*, DC. 5 Bourbon.—*Pterospermum rubiginosum*, Heyne. 5 Courtallum.—*P. reticulatum*, W. and A. 5 Peninsula of India.—*P. obtusifolium*, Wight. 5 Courtallum.—*Wallichia quinquelocularis*, (Microchlaena, W. and A.) Pulney Hills.—*Göthea semperflorens*, Nees. and Mart. 5 Brazil.—



G. cauliflora, Nees. and Mart. 5 Brazil.—*Theobroma guianense*, Willd. 5 Guiana.—*T. bicolor*, H. and B. 5 N. Granada.—*T. angustifolium*, Moq. and Sessé. 5 Mexico.—*Abroma fastuosum*, Gärtn. 5 Timor. N. Holland.—*Guazuma ulmifolium* Lam. 5 W. Indies.—*G. polybotryum*, Cav. 5 St. Domingo.—*Commersonia platyphylla*, Andr.; B. M. 43, t. 1813. 5 Moluccas.—*Büttnera microphylla*, L. 5 St. Domingo.—*B. scabra*, L. 5 S. America.—*Ayenia pusilla*, L. 2. W. Indies.—*A. magna*, L. 5 Mexico.—*Melochia tomentosa*, L. 5 W. Indies.—*Riedleia corymbosa*, DC. 5 Mexico.—*R. nodiflora*, DC. 5 Jamaica.—*R. jamaicensis*, DC. 5 Jamaica.—*Hermannia hysopifolia*, L. 5 C. G. H.—*H. flammea*, Jacq. 5 C. G. H. (B. M. 33, t. 1349.)—*Mahernia bipinnata*, L.; B. M. 8, t. 277. 5 C. G. H.—*M. incisa*, Jacq.; B. M. 10, t. 353. 5 C. G. H.—*M. Burchellii*, Swt. (*M. grandiflora*, B. Reg. 3, t. 224.) 5 C. G. H.

ORDER LXX.—MALVACEÆ, Juss.—Lindl. Nat. Syst. p. 95.

THE MALLOW TRIBE.

Herbs, undershrubs, shrubs, rarely climbers, and trees, referred to 36-37 genera. Of species, DC. pr. and Spreng. syst. assign about 260 to S. America, Mexico and the W. Indies; 50 to Europe; 24 to Bourbon and Mauritius; 16 to N. America; 12 to N. Africa; 12 to New Holland and the South Sea Islands; 8 to China; 7 to tropical Africa; 6 to the Levant; 4 to Timor; 4 to the Canaries; 3 to Madagascar; 5 to Arabia; 1 to Persia; 1 to Siberia; and 1 to Caucasus. Forty have been found in S. Africa; (*Harvey*) and, judging from our materials, 130 in the E. Indies, viz. 9 of *Malva*; 1 of *Althæa*; 10 of *Urena*; 4 of *Pavonia*; 2 of *Lebretonia*; 30 of *Hibiscus*; 3 of *Paritium*; 2 of *Decaschistia*; 14 of *Abelmoschus*; 3 of *Thespesia*; 5 of *Gossypium*; 2 of *Lagunea*; 11 of *Abutilon*; and 34 of *Sida*. From these must, however, be deducted 12-41 species, common to other parts of the world. As in Sterculiaceæ, by far the greater part of the order is tropical, a few species only extending to the slope of the Himalayahs.

"The uniform character of this tribe is to abound in mucilage, and to be totally destitute of all unwholesome qualities." (*Lindl.*) The peculiar properties are noticed under the several species.

MALVA, L. (*DC. pr.* 1, p. 430;—*W. and A. pr.* 1, p. 45.)

1. *americana*, L. (*DC. l. c.*) © St. Domingo. Fl. small, yellow, Feb. and March; fr. April. Domesticated about Serampore.
2. *polystachya*, Cav. (*DC. pr.* 1, p. 430.) 5 Peru. Has been introduced into H. C. G. Fl. ?
3. *hispanica*, L. (*DC. pr.* 1, p. 431.) © Spain, Barbary. Fl. small, flesh-coloured, C. S.; fr. March.

4. *stipulacea*, Cav. (DC. l. c.) © Spain. Fl. smallish, purple, C. S.; fr. March.
5. *mauritiana*, L. (DC. pr. 1, p. 432;—W. and A. pr. 1, p. 45;—Roxb. fl. ind. 3, p. 181;—J. Grah. Cat. B. pl. p. 12.) © Italy, Spain, Portugal. Fl. largish, dark-purple, Feb. and March; fr. April.
6. *rotundifolia*, L. (DC. l. c.;—W. and A. l. c.;—Roxb. l. c.;—E. B. 16, t. 1092.) © Europe, Madura, Mysore, Persia, Cashmere. Fl. middle-sized, deep rose-coloured, Feb. and March; fr. April.
7. *verticillata*, L. (DC. pr. 1, p. 433.) © China. Fl. middle-sized, white, Feb. and March; fr. April.
8. *caroliniana*, L. (DC. pr. 1, p. 435.) © Carolina. Fl. middle-sized, red, C. S.; fr. March.

ALTHEA, L. (DC. pr. 1, p. 436;—W. and A. pr. 1, p. 45.)

1. *rosea*, Cav. (DC. l. c.;—Roxb. fl. ind. 3, p. 180;—J. Grah. Cat. B. pl. p. 12;—B. M. 59, t. 3189.) *Hollyhock*. গোলশয্যড়া *Golkhyra*. © China. Fl. very large, rose-coloured, Feb. and March; fr. April. Is the origin of nearly twenty splendid varieties of border flowers. Leaves said to yield a colouring matter, resembling Indigo. (Lindl.)

MALACHRA, L. (DC. pr. 1, p. 440.)

1. *capitata*, L. (DC. l. c.) © W. Indies. Fl. middle-sized, yellow, R. S.; fr. C. S. Domesticated about Serampore.
2. *heptaphylla*, Fisch. (DC. pr. 1, p. 441, excl. syn. M. fasciatæ, Ker. B. Reg. 6, t. 467.) 2. Brazil. Fl. middle-sized, rose-coloured, and fr. nearly the whole year. Stings almost like a Loasa.

URENA, L. (DC. pr. 1, p. 441;—W. and A. pr. 1, p. 46.)

1. *lobata*, L. (DC. l. c.;—W. and A. l. c.;—Roxb. fl. ind. 3, p. 182;—J. Grah. Cat. B. pl. p. 13;—B. M. 58, t. 3043;—Rumph. 6, t. 25, f. 2. A.) বনধুকড়া *Bun-okra*. 5 Fl. middle-sized, rose-coloured, R. S; fr. C. S. Both Peninsulas of India, Bengal, (Serampore,) Nepal.
2. *sinuata*, L. (DC. pr. 1, p. 442;—W. and A. pr. 1, p. 46;—Roxb. fl. ind. 3, p. 182;—J. Grah. Cat. B. pl. p. 13;—U. muricata, DC. l. c. U. Iappago, Sm. ?—DC. o. c. p. 441;—Rheed. 10, t. 2;—Rumph. 6, t. 25.—U. heterophylla, Sm.;—DC. o. c. p. 442;—Burm. zeyl. t. 62, f. 2.) কঙ্গুয়া *Kungooya*. 5 Ceylon, Peninsula of India, Bengal, (Serampore.) Fl. smallish, rose-coloured, R. S; fr. C. S.
3. *repanda*, Sm. (Wight. ill. 1, p. 65;—DC. pr. 1, p. 441;—Roxb. fl. ind. 3, p. 182;—W. and A. pr. 1, p. 46.) 5 Goomsoor. In H. C. G. fl. Sept. Oct. and Nov.; fr. Dec., Jan. and Feb. (Roxb.)
4. *speciosa*, Wall. (pl. as. rar. 1, t. 26.) 5 Taong Dong. Fl. large, rose-coloured. Has been introduced into H. C. G.?
5. *rigida*, Wall. Cat. Moulmein. In H. C. G. Fl.?
6. *macrocarpa*, Wall. 5. Burma.

SIDA, L. (W. and A. pr. 1, p. 57.)

1. *angustifolia*, Lam. (DC. pr. 1, p. 459.) 5 Bourbon. Fl. small, yellowish, and fr. nearly the whole year.



2. *acuta*, Burm. (DC. pr. 1, p. 460;—Roxb. fl. ind. 3, p. 171;—W. and A. pr. 1, p. 57;—Wight. icon. 1, t. 95;—J. Grah. Cat. B. pl. p. 16. —S. lanceolata, Retz.;—Roxb. o. c. p. 175;—Rheed. 10, t. 53;—Rumph. 6, t. 18.) কুরেতা *Kureta*. ♂ Both Peninsulas of India, Bengal, (Serampore.) Fl. smallish, yellow, R. and C. S.; fr. C. S.—Root intensely bitter, and stomachic. (Ainslie.)
3. *alba*, L. (DC. pr. 1, p. 460;—Roxb. fl. ind. 3, p. 174;—W. and A. pr. 1, p. 58.) নাগবনা *Nag-bula*. নাগবাড়ানা *Nag-barjala*. ♂ Coromandel, Bengal. Fl. small, white, R. and C. S.; fr. C. S.
4. *carpinifolia*, L. fil. (DC. pr. 1, p. 461.) ♂ Madeira. Fl. middle-sized, yellow, R. and C. S.; fr. C. S.
5. *jamaicensis*, Cav. (DC. pr. 1, p. 460.) ♂ Jamaica, St. Domingo. Fl. middle-sized, yellow, R. and C. S.; fr. Feb. and March.
6. *microphylla*, Cav. (DC. pr. 1, p. 461;—Roxb. fl. ind. 3, p. 170.) ♂ Bengal. Fl. small, yellow, R. and C. S.; fr. C. S.
7. *cuneifolia*, Roxb. (fl. ind. 3, p. 170.—Riedleia truncata, DC. pr. 1, p. 491;—W. and A. pr. 1, p. 66.) ♂ Fl. largish, yellow, R. and C. S.; fr. C. S.
8. *rhombifolia*, Roxb. (fl. ind. 3, p. 176.) ♂ Bengal, লালবাড়ানা *Lal-barjala*. Fl. smallish, yellow, R. and C. S.; fr. C. S.
9. *rhomboidea*, Roxb. (fl. ind. 3, p. 176;—DC. pr. 1, p. 462;—W. and A. pr. 1, p. 57.) শ্বেতবাড়ানা *Shwet barjala*. ♂ Peninsula of India, Bengal, (Serampore.) Fl. smallish, pale-yellow, R. and C. S.; fr. C. S.; “The bark of this and the last species yield an abundance of very delicate, flaxy fibres, and might, I think, be advantageously employed for many purposes. When the seed is sown thick in a good soil, the plants grow tall and slender, without branches, and are in every way fit for such purposes.” (Roxb.)
10. *retusa*, L. (DC. pr. 1, p. 462;—Roxb. fl. ind. 3, p. 175;—W. and A. pr. 1, p. 58;—Rheed. 10, t. 18;—Rumph. 6, t. 19.) ♂ Peninsula of India, Bengal, (Serampore.) Fl. small, yellow, R. and C. S.; fr. C. S.
11. *humilis*, Willd. (DC. pr. 1, p. 463;—Roxb. fl. ind. 3, p. 171;—W. and A. pr. 1, p. 59.) ♀ Both Peninsulas of India, Bengal, (Serampore.) Fl. very small, yellow, and fr. nearly throughout the year.
12. *cordifolia*, L. (DC. pr. 1, p. 464;—Roxb. fl. ind. 3, p. 177;—W. and A. pr. 1, p. 58;—J. Grah. Cat. B. pl. p. 16.—S. herbacea, Cav. DC. o. c. p. 463.—S. rotundifolia, Cav.;—DC. o. c. p. 464;—Rheed. 10, t. 54.) বাড়ানা *Barjala*. ♂ Both Peninsulas of India, Bengal, (Serampore.) Fl. middle-sized, yellow, R. and C. S.; fr. C. S. The mucilage of this plant, mixed with rice, is used to alleviate dysentery. (Ainslie.)
13. *truncata*, Cav. (DC. pr. 1, p. 471.) ☉ St. Domingo. Fl. small, yellow; R. and C. S.; fr. C. S.
14. *nervosa*, DC. (pr. 1, p. 465.) ♂ St. Domingo. Fl. small, yellow, and fr. nearly the whole year.



NAPÆA, L. (*Gen. pl.* p. 273.)

1. *lavis*, L. (*Sida* Napæa, *Cav.*;—*DC. pr.* 1, p. 466;—*B. M.* 48, t. 2193;—*Roxb. fl. ind.* 3, p. 175.) ♀. Virginia. Fl. middle-sized, white, R. and C. S.; fr. C. S.

ABUTILON, Mönch. (*W. and A. pr.* 1, p. 55.)

1. *polyandrum*, W. and A. (*l. c.*;—*J. Grah. Cat. B. pl.* p. 15.—*Sida* polyandra, *Roxb. fl. ind.* 3, p. 173.—*S. persica*, *Burm. ind. t.* 47, f. 1;—*DC. pr.* 1, p. 473.) ♂. Neelgherries, Nundidroog, Hills about Parr, Kandalla, &c. Fl. largish, yellow, R. and C. S.; fr. C. S.
2. *periplocifolium*, G. Don. (*W. and A. pr.* 1, p. 55.—*Sida* periplocifolia, *L.*;—*DC. pr.* 1, p. 467;—*Roxb. fl. ind.* 3, p. 142.) 5 Sumatra, Malay Islands. Fl. very small, yellow, R. and C. S.; fr. C. S.
3. *crispum*, G. Don. (*W. and A. pr.* 1, p. 56;—*Wight. icon.* 1, t. 68.—*Sida* crispa, *L.*;—*DC. pr.* 1, p. 469;—*Roxb. fl. ind.* 3, p. 177.) ♀. Coromandel, Gingie Hills. Fl. middle-sized, yellow, R. and C. S.; fr. C. S.
4. *indicum*, G. Don. (*W. and A. pr.* 1, p. 56. a.—*Wight. icon.* 1, t. 12;—*J. Grah. Cat. B. pl.* p. 15.—*Sida* indica, *L.*;—*DC. pr.* 1, p. 471;—*Roxb. fl. ind.* 3, p. 179.) Country Mallow-leaf. ♂ ♀. Both Peninsulas of India, Bengal, (Serampore.) Fl. largish, orange. R. and C. S.; fr. C. S.
5. *populifolium*, G. Don. (*Mill. dict.* 1, p. 503;—*A. indicum* β *W. and A. pr.* 1, p. 56.—*Sida* populifolia, *Lam.*;—*DC. pr.* 1, p. 470;—*Roxb. fl. ind.* 3, p. 179;—*Rheed.* 6, t. 45;—*Rumph.* 4, t. 11.) ♂ ♀. Fl. largish, orange, R. and C. S.; fr. C. S. Moluccas, Peninsula of India, Bengal, (Serampore.)
6. *asiaticum*, G. Don. (*W. and A. pr.* 1, p. 56;—*J. Grah. Cat. B. pl.* p. 15.—*Sida* asiatica, *L.*;—*DC. pr.* 1, p. 470;—*Roxb. fl. ind.* 3, p. 179.) ♂ Peninsula of India, Bengal, (Serampore.) পেটাবী Petaree. Fl. largish, orange, R. and C. S.; fr. C. S.

The three last species contain a great deal of mucilage, and are on that account used in the same manner here, as the Mallows and Marsh-mallows in Europe.

7. *graveolens*, W. and A. (*pr.* 1, p. 56;—*J. Grah. Cat. B. pl.* p. 15.—*Sida* graveolens, *Roxb. fl. ind.* 3, p. 179;—*DC. pr.* 1, p. 473;—*Rumph.* 4, p. 29, t. 10.) বড়কুঁড়ি Bura-kungi. ♀. Moluccas. Both Peninsulas of India, Bengal, Hindoosthan. Fl. large, deep orange, C. S.; fr. H. S.
8. *tomentosum*, W. and A. (*pr.* 1, p. 56.—*Sida* tomentosa, *Roxb. fl. ind.* 3, p. 178.) ♂ Peninsula of India, Bengal. Fl. large, light orange, R. and C. S.; fr. C. S.
9. *Avicennæ*, Gärtn. (*fr.* 2, t. 135, f. 1.—*Sida* Abutilon, *L.*;—*DC. pr.* 1, p. 470;—*Roxb. fl. ind.* 3, p. 178. excl. syn. *Rumph.*) ♂ S. France, Switzerland, Siberia, N. China. Fl. largish, light orange, R. S.; fr. C. S.—Said to be cultivated in the North of China, as a substitute for hemp and flax. (*Roxb.*)



10. *auritum* (*Sida aurita*, Wall. Cat.;—DC. pr. 1, p. 468;—B. M. 51, t. 2495.) ♂ Java. Fl. largish, deep orange, and fr. whole year.
11. *molle*, G. Don. (*Mill. dict.* 1, p. 503.—*Sida mollis*, Ort.;—DC. pr. 1, p. 470.—*S. grandifolia*, Willd.;—B. Reg. 5, t. 360.) ♂ Peru. Fl. large, yellow, and fr. throughout the year.
12. *striatum*, Dicks. (B. M. 67, 3840.) ♂ Brazil. Fl. C. S. 1841.

LAGUNEA, Cav. (DC. pr. 1, p. 474;—W. and A. pr. 1, p. 55.)

1. *lobata*, Willd. (DC. l. c.;—W. and A. l. c.—*Solandra lobata*, Murr.;—Lam. ill. t. 530.—*Triguera acerifolia*, Cav. diss. 1, t. 11.) ☉ Dindygul, Ginglie, Monghir. Fl. white, smallish. In. H. C. G. fl. R. S.; fr. C. S. (Roxb.) As this genus only differs from *Hibiscus* by the total absence of an involucl, it is rather singular to observe *Hibiscus Solandra*, Roxb. fl. ind. 3, p. 197, and *H. pumilus*, Roxb. o. c. p. 203, quoted, (in W. and A. pr. add. and corrig. p. 448,) as synonymes of *Lagunea lobata*, Willd.; Roxburgh saying of the former, "exterior calyx minute or wanting," and of the latter "exterior calyx minute and from 6-9 parted." Perhaps the genus *Lagunea*, has been formed from specimens, in which the involucl had dropped off.

ANODA, Cav. (DC. pr. 1, p. 458.)

1. *hastata*, Cav. (DC. o. c.) ☉ Mexico. Fl. largish, light blue, C. S.; fr. Feb. and March.
2. *Dilleniana*, Cav. (DC. l. c.—*Sida cristata*, Curt.;—B. M. 10, t. 330, excl. syn.) ☉ Mexico. Fl. large, deep-rose coloured, C. S.; fr. Feb. and March.
3. *triangularis*, DC. (pr. 1, p. 459.—*Sida deltoidea*, Horn.) ☉ Mexico. Fl. largish, light-blue, C. S.; fr. Feb. and March.
4. *acerifolia*, DC. (l. c.—*Sida hastata*, Sims;—B. M. 37, t. 1541, excl. syn.) ☉ Mexico. Fl. largish, pale-blue, C. S.; fr. Feb. and March.

PAVONIA, Cav. (DC. pr. 1, p. 442;—W. and A. pr. 1, p. 47.)

1. *Columella*, Cav. (DC. o. c. p. 443.) ♂ Bourbon. Fl. largish, white-purplish, C. S.; fr. March.
2. *odorata*, Willd. (DC. pr. 1, p. 444;—Roxb. fl. ind. 3, p. 214;—W. and A. pr. 1, p. 47.—*P. sidoides*, Horn.;—DC. l. c.) ♀ Gingie, Dindygul, Vendaloore. Fl. middle-sized, rose-coloured, and fr. the whole year. An infusion of the roots is prescribed as a diet-drink in fevers. (Wight.)
3. *rosea*, Wall. Cat. ♂ Burma. Fl. middle-sized, rose-coloured, and fr. the whole year.
4. *zeylanica*, Cav. (DC. pr. 1, p. 444;—Roxb. fl. ind. 3, p. 214;—W. and A. pr. 1, p. 47;—J. Grah. Cat. B. pl. p. 246.—*Hibiscus zeylanicus*, L.;—Burm. ind. t. 48, f. 3.) ☉ Ceylon, Trichinopoly. Fl. middle-sized, whitish, R. S.; fr. C. S.

ACHANIA, Swz. (Malvaviscus, DC. pr. 1, p. 445.)

1. *Malvaviscus*, Swz. (B. M. 49, t. 2305.—*Malvaviscus arboreus* Cav.;

- DC. l. c.) 5 Jamaica, N. Granada, Mexico. Fl. largish, crimson, C. S.; fr. H. S.
2. *pilosa*, Swz. (*Malvaviscus pilosus*, DC. pr. 1, p. 445.) 5 Jamaica. Fl. largish, crimsonish, C. S.; fr. H. S.
- HIBISCUS, L. (*W. and A. pr. 1, p. 47.*)
1. *vesicarius*, Cav. (DC. pr. 1, p. 453;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 13.*) © C. G. H. Peninsula of India. Fl. large, cream-coloured, with a dark-purple eye, C. S.; fr. Feb. and March.
 2. *Trionum*, L. (DC. l. c.;—*B. M. 6, t. 209*;—*Roxb. H. B. p. 52.*) © Italy. Carniola. C. G. H. Cuddapah in the Peninsula of India. Fl. like those of No. 1, C. S.; fr. Feb.
 3. *surrattensis*, L. (DC. pr. 1, p. 449;—*Roxb. fl. ind. 3, p. 205*;—*W. and A. pr. 1, p. 48*;—*J. Grah. Cat. B. pl. p. 13*;—*B. M. 33, t. 1356*;—*Wight. icon. 1, t. 197*;—*Rheed. 6, t. 44*;—*Rumph. 4, t. 16.*) 2. Moluccas. Both Peninsulas of India. Fl. large, pale sulphur, with a dark-purple eye, R. and C. S.; fr. Feb. and March.
 4. *furcatus*, Roxb. (*fl. ind. 3, p. 204*;—DC. pr. 1, p. 449;—*W. and A. pr. 1, p. 48*;—*J. Grah. Cat. B. pl. p. 246.*) 5. Ghauts. Interior of Bengal. Fl. large, pale sulphur, with a dark purple eye, R. S.; fr. C. S.—Yields an abundance of strong, white, flaxy fibres, but being very prickly, it is unfit for handling. (*Roxb.*)
 5. *bifurcatus*, Cav. (DC. pr. 1, p. 449;—*Roxb. H. B. p. 51.*) 5. Porto-Rico, Brazil. Fl. large, purplish, (DC.) In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
 6. *Lindleyi*, Wall. (*pl. as. rar. 1, t. 4*;—*B. Reg. 17, t. 1395.*) © Segaeen, Tavoy, Taong-Dong. Fl. large, deep crimson, with a dark-purple eye, R. and C. S.; fr. C. S.
 7. *radiatus*, Cav. (DC. pr. 1, p. 449;—*Roxb. fl. ind. 3, p. 209*;—*W. and A. pr. 1, p. 48*;—*B. M. 44, t. 1911.*) ♂ Common in gardens. Native place? Jamaica? Fl. large, pale sulphur, with a dark purple eye, R. and C. S.; fr. C. S.
 8. *aculeatus*, Roxb. (*fl. ind. 3, p. 206.*) © Native Place? Fl. large, sulphur, with a dark purple eye, R. and C. S.; fr. C. S.
 9. *Lampas*, Cav. (DC. pr. 1, p. 447;—*Roxb. fl. ind. 3, p. 197*;—*W. and A. pr. 1, p. 48*;—*J. Grah. Cat. B. pl. p. 13*;—*Wight. icon. 1, t. 5.*) 5 Both Peninsulas of India, Bengal, Hindoosthan, extending to the foot of Himalaya. Fl. large, sulphur, with a dark purple eye, R. and C. S.; fr. C. S.
 10. *lunarifolius*, Willd. (DC. pr. 1, p. 451;—*W. and A. pr. 1, p. 49*;—*Wight. icon. 1, t. 6.*—*Hibiscus pruriens*, *Roxb. fl. ind. 3, p. 196.*) ♂ Dindygul, Segaeen, Ava, Taong-Dong. Fl. large, sulphur, with a dark purple eye, H. and R. S.; fr. C. S.
 11. *Rosa sinensis*, L. (DC. pr. 1, p. 448;—*Roxb. fl. ind. 3, p. 194*;—*W. and A. pr. 1, p. 49*;—*J. Grah. Cat. B. pl. p. 13*;—*B. M. 5, t. 158*;—*B. Reg. 21, t. 1826.*) कर्वा Juva. Shoe-flower. 5 China, Mo-



luccas, interior of Hindoosthan. Fl. large, crimsonish, nearly the whole year, fr. 0. Petals astringent, used by the Chinese to blacken their shoes and eyebrows.

β. *rubro-plenus*; double red. (*Rheed.* 2, t. 17;—*Rumph.* 4, t. 8.)

γ. *flavo-plenus*; double yellow.

δ. *carneo-plenus*; double flesh-coloured.

ε. *luteo-plenus*; double yellowish.

ρ. *variegato-plenus*; double variegated.

12. *liliflorus*, Cav. β. *hybridus*, (*B. M.* 56, t. 2891;—*J. Grah. Cat. B. pl.* p. 13.) 5 A hybrid plant, derived from *H. liliflorus*, (a native of the mountains of Bourbon) whose flowers were fertilized by the pollen of *H. Rosa sinensis*. Fl. very large, deep rose-coloured, the whole year.

β. *ruber*, fl. deep red.

γ. *luteus*, fl. buff-coloured.

13. *Genevii*, Bojer. (*B. M.* 59, 3144.) 5 Bourbon, Mauritius, 1835.

14. *syriacus*, L. (*DC. pr.* 1, p. 448;—*Roxb. fl. ind.* 3, p. 195;—*J. Grah. Cat. B. pl.* p. 246.—*H. rhombifolius*, Cav.;—*DC. o. c. p.* 452.) 5 Syria, Carniola. Cultivated in India. Fl. large, purplish-lilac, with a dark-purple eye, R. S.; fr. 0.

β. *pallido-roseus*, fl. pale rose-coloured, with a dark-brown eye. (*B. M.* 3, t. 83.)

γ. *roseo-plenus*, double rose-coloured.

ε. *albo-plenus*, double white. শাদা জবা *Sada-juva*.

15. *panduriformis*, Burm. (*fl. ind.* t. 47, f. 2;—*DC. pr.* 1, p. 455;—*W. and A. pr.* 1, p. 50;—*J. Grah. Cat. B. pl.* p. 246.—*H. tubulosus*, Cav.;—*DC. o. c. p.* 447;—*Roxb. fl. ind.* 3, p. 196.) 0 Peninsula of India, Bengal, (Serampore.) Fl. large, sulphur, with a dark purple eye, Oct. and Nov.; fr. Jan. and Feb.

16. *cannabinus*, L. (*DC. pr.* 1, p. 450;—*Roxb. Corom.* 2, t. 190; *fl. ind.* 3, p. 208;—*W. and A. pr.* 1, p. 50;—*J. Grah. Cat. B. pl.* p. 13.) 0 Both Peninsulas of India, Bengal, (Serampore.) বেড়াপাতি *Mesta-pato*. Fl. large, sulphur, with a dark-brown eye, R. S.; fr. C. S.—*Leaves* acidulous, eaten by the natives as spinach. Fibres of the bark used for cordage.

17. *vitifolius*, L. (*DC. pr.* 1, p. 450;—*Roxb. fl. ind.* 3, p. 200;—*W. and A. pr.* 1, p. 50.—excl. *H. truncato*, Roxb.;—*J. Grah. Cat. B. pl.* p. 13;—*Rheed.* 6, t. 46.) বকপাস *Bun-kapas*. ♂ Both Peninsulas of India, Bengal, (Serampore.) Fl. large, sulphur, with a dark-purple eye, R. and C. S.; fr. C. S.

18. *truncatus*, Roxb. (*fl. ind.* 3, p. 200.) 0 Ceylon. Fl. largish, sulphur, with a dark-purple eye. In H. C. G. fl. R. and C. S.

19. *scandens*, Roxb. (*fl. ind.* 3, p. 200.) L. 5 Chittagong. Fl. large, pale sulphur, with a dark-brown eye, March; fr. 0.

20. *Patersoni*, Ait. (*DC. pr.* 1, p. 454;—*B. Rep.* 4, t. 286.—*Lagunæa Patersonia*, *B. M.* 20, 769.) 5 Norfolk Island.



21. *heterophyllus*, Vent. (DC. pr. 1, p. 450;—Roxb. fl. ind. 3, p. 213;—B. Reg. 1, t. 29.) 5 N. Holland. Fl. large, white, rosy-tinged, with a dark blood-coloured eye, March; fr. 0.
22. *diversifolius*, Jacq. (Icon. rar. 3, t. 551;—DC. pr. 1, p. 449;—Roxb. fl. ind. 3, p. 208;—B. Reg. 5, t. 381.—H. ficulneus, Cav.; not of others.) 5 East Africa, Madagascar. Fl. large, primrose-coloured, with a dark blood-coloured eye, C. S.; fr. H. S.
23. *mutabilis*, L. (DC. pr. 1, p. 452;—Roxb. fl. ind. 3, p. 201;—W. and A. pr. 1, p. 51;—J. Grah. Cat. B. pl. p. 13;—B. Reg. 7, t. 589;—Rheed. 6, t. 38, t. 40, f. 1, t. 42;—Rumph. 4, t. 9.) 5 Moluccas. Fl. very large, in the morning white, at noon pale-rose, in the evening deep rose, R. and C. S.; fr. C. S.
- β. *plenus*; double-flowered. (Rheed. t. 39, t. 40, f. 2, t. 41.) থলপদ্ম
Thulpudmo.
24. *collinus*, Roxb. (H. B. p. 51;—fl. ind. 3, p. 198.—H. eriocarpus, DC. pr. 1, p. 452;—W. and A. pr. 1, p. 51.) 5 Circars. Fl. very large, pale-rose, with a dark-blood coloured eye, R. and C. S.; fr. C. S.
25. *hirtus*, L. (W. and A. pr. 1, p. 51;—J. Grah. Cat. B. pl. p. 14.—H. Rosa malabarica, Kön;—B. Reg. 4, t. 327.—H. phoeniceus, Willd. excl. syn. L. suppl. and H. hirtus, Cav.;—Roxb. fl. ind. 3, p. 194;—DC. pr. 1, p. 452. ex pte;—Rheed. 10, t. 1.) লালসুৰ্গমুনি Lal-soorgumuni. 5 Peninsula of India, Bengal, (Serampore.) Fl. middle-sized, scarlet, R. and C. S.; fr. C. S.
- β. *albiflorus*; white-flowered. শ্বেতসুৰ্গমুনি Shwet-soorgumuni.
26. *micranthus*, L. (DC. pr. 1, p. 453;—W. and A. pr. 1, p. 51.—H. rigidus, L.;—Roxb. fl. ind. 3, p. 195.) 5 Peninsula of India, Silhet, extending as far as Delhi. Fl. small, white, and fr. nearly the whole year. The natives, particularly children, eat the green, tender capsules of both this and the last species. (Roxb. MSS.)
27. *palustris*, L. (B. M. 23, 882;—B. Reg. 17, 1463.) 5 N. America R. S. 1837.
28. *Sabdariffa*, L. (DC. pr. 1, p. 453;—W. and A. pr. 1, p. 52;—Roxb. H. B. p. 52;—J. Grah. Cat. B. pl. p. 14.) মেস্তা Mesta. The Roselle plant, or Red Sorrel of the W. Indies. © W. Indies. Cultivated in India. Fl. large, pale, sulphur, with a dark brown eye, R. S.; fr. C. S. From the fleshy, acid, red calyxes are prepared excellent jellies and tart fruits.
- ABELMOSCHUS, Medik. (W. and A. pr. 1, p. 53.)
1. *esculentus*, W. and A. (l. c.;—J. Grah. Cat. B. pl. p. 14.—Hibiscus esculentus, L.;—DC. pr. 1, p. 450.—H. longifolius, Willd.;—DC. l. c.;—Roxb. fl. ind. 3, p. 210.) রামতরায় Ramturay ধৈর্য Dhenroos. 5 Peninsula of India, Bengal in a cultivated state. Native Place? Fl. large, sulphur, with a dark-blood-coloured eye. Unripe fruit a favorite ingredient in soups, &c.



2. *moschatus*, Mönch (*W. and A. pr.* 1, p. 53;—*J. Grah. Cat. B. pl.* p. 14;—*Wight icon.* 2, t. 399.—*Hibiscus Abelmoschus*, *L.*;—*DC. pr.* 1, p. 452;—*Roxb. fl. ind.* 3, p. 202;—*Rheed.* 2, t. 38;—*Rumph.* 4, t. 15.) काजकस्तुरी *Kal-kusturee*, *Musk-Mallow*. © Moluccas, Java, both Peninsulas of India, Bengal, (Serampore,) extending northwards to the foot of the Himalayas. Fl. large, sulphur, with a dark blood-coloured eye, R. and C. S.; fr. C. S.—Abounds in *mucilage*, which in Upper India is used to clarify sugar. *Seeds* considered cordial and stomachic, used by the Arabs, mixed with coffee. (*Lindl.*)
3. *crinitus*, Wall. (*pl. as. rar.* 1, t. 44.) © ? *Prome.* Fl. large, sulphur, with a dark blood-coloured eye. In H. C. G. fl. R. and C. S.; fr. C. S. (*Wall.*)
4. *cancellatus*, Wall. Cat. (*Hibiscus cancellatus*, *L. fil.*;—*Roxb. fl. ind.* 3, p. 201.—*H. racemosus*, *Lindl.*;—*B. Reg.* 11, t. 917.—*Pavonia cancellata*, *Cav.*;—*DC. pr.* 1, p. 444.) © Surinam, Nepal, Kamaon. Fl. large, sulphur, with a dark blood-coloured eye. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)
5. *angulosus*, Wall. (*W. and A. pr.* 1, p. 53.—*Hymenocalyx variabilis*, *Zenk.*) © Neelgheries. Fl. large, sulphur, with a dark blood-coloured eye. In H. C. G. fl. C. S.; fr. Febr.
6. *rugosus*, Wall. (*W. and A. pr.* 1, p. 53.—*Hibiscus hirtus*, *Buch.*;—*Roxb. fl. ind.* 3, p. 203, excl. syn. *Pluk.*) © Madura Hills. Fl. large, sulphur, with a dark blood-coloured eye. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)
7. *ficulneus*, W. and A. (*pr.* 1, p. 53;—*Wight. icon.* 1, t. 154;—*J. Grah. Cat. B. pl.* p. 14;—*Hibiscus ficulneus*, *L.*;—*DC. pr.* 1, p. 448.—*H. prostratus*, *Roxb. fl. ind.* 3, p. 208.—*Lagunea aculeata*, *Cav.*;—*DC. pr.* 1, p. 474.) © Rajmahl Hills, Circars. Fl. white, with a rose-coloured eye. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)
8. *tetraphyllus*, Wall. Cat. (*J. Grah. Cat. B. pl.* p. 14.—*Hibiscus tetraphyllus*, *Roxb. fl. ind.* 3, p. 311;—*DC. pr.* 1, p. 448.) © Woods about Calcutta. Girgaum woods, Bombay. © Fl. large, yellow, with a dark-purple eye, R. S.; fr. C. S.
9. *strictus*, (*Hibiscus strictus*, *Roxb. fl. ind.* 3, p. 206.) © Rajmahl Hills. Fl. largish, pure-white, R. S.; fr. C. S. *Bark* abounds in long, glossy, white, fine and strong fibres. In 1801 Dr. Roxb. had forty square yards planted with this species, which yielded thirty-three pounds weight of the naturally very clean fibres.
10. *chinensis*, Wall. Cat. (*Hibiscus chinensis*, *Roxb. fl. ind.* 3, p. 212.) © China. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)
11. *pungens*, Wall. Cat. (*Hibiscus pungens*, *Roxb. fl. ind.* 3, p. 213.) ॡ Nepal. Fl. large, deep-yellow. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)
12. *pentaphyllus*, (*Hibiscus pentaphyllus*, *Roxb. fl. ind.* 3, p. 212.) © China. Fl. large, yellow. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)



13. *Manihot*, Wall. Cat. (*Hibiscus Manihot*, L.;—*DC. pr.* 1, p. 448;—*B. M.* 41, t. 1702.) 5 Japan, China. Fl. large, sulphur, with a dark blood-coloured eye, R. and C. S.
 14. *theiodes*, (*Hibiscus sulphureus*, Wall. not H. B. and Kth.) © Burma. Fl. large, sulphur, with a dark brown eye, R. and C. S.; fr. C. S.
- PARITIUM, St. Hil. (*W. and A. pr.* 1, p. 52.)
1. *tiliaceum*, St. Hil. (*W. and A. l. c.*;—*Wight, icon.* 1, t. 7;—*J. Grah. Cat. B. pl.* p. 14.—excl. *Hibiscus tortuosus*, Roxb.—*Hibiscus tiliaceus*, L.;—*DC. pr.* 1, p. 454;—*Roxb. fl. ind.* 3, p. 192;—*Rumph. 2*, t. 73.) 5 Moluccas, Amherst, Travancore, Bombay. Fl. very large, sulphur, with a dark blood-coloured eye, and fr. the whole year.
 2. *tortuosum*, Wall. (*Hibiscus tortuosus*, Roxb. *fl. ind.* 3, p. 192. *H. tiliaceus*, Lour.; not L.;—*B. R.* 3, t. 232; excl. syn. Rumph.—*Novella repens*, Rumph. 2, p. 122;—*Rheed.* 1, t. 30) বঙ্গ। Bula. 5 Moluccas; Cochin-China, Soonderbuns. Fl. like those of No. 1, H. and R. S.; fr. C. S.—*W. and A. pr.* 1, p. 52; refer this species doubtfully to No. 1.
 3. *macrophyllum*, G. Don., (*Mill. dict.* 1, p. 485.—*Hibiscus macrophyllus* Roxb. *H. B.* p. 51;—*DC. pr.* 1, p. 455;—*Wall pl. as. rar.* 1, t. 51.) L. 5 Assam, Penang. Fl. very large, sulphur, with a dark blood-coloured eye, H. and R. S.; fr. C. S.—*W. and A. pr.* 1, p. 50, refer with doubt *Hibiscus setosus*, Roxb. to *Paritium*, adding that it seems in no respect distinct from *H. macrophyllum*, Roxb.
 4. *tricuspe*, G. Don. (*W. and A. pr.* 1, p. 52;—*J. Grah. Cat. B. pl.* p. 14.—*Hibiscus tricuspis*, Cav;—*DC. pr.* 1, p. 453;—*Roxb. fl. ind.* 3, p. 202.—*H. hastatus*, L. *fil. suppl.* 310.) 5 Society Islands. Fl. large, sulphur, with a dark blood-coloured eye, C. S.; fr. H. S.
 5. *Bealii*, Wall. MSS. 5 Japan. Introduced in 1840. Has not fl.
- THESPIESIA, Corr. (*DC. pr.* 1, p. 455;—*W. and A. pr.* 1, p. 54.)
1. *populnea*, Corr. (*DC. o. c.* p. 456;—*W. and A. l. c.* excl. *Hibiscus populneoides*, Roxb.;—*Wight icon.* 1, t. 8;—*J. Grah. Cat. B. pl.* p. 15, excl. syn. Roxb.—*Hibiscus populneus*, Roxb. *fl. ind.* 3, p. 190;—*Rheed.* 1, t. 28;—*Rumph. 2*, t. 74.) পোরেশ Poresh. 5 Society Islands, Guinea, Courtallum, Singapore, Bengal. Fl. large, sulphur, with a dark blood-coloured eye, R. S.; fr. C. S.—*Wood* used for making rollers, and other purposes, where closeness of grain is required. The fruit abounds in a yellow pigment, which might perhaps be turned to some account. (*J. Grah.*)
 2. *populneoides*, Wall. (*Hibiscus populneoides*, Roxb. *fl. ind.* 3, p. 191.) 5 Coromandel, Bengal. পোরেশপিপ্পল Poresh-pippul. Fl. like those of No. 1, R. and C. S.; fr. C. S.
- GOSSYPIMUM, L. (*DC. pr.* 1, p. 456;—*W. and A. pr.* 1, p. 54.) Cotton.
1. *acuminatum*, Roxb. (*fl. ind.* 3, p. 186;—*Royle ill.* p. 98;—*Wight. ill.* 1, t. 27.) 5 Mountains of Bengal, Malacca. Fl. large, sulphur, and fr. throughout the whole year. This species is not cultivated;



"but well worth trial in different parts of India, as it is indigenous, and desirable on account of the facility with which the wool separates from the naked seeds." (*Royle*.)

2. *obtusifolium*, Roxb. (*fl. ind.* 3, p. 183;—*Royle ill.* p. 98.) 5 Ceylon. In H. C. G. fl. and fr. the whole year, not cultivated.

3. *herbaceum*, L. (*Roxb. fl. ind.* 3, p. 184;—*Royle ill.* p. 98, t. 23, f. 1;—*Wight icon.* 1, t. 9 and 11;—*Rumph.* 4, t. 12.) কাপাস *Kapas*. 5. 4. Moluccas. Both Peninsulas of India, Bengal, (Serampore,) Hindoosthan. Fl. large, sulphur, with a dark blood-coloured eye, and fr. nearly the whole year.

α. *daccanense*; (*Roxb. Corom.* 3, t. 269.) *Dacca Cotton*. From this is manufactured the *Dacca Muslin*.

β. *berarenses*; *Berar Cotton*. From this the *Madras*, or *Northern Circular long-cloth*.

γ. *chinense*; *China-cotton*.

δ. *cawnporenses*; *Cawnpore and Doab-cotton*. (*Royle ill.* t. 23, f. 1.)

4. *arborescens*, L. (*Roxb. fl. ind.* 3, p. 183;—*Royle ill.* p. 99; t. 23, f. 2;—*Wight icon.* 1, t. 10.) 5 Egypt, Arabia. India about Pagodas, Celebes. Fl. large, intensely red, with a faint yellowish eye, and fr. the whole year, (*Roxb.*) Its *cotton* is used only for making turbans, (*Royle*.)

5. *religiosum*, Swz. (*Roxb. fl. ind.* 3, t. 185;—*Royle ill.* p. 99.) *Nankin Cotton*. 4. China. Fl. large, yellow. In H. C. G. fl. and fr. the whole year. Does not promise to be profitable. Colour of the wool tawny, and very different from the colour of the cotton-cloth, commonly called *Nankeen*, which is, no doubt, dyed. (*Roxb.*)

6. *hirsutum*, Swz. (*Roxb. fl. ind.* 3, p. 187;—*Royle ill.* p. 100.) 5 W. Indies. Fl. large, uniformly pale yellow, and fr. the whole year. (*Roxb.*) In the W. Indies it is called *French Cotton*, and seems to be the *green-seeded short staple* or *Upland Cotton* of the Americans. (*Royle*.)

7. *barbadense*, L. (*Roxb. fl. ind.* 3, p. 187;—*Royle ill.* p. 100;—*B. Reg.* 1, t. 84. *Bourbon* or *Barbadoes Cotton*, *Wight ill.* 1, t. 28 a. *Sea-Island* or *long stapled Cotton*, *Wight ill.* 1, t. 28 b. *Upland Georgian* or *short-stapled Cotton*, *Wight ill.* 1, t. 28 c.—*G. vitifolium*, *Cav. diss.* 6, p. 311, t. 166.) 5 W. Indies. Fl. large, yellow, and fr. the whole year.

8. *vitifolium*, Roxb. (*fl. ind.* 3, p. 186, not of others.) 5 Native Place? Fl. large, deep crimson, with a dark-brown eye, and fr. the whole year. Cotton fine, and large in fibre, but does not promise advantage to the cultivator, on account of the scantiness of the crop. (*Roxb.*)

* *Malope malacoides*, L. ⊙ S. Europe.—*M. trifida*, Cav. ⊙ N. Africa.—*Malva prostrata*, Cav.; B. M. 51, t. 2515. 5 S. America.—*M. abutiloides*, L.; B. M. 52, t. 2544. 5 Bahama Islands.—*M. angustifolia*, Ait.; B. M. 55, t. 2839. 5 Mexico.—*M. lateritia*, Hook; B. M. 67, t. 3846. 5 Buenos Ayres.—*M. umbellata*, Cav.; B. Reg. 19, t. 1608.



5 Mexico.—*Althea coromandeliana*, Cav. (*A. flexuosa*, Sims.; B. M. 23, t. 892. Seringapatam Hollyhock.) ♂ Peninsula of India.—*A. caribæa*, Sims.; B. M. 44, t. 1916. ♂ W. Indies.—*Lavatera plebeia*, Sims.; B. M. 48, t. 2269. ♀ N. Holland.—*Malachra rotundifolia*, Schrank. © Brazil.—*M. heptaphylla*, Fisch. (*M. fasciata*, Ker.; B. Reg. 6, t. 467.) © Brazil.—*M. triloba*, Desf. © S. America.—*M. bracteata*, Cav. © Brazil.—*Urena multifida*, Cav. 5 Bourbon.—*U. tricuspis*, Cav. ♀ Bourbon.—*U. reticulata*, Cav. 5 Cayenne.—*U. subtriloba*, Schrank. © Brazil.—*U. Swartzii*, DC. 5 Surinam.—*U. paradoxa*, Kth. 5 Banks of Orinoco.—*Pavonia Schrankii*, Spreng.; B. M. 65, t. 3692. 5 Brazil.—*P. spinifera*, Willd.; B. Reg. 4, t. 339. 5 S. America.—*P. leptocarpa*, DC. 5 Surinam.—*P. coccinea*, Cav. 5 St. Domingo.—*P. typhaleoides*, Kth. 5 Trinidad.—*Achamia mollis*, Ait.; B. R. 1, t. 11. 5 Mexico.—*Hibiscus liliiflorus*, Cav. 5 Bourbon.—*H. splendens*, Fraz.; B. Reg. 19, t. 1629. 5 N. Holland.—*H. unidentis*, Lindl.; B. Reg. 11, 878. 5 Brazil.—*H. lilacinus*, Lindl.; B. Reg. 23, t. 2009. 5 Swan River.—*Anoda triloba*, Cav. 5 Mexico.—*A. incarnata*, Humb. ♂ Mexico.—*A. parviflora*, Cav. © W. Indies.—*Periptera punicea*, DC. (*Sida periptera*, Sims.; B. M. 40, t. 1644.) 5 Mexico.—*A. pictum*, Hook; B. M. 67, t. 3840. 5 Brazil.—*Sida pulchella*, Willd.; B. M. 54, t. 2753. 5 N. Holland.—*S. globiflora*, Hook; B. M. 55, t. 2821. 5 Mauritius.—*S. sessiliflora*, Hook; B. M. 55, t. 2857. 5 S. America.—*S. rosea*, Lk. and Ott.; B. M. 59, t. 3150. 5 S. America.—*Decaschistia crotonifolia* W. and A.; Wight icon. 1, t. 42. 5 Mysore.—*D. triloba*, Wight; icon. 1, t. 88. ♀ Belgium.

ORDER LXXI.—ELÆOCARPACEÆ, Lindl. Nat. Syst. p. 97.

Trees or shrubs, referred to 9 genera including 65 species: 5 from S. America; 2 from New Zealand; 2 from New Holland; 1 from Mauritius, and 55 from the E. Indies. Of the latter, 40 belong to *Elæocarpus*, which, however, upon a strict revision of authentic species, will, no doubt, be somewhat reduced; 11 to *Monocera*; 2 to *Ganitrus*; and 1 to *Acronodia*. 2-3 are natives of Cochinchina; 2 of the Moluccas; 1 of Luzon; 7 of the Khasya mountains and Assam; 11 of Java; and the rest of the two Peninsulas of India. Properties but little known.

A synopsis of some of the Indian species will be found in *Wight's ill.* 1, p. 83-84.

MONOCERA, Jack. (*W. and A. pr.* 1, p. 83.)

1. *rugosa*, Wight. (*ill.* 1, p. 83;—*icon.* 1, t. 61.—*Elæocarpus rugosus*. *Roxb. fl. ind.* 2, p. 596.) L. 5 Assam, Chittagong. Fl. large white, In H. C. G. fl. fr. Feb. and March; fr. June and July. (*Roxb.*)
2. *Roxburghii*, Wight. (*ill.* 1, p. 83;—*icon.* 1, t. 63.—*Elæocarpus aristatus*, *Roxb. fl. ind.* 2, p. 599.) L. 5 Khasya Mountains. Fl.



middle-sized, yellow, fragrant. In H. C. G. fl. April; fr. August. (Roxb.)

GANITRUS, Rumph. (*Gärtn. fr.* 2, p. 271.)

1. *sphaericus*, Gärtn. (*o. c. t.* 139;—*Wight. ill.* 1, p. 83;—*icon.* 1, t. 66.)—*Eleocarpus Ganitrus*, Roxb. *fl. ind.* 2, p. 592;—*J. Grah. Cat. B. pl. p.* 22;—*Rumph.* 3, t. 101.) L. 5 Moluccas, Assam, Khassya and Morung Mountains, Nepal. Fl. middle-sized, white. In H. C. G. fl. Feb. and March; fr. Nov. (Roxb.) The hard, dry, deeply grooved and elegantly sculptured seeds are frequently worn as beads by Brahmins and Fakeers, and set in gold, are sometimes even sold as ornaments in England. (Royle.)

ELMOCARPUS, L. (*W. and A. pr.* 1, p. 82.)

1. *prinodes* (E. serratus, Roxb. *fl. ind.* 2, p. 596, not L.;—*W. and A. l. c. annot.*) জলপাই *Julpai*. 5 Assam, Khassya Mountains, Kamaon. Fl. small, white, H. S.; fr. R. S. Fruit eaten by the Natives in their curries, or pickled. No oil can be extracted from them. (Roxb.)
2. *lanceafolius* Roxb. (*fl. ind.* 3, p. 598;—*Wight. icon.* 1, t. 65.) 5 Khassya Mountains, Assam. Fl. small, white. In H. C. G. fl. June and July; fr. Sept. and Oct. (Roxb.) Seeds used like those of *Ganitrus sphaericus*. (Royle.)
3. *robustus*, Roxb. (*fl. ind.* 2, p. 597;—*Wight. icon.* 1, t. 64.) L. 5 Khassya Mountains. Fl. largish, white, fragrant, June and July; fr. Sept. and Oct.
4. *lucidus*, Roxb. (*fl. ind.* 2, p. 600.) 5 Chittagong. Introduced into H. C. G. in 1810, but had not fl. in 1814.
5. *longifolius*, Bl. (*Spreng. c. p. p.* 189.) 5 Java. Banks of the Saluen. Introduced in 1839. Has not fl.
6. *integrifolius*, Lam. (*DC. pr.* 1, p. 519.) 5 Mauritius. Has been introduced into H. C. G. Fl. ?

* *Monocera tuberculata*, W. and A.; *Wight. ill.* 1, t. 35. 5 Travancore. Neelgherry.—*M. Griffithii*, *Wight.* 5 Mergui.—*M. ferruginea* *Wight.* 5 Neelgherry.—*M. Munronii*, *Wight.* 5 Coorg.—*M. petiolata*, Jack. 5 Penang.—*Eleocarpus serratus*, L. 5 Travancore.—*E. cuneatus*, *Wight.* 5 Malabar, Quilon, Ceylon.

ORDER. LXXII.—DIPTEROCARPACEÆ, (DIPTERACEÆ, Lindl.
Nat. Syst. p. 98.)

THE CAMPHOR TREE TRIBE.

Generally large trees, arranged in 5 genera comprising 32 species: 2 for Sierra Leona; (*Lophira*); and the rest E. Indian, viz. 11 of *Dipterocarpus*;



10 of *Hopea*; 5 of *Vatica*; and 4 of *Vateria*. Beside these, Blume has three species for Java, probably belonging to *Dipterocarpus*. Roxburgh's *Hopea eglandulosa*, constitutes a new genus, to be referred probably to *Euphorbiaceæ* or its neighbourhood. More than 2-3ds. of the species inhabit mountainous or hilly parts of the two Indian Peninsulas.

Almost every species of this order abounds in a balsamic resinous juice, well known under the common English names of *Dammer* and *Wood-oil*, according to its hardening or continuing liquid, when exposed to the air. That drawn from the *Vaticas* and *Vaterias* hardens and forms *Dammer* and *Piney*; that from the *Dipterocarpi* retains its fluidity, and is the *Wood-oil* of the bazars. Some of the species produce a fragrant resin, which is burnt in the temples as incense. *Dammer* is used in India for most of the purposes to which pitch and rosin are applied in Europe. *Wood-oil* either alone, or thickened with *Dammer*, supplies a useful varnish for wood, possessing the valuable property of repelling, for a long time, the attacks of white ants, as well as of resisting the influence of the climate. (*Wight*.)

VATERIA, L. (*W. and A. pr.* 1, p. 83.)

1. *indica*, L. (*W. and A. l. c.*;—*Wight ill.* 1, t. 36;—*Roxb. Corom.* 3, t. 288; *fl. ind.* 2, p. 602;—*J. Grah. Cat. B. pl.* p. 22. *Elæocarpus copalliferus*, Retz.;—*Rheed.* 4, t. 15.) *Piney Varnish tree*. L. 5 Malabar. Fl. middle-sized, white. In H. C. G. fl. H. S.; fr. Aug. (*Roxb.*)

Vateria indica produces the resin called in India, *Copal*, (in England known by the name of *Gum Anime*) as very nearly approaching the true resin of that name. (*Lindl.*) When recent, it is found from pale green to a deeper amber colour, with all the intermediate shades. In some parts of India, beads are made of such pieces as most resemble Amber beads, even to being electrical, when excited by rubbing. (*Roxb.*) The resin is procured by cutting a notch in the tree, sloping inwards and downwards. This is soon filled with the juice, which in a short time hardens by exposure to the air. When used as a varnish (*Piney Varnish*), the usual practice is to apply the balsam, before it has become hard; but when this cannot be procured, the resin melted by a slow fire and mixed with boiling Linseed-oil forms a varnish, which answers equally well for most purposes. The resin is on the Malabar-coast also made into candles. While burning, these diffuse an agreeable fragrance, give a fine clear light with little smoke, and consume the wick so as not to require snuffing. (*Wight*.)

2. *lanceifolia*, Roxb. (*fl. ind.* 2, p. 601;—*Wight ill.* 1, p. 88.) 5 Assam, Khassya Mountains. Fl. largish, white, fragrant. In H. C. G. fl. April and May; fr. July and Aug. (*Roxb.*) This tree yields a resin like that of No. 1, from which the Indians prepare one of the materials of their religious oblations. (*As. Res.* 12, p. 539.)

VATICA, L. (*W. and A. pr.* 1, p. 84.—*Shorea*, (*Roxb.*)

1. *robusta*, W. and A. (*Shorea robusta*, *Roxb. fl. ind.* 2, p. 615;—*Corom.* 3, t. 212.) *नाम* *Sal*. L. 5 Morung, Nepal. Extends more nor-



therly than any other of the order, being found all along the Himalaya, to the neighbourhood of the Jumna, forming vast forests, frequently unmixd with any other tree, but generally confined in the most northern parts within the first range of the hills, (*Royle*). Fl. middle-sized, yellowish-white, fragrant, April and May; fr. R. S. It affords the best and most extensively used timber in India; the goodness of which must depend in a great measure on the resin, (called *ral* in the northern, and *dhoona* in the southern provinces) which it contains. (*Royle*.)

2. *Tumbuggaia*, W. and A. (*pr.* 1, p. 84;—*Wight icon.* 1, t. 27.—*Shorea Tumbuggaia*, *Roxb. H. B.* p. 42;—*fl. ind.* 2, p. 617.) 5 Paulghat Mountains. Fl. middle-sized. Introduced into H. C. G., before 1814. Fl. ?

DIPTEROCARPUS, Gärtn. (*W. and A. pr.* 1, p. 84.)

1. *lavis*, Buch (*W. and A. o. c.* p. 85.—*Dipterocarpus turbinatus*, *Roxb. Corom.* 3, t. 213;—*fl. ind.* 2, p. 612.) L. 5 Tippera, Ava. Fl. large white, tinged with red. In H. C. G. fl. March; fr. May and June, Yields an abundance of *Wood-oil*. A large notch is cut into the trunk of the tree, near the ground, where a fire is kept up, till the wound is charred, soon after which the balsam begins to ooze out: the average produce of the best trees during the season, is said to be sometimes 40 gallons. It is found necessary, every three or four weeks, to cut off the old charred places and burn them again. In large healthy trees, abounding in balsam, they even cut a second notch in some other part of the tree and char it as the first. These operations are performed during the months of November, December, January and February. Should any of the trees appear sickly the following season, one or several years respite is given them. (*Roxb.*)
2. *angustifolius*, W. and A. (*pr.* 1, p. 84. *annot.*—*Dipterocarpus costatus*, *Roxb. fl. ind.* p. 613, not Gärtn.) L. 5 Chittagong. In H. C. G. fl. C. S; fr. April and May. (*Roxb.*) Next to the following species, it furnishes the largest quantity of *Wood-oil*.
3. *incanus*, *Roxb. (fl. ind.* 2, p. 614.) L. 5 Chittagong. In H. C. G. fl. Nov. and Dec.; fr. April. (*Roxb.*)
4. *alatus*, *Roxb. (fl. ind.* 2, p. 614.) L. 5 Pegu, Mascall Islands. Introduced into H. C. G. in 1809. Here the tree has not fl., though cultivated for more than fourteen years.

HOPEA, *Roxb. (W. and A. pr.* 1, p. 85.)

1. *odorata*, *Roxb. (fl. ind.* 2, p. 609.) 5 Chittagong, Pegu. Fl. small, pale-yellow, fragrant. In H. C. G. fl. April and May; fr. R. S. (*Roxb.*)
2. *faginea* Wall Cat. Penang. Introduced in 1840.

* *Vateria Roxburghiana*, *Wight icon.* 1, t. 26. 5 Peninsula of India.—*V. ceylanica*, *Wight*. Ceylon,—*Vatica laccifera*, W. and A.; *Wight*



icon, 1, t. 164. 5 Paulghat Mountains.—*V. obtusa* (*Shorea obtusa*, Wall. Cat.) Martaban.—*V. camphorifera*, Wight. (*Shorea camphorifera*, Roxb. *Dryobalanops Camphora*, Gärtn.) the famous Camphor-tree of Sumatra.—*Dipterocarpus turbinatus*, Gärtn. 5 Chittagong.—*D. tuberculatus*, Roxb. 5 Chittagong.—*D. pilosus*, Roxb. 5 Mascall Islands.—*Hopea Wightiana*, Wall.; Wight ill. 1, t. 37. 5 Peninsula of India.—*Lophira alata*, Banks. 5 S. Leona.

ORDER. LXXIII.—TILIACEÆ, Juss. Lindl. Nat. Syst. p. 99.

THE LINDEN TRIBE.

Trees, shrubs, seldom undershrubs or herbs, referred by Lindl. to 29 genera, from which must be deducted *Vatica*. As to species, DC. pr. and Spreng. syst. enumerate 53 from S. America, Mexico, and the W. Indies; 8 from tropical Africa; 6 from Europe; 5 from Japan; 4 from N. America; 4 from Arabia; 2 from the Society Islands; 2 from Mauritius; 1 from China; 1 from Madagascar, and 1 from New Zealand. To these Wall. Cat. adds 1 from St. Helena, and 1 from Zanzibar. Six forms have been discovered in S. Africa (*Harvey*); and 82 in the E. Indies, viz. 53 of *Grewia*; 12 of *Triumfetta*; 8 of *Corchorus*; 3 of *Columbia*; 1 of *Diphlophractum*; 1 of *Neesia*; 1 of *Porpa*; 1 of *Espera*; (*Spreng.*) 1 of *Berrya*; and 1 of *Brownlowia*. With the exception of a few Nepalese species, the order is in India confined to the tropics.

General properties mucilaginous and emollient; special ones noticed under the different species.

CORCHORUS, L. (DC. pr. 1, p. 504;—*W. and A. pr.* 1, p. 72.)

1. *fascicularis*, Lam. (DC. pr. 1, p. 505;—*W. and A. l. c.*;—*Roxb. fl. ind.* 2, p. 582.) खट्वलि पाटे *Jungle-pat.* दिम नाजिता *Bil-nalita*. © Peninsula of India, Bengal, (Serampore,) extending up to the arid region on the western banks of the Jumna. Fl. small, yellow, R. and C. S.; fr. C. S.

2. *trilocularis*, L. (DC. pr. 1, p. 504;—*W. and A. pr.* 1, p. 72;—*Roxb. fl. ind.* 2, p. 582;—*J. Grak. Cat. B. pl.* p. 20.) © Peninsula of India, Prome, Bengal, (Serampore.) Fl. small, yellow, Aug. and Sept.; fr. Oct. and Nov.

3. *olitorius*, L. (DC. pr. 1, p. 504;—*W. and A. pr.* 1, p. 73;—*Roxb. fl. ind.* 2, p. 581;—*J. Grak. Cat. B. pl.* p. 20;—*B. M.* 55, t. 2810. *C. decemangularis*, *Roxb. o. c.* p. 582.) पाटे *Pat.* © Both Peninsulas of India, Bengal, (Serampore.) Fl. small yellow, R. S.; fr. Oct. and Nov. used in India, and in Egypt, as a pot-herb. Cultivated in Bengal for the fibres of its bark, which, like those of *C. capsularis*, L., are employed in making a coarse kind of cloth (*gunny*, or rice bags,) cordage for agricultural purposes and boats, and Bengalee paper.



4. *acutangulus*, Lam. (DC. *pr.* 1, p. 505;—*W. and A. pr.* 1, p. 73;—*J. Grah. Cat. B. pl.* p. 20.—*C. fuscus*, *Roxb. fl. ind.* 2, p. 582.—*C. æstuans*, *Gürt. fr.* 2, t. 64.) তিত পাটে *Tita-pat*. © Both Peninsulas of India, Bengal, (Serampore,) extending up to Saharunpore. Fl. small, yellow, R. S.; fr. C. S.
5. *capsularis*, L. (DC. *pr.* 1, p. 505;—*W. and A. pr.* 1, p. 73;—*Roxb. fl. ind.* 2, p. 581;—*Wight icon.* 1, t. 311.—*Rumph.* 5, t. 78, f. 1.) ঘি নাভিতা পাটে *Ghi-nalita-pat*. © China, Moluccas, both Peninsulas of India, Bengal, (Serampore,) extending up to Saharunpore. Fl. small, yellow, R. S.; fr. Sept. and Oct. Cultivated in China and Bengal, for the same purposes as No. 3.
- TRIUMFETTA, L. (DC. *pr.* 1, p. 506;—*W. and A. pr.* 1, p. 73.)
1. *angulata*, Lam. (DC. *o. c.* p. 507;—*W. and A. o. c.* p. 74;—*J. Grah. Cat. B. pl.* p. 21.—*Wight icon.* 2, t. 320.—*T. Bartramia*, L., partly;—*Roxb. fl. ind.* 2, p. 463.) বন ওকড়া *Bun-okra*. © Peninsula of India, Bengal, (Serampore,) Saharunpore. Fl. small, yellow, R. and C. S.; fr. C. S.
2. *rotundifolia*, Lam. (DC. *pr.* 1, p. 506;—*W. and A. pr.* 1, p. 75.—*T. orbiculata*, *Roxb. H. B.* p. 36.—*T. sub-orbiculata*, DC. *l. c.*) ২. *Circars*, Bengal. Fl. small, yellow, Sept. and Oct.; fr. C. S.
3. *annua*, L. (DC. *pr.* 1, p. 507;—*Roxb. H. B.* p. 36;—*B. M.* 49, t. 2296.) © Bengal. Fl. small, yellow, Jan. and Febr.; fr. May.
4. *trilocularis*, *Roxb. (fl. ind.* 2, p. 462;—DC. *pr.* 1, p. 508.) ৩ Bengal, (Serampore,) Senegambia. Fl. small, yellow, Oct. and Nov.; fr. Jan. and Feb.
- GREWIA, L. (DC. *pr.* 1, p. 508;—*W. and A. pr.* 1, p. 75.)
1. *orientalis*, L. (DC. *pr.* 1, p. 510, excl. syn. Rheed;—*W. and A. pr.* 1, p. 76;—*Roxb. fl. ind.* 2, p. 586? excl. syn. Rheed.) ১ Peninsula of India, Bengal. Fl. small, white, H. S.; fr. C. S.
2. *lævigata*, Vahl. (DC. *pr.* 1, p. 510;—*W. and A. pr.* 1, p. 77.—*G. didyma*, *Roxb. fl. ind.* 2, p. 591.) ৫ Both Peninsulas of India, Bengal, (Serampore,) Hindoosthan, Kheree Pass, Deyra-Dhoon. Fl. smallish, white, Sept. and Oct.; fr. C. S. Leaves in the Upper Provinces used as fodder for cattle (*Royle*.)
3. *columnaris*, Sm. (DC. *pr.* 1, p. 510;—*W. and A. pr.* 1, p. 76;—*Wight icon.* 1, t. 44.) ১ Peninsula of India, Khassya Mountains. Fl. middle-sized, whitish, R. S.; fr. C. S.
4. *trichodes*, (G. *pilosa*, *Roxb. fl. ind.* 2, p. 588; not Lam.) ১ Bengal, (Serampore.) Fl. small, white, becoming yellow, Sept. and Oct.; fr. C. S.
5. *polygama*, *Roxb. (fl. ind.* 2, p. 588.) ১ Bengal, (Serampore.) Fl. small, white, Aug. and Sept.; fr. C. S.
6. *pilosa*, Lam., (DC. *pr.* 1, p. 510;—*W. and A. pr.* 1, p. 78; not *Roxb.*—*G. carpinifolia*, *Roxb. fl. ind.* 2, p. 587; not Juss.—*G. commutata*, DC. *o. c.* p. 511.—*G. flavescens*, Juss.; DC. *o. c.* p. 510.)



- ♂ Peninsula of India, Tavoy. Fl. small, whitish. In H. C. G. fl. and fr. C. S.
7. *abutilifolia*, Juss. (DC. pr. 1, p. 511;—*W. and A. pr. 1, p. 79*.—*G. aspera*, Roxb. fl. ind. 2, p. 591.) ♂ Peninsula of India. Fl. middle-sized, greenish white, and fr. throughout the year.
8. *viminea*, Wall. Cat. ♂ Prome. Fl. smallish, white, R. S.; fr. 0.
9. *oppositifolia*, Buch. (Roxb. fl. ind. 2, p. 583;—*Wight icon. 1, t. 82*.) ♂ Kheree-Pass, Deyra Dhoon. Fl. largish, yellowish, R. and C. S.; fr. C. S. The inner bark of this tree used by the Natives for making coarse-cloth and agricultural cordage. (Royle.)
10. *sclerophylla*, Roxb. (H. B. p. 42;—*Wight icon. 1, t. 89*.—*G. scabrophylla*, Roxb. fl. ind. 2, p. 584.) ♂ Hindcoosthan, extending to the Kheree Pass and Deyra Dhoon. Fl. largish, white, April and May; fr. Oct. and Nov. Berries acid, used by the Natives for making sherbet. (Royle.)
11. *occidentalis*, L. (DC. pr. 1, p. 511;—*B. M. 12, t. 422*.) ♂ C. G. H. Fl. middle-sized, rose-coloured. Introduced in 1840. Has not fl.
12. *sepiaria*, Roxb. (H. B. p. 42; fl. ind. 2, p. 589.—*G. serrulata*, DC. pr. 1, p. 510.) पाने-साड़ा *Panee-sara*. ♂ Bengal, (Serampore.) Fl. middle-sized, white, R. S.; fr. C. S. Often employed with *Trophis aspera*, Retz. for making hedges.
13. *umbellata*, Roxb. (fl. ind. 2, p. 591;—*Wight icon. 1, t. 83*.) ♂ Sumatra, Penang. Fl. largish, whitish, April and May; fr. 0.
14. *paniculata*, Roxb. (fl. ind. 2, p. 591; not *Microcos tomentosa*, Sm. according to G. Don.) ♂ Penang, Malacca. Fl. smallish, greenish-yellow, Aug. and Sept.; fr. 0.
15. *asiatica*, L. (DC. pr. 1, p. 511;—*W. and A. pr. 1, p. 79*;—*Roxb. fl. ind. 2, p. 586*;—*J. Gralh. Cat. B. pl. p. 21*.) फुलसा *Phulsa*. ♂ Peninsula of India, Bengal, (Serampore.) Fl. middle-sized, yellowish-orange, C. S.; fr. H. S. Berries acid, palatable, and as well as those of the next species, used for making sherbet.
16. *sapida*, Roxb. (fl. ind. 2, p. 590.) ♂ Bengal, extending from Chit-tagong up to the jungles and forests at the foot of the Himalaya. In H. C. G. fl. March; fr. May and June.
17. *ulmifolia*, Roxb. (fl. ind. 2, p. 591);—*Wight icon. 1, t. 84*.—*G. Microcos*, *W. and A. pr. 1, p. 81*; not L.;—*J. Gralh. Cat. B. pl. p. 21*.) ♂ China, Assam.—In H. C. G. fl. H. and R. S.; fr. C. S.
18. *humilis*, Wall. Cat. (*G. Don's Mill. dict. 1, p. 549*.) ♂ Banks of the Irawaddi.—Fl. R. S.; fr. C. S.
19. *microstemma*, Wall. Cat. ♂ Banks of the Irawaddi. Fl. R. S.
20. *denticulata*, Wall. MSS. ♂ Nepal. Fl. R. S.
21. *floribunda*, Wall. MSS. ♂ Burma. Fl. R. S.
- BERRY, Roxb. (DC. pr. 1, p. 517; *W. and A. pr. 1, p. 81*.)
1. *Ammonilla*, Roxb. (DC. l. c. p. 518;—*W. and A. l. c.*;—*Wight ill. 1, t. 33*;—*Roxb. Corom. 3, t. 264*;—fl. ind. 2, p. 639.) Trincomalee



wood-tree. L. 5 Ceylon. Fl. small, white, with gold-coloured anthers, May; fr. Aug.—Wood esteemed for its lightness and strength, and employed in the construction of the Massoola boats of Madras. (Wight.)

BROWNLOWIA, Roxb. (Corom. 3, t. 265;—B. Reg. 17, t. 1472.—Humea, Roxb. fl. ind. 2, p. 640.)

1. *elata*, Roxb. (Corom. pl. l. c.;—B. Reg. l. c.;—Wall. pl. as. rar. 3, p. 45.—Humea *elata*, Roxb. fl. ind. l. c.) L. 5 Chittagong. Fl. middle-sized, yellowish-white, April and May; fr. Sept. and Oct.

* *Sparmannia africana*, L. fil.; B. M. 15, t. 516. 5 C. G. H.—*Helio-
carpus americanus*, L. 5 Vera Cruze.—*Honckenia ficifolia*, Willd. 5
Guinea.—*Triumfetta havanensis*, H. B. and Kth. 5 Cuba.—*T. semitri-
loba*, L. 5 W. Indies.—*T. mollissima*, H. B. Kth. 5 St. Fe de Bogota.
—*T. rhomboidea*, Jacq. 5 W. Indies.—*T. althaeoides*, Lam. 5 Cayenne.
—*Grewia villosa*, Hb. Miss. 5 Trichinopoly.—*G. tiliaefolia*, Vahl. 5
Neelgherry.—*G. populifolia*, Vahl. 5 Peninsula of India.—*G. elastica*,
Royle, ill. 1, t. 22. 5 Himalaya.—*G. Microcos*, L.; Wight, ill. 1,
t. 33. 5 Peninsula of India.—*Columbia serratifolia*, DC. 5 Philippine
Islands.—*Muntingia Calabura*, L. 5 W. Indies.—*Apeiba Petoumo*,
Aubl. 5 Guiana.—*Sloanea Massoni*, Swz. 5 W. Indies.—*Luheia
speciosa*, Willd. Brazil.—*L. grandiflora*, Mart. Brazil.—*L. candicans*,
Mart. Brazil.

ORDER LXXIV.—LYTHRACEÆ,—Lindl. Nat. Syst. p. 100.

THE LOOSESTRIFE TRIBE.

Herbs, undershrubs, seldomer shrubs or trees, referred to 27 genera. Of species, DC. (1828) enumerates about 105 for S. America, Mexico and the W. Indies; 10 for Europe; 7 for N. America; 4 for N. Africa; 4 for Senegal; 1 for Iberia; 1 for Caucasus; 1 for Timor; 1 for Mauritius; 1 for China; and 1 for New Holland. In South Africa have been found 3 species, (Harvey); and in the E. Indies 32: 3 of *Rotala*; 1 of *Symmetria*; 2 of *Cryptotheca*; 4 of *Ameletia*; 7 of *Ammannia*; 1 of *Lythrum*; (Cashmere); 1 of *Fatima*; (*Lagerströmia parviflora*?) (Royle); 1 of *Pemphis*; 1 of *Nesaea*, (Wight); 1 of *Lawsonia*; 1-2 of *Grislea*; 8 of *Lagerströmia*; and 1 of *Duabanga*. Five of these have also been found in other parts of the world. Most of them are tropical, only 4 extending to the foot of the Himalayas, in the Deyra Dhoon.—Properties unimportant.

ROTALA, L. (Wight, ill. 1, p. 205-6.)

1. *Roxburghiana*, Wight. (ill. 1, p. 206; icon. 1 t. 260. A.—*Ammannia pentandra*, Roxb. fl. ind. 1, p. 427; ed. Carey, 1, p. 448;—DC. pr. 3, p. 79;—W. and A. pr. 1, p. 305.) © Peninsula of India, Bengal, (Serampore,) Nepal. Fl. minute, red; and fr. R. S.

AMELETIA, DC. (*Wight. ill.* 1, p. 205-6.)

1. *indica*, DC. (*pr.* 3, p. 76;—*W. and A. pr.* 1, p. 303;—*Wight. ill.* 1, p. 206; *icon.* 1, t. 257, *A.*—*Ammannia nana*, *Roxb. ? fl. ind.* 1, p. 427; *ed. Carey*, 1, p. 448.) ⊙ Peninsula of India, Bengal, (Serampore.) Fl. minute; and fr. R. S.
2. *rotundifolia*, *Wight (ill.* 1, p. 206;—*icon.* 1, t. 258.—*Ammannia rotundifolia*, *Buch.*;—*Roxb. fl. ind.* 1, p. 425; *ed. Carey*, 1, p. 446;—*DC. pr.* 3, p. 79;—*W. and A. pr.* 1, 306.) ⊙ Neelgherries, Khassya Mountains, Deyra-Dhoon. ⊙ Fl. small, red; and fr. R. S.

AMMANNIA, L. (*DC. pr.* 3, p. 77;—*Wight. ill.* p. 205-6.)

1. *vesicatoria*, *Roxb. (fl. ind.* 1, p. 426; *ed. Carey*, 1, p. 447;—*DC. pr.* 3, p. 78;—*W. and A. pr.* 1, p. 305;—*J. Grah. Cat. B. pl.* p. 67.) दादमारी *Dad-Mari*. ⊙ Both Peninsulas of India, Bengal, (Serampore.) Saharunpore. Fl. minute, red; and fr. R. S. The whole plant has a strong muriatic, not disagreeable smell. Its leaves, being extremely acrid, are used by the native practitioners of India to raise blisters in rheumatism, &c. Bruised and applied to the part intended to be blistered, they perform their office in half-an-hour, and most effectually. (*Ainslie*.)
2. *indica*, *Lam. (DC. pr.* 3, p. 77;—*W. and A. pr.* 1, p. 305.) ⊙ Both Peninsulas of India, Bengal, (Serampore.) ⊙ Fl. minute, reddish, and fr. R. S.
3. *multiflora*, *Roxb. (fl. ind.* 1, p. 426; *ed. Carey*, 1, p. 447;—*DC. pr.* 3, p. 79;—*W. and A. pr.* 1, p. 305.) ⊙ Peninsula of India, Bengal, (Serampore.) Fl. minute, red; and fr. R. S.

NESSEA, Commers. (*DC. pr.* 3, p. 90;—*Wight. ill.* p. 205-6.)

1. *triflora*, *H. B. and Kth. (DC. l. c.*;—*W. and A. pr.* 1, p. 307;—*Wight. icon.* 1, t. 259. *Lythrum triflorum*, *L. fl.*) ५. Mauritius. Fl. small, blue; and fr. nearly the whole year.
2. *octandra*, *Wight. (ill.* 1 p. 205-6.—*Ammannia octandra*, *L.*;—*DC. pr.* 3, p. 80;—*Roxb. Corom.* 2, t. 133;—*fl. ind.* p. 425;—*ed. Carey*, 1, p. 446;—*W. and A. pr.* 1, p. 304;—*J. Grah. Cat. B. pl.* p. 67.) ⊙ Peninsula of India, Saharunpore. Fl. small, bright red; and fr. R. S.
3. *myrtifolia*, *Lindl. (Heimia myrtifolia*, *Lk.*) ५. Brazil. Fl. smallish, yellow, R. and C. S.; fr. C. S.

LYTHRUM, L. (*DC. pr.* 3, p. 80.)

1. *Salicaria*, *L. (DC. o. c. p.* 82;—*E. B.* 15, t. 1061.) Purple Loosestrife. ५. Europe. W. Asia. N. Holland. Fl. middle-sized, pale purple, R. S. It is the only species of the order yet described from N. Holland, if we except *Rotala? decussata*, DC.
2. *virgatum*, *L. (DC. pr.* 3, p. 83;—*B. M.* 25, t. 1003.) ५. Siberia, Russia, Tauria, Austria, Germany, Belgium. Fl. middle-sized, reddish-purple, R. S.

CUPHEA, Jacq.

1. *ligustrina*, *Schlecht. and Cham.* ५. S. America. C. S. 1840.



GINORIA, Jacq.

1. *americana*, Jacq. (*amer. p.* 148, *t.* 91. *DC.* 3, *p.* 91.) 5 Cuba, C. S. 1840.

LAWSONIA, L. (*DC. pr.* 3, *p.* 90;—*W. and A. pr.* 1, *p.* 307.)

1. *alba*, Lam. (*DC. o. c. p.* 91;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p.* 67;—*Wight. ill.* 1, *t.* 94.—*L. spinosa*, L.—*L. inermis*, L.;—*Roxb. fl. ind.* 2, *p.* 258;—*Alcanna*, *Gärtn. fr.* 2, *t.* 110;—*Rheed.* 1, *t.* 40;—*Rumph.* 4, *t.* 17.) **মেখি Mendi.** 5 Moluccas, Peninsula of India, Bengal, (Serampore,) Hindoosthan, &c. Exists in a cultivated state in N. Africa and most parts of the Oriental region. Fl. small, pale greenish, fragrant; and fr. the whole year. This is the *Henna-plant* of Egypt. The fresh leaves, beaten up with Catechu, dye the nails and skin of a reddish orange colour, which is much admired by the women of India and Egypt. The fresh made paste is laid on at bed-time, and removed in the morning, when the colour remains till the nails or epidermis are renewed or removed. (*Roxb.*) The leaves are also used for dyeing skins and maroquins reddish yellow, and for many other purposes. They contain no tannin. (*Edinb. Phil. Journ.* 12, *p.* 416.)

GRISLEA, Löffl. (*DC. pr.* 3, *p.* 92;—*W. and A. pr.* 1, *p.* 307.)

1. *tomentosa*, Roxb. (*Corom.* 1, *t.* 31;—*fl. ind.* 2, *p.* 233;—*DC. l. c.*;—*W. and A. o. c. p.* 308;—*J. Grah. Cat. B. pl. p.* 67;—*B. Reg.* 1, *t.* 40;—*B. M.* 44, *t.* 1906.—*Woodfordia floribunda*, *Salish. par. lond.* *t.* 42.—*Lythrum fruticosum*, L.—*L.?* *Hunteri*, *DC. pr.* 3, *p.* 83.) **ধব Dhub. ধাইফুল Dhawe phool.** 5 Peninsula of India, Bengal, (Serampore,) Oude, Deyra Dhoon, Timor, Java, China. Fl. middle-sized, scarlet, with rose-coloured petals, Feb. and March; fr. R. S. Fl. employed in India, mixed with Morinda, to dye red. (*As. Res.* 4, *p.* 42.)

LAGERSTRÖMIA, L. (*DC. pr.* 3, *p.* 93;—*W. and A. pr.* 1, *p.* 308.)

1. *indica*, L. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. fl. ind.* 2, *p.* 505;—*Wight. ill.* 1, *t.* 95;—*J. Grah. Cat. B. pl. p.* 67;—*B. M.* 12, *t.* 405.—*Velaga globosa*, *Gärtn. fr.* 2, *t.* 133.—*Rumph. auct. t.* 28.) **তেলাঙ্গাচীনা Telanga-cheena.** 5 China. Fl. largish, R. S.; fr. generally O.
α. *rosea*;—Fl. very deep rose-coloured.
β. *lilacina*;—Fl. purplish-lilac.
γ. *alba*;—Fl. white.
2. *parviflora*, Roxb. (*Corom.* 1, *t.* 66;—*fl. ind.* 2, *p.* 505;—*DC. pr.* 3, *p.* 93;—*Wight. icon.* *t.* 69, not *W. and A.*;—*J. Grah. Cat. B. pl. p.* 67, excl. *L. microcarpa*, *Wight.*) 5 Peninsula of India, Deyra Dhoon. Fl. small, white, fragrant, H. S; fr. Aug. and Sept.
3. *Reginae*, Roxb. (*Corom.* 1, *t.* 65;—*fl. ind.* 2, *p.* 505;—*DC. pr.* 3, *p.* 93;—*W. and A. pr.* 1, *p.* 308;—*Wight icon.* 2, *t.* 413;—*J. Grah. Cat. B. pl. p.* 67.—*L. flos reginae*, *Retz.*—*Adameba glabra*, *Lam*;—*Rheed.* 4, *t.* 20, 21.) **জারুল Jarool.** L. 5 Circars, Courtallum, Valley

of the Nagotnah river, near its source, Taong Dong, Tavoy, Amherst, Moulmein, Assam, Deyra-Dhoon, China. Fl. large, pale rose-coloured in the morning, at sunset purplish, H. S.; fr. Aug. and Sept.—At Rangoon its timber is used to make knees for ships. (Roxb.)

4. *macrocarpa*, Wall. Burma.

5. *elegans*, Wall. ♂ Fl. larger than No. 1, and of the same colour. R. S.

? DUABANGA, Buch. (Lindl. Nat. Syst. p. 101.)

1. *sonneratioides*, Buch. (*Lagerströmia grandiflora*, Roxb. fl. ind. 2, p. 503;—DC. pr. 3, p. 93.) L. ♂ Chittagong, Assam, Martaban, Nepal. Fl. large, whitish, unpleasantly smelling, Feb. and March; fr. July and Aug.

* *Symmetria obovata*, Bl. ♂ Java.—*Cryptotheca dichotoma*, Bl. ♂ Java.—*C. apetala*, Bl. ♂ Java.—*Lythrum Hyssopifolia*, L.; E. B. 5, t. 292. ♂ Europe, America.—*L. alatum*, Pursh; B. M. 43, t. 1812. ♀ Georgia, Mexico.—*L. lanceolatum*, Ell. ♀ Carolina.—*L. album*, H. B. and Kth. ♂ Mexico.—*Cuphea circæoides*, Sm. B. M. 48, 2201. ♂ S. America.—*C. Melvillea*, Lindl. B. Reg. 10, t. 852. ♀? Guiana.—*C. procumbens*, Cav. B. Reg. 3, t. 182. ♂ Mexico.—*C. micropetala*, H. B. and Kth. ♂ Mexico.—*C. Parsonsia*, R. Br. ♀, Jamaica.—*C. Melanum*, R. Br. ♀, Jamaica.—*C. parviflora*, Hook; exot. bot. t. 151. ♂ Demerara.—*Acisanthera quadrata*, Juss. ♀, Meadows of Jamaica.—*Pemphis acidula*, Forst.; Rumph. 3, t. 84. ♂ Both Peninsulas of India, Moluccas.—*Diplusodon buxifolius*, DC. ♂ Equinoctial Brazil.—*D. amoenum*, DC. ♂ Equinoctial Brazil.—*Nesaea salicifolia*, H. B. Kth. ♂ N. Spain.—*N. syphilitica*, Lindl. ♂ Mexico. *N. linariaefolia* Lindl. ♂ S. America.—*Creneia maritima*, Aubl. ♀, Cayenne.—*Antherylum Rokrii*, Vahl. ♂ St. Thomas.—*Dodecas surinamensis*, L. fil. ♂ Surinam.—*Adenaria griseoides*, H. B. Kth. ♂ Banks of Magdalena river.—*Lagerströmia speciosa*, Pers. China.—*L. floribunda*, Jack, Penang.—*L. microcarpa*, Wight. icon. 1, t. 109. Courtallum.

ORDER LXXV.—MELIACEÆ, Juss.—Lindl. Nat. Syst. p. 101.

THE BEAD-TREE TRIBE.

Trees or shrubs, by Lindl. referred to 35 genera, (adding *Munronia* and *Monocyclus*, and deducting *Aitonia*, which Harvey places among *Zygophyllaceæ*.) Of their species, DC. pr. and Spreng. syst. enumerate 22 for S. America, Mexico and the W. Indies; 1 for tropical Africa; 5 for Madagascar; 5 for Mauritius; 1 for Arabia; 1 for China; and 3 for New Holland and the South Sea Islands. To these Lindl. adds an *Hartighsea* for N. Zealand. S. Africa exhibits 3 species, (*Harvey*); and the E. Indies



72; viz., 5 of *Turrea*; 1 of *Naregamia*; 4 of *Munronia*; 4-5 of *Melia*; 1 of *Azadirachta*; 2 of *Mallea*; 1 of *Cipadessa*; 5 of *Amoora*; 3 of *Milnea*; 4 of *Walsura*; 1 of *Monocyclis*; 2 of *Spherosacme*; 10 of *Dysoxylum*; 1 of *Chisocheton*; 2 of *Hartighsea*; 6 of *Epicharis*; 1 of *Didymocheton*; 1 of *Gonocheton*; 1 of *Sandoricum*; 1 of *Lansium*; 5 of *Hegnia*; 2 of *Xylocarpus*; 1 of *Calpandria*; and 7 of *Aglaia*. Twenty-four of these inhabit Java; 4 the Moluccas; 4 Assam; 4 the Khassya Mountains; 4 Nepal; and the rest the two Peninsulas of India, Ceylon, Sumatra, and Bengal.

"Bitter, astringent, and tonic qualities belong to the species of this order, but often developed in so considerable a degree as to render their employment dangerous, without much precaution." (*Lindl.*) The latter is however, not the case with our Indian Meliaceæ, unless f. ex. the Neembark and fruit are taken in an immoderate dose.

QUIVISTIA, Juss. (*DC. pr. 1, p. 620.*)

1. *heterophylla*, Cav. (*Diss. 7, p. 368. t. 213;—DC. o. c. p. 621.*) 5 Mauritius. Fl. small, whitish, April; fr. 0

MUNRONIA, Wight. (*ill. 1, p. 147.*)

1. *Wallichii*, Wight. (*l. c.;—Horsf. pl. as. rar. 2, p. 176. t. 138.—Turreea pinnata, Wall. pl. as. rar. 2, t. 119;—B. Reg. 17, t. 1413.*) 5 Khassya Mountains. Fl. largish, rose-coloured. In H. C. G. Fl.?

MELIA, L. (*DC. pr 1, p. 621;—W. and A. pr. 1, p. 117.*)

1. *composita*, Roxb. (not DC.;—*W. and A. l. c.;—J. Grah. Cat. B. pl. p. 30.—M. superba, Roxb. fl. ind. 2, p. 396.*) L. 5 Mysore. Hilly parts of the Concan, Parr Ghaut. Fl. small, greenish-white, honey-scented, March and April; fr. Dec. and Jan. Fruit of this larger, and not so rounded as that of No. 2.
2. *robusta*, Roxb. (*fl. ind. 2, p. 397;—W. and A. l. c.; not Willd.*) 5 Mysore, Concan.
3. *Azedarach*, L. (*DC. pr. 1, p. 621;—Roxb. fl. ind. 2, p. 395;—W. and A. pr. 1, p. 117;—J. Grah. Cat. B. pl. p. 30;—B. M. 27, t. 1066;—Wight. icon. 1, t. 160.*) Common Bead-tree. Persian Lilac. L. 5 Syria, China, N. India. Common about villages both in the Concan and Deccan. Fl. smallish, white, externally lilac at the top, fragrant, March; fr. Nov. and Dec.—Cultivated in Provence and in our gardens.—Root bitter, nauseous, used in N. America as anthelmintic. (*A. Richard.*)
4. *Bukayun*, Royle. (*ill. p. 141.—Melia sempervirens, Roxb. fl. ind. 2, p. 395;—W. and A. pr. 1, p. 117; Swz.?*) बाकायून *Bukaryun*. Hind, *Bukayun*. 5 Persia, Nepal, Kemaon. Cultivated in our gardens. Fl. smallish, lilac, fragrant; and fr. the whole year.

AZADIRACHTA, Ad. Juss. (*W. and A. pr. 1, p. 117.*)

1. *indica*, Ad. Juss. (*W. and A. o. c. p. 118;—J. Grah. Cat. B. pl. p. 30;—Wight. icon. 1, t. 17.—Melia Azadirachta, L.;—DC. pr. 1, p. 622;—Roxb. fl. ind. 2, p. 394;—Burm. zeyl. t. 15;—Rheed 4, t. 52.*) निम *Nim*. 5 Ceylon, Peninsula of India, Ava, Bengal, (Serampore.)

Hindoosthan, Assam. Fl. small, white, honey-scented, Feb. and March; fr. May and June. *Bark* used as a good substitute for Peruvian bark. *Leaves*, especially mixed with equal parts of those of *Vitex Negundo*, L. are used successfully in various ways. The mixed, dried leaves, added to common poultices, act powerfully in preventing glandular tumors from coming to maturity. The same discutient effect is produced, after the application of leeches, in all kinds of bruises and sprains, by a watery or vinous infusion of them, particularly when spirit of camphor is now and then sprinkled over the cloth, steeped in the infusion. We have seen the greatest benefit from this application, in the worst cases of compound fracture. A *succulus aromaticus* of these leaves, with a few grains of powdered camphor, seldom fail to afford relief in rheumatic affections of the ears, eyes, and teeth. From the *fruit* a bitter oil is expressed, which is used against worms, and that, according to Dr. Buchanan, in doses of one ounce. This, Achil. Richard observes, is another instance, after the Olive, of the pericarp (pulp) yielding that substance which is usually obtained from the seed. The *seeds* after being skinned are used for killing insects, and the kernels, powdered and mixed with water, for washing the hair. *Timber* hard, durable, fit for ship-building—"Leaves beaten into a pulp, and thus externally applied, act like a charm in removing the most intractable forms of psora, and other pustular eruptions." (*Wight*.)

MALLEA, Ad. Juss. (*W. and A. pr.* 1, p. 118.)

1. *Rothii*, (*W. and A. l. c.*;—*J. Grak. Cat. B. pl.* p. 31.—*Melia baccifera*, *Roth.*;—*DC. pr.* 1, p. 622.—*Ekebergia indica*, *Roxb. fl. ind.* 2, p. 392.) 5 Circars, Katruj Ghaut, near Poona. Fl. small, white; and fr. the whole year.
2. *integerrima*, Wall. MSS. (*Ekebergia*? *integerrima*, Wall. *Cat.*) 5 Taong Dong. Fl. small, yellowish-green, March; fr. 0.

AMOORA, Roxb. (*W. and A. pr.* 1, p. 119.)

1. *Rohituka*, *W. and A. (l. c.*—*Andersonia Rohituka*, *Roxb. fl. ind.* 2, p. 213.) তিক্তরাজ *Tikta-raj*. 5 Travancore, Moulmein, Chappedong, Bengal, (Serampore.) Fl. small, white, July and Aug.; fr. H. S.—From the *seeds* the natives, where the trees grow plentifully, extract an oil, which they use for many economical purposes. (*Roxb.*)
2. *cucullata*, Roxb. (*Corom.* 3, t. 258.—*Andersonia cucullata*, *Roxb. fl. ind.* 2, p. 212.) আমুরা *Amoora*. L. 5 Soonderbuns. Fl. small, yellow. Has not fl. here.
3. *polystachya*, *W. and A. (pr.* 1, p. 119, *annot.*—*Aglaia*? *polystachya*, Wall.;—*Roxb. fl. ind.*; *ed. Carey*, 2, p. 429.) L. 5 Khassya Mountains. Fl. pale yellowish, fragrant, R. S.; fr. 0.

MILNEA, Roxb. (*W. and A. pr.* 1, p. 118.)

1. *edulis*, Roxb. (*fl. ind.* 1, p. 637;—*ed. Carey*, 2, p. 430.) 5 Silhet.



Fl. minute.—In H. C. G. fl. June and July; fr. Sept. and Oct. (Roxb.) Fruit watery, cooling.

WALSURA, Roxb. (*W. and A. pr. 1, p. 120.*)

1. *piscidia*, Roxb. (*fl. ind. 2, p. 387*;—*W. and A. l. c.*;—*Wight ill. 1, t. 55.*) 5 Circars. Fl. small, yellowish, C. S.—Bark thrown into ponds to kill fish, which coming to the surface, are easily taken and are not considered injurious to be eaten. (Roxb.)

MONOCYCLIS, Wall. (*Rept. sine caractere*!)

1. *robusta*, Wall. (*Walsura robusta*, Roxb. *fl. ind. 2, p. 386.*) L. 5 Silhet. Fl. smallish, white. In H. C. G. fl. March and April; fr. June and July. (Roxb.)

SPRÆROSACME, Wall. (*Cat. sine caractere*! *Lindl. Nat. Syst. p. 103.*)

1. *fragrans*, Wall. (*icon. in ed. t. 853*; according to Royle.—*Aglaia*? *decandra*, Wall.;—Roxb. *fl. ind.*; *ed. Carey, 2, p. 427.*) L. 5 Nepal. Fl. very small, yellowish, fragrant. Has been introduced into H. C. G.? Fl.?

DYSOXYLUM, Bl. (*Lindl. Nat. Syst. p. 103.*)

1. *multijugum*, Arn. (*Wight. icon. 1, t. 146.*—*Guarea paniculata*, Roxb. *fl. ind. 2, p. 242.*) L. 5 Assam. Fl. largish, pale yellow. In H. C. G. fl. May and June; fr. April and May. (Roxb.)

EPICHAERIS, Bl. (*Lindl. Nat. Syst. p. 103.*)

1. *exarillata*, Arn. (*W. and A. pr. 1, p. 120*, annot.—*Guarea binetariifera*, Roxb. *fl. ind. 2, p. 240.*) L. 5 Chittagong, Tippera. Fl. smallish, pale yellowish, May; fr. Feb. and March.
2. *mollis*, Wall. 5 Regions bordering on Silhet. Introduced in 1835. Has not fl. here.

SANDORICUM, Cav. (*DC. pr. 1, p. 621*;—*W. and A. pr. 1, p. 119.*)

1. *indicum*, Cav. (*DC. l. c.*;—Roxb. *fl. ind. 2, p. 392*;—*W. and A. pr. 1, p. 120.*—*Trichilia nervosa*, Vahl.;—*DC. pr. 1, p. 623*;—*Rumph. 1, t. 64.*) 5 Philippine Islands, Moluccas, Mysore, Penang. Fl. small, yellow, Feb. and March; fr. Sept. and Oct.—Fruit eatable, watery, cooling.

LANSIUM, Rumph. (*Correa de Serra in Ann. mus. 10, 157 t. 7, f.*—*Jack. in Linn. trans. 14, p. 115, t. 4, f. 1*;—*Spreng. syst. 3, p. 7, No. 2384.*)

1. *domesticum*, Jack. (*Spreng. syst. 3, p. 66.*) excl. syn. cur. p. 52.—*Rumph. 1, t. 54.*) 5 Moluccas, Sunda Islands. In H. C. G. Fl.?

HEYNEA, Roxb. (*DC. pr. 1, p. 624*;—*W. and A. pr. 1, p. 120.*)

1. *trijuga*, Roxb. (*fl. ind. 2, p. 390*;—*DC. l. c.*;—*J. Grah. Cat. B. pl. p. 31*;—*B. M. 42, t. 1738.*) 5 Nepal. Fl. small, whitish, somewhat sweet-scented, March; fr. Oct.—Bark, leaves and tender parts bitter and tonic.
2. *quinquejuga*, Roxb. (*fl. ind. 2, p. 391.*) 5 Moluccas, Penang. In H. C. G. Fl.?

XYLOCARPUS, Kön. (*W. and A. pr. 1, p. 121.*)

1. *Granatum*, Kön. (*W. and A. l. c.*;—*Roxb. fl. ind. 2, p. 240.*—*Carapa moluccensis*, Lam. ?—*DC. pr. 1, p. 626*;—*Rumph. 3, t. 61.*) अरूख
Puroos. 5 Sunderbuus. Fl. small, yellowish, R. S.; fr. H. S.

AGLALA, Lour. (*DC. pr. 1, p. 537.*)

1. *odorata*, Lour. (*DC. l. c.*;—*Grah. Cat. B. pl. p. 25*;—*Wight icon. 2, t. 511.*—*Camunium sinense*, *Rumph. 5, t. 18, f. 1*;—*Roxb. fl. ind. 1, p. 637*; *ed. Carey, 2, p. 425.*) 5 China, Cochinchina. Fl. small, yellow, delightfully fragrant, R. S.; fr. O.
2. *midnaporensis*, Carey MSS. (*A. grata*, *Wall. Rept.*) 5 Forests of Midnapore, from which it was sent many years ago to the late Dr. Carey.

* *Quivisia decandra*, Cav. 5 Mauritius.—*Naregamia alata*, W. and A.; *Wight icon. 1, t. 90.* 5 Country east of Panwell. (*J. Grah.*)—*Munronia pumila*, *Wight icon. 1, t. 91.* 5 Ceylon.—*M. neelgherrica*, *Wight. ill. 1, t. 54.* 5 Neelgherries, Coorg.—*Turraea virens*, L. 5 Kandalla, Parr. Ghaut.—*T. rigida*, Vent. 5 Mauritius.—*Cipadessa fruticosa*, Bl. 5 Java.—*Amoora ficiformis*, *Wight.* Shevagerry mountains, near Courtallum.—*Sphaerosacme spectabilis*, Wall. Nepal.—*Milnea Roxburghiana*, W. and A.; *Wight. icon. 1, t. 166.* 5 Peninsula of India.—*Walsura villosa*, W. and A. Moulmein.—*Dysoxylum alliaceum*, Bl. Java.—*D. macrocarpon*, Bl. Java.—*Chisocheton patens*, Bl. Java.—*C. divergens*, Bl. Java.—*Hartighsea alliaria*, Arn. Goalpara.—*H. Gobara*, W. and A.; Goalpara.—*Epicharis densiflora*, Bl. Java.—*E. sericea*, Bl. Java.—*Didymocheton nutans*, Bl. Java.—*Goniocheton arborescens*, Bl. Java.—*Heynea affinis*, Ad. Juss. Peninsula of India. *H. connaroides*, *Wight*, (*Xanthoxylon? connaroides*, W. and A.) Peninsula of India.—*Trichilia hirta*, L. 5 Jamaica.—*T. spondioides*, Swz. 5 Jamaica.—*T. havanensis*, Jacq. 5 Havannah.—*Guarea grandifolia*, DC. 5 Guiana, W. Indies.—*G. Swartzii*; DC. 5 W. Indies.—*Carapa guianensis*, Aubl. 5 Guiana.—*Calpandria lanceolata*, Bl. 5 Java.—*Agluia odoratissima*, Bl. Java.—*A. speciosa*, Bl. Java.

ORDER LXXVI.—CEDRELACEÆ, Ad. Juss. *Lindl. Nat. Syst. p. 103.*

THE TOON-TREE TRIBE.

Large trees, of 9-10 genera comprising about 16-18 species: 5 from South America, Mexico and the W. Indies; 2 from New Holland; 1 from Senegal, and 8-10 from the E. Indies. Of the latter, 1 belongs to *Soyimida*; 1 to *Chikrassia*; 1 to *Chloroxylon*; 1 to *Flindersia*; 4-5 to *Cedrela*; and 1 to *Ixonanthes*, which, perhaps does not belong to the order. Properties under the species.



SWIETENIA, L. Ad. Juss.

1. *Mahagoni*, L. (DC. pr. 1, p. 625;—Cav. diss. 7, p. 365, t. 209;—Roxb. H. B. p. 33.) *Mahagoni Tree*. L. 5 Rocky places in the hotter parts of America. Fl. very small, pale greenish-white, April; fr. 0.—*Bark* accounted febrifugal.

SOYMIDA, Ad. Juss. (W. and A. pr. 1, p. 122.)

1. *febrifuga*, Ad. Juss. (W. and A. l. c.—Swietenia febrifuga, Roxb. Corom. 1, t. 17; fl. ind. 2, p. 398;—DC. pr. 1, p. 625;—J. Grah. Cat. B. pl. p. 32.) *ରୋହିତା Rohita*. Red-Wood tree. L. 5 Central and Southern Provinces of India. In considerable abundance in various parts of Guzerat; also at the Sindwah Ghaut, and in the Adjunta and Jowar jungles. Fl. smallish, greenish-white, March and April; fr. July and Aug. The *Rohita Bark* is a useful tonic in intermittent fevers, where quinine cannot be had.

CHICKRASSIA, Ad. Juss. (W. and A. pr. 1, p. 122.)

1. *tabularis*, Ad. Juss. (W. and A. o. c. p. 123;—Wight ill. 1, t. 76.—Swietenia Chickrassa, Roxb. fl. ind. 2, p. 399;—*ଚିକ୍ରାସି Chikrasee*, L. 5 Chittagong. Cunnawady Hills, near Dindygul. Fl. middle-sized, greenish-white. In H. C. G. fl. H. S.; fr. C. S. The wood of this tree, (*Chittagong Wood*), is close-grained, light-coloured, elegantly veined, and employed by the cabinet-makers. (Roxb.)

CHLOROXYLON, DC. (pr. 1, p. 625;—W. and A. pr. 1, p. 123.)

1. *Swietenia*, DC. (l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 32.—Swietenia Chloroxylon, Roxb. Corom. 1, t. 64; fl. ind. 2, p. 400.) *Satin-Wood tree*. 5 Circars, about the falls of Gokauk, on sandstone hills, Alleh Belah Hills. Fl. small, greenish-white, March and April; fr. C. S. Wood, close-grained, yellow-coloured, like the box. One of the trees that yield wood-oil.

FLINDERSIA, R. Br. (DC. pr. 1, p. 125;—Spreng. syst. 1, p. 520. No. 889.)

1. *amboinensis*, Poir. (DC. l. c.;—Spreng. syst. 1, p. 794;—Rumph. 3, t. 129.) 5 Moluccas. In H. C. G. Fl. ?
2. *australis*, R. Br. (DC. l. c.) 5 N. Holland. In H. C. G. Fl. ?

CEDRELA, L. (DC. pr. 1, p. 624;—W. and A. pr. 1, p. 123.)

1. *Toona*, Roxb. (Corom. 3, t. 238; fl. ind. 1, p. 635;—ed. Carey, 2, p. 423;—DC. l. c.;—W. and A. o. c. p. 124;—Wight icon. 1, t. 161.—C. hexandra, Wall. in Roxb. o. c. annot.;—Rumph. 3, t. 39.) *तूना Toon*. L. 5 Peninsula of India, Bengal, (Serampore.) Foot of the Himalayas. Fl. small, whitish, honey-scented, May and June; fr. R. S. Wood forms the Mahogany of India, though it is lighter and more loose-textured than Mahogany. Bark accounted febrifugal.

- * *Khaya senegalensis*, Ad. Juss. 5 Senegal.—*Cedrela serrata*, Royle; ill. t. 25. 5 Valleys of the Himalaya.—*C. odorata*, L. 5 W. Indies.—*C. angustifolia*, Moc. and Sessé. 5 N. Spain.—*Oxleya xanthoxyla*, Cunningham. 5 N. S. Wales.

ORDER LXXVII.—HUMIRIACEÆ.—Ad. Juss. Lindl. Nat. Syst. p. 104.

"All Brazilian trees." (Lindl.)

- * *Helleria obovata*, Mart.—*Humirium crassifolium*, Mart.—*H. floribundum*, Mart. The latter, "when the trunk is wounded, yields a fragrant, liquid, yellow balsam, called *Balsam of Umiri*, resembling in properties Copaiva and Balsam of Peru." (Martius.)

ORDER LXXVIII.—CITRACEÆ.—(AURANTIACEÆ, CORR.
 Lindl. Nat. Syst. p. 105.)

THE CITRON TRIBE.

Trees or shrubs, comprehended in 18 genera. Of the species, 2 have been found in the South Sea Islands; 5 in China; 1 in Timor; 1 in Mauritius; 1 in Madagascar; 2 in Japan; 1 in Florida; 2 in S. America; and 74 in the E. Indies. Of the latter, 5 belong to *Atalantia*; 1 to *Triphasia*; 11 to *Limonia*; 11 to *Glycosmis*; 11 to *Sclerostylis*; 1 to *Bergera*; 3 to *Murraya*; 4-5 to *Cookia*; 8-9 to *Clausena*; 1-2 to *Micromelum*; 1-2 to *Paramignya*; 2 to *Luvunga*; 1 to *Polycyema*; 1 to *Feronia*; 1 to *Ægle*; 9 to *Citrus*, and 1 to *Chionotria*. Several species of the order will, however, require a thorough re-examination from authentic specimens. With the exception of *Limonia Laureola*, Wall., and *L. retusa*, D. Don, (Nepalese plants,) all the Indian species are tropical.

The wood of the species of this order is universally hard and compact. They abound in a volatile, fragrant, bitter, exciting oil. The pulp of the fruit is always more or less acid, (DC.)

A. LIMONÆ, W. and A. pr. 1, p. 90.

ATALANTIA, CORR. (DC. pr. 1, p. 535;—W. and A. pr. 1, p. 90.)

1. *monophylla*, DC. (l. c.;—W. and A. o. c. p. 91;—J. Grah. Cat. B. pl. p. 23.—*Limonia monophylla*, L.;—Roxb. Corom. 1, t. 82; fl. ind. 2, p. 378.—*Turraea virens*, Kōn; not L.—*Trichilia*? *spinosa*, Willd.;—DC. pr. 1, p. 623.—*Limonia pumila*, Burm. zeyl. t. 65, f. 1;—Rheed. 4, t. 12.) 5 Coromandel. Common on the Ghauts, at Sidney Point, Mahableshwur. Fl. small, white, Oct. and Nov.; fr. Feb.

2. ? *pubigera*, Wall. 5 Assam. Introduced in 1839, has not fl.

TRIPHASIA, LOUR. (DC. pr. 1, p. 535;—W. and A. pr. 1, p. 91.)

1. *trifoliata*, DC. (o. c. p. 536;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 23.—*T. Aurantiola*, Lour.;—Roxb. H. B. p. 25.—*Limonia trifoliata*, L.;—Burm. ind. t. 35, f. 1;—Jacq. icon. rar. 3, t. 463.—L. ? *diacantha*, DC. pr. 1, p. 536.) चीनाबारी *Cheena-narungee*. 5 China. Cultivated in gardens. Fl. middle-sized, white, fragrant; and fr. the whole year. Fruit very pleasant.



LIMONIA, L. (DC. *pr.* 1, p. 536;—*W. and A. pr.* 1, p. 91.)

1. *acidissima*, L. (DC. *l. c.*;—*W. and A. o. c. p.* 92;—*J. Grah. Cat. B. pl. p.* 23.—*L. crenulata*, *Roxb. Corom.* 1, t. 86;—*fl. ind.* 2, p. 381;—DC. *l. c.*;—*Rheed.* 4, t. 14.) 5 Coromandel. Common on sandstone hills at Padshapore, and at the Falls of Gokauk. Monghir. Hurdwar. Assam. Fl. small, white, fragrant, H. S.; fr. R. S.—*Fruit* much used as a tonic in Malabar, where it forms an article of commerce with the Arabs. (*J. Grah.*)
2. *angulata*, W. and A. (*pr.* 1, p. 91. *annot.*—*Citrus angulata*, *Willd.*—DC. *pr.* 1, p. 540;—*Rumph.* 2, t. 32.) 5 Moluccas. Soonderbuns. Fl. small, white, fragrant. Introduced in 1840. Has not fl.
3. *caudata*, Wall. Khasiya Hills. Introduced in 1839. Has not fl.
4. ? *grata*, Wall. Native place?—In H. C. G. Fl. ?
5. ? *alternans*, Wall. 5 Pegu, Oct. 1821.

GLYCOSMIS, Corr. (DC. *pr.* 1, p. 538;—*W. and A. pr.* 1, p. 92.)

1. *arborea* DC. (*l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p.* 23.—*Limonia arborea*, *Roxb. Corom.* 1, t. 85; *fl. ind.* 2, p. 381;—*B. M.* 46, t. 2074.) 5 Circars. Bombay Presidency. Ava. Fl. small, greenish-white. Has been introduced into H. C. G. ? Fl. ?
2. *pentaphylla*, DC. (*pr.* 1, p. 538;—*W. and A. pr.* 1, p. 93;—*J. Grah. Cat. B. pl. p.* 23.—*Limonia pentaphylla*, *Retz* ?—*Roxb. fl. ind.* 2, p. 381,—*Corom.* 1, t. 84.) काशशूरा *Ashshoura*. 5 Peninsula of India, Bengal, (Serampore.) Fl. small, white, fragrant; and fr. R. and C. S.
3. *tetraphylla*, Wall. 5 Khasiya Mountains. Fl. small, white, fragrant, nearly the whole year; fr. O.
4. *oxyphylla*, Wall. 5 Near to No. 4. Khasiya Mountains.

SOLEROSTYLIS, Bl. (*W. and A. pr.* 1, p. 93.)

1. *atalantioides*, W. and A. (*l. c.*—*Limonia bilocularis*, *Roxb. fl. ind.* 2, p. 377.) 5 Coromandel. Fl. small, white, nearly inodorous,—May and June; fr. July and Aug.

BERGERA, Kön. (DC. *pr.* 1, p. 537;—*W. and A. pr.* 1, p. 94.)

1. *Königii*, L. (DC. *l. c.*;—*Roxb. Corom.* 2, t. 112; *fl. ind.* 2, p. 375;—*W. and A. l. c.*;—*Wight icon.* 1, t. 13;—*J. Grah. Cat. B. pl. p.* 24;—*Trans. Linn. Soc.* 15, t. 5, f. 4;—*Rheed.* 4, t. 53.) बड़भांग *Bursunga*. Curry-leaf. 5 Coromandel, Assam, Kemaon. Fl. small, white, fragrant, C. S.; fr. H. S. Leaves very fragrant, used for seasoning curries, stomachic, and tonic. Dried they retain these qualities, and are sold in the bazars. An infusion of them considered antemetic.

B. CLAUSENEÆ, *W. and A. pr.* 1, p. 90.

MURNAYA, Kön. (DC. *pr.* 1, p. 537;—*W. and A. pr.* 1, p. 94.)

1. *exotica*, L. (DC. *l. c.*;—*W. and A. l. c.*;—*Wight icon.* 1, t. 96;—*J. Grah. Cat. B. pl. p.* 24;—*Roxb. fl. ind.* 2, p. 374, as to the sp. char. only.—*Marsana buxifolia*, *Sonner. it.* 3, t. 139.—*Chalcas japonensis*, *Lour*;—*Rumph.* 5, t. 18, f. 2.) कामिनी *Kaminee*. 5 Monghir.

- Foot of the Himalaya. Much cultivated. Fl. middle-sized, white, strongly-fragrant, H. and R. S.; fr. C. S.
2. *paniculata*, Hb. Sm. (*W. and A. pr. 1, p. 94*;—*J. Grah. Cat. B. pl. p. 24*.—*M. exotica, Roxb. fl. ind. 2, p. 374*, as to the wild plant and description. *Chalcas paniculata, L.; Lour.*) कश्मिरी *Kaminee*. 5 Circars. Table land at Mahableschwur. The Ghauts. Goalpara.—Fl. middle-sized, white, strongly fragrant, H. and R. S.; fr. C. S.
 3. *sumatrana*, Roxb. (*fl. ind. 2, p. 375*;—*W. and A. pr. 1, p. 95*.—*M. paniculata, Jack.; Mal. Misc. 1, p. 31*,—*in Hook. bot. misc. 2, p. 79*;—*Hook. exot. fl. t. 79*;—*DC. pr. 1, p. 537*; excl. syn. *Lour.*—*Rumph. 5, t. 17*.) 5 China, Cochin-China, Moluccas. Fl. largish, white, sweet-scented, May; fr. 0.
- COOKIA, Sonner. (*DC. pr. 1, p. 537*;—*W. and A. pr. 1, p. 95*.)
1. *punctata*, Retz. (*DC. l. c.*;—*W. and A. pr. l. c.*;—*Roxb. fl. ind. 2, p. 382*;—*J. Grah. Cat. B. pl. p. 24*.—*Quinaria Lansium, Lour.*;—*Rumph. 1, t. 55*.) Whong-pi. 5 China. Fl. small, white, faintly fragrant, Feb. and March; fr. R. S.—Fruit very agreeable.
- CLAUSENA, Burd. (*DC. pr. 1, p. 538*;—*W. and A. pr. 1, p. 95*.)
1. *nana*, W. and A. (*l. c. annot.*—*Amyris nana, Roxb. fl. ind. 2, p. 249*.) 5 Moluccas. Fl. minute, fragrant, whitish. In H. C. G. fl. H. S.; fr. R. S. (*Roxb.*)
 2. *suffruticosa*, W. and A. (*pr. 1, p. 95. annot.*—*Amyris suffruticosa, Roxb. fl. ind. 2, p. 250*.) 5 Chittagong. Fl. small, greenish-white, H. S.; fr. R. S.
 3. *heptaphylla*, W. and A. (*pr. 1, p. 95. annot.*;—*Amyris heptaphylla, Roxb. fl. ind. 2, p. 248*;—*Trans. Linn. Soc. 15, t. 5, f. 2*;—*J. Grah. Cat. B. pl. p. 43*.) কীর্ত্তন Karun-phul. 5 Calcutta, Serampore. Fl. small, greenish-yellow, anise-scented, H. S.; fr. R. S. The leaves when bruised, have the fragrance of fresh anise-seeds.
 4. *sumatrana*, W. and A. (*pr. 1, p. 95. annot.*—*Amyris sumatrana, Roxb. fl. ind. 2, p. 250*.) 5 Sumatra. Fl. small, greenish-white, R. S.; fr. C. S. Fresh leaves, when bruised, emit the fragrance of a lemon leaf.
 5. *punctata*, W. and A. (*pr. 1, p. 95. annot.*—*Amyris punctata, Roxb. fl. ind. 2, p. 251*.) 5 Chittagong. Fl. small, white, H. S.; fr. R. S.
- MICROMELUM, Bl. (*Wight. ill. p. 107*.)
1. *integerrimum*, W. and A. (*pr. 1, p. 94. annot.*—*Bergera integerrima, Buch.*;—*Roxb. fl. ind. 2, p. 376*;—*DC. pr. 1, p. 537*.) 5 Banks of the Megna. Fl. small, greenish-white, fragrant, C. S.; fr. R. S.
- PARAMIGNYA, Wight (*ill. 1, p. 108*.)
1. *citrifolia*, Wight. (*Limonia citrifolia, Roxb. fl. ind. 2, p. 379*.) 5 Chittagong. Fl. middle-sized, white, fragrant, H. S.; fr. 0.
- LUVUNGA, Buch. (*Wight ill. 1, p. 108*.)
1. *scandens*, Buch. (*Limonia scandens, Roxb. fl. ind. 2, p. 380*.) লুবঙ্গা *Luvunga-luta*. 5 Silhet, Chittagong. Fl. middle-sized, white, fragrant, H. S.; fr. August and Sept.



POLYCYEMA.

1. *pentaphyllum*, (*Amyris pentaphylla*, *Roxb. fl. ind.* 2, p. 247.) 5 Cawn-pore. Fl. small, whitish, fragrant, H. S.; fr. R. S.;—*Leaves*, when bruised between the fingers, very fragrant. *W. and A.* would refer it to *Cookia*, from which, as well as from *Clausenæ*, the many ovula in each cell of the ovary exclude it.

FERONIA, CORR. (*DC. pr.* 1, p. 538;—*W. and A. pr.* 1, p. 96.)

1. *Elephantum*, CORR. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. Corom.* 2, t. 141; *fl. ind.* 2, p. 411;—*Wight icon.* 1, t. 15;—*J. Grah. Cat. B. pl.* p. 24.—*Cratæva Vallanga*, *Kön. Anisifolius*, *Rumph.* 2, t. 43.) कथबेल *Kuthbel. Elephant or Wood-Apple*. L. 5 Moluccas. Coromandel. Bombay Presidency, especially at Guzerat. Bengal, (Serampore.) Assam. Fl. small, greenish-white, anise-scented, March; fr. Oct. *Wood* hard, durable. From wounds in the bark exudes a very transparent *gum*, having the properties of Gum Arabic, and said to be better suited for mixing colours than it. The young *leaves* emit a fragrance of anise, and are therefore considered stomachic and carminative. The *pulp* of the fruit affords a very pleasant jelly, so closely resembling black currant jelly, as to be only distinguished by a slight degree of astringency. (*Wight*.)

ÆGLE, CORR. (*DC. pr.* 1, p. 538;—*W. and A. pr.* 1, p. 96.)

1. *Marmelos*, CORR. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. Corom.* 2, t. 143; *fl. ind.* 2, p. 579;—*J. Grah. Cat. B. pl.* p. 24;—*Wight icon.* 1, t. 16.—*Feronia lucida*, *Roth.*;—*DC. l. c.*—*Cratæva Marmelos*, *L.*;—*Rheed* 3, t. 37.—*Rumph.* 1, t. 81.) ऐबल *Bel*. 5 Coromandel. Malabar Hill, Bombay. Elephantia, Bengal, (Serampore.) Assam. Common about the Pagodas, as the Natives have a deep reverence for this tree. Fl. middle-sized, greenish-white, fragrant, May; fr. Oct. and Nov. The *fruit* is nutritious, warm, cathartic, delicious, exquisitely fragrant. Its aperient and detersive qualities, and its efficacy in removing habitual costiveness, have been proved by constant experience. (*Roxb. in As. Res.* 2, p. 349.) The *bark of the root* is sometimes used by the Natives in compound decoctions against intermittent fevers; while the fresh expressed *juice of the leaves*, diluted, is praised in catarrhs and feverishness—the *leaves* in a poultice against ophthalmias and a *decoction of the immature dried fruit* against diarrhoea and dysentery. The *mature fruit*, mixed with tamarind juice, forms a sort of antifebrile sherbet. (*Trans. Med. and Phys. Soc. Calcutta.* 4, p. 110.) The astringent *rind of the fruit* is used in dyeing yellow, while the glutinous and tenacious matter which surrounds the seeds is considered an excellent addition to mortar, especially in well-building. (*Royle*.)

CITRUS, L. (*DC. pr.* 1, p. 539;—*W. and A. pr.* 1, p. 97.)

1. *decumana*, L. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. fl. ind.* 3, p. 393;—*J. Grah. Cat. B. pl.* p. 25;—*Risso and Poit. Hist. d'Or.* t. 61.

- Rumph.* 2, t. 24, f. 2.) *বাতাবিনেবু* *Batavi-neboo*. *Shaddock*, *Pump-lemuss*. 5 Moluccas, Sunda Islands. Cultivated in India. Fl. large, white, fragrant, Feb. and March; fr. Sept. Oct. and Nov.
2. *Aurantium*, L. (*DC. pr.* 1, p. 639;—*Roxb. fl. ind.* 3, p. 392;—*W. and A. pr.* 1, p. 97;—*J. Grah. Cat. B. pl.* p. 25.—*C. nobilis*, *Lour.*;—*Rumph.* 2, t. 34, 35.) *কুমলানেবু* *Kumla-neboo*. *নারঙ্গী* *Narungee*. *Sweet Orange*. 5 Moluccas. Circars, Aurungabad, Khassya Mountains, &c. Fl. large, white, fragrant. In H. C. G. fl. Feb.; fr. C. S. (*Roxb.*) Here it has never fruited.
3. *Bergamia*, Risso and Poit. (*Hist. d'Or. t.* 53;—*W. and A. pr.* 1, p. 98.—*C. acida*, *Roxb. fl. ind.* 3, p. 390;—*Rumph.* ? 2, t. 26, f. 1. (*Limo ungrentarius*; not *L. tuberosus*); t. 26, f. 3. (*L. taurinus*, not *L. ungrentarius*); t. 27; t. 28. (*L. ventricosus*, not *L. ferus*.) *Bergamotte* or *Acid Lime*. 5 Moluccas. Sunda Islands, Peninsula of India, Bengal, Assam, &c. Fl. white, fragrant, H. S.; fr. R. S., sometimes C. S.
- a. *Pati-neboo*; *পাতিনেবু* Common, round Lime. Bengal. (Serampore.)
- β. *Kagujee-neboo*; *কাগজীনেবু* Long, small Lime. Bengal. (Serampore.)
- γ. *Gora-neboo*; *গৌড়ানেবু* Thick-skinned, small, oval Lime. Bengal. (Serampore.)
- δ. *Cheena-gora-neboo*; *চীনা গৌড়ানেবু* China, yellow-juiced Lime. Cultivated.
- ε. *Kamuraleo-neboo*; *কামুরালীনেবু* Large, oval, smooth-skinned Lime. Bengal. (Serampore.)
- ρ. *Rungpore-neboo*; *রঙ্গপুরনেবু* Round, smooth-skinned Lime. Cultivated.
- η. *Taba-neboo*; *তাবানেবু* A large, globose, spongy-skinned Lime. Bengal.
- θ. *Arabian Lime*; A large, thick-skinned sort from Muscat.
4. *Limetta*, Risso and Poit. (*W. and A. pr.* 1, p. 98.) *Sweet Lime*. 5 Moluccas, &c. Fl. white, fragrant, H. S.; fr. R. S.
- a. Risso and Poit. (*o. c. t.* 57.—*C. Limetta*, *DC. pr.* 1, p. 539.) Cultivated.
- β. Risso and Poit. (*o. c. t.* 59.—*C. Hystrix*, *DC. l. c.*;—*Rumph.* 2, t. 30;—*Roxb. fl. ind.* 3, p. 392, 9th.) *মিঠানেবু* *Mita-neboo*, Cultivated.
5. *Limonum*, Risso and Poit. (*W. and A. pr.* 1, p. 98;—*DC. pr.* 1, p. 539.—*C. Medica*, *Roxb. fl. ind.* 3, p. 392; partly *Rumph.* ? 2, t. 26, f. 2. (*Limo tuberosus*, not *L. ventricosus*.) *কোর্গানেবু* *Korna-neboo*. 5 Garrow Hills. Foot of the Himalaya, &c., Cultivated. Flowers white, tinged with red, fragrant, H. S.; fr. R. S.
6. *medica*, L. (*DC. pr.* 1, p. 539;—*W. and A. pr.* 1, p. 98;—*Roxb. fl. ind.* 3, p. 392, partly.—*Rumph.* ? 2, t. 25, 29.) *বেগপুড়া* *Beg-poora*, *Common Citron*. 5 Foot of the Himalaya, Garrow-Hills, &c. Cultivated. Fl. white, tinged with red, fragrant, H. S.; fr. R. S.
- β *digitata*; China. Cultivated.



7. *madurensis*, Lour. (DC. pr. 1, p. 540.—*C. inermis*, Roxb. fl. ind. 3, p. 393.—*Limonellus madurensis*, Rumph. 2, t. 31.) 5 China. Cochin-China. Moluccas. Cultivated. Fl. white, fragrant, H. S; fr. R. S.

* *Atalantia platystigma*, Wight. 5 Peninsula of India.—*Triphasia monophylla*, DC. 5 Timor.—*Limonia alata*, Hb. Madr. Wight ill. 1, t. 41. Ceylon, Neelgherries.—*L. Missionis*, Wall.; Wight. icon. 1, t. 175. Tanjore.—*L. Laureola*, DC. Wall. pl. as. rar. 3, t. 245. Nepal.—*Glycosmis nitida*, W. and A. 5 Peninsula of India.—*G. triphylla*, Wight. icon. t. 167. 5 Tanjore.—*G. chyllocarpa*, W. and A. 5 Kandalla, the Ghauts.—*G. macrocarpa*, Wight. 5 Courtallam.—*G. macrophylla*, Lindl. 5 Penang.—*G. citrifolia*, Lindl. (*Limonia parviflora*, Sims; B. M. 50, t. 2416.) 5 China.—*Sclerostylis racemosa*, Wight. 5 Peninsula of India.—*S. parvifolia*, Wight. ill. 1, t. 71. 5 Peninsula of India.—*S. Arnottiana*, Wight. Ceylon.—*S. ceylanica*, Wight. Ceylon.—*S. Roxburghii*, Wight. icon. 1, t. 72. (*Amyris simplicifolia*, Roxb.) 5 Penang.—*Clausena Willdenowii*, W. and A.; Wight. icon. 1, t. 14. 5 Chingleput, near Madras.—*C. pubescens*, W. and A. 5 Peninsula of India.—*Paramigaya monophylla*, Wight. (*Micromelum?* monophyllum, Wight. ill. 1, t. 42.) 5 Courtallam, Ceylon, Bombay.—*Luvunga tavoyana*, Lindl. Tavoy.—*Citrus vulgaris*, Risso and Poit. Rumph. 2, t. 33. 5 Moluccas. Bitter or Seville Orange.

ORDER LXXIX.—SPONDIACEÆ, Kth.—Lindl. Nat. Syst. p. 106.

THE HOCPLUM TRIBE.

Trees, of 3 genera and 8 species: 2 from S. America and the W. Indies; 1 from the Society Islands; 2 from Bourbon and Mauritius; and 3 (*Spondias*) from the E. Indies.—With *Lanea*, G. and P. we are not acquainted.—Fruit of several species eatable.

SPONDIAS, L. (DC. pr. 2, p. 74;—W. and A. pr. 1, p. 172.)

1. *lutea*, L. (DC. pr. 2, p. 75;—Bojer Hort. Maurit. p. 81. *S. Myrobalanus*, L.—Jacq. amer. p. 139, t. 88.—Gürt. fr. 2, p. 102. t. 204.) 5 W. Indies. H. S. 1842.

2. *mangifera*, Pers. (DC. o. c. p. 75;—W. and A. o. c. p. 173;—Roxb. fl. ind. 2, p. 451;—J. Grah. Cat. B. pl. p. 42;—Wight. ill. 1, t. 76. *S. amara*, Lam.—*S. Amra*, Buch.—*Mangifera pinnata*, Kön.—*L. fil*; not Lam.—Poupartia *mangifera*, Bl.;—Rheed. 1, t. 50;—Rumph. 1, t. 61, ?) আমড়া *Amra*. L. 5 Peninsula of India, Bengal, (Serampore.) Valleys of Deyra Dhoon and Kyarda. Fl. small, white, March; fr. Dec. and Jan.—Fruit, when ripe, eaten raw; unripe it is pickled, put in curries, made into tarts, &c. From wounds in the bark a large quantity of a pure gum exudes, which soon hardens into a substance like gum arabic.



3. *acuminata*, Roxb. (*fl. ind.* 2, p. 453;—*W. and A. pr.* 1, p. 173;—*J. Grah. Cat. B. pl.* p. 42.) 5 Malabar. Hills near Keenry Caves. Was introduced into H. C. G. in 1808, but had not fl. in 1814.—Here the plant has been cultivated for twelve years, without fl.
4. *longifolia*, Roxb. (*fl. ind.* 2, p. 453.) 5 Mauritius.—Introduced into H. C. G. in 1810. Fl. ?
5. *axillaris*, Roxb. (*fl. ind.* 2, p. 453.) 5 Nepal.—In H. C. G. fl. March and April; fr. R. S. (*Roxb.*)
6. *dulcis*, Forst. (*DC. pr.* 2, p. 75;—*Roxb. fl. ind.* 2, p. 452;—*J. Grah. Cat. B. pl.* p. 42.—*S. Cytheraea*, *Sonn. it.* 2, t. 123;—*Lam. ill. t.* 334.—*Gürt. fr.* 2, p. 101, t. 103.) *বিলতি আমড়া* *Bilati-amra*. *Otaheiti Apple-tree*, L. 5 Society Islands. Cultivated in India. Fl. small, greenish-yellow, March; fr. Dec. and Jan. *Fruit* used in the same manner as that of No. 1.
- POUPARTIA, Commers. (*DC. pr.* 2, p. 75.)

1. *borbonica*, Lam. (*DC. l. c.*) 5 Bourbon. In H. C. G. fl. in March.

* *Spondias purpurea*, L. 5 W. Indies.—*S. lutea*, L. 5 W. Indies.

ORDER LXXX.—RHAMNACEÆ.—Lindl. *Nat. Syst.* p. 107.

THE BUCKTHORN TRIBE.

Trees and shrubs, simple or climbing, by Lindl. referred to 30 genera. Of species, *DC. pr.* and *Spreng. syst.* enumerate 58 for S. America, Mexico and the W. Indies; 22 for New Holland and the South Sea Islands; 16 for Europe; 15 for N. America; 7 for China; 5 for Mauritius; 4 for N. Africa; 3 for the Canaries; 3 for Timor; 2 for Persia; 2 for Senegal; 2 for St. Helena; 1 for Dahuria; 1 for Siberia; 1 for the Azores; 1 for Guinea; 1 for Abyssinia; 1 for Tristan d'Acunha, and 1 for the Antarctic Islands. S. Africa possesses 50 species, (*Harvey*); and the E. Indies, according to our materials, 55; viz. 2 of *Paliurus*; 25 of *Zizyphus*; 5 of *Berchemia*; (3 uncertain. *DC.*) 2 of *Sageretia*; 1 of *Ventilago*; 6 of *Rhamnus*; 1 of *Scutia*; 1 of *Hovenia*; 2 of *Colubrina*; 3 of *Ceanothus*; and 4 of *Gouania*. With Blume's two new genera, *Lepionurus* and *Crypteronia*, and the Javanese species in general we are not acquainted. Of the Indian forms, 23 have been discovered at the foot of the Himalayas and in Nepal; the rest are tropical. Properties under the species.

Zizyphus, Tournef. (*DC. pr.* 2, p. 19;—*W. and A. pr.* 1, p. 161.)

1. *rugosa*, Lam. (*DC. o. c.* p. 20;—*W. and A. o. c.* p. 162;—*J. Grah. Cat. B. pl.* p. 39;—*Wight. icon.* 2, t. 339;—*Z. latifolia*, *Roxb. fl. ind.* p. 607; *ed. Carey*, 2, p. 355;—*DC. l. c.*) 5 Travancore, the Ghants. Khassya Mountains. Assam. Oude. Nepal. Fl. minute, greenish, March; fr. R. S.—*Fruit* eaten by the Natives. (*J. Grah.*)



2. *glabrata*, Heyne. (*W. and A. pr.* 1, p. 162;—*Wight. icon.* 1, t. 282, —*Z. trinervia*, *Roxb. fl. ind.* 1, p. 606; *ed. Carey*, 2, p. 354;—not Poir.) 5 Mysore. Fl. small greenish-yellow. In H. C. G. fl. H. S.; fr. Oct. and Nov. (*Roxb.*)
3. *Xylopyrus*, Willd. (*DC. pr.* 1, p. 21;—*W. and A. pr.* 1, p. 162;—*Roxb. fl. ind.* 1, p. 611; *ed. Carey*, 2, p. 360;—*J. Grah. Cat. B. pl.* p. 39. *Z. elliptica*, *Roxb. fl. ind.* 1, p. 610; *ed. Carey*, 2, p. 359.—*Z. Caracutta*, *Buch.*;—*Roxb. fl. ind.* 1, p. 612; *ed. Carey*, 2, p. 361.—*Z. orbicularis*, *Schult.*;—*DC. pr.* 2, p. 21.) 5 Courtallum. The Ghauts. Hills from Shergotty to Ronghonaupore. Fl. small, greenish-yellow, R. S.; fr. C. S. Fruit used by the shoemakers to blacken leather, and to make blacking. (*Dr. Gibson.*)
4. *Jujuba*, Lam. (*DC. pr.* 2, p. 21;—*W. and A. pr.* 1, p. 162;—*Roxb. fl. ind.* 1, p. 608;—*ed. Carey*, 2, p. 357;—*Wight icon.* 1, t. 99;—*J. Grah. Cat. B. pl.* p. 39.—*Z. sororia*, *Schult.*;—*DC. l. c.*—*Rhamnus Jujuba*, L.;—*Rheed.* 4, t. 41;—*Rumph.* 2, t. 36.) कुनगाई *Kool-gachh*, बरुर *Byur*. 5 Moluccas, Sunda Islands. Both Peninsulas of India, Bengal, (Serampore.) Assam. The valleys of Gurliwal and Sirmore. Fl. small, greenish-yellow, R. S.; fr. C. S. Fruit eatable.
β. *fructu oblongo*; oblong fruited. नारिकेलीकून *Narikel-lee-kool*, बरुर *Buru-Byar*. Fruit eaten by Europeans, as well as Natives; lately much improved by culture.
5. *nummularia*, W. and A. (*pr.* 1, p. 162.—*Z. microphylla*, *Roxb. fl. ind.* 1, p. 613;—*ed. Carey*, 2, p. 262.—*Z. rotundifolia*, Lam.;—*DC. pr.* 2, p. 21.—*Rhamnus nummularia*, *Burm. ind.* p. 61.) 5 Palameotta, Courtallum. Fl. small, greenish-yellow, May and June; fr. 0.
6. *Oenopia*, Mill. (*DC. pr.* 2, p. 21;—*W. and A. pr.* 1, p. 163;—*Roxb. fl. ind.* 1, p. 611;—*ed. Carey*, 2, p. 360;—*J. Grah. Cat. B. pl.* p. 39.—*Z. scandens*, *Roxb. H. B.* p. 17.—*Z. Napeca*, *Roth.*;—*Roxb. fl. ind.* 1, p. 613;—*ed. Carey*, 2, p. 363, not Willd.;—*Burm. Zeyl.* t. 61.) श्याकून *Shya-kool*. 5 Both Peninsulas of India. Ceylon. Bengal, (Serampore.) Rajmahl Hills. Assam. Banks of the Jumna, near Delhi. Kheree Pass. Fl. small, greenish-yellow, H. S.; fr. R. S.
7. *albens*, *Roxb.* (*fl. ind.* 1, p. 607;—*ed. Carey*, 2, p. 355.) 5 China. In H. C. G. fl. April. (*Roxb.*)
8. *nitida*, *Roxb.* (*fl. ind.* 1, p. 609;—*ed. Carey*, 2, p. 358.) 5 China. Fl. small, yellow. In H. C. G. fl. H. S.; fr. C. S. (*Roxb.*)
9. *vulgaris*, Lam. (*DC. pr.* 1, p. 19;—*Roxb. fl. ind.* 1, p. 609;—*ed. Carey*, 2, p. 358;—*Rhamnus Zizyphus*, L.) 5 Syria, and thence introduced into Persia and Hindoosthan. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
10. *Lotus*, Lam. (*DC. pr.* 1, p. 19;—*Roxb. fl. ind.* 1, p. 610;—*ed. Carey*, 2, p. 359.—*Rhamnus Lotus*, L.) 5 N. Africa, Persia. In H. C. G. fl. H. S. (*Roxb.*)



11. *Rozburghiana*, (Z. tomentosa, Roxb. *fl. ind.* 1, p. 611;—*ed. Carey*, 2, p. 360; not Poir.) ॐ Chittagong. Introduced into H. C. G. in 1810, but had not fl. in 1814.
 12. *glabra*, Roxb. (*fl. ind.* 1, p. 614;—*ed. Carey*, 2, p. 364.) ॐ Chittagong. Introduced into H. C. G. in 1810, but had not fl. in 1814.
 13. *incurva*, Roxb. (*fl. ind.* 1, p. 614.—*ed. Carey*, 2, p. 364.) 5 Deyra Dhoon. Fl. small, greenish. In H. C. G. fl. R. S. (Roxb.)
 14. *flesuosa*, Wall. (Roxb. *fl. ind. ed. Carey*, 2, p. 365.) L. ॐ Gossain Than. Mountains towards Cashmere. In H. C. G. Fl.?
- BERCHEMIA, Neck. (*DC. pr.* 2, p. 22;—*W. and A. pr.* 1, p. 163.)
1. *floribunda*, Wall. Cat. (*Zizyphus floribundus*, Wall.;—Roxb. *fl. ind. ed. Carey*, 2, p. 368.) ॐ Khassya Mountains, Nepal, Kemaon. Fl. small, white. Introduced in 1839. Has not fl.
- SAGERETIA, Brongn. (*G. Don's Mill. dict.* 2, p. 28.)
1. *oppositifolia*, Brongn. (*Berchemia?* *oppositifolia*, Wall. Cat.—*Zizyphus oppositifolia*, Wall.;—Roxb. *fl. ind. ed. Carey*, 2, p. 370.—*Rhamnus trigynus*, Don.;—*DC. pr.* 2, p. 27; ex. pte.) ॐ Deyra Dhoon. Fl. small, greenish, R. S.; fr. C. S.
 2. *hamosa*, Brongn. (*Berchemia?* *hamosa*, Wall. Cat.—*Zizyphus hamosa*, Wall.—Roxb. *fl. ind. ed. Carey*, 2, p. 369.—*Rhamnus trigynus*, Don.;—*DC. pr.* 2, p. 27, ex. pte.) ॐ Nepal. Fl. small, greenish. In H. C. G. Fl.?
- VENTILAGO, Gärtn. (*DC. pr.* 2, p. 38;—*W. and A. pr.* 1, p. 164.)
1. *maderaspatana*, Gärtn. (*DC. l. c.*;—*W. and A. l. c.*;—Roxb. *Corom.* 1, t. 76;—*fl. ind.* 1, p. 629;—*ed. Carey*, 2, p. 413;—*Wight. icon.* 1, t. 163;—*J. Grah. Cat. B. pl.* p. 40;—*Gärtn. fr.* 1, t. 49;—*Rumph.* 5, t. 2.) रुक्मिणी *Rukta-pila*. L. ॐ Moluccas. Both Peninsulas of India, Hills of Bengal, Assam, Nepal, Kemaon. Fl. small, greenish, offensively smelling, C. S.; fr. H. S.—Bark used for cordage. (*As. Res.* 6, p. 352.) According to Rumphius, the Amboyna fishermen use the long climbing stems instead of ropes.
- RHAMNUS, L. (*DC. pr.* 2, p. 23;—*W. and A. pr.* 1, p. 164.) Buckthorn.
1. *virgatus*, Roxb. (*fl. ind.* 1, p. 604;—*ed. Carey*, 2, p. 351;—*DC. pr.* 2, p. 24.) 5 Neelgherries, Mussooree, Gurhwal, Deyra Dhoon, Kemaon. Fl. very small, greenish-yellow. In H. C. G. fl. H. S.; fr. Oct. and Nov. (Roxb.)
 2. *incanus*, Roxb. (*fl. ind.* 1, p. 603; *ed. Carey*, 2, p. 350.) 5 Moluccas. Fl. small, greenish-yellow. In H. C. G. fl. C. S.; fr. H. S. (Roxb.)
- SCUTIA, Commers. (*W. and A. pr.* 1, p. 165.)
1. *indica*, Brongn. (*W. and A. l. c.*;—*Wight. ill.* 1, t. 73;—*J. Grah. Cat. B. pl.* p. 39.—*Rhamnus circumsissus*, L.;—Roxb. *fl. ind.* 1, p. 603; *ed. Carey*, 2, p. 350.—*R. myrtinus*, Burm.;—*DC. pr.* 2, p.



27.—*Ceanothus circumsissa*, *Gärtn. fr.* 2, t. 106;—*DC. pr.* 2, p. 30.—*C. zeylanica*, *Heyne*;—*DC. l. c.*—*Celastrus zeylanica*, *Roth.*;—*DC. pr.* 2, p. 9;—*Rheed* 5, t. 30, 31.) ♀ Peninsula of India. Fl. small, greenish-yellow, Jan., Feb. and March; fr. Dec. and Jan.

HOVENIA, Thunb. (*DC. pr.* 2, p. 40.)

1. *dulcis*, Thunb. (*Roxb. fl. ind.* 1, p. 630;—*ed. Carey*, 2, p. 414;—*J. Grak. Cat. B. pl.* p. 40;—*B. M.* 50, t. 2360;—*DC. l. c.*—*H. inequalis*, *DC. l. c.*—*H. acerba*, *Lindl.*;—*B. Reg.* 6, t. 501;—*DC. l. c.*) L. b China. Japan, Nepal, Kamaon, Mussooree. Fl. small, white, H. S; fr. R. S.—*Peduncles* of the fruit extremely enlarged and succulent, and are in much esteem in China, resembling in flavour, as it is said, a ripe Pear. (*Lindl.*)

COLUBRINA, Rich. Brongn. (*W. and A. pr.* 1, p. 165.)

1. *asiatica*, Brongn. (*W. and A. o. c.* p. 166;—*Wight ill.* 1, t. 74;—*J. Grak. Cat. B. pl.* p. 39.—*Ceanothus asiaticus*, *L.*;—*DC. pr.* 2, p. 30;—*Roxb. fl. ind.* 1, p. 615;—*ed. Carey*, 2, p. 373.—*C. ? capsularis*, *Forst.*;—*DC. pr.* 2, p. 32;—*Burm. Zeyl.* t. 48.) L. ♀ Both Peninsulas of India. The Ghauts. Elephanta. Siam, Singapore, Amherst, Moulmein, Ceylon, Mauritius. Fl. small, pale-greenish, April and May; fr. June and July.

2. *nepalensis*, G. Don. (*Mill. dict.* 2, p. 36.—*Ceanothus nepalensis*, *Wall.*;—*Roxb. fl. ind. ed. Carey*, 2, p. 375.) ♀ Nepal. Fl. small, greenish, May; fr. June and July.

? 3. *macrophylla*, Wall. ♀ Martaban. In H. C. G. Fl. ?

VITMANNIA, W. and A. (*pr.* 1, p. 166; not Vahl.—*Willemetia*, *Brongn.*; not Neck. Cassini, &c.)

1. *africana*, W. and A. (*l. c.*—*Wight icon.* 2, t. 490.—*Willemetia africana*, *Brongn.*—*Ceanothus africana*, *L.*;—*DC. pr.* 2, p. 32.) ♀ C. G. H. In H. C. G. Fl. ?

GOUANIA, Jacq. (*DC. pr.* 2, p. 38;—*W. and A. pr.* 1, p. 166.)

1. *leptostachya*, DC. (*o. c.* p. 40;—*W. and A. l. c.*—*G. tiliaefolia*, *Roxb. Coram.* 1, t. 98;—*fl. ind.* 1, p. 632;—*ed. Carey*, 2, p. 417; not Lam.) ♀ Circars, Chitagong, Bengal, (Serampore.) Assam. Deyra Dhoon. Fl. small, greenish, R. and C. S.; fr. H. S.

2. *madagascariensis*, Rich. ♀ Bourbon. Fl. 1840.

* *Paliurus virgata*, Don.; B. M. 52, t. 2535. ♀ Nepal.—*Z. mirzaporensis*, Royle. ♀ from Shergatty to Roghonautpore.—*Berchemia parviflora*, Wall.; *Wight icon.* 1, t. 19. ♀ Peninsula of India.—*Sageretia theezans*, Brongn. ♀ China.—*Rhamnus Wightii*, W. and A.; *Wight icon.* 1, t. 159. ♀ Courtallum.—*Colletia spinosa*, Lam. ♀ Brazil.—*Scutia Commersonii*, Brongn. b Mauritius.—*Gouania microcarpa*, DC. ♀ Courtallum.—*G. nepalensis*, Wall. ♀ Nepal.



ORDER LXXXI.—CHAILLETIACEÆ, DC. Lindl. Nat. Syst. p. 108.

Trees or shrubs, referred by Lindl. to 4 genera. Of their species, 3 have been found in Guiana; 2 in Sierra Leona; 2 in Madagascar; 1 in Timor; and 1 in Silhet. To the latter R. Br. in Wall. Cat. adds 2 more, one from Penang, the other from Tavoy. Properties nearly unknown.

MOACURRA, Roxb. (*fl. ind.* 2, p. 69.)

1. *gelonioides*, Roxb. (*l. c.*) 5 Silhet. Fl. small, greenish. In H. C. G. fl. April and May; fr. Dec. (Roxb.)

* *Chailletia pedunculata*, DC. 5 Cayenne.—*C. timoriensis*, DC. 5 Timor.—*C. dichapetalum*, R. Br. 5 Madagascar.—*Tapura guianensis*, Aubl. 5 Guiana.—*Moutabea guianensis*, Aubl. 5 Guiana.

ORDER LXXXII.—BURSERACEÆ, Kth. Lindl. Nat. Syst. p. 110.

Trees or shrubs, (excluding Colophonia,) referred by Lindl. to 12 genera. Of their species, 29 inhabit S. America, Mexico and the W. Indies; 3-4 Arabia; 3 Madagascar; 2 S. Africa; 1 Congo; 1 Mauritius; and 1 Timor. In the E. Indies 18-19 forms have been found: 7 of *Canarium*; 4-5 of *Protium*; 3 of *Boswellia*; 2 of *Balsamodendron*; 1 of *Icica*; and 1 of *Garuga*;—nearly all natives of the tropics.

They have all an abundance of fragrant resinous juice, which is, however, destitute of the acridity and staining property of that of Anacardiaceæ—*Balsam of Acouchi* is produced by *Icica Aracouchini*, Aubl.; *Gum elemi* by *Icica heptaphylla*, Aubl.; *Balm of Gilead* by *Balsamodendron gileadense* Kth.; *Myrrh* by *B. Myrrha*, Ehrenb. and Hempr.; *Opobalsamum* or *Balsam of Mecca*, by *B. Opobalsamum*, Kth.; a substance like *Gum elemi* by *Icica Icicariba*, DC. and Carana,—and a yellow concrete essential oil by *Bursera acuminata*, Willd. (Lindl.)

BOSWELLIA, Roxb. (DC. *pr.* 2, p. 76;—*W. and A. pr.* 1, p. 174.)

1. *serrata*, Stackh. (*B. thurifera*, Colebr.;—Roxb. *fl. ind.* 2, p. 333;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 42.) भाजिहि साल, बवान Luban. L. 5 Mountains of Coromandel. S. Concan. Jungles above Rajoor. Hill of Shendoor in the Chichoorree Talook, of the Belgaum Collectorate. Bundlekund. Fl. smallish, greenish-white, March and April; fr. C. S.—This tree produces the gum-resin, *Olibanum*, (कुंदरु Koonduroo,) a substance chiefly used as a grateful incense, but which also possesses stimulant, astringent, and diaphoretic properties. (Ainslie.)

CANARIUM, L. (DC. *pr.* 2, p. 79;—*W. and A. pr.* 1, p. 174.)

1. *commune*, L. (DC. *l. c.*;—*W. and A. o. c.* p. 175;—*Kön. in ann. bot.* 1, p. 260. t. 7, f. 2;—Roxb. *fl. ind.* 3, p. 137.—*C. Mehenbethene*,



Gärtn. fr. 2, p. 98. t. 102?—*Amyris zeylanica*, Retz.—*Balsamodendron zeylanicum*, Kth. ;—*DC. pr. 2, p. 76.*—*Colophonía mauritiana*, *DC. pr. 2, p. 79.*—*Bursera paniculata*, Lam.—*Rumph. 2, t. 47.*) L. 5 Moluccas. Ceylon. Mauritius. Peninsula of India. Introduced into H. C. G. in 1798, but had not fl. up to 1814. The resinous juice of this tree has the same properties as the Balsam of Copaiva. The three-cornered nuts are eaten in Java both raw and dressed, and an oil is expressed from them, which is used at table when fresh, and for burning when stale. The raw nuts are, however, apt to produce diarrhœa. (*Ainslie.*)

2. *strictum*, Roxb. (*fl. ind. 3, p. 138*;—*W. and A. pr. 1, p. 175.*) 5 Tinevelly. Introduced into H. C. G. in 1808, but had not fl. in 1814. Known in Malabar under the name of the *Black Dammer-tree*, in contradistinction to *Vateria indica*, or white Dammer-tree. It is common in the alpine forests about Courtallam in the Tinevelly district, and is there regularly rented for the sake of its Dammer. This is transparent and of a deep brownish yellow or amber colour, when held between the eye and the light, but when adhering to the tree has a bright shining black appearance. (*Wight.*)

3. *bengalense*, Roxb. (*fl. ind. 3, p. 136.*) L. 5 Assam. Fl. small. In H. C. G. fl. May and June; fr. Jan. and Feb. (*Roxb.*) From fissures and wounds in the bark, a large quantity of very pure, clear, amber-coloured resin exudes, which soon becomes hard and brittle, and is not unlike *Copal*, yet the natives set little or no value on it. (*Roxb.*)

4. *nigrum*, Roxb. (*fl. ind. 3, p. 138.*—*Marignia acutifolia*, *DC. pr. 2, p. 79.*—*Dammara nigra*, *Rumph. 2, p. 160, t. 52, 53.*) L. 5 Amboyna, and other Molucca Islands. Fl. small. In H. C. G. fl. May. A reddish, soft, viscid, heavy-smelling substance exudes from wounds in the bark. (*Rumph.*)

5. *sylvestre*, Gärtn. (*fr. p. 99, t. 102*;—*DC. pr. 2, p. 79*;—*Roxb. fl. ind. 3, p. 137.*—*C. sylvestre alterum*, *Rumph. 2, p. 155, t. 49.*—*C. Pimela*, Kön.;—*Ann. bot. 1, p. 361, t. 7, f. 1*;—*DC. pr. 2, p. 80.*—*Pimela nigra*, Lour.) 5 Amboyna. Cochin China, China. Introduced into H. C. G. in 1798, but had not fl. up to 1814.

ICICA, Aubl. (*DC. pr. 2, p. 77*;—*W. and A. pr. 1, p. 177.*)

1. *bengalensis*, (L. *indica*, *W. and A. l. c.*—*Bursera serrata*, Wall.;—*Colebr. in Linn. soc. trans. 15, p. 362, t. 4.*—*Schinus bengalensis*, *Saharia and Niara, Hb. Buch.*) L. 5 Chittagong, Assam. Fl. very small, green, March and April.—*Timber* close-grained, hard, as tough, but heavier than oak, used for furniture by the Natives.

BALSAMODENDRON, Kth. (*DC. pr. 2, p. 76*;—*Wight ill. 1, p. 185.*)

1. *Berryanum*, (B. *Berryi*, Arn.;—*Wight ill. l. c.*—*Protium gilcadense*, *W. and A. pr. 1, p. 177*, excl. syn. Kth, DC. and Vahl.—*Amyris gilcadensis*, *Roxb. fl. ind. 2, p. 246*, excl. syn. Willd. and "Arabia.") 5 Peninsula of India, where it is constantly used for making fences.

(Wight.) Was introduced, by Dr. Berry, into H. C. G. in 1798, but had not fl. up to 1814.

2. *Roxburghianum*, Wall. (*Protium Roxburghianum*, W. and A. pr. 1, p. 176.—*Amyris acuminata*, Roxb. fl. ind. 2, p. 246;—not Poir.) 5 Moluccas. Fl. small, yellowish, May; fr. O.—The bark and all the tender parts, on being bruised or wounded, discharge a small quantity of pale whey-coloured liquid, which possesses a fragrance somewhat like that of an orange leaf. (Roxb.)
3. *Agallocha*, W. and A. (pr. 1, p. 96, annot.—B. *Roxburghii*, Arn.;—Wight ill. 1, p. 185.—*Amyris Agallocha*, Roxb. H. B. p. 28.—A *Commiphora*, Roxb. fl. ind. 2, p. 244, excl. syn. Jacq.) ৫৫৫৫ *Googul*. 5 Assam, Garrow-Hills. Fl. small, reddish, Feb. and March; fr. O. Produces the *Gum Bdellium* of commerce, and perhaps of Dioscorides. (Royle.) The whole plant, while growing, is considerably odoriferous, particularly when any part is broken or bruised, and diffuses to a considerable distance around a grateful fragrance, like that of the finest myrrh. (Roxb.)

MARIGNIA, Commers. (DC. pr. 2, p. 79.)

1. *obtusifolia*, DC. (l. c.—*Bursera obtusifolia*, Lam.—*Dammara graveolens*, Gürke. fr. 2, p. 100. t. 103. f. 11, excl. syn. Rumph.) 5 Mauritius, where it is called *Coleophane bastard*.—Fl. small, whitish, May; fr. O.

SORINDEIA, Pet. Th. (DC. pr. 2, p. 80;—W. and A. pr. 1, p. 170.)

1. *madagascariensis*, (DC. l. c.;—W. and A. l. c.—*Mangifera pinnata*, Lam.;—not L.) 5 Madagascar, where the French call it *Manguier à grappes*.—Fl. small, greenish, Feb; fr. May 1836.
2. ? *attenuata*, Wall. 5 Penang.—March 1835.

GARUGA, Roxb. (DC. pr. 2, p. 80;—W. and A. pr. 1, p. 175.)

1. *pinnata*, Roxb. (Corom. 3, t. 208;—fl. ind. 2, p. 400;—DC. o. c. p. 81;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 43;—Rheed 4, t. 33.) ৫৫৫ *Joom*. L. 5 Coromandel. The Ghauts. The hilly parts of the Concan. Bengal, (Serampore.) Assam. Deyra Dhoon, Kyarda. Flowers smallish, cream-coloured, March; fr. C. S.—Fruit eaten by the Natives raw or pickled.

* *Boswellia glabra*, Roxb. Corom. 3, t. 207. 5 Mountains of Coromandel, Deccan.—*Bursera gummifera*, Jacq. 5 W. Indies.—*B. acuminata*, Willd. 5 St. Domingo.—*Protium caudatum*, W. and A. 5 Peninsula of India.—*P. pubescens*, W. and A. 5 Peninsula of India.—*P. javanicum*, Burm, Rumph. 7, t. 23. 5 Java.—*Icica Aracouchini*. 5 Guiana.—*I. guianensis*, Aubl. 5 Cayenne. *I. heptaphylla*, Aubl. 5 Guiana.—*I. Icicariba*, DC. 5 Brazil.—*Balsamodendron Wightii*, Arn. 5 Peninsula of India.—*B. gileadense*, Kth. 5 Arabia.—Was, in 1837, introduced into the Bombay Hort. Soc. Gardens from Mecca.—*Hedwigia balsamifera*, Swz. 5 Huylti.

ORDER LXXXIII.—EUPHORBIACEÆ, Ad. Juss.—Lindl. Nat.
Syst. p. 112.

THE EUPHORBIUM TRIBE.

As we have but extremely insufficient materials regarding this large family, we shall abridge from Lindley's remarks (*l. c.*) as much as will suit our purpose. "Trees, shrubs, or herbaceous plants, often abounding in acrid milk. The order, which probably does not contain fewer than 1500 species, exists in the greatest abundance in equinoctial America, where about 3-8ths of the whole number have been found, sometimes in the form of large trees, frequently of bushes, still more usually of diminutive weeds, and occasionally of deformed, leafless, succulent plants, resembling Cactaceæ in their port, but differing from them in every other particular. In the Western world they gradually diminish, as they recede from the equator, so that not above 50 species are known in N. America, of which a very small number reaches as far as Canada.—There are about 120 species from Europe, including the basin of the Mediterranean; of these 16 only are found in Great Britain, and 7 in Sweden." (*Lindl.*) S. Africa contains 100 species, (*Harvey.*) Of Indian, Roxb. in his *fl. ind.* describes 112. What may be the amount of Blume's Javanese Euphorbiaceæ, we cannot ascertain, his works being inaccessible to us. That their number however, must be considerable, we conclude from his 21 new genera, enumerated by Lindl. Our ignorance is still more increased by the Catalogues of Heyn's, Klein's, Rottler's, Buchanan's, Finlayson's, Wallich's, Wight's, and Royle's discoveries in this order being unpublished.

"The general property of this order is that of exciting, varying greatly in degree, and consequently in effect. This principle resides chiefly in the milky secretion of the order, and is most powerful in proportion as the secretion is abundant. The smell and taste of a few are aromatic; but in the greater part the former is strong and nauseous, the latter acrid and pungent. The hairs of some species are stinging. Some of them are emetic, others cathartic—many of them are also dangerous, even in small doses, and so fatal in some cases, that no practitioner would dare to prescribe them; as for example, *Manchineel*. In fact, there is a gradual and insensible transition, in this order, from mere stimulants to the most dangerous poisons. Whatever the stimulating principle of Euphorbiaceæ may be, it seems to be of a very volatile nature, because application of heat is sufficient to dissipate it. Thus the root of *Jatropha Manihot* or *Cassava* which, when raw, is one of the most violent of poisons, becomes a wholesome nutritious article of food when roasted. In the seeds, the albumen is harmless and eatable, but the embryo itself is acrid and dangerous. Independently of this volatile principle, there are two others belonging to the order, which require to be noticed; the first of these is *Caoutchouc*, that most innocuous of all substances, produced by the most poisonous of all families,

which may be almost said to have given a new arm to surgery, and which has become an indispensable article of life; it exists in *Artocarpæ* and elsewhere, but is chiefly the produce of species of *Euphorbiaceæ*. The other is the preparation called Turnsol, which, although chiefly obtained from *Crozophora* (*Croton*) *tinctoria*, is to be produced equally abundantly from many other plants of the order." (*Lindl.*)

A. BUXÆ, Bartl.

SARCOCOCCA, Lindl. (*B. Reg.* 12, t. 1012.)

1. *pruniformis*, Lindl. (*l. c.*) *Nepal Bastard-Plum*. 5 Nepal. Fl. small, greenish-yellow. C. S.; fr. 0.

α. *latifolia*. (*Pachysandria*? *coriacea*, *Hook. exot. fl. t.* 148.)

β. *angustifolia*. (? *Buxus saligna*, *Don. pr. fl. nep.* p. 63;—*Spreng. syst.* 3, p. 847.)

BUXUS, L. (*Spreng. syst.* 3, p. 760, *Nö.* 3103.)

1. *chinensis*, Lk. (*Spreng. syst.* p. 847.) *China Box Tree*. 5 China. Fl. small, yellowish-green. Has been introduced into H. C. G. Fl.?

2. *balearica*, Lam. (*Spreng. l. c.*) *Balearic Box Tree*. 5 Minorca. Fl. small, yellowish-green. Introduced in 1841. Has not fl.

3. *sempervirens*, L. (*Spreng. syst. l. c.*) 5 South Europe, North Persia. In H. C. G.

In some parts of Persia where Box Trees abound, the Camel cannot be employed, because it is found impracticable to prevent that animal from browsing upon the leaves, which invariably prove poisonous to it. (*Lindl.*)

SECURINEGA, Juss. (*Spr. syst.* 1, *No.* 1112.)

1. *borbonica*, Rich. Bourbon.

FLUGGEA, Willd. (*Spreng. syst.* 1, p. 523. *No.* 939.)

1. *Leucopyrus*, Willd. (*Spreng. syst.* 1, p. 825.—*Phyllanthus Leucopyrus*, Kôn.;—*Roxb. fl. ind.* 3, p. 658.) L. 5 Coromandel. Fl. small, greenish; and fr. R. S.

2. *retusa*, Roxb. (*Phyllanthus retusus*, *Roxb. fl. ind.* 3, p. 657.) L. 5 Bengal, (Serampore,) extending northwards to the banks of the Jumna. Fl. small, greenish; and fr. whole year.

3. *virosa*, Roxb. (*Phyllanthus virosus*, *Roxb. fl. ind.* 3, p. 659;—*Spreng. syst.* 3, p. 22.) L. 5 Circars, Banks of the Jumna. Fl. small, greenish. In H. C. G. fl. H. and R. S.; fr. R. S. (*Roxb.*) The bark is a strong astringent, and possesses, when thrown into the water, the power of intoxicating fish, whereby they are easily taken. (*Roxb.*)

B. PHYLLANTHÆ, Bartl.

GLOCHIDION, Forst. (*Juss. gen. pl.* p. 442. *Bradleia*, Gärtn.; *Lindl. nat. Syst.* p. 116.)

1. *multiloculare*, (*Bradleia multilocularis*, *Roxb. fl. ind.* 3, p. 696;—*Spreng. syst.* 3, p. 19.) 5 Bengal, (Serampore.) Fl. small, greenish cream-coloured, H. and R. S.; fr. C. S.



2. *lanceolatum*, (*Bradleya lanceolaria*, *Roxb. fl. ind.* 3, p. 697.) L. 5 Assam. Fl. small, greenish cream-coloured, March and April; fr. R. S.—A useful timber-tree. (*Roxb.*)
 3. *nitidum*, (*Bradleya nitida*, *Roxb. fl. ind.* 3, p. 699.) 5 Circars. Fl. small, greenish cream-coloured, C. S.; fr. H. S.
 4. *sinicum*, (*Bradleya sinica*, *Gärtn. fr.* 2, p. 127, t. 109, f. 1;—*Spreng. syst.* 3, p. 19;—*Roxb. fl. ind.* 3, p. 700;—*J. Grah. Cat. B. pl.* p. 184, under *Bridelia*.) 5 Penang. Kandalla. Along the Ghauts. Fl. small, white. In H. C. G. Fl. ?
 5. *hirsutum*, (*Bradleya hirsuta*, *Roxb. fl. ind.* 3, p. 699.) 5 Penang. Introduced into H. C. G. Fl. ?
 6. *pinnatum*, (*Bradleya pinnata*, *Roxb. fl. ind.* 3, p. 700.—*Phyllanthus obscurus*, *Roxb. Willd.*;—*Spreng. syst.* 3, p. 22.) 5 Penang. Fl. small, yellow, nearly the whole year.
- CICCA**, L. (*Spreng. syst.* 1, p. 375, No. 569.)
1. *disticha*, L. (*Spreng. syst.* 1, p. 500;—*Lam. ill.* t. 757, f. 1;—*J. Grah. Cat. B. pl.* p. 180.—*Phyllanthus longifolius*, *Jacq. Schönb.* 2, p. 36, t. 1. 194;—*Roxb. fl. ind.* 3, p. 672.—*Averrhoa acida*, L.;—*Rheed.* 3, t. 47-48.—*Rumph. auct.* p. 33, t. 17, f. 2.) नवाड़ी *Nubaree*. नड़ी *Nurse*. 5 Native place uncertain. Commonly cultivated in gardens. Fl. small, reddish, H. S.; fr. R. and C. S. Leaves sudorific. Fruit succulent, sub-acid, cooling, wholesome, eaten raw, or made into pickles and preserves.—Seeds cathartic.
- EMBLICA**, *Gärtn.* (*Spreng. syst.* 3, p. 4, No. 2343.)
1. *officinalis*, *Gärtn.* (*fr.* 2, p. 122, t. 108, f. 2;—*Spreng. syst.* 3, p. 20.—*Phyllanthus Emblica*, L.;—*Roxb. fl. ind.* 3, p. 671;—*J. Grah. Cat. B. pl.* p. 180;—*Rheed.* 1. t. 38;—*Rumph. auct.* p. 1, t. 1.) अम्ल *Amla*, L. 5 Moluccas. Coromandel. Concan, Deccan, South Mahratta country. Bengal, extending northwards to the Banks of the Jumna. Cultivated in gardens. Fl. minute, greenish-yellow, H. and R. S.; fr. C. S. Wood hard and durable, particularly under water. Bark very astringent, used by the Natives for tanning.—Fruit succulent, sharp, unpalatable, unless pickled or preserved with sugar. (*Roxb.*)
- PHYLLANTHUS**, L. (*Spreng. syst.* 3, p. 4, No. 2344.)
1. *maderaspatensis*, L. (*Spreng. syst.* 3, p. 21;—*Roxb. fl. ind.* 3, p. 654;—*J. Grah. Cat. B. pl.* p. 180.) © Peninsula of India, Bengal, (Serampore.) Fl. small, greenish; and fr. the whole year. Taste herbaceous, somewhat astringent. Cattle eat it. (*Roxb.*)
 2. *simplex*, *Retz.* (*Spreng. syst.* 3, p. 23;—*Roxb. fl. ind.* 3, p. 654.) 4. Coromandel, Bengal, (Serampore.) Fl. small, greenish, R. S.; fr. C. S.—Fresh leaves, bruised and mixed with butter-milk, used by the Natives to cure the itch in children. (*Roxb.*)
 3. *fasciculatus*, *Poir.* (p. 304.—*Phyllanthus Kirganelia*, *Willd.*;—*Roxb. fl. ind.* 3, p. 668.—*Kirganelia virginea*, *Pers. syn.* 2, p. 591.—



- Kirganelia, Juss.) 5 Mauritius, where it is called *Bois de Demoiselle*. Fl. small, reddish, the whole year; fr. O. or rare.
4. *reticulatus*, Poir. (*Ph. Vitis Idea*, Kön.;—*Roxb. fl. ind.* 3, p. 665;—*J. Grah. Cat. B. pl.* p. 180;—*Rheed. 5 t.* 44.) হামকটিকুলি *Hamkato-jooli*. L. 5 Coromandel. Concans. Bengal, (Serampore.) Fl. small, greenish; and fr. the whole year. Wood white and durable, employed by the Hill people for various economical purposes. Cattle eat the leaves. Frequently employed for ornamental hedges. (*Roxb.*)
5. *obcordatus*, Roxb. (*fl. ind.* 3, p. 656.) 5 Bengal, (Serampore.) Fl. small, greenish; and fr. the whole year.
6. *Niruri*, L. (*Spreng. syst.* 3, p. 23;—*Roxb. fl. ind.* 3, p. 659;—*J. Grah. Cat. B. pl.* p. 180.—*Urinaria indica*, *Burm. zeyl. t.* 93;—*Rheed. 10, t.* 15.) সাদাহাজুরমনি *Sada-hajur-muni*. Peninsula of India, Bengal, (Serampore.) Fl. minute, greenish; and fr. the whole year. Leaves deobstruent, diuretic, healing. Fresh root a good remedy in jaundice. Half an ounce, rubbed up in a cup of milk, and given every morning and evening, will complete the cure in a few days, without any sensible operation of the medicine. (*Roxb.*)
7. *Urinaria*, L. (*Spreng. syst.* 3, p. 23;—*Lam. ill. t.* 756, f. 2;—*Roxb. fl. ind.* 3, p. 660;—*J. Grah. Cat. B. pl.* p. 180;—*Rheed. 10, t.* 16;—*Rumph. 6, t.* 17, f. 2.) হাজুরমনি *Hajur-muni*. © Peninsula of India, Bengal, (Serampore.) Moluccas.—Fl. minute, greenish; and fr. the whole year.—Plant powerfully diuretic.
8. *bacciformis*, L. (*Roxb. fl. ind.* 3, p. 661;—*Pers. syn.* 2, p. 690.—*Agyncea phyllanthoides*, *Spreng. syst.* 3, p. 19.) ♂ Coromandel. Fl. small, greenish; and fr. the whole year.
9. *pendulus*, Roxb. (*fl. ind.* 3, p. 662.) ♂ Coromandel. Fl. small, greenish, R. S.; fr. C. S.
10. *multiflorus*, Willd. (*Spreng. syst.* 3, p. 22;—*Roxb. fl. ind.* 3, p. 664;—*J. Grah. Cat. B. pl.* p. 180;—*Rheed. 10, t.* 27.) পানশিউলি *Pan-shiiooli*. 5 Coromandel. Concans. Bengal, (Serampore.) Fl. small, greenish-white; and fr. the whole year.
11. *turbinatus*, Kön. (*Roxb. fl. ind.* 3, p. 666;—*H. B. p.* 104;—*B. M.* 44, t. 1862;—*Spreng. syst.* 3, p. 21, excl. syn. Ker;—*J. Grah. Cat. B. pl.* p. 180.—*P. Simsianus*, *Wall. rept*;—*Rheed. 5, t.* 43) L. 5 or 5 Mountains of Orissa. Coromandel. Malabar and Worlee hills. Salsette. Fl. small, greenish.—In H. C. G.—Fl. ?
12. *patens*, Roxb. (*fl. ind.* 3, p. 667.) 5 Chittagong. Fl. small, greenish; and fr. the whole year.
13. *tenellus*, Roxb. (*fl. ind.* 3, p. 668.) 5 Mauritius. Fl. minute, pale pink. In H. C. G. fl. and fr. the whole year. (*Roxb.*)
14. *reclinatus*, Roxb. (*fl. ind.* 3, p. 669.) 5 Sumatra. Fl. small, yellowish, R. S.; fr. C. S.
15. *strictus*, Roxb. (*fl. ind.* 3, p. 670.) 5 Malay Islands. Fl. small, deep-purple; and fr. the whole year.



16. *tetrandrus*, Roxb. (*fl. ind.* 3, p. 674;—*P. reticulata*, Lodd. *Cab.* 2, t. 116, not Poiret.—*P. multiflorus*, Poir., not Willd.) 5. Silhet. Fl. minute, purple, April and May; fr. Sept. and Oct.
17. *juniperinus*, Wall. 5. Nepal. Fl. small, greenish; and fr. the whole year.
18. *baeobotroides*, Wall. 5. Khasiya Hills. Fl. small, greenish, H. and R. S.; fr. C. S.

XYLOPHYLLA, L. (*Juss. gen. pl.* p. 387.)

1. *angustifolia*, Willd. (*Phyllanthus angustifolius*, Swz.;—*Spreng. syst.* 3, p. 20.) 5. Rocky places in Jamaica.—Fl. small, yellowish-red, R. S.; fr. 0.
2. *latifolia*, L. (*B. M.* 26, t. 1021.—*Phyllanthus latifolius*, Swz.—*Spreng. l. c.*) 5. Jamaica. Introduced in 1841.
3. *elongata*, Lodd. (*B. Cab.* t. 1091.) 5. Jamaica. Introduced in 1841.

AGYNEIA, L. (*Spreng. syst.* 3, p. 3. No. 2341.)

1. *puber*, L. (*Spreng. syst.* 3, p. 19.—*Bradleia puber*, Roxb. *fl. ind.* 3, p. 698.) 5. Moluccas.—In H. C. G. Fl?

CLUTIA, L. (*Clutia*, *Spreng. syst.* 3, p. 6. No. 2373.)

1. *semperflorens*, Roxb. (*fl. ind.* 3, p. 730.) 5 Silhet, Assam. Fl. small, purple or green; and fr. the whole year.
2. *oblongifolia*, Roxb. (*fl. ind.* 3, p. 730.) 5 Silhet, Assam. Fl. minute, white, April and May; fr. Aug. and Sept.—Furnishes the Natives with hard, durable wood, fit for various economical purposes. (*Roxb.*)
3. *collina*, Roxb. (*Corom.* 2, t. 169;—*fl. ind.* 3, p. 732;—*Spreng. syst.* 3, p. 49.) 5 Circars. Fl. minute, white, H. S; fr. Dec. and Jan.—Wood reddish, very hard and durable. Outer part of the capsule reported to be exceedingly poisonous.
4. *patula*, Roxb. (*Corom.* 2, t. 170;—*fl. ind.* 3, p. 733;—*Spreng. syst.* 3, p. 49.) 5 Valleys among the Circars. Fl. small, white.—In H. C. G. fl. H. S; fr. R. S.—Wood of the colour of dried rose-leaves, hard, and durable. (*Roxb.*)

The above four species, as well as *C. diversifolia*, Roxb., being all monoealous, and differing in several other respects from *Clutia*, L., which is a Cape-genus, will no doubt be hereafter ranged under a separate head.

BRIDELIA, Willd. (*Spreng. syst.* 3, p. 6. No. 2371.)

1. *spinosa*, Willd. (*Spreng. syst.* 3, p. 48;—*Roxb. fl. ind.* 3, p. 735;—*J. Grah. Cat. B. pl.* p. 184.—*Clutia spinosa*, Roxb. *Corom.* 2, t. 172.) L. 5 Circars. Elephanta, the Ghauts, Salsette, Assam. Fl. small, greenish-yellow. In H. C. G. fl. July and Aug.; fr. Dec. (*Roxb.*)—Wood dark-coloured, hard and durable. Bark powerfully astringent. Leaves eaten by cattle, and said to free them from intestinal worms. (*Roxb.*)
2. *crenulata*, Roxb. (*fl. ind.* 3, p. 734.) L. 5 Banks of the Megna. Fl. small, yellowish. In H. C. G. fl. May; fr. Oct. (*Roxb.*)

3. *scandens*, Willd. (*Spreng. syst.* 3, p. 48;—*Roxb. fl. ind.* 3, p. 736;—*J. Grah. Cat. B. pl.* p. 184.—*Cluytia scandens*, *Roxb. Corom.* 2, t. 173;—*Rheed.* 2, t. 16.) 5 Cirsars. Hills near Nagotnah and about Parr. Common on the Banks of the Gutpurba, near Duddi. Fl. small, yellowish-green. In H. C. G. fl.; and fr. the whole year. (*Roxb.*)
4. *lanceafolia*, *Roxb.* (*fl. ind.* 3, p. 737) L. 5 Bengal. Fl. small, yellowish-green, R. S.; fr. C. S.
5. *attenuata*, Wall. MSS. 5 North-east of Bengal. Fl. small, greenish, R. S.
6. *Berryana*, Wall. MSS. 5 Courtallum? Fl. small, greenish, R. S.
7. *amoena*, Wall. 5 Pegu.

C. RICINER, Bartl.

CROZOPHORA, Neck. (*Spreng. syst.* 3, p. 760, No. 3110.)

1. *plicata*, Ad. Juss. (*Spreng. syst.* 3, p. 850.—*Croton plicatum*, *Vahl.*;—*Roxb. fl. ind.* 3, p. 681;—*J. Grah. Cat. B. pl.* p. 182.—*C. tinctorium*, *Burm. ind.* t. 62, f. 1; not L.) খুদি শুকত। *Khoodi-okra*. © Peninsula of India, Bengal, (Serampore,) extending northwards to the banks of the Jumna. Fl. small, greenish-white, C. S.; fr. H. S.—Cloth moistened with the juice of the green capsules, soon becomes blue on exposure to the open air. They, no doubt, contain colouring matter that might be usefully employed, probably similar to that of *Croton tinctorium*, L. (*Roxb.*)

CROTON, L. (*Spreng. syst.* 3, p. 762, No. 3135.—*κρότων, ὄνος, ὅ*. *Croton*, onis, f. *Plin.*)

1. *polyandra*, *Roxb.* (*H. B.* p. 69;—*fl. ind.* 3, p. 682; not *Spreng.*—*Neue Entdeck.* 1820-22, 2, p. 120.—*C. Roxburghii*, *Wall. Rept.*) হাকুই *Hakooi*. দন্তী *Dumtee*. 5 Cirsars. Bengal, (Serampore,) extending northwards to the banks of the Jumna. Fl. small, greenish-yellow, R. and C. S.; fr. C. S. Seeds esteemed by the Natives as a good purgative. They administer one, two, or three seeds, bruised up with water, according to the effect they wish to be produced. Some say, that these are the real *Jamalgota* of the Hindoos, while others, and with more reason, think that *Croton Tiglium* is the plant producing the real drug. (*Roxb.*)
2. *drupacea*, *Roxb.* (*fl. ind.* 3, p. 683.) 5 Dacca. Fl. small, greenish yellow, March and April; fr. Aug. and Sept.
3. *oblongifolia*, *Roxb.* (*fl. ind.* 4, p. 685, not *Delile*, nor *Sieber.*) বড়গাছ *Buro-gachh*. 5 Fl. small, greenish yellow, March; fr. R. S. Bengal. (Serampore.)
4. *Joufra*, *Roxb.* (*fl. ind.* 3, p. 685.) 5 Silhet. Fl. small, greenish yellow, Feb. and March; fr. R. S.
5. *Tiglium*, L. (*Spreng. syst.* 3, p. 870;—*Roxb. fl. ind.* 3, p. 682;—*J. Grah. Cat. B. pl.* p. 182.—*C. Jamalgota*, *Buch.*;—*Rheed.* 2, t. 33;—*Rumph.* 4, t. 42.) জয়পাল *Jypal*. Hind. *Jamalgota*. 5 Moluccas,

Baliospermum
axillare Pl.
H. Br. Ind. 44



Tavoy, Coromandel, Concan, Assam. Fl. small, greenish yellow; H. S.; fr. C. S. Produces the famous *Croton-oil*. The leaves have a very nauseous taste, and the whole tree smells offensively. (*Roxb.*)

6. *bicolor*, *Roxb.* (*fl. ind.* 3, p. 680.) 5 Sumatra. In H. C. G. fl. March and April. (*Roxb.*)

7. *urophylla*, Wall. MSS. Introduced in 1841. N. E. of Bengal.

8. *micradenia*, Wall. N. E. of Bengal.

9. *iliciodora*, Wall. 5 from Madagascar.

10. *levigata*, Wall. (not Vahl.) Silhet.

HÆMATOSPERMUM, Wall. (*Lindl. Nat. Syst.* p. 116.)

1. *neriifolium*, Wall. (*Adelia neriifolia*, *Roxb. fl. ind.* 3, p. 849;—*Spreng. syst.* 3, p. 148;—*J. Grah. Cat. B. pl.* p. 185.) L. 5 Coromandel, Common in the beds of Concan and Deccan rivers. Assam. Fl. small, H. S.; fr. R. S.

ROTTLEFÆ, *Roxb.* (*Spreng. syst.* 3, p. 762. No. 3136.)

1. *tinctoria*, *Roxb.* (*Corom.* 2, t. 168; *fl. ind.* 3, p. 827;—*Spreng. syst.* 3, p. 878;—*J. Grah. Cat. B. pl.* p. 184;—*Rheed.* 5, t. 21.) 5 L. 5 Coromandel. Parell Hill, Bombay. Hills throughout the Concan. Common in the jungles between Mundighur and Sanklee, Assam.—Has not fl. here, nor had it done so in H. C. G. in 1814, though introduced in 1797.—The red, mealy powder which covers the capsules is used by the Natives to dye scarlet. (*Roxb.*)

2. *tetracocca*, *Roxb.* (*fl. ind.* 3, p. 826.) L. 5 Silhet, Assam.—In H. C. G. fl. H. S.; fr. July and Aug. (*Roxb.*)

3. *peltata*, *Roxb.* (*fl. ind.* 3, p. 828.) 5 Silhet, Assam. Fl. small, greenish yellow, April and May; fr. Aug.

4. *ferruginea*, *Roxb.* (*fl. ind.* 3, p. 828.) 5 Malay Islands. Fl. small, greenish yellow, H. S.; fr. O.

5. *alba*, *Roxb.* (*fl. ind.* 3, p. 829.) 5 Penang.—In H. C. G. fl. Sept. and Oct. (*Roxb.*)

6. *laccifera*, (*R. dicocca*, *Roxb. fl. ind.* 3, p. 829.—*Aleurites laccifera*, *Willd.*;—*Spreng. syst.* 3, p. 147.—*Croton lacciferum*, L.;—not C. aromaticum, L.; *Spreng. o. c.* p. 869.) 5 आकूष *Aukkush*. 5 Coromandel, Bengal, (Serampore.) Fl. small, greenish yellow, H. and R. S.; fr. R. S.

7. *barbata*, Wall. 5 Penang. Introduced in 1840.—Has not fl.

CODIÆUM, *Rumph.* (*Spreng. syst.* 3, p. 762. No. 3134.)

1. *chrysosticton*, *Rumph.* (*Spreng. syst.* 3, p. 866.—*Croton variegatum*, L.;—*Roxb. fl. ind.* 3, p. 678;—*J. Grah. Cat. B. pl.* p. 182.) 5 Moluccas. Fl. small, greenish-yellow, H. and R. S.; fr. R. S. but rare.—Root and bark acrid, exciting, if chewed, a burning sensation in the mouth. Leaves sweet and cooling. (*Rumph.*)

a. *medium*; yellow-green-leaved. (*Rheed.* 6, t. 61;—*Rumph.* 4, t. 25.)

β. *crispum*; crisp-leaved. (*Rumph.* 4, t. 26, f. 2.)



γ. *latifolium*; painted-leaved. (*Codiaeum pictum*, Hook. B. M. 58, t. 3051.)

δ. *viride*; long and uniformly green-leaved.

GENIUM, Roxb. (*Spreng. syst.* 2, p. 445. No. 1793.)

1. *bifarium*, Roxb. (*fl. ind.* 3, p. 830;—*Spreng. syst.* 2, p. 465.) 5 Native place uncertain. Fl. small, yellow; Feb. and March; fr. R. S.
2. *lanceolatum*, Roxb. (*fl. ind.* 3, p. 831;—*Spreng. syst.* 2, p. 465.) 5 Bengal. (Serampore.) Fl. small, yellow, fragrant, H. S.; fr. C. S.
3. *fasciculatum*, Roxb. (*fl. ind.* 3, p. 832;—*B. M.* 60, t. 3231.—*Sunagada glabra*, Roxb. MSS.) বননারীক্ষা *Bunnaranga*. 5 Circars. Bengal. (Serampore.) Fl. small, yellow, fragrant, H. S.; fr. R. S.

RICINUS, L. (*Spreng. syst.* 3, p. 762, No. 3138.)

1. *communis*, L. (*Spreng. syst.* 3, p. 878;—*Roxb. fl. ind.* 3, p. 689;—*J. Grah. Cat. B. pl.* p. 183;—*B. M.* 48, t. 2209.—*Ricinus speciosus*, *Burm. ind.* t. 63, f. 2;—*Rheed.* 2, t. 32;—*Rumph.* 4, t. 41.) ভেড়ুল *Bherunda*. *Palma Christi*. Castor-oil plant. 5 Greece, N. Africa. India. Much cultivated. Seeds used by dyers to mix with colours and render them permanent. (*J. Grah.*) The oil often used in lamps, especially by the Natives. Leaves a favourite food of some silk worms.
2. *dicocus*, Roxb. (*fl. ind.* 3, p. 690;—*Rumph.* 4, t. 64.) 5 Amboyna. Fl. small, greenish-yellow, H. S.; fr. R. S.
3. *Mappa*, L. (*Roxb. fl. ind.* 3, p. 690.—*Mappa moluccana*, *Spreng. syst.* 3, p. 878.—*Acalypha Mappa*, *Willd.*;—*Rumph.* 3, t. 108.) 5 Moluccas. Fl. small, greenish, R. and C. S.; fr. O.

JANIPHA, Kth. (*Spreng. syst.* 3, p. 8, No. 2404.)

1. *Yuquilla*, Kth. (var. *J. Lofingii*, Kth.;—*Spreng. syst.* 3, p. 77.) 5 S. America. Introduced in 1841.
2. *Manihot*, Kth. (*Spreng. syst.* 3, p. 77;—*B. M.* 58, t. 3071.—*Jatropha Manihot*, L.;—*Roxb. H. B.* p. 69;—*J. Grah. Cat. B. pl.* p. 183.) *Tapioca*, *Manioc*, or *Cassava*. Plant. Fl. smallish, reddish. Has never fl. here, nor had it done so in H. C. G. in 1814, though introduced in 1794.—S. America.—The roots yield a flour (*Cassava*) of immense importance in S. America. This is obtained by crushing them, after the bark has been removed, and then straining off the water; after which the mass is gradually dried in pans over a fire. *Tapioca* is a preparation from the same root. (*Lindl.*)

JATROPHA, L. (*Spreng. syst.* 3, p. 8, No. 2403.)

1. *pandurafolia*, Andr. (*Spreng. syst.* 3, p. 76;—*B. M.* 17, t. 604.) 5 Cuba. Fl. largish, scarlet; and fr. the whole year.
2. *Curcas*, L. (*Spreng. syst.* 3, p. 77;—*Roxb. fl. ind.* 3, p. 686;—*J. Grah. Cat. B. pl.* p. 183.—*Castiglionia lobata*, *Ruiz. and Pav.*) বাষভেরণ্ডা *Bagh-dharanda*. 5 Cuba, S. America. Domesticated in India. Fl. small, green; and fr. the whole year. Seeds purgative and occasionally emetic. An expressed oil is obtained from them, which is reckoned a valuable external application in itch and herpes; it is also used, a



little diluted, in chronic rheumatism. The varnish used by the Chinese for covering boxes is made by boiling this oil with oxide of iron. The leaves are considered rubefacient and discutient. The milky-juice is supposed to be detergent and healing, and dyes linen black. (*Ainslie*.)

3. *multifida*, L. (*Spreng. syst.* 3, p. 77;—*Roxb. H. B.* p. 69;—*J. Grah. Cat. B. pl.* p. 183;—*Salisb. lond. t.* 91.) Coral-plant. 5 S. America. Fl. small, red; and fr. the whole year.

4. *glandulifera*, Roxb. (*fl. ind.* 3, p. 688.—*J. glauca*, *Vahl.* ?) 5 India; locality uncertain. Fl. small, greenish-yellow; and fr. the whole year. Exudes a pale thin juice, which the Hindoos employ for removing films from the eyes. (*Roxb.*)

5. *carnosa*, Wall. 5 Bengal. H. C. G.

MACABANGA, Pet. Th. ?

1. *Roxburghii*, Wall. (*Osyris peltata*, *Roxb.* 3, p. 755.) 5 Circars. All the young parts of this plant are covered more or less with soft resinous adhesive matter, smelling strongly of turpentine.

ELÆOCOCCA, Commers. (*Elæococcus*, *Spreng. syst.* 3, p. 763, No. 3140.)

1. *Vernicia*, Ad. Juss. (*Spreng. syst.* 3, p. 884.—*Vernicia montana*, *Lour.*—*Dryandra Vernicia*, *Corr.*) 5 China, Cochin-China. Assam. Fl. largish, white, R. S. This and the next species are the Varnish-trees of the Chinese.

2. *verrucosa*, Ad. Juss. (*Spreng. syst.* 3, p. 884.—*Dryandra cordata*, *Thunb. jap. p.* 267, t. 27.—*D. oleifera*, *Lam.*;—*Banks icon*, *Kämpf. t.* 23.) 5 Japan. In H. C. G. ? Fl. ?

ALBURITES, Forst. (*Spreng. syst.* 3, p. 13, No. 2473.)

1. *triloba*, Forst. (*Spreng. syst.* 3, p. 147;—*Roxb. fl. ind.* 3, p. 629;—*J. Grah. Cat. B. pl.* p. 181.—*Camirium cordifolium*, *Gärtn. fr. p.* 195, t. 125, f. 2.—*Juglans Camirium*, *Lour.*—*Camirium*, *Rumph. 2, t.* 58.) अथराटे *Ukhrot*. L. 5. Moluccas, Malay Islands. South Mahratta country about Belgaum. Bengal, (Serampore,) Assam. Fl. small, greenish-white, H. S.; fr. Aug. Kernels eatable, tasting like fresh walnuts. They yield by expression a large proportion of very pure, palatable oil. (*Roxb.*)

ANDA, Pis. (*Spreng. syst.* 3, p. 6, No. 2380.)

1. *Gomesii*, Juss. (*Spreng. syst.* 3, p. 54.) L. 5. Brazil. Fl. small, whitish, somewhat sweet-scented, March and April; fr. nearly a year after. The seeds either eaten raw, or prepared as an electuary, act as a purgative. They yield an oil, which is said to be drying and excellent for painting. (*A. St. Hilaire*.)

D. ACALYPHÆ, Bartl.

ACALYPHA, L. (*Spreng. syst.* 3, p. 762, No. 3139.)

1. *ciliata*, Forsk. (*Spreng. syst.* 3, p. 879;—*Roxb. fl. ind.* 3, p. 676;—*Vahl. symb. 1, p.* 77, t. 20.) ☉ Guinea, Arabia, Bengal, (Serampore,) extending northwards to the banks of the Jumna. Fl. small, greenish, R. S.; fr. C. S.

2. *indica*, L. (*Spreng. syst.* 3, p. 880;—*Roxb. fl. ind.* 3, p. 675;—*J. Grah. Cat. B. pl.* p. 186;—*Rheed.* 10, t. 81, 83.) बूक्त झुड़ि *Mookto-joori*. © Peninsulas of India. Bengal, (Serampore,) &c. Fl. small, greenish, R. S.; fr. C. S. Root, bruised in hot water, cathartic. A decoction of the leaves laxative. (*Rheed.*) Cats are as much affected by the roots as by those of *Valerian*. (*Nimmo*.)
 3. *chinensis*, *Roxb.* (*fl. ind.* 3, p. 677.) © China. In H. C. G. fl.; and fr. the whole year. (*Roxb.*)
 4. *conferta*, *Roxb.* (*fl. ind.* 3, p. 677.) © China. In H. C. G. fl.; and fr. the whole year. (*Roxb.*)
 5. *cylindrica*, *Roxb.* (*fl. ind.* 3, p. 678.) © Mauritius. In H. C. G. fl.; and fr. the whole year. (*Roxb.*)
- MERCURIALIS, L. (*Spreng. syst.* 2, p. 263, No. 1529.)
1. *annua*, L. (*Spreng. syst.* 2, p. 272;—*Roxb. H. B.* p. 73;—*E. B.* 8, t. 559.) Annual Mercury. © Europe. Fl. small, greenish-yellow, Feb. Plant diuretic, rather dangerous. (*Smith*.)
- PLUKENETIA, L. (*Spreng. syst.* 3, p. 10, No. 2430.)
1. *corniculata*, Sm. (*Spreng. syst.* 3, p. 87;—*Rumph.* 1, t. 79, f. 2.) ॐ Amboyna. Assam. Fl. small, greenish, R. S. The boiled leaves are said to be an excellent potherb, for which purpose the plant is cultivated in Amboyna. (*Rumph.*)
- TRAGIA, Plum. (*Spreng. syst.* 3, p. 759, No. 3091.)
1. *cannabina*, L. (*Spreng. syst.* 3, p. 834;—*Roxb. fl. ind.* 3, p. 575.) ॐ Coromandel. Bengal, (Serampore,) extending northwards to the banks of the Jumna. Fl. small, yellowish, R. S.; fr. C. S. The hair of this plant stings like that of the common nettle.
 2. *Mercurialis*, L. (*Spreng. syst.* 3, p. 833;—*Roxb. fl. ind.* 3, p. 576;—*J. Grah. Cat. B. pl.* p. 186;—*Rheed.* 10, t. 82.) © Peninsula of India. Fl. small, greenish, R. and C. S.; fr. C. S.
 4. *involutrata*, L. (*Spreng. syst.* 3, p. 833;—*Roxb. fl. ind.* 3, p. 576;—*J. Grah. Cat. B. pl.* p. 186;—*Jacq. icon. rar.* 2, t. 190;—*Rheed.* 2, t. 39;—*Burm. Zeyl.* t. 92.) बिछुड़ी *Bichhutee*. ॐ Ceylon. Peninsula of India, Bengal, (Serampore.) Fl. small, greenish; and fr. the whole year. The hair of this plant stings like that of the common nettle. The root is reckoned, by the Hindoo doctors, among those medicines which they conceive to possess altering and correcting virtues in cases of cachexia. (*Ainslie*.)
 5. *colorata*, Poir. (*excl. syn. Rheed.* 12, t. 30.) Mauritius.
- ? STYLODISCUS, Bennett. (*Horsf. pl. Jav. rar.* 2, p. 133.)
1. *trifoliatum*, Bennett. (*Horsf. o. c. t.* 29.—*Psychodendron trifoliatum*, *Wall. rept.*—*Andrachne trifoliata*, *Roxb. fl. ind.* 3, p. 728.) L. 5 Java. Ava. Peninsula of India, Hurdwar. Chittagong, Nepal. Fl. small greenish, Feb.; fr. May and June. Wood and bark red. Employed for masts and spars of small vessels.

*E. HIPPOMANEÆ*, Bartl.*CNEMIDOSTACHYS*, Mart. (*Spreng. syst.* 3, p. 759. No. 3092.)

1. *Chamaelea*, Spreng. (*syst.* 3, p. 835.—*Tragia Chamaelea*, L.;—*Roxb. fl. ind.* 3, p. 577;—*J. Grah. Cat. B. pl.* p. 186;—*Rheed.* 2, t. 34;—*Burm. zeyl.* t. 25.) 4. Ceylon. Coromandel. South Concan. Fl. small, greenish; and fr. C. S.

SAPIUM, Jacq. (*Spreng. syst.* 3, p. 759, No. 3085.)

1. *indicum*, Willd. (*Spreng. syst.* 3, p. 805;—*Roxb. fl. ind.* 3, p. 692;—*J. Grah. Cat. B. pl.* p. 181;—*Rheed.* 4, t. 51.) হুড়ুয়া *Hooroooya*. 5 Coromandel, South Concan. Soonderbuns. Assam. Fl. minute, greenish; and fr. nearly the whole year.

2. *baccatum*, Roxb. (*fl. ind.* 3, p. 694.) L. 5 Assam. Fl. minute, greenish, March and April; fr. Aug. and Sept.

STILLINGIA, L. (*Spreng. syst.* 3, p. 759. No. 3084.)

1. *sebifera*, Michx. (*Spreng. syst.* 3, p. 805.—*Sapium sebiferum*, *Roxb. fl. ind.* 3, p. 693;—*J. Grah. Cat. B. pl.* p. 181.—*Croton sebiferum*, L.) চেনাটপিন্সল *Chelat-pipul*. মোমচীনা *Mom-cheena*. 5 China. Domesticated about Serampore. Fl. small, yellowish, March and April; fr. C. S. The sebaceous produce of the seeds forms the vegetable tallow of China, which, however, is for the lamp, far inferior to Cocoa-nut oil. (*Roxb.*)

HURA, L. (*Spreng. syst.* 3, p. 763. No. 3141.)

1. *crepitans*, L. (*Spreng. syst.* 3, p. 884;—*Roxb. H. B.* p. 70;—*J. Grah. Cat. B. pl.* p. 184;—*Lam. ill.* t. 793.) Sandbox Tree. L. 5 Tropical America. Fl. small, whitish, R. S.; fr. C. S. The sap of the leaves and bark is highly poisonous. One or two seeds are said to have been administered to negro slaves as purgatives, with fatal consequences. (*Adr. Jussieu.*)

EXCOECARIA, L. (*Spreng. syst.* 3, p. 4, No. 2345.)

1. *Agallocha*, L. (*Spreng. syst.* 3, p. 25;—*Roxb. fl. ind.* 3, p. 756;—*J. Grah. Cat. B. pl.* p. 185;—*Rumph.* 2, t. 79, 80.) গৌয়া *Gengwa*. 5 Moluccas. Soonderbuns. Salt Marshes at Bombay. Fl. minute, greenish, H. S.; fr. R. S. The juice of this tree, and even its smoke when burnt, affects the eyes with intolerable pain, as has been experienced occasionally by sailors sent ashore to cut fuel, who, according to Rumphius (and Roxburgh,) having accidentally rubbed their eyes with the juice, became blinded, and ran about like distracted men, and some of them finally lost their sight. (*Lindl.*)

F. EUPHORBIEÆ, Bartl.*DALECHAMPLA*, L. (*Spreng. syst.* 3, p. 10, No. 2429.)

1. *madagascariensis*, Bojer. 5 Madagascar. Fl. small, deep-yellow, with large white bractes, Sept.; fr. C. S.

EUPHORBIA, L. (*Spreng. syst.* 3, p. 758. No. 3076.) *Spurge*.

1. *Ligularia*, *Roxb.* (*fl. ind.* 2, p. 465;—*J. Grah. Cat. B. pl.* p. 179. annot;—*Rumph.* 4, t. 40.) মনসাসিজ *Munsa-sij*. 5 Moluccas. Peninsula

- of India, Bengal, (Serampore.) Fl. middle-sized, greenish-yellow, R. S. Root, mixed up with black pepper, used by the Natives against snake-bites. (Roxb.)
2. *Nivulia*, Buch. (*Spreng. syst.* 3, p. 787.—*E. nerifolia*, L.;—*Roxb. fl. ind.* 2, p. 467;—*J. Grah. Cat. B. pl.* p. 178;—*DC. pl. gras. t.* 46;—*Rheed. 2, t.* 43.) *সিঁজ* *Sij.* 5 Coromandel. Rocky parts of the Deccan. The Concans. Bengal, (Serampore.) Scinde. Fl. middle-sized, greenish-yellow, March and April. Juice of the leaves taken by the Natives as a purge and deobstruent, and, mixed with *Neem* oil, employed externally in cases of contracted limb brought on by ill-treated rheumatic affections. (*Ainslie.*)
 3. *bupleurifolia*, Jacq. (*Spr. syst.* 3, p. 787;—*B. M.* 63, p. 3476.) *‡* C. G. H.
 4. *trigona*, Roxb. (*fl. ind.* 2, p. 468;—not Haw.) *‡* Moluccas. Fl. middle-sized, greenish-yellow. Feb. March and April; fr. 0.
 5. *Bojeri*, Hook. (*B. M.* 63, t. 3527.) *‡* Madagascar. Fl. largish, scarlet, —the whole year.
 6. *splendens*, Bojer. (*B. M.* 56, t. 2902.) *‡* Madagascar. Fl. largish, red, H. S.
 7. *hoyafolia*, Wall. *‡* Penang. In H. C. G.
 8. *antiquorum*, L. (*Spreng. syst.* 3, p. 786;—excl. syn. Vahl.—*Roxb. fl. ind.* 2, p. 468;—*J. Grah. Cat. B. pl.* p. 179;—*Rheed. 2, t.* 42.) *নাড়াসিঁজ* *Nara-sij.* *তেকাটাসিঁজ* *Tekata-sij.* *‡* Coromandel. South Mahratta Country. Bengal, (Serampore.) Assam. Fl. middle-sized, greenish yellow, C. S.; fr. H. S. The inspissated milky juice of this species is said, in common with that of other succulent Euphorbias, to produce the drug Euphorbium. In India this is mixed with the oil expressed from the seeds of *Sesamum indicum*, and used externally in rheumatic affections, and internally in cases of obstinate constipation. (*Ainslie.*)
 9. *arborescens*, Roxb. (*fl. ind.* 2, p. 468.) *‡* Bengal? Has not fl. here, nor had it done so in H. C. G. in 1814, though introduced in 1800.
 10. *lactea*, Roxb. (*fl. ind.* 2, p. 468.) *‡* Moluccas. Introduced into H. C. G. in 1802, but had not fl. up to 1814.
 11. *lophogona*, Lam. (*Spreng. syst.* 3, p. 788;—*B. Cab.* 15, p. 1477.) *‡* Madagascar. Has been introduced into H. C. G. Fl. ?
 12. *Tiraculli*, L. (*Spreng. syst.* 3, p. 789;—*Roxb. fl. ind.* 2, p. 470;—*J. Grah. Cat. B. pl.* p. 179;—*Rheed. 2, t.* 44;—*Rumph. auct. t.* 29.) *লঙ্কাসিঁজ* *Lunka-sij.* *‡* Coromandel. Guzerat. Deccan. Concan. Bengal, (Serampore.) Assam. Moluccas. Fl. small, yellowish, R. S. The fresh, acrid juice of this plant employed by the Natives as a blister. (*Ainslie.*)
 13. *pyrifolia*, Lam. (*Spreng. syst.* 3, p. 789.) *‡* Mauritius. Has been introduced into H. C. G. Fl. ?



14. *mellifera*, Ait. (*Spreng. syst.* 3, p. 789;—*B. M.* 22, t. 1305.) 5
Madeira. Introduced in 1841.
15. *maculata*, L. (*Spreng. syst.* 3, p. 791;—*Jacq. vind.* 2, t. 186.) 4.
N. America. Fl. small, greenish, the whole year.
16. *picta*, Jacq. (*coll.* 3, p. 178;—*ic. rar.* 3, p. 5, t. 477.) 4. W.
Indies, 1820.
17. *uniflora*, Roxb. (*fl. ind.* 2, p. 473.) ☉ Coromandel? In H. C. G.
fl.; and fr. the whole year. (*Roxb.*)
18. *parviflora*, Roxb. (*fl. ind.* 2, p. 472;—*Linn.*?—*J. Grah. Cat. B.*
pl. p. 179;—*Burm. Zeyl.* t. 105, f. 2.) ☉ Ceylon, Peninsula of
India, Bengal, (Serampore.) Fl. minute greenish; and fr. the whole
year.
19. *linearis*, Retz. (*Spreng. syst.* 3, p. 792.) 5 St. Cruze. Introduced in
1841.
20. *Peplis*, L. (*Spreng. syst.* 3, p. 792;—*E. B.* 28, t. 2002.)
Purple Spurge. ☉ England, S. Europe. Fl. small, yellow or red,
C. S.
21. *punicea*, Swz. (*Spr. syst.* 3, p. 790;—*Jacq. coll.* 3, p. 379;—*ic. rar.*
3, 484;—*B. Reg.* 3, 190;—*B. M.* 45, 1961;—*B. Cab.* 20, 190.) 5
Jamaica.—Fl. Feb.
22. *Chamaesyce*, L. (*Spreng. syst.* 3, p. 792;—*Roxb. fl. ind.* 3, p. 473.)
ছোটকেরুই *Choto-keruee.* ☉ Coromandel, Bengal, (Serampore.) S.
Europe. Fl. minute, greenish-white; and fr. the whole year.
23. *sessiliflora*, Roxb. (*fl. ind.* 2, p. 471.) 4. Pegu. In H. C. G. fl.
Feb. and March. (*Roxb.*)
24. *acaulis*, Roxb. (*fl. ind.* 2, p. 472;—*J. Grah. Cat. B. pl.* p. 179.)
4. Bengal, (Poorneah.) Hills in the Concan, Mahableschwur. In H.
C. G. fl. March. (*Roxb.*)
25. *peltata*, Roxb. (*fl. ind.* 2, p. 474.) ☉ Circars. In H. C. G. fl. C. S.;
fr. H. S. (*Roxb.*)
26. *prunifolia*, Jacq. (*Spreng. syst.* 3, p. 793, under *E. geniculata*, Ort.;—
Roxb. H. B. p. 36.) ☉ Peru. Fl. minute, greenish; and fr. the whole
year.
27. *hirta*, L. (*Spreng. syst.* 3, p. 793;—*Roxb. fl. ind.* 2, p. 472;—*J.*
Grah. Cat. B. pl. p. 179;—*Jacq. collect. suppl.* p. 160, t. 11, f. 1;—
Burm. zeyl. t. 104;—*Rumph.* 6, t. 23, f. 2.) বড়কেরুই *Buro-keruee.*
☉ Moluccas, Ceylon, Peninsula of India, Bengal, (Serampore.) Fl.
minute, greenish; and fr. the whole year.
28. *thymifolia*, L. (*Spreng. syst.* 3, p. 795;—*Roxb. fl. ind.* 2, p. 473.—
Burm. zeyl. t. 105, f. 3.) শেতকেরুই *Shwet-keruee.* ☉ Bourbon,
Mauritius, Ceylon, Peninsula of India, Bengal, (Serampore.) Fl. mi-
nute, greenish; and fr. the whole year.
29. *prolifera*, Buch. (*Spr.* 3, *syst.* 795.) Nepal.
30. *exigua*, L. (*Spreng. syst.* 3, p. 796;—*E. B.* 19, t. 1336.) *Dwarf*
Spurge. ☉ England, Europe. Fl. minute, reddish-green, C. S.

31. *dracunculoides*, Lam. (*Spreng. syst.* 3, p. 796;—*Roxb. fl. ind.* 2, p. 474.) ছাগলপুটিপত্রী *Chhagul-puiputee*. © Mauritius. Peninsula of India. Bengal, (Serampore.) Fl. minute, greenish, C. S.; fr. H. S.

POINSETTIA, Grah. (*B. M.* 63, t. 3493.)

1. *pulcherrima*, Grah. (*l. c.*) ☞ Mexico. Fl. small, green, but the floral leaves (bractes) very large and of a vermillion colour. In H. C. G. fl. C. S.

PEDILANTHUS, Neck. (*Spreng. syst.* 3, p. 758. No. 3077.)

1. *lithymaloides*, Poit. (*Spreng. syst.* 3, p. 802;—*B. Reg.* 10, t. 837.—*Euphorbia tithymaloides*, L.;—*Roxb. H. B.* p. 36;—*J. Grah. Cat. B. pl.* p. 179.) ☞ S. America. Fl. largish, bright scarlet, H. S.; fr. O. Was introduced into the country before 1794, and is now domesticated every where. Chiefly used for hedges, as neither goats nor cows will touch the leaves.—Used in the W. Indies medicinally under the name of Ipecacuanha, in all cases where that drug is required.

2. *carinatus*, Spreng. (*o. c.* p. 802;—*B. M.* 51, t. 2514.) ☞ Trinidad.

GOVANIA, Wall. ☞ Ava. Fl. H. S.

1. *nivea*, Wall.

XEROGLOTTIS, Wall.

1. *fragrans*, Wall.—North East Bengal.

- * *Xylophylla speciosa*, Jacq. ☞ Jamaica.—*X. linearis*, Pers. ☞ Jamaica.—*Croton Cascarilla*, L. ☞ S. America.—*C. Eleuteria*, L. ☞ Jamaica.—*C. xalapensis*, Kth. ☞ Mexico.—*C. gossypifolia*, Vahl. ☞ Trinidad.—*C. nivea*, Jacq. ☞ Jamaica.—*Adelia Bernardia*, L. ☞ Jamaica.—*A. Ricinella*, L. ☞ Jamaica.—*A. Acidoton*, L. ☞ Jamaica.—*Acidoton urens*, Swz. ☞ Jamaica.—*Ricinus globosus*, Willd. ☞ Jamaica.—*Janipha foetida*, Kth. ☞ Mexico.—*Jatropha integerrima*, Jacq. ☞ Cuba. B. M. 36, t. 1464. Still more beautiful than *J. panduræfolia*, Andr.—*J. coccinea*, Lk. ☞ Cuba.—*J. gossypifolia*, L.; B. Reg. 9, t. 746. ☞ W. Indies.—*J. fragrans*, Kth. ☞ Cuba.—*J. urens*, L. ☞ Brazil.—*Siphonia Cahuchu*, Rich. ☞ Guiana. The famous Caoutchouc Plant of S. America.—*Plukenetia volubilis*, L. ☞ W. Indies.—*P. verrucosa*, Sm. ☞ Surinam.—*Omalanthus populifolius*, Grah.; B. M. 54, t. 2780. ☞ N. Holland. Introduced at Bombay.—*Hippomane Mancinella*, L. ☞ W. Indies.—*Omphalea triandra*, L. ☞ Jamaica.—*Dalechampia scandens*, L. ☞ W. Indies.—*D. brasiliensis*, Lam. ☞ Brazil.—*Euphorbia punicea*, Swz.; B. M. 45, t. 1961. ☞ Jamaica.—*E. cyathophora*, Jacq.; B. Reg. 9, t. 765. ☞ S. America.—*E. magnimamma*, Haw. ☞ Mexico.—*E. lanifera*, Haw. ☞ Mexico.—*E. gemmispina*, Haw. ☞ Mexico.—*E. biglandulosa*, Haw. ☞ Bourbon.—*E. angustifolia*, Lock. ☞ Trinidad.—*Pedilanthus carinatus*, Spreng.; B. M. 51, t. 2514. ☞ Trinidad.—*P. canaliculatus*, Swz. ☞ S. America.—*P. padifolius*, Poit. ☞ S. America.—*P. cordellatus*, Haw. ☞ S. America.



ORDER LXXXIV.—EMPETRACEÆ, Lind. Nat. Syst. p. 117.

THE CROWBERRY TRIBE.

Small shrubs, of 3 genera, and 4 species: 2 from S. Europe; 1 from N. America; and from the Straits of Magellan.—Properties unknown.

* *Corema album*, D. Don. 5 Portugal.

ORDER LXXXV.—FOUQUIERACEÆ, DC.—Lindl. Nat. Syst. p. 118.

Trees or shrubs, of 2 Mexican genera, each with 1 species.—Properties unknown.

* *Fouquiera formosa*, H. B. and Kth. 5 Mexico.

ORDER LXXXVI.—CELASTRACEÆ, Lindl. Nat. Syst. p. 119.

Trees or shrubs, sometimes climbing, referred by Lindl. (adding *Lophopetalum*) to 26 genera. Of species, DC. pr. and Spreng. syst. enumerate 22 from S. America, Mexico and the W. Indies; 9 from N. America; 5 from Japan; 5 from Madagascar and Mauritius; 3 from Europe; 2 from N. Africa; 2 from the Canaries; 2 from Arabia; 2 from New Holland and the South Sea Islands; 1 from China; 1 from Caucasus; and 1 from Senegal. To these Wall. Cat. adds 1 for China, and 1 for Mauritius. S. Africa exhibits 60 forms, (*Harvey*,) and the E. Indies, according to our materials, 80. Of these, 28 belong to *Euonymus*; 3 to *Lophopetalum*; 33 to *Celastrus*; 3-4 to *Elæodendron*; 2 to *Pleurostylia*; — to *Actegeton*; 4 to *Kurrimia*; 4 to *Microtropis*; and 1 to *Tralliana*. Twenty-two inhabit the Himalayas; 12 the Khassya and Morung Mountains; 4 the Neelgherries; and the rest Ceylon, Malabar, Mysore, Travancore, Singapore, Penang, Prome, Tavoy, &c. Properties unimportant.

EUONYMUS, L. (*DC. pr.* 2, p. 3;—*W. and A. pr.* 1, p. 160.) *Spindle-Tree*.

1. *Hamiltonianus*, Wall. (*Cat.*—*E. atropurpurens*, *Roxb. fl. ind.* 1, p. 627; *ed. Carey*, 2, p. 402;—not *Jacq.*) 5 Deyrah Dhoon. Fl. small, greenish-white, March and April; fr. 0.
2. *glaber*, *Roxb. (fl. ind.* 1, p. 628; *ed. Carey*, 2, p. 403.) 5 Chittagong. Fl. small, greenish-white, May; fr. 0.
3. *grossus*, Wall. (*Roxb. fl. ind.*; *ed. Carey*, 2, p. 408.) 5 Nepal. Fl. small, greenish, June; fr. 0.
4. *echinatus*, Wall. (*Roxb. fl. ind.*; *ed. Carey*, 2, p. 410;—*B. M.* 54, t. 2767;—*Royle ill. t.* 21.) 5 Nepal. 5-7000 ft. alt. Fl. small, green. In H. C. G. Fl.?

5. *bullatus*, Wall. (Cat.) Khassya Mountains. In H. C. G. Fl. ?
? 6. *grandiflorus*, Wall. (Roxb. fl. ind.; ed. Carey, 2, p. 404;—*pl. as. rar.* 3, t. 254;—*tent. fl. nep. t.* 30.) 5 Deyrah Dhoon. Fl. large, white. Has been introduced into H. C. G. Fl. ?

CELASTRUS, L. (DC. pr. 2, p. 5;—W. and A. pr. 1, p. 158.) Staff Tree.

1. *paniculata*, Willd. (Roxb. fl. ind. 1, p. 621; ed. Carey, 2, p. 388;—DC. pr. 2, p. 6;—W. and A. pr. 1, p. 158;—J. Grak. Cat. B. pl. p. 38.—C. nutans, Roxb. fl. ind. 1, p. 623; ed. Carey, 2, p. 390;—DC. l. c.—C. Rothiana, Schult;—DC. pr. 2, p. 8.) 5 Neelgherries. The Ghauts. Hilly parts of the Concan. Mahableshwur. Rajmahl Hills. Shrinagur, Nathpur, Deyra Dhoon, Kheree Pass. Fl. small, greenish, March, April, and May; fr. July and August. An empyreumatic oil is extracted from the seeds, which, owing to a resinous principle, have a very hot and biting taste. This oil (oleum nigrum) has been employed successfully in Beriberri. (Herklots. Malcolmson.)
2. *Wallichiana*, Spreng. (syst. 5, index p. 150, under C. rigida, Wall. —W. and A. pr. 1, p. 159.—C. rigida, Wall.;—Roxb. fl. ind. ed Carey, 2, p. 396.—C. buxifolia, Roxb. H. B. p. 18; not L.) 5 Travancore. Fl. small, yellowish-green, March and April; fr. Aug.
3. *montana*, Roxb. (fl. ind. 1, p. 620; ed. Carey, 2, p. 387;—DC. pr. 2, p. 9;—W. and A. pr. 1, p. 159;—J. Grak. Cat. B. pl. p. 38;—Wight icon. 2, t. 382.) 5 Coromandel. Hills of the Deccan. Fl. small, greenish-white, March; fr. O. Wood hard and durable. (Roxb.)
4. *emarginata*, Willd. (DC. pr. 2, p. 8;—Roxb. fl. ind. 1, p. 620;—ed. Carey, 2, p. 387;—W. and A. pr. 1, p. 160.) 5 Coromandel. Fl. small, whitish-yellow, C. S.; fr. H. S. Makes good fences and fuel. (Roxb.)
5. *dependens*, Wall. (C. multiflora, Roxb. fl. ind. 1, p. 622; ed. Carey, 2, p. 389;—not Lam.) 5 Nepal. Fl. small, whitish-yellow, July and Aug.; fr. Jan.
6. *trigyna*, Lam. (DC. pr. 2, p. 6.—C. obtusifolia, Roxb. fl. ind. 1, p. 625; ed. Carey, 2, p. 393.) 5 Mauritius. Fl. small, white, faintly sweet-scented, May and June; fr. O.
7. *monosperma*, Roxb. (fl. ind. 1, p. 625; ed. Carey, 2, p. 394.) 5 Silhet. Fl. small, greenish yellow.—In H. C. G. fl. April; fr. Oct. (Roxb.)
8. *robusta*, Roxb. (fl. ind. 1, p. 626; ed. Carey, 2, p. 395.) L. 5 Silhet, Assam. Fl. small, greenish yellow.—In H. C. G. fl. Aug.; fr. April.
9. *rufa*, Wall. (Roxb. fl. ind.; ed. Carey, 2, p. 397.) L. 5 Nepal, Kemaon. Fl. small, white. Introduced in 1841.
10. *stylosa*, Wall. (Roxb. fl. ind.; ed. Carey, 2, p. 401.) 5 Nepal. Fl. small, greenish white. Introduced in 1841.
11. *buxifolia*, L. (DC. pr. 2, p. 8;—B. M. 47, t. 2114;—not Roxb.) 5 C. G. H. Fl. small, white, April and May; fr. O.
12. *pyracantha*, L. (DC. pr. 2, p. 8;—B. M. 29, t. 1167.) 5 C. G. H. Fl. smallish, white, April; fr. O.



13. *oblonga*, Wall. 5 Silhet. Fl. Dec.
14. *pallida*, Wall. Singapore. Fl. H. S.
15. *tristyla*, (C. trigyna, Roxb. *fl. ind.* 1, p. 624; ed. Carey, 2, p. 391; —not Lam.) 5 Moluccas. In H. C. G.?
16. *fascicularis*, Wall. Khassya Hills.
ELÆODENDRON, Jacq. ? Roxb. (*W. and A. pr.* 1, p. 156.)
1. *glauca*, Pers. (DC. *pr.* 2, p. 10;—Roxb. *fl. ind.* 1, p. 638; ed. Carey, 2, p. 432.—Schrebera albens, Retz. *obs.* 6, p. 25, t. 3.—Celastrus glaucus, Vahl.—Mangifera glauca, Rottb. *nov. act. hafn.* 2, t. 4, f. 1.—Senacia glauca, Lam.) Ceylon Tea-tree. 5 Ceylon. Fl. small, green, May; fr. Sept. and Oct.
RUBENTIA, Commers. (*Juss gen. pl.* p. 378;—*W. and A. pr.* 1, p. 156, annot.)
1. *olivina*, Gmel. (*syst.* 408.—Elæodendron orientale, Jacq. *icon. rar.* 1, t. 48;—DC. *pr.* 2, p. 10.—E. indicum, Görtz. *fr.* 1, p. 274, t. 57, f. 5;—Lam. *ill.* t. 132;—Roxb. *fl. ind.* 1, p. 640; ed. Carey, 2, p. 433.) 5 Madagascar, Mauritius, where it is called Bois rouge, Bois d'olive. Has been fourteen years in the garden, without fl.
KURRIMIA, Wall. (*Cat.*—Lindl. *Nat. Syst.* p. 119.)
? 1. *macrophylla*, Wall. (*Cat.*—Itea macrophylla, Roxb. *fl. ind.*; ed. Carey, 2, p. 419.) 5 Khassya Mountains. Fl. smallish, yellow, fragrant. Has been introduced into H. C. G. Fl.?
MICROTROPIS, Wall. (*Cat.*—Lindl. *Nat. Syst.* p. 119.)
1. *garcinifolia*, (M. discolor, Wall. *Cat.*—Euonymus garcinifolius, Roxb. *H. B.* p. 18;—*fl. ind.* 1, p. 628; ed. Carey, 2, p. 403.—E. lacer, Buch.; DC. *pr.* 2, p. 5.—Cassine discolor, Wall.;—Roxb. *fl. ind.*; ed. Carey, 2, p. 378.) 5 Khassya Mountains. Fl. small, yellow; and fr. the whole year. (Roxb.)
* *Euonymus dichotomus*, Heyne. Courtallum, Colemala.—*E. Goughii*, Wight *icon.* 1, t. 215. 5 Neelgherries.—*E. acutangulus*, Wight. Neelgherries.—*Lophopetalum Wightianum*, Arn. 5 Malabar.—*L. fimbriatum*, Wight. Mergui.—*Celastrus pyrea*, Telf. Mauritius.—*C. myrtifolia*, L. 5 Jamaica.—*C. quadrangularis*, Schr. 5 Brazil.—*C. mexicana*, M. and S. 5 Mexico.—*Elæodendron Roxburghii*, W. and A.; Wight *ill.* 1, t. 71. 5 Courtallum, Deyra Dhoon.—*Pleurostylia Wightii*, W. and A. Peninsula of India.—*P. Heynii*, W. and A. Peninsula of India.—*Cyrrilla Antillarum*, Michx. 5 W. Indies.—*Ptelidium ovatum*, Pet. Th. 5 Madagascar.

SUB-ORDER.—HIPPOCRATEÆÆ, Lindl. *Nat. Syst.* p. 120.

Arborescent or climbing shrubs, referred to 6 genera. Of their species, DC. *pr.* and Spreng. *syst.* assign 31 to S. America, Mexico and the W.



Indies; 3 to Guinea; 1 to Senegal; 2 to Madagascar; 2 to Timor; and 1 to China. The E. Indian forms amount to 27; 8 of *Hippocratea*; and 19 of *Salacia*. Eight of these inhabit Nepal, Assam, the Khassya, Morung, and Monghir Hills; the rest are found in Java, Cochin-China, Penang, Singapore, Tavoy, Ceylon and Malabar.

"The fruit of *Salacia* (*Tonsella*) *pyriformis*, a native of Sierra Leona, is eatable. It is about the size of a Bergamot Pear; its flavour is rich and sweet. (*Hort. trans.*) The nuts of *Hippocratea comosa* are oily and sweet. Swartz. (*Lindl.*)

HIPPOCRATEA, L. (*DC. pr. 1, p. 567*;—*W. and A. pr. 1, p. 103.*)

1. *indica*, L. (*DC. o. c. p. 568*;—*W. and A. pr. 1, p. 104*;—*Roxb. Corom. 2, t. 130*;—*fl. ind. 1, p. 165*; *ed. Carey. 1, p. 169*;—*J. Grah. Cat. B. pl. p. 27.*) L. 5  Pathucottah. Gingie-Hills. Banks of the Quoina river, above Parr bridge. Along the Ghauts. Monghir. Fl. minute, greenish, April; fr. March.
2. *obtusifolia*, Roxb. (*fl. ind. 1, p. 166*; *ed. Carey. 1, p. 170*;—*DC. pr. 1, p. 569*;—*W. and A. pr. 1, p. 104.*—*Salacia hevigata*, Wight; in *Hook. Bot. Misc. 3, p. 295, suppl. t. 36.* not *DC.*) L. 5  Madura, Tanjore. Fl. small, green, Feb., March and April; fr. March.
3. *arborea*, Roxb. (*Corom. 3, t. 205*; *fl. ind. 1, p. 167*; *ed. Carey. 1, p. 171*;—*DC. pr. 1, p. 569.*) 5 Chittagong, Tippera. Morung, Assam. Fl. small, greenish-yellow, May, June and July; fr. March and April.
4. *viminea*, Wall. (*Salacia? viminea*, *Wall. Cat.*) Penang. Introduced in 1840.

SALACIA, L. (*DC. pr. 1, p. 570*;—*W. and A. pr. 1, p. 104.*)

1. *prinoïdes*, DC. (*o. c. p. 571*;—*W. and A. o. c. p. 105*;—*J. Grah. Cat. B. pl. p. 27*;—*Wight. icon. 2, t. 321.*—*Johnia coromandeliana*, *Roxb. fl. ind. 1, p. 169*; *ed. Carey. 1, p. 173*;—*DC. l. c.*) 5 Amherst, Moulmein, Attran and Irawaddi river-banks. Coromandel. The Corinda side of the Hill above Kandalla tank. Common about Malabar and Amboolee, Salsette. Assam. Fl. greenish, small, C. S.; fr. H. S.
2. *Roxburgii*, Wall. (*Cat.*—*W. and A. pr. 1, p. 105.*—*Johnia salacioides*, *Roxb. fl. ind. 1, p. 168*; *ed. Carey. 1, p. 172*;—*DC. pr. 1, p. 571.*) L. 5 Chittagong, Tippera. Assam. Fl. small, greenish-orange, H. S.; fr. R. S.
3. *longifolia*, Wall. (*pl. us. rar. 3, t. 278.*) L. 5 Khassya Mountains. Nepal. Fl. small, greenish, H. S.; fr. O.
4. *celastrifolia*, Wall. (*Rept.*) In H. C. G. Fl.?

* *Hippocratea Arnottiana*, Wight. *ill. 1, t. 46, f. 1, t. 47.* A. 5 Malabar.—*H. Grahamii*, Wight. 5 Bombay.—*H. lanceolata*, Buch. Goalpara.—*H. obcordata*, Lam. 5  W. Indies.—*H. ovata*, Lam. 5  S. America.—*Salacia Brunoniana*, W. and A. Peninsula of India.—*S. reticulata*, Wight. 5 Ceylon.—*S. verrucosa*, Wight. 5 Mergui.—



S. multiflora, Wight. 5 Mergui.—*S. pomifera*, Wall.; Wight. icon. 1, t. 55. Peninsula of India.—*S. oblonga*, Wall.; Wight. ill. 1, t. 47. B.; icon. 1, t. 97. Peninsula of India. Trincomalee.—*Anthodon paniculatus*, Mart. 5 Rio Janeiro.—*A. ellipticus*, Mart. 5 Rio Janeiro.—*Tonsella scandens*, Vahl. 5 Guiana.

SUB-ORDER.—TRIGONIÆ, Lindl. Nat. Syst. p. 120.

Sarmentose climbing shrubs, all natives of S. America, referred to one genus containing 5 species.—Properties unknown.

* *Trigonia villosa*, Aubl. 5 Cayenne.—*T. mollis*, DC. 5 Brazil.—*T. laevis*, Aubl. 5 Guiana.

ORDER LXXXVII.—STAPHYLEACEÆ, Lindl. Nat. Syst. p. 121.

THE BLADDER-NUT TRIBE.

Trees or shrubs, referred to 2 genera, containing 12 species: 4 from S. America, Mexico and the W. Indies; 1 from N. America; 1 from Japan; and 1 from Europe. Five are from the E. Indies; viz. 1 (*Staphylea*) from the Himalayas; and 4 (*Turpinia*) from Nepal, Silhet, Singapore, and Martaban.—Properties unknown.

TURPINIA, Vent. (DC. 2, p. 3;—*W. and A. pr.* 1, p. 156.)

1. *pomifera*, DC. (*l. c.*—*Dalrymplea pomifera*, Roxb. *fl. ind.* 1, p. 633; *ed. Carey*, 2, p. 422;—*Corom.* 3, t. 279.—Canarium? Sajiga, *Buch. Herb.*) L. 5 Assam. Fl. small, yellowish-white, March and April; fr. Sept. and Oct.

* *T. nepalensis*, Wall. 5 Mountains of the Peninsula and Nepal.—*T. paniculata*, Vent. 5 St. Domingo. Mexico.

ORDER LXXXVIII.—MALPIGHIACEÆ, Juss.—Lindl. Nat. Syst. p. 121.

THE BARBADOES CHERRY TRIBE.

Small trees or shrubs, sometimes climbing, referred by Lindl. to 27 genera. Of species DC. *pr.*, Spreng. *syst.* and B. *Reg.* enumerate 175 for S. America, Mexico and the W. Indies; 1 for Sierra Leona; 1 for S. Africa; 1 for Madagascar; 1 for Arabia; 1 for China, and 1 for Timor. In the E. Indies have been found 20 species; 3 of *Hiptage*; 11 of *Hirca*;—of *Turrie-*

tia; 5 of *Ancistrocladus*; and 1 of *Platynema*. To these Wight adds Malpighia? heteranthera, (*Ill.* 1, p. 138, t. 49.) China? Two have been found in Nepal; 3 on the Khassya Mountains; 2 in Bengal; 2 in Ceylon, and the rest in the two Peninsulas of India and Java. Properties almost unknown.

MALPIGHIA, L. (*DC. pr.* 1, p. 577.)

1. *coccifera*, L. (*DC. pr.* 1, p. 578;—*B. Reg.* 7, t. 568;—*Jacq. icon. rar.* 3, t. 470;—*J. Grah. Cat. B. pl.* p. 28.) 5 W. Indies. Fl. smallish, white, with a faint tinge of rose. H. and R. S.; fr. C. S.
2. *punicifolia*, DC. (*pr.* 1, p. 578.) 5 W. Indies. Introduced in 1840.
3. *glabra*, L. (*DC. pr.* 1, p. 578;—*B. M.* 21, t. 813;—*B. Cab.* 6.533.) W. Indies. Fl. C. S.

BYRSONIMA, Rich. (*DC. pr.* 1, p. 579.)

1. *lucida*, DC. (*l. c.* p. 580.—Malpighia lucida, Swz.—*B. M.* 51, t. 2462;—*Roxb. H. B.* p. 34.) 5 W. Indies. Fl. smallish, white, then rose-coloured, at last scarlet, March, April and May; fr. C. S.
2. *pulcherrima*, Wall. L. b In H. C. G.—S. America?

GAUDICHAUDIA, H. B. and Kth. (*DC. pr.* 1, p. 584.)

1. *guaranitica*, St. Hil. (*DC. l. c.*) 5 Brazil. Introduced in 1841.

HIPTAGE, Gärtn. (*DC. pr.* 1, p. 583;—*W. and A. pr.* 1, p. 107.)

1. *Madablota*, Gärtn. (*fr.* 2, p. 169. t. 116. f. 4;—*DC. l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 28;—*Wight ill.* 1, t. 50.—*Gärtnera racemosa*, *Roxb. Corom.* 1, t. 18;—*fl. ind.* 2, p. 368.—*Molina racemosa*, *Cav. diss.* 9, t. 263.—*Banisteria bengalensis*, L.—*B. tetraptera* s. *Madablota*, *Sonner. it.* 2, p. 238. t. 135.—*B. unicapsularis*, *Lam.—Rheed.* 6, t. 59.) माधवी *Madhubee*. माधवी लता *Madhubee-lata*. বাসন্তী *Basuntee*.—L. 5 Coromandel. The Ghauts. Prome, Martaban. Bengal, (Serampore.) Goalpara. Hindoosthan. Nepal. Fl. middle-sized, sweet-scented, white, with a tinge of sulphur, R. and C. S.; fr. C. S.
2. *obtusifolia*, DC. (*pr.* 1, p. 583.—*Gärtnera obtusifolia*, *Roxb. fl. ind.* 2, p. 369.) 5 China. Fl. like those of No. 1, Feb. March and April; fr. R. S.

HIRSEA, Jacq. (*DC. pr.* 1, p. 585;—*W. and A. pr.* 1, p. 108.)

1. *indica*, *Roxb. (fl. ind.* 2, p. 448;—*DC. l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 28.—*Triopteris indica*, *Willd.*;—*Roxb. Corom.* 2, t. 160.) 5 Circars. Kandalla Ghaut. Chittagong. Martaban. Goalpara. In H. C. G.? Fl.?
2. *nutans*, *Roxb. (fl. ind.* 2, p. 447;—*DC. pr.* 1, p. 485;—*W. and A. pr.* 1, p. 108.) 5 Interior of Bengal. Fl. small, yellowish, July and Aug.; fr. Nov. and Dec.
3. *hirsuta*, Wall. (*pl. as. rar.* 1, t. 13.) 5 Prome, Taong-Dong. Fl. yellow, small, sweetish-smelling, R. S.; fr. O.
4. *nepalensis*, Wall. MSS. 5 In H. C. G. Fl.?

STIGMATOPHYLLUM, Ad. Juss. (*B. Reg.* 20, t. 1659.)

1. *aristatum*, Lindl. (*B. Reg.* t. c.—*Banisteria auriculata*, *Roxb. H. B.* p. 34;—not Cav.) 5 S. America. Fl. largish, yellow. In H. C. G. fl. January to July. (*Roxb.*)

HETEROPTERIS, Kth.

1. *argentea*, Kth (*DC. pr.* 1, p. 591.) Nova Granada. 5. C. S.

BANISTERIA, L. (*DC. pr.* 1, p. 587.)

1. *laurifolia*, L. (*DC. o. c.* p. 589;—*B. Reg.* 11, t. 937.) 5 Jamaica. Has been introduced into H. C. G. Fl. ?

2. *periplocaefolia*, Desf. (*DC. pr.* 1, p. 589.) 5 Porto Rico. Fl. H. S.

? ANGISTROCLADUS, Wall. (*Cat.*—*Wormia*, *Vahl. in act. soc. hist. nat. hufn.* 6, p. 104;—not Rotth.)

1. *extensus*, Wall. (*Cat.*) 5 Amherst. Introduced in 1840. Has not fl.

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- * *Malpighia fucata*, Ker; *B. Reg.* 3, t. 189. 5 W. Indies?—*M. urens*, L. *B. Reg.* 2, t. 96. 5 S. America.—*M. glabra*, L. *B. M.* 21, t. 813. 5 S. America.—*M. cubensis*, Kth. 5 Havannah.—*M. Aquifolium*, L. 5 S. America.—*M. faginea*, Swz. 5 S. America.—*M. ? heteranthera*, Wight. *ill.* 1, t. 49. 5 China?—*Byrsonima verbascifolia*, DC. 5 Guiana.—*B. nervosa*, DC. 5 Brazil.—*B. reticulata*, DC. 5 Cayenne.—*B. pallida*, DC. 5 Cayenne.—*B. crassifolia*, DC. 5 Guiana.—*Bunchosia glandulosa*, DC. 5 W. Indies.—*B. argentea*, DC. 5 Caraccas.—*B. nitida*, DC. 5 St. Domingo.—*B. paniculata*, DC. 5 W. Indies.—*Galphimia glauca*, DC. 5 Mexico.—*Hiptage parvifolia*, W. and A. 5 Courtallum, Ceylon.—*Tristellateia madagascariensis*, Poir. 5 Madagascar.—*Platynema laurifolium*, W. and A. Ceylon.—*Thryallis brachystachys*, Lindl. *B. Reg.* 14, t. 1162. 5 Rio Janeiro.—*Triopteris jamaicensis*, L. 5 Jamaica.—*Tetrapteris citrifolia*, Pers. 5 Cayenne.—*T. buxifolia*, Cav. 5 St. Domingo.—*Hiraea cordata*, Heyne. 5 Peninsula of India?—*H. lanuginosa*, Wall. Nepal.—*Banisteria auriculata*, Cav. 5 Brazil.—*B. splendens*, DC. 5 Brazil.—*B. ferruginea*, Cav. 5 Brazil.—*B. tenuis*, Lindl. 5 Rio Janeiro.—*Heteropteris chrysophylla*, Humb.; *B. M.* 60, t. 3237. 5 Brazil.—*H. nitida*, Humb. *B. Reg.* 11 t. 950. 5 S. America.—*H. floribunda*, Humb. 5 Mexico.—*H. appendiculata*, DC. 5 St. Vincent.

SUB.ORDER.—ERYTHROXYLEÆ, Kth.—Lindl. *Nat. Syst.* p. 122.

Shrubs or trees, of 1 genus, and 31 species: 19 natives of S. America, Mexico and the W. Indies; 6 of Madagascar, Bourbon, and Mauritius; and 6 of the E. Indies. Of the latter, 1 has been found in Ceylon, 1 on the Khassya Mountains; and the rest in Courtallum.

"Erythroxylon Coca is a plant much used by the miners of Peru for its remarkable power in stimulating the nervous system, in which respect it much resembles opium. Its leaves are chewed with a small mixture of finely powdered chalk. No effects that have been ascribed to the immoderate use of opium are exceeded by what seems the consequence of chewing the Coca-leaf." (Lindl.)

ERYTHROXYLON, L. (DC. pr. 1, p. 573.)

1. *monogynum*, Roxb. (Corom. 1, t. 88; fl. ind. 2, p. 449.—*E. sideroxyloides*, Roxb. fl. ind. 1. c. excl. No. 2,—non Lam.—*Sethia indica*, DC. pr. 1, p. 576;—W. and A. pr. 1, p. 106;—Wight ill. 1, t. 48.) 5 Circars, Mysore, Courtallum. Throughout the Carnatic. FL small, greenish, R. and C. S.; fr. C. S.
2. *hypericifolium*, Lam. (DC. pr. 1, p. 573.) 5 Mauritius, where it is called *Bois d'huile*, *Bois de Dames*. FL small, whitish, R. S.
3. *longifolium*, Lam. (DC. pr. 1, p. 574.) 5 Madagascar, Bourbon. Introduced into H. C. G. FL ?
4. *laurifolium*, Lam. (DC. pr. 1, p. 575;—Roxb. fl. ind. 2, p. 449.) 5 Mauritius, where it is called *Bois de Ronde* or *Bois de Rongle*. Introduced into H. C. G. FL ?

* *E. havanense*, Swz. 5 Jamaica.—*E. burifolium*, Lam. 5 Madagascar.—*E. sideroxyloides*, Lam. 5 Bourbon.—*E. macrophyllum*, Cav. 5 Cayenne.—*E. squamatum*, Vahl. 5 Cayenne.—*E. mexicanum*, H. B. and Kth. 5 Mexico.—*E. acuminatum*, (*Sethia acuminata*, Arn.) Ceylon.—*E. lanceolatum*, (*Sethia lanceolata*, Wight.) Courtallum.—*E. obtusifolium*, (*Sethia obtusifolia*, Wight.) Courtallum.—*E. Wightii*, (*Sethia erythroxyloides*, Wight.) Courtallum.

ORDER LXXXIX.—PORTULACACEÆ, Lindl. Syst. 1, p. 123.

THE PURSLANE TRIBE.

Succulent herbs, sometimes shrubs or under-shrubs, referred by Lindl. to 11 genera. Of the species according to DC. pr., Spreng syst., B. M. and B. Reg. 43 are from S. America, Mexico and the W. Indies; 8 from N. America; 4 from Arabia; 4 from Siberia; 2 from Europe; 1 from Guinea; 1 from the Society Islands; and 1 from St. George's Island. Twenty species inhabit S. Africa, (*Harvey*), and 13 the E. Indies. Of the latter, 7 belong to *Portulaca*; 5 to *Trianthema*; and 1 to *Talinum*;—3, however, are common to other parts of the world. They are all found in the Peninsula of India, Java, and Bengal, with the exception of 2, discovered at Monghir and Delhi. *Talinum Strictum*, Wall. Cat. is perhaps not different from *T. cuneifolium*, Willd.



Properties of no importance. The use of the common Purslane is well known. *Portulacaria afra*, Jacq. is greedily eaten by the Elephants in S. Africa.

TRIANTHEMA, L. (DC. *pr.* 3, p. 351;—*W. and A. pr.* 1, p. 354;—*Wight ill.* 2, p. 43.)

1. *crystallinum*, Vahl. (DC. *o. c. p.* 352;—*W. and A. pr.* 1, p. 355;—*Roxb. fl. ind.* 2, p. 444.—*T. triquetra*, Rottl.;—DC. *l. c.*—*Papularia crystallina*, Forsk.) 2. Arabia. Coromandel. Bengal, (Serampore.) Fl. small, greenish, R. S.; fr. C. S.

2. *obcordatum*, Roxb. (*fl. ind.* 2, p. 445;—*W. and A. pr.* 1, p. 355;—*Wight icon.* 1, t. 288.—*T. pentandra*. β . *obcordata*, DC. *pr.* 3, p. 352.) $\odot$ Coromandel. Bengal, (Serampore.) Fl. small, greenish white, R. and C. S.; fr. C. S. Leaves and tender tops eaten by the Natives. (Roxb.)

a. rubellum; লালসাবনী *Lal-sabunee*. Plant reddish.

β . *viridulum*; শ্বেতসাবনী *Shwet-sabunee*. Plant pale-greenish.

3. *decandrum*, L. (DC. *pr.* 3, p. 352;—*Roxb. fl. ind.* 2, p. 444;—*W. and A. pr.* 1, p. 355;—*Wight, icon.* 1, t. 296;—*J. Grah. Cat. B. pl.* p. 81.—*Zaleya decandra*, *Burm. ind.* t. 31, f. 3.) গাঁদিবুয়া *Gaido-bunya*. $\odot$ Peninsula of India. Bengal, (Serampore, but rarely.) Fl. small, greenish-white, R. and C. S.; fr. C. S.

PORTULACA, L. (DC. *pr.* 3, p. 353;—*W. and A. pr.* 1, p. 355.) Purslane.

1. *oleracea*, L. (DC. *l. c.*;—*W. and A. o. c. p.* 356;—*Roxb. fl. ind.* 2, p. 463;—*J. Grah. Cat. B. pl.* p. 81;—*Rheed.* 10, t. 36.) বড়লুনিয়া *Buro-looniya*. Common Purslane. $\odot$ All over India, Ceylon, Java, &c. Fl. small, yellow, R. S.; fr. C. S.

2. *quadrifida*, L. (DC. *pr.* 3, p. 354;—*Roxb. fl. ind.* 2, p. 464;—*W. and A. pr.* 1, p. 356.) $\odot$ Coromandel. Bengal. (Serampore.) Fl. very small, yellow; and fr. the whole year.

3. *meridiana*, L. (*Roxb. fl. ind.* 2, p. 463. *P. quadrifida*, L. β . *meridiana*, DC. *pr.* 3, p. 354;—*W. and A. pr.* 1, p. 356.—*Illecebrum verticillatum*, *Burm. ind.* p. 66;—*Rheed.* 10, 31.) ছোটলুনিয়া *Chhoto-looniya*. $\odot$ Peninsula of India. Bengal, (Serampore,) &c. Fl. very small, yellow; and fr. the whole year.

4. *pilosa*, L. (DC. *pr.* 3, p. 354;—*B. Reg.* 10, t. 792;—*Roxb. H. B.* p. 28.) $\odot$ South America, about Curacao. Brazil. Martinique, &c. Fl. small, purplish; and fr. the whole year.

5. *linifolia*, Roxb. (*H. B. p.* 28.) $\odot$ In H. C. G. fl. and fr. the whole year. (Roxb.)

TALINUM, Sims. (DC. *pr.* 3, p. 356;—*W. and A. pr.* 1, p. 356.)

1. *cuneifolium*, Willd. (DC. *o. c. p.* 357;—*Roxb. fl. ind.* 2, p. 465.—*T. indicum*, *Wight*;—*W. and A. pr.* 1, p. 356;—*J. Grah. Cat. B. pl.* p. 81.) $\dagger$ Arabia. Cultivated in gardens. Fl. small, rose-coloured, R. and C. S.; fr. C. S.



2. *reflexum*, Cav. (DC. pr. 3, p. 357;—B. M. 37, t. 1543.) ♀ S. America. Fl. small, pale yellow, R. S.; fr. C. S.

CALANDRINIA, H. B. and Kth. (DC. pr. 3, p. 358.)

1. *speciosa*, Lindl. (B. Reg. 19, t. 1598;—B. M. 62, t. 3379.) ⊙ N. California. Fl. large, deep crimson, March; fr. 0.

PORTULACARIA, Jacq. (DC. pr. 3, p. 360.)

1. *afra*, Jacq. (DC. l. c.;—Jacq. coll. 1, p. 160, t. 22;—DC. pl. grass. t. 132.—Claytonia Portulacaria, L.;—Lam. ill. t. 144, f. 2.—Crassula Portulacaria, L.—Hünke crassifolia, Salisb. pr. 174.—Portulaca fruticosa, Thunb.) ♀ C. G. H. Has not fl. here, though now a strong, largish, healthy shrub, cultivated for more than 15 years.

CLAYTONIA, L. (DC. pr. 3, p. 360.)

1. *perfoliata*, Don. (hort. cant., p. 25;—DC. l. c.;—B. M. 33, t. 1336.—C. cubensis, Bonpl.—Litnia perfoliata, Haw.) ⊙ Cuba, Mexico. Rocky Mountains, Virginia. Fl. small, white, Feb. and March; fr. April.

* *Portulaca foliosa*, Lindl. (B. Reg. 10, t. 793.) Mexico?—*P. halimoides*, L. ⊙ Jamaica.—*P. Gilliesii*, Hook; B. M. 58, t. 3064; B. Reg. 20, t. 1672. ♀ Chili. Fl. large, crimson.—*P. grandiflora*, Hook.; B. M. 56, t. 2885. ♀ Mendoza. Fl. large, orange and purple.—*Talinum triangulare*, Willd. ♀ W. Indies.—*T. crassifolium*, Willd. ♀ W. Indies?—*T. fruticosum*, Willd. ♀ S. America.—*T. patens*, Willd. ♀ Mexico.—*Calandrinia pilosinacula*, DC. ⊙ Chili.—*C. discolor*, Hort. Gött.; B. M. 61, t. 3357; B. Reg. 1839, t. 4. ⊙ Brazil?—*C. adscendens*, Hortul. ♀ Brazil.—*C. arenaria*, Hook. and Arn.; B. Reg. 19, t. 1605. ⊙ Valparaiso.—*Montia fontana*, L.; E. B. 17, t. 1206. ⊙ Europe. N. America.

ORDER XC.—SILENACEÆ, Lindl. Nat. Syst. p. 124.

THE DIANTHUS TRIBE.

Herbs, sometimes undershrubs, referred by Lindl. to 12 genera. According to DC. pr. Spreng. syst. B. M. and B. Reg. about 200 species are natives of Europe; 32 of the Levant; 32 of Tauria and Caucasus; 20 of N. Africa; 14 of Siberia; 12 of N. America; 5 of China and Japan; 5 of Mexico; 4 of Tartary; 2 of Persia; 2 of Arabia; 2 of Altai; 1 of the Canaries; and 1 of the Straits of Magellan. Thirty species (including some Cerastia) have been found in S. Africa, (Harvey,) and 23 in the E. Indies. Of the latter, 1 belongs to *Dianthus*; 1 to *Gypsophila*; 1 to *Acosmia*; 1 to *Cucubulus*; 9 to *Silene*; and 10 to *Lychnis*; but of these, 7 are common to other parts of the world. With the exception of *Gypsophila Vaccaria*, Sm.,



also growing in the plains, they are all natives of the Himalayas, Kunawur, and Cashmere.—Properties unimportant.

DIANTHUS, L. (*DC. pr. 1, p. 355.*) *Pink.*

1. *prolifer*, L. (*DC. l. c.*;—*E. B. 14, t. 956.*) ☉ Europe. Fl. small, purplish, Feb. and March; fr. April and May.
2. *Armeria*, L. (*DC. pr. 1, p. 355*;—*E. B. 5, t. 317.*) ☉ Europe. Fl. small, red dotted, Feb. and March; fr. April.
3. *barbatus*, L. (*DC. pr. 1, p. 355*;—*B. M. 6, t. 205. β.*) *Sweet William*. ♀. France, Germany. Fl. pink, middle sized, Feb. and H. S.
4. *Carthusianorum*, L. (*DC. pr. 1, p. 356*;—*β. B. M. 43, t. 1775.*) ♀. Europe. Fl. middle-sized, red, C. S.; but rarely.
5. *chinensis*, L. (*DC. pr. 1, p. 359*;—*Roxb. fl. ind. 2, p. 446*;—*J. Grah. Cat. B. pl. p. 245*;—*B. M. 1, t. 25.*) ☉ ♂ China. Fl. middle-sized, deep red, Feb. and H. S.; fr. May.
6. *pratensis*, Bieb. (*DC. pr. 1, p. 358.*) ☉ (here) Crimea. Fl. middle-sized, yellowish-white; and fr. H. S.
7. *Caryophyllus*, L. (*DC. pr. 1, p. 359*;—*E. B. 3, t. 214.*) *Clove Pink. Carnation*. ♀. S. France, England. Fl. smallish, rose-coloured, fragrant; and fr. January—May.
β. plenus; (*Roxb. fl. ind. 2, p. 446*;—*J. Grah. Cat. B. pl. p. 245.*)
Double Carnation. Fl. large, deep rose, fragrant, C. and H. S.
8. *hyssopifolius*, Hortul. ♀. S. Europe. Fl. small, pink, C. and H. S.
9. *petraeus*, Waldst. and Kit. (*DC. pr. 1, p. 362*;—*β. B. M. 30, t. 1204.*) ♀. Hungary. Fl. largish, white, Jan., Feb. and March.
10. *superbus*, L. (*DC. pr. 1, p. 365*;—*B. M. 9, t. 297.*) ♀. Europe. Fl. large, white, with a tinge of rose. Introduced in 1840.

GYPHOPHILA, L. (*DC. pr. 1, p. 351*;—*W. and A. pr. 1, p. 42.*)

1. *viscosa*, Murr. (*DC. o. c. p. 352.*) ☉ Levant. Fl. small, white, March; fr. April.
2. *repens*, L. (*DC. pr. 1, p. 353*;—*B. M. 35, t. 1448.*) ♀. Road-sides of the Alps and Pyrenees. Fl. small, white, with a faint tinge of rose, C. S.; fr. H. S.
3. *muralis*, L. (*DC. pr. 1, p. 354*;—*fl. dan. t. 1268.*) ☉ Denmark. Germany. France. Switzerland. Crimea. Fl. small, pale rose-coloured, Feb.; fr. March.
4. *Vaccaria*, Sm. (*W. and A. pr. 1, p. 42.*—*Saponaria Vaccaria*, L.;—*DC. pr. 1, p. 365*;—*B. M. 49, t. 2290.*—*S. perfoliata*, *Roxb. fl. ind. 2, p. 445*;—*DC. l. c.*) ☉ Europe. Bengal. Fl. largish, rose-coloured, C. S.; fr. R. S.

SAPONARIA, L. (*DC. pr. 1, p. 365.*) *Soap-wort.*

1. *officinalis*, L. (*DC. l. c.*;—*E. B. 15, t. 1060.*) ♀. Road-sides of Europe. Fl. largish, sweet-scented, pale rose-coloured, Jan., Feb. and March; fr. 0.



CUCUBALUS, L. (DC. pr. 1, p. 367.)

1. *bacciferus*, L. (DC. l. c.;—E. B. 22, t. 1577.) ♀. Shady places of Europe. Himalayahs on Jumbo. (Royle.) Fl. middle-sized, greenish-white, C. S.; but rarely.

SILENE, L. (DC. pr. 1, p. 367;—W. and A. pr. 1, p. 42.) *Catchfly*.

The annuals among the following species have either small or middle-sized flowers, and these have appeared in February and March, some of them have been succeeded by ripe seeds.

1. *inflata*, Sm. (DC. pr. 1, p. 368.—Cucubalus Behen, L.;—E. B. 3, t. 164.) ♀. Europe. Nepal, Kemaon, Choor, Mussooree. Fl. largish, purple greenish-white, C. S.
2. *oblongifolia*, Otth. (DC. pr. 1, p. 369.) ☉ Native place unknown. Fl. white.
3. *apetala*, Willd. (DC. pr. 1, p. 369.) ☉ Spain. Fl. greenish.
4. *viscosa*, Pers. (DC. pr. 1, p. 370.—Cucubalus viscosus, L.; fl. dan. t. 1209.) ♂. Denmark, Sweden. Italy. Levant. Kunawur. (Royle.) Fl. white, C. S.
5. *conica*, L. (DC. pr. 1, p. 371;—E. B. 13, t. 922.) ☉ England. coloured, France. Spain. Levant. Fl. rose-sweet-scented.
6. *anglica*, L. (DC. pr. 1, p. 371;—E. B. 17, t. 1178.) ☉ England, France, &c. Fl. white.
7. *lusitanica*, L. (DC. pr. 1, p. 371.) ☉ Portugal. Fl. pale rose-coloured.
8. *gallica*, L. (DC. pr. 1, p. 371.) ☉ France. Fl. pale. rose-coloured.
9. *quinquevulnera*, L. (DC. pr. 1, p. 372;—E. B. 2, t. 86.) ☉ England. France. Spain, &c. Fl. white, with five deep red spots.
10. *nocturna*, L. (DC. pr. 1, p. 372.) ☉ France. Spain, &c. Fl. brownish.
11. *vespertina*, Retz. (DC. pr. 1, p. 374;—B. M. 18, t. 677.) ☉ Portugal. N. Africa. Fl. deep rose-coloured.
12. *colorata*, Schousb. (DC. pr. 1, p. 374.) ☉ Morocco. Island of Scio. Fl. deep rose-coloured.
13. *obtusifolia*, Willd. (DC. pr. 1, p. 374.) ☉ Native place uncertain. Fl. deep rose-coloured.
14. *pendula*, L. (DC. pr. 1, p. 375;—B. M. 4, t. 114.) ☉ Sicily. Candia. Fl. deep rose-coloured.
15. *inaperta*, L. (DC. pr. 1, p. 376.) ☉ S. Europe. Fl. brownish.
16. *linifolia*, Willd. (DC. pr. 1, p. 376.) ☉ Native place unknown. Fl. greenish yellow.
17. *antirrhina*, L. (DC. pr. 1, p. 376;—Roxb. H. B. p. 34.) ☉ Virginia. Fl. white.
18. *cretica*, L. (DC. pr. 1, p. 376.) ☉ Candia. Fl. greenish white.
19. *stricta*, L. (DC. pr. 1, p. 379.) ☉ Spain. Fl. purplish.
20. *noctiflora*, L. (DC. pr. 1, p. 379;—E. B. 5, t. 291.) ☉ Denmark, Sweden. England. Fl. cream-coloured, tinged with red.



21. *bupleuroides*, L. (DC. *pr.* 1, p. 382.) ☉ (here) Persia. Fl. whitish purple.
22. *Armeria*, L. (DC. *pr.* 1, p. 383;—*E. B.* 20, t. 1398.) ☉ Denmark. Germany. France. Fl. purplish.
- LYCHNIS, L. (DC. *pr.* 1, p. 385.)
1. *Viscaria*, L. (DC. *l. c.*;—*E. B.* 11, t. 788.) ☉ Europe. Fl. largish, purplish deep-rose, Feb. and March; fr. April and May.
2. *Coeli rosa*, Desrouss. (DC. *pr.* 1, p. 386.—*Agrostemma Coeli rosa*, L.; *B. M.* 9, t. 295.) ☉ Sicily. Barbary. Levant. Fl. large deep rose-coloured, Feb. and March.
3. *dioeca*, L. (DC. *pr.* p. 386;—*E. B.* 22, t. 1530.) ☉ Road sides of Europe. Fl. large, white, Feb. and March.
4. *indica*, Benth. (*Royle. ill.* p. 18.—*Silene indica*, Roxb. *fl. ind.* 2, p. 446.) ☉ Nepal. In H. C. G. fl. H. S.; fr. R. S. (*Roxb.*)
- AGROSTEMMA, L. (*Githago*, DC. *pr.* 1, p. 387.)
1. *Githago*, L. (*E. B.* 11, t. 741.—*Lychnis Githago*, Lam.; DC. *l. c.*) Corn Cockle. ☉ Europe. Fl. large, purplish, Feb. and March; fr. April and May.

* *Dianthus Arbuscula*, Lindl; *B. Reg.* 13, t. 1086. ☉ China.—*D. longicaulis*, Ten. ☉ Italy.—*D. caryophyllus*, L.—Varieties of double Carnation.—*Saponaria ocyroides*, L.; *B. M.* 5, t. 154. ☉ France.—*S. glutinosa*, Bieb.; *B. M.* 55, t. 2855. ♂—Caucasus.—*S. bellidifolia*, Sm. ☉ Italy.—*Lychnis neglecta*, G. Don. (*Viscaria alba*, *Hortul.*) ☉ Native place uncertain.—*L. leta*, Ait. ☉ Portugal.

ORDER XCI.—ALSINACEÆ,—Lindl. Nat. Syst. p. 125.

THE CHICKWEED TRIBE.

Herbs, annual or perennial, by Lindl. referred to 32 genera. Of these, according to DC. *pr.* and Spreng. *syst.* about 140 species inhabit Europe; 44 Siberia; 30 S. America, Mexico and the W. Indies; 30 N. America; 30 Tauria, Caucasus and Dahuria; 12 the Levant; 8 N. Africa; 4 Persia; 4 Greenland; 2 the Straits of Magellan; 1 Madeira; 1 Bourbon; 1 Altai; 1 Arabia; 1 Japan; 1 the Sandwich Islands; and 1 Melville Island. S. Africa contains several species of *Cerastium*, all of which are common to Europe, and probably introduced from thence, (*Harvey.*) In the E. Indies 24 have been discovered; viz. 1 of *Alsinnella*, 2 of *Cherleria*, (*D. Don.*); 7 of *Arenaria*; 4 of *Cerastium*; 1 of *Brachystemma*; 7 of *Stellaria*; 2 of *Leucostemma*; and 1 of *Larbreca*;—four of these are common to Europe. Excepting *Stellaria tetragona*, Bl., (Java) and *Cerastium cordifolium*, Roxb. (Bengal,) all the rest are natives of the Himalayas and the



Neelgherries. One species, (*Brachystemma calycinum*, D. Don.) has also been found on the Khassya Mountains.—“Properties of the order none.” (*Lindl.*)

BUFFONIA, L. (*DC. pr. 1, p. 388.*)

1. *annua*, DC. (*l. c.*—*B. tenuifolia*, Lam.;—*E. B. 19, t. 1313.*) ⊙ England. France. Fl. minute, white, Feb. and March; fr. March and April.

SAGINA, L. (*DC. pr. 1, p. 389.*)

1. *apetala*, L. (*DC. l. c.*;—*E. B. 13, t. 881.*) ⊙ England. Germany. Italy. Fl. minute, pale-green, Feb. and March; fr. April.

MINUARTIA, Löff. (*DC. pr. 3, p. 379.*)

1. *dichotoma*, Löff. (*DC. o. c. p. 380.*) ⊙ Spain. Fl. minute, greenish, Feb. and March; fr. April.

ARENARIA, L. (*DC. pr. 1, p. 400*;—*W. and A. pr. 1, p. 43.*)

1. *serpyllifolia*, L. (*DC. pr. 1, p. 411*;—*E. B. 13, t. 923.*) ⊙ Europe. Sirmore, Deyra Dhoon. Fl. small, white, Feb. and March; fr. —

CERASTIUM, L. (*DC. pr. 1, p. 414*;—*W. and A. pr. 1, p. 42.*)

1. *dichotomum*, L. (*DC. l. c. p. 415.*) ⊙ Spain. Algiers.—Fl. small, white, Feb. and March; fr. April and May.
2. *vulgatum*, L. (*DC. pr. 1, p. 415*;—*W. and A. pr. 1, p. 43*;—*E. B. 11, t. 789.*) ⊙ Europe.—Fl. small, white, Feb. and March.
3. *cordifolium*, Roxb. (*fl. ind. 2, p. 458.*) ⊙ Bengal.—Fl. and fr. C. S. (*Roxb.*)

STELLARIA, L. (*DC. pr. 1, p. 396*;—*W. and A. pr. 1, p. 42.*)

1. *media*, Sm. (*DC. l. c.*;—*W. and A. l. c.*;—*E. B. 8, t. 537.*) ⊙ Europe, Neelgherries.—Fl. small, white, C. S.
2. *triandra*, Wall. ⊙ Nepal.

ORDER XCII.—TAMARICACEÆ.—*Lindl. Nat. Syst. p. 126.*

THE TAMARISK TRIBE.

Shrubs, occasionally perennial herbs, referred to 3 genera. Of these, 3 species are natives of Dahuria; 4 of Siberia; 2 of Astrachan; 2 of Arabia; 3 of Europe; 1 of N. Africa; 1 of the Canaries; 1 of Senegal; 1 of Persia; and 1 of China. In S. Africa only *Tamarix orientalis*, Försk. which also is a native of Arabia and Persia, has been found. The E. Indies exhibit 6 species, (one of which is a variety of *Tamarix gallica*, L.) viz. 3 of *Tamarix*; 1 of *Trichaurus*; and 2 of *Myricaria*. Four of these inhabit the plains of the Peninsula and Hindoosthan, the latter 2 were found near Cashmere, and in Kunawur.

Bark slightly bitter and astringent. (DC.) Ehrenberg found that the Manna of Mount Sinai is produced by a variety of *Tamarix gallica*.



This substance being analysed by Mitscherlich, was found to contain no crystallisable Mannite, but to consist wholly of pure mucilaginous sugar. Lindl. from *Ann. des scienc.* 12, 68. (1827.)

TAMARIX, L. (DC. pr. 3, p. 95;—*W. and A. pr.* 1, p. 40.)

1. *gallica*, L. (DC. o. c. p. 96;—*E. B.* 19, t. 1318.)

β. indica, Ehrenb. (*T. indica*, Willd.;—DC. 3, p. 96;—*Roxb. fl. ind.* 2, p. 100; excl. syn. Vahl.—*T. gallica*, *W. and A. pr.* 1, p. 40;—*W. ill.* 1, t. 24, f. 1;—*J. Græh. Cat. B. pl.* p. 11.—*T. epacroides*, Sm.) **अरुंडे Jhaoo.** 5 Coromandel, Banks of the Indus, Cutch and Scinde, where it is commonly used for fire-wood. Banks of the Jumna and Ganges. Fl. very small, rose-coloured, R. S; fr. C. S.—The ashes of this tree, when it grows near the sea are remarkable for containing a quantity of sulphate of soda, and cannot be used as a ley for washing, as they coagulate the soap. When the tree grows in sweet soil in the interior, the ashes are free from the soda, (*Wight*.) The galls of *T. indica* and *dioeca* are highly astringent, and are used both in medicine and dyeing. (*Royle*.)

2. *dioeca*, Roxb. (*fl. ind.* 2, p. 101;—DC. pr. 3, p. 96;—*W. and A. pr.* 1, p. 40;—*J. Græh. Cat. B. pl.* p. 11.) 5 Soonderbuns. Beds of the Concan and Deccan rivers. Upper India. **बजान अरुंडे Lal Jhaoo.** Fl. very small, rose-coloured, nearly the whole year; fr. C. S.

* *T. africana*, Poir. 5 N. Africa. Naples.—*T. canariensis*, Willd. 5 Canaries.—*T. Pharos*, Buch.; Doab. Agra. Delhi.—*Trichaurus ericoides*, Arn.; *Wight. ill.* 1, t. 24. B. Deccan. Banka. Palaar.—*Myricaria elegans*, Royle. Kunawur,

ORDER XCIII.—ILLECEBRACEÆ.—Lindl. Nat. Syst. p. 127.

THE KNOT-GRASS TRIBE.

Herbs or half-shrubby plants, by Lindl. referred to 39 genera. Of these, DC. pr. and Spreng. syst. assign about 40 species to Europe; 22 to S. America, Mexico and the W. Indies; 10 to N. America; 8 to N. Africa; 6 to the Canaries; 3 to Guinea; 3 to Arabia; 1 to Abyssinia; 1 to Senegal; 1 to Madagascar; 1 to Persia; 1 to Dahuria; 1 to Siberia; 1 to China; 2 to New Holland; and 1 to Van Diemen's Land. Excluding *Scleranthus annuus*, S. Africa exhibits 49 species. In the E. Indies about 17 forms have been discovered; viz. 1 of *Herniaria*. (Cashmere.) 1 of *Hapalosia*; (common;) 1 of *Illecebrum*; (Kunawur;) 4 of *Polycarpæa*; (Ceylon, Peninsula of India, Silhet;) 2 of *Drymaria*; (Himalayas, Khassya Mountains, Dindigul, Taong-Dong, Java;) and 8 of *Mollugo*; (Ceylon, both Peninsulas, Bengal, Nepal, Cochin-China.) A few of them are common to other parts of the world.



"A trace of astringency pervades the order, and is the only sensible property that it is known to possess." (Lindl.)

HAPALOSIA, Wall. (*W. and A. pr.* 1, p. 358.)

1. *Löfvingia*, Wall. (*W. and A. l. c.*—*Pharnaceum depressum*, L.—*Löfvingia indica*, Retz.;—*Roxb. fl. ind.* 1, p. 165; *ed. Carey*, 1, p. 169.—*Polycarpæa*? *depressa*, DC. *pr.* 3, p. 375.) © Both Peninsulas of India, Bengal, (Serampore,) &c. Fl. small, whitish, Feb.; fr. March.

SPERGULA, L. (DC. *pr.* 1, p. 394.) *Spurrey*.

1. *arvensis*, L. (DC. *l. c.*;—*E. B.* 22, t. 1535.) © Fields of Europe. Fl. small, white, C. S.; fr. March.
2. *pentandra*, L. (DC. *l. c.*;—*E. B.* 22, t. 1536.) © Woods of Europe. Fl. small, white, C. S.; fr. Feb.

SPERGULARIA, Pers. (*synop.* 1, p. 504.)

1. *rubra*, Pers. (*l. c.*—*Arenaria rubra*, L.; DC. *pr.* 1, p. 401;—*E. B.* 12, t. 852.) © Europe, Africa. Fl. smallish, purplish, Feb.; fr. O.

MOLLUGO, L. (DC. *pr.* 1, p. 391;—*W. and A. pr.* 1, p. 43.)

1. *pentaphylla*, L. (DC. *l. c.*;—*W. and A. o. c. p.* 44;—*Roxb. fl. ind.* 1, p. 359; *ed. Carey*, 1, p. 360;—*J. Grah. Cat. B. pl.* p. 12;—*Burm. zeyl. t.* 8, f. 1.) খেত পাঁপড়া *Khet-papra*. © Peninsula of India. Bengal, (Serampore.) Hindoosthan. Fl. small, white, Feb.; fr. H. S.
2. *triphylla*, Lour. (DC. *pr.* 1, p. 392;—*W. and A. pr.* 1, p. 44;—*Roxb. fl. ind.* 1, p. 360; *ed. Carey*, 1, p. 360;—*J. Grah. Cat. B. pl.* p. 12.—*M. Linkii*, DC. *l. c.*—*M. paniculata*, *Burm.*—*M. radiata*, *Ruiz. and Pav.*; DC. *l. c.*;—*Burm. zeyl. t.* 6, f. 2;—*Rheed.* 10, t. 26.) জল পাঁপড়া *Jal-papra*. © China. Ceylon. Peninsula of India. Bengal. (Serampore.) Hindoosthan. Nepal. Chili. Fl. small, white; and fr. the whole year.

3. *Spergula*, L. (DC. *pr.* 1, p. 391;—*W. and A. pr.* 1, p. 44;—*J. Grah. Cat. B. pl.* p. 12;—*Burm. ind. t.* 5, f. 4.—*M. verticillata*, *Roxb. fl. ind.* 1, p. 360; *ed. Carey*, 1, p. 360; not L.—*M. erecta*, *Burm. ind. p.* 32.—*M. parviflora*, *Ser.*;—DC. *pr.* 1, p. 391.—*Pharnaceum Mollugo*, L.;—*Roxb. fl. ind.* 2, p. 102;—*Burm. zeyl. t.* 7;—*Rheed.* 10, t. 24.) গিহি শাক *Ghimi shak*. © Ceylon. Both Peninsulas of India. Bengal, (Serampore.) Fl. small, white; and fr. the whole year.

ORDER XCIV.—OCHNACEÆ, DC.—Lindl. *Nat. Syst.* p. 129.

Trees or shrubs, by Lindl. referred to 7 genera. Of these, DC. *pr.* and Spreng. *syst.* enumerate 34 species for S. America, Mexico and the W. Indies; 5 for Madagascar; 1 for Mauritius; 3 for tropical Africa; 4 for S. Africa; (*Harvey*.) and 1 for Arabia. In the E. Indies have been discovered 8 species of *Ochna*; (Travancore, Goruckpore, Silhet, Nepal, Prome,) 3 of



Gomphia; (Ceylon, Singapore, Sumatra,) and 3 of *Euthemis*, (Singapore.)
—Properties unimportant.

OCHNA, L. (DC. pr. 1, p. 735;—W. and A. pr. 1, p. 152.)

1. *squarrosa*, L. (W. and A. l. c.;—Roxb. Corom. 1, t. 89;—fl. ind. 2, p. 643;—Wight. ill. 1. 69;—J. Grah. Cat. B. pl. p. 37.—*O. obtusata*, DC. pr. 1, p. 735.—*O. lucida*, Lam. ill. t. 472, f. 1;—DC. l. c.)

कुकु चम्पा *Kunuk-champa*. 5 Both Peninsulas of India. Assam. Fl. large, gold-coloured, fragrant, Feb. and March; fr. May and June.

2. *stipulacea*, Colebr. (Wall. Cat.) In H. C. G.—Fl. ?

GOMPHIA, Schreb. (DC. pr. 1, p. 736;—W. and A. pr. 1, p. 152.)

1. *angustifolia*, Vahl. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 38.—*G. zeylanica*, DC. l. c.—*G. malabarica*, DC. l. c.—*Ochna zeylanica*, Lam;—Burm. zeyl. t. 56;—Rheed. 5, t. 48, 52.) 5 Ceylon. Travancore, S. Concan. Fl. yellowish, middle-sized. In H. C. G.—Fl. ?

* *Ochna nana*, Buch. Goruckpore.—*O. Wightiana*, Wall; Wight. icon, 1, t. 223. Travancore.—*O. Heyneana*, W. and A. Peninsula of India.—*O. mauritiana*, Lam. 5 Mauritius.—*O. ciliata*, Lam. 5 Madagascar.—*Gomphia sumatrensis*, Jack, Singapore.—*G. oleæfolia*, St. Hil. 5 Brazil.—*G. guianensis*, Rich. 5 Guiana. Brazil.—*G. laurifolia*, Swz. 5 Jamaica. Cayenne.—*Walkera integrifolia*, DC. 5 Guiana.—*Euthemis leucocarpa*, Jack. 5 Singapore. Penang.—*E. minor*, Jack. 5 Singapore.—*Elvasia calophylla*, DC. 5 Brazil.—*Castela depressa*, Turp. 5 St. Domingo.—*C. erecta*, Turp. 5 Antigua.

ORDER XCV.—SIMARUBACEÆ, Rich.—Lindl. Nat. Syst. p. 129.

THE QUASSIA TRIBE.

Trees or shrubs, by Lindl. referred to 6 genera. Of these, DC. pr. and Spreng. syst. enumerate 11 species of S. America and the W. Indies; and 1 of Madagascar. In the E. Indies have been found 2 species of *Samadera*; (Java, Ceylon, Malabar, Amherst.) and 1 of *Nima*. (Nepal.)

The whole order is distinguished by its intense bitterness. Quassia-wood is well known.

QUASSIA, L. (DC. pr. 1, p. 733.)

1. *amara*, L. fil. (DC. l. c.;—B. M. 14, t. 497.) *Quassia tree*. 5 Surinam. Fl. largish, deep-red, Feb.; fr. 0. Produces *Quassia-wood*.

* *Simaruba officinalis*, DC. 5 Guiana, W. Indies.—*S. glauca*, DC. 5 Cuba. *Simaba guianensis*, Aubl. 5 Guiana.—*S. floribunda*, St. Hil. 5 Brazil.—*S. ferruginea*, St. Hil. 5 Brazil.—*S. suaveolens*, St. Hil. 5 Brazil.—



Samadera indica, Gärtn. ; Wight, ill. 1, t. 68, 5 Java, Ceylon, Malabar.
—*S. lucida*, (Niota lucida, Wall. pl. as. rar. 2, t. 168.) 5 Amherst.—
Nima quassoides, Buch. Nepal. Valley of Gurhwal. Banks of the Sutlej.

ORDER XCVI.—RUTACEÆ, DC.—Lindl. Nat. Syst. p. 130.

THE RUE TRIBE.

Trees or shrubs, very rarely herbaceous plants, by Lindl. referred to 44 genera. Of these, DC. pr. and Spreng. syst., assign about 48 to New Holland and the South Sea Islands; 44 to S. America, Mexico and the W. Indies; 12 to Europe; 3 to the Levant; 2 to Tauria and Caucasus; 2 to Dahuria; 1 to Siberia; 2 to Persia; 1 to the Canaries; 2 to N. Africa; and 1 to Mauritius. One hundred and ten species inhabit S. Africa, (*Harvey*.) In the E. Indies have been found 1 *Ruta*; 1 *Aplophyllum*; 2 *Cymnosma*; 1 *Evodia*; (Moluccas, DC.) and 1 *Dictamnus*. One *Cymnosma* stretches from China, Cochin China, Java and Ceylon, through both Peninsulas of India, up to the Khassya Mountains. The rest are natives of Nepal and the Himalayas.

This order in general, possesses sharp, aromatic, bitterish, tonic or intensely stimulant properties. The common Rue is well known on account of its very strong and unpleasant smell. It is a powerful stimulant in diseases of the uterus. "*Ruta angustifolia*, Pers., said to be common in Persia, Cabul, and Tinkaboon, is given in India as a substitute for *R. graveolens*, L., and considered emenagogue. *R. albiflora* is employed as a stimulant in the hills." (*Royle*.) *Dictamnus albus*, L., whose bitter aromatic root was formerly used as a sudorific, is now nearly obsolete. Its abundance of volatile oil is so great, that in hot weather the surrounding atmosphere may be lighted by a candle. The *Diosmeæ* of S. Africa are remarkable for their powerful and offensive smell, more especially *Barosma crenulata*, Willd. (*Bucku*), whose leaves have been much extolled in wounds, rheumatism, spasms, and diseases of the bladder. The American species are in many instances powerfully febrifugal, f. ex. *Galipea cusparia*, St. Hil.; *Evodia febrifuga*, St. Hil.; *Ticorea febrifuga*, St. Hil.; *Hortia brasiliana*, Vand. &c.

RUTA, L. (DC. pr. p. 709;—*W.* and *A.* pr. 1, p. 146.) *Rue*.

1. *angustifolia*, Pers. (DC. o. c. p. 710;—*W.* and *A.* l. c.;—*B. M.* 49, t. 2311.—*R. chalepensis*, Vill.—*R. graveolens*, *a. L. sp.* 548;—*Rosb. fl. ind.* 2, p. 374;—*J. Grah. Cat. B. pl.* p. 36.—*R. chalepensis*, *β. L. mant.* p. 69.) 5 S. France. Cultivated in India. Fl. small, yellowish green, heavy smelling. C. S; fr. H. S.
2. *albiflora*, Hook. (*exot. fl.* 3, part. 2, t. 79;—*Spr. syst.* 2, p. 320.) 5 Nepal. Fl. small, white.—C. S; fr. O.



CYMINOSMA, Gärtn. (DC. pr. 1, p. 722 ;—W. and A. pr. 1, p. 146.)

1. *pedunculata*, DC. (W. and A. o. c. p. 147 ;—Roxb. fl. ind. 2, p. 239 ;—Wight ill. 1, t. 65 ;—J. Gruh. Cat. B. pl. p. 36.—C. Ankanda, Gärtn. fr. 1, p. 280, t. 58, f. 6 ;—DC. l. c.—*Jambolifera pedunculata*, Vahl. symb. 3, p. 52, t. 61.—*Gela lanceolata*, Lour.—*Ximenia*? *lanceolata*, DC. pr. 1, p. 533 ;—Rheed. 5, t. 15.) 5 Ceylon. Coromandel, S. Concan. Rangoon. Chittagong. Assam. Fl. small, greenish-white March ; fr. 0.

2. *Reevesii*, Wall. 5 China. In H. C. G.

* *Ruta pinnata*, L. ; B. Reg. 4, t. 307. 5 Canaries.—*R. montana*, Clus. 5 S. Europe.—*R. graveolens*, L. 5 S. Europe.—*R. chalepensis*, Pers. 5 N. Africa.—*R. bracteosa*, DC. 5 Sicily.—*R. macrophylla*, Sol. ; B. M. 45, t. 2018. 5 N. Africa.—*Aplophyllum patavinum*, Ad. Juss. 4. Padua.—*A. pubescens*, Ad. Juss. 4. Spain.—*A. suaveolens*, Ad. Juss. (*Ruta linifolia* L. β . *grandiflora*, B. M. 48, t. 2254.) 5 Crimea.—*A. cordatum*, (*Ruta cordata*, Don.) 5 Nepal.—*Galipea trifoliata*, Aubl. 5 Guiana.—*G. Cusparia*, St. Hil. 5 S. America.—*G. odoratissima*, Lindl. ; B. Reg. 17, t. 1420.—5 Rio Janeiro.—*Diglossis obovata*, Nees. 5 Brazil.—*Erythrochiton brasiliensis*, Nees. 5 Brazil.—*Ticorea foetida*, Aubl. 5 Guiana.—*T. jasminiflora*, St. Hil. 5 Rio Janeiro.—*Monniera trifolia*, L. 5 Guiana.

ORDER XCVII.—ZYGOPHYLLACEÆ.—Lindl. Nat. Syst. p. 133.

THE BEAN-CAPER TRIBE.

Herbs, under-shrubs, shrubs, or trees, referred by Lindl., (including *Aitonia*) to 18 genera. Of these, DC. pr. and Spreng. syst., enumerate 13 species for S. America, Mexico and the W. Indies ; 1 for N. America ; 4 for Europe ; 10 for N. Africa ; 1 for Senegal ; 1 for Sierra Leona ; 1 for Arabia ; 1 for Persia ; 1 for Siberia ; 3 for the Levant ; and 3 for New Holland and the South Sea Islands. The S. African forms amount to 40, (*Harvey*) ; and the E. Indian ones to 6. Of the latter, 1 belongs to *Tribulus*, (both Peninsulas of India, Bengal, Monghir.) 1 to *Biebersteinia*, (Kunawur ;) 1 to *Peganum*, (Peninsula of India, Agra ;) 1 to *Zygophyllum*? (*Taong-Dong* ;) and 1 to *Melianthus*? (*Kemaon*.)—*Biebersteinia odora* is also common to Altai, and *Peganum Harmala* to Europe and the Levant.

“The woody plants of the order are remarkable for the extreme hardness of their wood. All the *Guaiacums* are well known for their exciting properties ; the bark and wood of *Guaiacum sanctum* and *officinale* have a somewhat bitter and acrid flavour, and are principally employed as sudorifics or alteratives ; they contain a particular matter, often designated as



resin or gum-resin, but which is now considered a distinct substance, called Guaiacine." (DC. Lindl.)

TRIBULUS, L. (DC. pr. 1, p. 703;—W. and A. pr. 1, p. 144.) *Caltrops*.

1. *lanuginosus*, L. DC. o. c. p. 704;—W. and A. o. c. p. 145;—Roxb. fl. ind. 2, p. 401;—Wight icon. 1, t. 98;—J. Grah. Cat. B. pl. p. 35;—Burm. zeyl. t. 106, f. 1.) গোকুল Gokhoor. ५. Paghamew. Ceylon. Coromandel. Deccan. Bengal, (Serampore.) Monghir. Fl. large, bright yellow, sweet-scented; fr. the whole year.

2. *cistoides*, L. (DC. pr. 1, p. 703;—Jacq. Schönb. t. 103;—B. R. 10, t. 791;—Roxb. H. B. p. 33.) ५. S. America. Fl. large, yellow; and fr. the whole year.

GUAIACUM, L. (DC. pr. 1, p. 706.)

1. *officinale*, L. (DC. o. c. p. 706;—B. Reg. (1839,) t. 9.) Jamaica, Hayti. Fl. small, beautiful, blue. Has not fl. here as yet, and does not seem to like the climate.

* *Tribulus albus*, Poir. 5 Senegambia.—*Kallströmia maxima*, Scop. (*Tribulus maximus*, L.) ① Jamaica.—*Peganum Harmala*, L. ५. Madrid, Levant. On the ruins of Beejapore, Agra.—*Fagonia cretica*, L.; B. M. 7, t. 241. ① S. Europe, N. Africa.—*F. arabica*, L. 5 Barbary, Egypt, Arabia.—*F. glutinosa*, Delile. ५. Egypt.—*F. mysorensis*, Roth.; Wight. ill. 1, t. 64. ① Grain-fields in the Deccan.—*Zygophyllum simplex*, L. ① St. Jago.—*Z. coccineum*, L. 5 Egypt.—*Larrea nitida*, Cav. 5 S. America.—*Guaiacum sanctum*, L. 5 Equinoctial America.

ORDER XCVIII.—XANTHOXYLACEÆ.—Lindl. Nat. Syst. p. 135.

Trees or shrubs, sometimes climbing, by Lindl. referred to 15 genera. Of these, DC. pr. and Spreng. syst. assign 22 species to S. America, Mexico and the W. Indies; 4 to N. America; 2 to Senegal; 1 to Madagascar; 6 to Mauritius and Bourbon; 1 to Abyssinia; 4 to China; 2 to Japan; and 2 to New Holland. S. Africa exhibits 4 species, (Harvey,) and the E. Indies 37. Of the latter 2-3 belong to *Brucea*; 22 to *Xanthoxylum*; 1 to *Blackburnia*? (Roxb.); 1 to *Lacuris*; 3-4 to *Toddalia*; 4 to *Ailantus*; 1 to *Eurycoma*; and 1 to *Ptelea*? (Lour.); but two are also natives of China. With the exception of 11 which inhabit Nepal, the Khasya and Morung Mountains, the rest are nearly all natives of the Peninsulas of India, the Moluccas and Cochin China. The Javanese species, including *Ruteæ*, are stated by Blume to be 14, (Wight;) but we are not acquainted with their generic distribution.—To the Mauritius and Bourbon *Xanthoxylaceæ*, Wall. Cat. adds 2 species of *Xanthoxylon*.

"Nearly all the species of this order are aromatic and pungent—*Xanthoxylon Clava Herculis* and *fraxineum* are powerful sudorifics; they are



remarkable, according to Barton, for their extraordinary power in exciting salivation, whether applied immediately to the gums or taken internally; two plants are reputed to have been used successfully in paralysis of the muscles of the mouth and in rheumatic affections. (DC.)—Xanthoxylon hyemale is employed as a remedy for pain in the ear, for which purpose the powder of its bark is made use of.—Brucea antidysenterica contains a poisonous principle, called Brucea, which is similar in its effects to Strychnia, but 12 or 16 times less energetic than that alkali. Turner. (Lindl.)

BRUCEA, J. S. Mill. (DC. pr. 2, p. 88.)

1. *sumatrana*, Roxb. (*fl. ind.* 1, p. 449; *ed. Carey*, 1, p. 469;—DC. l. c.;—Gonus amarissimus, Lour.;—Rumph. auct. t. 15.) 5 Sumatra, Moluccas, Cochin China, China, Assam. Fl. minute, dark-purple, H. S.; fr. C. S. Green parts intensely bitter. (Roxb.)

2. *mollis*, Wall. (Rept.) In H. C. G. ? Khassya Hills, In. H. C. G. fl. R. S. XANTHOXYLON, L. (*W. and A. pr.* 1, p. 147.)

1. *triphyllum*, Juss. (*Wight. ill.* 1, p. 169;—J. Grah. Cat. B. pl. p. 36;—Wight. icon. 1, t. 149.—X. zeylanicum, DC. pr. 1, p. 728.—Evodia triphylla, DC. pr. 1, p. 724.—Fagara triphylla, Lam.;—Roxb. *fl. ind.* 1, p. 416; *ed. Carey*, 1, p. 436;—Rumph. 2, t. 62.) 5 Amboyna, Philippine Islands, Penang, Singapore. Ravines at Kandalla. Parr Ghaut. Table land of Mahableshwur. Fl. small, white, H. S. Capsules of a strong aromatic taste. According to Rumphius, the Amboyna women prepare a cosmetic from the bark, and apply it to improve their complexion.
2. *limonifolium*, Wall. (Rept.) 5 Khassya Hills. Fl. minute, greenish-white, Feb. and March.
3. *alatum*, Roxb. (*fl. ind.* 3, p. 768.—X. armatum, DC. pr. 1, p. 727; not Roxb. H. B. p. 72, no such name being found there.—X. acanthopodium, DC. l. c.) 5 Nepal, Simla, Rohilkund, Oude. Fl. minute, greenish, H. S.; fr. R. S.
4. *nitidum*, DC. (DC. pr. 1, p. 727;—B. M. 52, t. 2558.—Fagara nitida, Roxb. *fl. ind.* 1, p. 419; *ed. Carey*, 1, p. 439.) 5 China. Fl. minute, greenish, fragrant, Feb.; fr. 0.
5. *Rhetsa*, DC. (*pr.* 1, p. 728;—*W. and A. pr.* 1, p. 148;—J. Grah. Cat. B. pl. p. 36.—Fagara Rhetsa, Roxb. *fl. ind.* 1, p. 417; *ed. Carey*, 1, p. 438;—Rheed. 5, t. 34.) L. 5 Mountains of Coromandel. Parr village. Kandalla. Kandesh. Fl. minute, yellow. Was introduced into H. C. G. in 1803, but had not yet fl. in 1814. Unripe capsules gratefully aromatic, and tasting like fresh orange-peel. Inner lamina of the bark bitter and acrid.
6. *Budrunga*, DC. (*pr.* 1, p. 728.—Fagara Budrunga, Roxb. *fl. ind.* 1, p. 417; *ed. Carey*, 1, p. 437.) L. 5 Assam. Fl. minute, greenish, March and April; fr. July and Aug. Seeds have the fragrance of lemon-peel, and being of a warm spicy nature, are used medicinally by the Natives.
7. *violaceum*, Wall. Cat. Nepal. 5 Has been introduced into H. C. G. Fl. ?
8. *undulatum*, Wall. Cat. Mauritius. In H. G. G. Fl. ?
9. *obovatum*, Wall. Khassya Hills.



TODDALIA, JUSS. (DC. pr. 2, p. 83;—W. and A. pr. 1, p. 149.)

1. *aculeata*, Pers. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 37.—T. asiatica, Lam.—T. nitida, Lam. ill. t. 139, f. 1.—T. rubricaulis, Willd.—Scopolia aculeata, Sm.;—Roxb. fl. ind. 1, p. 616; ed Carey, 2, p. 379.—Paullinia asiatica, L.—Burm. zeyl. t. 24;—Rheed. 5. t. 41.) ५ Coromandel. S. Concan. Fl. small, white, Feb. and March; fr. 0.—Every part of this shrub has a strong pungent taste. The roots, when fresh cut, have a particularly pungent smell. The ripe berries, as pungent as black pepper, are pickled by the Natives. (Roxb.)
2. *floribunda*, Wall. (pl. as. rar. 3, t. 232;—Wight. ill. 1, t. 66, under T. aculeata.) ५ Mountains of Nepal. Fl. small, greenish yellow, H. S.; fr. 0.
3. *capparidea*, Wall.—In H. C. G. Bourbon.

PTELEA, L. (DC. pr. 2, p. 82.)

1. *trifoliata*, L. (DC. l. c.) ५ N. America. Has been introduced into H. C. G. Fl. ?

AILANTUS, Desf. (DC. pr. 2, p. 88;—W. and A. pr. 1, p. 150.—Ailantos: Chinese name for A. glandulosus, Desf.)

1. *excelsus*, Roxb. (Corom. 1, t. 23; fl. ind. 2, p. 450;—DC. o. c. p. 151;—W. and A. l. c.;—Wight. ill. 1, t. 67;—J. Grah. Cat. B. pl. p. 37.) L. 5 Coromandel. Surat. Broach and Baroda. Deccan. Fl. small, yellow, C. S.—Wood, white, light, much used for making sword handles, &c. (J. Grah.)
2. *glandulosus*, Desf. L. 5 China. Moluccas.

* *Dictyoloma Vandellianum*, Ad. Juss. 5 Brazil.—*Brucea antidysenterica*, Mill. ५ Abyssinia.—*Xanthoxylon ovalifolium*, Wight. ५ Shevaggery Hills.—*X. sepiarium*, Wight. ५ Pulicat Hills near Madras.—*X. emarginatum*, Swz. ५ Jamaica.—*X. Clava Herculis*, L. ५ W. Indies.—*X. Avicennia*, DC. ५ China.—*X. acuminatum*, Swz. ५ Jamaica. *X. aromaticum*, Willd. ५ W. Indies.—*Lacuris ilicioides*, Buch. Morung Mountains.—*Toddalia lanceolata*, Lam. ५ Mauritius.—*T. paniculata*, Lam. ५ Mauritius.—*T. angustifolia*, Lam. 5 Mauritius.—*A. malabaricus*, DC. Rheed. 6, t. 15. 5 Ravines at Nagotnah. Korinda village, Kandalla.—*Eurycoma longifolia*, Jack. 5 Sumatra. Singapore. Pulo-Dinding. Penang.

ORDER XCIX.—GERANIACEÆ, DC.—Lindl. Nat. Syst. p. 137.

THE GERANIUM TRIBE.

Herbs, under-shrubs or shrubs, by Lindl. referred to 10 genera. Of these, according to DC. about 50 species (Geraniums and Erodiums) in-



habitat Europe; 4 Siberia; 5 Caucasus and Tauria; 2 Iberia; 5 Dahuria; 2 the Levant; 9 N. Africa; 2 Teneriffe and Madeira; (1 *Geranium*; 1 *Pelargonium*) 2 St. Helena; (P.) 11 New Holland and Van Diemen's Land; (9 G. and E.; 2 P.) 1 Arabia; (E.) 2 N. America (E.); 14 S. America; (2 *Rhynchotheca*; the rest G. and E.) and 1 Tristan d'Acunha. (P.) In S. Africa have been found 350 species; viz. 8 *Monsonias*, and a few *Geraniums* and *Erodiums*, the rest all *Pelargoniums*. (*Harvey*.) The E. Indian forms amount to about 14, (13 of *Geranium*, and 1 of *Erodium*.) With the exception of one species from the Peninsula of India, they are all natives of the Himalayas. One of them, *Geranium eriostemon*, Fisch, is also an inhabitant of Dahuria.

"An astringent principle and an aromatic or resinous flavour are the characteristics of this order.—Some of the *Pelargoniums* are acidulous, but this genus is chiefly known as an object of garden culture, for which its great beauty, and the facility with which the species or supposed species intermix, render it well adapted. (*Lindl*.) This intermixture, so unpleasant to those who wish to see plants distinct in their characters, has fully justified W. Curtis's prophecy (in 1797), "that in a few years, from the multiplication of seminal varieties, springing from seeds casually or perhaps purposely impregnated with the pollen of different sorts, such a crop will be produced as will baffle all our attempts to reduce to species, or even regular varieties."

MONSONIA, L. fil. (*DC. pr. 1, p. 638, sect. 3.*)

1. *pilosa*, Willd. (*DC. l. c.*—*M. speciosa*, *Swt. ger. t. 77.*) ♀. C. G. H. Fl. large, greenish-white, with a red eye, March.
2. *speciosa*, L. (*DC. pr. 1, p. 638*;—*B. M. 3, t. 73.*) ♀. C. G. H. Fl. large, pale rose-coloured, with a crimson eye, March.

GERANIUM, L. (*DC. pr. 1, p. 639*;—*W. and A. pr. 1, p. 133.*)

1. *nepalense*, *Swt. (ger. t. 12*;—*DC. pr. 1, p. 643.*) ☉ Nepal, Mussooree. Cashmere. Fl. largish, deep rose, with a dark purple eye, C. S.; fr. H. S.
2. *rotundifolium*, L. (*DC. pr. 1, p. 643*;—*E. B. 3, t. 157.*) ☉ Europe. Fl. small, deep rose, Feb. and March; fr. April.
3. *columbinum*, L. (*DC. l. c.*;—*E. B. 4, t. 259.*) ☉ Europe. Fl. smallish, rose-coloured, March.
4. *dissectum*, L. (*DC. pr. 1, p. 643*;—*E. B. 11, t. 753.*) ☉ Europe, Iberia. Fl. small, rose, Feb. and March; fr. April.
5. *lucidum*, L. (*DC. pr. 1, p. 644*;—*E. B. 2, t. 75.*) ☉ Europe. Fl. small, rose, Feb. and March; fr. April.
6. *Robertianum*, L. (*DC. l. c.*;—*E. B. 21, t. 1486.*) ☉ Europe. Fl. small, purplish, Feb. and March; fr. April.

ERODIUM, L'Herit. (*DC. pr. 1, p. 644.*)

1. *cicutarium*, Sm. (*DC. o. c. p. 646*;—*E. B. 25, t. 1768*;—*Roxb. H. B. p. 49.*) ☉ Europe. N. Africa. Levant. Fl. small, deep rose, Feb. and March; fr. April.

2. *moschatum*, Ait. (DC. pr. 1, p. 647;—E. B. 13, t. 902.) ☉ S. Europe. England. N. Africa. C. G. H.—Peru. Fl. small, deep rose, Feb. and March; fr. April.
3. *gruinum*, Ait. (DC. l. c.;—Roxb. H. B. p. 49.) ☉ Candia. N. Africa. Spain. In H. C. G. fl. C. S. (Roxb.)

PELARGONIUM, L'Herit. (DC. pr. 1, p. 649.)

1. *melananthum*, Jacq. (icon. rar. 3, t. 514;—DC. pr. 1, p. 653.—Hoe-rea *melanantha*, Swt. ger. t. 73.) ♀ C. G. H. Introduced in 1841.
2. *astragalifolium*, Pers. (DC. pr. 1, p. 653.—P. *pinnatum*, B. M. 16, t. 579.) ♀ C. G. H. Introduced in 1841.
3. *zonale*, Willd. (DC. pr. 1, p. 659;—Roxb. H. B. p. 49.) ♂ C. G. H. Fl. largish, scarlet, C. S.; fr. H. S.
4. *inquinans*, Ait. ? (DC. pr. 1, p. 659 ?—Roxb. H. B. p. 49;—J. Grah. Cat. B. pl. p. 247.) Scarlet Geranium. Fl. largish, scarlet, nearly the whole year; fr. C. and H. S.—DC. says, "Folia tecta inquinant colore ferrugineo. Petala chermesina." This does not agree with our plant.
5. *primulinum*, Swt. (DC. pr. 1, p. 665.—P. *crassicaule*, B. M. 14, t. 477;—not L'Herit.) ♂ C. G. H. Introduced in 1841.
6. *peltatum*, Ait. (DC. pr. 1, p. 666.—Geranium *peltatum*, Curt. B. M. 1, t. 20.) ♂ C. G. H.—Fl. large, pale rose, the two upper petals with a deep rose-coloured spot about the middle, March; fr. O.
7. *cucullatum*, Ait. (DC. pr. 1, p. 671.) ♂ C. G. H. Has not fl. here, though cultivated for several years.
8. *vitifolium*, Ait. (DC. pr. 1, p. 674;—Roxb. H. B. p. 49.) Balm-scented Geranium. ♂ C. G. H. Fl. small, rose-coloured, with the two upper petals dark-purple-streaked, C. S.; fr. H. S.
9. *capitatum*, Ait. (DC. pr. 1, p. 674;—Roxb. H. B. p. 49;—J. Grah. Cat. B. pl. p. 247.) Rose-scented Geranium. ♂ C. G. H. Fl. small, light purple, with the two upper petals striped, C. S.; fr. H. S.
10. *Radula*, L'Herit. (DC. pr. 1, p. 679.—Geranium *Radula*, Cav.—B. M. 3, t. 95.) ♂ C. G. H.—Fl. largish, pale rose, the two upper petals with a dark-purple spot about the middle, Feb. and March; fr. O.
11. *balsameum*, Jacq. (DC. pr. 1, p. 679.) ♂ C. G. H. Introduced in 1841.

* *Rhynchotheca integrifolia*, H. B. and Kth. ♂ Quito.—*R. diversifolia*, H. B. and Kth. ♂ Peru.—*Pelargonium glutinosum*, Ait. B. M. 4, t. 143. ♂ C. G. H.—*P. ternatum*, Jacq.; B. M. 12, t. 413. ♂ C. G. H.—*P. glaucum*, L'Herit. (Geranium *lanceolatum*, B. M. 2, t. 56.) ♂ C. G. H.—*P. bicolor*, Ait.; B. M. 16, t. 201. ♂ C. B. S.—*P. fragrans*, Willd.; Swt. ger. t. 172. ♂ C. G. H.—*P. quinatum*, Curt.; B. M. 15, t. 547. ♂ C. G. H.—*P. cordatum*, Ait. (*P. cordifolium*, B. M. 5, t. 165.) ♂ C. G. H.—*P. betulinum*, Ait.; B. M. 5, 148. ♂ C. G. H.—*P. pulchellum*, Curt.; B. M. 15, t. 524. ♂ C. G. H.—*P. acetosum*, Ait.; B. M. 3, t. 103. ♂ C. G. H.—*P. tetragonum*, L'Herit.; B. M. 4, t. 136. ♂ C. G. H.—*P. ceratophyllum*, L'Herit.; B. M. 9, t. 315.



5 C. G. H.—*P. dasycaulon*, Sims.; B. M. 46, t. 2049. 5 C. G. H.—*P. odoratissimum*, Ait. 4. C. G. H.—*P. glomeratum*, Jacq. (*P. australe*, Swt. ger. t. 68.) 4. N. Holland. Commonly cultivated in the Madras Presidency.

ORDER C.—BALSAMINACEÆ.—Lindl. Nat. Syst. p. 138.

THE BALSAM TRIBE,

Succulent, herbaceous, generally annual plants, sometimes under-shrubby, referred to 2 or 3 genera. Of these DC. pr. mentions; 1 species for Europe; 1 for Siberia; 2 for N. America; 1 for Madagascar; 2 for China; and Harvey, 2 for S. Africa. The rest have all been found in the E. Indies, where, according to our materials, they amount to 74 species of *Impatiens*; and 2 of *Hydrocera*. Several have, however, been found lately in Ceylon, Courtallum, and the Shevavery Hills.—They are eminently alpine plants, luxuriating in moisture and a moderate temperature, especially during the rainy season, and they, therefore, chiefly inhabit mountains and hills from the Himalayas down to Ceylon, and the Malacca Peninsula—Excepting *Hydrocera angustifolia*, Bl. we are unacquainted with the Javanese forms of the order. (See *Wight. ill.* 1, p. 156, 160.)

“Chiefly remarkable for the elastic force with which the valves of the fruit separate at maturity, expelling the seeds.” (*Lindl.*)

IMPATIENS, L. (*W. and A. pr.* 1, p. 135.)

1. *Balsamina*, L. (*W. and A. l. c.*) দোপাটী *Dopatee*.

a. sylvestris; (*I. Balsamina*, *J. Grah. Cat. B. pl.* p. 34.—*I. coccinea*, Sims.;—*B. M.* 31, t. 1256.—*Balsamina coccinea*, DC. *pr.* 1, p. 685.—*B. cornuta*, DC. *o. c. p.* 586.—*I. cornuta*, L.—*Burm. zeyl. t.* 16, f. 1.) © Ceylon, Coromandel, Bombay, Banks of the Irawaddi, Bengal, (Serampore.) Fl. large, scarlet; and fr. nearly the whole year.

β. hortensis; (*I. Balsamina*, L.;—*Lam. ill. t.* 725;—*Roxb. fl. ind.* 1, p. 651; *ed. Carey*, 2, p. 452.—*Balsamina hortensis*, DC. *pr.* 1, p. 685;—*Rheed*, 9, t. 52?—*Rumph.* 5, t. 90.) © Cultivated in gardens. Fl. large, scarlet, crimson, purple, white, variegated; and fr. January, Feb. and H. S.

2. *tripetala*, Roxb. (*fl. ind.* 1, p. 651; *ed. Carey*, 2, p. 453.—*I. ternifolia*, Buch.) © Khassya Mountains, Assam. Fl. large, red, tinged with yellow; and fr. the whole year.

HYDROCERA, Bl. (*W. and A. pr.* 1, p. 140.)

1. *triflora*, W. and A. (*pr. l. c.*—*Impatiens triflora*, L.;—DC. *pr.* 1, p. 687.—*I. natans*, Willd.;—DC. *l. c.*;—*Roxb. fl. ind.* 1, p. 652; *ed. Carey*, 2, p. 455;—*Burm. zeyl. t.* 16, f. 2.) দোমুটী *Domotee*. © Ceylon, Tanjore, Banks of the Attran River, Bengal, (Serampore.) Fl. large, white, variegated with red and yellow, R. S; fr. C. S.



I. mysorensis, Roth. © Mysore.—*I. albida*, Wight. 5 Courtallum.—*I. dasysperma*, Wight. 4. Courtallum.—*I. trilobata*, Colebr. © Khas-sya Mountains.—*I. insignis*, DC. Wall. pl. as. rar. 2, t. 194. © Mus-sooree.—*I. bracteata*, Colebr. © Khassya Mountains.—*I. latifolia*, L. Rheed. 9, t. 48. © Travancore. The Concan.—*I. Rheedii*, W. and A. Rheed. 9, t. 49. © The Concan.—*I. fasciculata*, Lam. Rheed. 9, t. 47. The Concan. Khassya Mountains.—*I. fomentosia*, Heyne. © Penin-sula of India. Rangoon.—*I. oppositifolia*, L. © The Concan.—*I. Kleinii*, W. and A. Rheed. 9, t. 50? 51. © Travancore. The Concan.—*I. rosmarinifolia*, Retz. © Peninsula of India. Ceylon.—*I. filiformis*, W. and A. © Kandalla Ghaut.—*I. ornata*, Nimmo. © S. Concan.—*I. verticillata*, Wight. © Shevagerry.—*I. scapiflora*, Heyne; B. M. 64, t. 2587. © S. Concan.—*I. modesta*, Wight. © Shevagerry.—*I. rivalis*, Wight. © Courtallum.—*I. setacea*, Colebr. © Khassya Mountains.

SUB-ORDER.—TROPEOLEÆ. Juss.—Lindl. Nat. Syst. p. 139.

THE NASTURTIIUM TRIBE.

Trailing or twining herbs, of 3 genera, and according to DC. pr., B. M. and B. Reg., 16 species, all Natives of Peru, Chili, New Granada, and Brazil.—Properties unimportant.

TROPEOLUM, L. (DC. pr. 1, p. 663.) *Nasturtium*.

1. *majus*, L. (DC. l. c.;—B. M. 1, t. 23;—Roxb. H. B. p. 32;—J. Grah. Cat. B. pl. p. 247.) *Great Indian Cress*. © Peru. Fl. large, orange, crimson-streaked, fragrant, C. S; fr. 0.—Fleshy fruit acrid, possessing the properties of Cress.

* *T. minus*, L.; B. M. 3, t. 98. © Peru.—*T. aduncum*, Sm.; B. Reg. 9, t. 718. (*T. peregrinum*, B. M. 33, t. 1351.) © Peru, Mexico.—*T. pentaphyllum*, Lam.; B. Reg. 18, t. 1547; B. M. 59, t. 3190. 4. Buenos Ayres.—*T. Moritzianum*, Klotzch.; B. M. 67, t. 3844. © Cuma-na.—*Magallana aparrifolia*, Cav. © S. America. Tuberous roots, in excellent condition, of *Tropeolum tricolor*, Swt.; and *tuberosum*, Ruiz. and Pav.; have been tried here, but without success.

ORDER CI.—OXALIDACEÆ.—Lindl. Nat. Syst. p. 140.

THE WOODSORREL TRIBE.

Herbs, under-shrubs, rarely trees, by Lindl. referred to 5 genera. Of these, DC. pr. and Spreng. syst. enumerate about 100 species for S. Ame-rica; 5 for N. America; 2 for Europe; 1 for Iberia; 1 for Bourbon;



2 for New Holland; 1 for Terra del Fuego; and 1 for the Falkland Islands. S. Africa is inhabited by 110 species, (*Harvey*.) In the E. Indies have only been found 2 forms of *Averrhoa*; (Moluccas, Peninsulas of India, Bengal, Assam, &c.) 2—4 of *Biophytum*; (All India, but especially Courtallum, the Neelgherries, Ceylon, and Monghir,) and 1 of *Oxalis*, which is a native of most parts of the world.

“Acidity is the predominating characteristic of this order. “*Averrhoa* Bilimbi and the pinnated *Oxalis* called *Biophytum* have sensitive leaves. Their foliage is generally acid, so that they are fit to supply the place of sorrel.—*Oxalis* *Acetosella*, (Common Woodsorrel,) contains pure oxalic acid.” (*Lindl.*)

AVERRHOA, L. (*DC. pr. 1, p. 689*;—*W. and A. pr. 1, p. 141.*)

1. *Carambola*, L. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. fl. ind. 2, p. 450*;—*J. Grah. Cat. B. pl. p. 34*;—*Rheed. 3, t. 43, 44*;—*Rumph. 1, t. 35*.) 5 Moluccas. Cultivated. Fl. small, purplish-red, H. and R. S.; fl. C. S.

α. acidia; कर्दमरुङ्ग *Kumurunga*. Ripe fruit cooling, used in fevers.

β. dulcis; मिठा कामरुङ्ग *Mita-Kamruna*. Ripe fruit sweet.

2. *Bilimbi*, L. (*DC. pr. 1, p. 689*;—*W. and A. pr. 1, p. 142*;—*Roxb. fl. ind. 2, p. 451*;—*J. Grah. Cat. B. pl. p. 34*;—*Rheed. 3, t. 45, 46*;—*Rumph. 1, t. 36*.) बिजिबि *Bilimbi*. 5 Moluccas. Cultivated. Fl. small, reddish-brown, H. S.; fr. R. S. Fruit pickled, or preserved with sugar.

BIOPHYTUM, DC. (*pr. 1, p. 689.*)

1. *sensitivum*, DC. (*v. c. p. 690*;—*Wight. ill. 1, t. 69, f. 9*.—*Oxalis sensitiva*, L.;—*W. and A. pr. 1, p. 142*;—*Roxb. fl. ind. 2, p. 457*;—*J. Grah. Cat. B. pl. p. 35*;—*Rheed. 9, t. 19*;—*Rumph. 5, t. 104, f. 2*.) बन नाराङ्ग *Bun-naranga*. © Moluccas. Both Peninsulas of India, Bengal, (Serampore.) Fl. smallish, yellow; and fr. C. S.

OXALIS, L. (*DC. pr. 1, p. 690*;—*W. and A. pr. 1, p. 142.*)

1. *corniculata*, L. (*DC. pr. 1, p. 692*;—*W. and A. l. c.*;—*Roxb. fl. ind. 2, p. 457*;—*J. Grah. Cat. B. pl. p. 35*;—*E. B. 24, t. 1726*;—*Wight. icon. 1, t. 18*.—*O. pusilla*, *Salisb.*;—*Roxb. l. c. excl. No. 2*.) अमरुङ्ग *Amrool*. © Europe. N. America. Mexico. African Islands, Japan. India, from Ceylon to the foot of the Himalaya. Fl. small, yellow; and fr. nearly the whole year.

2. *rosacea*, Jacq. (*DC. pr. 1, p. 694*;—*B. M. 41, t. 1698*.) ५. C. G. H. Introduced in 1841.

3. *tetraphylla*, Cav. (*DC. pr. 1, p. 695*;—*Spreng. syst. 2, p. 431*.) ५. Mexico. Fl. largish, lilac-purplish, May; fr. 0.

4. *violacea*, L. (*DC. pr. 1, p. 695*;—*B. M. 48, t. 2215*;—*Roxb. H. B. p. 35*.) ५. N. America. Fl. largish, violet, C. S.; fr. 0.

5. *cernua*, Thunb. (*DC. pr. 1, p. 696*;—*O. caprina*, *B. M. 7, t. 237*;—*Roxb. H. B. p. 34*.) ५. C. G. H. Fl. largish, lemon-coloured, Jan., Feb. and March; fr. 0.



6. *variabilis*, Jacq. (*Lindl.*; *B. Reg.* 18, t. 1505.) 4. C. G. H.—Fl. largish, Jan. Feb. and March; fr. O.
a. *albiflora*; (*B. Reg.* l. c.;—*B. M.* 41, t. 1683.) Fl. white, with an orange eye.
β. *rosea*; (*B. Reg.* l. c.;—*B. M.* 41, t. 1712.) Fl. deep rose, with an orange eye.
7. *Bowiei*, Herb. (*B. Reg.* 19, t. 1585.) 4. C. G. H.—Fl. very large, deep rose-coloured, R. S. C. and fr. O.
8. *Deppii*, B. Cab. (16, t. 1500.) 4. Mexico 1833.
9. *floribunda*, Lehmann. 4. Brazil, C. S.

O. hirta, L.; *incarnata*, L.; *convexula*, Jacq.; *Acetosella*, L.; *versicolor*, L.; and *flava*, L.; have been cultivated here for many years without fl.

- * *O. bipunctata*, Grah.; *B. M.* 54, t. 2781. 4. Rio Janeiro.—*O. tenera*, Spreng.; *B. Reg.* 13, t. 1046. 4. Brazil.—*O. divergens*, Benth.; *B. Reg.* 19, t. 1620. 4. Mexico.—*O. Barrelieri*, Jacq.; *B. M.* 66, t. 3748. 5. Brazil.—*O. Plumieri*, Jacq.; *B. Reg.* 10, t. 810. 5. S. America.—*O. fruticosa*, Rad.; 5. Rio Janeiro.—*O. Dillenii*, Jacq.; ⊙ Guadeloupe.—*O. floribunda*, Lehm.; *B. Reg.* 13, t. 1123. 4. S. America.—*O. palustris*, St. Hil. 4. Brazil.—*O. stricta*, L.; Fl. dan. t. 873. ⊙ N. America. Europe.—*O. albicans*, H. B. and Kth. 4. Mexico.—*O. debilis*, H. B. and Kth. 4. Caraccas.—*O. Jacquiniana*, H. B. and Kth. 4. Mexico.—*Biophytum Candollianum*, Wight, ill. 1, t. 62. and f. 8. ⊙ Courtallum.—*B. proliferum*, Wight. ⊙ Ceylon.—*B. intermedium*, Wight, ⊙ Ceylon.—*B. polyphyllum*, Munro. ⊙ Neelgherries.—*B. verticillatum*, Wight. ⊙ Courtallum.—*Ledocarpum pedunculare*, Lindl.; *B. Reg.* 17, t. 1392. 5. Chili. A very beautiful plant.

ORDER CII.—CORIARIACEÆ.—Lindl. Nat. Syst. p. 141.

Shrubs of 2 genera; one (*Coriaria*) containing, according to DC. pr., 7 species: 1 from Europe and N. Africa; 4 from Peru; 1 from Mexico; and 1 from New Zealand. The other genus, *Ercilla*, Ad. Juss. we are not acquainted with. The E. Indies exhibit but one species.

"*Coriaria myrtifolia* is used by dyers for staining black. Its fruit is poisonous. (DC.) Its leaves have been used to adulterate Senna, and have produced fatal consequences." (*Fee, Lindl.*)

CORIARIA, L. (*DC. pr.* 1, p. 739.)

1. *nepalensis*, Wall. (*pl. as. var.* 3, t. 289.) 5. Mountains near Deyra Dhoon, Kemaon, Mussooree. alt. 5-7000 f. Has been cultivated



here for more than fourteen years, without fl. Fruit eaten in the hills. (Royle.)

* *C. atropurpurea*, Moç. and Sessé. 5 Mexico.

ORDER CIII.—SURIANACEÆ.—Lindl. Nat. Syst. p. 142.

The only true species of this order is

* *Suriana maritima*, L. 5 Sea-coasts of India.—Properties unknown.

ORDER CIV.—LIMNANTHACEÆ.—Lindl. Nat. Syst. p. 142.

The only species of this order, besides *Flörkea palustris*, Nutt. a N. American plant, is

* *Limnanthes Douglassii*, R. Br.; B. Reg. 20, t. 1673. © California.

ORDER CV.—ROSACEÆ.—Lindl. Nat. Syst. p. 143.

THE ROSE TRIBE.

Herbs or shrubs, excluding *Rhinanthera*, and adding *Hotelia*, by Lindl. referred to 35 genera. Of these, DC. pr. and Spreng. syst. assign about 154 species for Europe; 100 for N. America; 44 for Siberia; 30 for S. America, Mexico and the W. Indies; 30 for China and Japan; 12 for Tauria and Caucasus; 9 for the Levant; 8 for Dahuria; 5 for Greenland; 5 for the Straits of Magellan; 4 for Bourbon and Mauritius; 3 for New Holland and the Society Islands; 3 for Java; 3 for Melville Island; 2 for Persia; 1 for Iberia; 2 for Abyssinia; 1 for St. Helena; 1 for Luzon; and 1 for Terra Nova Island.—In S. Africa have been found 1 *Geum*; 1 *Potentilla*; 1 *Agrimonia*, and several species of *Rubus*, (Harvey.)—According to our materials, which, in general, do not touch Java, 117 Rosaceæ inhabit the E. Indies; viz. of *Rosa*, 12 (Nepal; a few from the Khassya Mountains, the Neelgherries and the banks of the Irrawaddy); of *Rubus* 38, (Himalayas, Khassya Mountains, Neelgherries, Moluccas); of *Dalibarda* 1, (Nepal); of *Fragaria* 4, (Gosain Than, Deyra Dhoon, Oude Java, Penang); of *Potentilla* 38; (Nepal, Khassya Mountains, Neelgherries, and 1 Ceylonese; 3 also common to Siberia, *P. cataclines*, *multifida* and *bifurca*); of *Sibbaldia* 2; (Himalayas, 1 of them, *S. procumbens*, L. also a

native of Europe and Siberia); of *Geum* 3, (Himalayas); of *Sieversia* 1, (Himalayas); of *Agrimonia* 2; (one Nepal; the other, a variety of *A. Eupatorium*, Ceylon); of *Spiræa* 11; (Himalayas. Two of them common to Kamschatka and Japan); of *Hotelia* 1, (Himalayas, Japan); of *Schizonotus* 1, (Himalayas); and of *Neillia* 3, (Nepal, Khassya Mountains.)

"No Rosaceous plants are unwholesome; they are chiefly remarkable for the presence of an astringent principle, which has caused some of them to be reckoned febrifuges.—One of the most powerful anthelmintics in the world, an Abyssinian plant, known to botanists by the name of *Brayera anthelminthica*, *Kth.* belongs to this family. Upon the authority of Brayer, after whom is it named, two or three doses of the infusion are sufficient to cure the most obstinate cases of tænia." (*Lindl.*)

Rosa, L. (*DC. pr.* 2, p. 597;—*W. and pr.* 1, p. 301.)

1. *involucrata*, Roxb. (*fl. ind.* 2, p. 513;—*DC. pr.* 2, p. 602;—*B. Reg.* 6, t. 739;—*Wight. icon.* 1, t. 234.) ॥ Kemaon, Silhet. Soonderbuns. Fl. large, white, fragrant, C. S.; fr. H. S.

2. *carolina*, L. (*DC. pr.* 2, p. 605.) ॥ N. America. In H. C. G. Fl. ?

3. *damascena*, Mill. (*DC. pr.* 2, p. 620;—*J. Grah. Cat. B. pl.* p. 65.) *Damascus Rose*. ॥ Syria. Fl. large, fragrant rose, C. S. but seldom. The petals yield a highly fragrant essential oil, called Atter of Roses.

4. *centifolia*, L. (*DC. pr.* 2, p. 619;—*Roxb. fl. ind.* 2, p. 513.) *Provence Rose*. *सुरावई गौलाव* *Busurai-golab*. ॥ S. Europe, fl. large, double rose, fragrant, Feb. and H. S.

β. *muscosa*, Ser. (*DC. l. c.*;—*B. M.* 63, t. 3475.—*Rosa muscosa*, Mill.;—*B. M.* 2, t. 69.) *Moss Rose*. ॥ France. Introduced in 1841.

5. *rubiginosa*, L. (*DC. pr.* 2, p. 617.)

β. *micrantha*, Lindl. (*R. micrantha*, Sm.;—*E. B.* 35, t. 2490.) *Small flowered Sweet Briar*. ॥ England. Fl. small, pale rose, H. S.; fr. O.

6. *canina*, L. (*DC. pr.* 2, p. 613.)

β. *Bourboniana*, Red. ॥ France. *Rose de* (In H. C. G. Fl. ? *Bourbon*.)

7. *indica*, L. (*DC. pr.* 2, p. 600, α. *vulgaris*;—*B. Reg.* 10, t. 804;—*J. Grah. Cat. B. pl.* p. 65.—*R. chinensis*, *Roxb. fl. ind.* 2, p. 513.) *काँठ गौलाव* *Kanta-golab*. ॥ Forests of Nepal. China. Fl. largish, rose, half double, C. S.; Feb. and March; fr. H. S.

8. *semperflorens*, Curt. (*B. M.* 8, t. 284;—*Roxb. fl. ind.* 2, p. 514.—*R. indica*, L.—*V. semperflorens*, Ser.; *DC. pr.* 2, p. 601.) ॥ China. Fl. large, deep red, the whole year.

9. *microphylla*, *Roxb.* (*fl. ind.* 2, p. 515;—*DC. pr.* 2, p. 602;—*B. Reg.* 11, t. 119;—*B. M.* 63, t. 3490;—*J. Grah. Cat. B. pl.* p. 65.) ॥ China. Fl. double, large, pale rose, C. S.

10. *multiflora*, Thunb. (*DC. pr.* 2, p. 598.)

γ. *carnea*; (*DC. l. c.*;—*B. Reg.* 5, t. 425;—*B. M.* 26, t. 1059.—*R. multiflora*, *J. Grah. Cat. B. pl.* p. 65.) ॥ Japan, China. Fl. double, smallish, rose, C. S.



- moschata*, Mill. (DC. pr. 2, p. 598.)
β. nepalensis, Lindl. (B. Reg. 10, t. 829.—R. glandulifera, Roxb. fl. ind. 2, p. 514;—J. Grah. Cat. B. pl. p. 65.) सिमरी Siotee. ५ Deyra Dhoon, Sirmore. Fl. largish, double, white, fragrant, C. S.
12. *sinica*, Ait. (B. M. 55, t. 2847;—B. Reg. 23, t. 1922;—J. Grah. Cat. B. pl. p. 65.—R. nivea, DC. pr. 2, p. 599.—R. ternata, Poir.—R. triphylla, Roxb. fl. ind. 2, p. 515.) ५ China. Fl. very large, single, white, C. S.
13. *Banksia*, R. Br. (DC. pr. 2, p. 601.) Lady Banks' Rose. ५ China. Fl. small, double, C. S.
β. albo-plena; (B. M. 45, t. 1954;—B. Reg. 5, t. 397.—R. inermis, Roxb. fl. ind. 2, p. 516. ex. pte.) Fl. white.
γ. luteo-plena; (B. Reg. 13, t. 1105.—R. inermis, Roxb. l. c. ex. pte.) Fl. pale yellowish.
RUBUS, L. (DC. pr. 2, p. 556;—W. and A. pr. 1, p. 298.)
1. *rosæfolius*, Sm. (DC. l. c.)
β. coronarius, Sims. (B. M. 43, t. 1783.—R. rosæfolius, Roxb. fl. ind. 2, p. 518.) ५ Mauritius. Fl. large, double, white, C. S.
2. *gracilis*, Roxb. (fl. ind. 2, p. 519;—DC. pr. 2, p. 557.) ५ Nepal. In H. C. G. fl. C. S.; fr. H. S. (Roxb.)
3. *Gowreephul*, Roxb. (fl. ind. 2, p. 517;—W. and A. pr. 1, p. 298;—Wight icon. 1, t. 231.) गोरीफूल Gowreephul. ५ Neelgherries. Ceylon. Khassya Mountains. Assam. Kemaon. Taong Dong. Fl. small, white, Feb. and March.
4. *Wallichianus*, W. and A. (pr. 1, p. 298;—Wight icon. 1, t. 230.—R. hirtus, Roxb. fl. ind. 2, p. 518; not Kit.) ५ Mountains of the Peninsula of India. In H. C. G. fl. C. S. (Roxb.)
5. *lusiocarpus*, Sm. (DC. pr. 2, p. 558;—W. and A. pr. 1, p. 699;—Wight icon. 1, t. 232;—J. Grah. Cat. B. pl. p. 64.—R. albescens and racemosus, Roxb. fl. ind. 2, p. 519.—R. mysorensis, Heyne;—DC. o. c. p. 557.) Country Raspberry. ५ Neelgherries. Dindygul and Cunnawady Hills. Mysore. Deyra-Dhoon. Fl. small, red, C. S.; fr. H. S.
6. *Roxburghianus*, Wall. (Cat.—R. paniculatus, Roxb. fl. ind. 2, p. 518; not Sm.) ५ Moluccas. In H. C. G. fl.; and fr. R. and C. S.
7. *ellipticus*, Sm. (DC. pr. 2, p. 563.) ५ Nepal. In H. C. G. Fl.?
8. *rugosus*, Sm. (DC. pr. 2, p. 567.)—W. and A. pr. 1, p. 299;—Wall. pl. as. rar. 3, t. 234;—Wight icon. 1, t. 225;—J. Grah. Cat. B. pl. p. 64.—R. alceaefolius, Poir;—DC. l. c.—R. reflexus, Ker.;—B. Reg. 6, t. 461;—DC. o. c. p. 566.—R. Hamiltonianus, Ser;—DC. l. c.—R. moluccanus, Roxb. fl. ind. 2, p. 518; not L.) ५ Neelgherries. In a ravine near Mahableshwur Village. Penang. Khassya Mountains. Assam. Nepal. Fl. small, white, C. S.; fr. H. S.
9. *hexagynus*, Roxb. (fl. ind. 2, p. 516;—W. and A. pr. 1, p. 299.—R. indicus, Lesch.;—DC. pr. 2, p. 568.) ५ Peninsula of India. Khassya Mountains. Fl. small, white, C. S.; fr. H. S.

FRAGARIA, L. (DC. *pr.* 2, p. 569;—*W. and A. pr.* 1, p. 299.) *Strawberry*.

1. *vesca*, L. (DC. *l. c.*) ♀. Europe. Fl. smallish, white; and fr. C. S.

a. *sylvestris*, L. (*E. B.* 22, t. 1524.) *Wood-strawberry*.

β. *horiensis*, Duch. (*F. vesca*, *Roxb. H. B.* p. 39.)—Cultivated.

2. *elatior*, Ehrh. (DC. *pr.* 2, p. 570;—*W. and A. pr.* 1, p. 300;—*E. B.* 31, t. 2197.) *Hautboy-strawberry*. ♀. America. Europe?—Fl. large, white; and fr. C. S.

3. *chilensis*, Ehrh. (DC. *pr.* 2, p. 571.) *Chili strawberry*. ♀. S. America. Fl. large, white; and fr. C. S.

4. *indica*, Andr. (*B. Repos.* 8, t. 475;—DC. *pr.* 2, p. 571;—*B. Reg.* 1, t. 61;—*W. and A. pr.* 1, p. 300.—*F. malayana*, *Roxb. fl. ind.* 2, p. 520.—*Duchesnea fragarioides*, Sm.—*D. fragiformis*, Don.—*Potentilla Wallichiana*, Ser.;—DC. *pr.* 2, p. 574.) ♀. Penang. Neelgherries. Deyra Dhoon. Kemaon. Fl. small, yellow; and fr. the whole year.

5. *Roxburghii*, W. and A. (*pr.* 1, p. 300, *annot.*—*F. indica*, *Roxb. fl. ind.* 2, p. 520; not Andr.) ♀. Khassya Mountains. Assam. In H. C. G. fl. and fr. C. S. (*Roxb.*)

POTENTILLA, L. (DC. *pr.* 2, p. 571;—*W. and A. pr.* 1, p. 300.) *Cinquoil*.

1. *reptans*, L. (DC. *o. c.* p. 574;—*E. B.* 12, t. 862.) ♀. Europe. Asia. Fl. largish, yellow, C. S. fr. 0.

2. *argentea*, L. (DC. *pr.* 2, p. 576;—*E. B.* 2, t. 89.) ♀. Europe. Fl. small, yellow, Jan. and Feb.; fr. 0.

3. *micropetala*, Don. (DC. *pr.* 2, p. 583.—*Comarum flavum*, *Buch.*;—*Roxb. fl. ind.* 2, p. 521.) ☉ Nepal, Gossain Than. Fl. small, yellow, Feb.; fr. 0.

4. *rupestris*, L. (DC. *pr.* 2, p. 583;—*E. B.* 20, t. 2058.) ♀. Europe. Siberia. Introduced in 1841.

P. verna, L.; *opaca*, L.; *aurea*, L.; *pedata*, Willd.; *recta*, L.; *astracantha*, Jacq.; and *anserina*, L.; have been cultivated in the garden here for many years, but without fl.

GEUM, L. (DC. *pr.* 2, p. 550.) *Avens*.

1. *chilense*, Balbis. (DC. *pr.* 2, p. 551, *annot.* under *G. coccineum*;—*B. Reg.* 16, t. 1348, as to spec. char. and syn.—*G. coccineum*, DC. *pr.* 2, p. 551, excl. fl. gr. and habitat;—*B. Reg.* 13, t. 1088; excl. fl. gr. and Spreng.) ♀. Chili. Fl. large, scarlet, R. S., but only once; fr. 0.

2. *rivale*, L. (DC. *pr.* 2, p. 551;—*E. B.* 2, t. 106.) ♀. Europe. America. Fl. middle-sized, yellow, with a purplish calyx, R. S. but rare; fr. 0.

G. urbanum, L.; cultivated for many years with the two preceding, has not fl.

AGREMONIA, L. (DC. *pr.* 2, p. 587.) *Agrimony*.

1. *nepalensis*, Don. (DC. *l. c.*) ♀. Nepal. Fl. small, yellow, June and July; fr. 0.

A. Eupatorium, L.; the common English Agrimony, has not fl.



KERIA, DC. (pr. 2, p. 541.)

1. *japonica*, DC. (l. c.—*Rubus japonicus*, L.—*Corchorus japonicus*, Thunb.—*Spiræa japonica*, Lamb.) ♀ Japan. Fl. yellow, largish; fr. O. β, *plena*; (*Corchorus japonicus*, Thunb.;—*B. Repos.* 2, t. 587;—*B. M.* 32, t. 1296.) Fl. the whole year.

SPIRÆA, L. (DC. pr. 2, p. 541.)

1. *Roxburghiana*, Wall. MSS. (*S. corymbosa*, Roxb. *fl. ind.* 2, p. 512; not Rafin.) ♀ China. Nepal. Fl. small, white, H. and R. S.; fr. O.
2. *Filipendula*, L. (DC. pr. 2, p. 546;—*E. B.* 4, t. 284.) ♀ Europe. Introduced in 1841.

* *Rosa bracteata*, Wendl. β. *scabricaulis*, Lindl.; *B. M.* 34, t. 1377. ♀ China.—*R. sulphurea*, Ait.; *B. Reg.* 1, t. 46. ♀ Levant.—*R. Eglandertia*, L. (*R. lutea unicolor*, *B. M.* 11, t. 363.) ♀ Native place unknown.—β *luteola*, Thor. (*R. hispida*, *B. M.* 13, t. 1570.)—*R. gallica*, L.; *B. Reg.* 6, t. 448. ♀ S. Europe.—*R. alba*, L.; fl. dan. t. 1215. ♀ Crimea.—*R. Montezumæ*, Humb. ♀ Mexico.—*R. Lawrenceana*, Swt. (*R. semperflorens*, γ *minima*, *B. M.* 42, t. 1762.) ♀ China.—*R. microcarpa*, Thunb. ♀ China.—*R. macrophylla*, Lindl.; Wall. pl. as. rar. 2, t. 117. ♀ Himalaya.—*R. sericea*, Lindl.; Royle, t. 42, f. 1. ♀ Kemaon.—*R. Lyellii*, Lindl. ♀ Oude.—*Lowea berberifolia*, Lindl.; *B. Reg.* 15, t. 1261. ♀ Persia.—*Rubus moluccanus*, L.; Rumph. 5, t. 47, f. 2. Tavoy. Moluccas.—*R. paniculatus*, Sm. Nepal.—*R. pauciflorus*, Wall.; *B. Reg.* 10, t. 854, Nepal.—*R. jamaicensis*, L. ♀ Jamaica.—*R. parvifolius*, L.; *B. R.* 6, t. 496. ♀ China. Nepal.—*Fragaria monophylla*, Duch.; *B. M.* 2, t. 63. ♀.—*F. grandiflora*, Ehrh. ♀ Surinam.—*F. bouariensis*, Juss. ♀ Buenos Ayres.—*Potentilla candicans*, Humb. ♀ Mexico.—*P. lineariloba*, M. and S. ♀ Mexico.—*Spiræa callosa*, Thunb. (*S. bella*, Sims.; *B. M.* 50, t. 2426. ♀ Nepal.—*Schizoneotus Lindleyanus*, Lindl. (*Spiræa Lindleyana*, Wall.) Kamaon. Sirmore.—*Geum Roylei*, Wall. Choor Mountain.—*Brayera anthelmintica*, Kth. Abyssinia.—*Keria japonica*, DC.; α. *simplex*.—*Lindleya mespiloides*, Kth. ♀ Mexico.—*Neillia thyrsiflora*, Don. Nepal.—*N. rubiflora*, Don. Nepal.

SUB-ORDER.—POMEÆ, Lindl. Nat. Syst. p. 145.

THE APPLE TRIBE.

Trees and shrubs, referred (including *Hesperomeles* and *Stranvæsia*) by Lindley to 13 genera. Of these, according to DC. pr. and *B. Reg.*, about 30 species have been found in Europe; 30 in N. America; 12 in China and Japan; 7 in S. America and Mexico; 5 in Siberia; 5 in the



Levant; 3 in N. Africa; 2 in Tauria and Caucasus; 2 in Persia; 1 about Astrachan; 1 in Madeira; and 1 in the Sandwich Islands. In the E. Indies, excluding Java, 29 species have been discovered, viz. 1 of *Cratægus*; (Nepal.) 1 of *Stranvæsia*; (Nepal.) 1 of *Rhaphiolepis*; (China; scarcely found in India,) 6 of *Photinia*; (Nepal. Khassya Mountains, Neelgherries,) 1 of *Eriobotrya*; (Nepal.) 8 of *Cotoneaster*; (Nepal, 1 from the Neelgherries,) 10 of *Pyrus*; (Himalayas, Khassya Mountains, Taong-Dong, Assam.) and 1 of *Cydonia*, (Nepal.) *Cydonia vulgaris*, Pers. is only cultivated in Hindoosthan.

"The fruit is an article of food, and the flowers for their beauty, are the chief peculiarities of this order, which consists exclusively of trees and bushes, without any herbaceous plant." (Lindl.)

CRATÆGUS, L. (DC. pr. 2, p. 626.)

1. *crenulata*, Roxb. (*fl. ind.* 2, p. 509;—DC. l. c.) 5 Nepal, Kemaon. Fl. largish, white, April and May; fr. Aug.

RHAPHIOLEPIS, Lindl. (DC. pr. 2, p. 630;—Lindl. B. Reg. under t. 1956.)

1. *indica*, Lindl. (DC. l. c.—*Cratægus indica*, L.? B. M. 42, t. 1726;—Roxb. H. B. p. 38.) 5 China. Fl. small, white, March and April; fr. O.

PHOTINIA, Lindl. (DC. pr. 2, p. 631;—W. and A. pr. 1, p. 302;—Lindl. B. Reg. under t. 1956.)

1. *bengalensis*, Wall. (P.? dubia, Lindl.;—DC. l. c.—*Mespilus bengalensis*, Roxb. *fl. ind.* 2, p. 510.) L. 5 Chittagong. Assam. Khassya Mountains. Nepal. Fl. small, white, Dec. and Jan.; fr. June and July. Bark used in Nepal for dyeing scarlet. (DC.)

2. *eugenifolia*, Lindl. (B. Reg. under t. 1956.) 5 Khassya Mountains. Fl. small, white, R. S.

ERIOBOTRYA, Lindl. (DC. pr. 2, p. 631;—W. and A. pr. 1, p. 302;—Lindl. B. Reg. under t. 1956.)

1. *japonica*, Lindl. (DC. l. c.;—W. and A. l. c.;—B. Reg. 5, t. 365;—Wight. icon. 1, t. 226;—J. Grah. Cat. B. pl. p. 65.—*Mespilus japonica*, Thunb.;—Roxb. *fl. ind.* 2, p. 510.) Loquat. 5 Japan, China. Cultivated in gardens. Fl. smallish, white, fragrant, R. S.; fr. Dec. Jan. Feb. and March.

COTONEASTER, Medik. (DC. pr. 2, p. 632.)

1. *affine*, Lindl. (DC. l. c.) 5 Nepal, Shreenagur. Has not fl. here, though cultivated for many years.
2. *obovatum*, Wall. Nepal.

PYRUS, L. (DC. pr. 2, p. 633.)

1. *communis*, L. (DC. l. c.;—E. B. 25, t. 1784.) Wild pear-tree. Europe. γ. *sativa*, (Roxb. *fl. ind.* 2, p. 510.) Cultivated pear-tree. Fl. large, white, fragrant, Feb. and March; fr. O.
2. *sinensis*, Lindl. (B. Reg. 15, t. 1248.—P. *chinensis*, Roxb. *fl. ind.* 2, p. 511.) Sandy Pear. China Pear. 5 China. In H. C. G. Fl? Introduced there before 1794, but had not fl. up to 1814.



3. *Malus*, L. (DC. pr. 2, p. 635;—Roxb. fl. ind. 2, p. 511;—J. Grah. Cat. B. pl. p. 66.) *Apple Tree*. 5 Europe. Persia. Assam, &c. Fl. large, reddish white, fragrant, Feb. and March; fr. 0.
4. *spectabilis*, Ait. (DC. pr. 2, p. 635;—B. M. 8, t. 267;—Roxb. H. B. p. 38.) 5 China. Fl. large, deep rose, afterwards pale rose. Introduced into H. C. G. in 1812. Fl. ?
5. *indica*, Roxb. (fl. ind. 2, p. 511;—Wall. pl. as rar. 2, t. 173.) 5 Khassya Mountains. Has not fl. here, though cultivated for more than ten years.
6. *lanuginosa*, Wall. Nepal.
- CYDONIA, Tournef. (DC. pr. 2, p. 638.)
1. *vulgaris*, Pers. (DC. l. c.—Pyrus Cydonia, L.;—Jacq. austr. t. 342;—Roxb. fl. ind. 2, p. 511;—J. Grah. Cat. B. pl. p. 66.—P. tomentosa, Roxb. o. c. p. 512; not DC.) *Common Quince Tree*. 5 Rocky places and hedges of S. Europe, Hindoostan? Introduced into H. C. G. in 1794, but had not fl. up to 1814.
2. *japonica*, Pers. (DC. pr. 2, p. 638.—Pyrus japonica, Thunb.;—B. M. 18, t. 692;—Roxb. H. B. p. 38.) *Japan Quince Tree*. 5 Fl. large crimson. In H. C. G. fl. H. S. (Roxb.)

* *Strunvesia glaucescens*, Lindl.; B. Reg. 23, t. 1956. 5 Nepal, Kamaon.—*Rhaphiolepis Phæostemon*, Lindl.; (Rhaphiolepis indica, B. Reg. 6, t. 468, not Lindl). 5 China.—*R. rubra*, Lindl.; B. Reg. 17, t. 1400. 5 China.—*R. salicifolia*, Lindl.; B. Reg. 8, t. 652. 5 China.—*Chamameles coriacea*, Lindl. 5 Madeira.—*Photinia serrulata*, Lindl. (Cratægus glabra, Thunb.; B. M. 47, t. 2105.) 5 Japan, China.—*P. pustulata*, Lindl. Canton.—*P. integrifolia*, Lindl. Nepal.—*P. Lindleyana*, W. and A.; Wight. icon. 1, t. 228. 5 Neelgherries.—*P. Notoniana*, Wall. Wight. ill. 1, t. 85. 5 Neelgherries.—*Eriobotrya elliptica*, Lindl. Nepal. 5.—*Osteomeles anthyllidifolia*, Lindl. 5 Sandwich Islands.—*Pyrus crenata*, Don.; B. Reg. 20, t. 1655. 5 Nepal.—*P. baccata*, L. 5 Kamaon.—*P. foliolosa*, Wall. pl. as. rar. 2, t. 189. 5 Nepal.—*Cydonia sinensis*, Thouin.; B. Reg. 11, t. 905. 5 China.

SUB-ORDER.—AMYGDALÆÆ, Lindl. Nat. Syst. p. 146.

THE ALMOND TRIBE.

Trees or shrubs, by Lindl. referred to 6 genera. Of these, DC. pr. assigns about 16 to N. America; 14 to Europe; 7 to S. America, Mexico and the W. Indies; 7 to Japan; 3 to the Levant; 1 to Siberia; 1 to Kalmukia; 1 to Caucasus; 1 to Arabia; 1 to Persia; 1 to China; and 1 to N. Africa. In the E. Indies, (mostly exclusive of Java) have been dis-



covered 20 species : 1 of *Prunus* ; (*P. bokharensis*, Royle.) 12 of *Cerasus* ; (Nepal, one a native of Moulmein, another also common to China.) ; 3 of *Amygdalus* ; (Kemaon. Cochin-China. One [*Persica saligna*, Royle.] a native of the Bissehur district.) 3 of *Polyodontia* ; (1 Javanese ; 2 Ceylonese,) and 1 of *Pygeum*, (Khassya Mountains.)

The kernels and leaves of several species, f. ex. *Cerasus capricida*, *C. virginiana*, *C. Laurocerasus*, &c., contain the deadly prussic acid, but the fruit is in many instances delicious, f. ex. peaches, nectarines, cherries, plums, apricots, almonds. The leaves of the sloe (*Prunus spinosa*) have been employed as a substitute for tea, and are still used in Europe for adulterating the black tea of China. *Kirshengeist* (l'eau de cerises) is a spirit prepared from the kernels of a variety of *Cerasus avium* in the Vosges, the Black Forest, and Switzerland. The well known liqueur, *Noyau*, is flavoured by the kernels of *Cerasus occidentalis*, and the *Maraskino*, it is said by those of *C. Mahaleb*.

PRUNUS, L. (*DC. pr. 2, p. 532.*)

1. *domestica*, L. (*DC. o. c. p. 533*;—*E. B. 25, t. 1783.*) *Common Plum-Tree*. 5 S. Europe. England. Fl. small, white, Febr.; fr. 0, or rare and sour.

CERASUS, Juss. (*DC. pr. 2, p. 535.*) *Cherry*.

1. *Puddum*, Wall. (*pl. as. rar. 2, t. 143*;—*DC. o. c. p. 537.*)—*Prunus Puddum*, Roxb. MSS.—*P. sylvatica*, Roxb. *fl. ind. p. 501.*) 5 Deyra Dhoon. Sirmore. Mountains of Hindoosthan. Has not fl. here.
2. *triflora*, Wall. (*Prunus triflora*, Roxb. *H. B. p. 38*, by a mistake trifolia, in *Roxb. fl. ind. 2, p. 501.*) 5 China. Nepal. Fl. small, white, Feb.; fr. May and June.
3. *nepalensis*, Ser. (*DC. pr. 2, p. 540.*—*C. glaucifolia*, Wall. *Cat.*) 5 Nepal, Kemaon. Has been introduced into H. C. G. Fl. ?
4. *caroliniana*, Michx. (*DC. pr. 2, p. 540.*—*Prunus caroliniana*, Ait.) 5 From Carolina to Florida. Has been introduced into H. C. G. Fl. ?

ARMENIACA, Tournef. (*DC. pr. 2, p. 531.*)

1. *vulgaris*, Lam. (*DC. o. c. p. 532.*—*Prunus Armeniaca*, L.;—*Roxb. fl. ind. 2, p. 501*;—*J. Grah. Cat. B. pl. p. 66.*) *Common Apricot*. 5 Armenia. Fl. small, white, fragrant, Jan. and Feb.; fr. H. S., but rare and bad.

AMYGDALUS, L. (*DC. pr. 2, p. 530.*)

1. *Persica*, L. (*Roxb. fl. ind. 2, p. 500*;—*J. Grah. Cat. B. pl. p. 66.*—*Persica vulgaris*, Mill.;—*DC. pr. 2, p. 531.*) *Peach Tree*. 5 Persia. Cultivated in gardens. Fl. largish, pale rose, Jan. and Febr.; fr. May. β . *nectarina*; (*Amygdalus Persica nectarina*, Ait.—*Persica laevis*, DC. *l. c.*) 5 Native place unknown. Fl. and fr. with a.
2. *cordifolia*, Roxb. (*fl. ind. 2, p. 500.*) L. 5 China. In H. C. G. fl. C. S.; fr. H. S. Of this tree, which, according to Roxb. was very common about Calcutta in 1814, we know nothing, nor is it mentioned in Wall. Cat.



The common *Almond* and *Cherry Tree* has been tried here repeatedly, but without success.

- * *Prunus insititia*, L.; E. B. 12, t. 841. 5 England, Germany, S. France.—*P. Cocomilla*, Ten. 5 Calabria.—*P. japonica*, Thunb. 5 China, Japan.—*α. simplex*, B. Reg. 21, t. 1801.—*β. plena*, B. Reg. 1, t. 27. (*Amygdalus pumila*, B. M. 47, t. 2176.)—*Cerasus acuminata*, Wall. pl. as. rar. 2, t. 181. Nepal.—*C. cornuta*, Wall.; Royle. ill. t. 38, f. 2. Sirmore.—*C. Pseudocerasus*, Lindl. B. Reg. 10, t. 800. 5 China.—*C. Laurocerasus*, Lois. 5 Levant.—*Armeniaca dasycarpa*, Pers.; B. Reg. 15, t. 1243. 5 Country unknown.

SUB-ORDER.—SANGUISORBEÆ, Lindl. Nat. Syst. p. 148.

THE BURNET TRIBE.

Herbs or under-shrubs, by Lindl. referred to 10 genera. Of these, DC. pr. enumerates 24 species for S. America and Mexico; 12 for Europe; 4 for the Straits of Magellan; 2 for N. Africa; 1 for N. America; 1 for Falkland Islands; 1 for the Levant; 2 for Caucasus; 1 for Daburia; 1 for the Canaries; 1 for New Zealand; and 1 for Tristan d'Acunha. In S. Africa have been found more than 30 species. In India we have *Sanguisorba diandra*, from Gossain Than; and *Alchemilla vulgaris*, from the Neelgherries. The latter is also common to Europe. Properties unimportant. The common Burnet (*Sanguisorba officinalis*, L.) is greedily eaten by cattle. (*Hornem.*)

POTERIUM, L. (DC. pr. 2, p. 594.)

1. *caudatum*, Ait. (DC. l. c.;—B. M. 49, t. 2341.) 5 Canaries. Fl. minute, crimson, C. S; extremely rare.
2. *Sanguisorba*, L. (DC. l. c.;—E. B. 12, t. 860;—Roxb. H. B. p. 68.) 4. Europe. Fl. green, with purple filaments and yellow anthers. H. S.

- * *Alchemilla arvensis*, L. E. B. 15, t. 1011. 6 Europe.—*Sanguisorba officinalis*, L.; E. B. 19, t. 1312. 4. Europe.

ORDER CVI.—FABACEÆ, Lindl. Nat. Syst. p. 148. LEGUMINOSÆ, of others.

THE BEAN TRIBE.

Herbs, under-shrubs, shrubs, or trees, arranged under about 362 genera. Of these, according to DC. pr., B. M. and B. Reg., about 1220 species belong to S. America, Mexico and the W. Indies; (620 Curvembriæ, 600 Rect-

embriæ.) 578 to Europe (1 Rect.); 224 to N. America (12 R.); 284 to New Holland and the South Sea Islands (94 R.); 118 to Siberia; 118 to N. Africa (6 R.); 115 to the Levant (3 R.); 78 to Tauria and Caucasus; 80 to tropical Africa (20 R.); 42 to China and Japan (4 R.); 25 to Iberia; 25 to Dahuria (2 R.); 18 to the Canaries; 20 to Bourbon and Mauritius; (3 R.); 14 to Persia; 22 to Madagascar (11 R.); 20 to Arabia (11 R.); 11 to Abyssinia (6 R.); 12 to Timor (7 R.); 3 to Madeira; 2 to Manila; 1 to the Marianne Islands; and 1 to Melville Island. S. Africa contains 700 species, referred to 80 genera, of which with the exception of *Arachis* and *Voandzeia*, all the papilionaceous ones belong to *Curvembriæ*, and those with regular or subregular flowers to *Rectembriæ*. (*Harvey*.) In the E. Indies, excluding almost entirely *Java*, have been discovered 891 species, arranged under 133 genera, viz.—

CURVEMBRÆ.

- | | |
|---|---|
| Of <i>Sophora</i> , 2-3. | Of <i>Shuteria</i> , 3. |
| — <i>Edwardsia</i> , 2. | — <i>Grona</i> , 1. (Lour.) |
| — <i>Ormosia</i> , 4. | — <i>Johnia</i> , 1. |
| — <i>Macrotropis</i> , 1. (Lour.) | — <i>Galactia</i> , 2. |
| — <i>Piptanthus</i> , 1. | — <i>Collaea</i> ? 2. |
| — <i>Thermopsis</i> , 1. | — <i>Pueraria</i> ? 4. (Wall.) |
| — <i>Heylandia</i> , 1. | — <i>Dumasia</i> , 3. |
| — <i>Crotalaria</i> , 80. | — <i>Glycine</i> , 12. |
| — <i>Priotropis</i> , 1. | — <i>Pseudarthria</i> , 2. |
| — <i>Cytisus</i> , 1. (Mussooree.) | — <i>Tephrosia</i> , 22. |
| — <i>Ononis</i> , 1. (Cashmere, Europe.) | — <i>Robinia</i> ? 1. (Lour.) |
| — <i>Anthyllis</i> ? 1. (Lour.) | — <i>Sesbania</i> , 5-6. |
| — <i>Medicago</i> , 8. (4 common to Europe.) | — <i>Agati</i> , 1. |
| — <i>Rothia</i> , 1. | — <i>Caragana</i> , 6. (Himalayas, Ludak.) |
| — <i>Trigonella</i> , 7. (3 common to Europe.) | — <i>Colutea</i> , 1. (Kunawar.) |
| — <i>Melilotus</i> , 3. (All common to Europe.) | — <i>Oxytropis</i> , 2. (Kunawur.) |
| — <i>Trifolium</i> , 3. (2 common to Europe, 1 Lour.) | — <i>Astragalus</i> , 23. (1 common to Europe.) |
| — <i>Lotus</i> , 1. (Common to Europe.) | — <i>Güldenstadtia</i> , 1. |
| — <i>Podolotus</i> , 1. | — <i>Diphaca</i> , 1. (Lour.) |
| — <i>Cyamopsis</i> , 1. | — <i>Ormocarpon</i> , 2. |
| — <i>Pycnospora</i> , 1. | — <i>Geissaspis</i> , 1. |
| — <i>Psoralea</i> , 4. (1 L., 1 Roxb., 2 Lour.) | — <i>Zornia</i> , 3. |
| — <i>Indigofera</i> , 51. (1 common to Egypt.) | — <i>Stylosanthes</i> , 1. |
| — <i>Clitoria</i> , 6. (2 J. Grah.) | — <i>Æschynomene</i> , 8. |
| | — <i>Smithia</i> , 4. |
| | — <i>Lourea</i> , 5. |
| | — <i>Uraria</i> , 14. |
| | — <i>Desmodium</i> , 60. |
| | — <i>Dicerma</i> , 4. |



Of *Taverniera*, 2.

- *Hedysarum* ? 1-2. (Lour. J. Grah.)
- *Elciotis*, 2.
- *Lespedeza*, 5.
- *Oxyramphis*, 3.
- *Alhagi*, 2. (1 common to Egypt.)
- *Alysicarpus*, 10.
- *Cicer*, 2.
- *Vicia*, 5. (3 common to Europe.)
- *Ervum*, 3.
- *Pisum*, 2.
- *Lathyrus*, 4. (3 common to Europe.)
- *Orobis*, 1. (Sirmore.)
- *Abrus*, 3.
- *Macranthus*, 1. (Lour.)
- *Rhynchosia*, 10.
- *Pyrrhotrichia*, 1.
- *Flemingia*, 19.
- *Phaseolus*, 38. (1 common to Europe.)
- *Nomismia*, 3.
- *Cantharosperrum*, 2.
- *Cyrtotropis*, 1.
- *Soja*, 1.

Of *Dolichos*, 32.

- *Lablab*, 2.
- *Pachyrrhizus*, 3. (2 Cochin-China.)
- *Parochetus*, 3.
- *Psophocarpus*, 1.
- *Canavalia*, 6.
- *Mucuna*, 17.
- *Cajanus*, 2.
- *Atylosia*, 5.
- *Dunbaria*, 3.
- *Cyanospermum*, 1.
- *Cylista*, 1.
- *Erythrina*, 15.
- *Butea*, 8.
- *Meizotropis*, 1. (Lour.)
- *Derris*, 2.
- *Endespermum*, 1.
- *Pongamia*, 38.
- *Millettia*, 7.
- *Brachypterum*, 1.
- *Dalbergia*, 35.
- *Pterocarpus*, 7.
- *Sarcodum*, 1. (Lour.)

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RECTEMBRIÆ.

Of *Arachis*, 1.

- *Gleditschia*, 1. (Pers.)
- *Anoma*, 1. (Lour.)
- *Guilandina*, 3-4.
- *Cæsalpinia*, 15.
- *Poinciana*, 2.
- *Mezoneuron*, 6.
- *Pterolobium*, 1.
- *Hardwickia*, 3.
- *Jonesia*, 2.
- *Dalhousiea*, 1.
- *Humboldtia*, 2.
- *Amherstia*, 1.
- *Tamarindus*, 1.
- *Baryxylum*, 1. (Lour.)
- *Cathartocarpus*, 5.
- *Cassia*, 24.
- *Cynometra*, 5.

Of *Intsia* ? 1.

- *Outea*, 1.
- *Bauhinia*, 30.
- *Aloexylon*, 1. (Lour.)
- *Dialium*, 1. (Java.)
- *Acrocarpus*, 1.
- *Entada*, 1.
- *Mimosa*, 7. (4 uncertain.)
- *Parkia*, 2.
- *Inga*, 24.
- *Desmanthus*, 4.
- *Caillea*, 1.
- *Adenanthera*, 3. (1 uncertain.)
- *Prosopis*, 1.
- *Acacia*, 47.
- *Vachellia*, 1.

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Properties under the several species, as far as India is concerned. :—

A. CURVEMBRÆ. Radicle back upon the cotyledons.

B. RECTEMBRÆ. Radicle bent straight.

A. PAPILIONÆÆ.
Lobes of the calyx distinct. Stamens perigynous. Corol papilionaceous.

B. SWARTZIÆÆ.
Calyx bladder-shaped, with indistinct lobes. Stamens hypogynous. Corol none, or of one or two petals.

A. CÆSALPINIÆÆ.
Petals before opening imbricated. Stamens perigynous.
a. *Geoffræa*. Filaments variously connected.
b. *Cassia*. Filaments distinct.

B. MIMOSÆÆ.
Sepals and petals before opening valvate. Stamens hypogynous.
§. *Detarieæ*.
Petals none. Fruit drupaceous.

A. PAPILIONÆÆ.

a. *Phyllolobæ*.

Cotyledons pushed above ground, becoming green and resembling leaves. Very few bear seeds eaten by man or animals.

a. *Sophorææ*. Legume continuous. Stamens distinct.

β. *Loteæ*. Legume continuous. Filaments grown together.

γ. *Hedysarææ*. Legume transversely jointed. Filaments nearly always grown together.

b. *Sarcolobæ*.

Germinate with their cotyledons under ground. Among these only *pulse* is found.

a. *Viciææ*. Legume many-seeded, opening. Leaves cirriferous; primordial ones alternate.

β. *Phascoleæ*. Legume many seeded, opening. Leaves not cirriferous, primordial ones opposite.

γ. *Dalbergiææ*. Legume one or two-seeded, not opening. Leaves not cirriferous.

A. SOPHOREÆ, Spreng.

(*DC. pr. 2, p. 74.*—*W. and A. pr. 1, p. 179.*)

SOPHORA, L. (*DC. o. c. p. 95*;—*W. and A. l. c.*)

1. *glauca*, Leschen. (*DC. l. c.*;—*W. and A. l. c.*) 3 Neelgherries. Fl. middle-sized, white, tinged with rose,—*H. and R. S.*

2. *tomentosa*, L. (*DC. pr. 2, p. 95*;—*W. and A. pr. 1, p. 179*;—*Roxb. fl. ind. 2, p. 316*;—*J. Grah. Cat. B. pl. p. 44*;—*Lam. ill. t. 325. f. 2*;—*Rumph. 4, t. 22.*) 5 Moluccas. Mauritius. Ceylon. Both Peninsulas of India. Cultivated in Gardens.—Fl. largish, bright yellow, fragrant, and fr. nearly the whole year.—*Seeds* very bitter, and according to Rumphius, considered a specific in cholera: dose—three or four rubbed up with water. A cold infusion of the *root* praised in spurious pleuritis, and against all poisons produced from the sea.

β. *occidentalis*; (*B. M. 62, t. 3390.*—*S. occidentalis, L.*) 5 W. Indies.

In *H. C. G.*

EDWARDSIA, Salisb. (*DC. pr. 2, p. 97.*)

1. *mollis*, Royle. (*ill. t. 32, f. 2.*—*Sophora mollis, Wall. Cat.*—*S. Houghiana, Wall. Cat.*) 5 Hills in the Deyra Dhoon. Sahunsadhara. Sirmore. Fl. middle-sized, yellow, *R. S.*



2. *maderaspatana*, Wight. ♀ Madras. Introduced in 1841.

E. microphylla, Salisb. has been cultivated here, but without success.

The same is to be said of *Virgilia capensis*, Lam; and *Baptisia australis*, R. Br.

ORMOSIA, Jacks. (DC. pr. 2, p. 97.)

1. *dasycarpa*, Jacks. (trans. Linn. soc. 10, t. 26;—DC. l. c.—*Sophora monosperma*, Swz.—*Podalyria monosperma*, Poir;—Roxb. H. B. p. 13.) ♀ W. Indies. Fl. middle-sized, dark purple, fragrant,—April; fr. O.

? 2. *robusta*, Wight. (*Sophora robusta*, Roxb. H. B. p. 31;—Wight. icon. 1, t. 245.) ♀ Assam.—In H. C. G. fl. April; fr. July. (Roxb.)

* *Sophora japonica*, L. ♀ Japan, China.—*S. ? velutina*, Lindl; B. Reg. 14, t. 1185, ♀ Nepal.—*S. havanensis*, Jacq. ♀ Havannah.—*S. littoralis*, Schrad. ♀ Brazil.—*Edwardsia nitida*, DC. ♀ Bourbon.—*E. denudata*, DC. ♀ Bourbon.—*Ormosia coccinea*, Jacks. ♀ Guiana.—*O. coarctata*, Jacks. ♀ Guiana.—*O. glauca*, Wall. pl. as. rar. 2, t. 125. ♀ Deyra-Dhoon.—*Virgilia aurea*, Lam; Wight. ill. 1, t. 81. ♀ Abyssinia. Courtallum.—*Piptanthus nepalensis*, Swt. Nepal. ♀

B. LOTEE, DC.

(pr. 2, p. 115.—W. and A. pr. 1, p. 180.)

HEYLANDIA, DC. (pr. 2, p. 123;—W. and A. l. c.)

1. *latebrosa*, DC. (l. c.;—W. and A. l. c.;—*Crotalaria uniflora*, Kön;—Roxb. fl. ind. 3, p. 271.—*Hallia hirta*, Willd.—*Lespedeza latebrosa*, Pers.—*Hedysarum latebrosus*, L.;—excl. syn. Petiv.) 2. Coromandel. Bombay. Hurdwar. Saharunpore. Fl. small, yellow,—C. S.

CROTALARIA, L. (DC. pr. 2, p. 124;—W. and A. pr. 1, p. 180.)

1. *alata*, Buch. (C. *bialata*, Roxb. fl. ind. 3, p. 274.) ♀ Silhet. In H. C. G. fl. R. and C. S.; fr. C. S. (Roxb.)

2. *parviflora*, Roth. (DC. pr. 2, p. 224;—Roxb. H. B. p. 54.) ☉ N. America. Fl. small, yellow, Feb. and March; fr. April and May.

3. *sagittalis*, L. (Roxb. H. B. p. 54, not L.) ☉ N. America. Fl. middle-sized, yellow, Feb. and March, fr. H. S.

4. *Wightiana*, Grah. (W. and A. pr. 1, p. 181.) Has been introduced into H. C. G. from Dindygul Hills. Fl. ?

5. *anthyllioides*, Lam. (DC. pr. 2, p. 129;—W. and A. pr. 1, p. 181;—J. Grah. Cat. B. pl. p. 44.—C. *stricta*, Roxb. fl. ind. 2, p. 265.—C. *Roxburghiana*, DC. l. c.—C. *calycina*, Schrank.; excl. syn.;—DC. l. c.) ☉ Dindygul. Bombay. Bengal, (Serampore.) Taong-Dong. Assam. Khasya Mountains. Mussooree. Nepal. China. Java. Fl. middle-sized, sulphur, and fr. C. S.

6. *hirta*, Willd. (DC. pr. 2, p. 130;—W. and A. pr. 1, p. 182.—C. *chinensis*, Roxb. fl. ind. 3, p. 268;—not L.) ♀ Peninsula of India. Fl. largish, yellow, Oct. and Nov.; fr. Jan. Feb. and March.

7. *montana*, Roxb. (*fl. ind.* 3, p. 265; not Heyne nor Roth.) 5 Circars. Fl. middle-sized, yellow, R. and C. S.; fr. C. S.
8. *fulva*, Roxb. (*fl. ind.* 3, p. 266;—*W. and A. pr.* 1, p. 183;—*J. Grah. Cat. B. pl.* p. 44.) 5 Mysore. Neelgheries. Ram Ghaut. Fl. largish, yellow, Nov. and Dec.; fr. January.
9. *paniculata*, Willd. (*DC. pr.* 2, p. 126;—*W. and A. pr.* 1, p. 183;—*Roxb. fl. ind.* 3, p. 274.—*C. chinensis*, Lam; not L.) Fl. large, yellow, C. S.; fr. H. S.
10. *ramosissima*, Roxb. (*fl. ind.* 3, p. 268;—*W. and A. pr.* 1, p. 183;—*J. Grah. Cat. B. pl.* p. 44.—*C. pellita*, Bert;—*DC. pr.* 2, p. 128.) 5 Fields at Nalutnar. Interior of Bengal. Fl. largish, yellow, R. and C. S.; fr. C. S. Stains the fingers of a yellow colour. (Law.)
11. *pulcherrima*, Roxb. (*fl. ind.* 3, p. 267;—*DC. pr.* 2, p. 125;—*W. and A. pr.* 1, p. 184;—*Wight. icon.* 2, t. 481;—*B. M.* 46, t. 2027. *C. pulchra*, Andr. *B. Re.* 9, t. 601.) 5 Mysore. Fl. large, bright yellow, C. S.; fr. H. S.
12. *junceæ*, L. (*DC. pr.* 2, p. 125;—*W. and A. pr.* 1, p. 185;—*Roxb. Corom.* 2, t. 193; *fl. ind.* 3, p. 259;—*B. M.* 14, t. 490;—*J. Grah. Cat. B. pl.* p. 44.—*C. bengalensis*, Lam.;—*DC. l. c.*—*C. tenuifolia*. *Roxb. fl. ind.* 3, p. 263;—*DC. o. c.* p. 126;—*B. Reg.* 12, t. 982.—*C. fenestrata*, Sims;—*B. M.* 44, t. 1933;—*DC. l. c.*) ৯৭ Sun. ৩ Both Peninsulas of India. Bengal. (Serampore.) Fl. large, bright yellow, R. and C. S.; fr. C. S.—Extensively cultivated about Bombay, Salsette, and some places in Bengal for the sake of its fibres, which make a good, strong hemp for cordage, canvas, and paper.
13. *tetragona*, Roxb. (*fl. ind.* 3, p. 263;—*DC. pr.* 2, p. 128;—*W. and A. pr.* 1, p. 185;—*B. Repos.* 9, t. 593.) 5 Deyra-Dhoon. Kherree jungle. Fl. large, yellow, R. and C. S.; fr. C. S.
14. *sericea*, Retz. (*Roxb. fl. ind.* 3, p. 273;—*W. and A. pr.* 1, p. 186;—*J. Grah. Cat. B. pl.* p. 45.—*C. spectabilis*, Roth.—*DC. pr.* 2, p. 125.) ৯৭৭৭ Peepooli-jhunjun. ৩ Peninsula of India, Bengal, (Serampore.) Assam. Deyra-Dhoon, Kherree Jungle. Fl. large, bright yellow, R. and C. S.; fr. C. S.
15. *retusa*, L. (*DC. pr.* 2, p. 125;—*W. and A. pr.* 1, p. 187;—*Roxb. fl. ind.* 3, p. 272;—*J. Grah. Cat. B. pl.* p. 45;—*B. M.* 52, t. 2561;—*B. Reg.* 3, t. 253.—*Lupinus cochinchinensis*, Lour; *DC. pr.* 2, p. 410;—*Rheed.* 9, t. 25.—*Rumph.* 5, t. 96, f. 1.) ৭৭৭৭ Bil-jhunjun. Moluccas. Peninsula of India. Taong-Dong. Bengal, (Serampore.) Assam. Kherree jungle. Deyra-Dhoon. Fl. large, bright yellow, C. S.; fr. H. S. Fibres of the bark employed in many places in the manufacture of cordage and canvas.
16. *verrucosa*, L. (*DC. pr.* 2, p. 115;—*W. and A. pr.* 1, p. 187;—*Roxb. fl. ind.* 3, p. 273;—*J. Grah. Cat. B. pl.* p. 45;—*B. M.* 57, t. 3034;—*B. Reg.* 14, t. 1134;—*Wight. icon.* 1, t. 200.—*C. angulosa*, Lam.;—*Roxb. fl. ind.* 3, t. 274.—*C. cærulea*, Jacq. *icon. rar.* t. 144;



- Burm. zeyl. t. 34*;—*Rheed. 9, t. 29.*) दम शन *Bun-sun*. © Mauritius. Ceylon. Both Peninsulas of India. Bengal. (Serampore.) Assam. Fl. large, bright blue and greenish white, C. S. particularly; fr. C. S.
17. *semperflorens*, Vent. (*DC. pr. 2, p. 125*;—*W. and A. pr. 1, p. 187*;—*Roxb. fl. ind. 3, p. 274.*) 5 Sumatra. Neelgherries. Fl. middle-sized, bright yellow, Nov. and Dec.; fr. Jan., Feb. and March.
18. *evoluloides*, Wight. (*W. and A. pr. 1, p. 188*;—*Wight. icon. 1, t. 31.*—*C. rubiginosa, Roxb. fl. ind. 3, p. 269*; not Willd.) 4. Dindygul Hills, Monghir. Introduced in 1841.
19. *prostrata*, Roxb. (*fl. ind. 3, p. 270*;—*DC. pr. 2, p. 130*;—*W. and A. pr. 1, p. 189.*) ছোট জ্বলন *Choto-jhunhun*. 5 Samulcottah. Prome. Bengal, (Serampore.) Monghir. Fl. small, yellow, R. and C. S.; fr. C. S.
20. *Trifoliatrum*, Willd. (*Roxb. fl. ind. 3, p. 277*;—*W. and A. pr. 1, p. 192*;—*Wight. icon. 2, t. 421.*—*C. medicaginea, DC. pr. 2, p. 133*; not Lam.—*C. stricta, Roth.*;—*DC. l. c.*) 5 Coromandel. Bengal, (Serampore.) Fl. large, yellow, C. S.; fr. H. S.
21. *laburnifolia*, L. (*DC. pr. 2, p. 130*;—*W. and A. pr. 1, p. 193*;—*Roxb. fl. ind. 3, p. 275*;—*J. Grah. Cat. B. pl. p. 45.*—*C. pendula, Bert*;—*DC. l. c.*—*C. pedunculosa, Desv.*;—*DC. o. c. p. 132.*—*Burm. zeyl. t. 35*;—*Rheed. 9, t. 27.*) মন *Muna*. 5 Coromandel. S. Concan. Ceylon. Bengal, (Serampore.) Fl. large, bright-yellow, and fr. nearly the whole year.
22. *arborescens*, Lam. (*DC. pr. 2, p. 130.*—*C. incanescens, L. fil.*—*C. capensis, Thunb.*;—*Jacq. vind. t. 64*;—*Roxb. H. B. p. 54.*) 5 C. G. H. Mauritius. Fl. large, yellow, C. S.; fr. 0.
23. *uncinella*, Lam. (*DC. pr. 2, p. 133.*—*C. elliptica, Roxb. fl. ind. 3, p. 279.*—*C. Vachellii, Hook and Arn. Beech. voy. p. 180.*) 5 China. Fl. small, yellow, Aug. and Sept; fr. C. S.
24. *bracteata*, Roxb. (*fl. ind. 3, p. 278*;—*DC. pr. 2, p. 130*;—*Wight. icon. 1, t. 273.*) 5 Taong-Dong, Rangoon. Fl. largish, yellow, Sept. and Oct.; fr. Jan. and Feb.
25. *striata*, DC. (*pr. 2, p. 131*;—*B. M. 59, t. 3200.*) 5 Bengal, (Serampore.) Fl. large, yellow, streaked with brownish, R. and C. S.; fr. C. S.
26. *Brownei*, Bert. (*DC. pr. 2, p. 130.*—*C. latifolia, Roxb.*;—*Moon's Cat. ceyl. pl.*—*C. lanceolata, Roxb. H. B. p. 54.*) 5 W. Indies. In H. C. G. fl.; and fr. C. S.
27. *incana*, L. (*DC. pr. 2, p. 132*;—*B. Reg. 5, t. 377*;—*Jacq. obs. 4, t. 82*;—*Cav. icon. 4, t. 322.*—*C. pubescens, Mönch*) 4. W. Indies. Fl. middle-sized, yellow; and fr. C. S.
28. *argentea*, Jacq. (*Schönb. 2, t. 220*;—*DC. pr. 2, p. 134*;—*Roxb. H. B. p. 54.*) 5 C. G. H. Fl. largish, yellow, C. S.; fr. 0.
29. *pulchella*, Andr. (*B. Repos. t. 417*;—*DC. pr. 2, p. 134*;—*B. M. 41, t. 1699.*) 5 C. G. H. Fl. very large, bright yellow, C. S.; fr. 0.

30. *purpurea*, Vent. (*Malm. t.* 66;—*DC. pr.* 2, *p.* 133;—*B. Reg.* 2, *t.* 128;—*B. M.* 44, *t.* 1913.—*C. elegans*, *Don. Hort. Cant.*) 5 C. G. H. —Fl. largish, crimson, Dec.; fr. 0.
 31. *quinquefolia*, L. (*DC. pr.* 2, *p.* 135;—*W. and A. pr.* 1, *p.* 194;—*Roxb. fl. ind.* 3, *p.* 279;—*J. Grah. Cat. B. pl.* *p.* 45.—*C. heterophylla*, *L. suppl. p.* 323;—*DC. l. c. p.* 131.—*Rheed.* 9, *t.* 28.) © Amerapura. Tavoy. Coromandel. Ram Ghaut. Bengal, (Serampore.) Fl. large, yellow, C. S.; fr. C. and H. S.
- LUPINUS, L. (*DC. pr.* 2, *p.* 406.)
1. *pilosus*, L. (*DC. l. c.*) © S. Europe. Fl. largish purplish, Feb. and March; fr. May.
 2. *varius*, L. (*DC. l. c.*—*L. semiverticillatus*, *Desrouss.*) © S. France, Spain. Fl. largish, blue and purplish, Feb. and March; fr. May.
 3. *luteus*, L. (*DC. l. c.*;—*B. M.* 4, *t.* 140.—*L. odoratus*, *Hortul.*) © France. Spain. Sicily. Fl. largish, bright, yellow, sweet-scented, Feb. and March; fr. 0. S.
- PRIOTROPIS, W. and A. (*pr.* 1, *p.* 180. *annot.*)
1. *cytisoides*, W. and A. (*l. c.*—*Crotalaria cytisoides*, *Roxb. fl. ind.* 3, *p.* 276;—*DC. pr.* 2, *p.* 131.—*C. psoraleoides*, *Don.*) 5 Taong-Dong. Assam. Nepal. Fl. largish, pale yellow, C. S.; fr. H. S.
- SPARTIUM, L. (*DC. pr.* 2, *p.* 145.)
1. *juncum*, L. (*DC. l. c.*;—*Roxb. H. B.* *p.* 54;—*J. Grah. Cat. B. pl.* *p.* 43;—*B. M.* 3, *t.* 85.—*Genista juncea*, *Lam.*—*G. odorata*, *Münch.*—*Spartianthus juncea*, *Lk.*) 5 S. Europe. Fl. large, yellow, sweet-scented, C. S.; fr. 0.
- MEDICAGO, L. (*DC. pr.* 2, *p.* 171.) *Medick.*
1. *circinnata*, L. (*DC. l. c.*—*Hymenocarpus circinnatus*, *Savi.*) © Along the Mediterranean. Corsica. Constantinople. Fl. small, yellow, Feb. and March; fr. April and May.
 2. *radiata*, L. (*DC. pr.* 2, *p.* 172.—*M. circinnata*, *Gärtn. fr.* 2, *p.* 348, *t.* 155, *f.* 7; not L.) © S. France. Egypt. Fl. small, yellow, Feb. and March; fr. April and May.
 3. *sativa*, (*DC. pr.* 2, *p.* 173;—*E. B.* 25, *t.* 1749;—*Roxb. H. B.* *p.* 58;—*J. Grah. Cat. B. pl.* *p.* 45.) *Lucern* 2. Spain. Patna. Peer Punjal. Cashmere. Tazeegong in Kunawur. Fl. smallish, purplish-blue, C. S.; fr. H. S. This plant is cultivated in the Deccan for feeding horses; also in Guzerat, where it is coming fast into use among the Natives as green food for cattle. (*Dr. Gibson.*)
 4. *apiculata*, Willd. (*DC. pr.* 2, *p.* 175.—*M. polycarpa*, *Willd. enum. suppl. p.* 52.—*M. polycephala*, *Hortul.*) © Nizza. Fl. small, yellow, Feb. and March; fr. April and May.
 5. *denticulata*, Willd. (*DC. pr.* 2, *p.* 176.) © S. France, Oude. Fl. small, yellow, Feb. and March; fr. April and May.
 6. *Terebellum*, Willd. (*DC. pr.* 2, *p.* 176.) © S. Europe. Fl. small, yellow, Feb. and March; fr. April and May.



maculata, Willd. (DC. *pr.* 2, p. 179.—*M. polymorpha*, *E. B.* 23, t. 1616;—*Roxb. H. B.* p. 58.—*M. cordata*, *Desrouss.*) ☉ Sandy places of Europe. Fl. small, yellow. Feb. and March; fr. 0.

8. *ciliaris*, Willd. (DC. *pr.* 2, p. 180.) ☉ S. Europe. Fl. small, yellow, Feb. and March; fr. April and May.

ROTELA, Pers. (DC. *pr.* 2, p. 382;—*W. and A. pr.* 1, p. 195.)

1. *trifoliata*, Pers. (DC. *l. c.*;—*W. and A. l. c.*;—*Wight. icon.* 1, t. 199.—*Dillwynia trifoliata*, *Roth*;—*Pers. Harpelema*, *Jacq. ecl.* 2, t. 129.—*Westonia humifusa*, *Spreng.*—*Glycine humifusa*, *Willd.*—*Trigonella indica*, *L.*;—*Roxb. fl. ind.* 3, p. 389.—*Lotus, indicus*, *Desrouss*;—DC. *pr.* 2, p. 210.) ☉ Coromandel. Fl. small, ^{sv} aur, at last reddish, Feb. and March; fr. April.

TRIGONELLA, L. (DC. *pr.* 2, p. 181;—*W. and A. pr.* 1, p. 195.)

1. *coerulea*, Ser. (DC. *l. c.*—*Trifolium Melilotus coerulea*, *L.*—*T. coeruleum*, *Willd.*;—*B. M.* 49, t. 2283;—*Roxb. H. B.* p. 58.—*Melilotus coerulea*, *Lam.*) ☉ Bohemia. Switzerland. Fl. small, pale blue, like the whole plant strongly smelling of *Foenugreek*, Jan. and Feb.; fr. March.

2. *Foenum græcum*, L. (DC. *pr.* 2, p. 182;—*W. and A. pr.* 1, p. 195;—*Roxb. fl. ind.* 3, p. 389;—*J. Grah. Cat. B. pl.* p. 45;—*Gärtn. fr.* 2, p. 332, t. 152, f. 3.) বড় মেথী *Buro-methee*. ☉ S. France. Cultivated in India. Fl. small, white, and fr. C. S. Seeds esteemed slightly tonic, and much eaten by the Natives.

3. *corniculata*, L. (DC. *pr.* 2, p. 184;—*W. and A. pr.* 1, p. 196;—*Roxb. fl. ind.* 3, p. 189;—*Wight. icon.* 2, t. 384.—*T. esculenta*, *Willd.*;—DC. *l. c.* p. 185.—*T. elatior*, *Sm. and Sibth*;—DC. *o. c.* p. 183.) পিড়ির Piring. ☉ S. France, Cultivated in India. Fl. small, yellow; and fr. C. S.

4. *ornithopodioides*, DC. (*pr.* 2, p. 184.—*Trifolium ornithopodioides*, *L.*;—*E. B.* 15, t. 1047.) ☉ Europe. Fl. small, rose-coloured; and fr. C. S.

MELILOTUS, Tournef. (DC. *pr.* 2, p. 186;—*W. and A. pr.* 1, p. 196.)

1. *officinalis*, L. (DC. *l. c.*;—*E. B.* 19, t. 1340.) Common Melilot. ☉ Fields of Europe. Fl. smallish, yellow, Jan. and Feb.; fr. March. Flowers and seeds the chief ingredients in flavoring the Gruyere cheese.

2. *leucantha*, Koth. (DC. *o. c.* p. 187;—*W. and A. pr.* 1, p. 196;—*J. Grah. Cat. B. pl.* p. 45.—*M. altissima*, *Thuill*;—DC. *l. c.*—*M. vulgaris*, *Willd.*—*Trifolium officinale*, *L.* β;—*Roxb. fl. ind.* 3, p. 388.) বন পিড়ির *Bun-piring*. ☉ Fields of Europe. Peninsula of India. Bengal, (Serampore.) Assam. Saharunpore. Fl. small, white, and fr. C. S.

3. *parviflora*, Desf. (DC. *pr.* 2, p. 187;—*W. and A. pr.* 1, p. 196;—*J. Grah. Cat. B. pl.* 46.—*M. minima*, *Roth*;—DC. *o. c.* p. 189.—*Trifolium indicum*, *L.* δ. —*Roxb. fl. ind.* 3, p. 389.) বন মেথী *Bun-methee* ☉ France. Italy. Greece. Bengal, (Serampore.) Fl. minute, here white and fr. C. S.

4. *italica*, Lam. (DC. pr. 2, p. 188.—M. *rotundifolia*, Ten.—*Trifolium Melilotus italica*, L.) ⊙ Italy. Cultivated in Upper India. Fl. small, yellow; and fr. C. S.
 5. *arvensis*, Wallr. (DC. pr. 2, p. 188.)
β. *albiflora*, Wallr. (DC. l. c.—M. *Petitpierreana*, Hayne) ⊙ Germany. Fl. small, white, Jan. and Feb.; fr. March.
 6. *sulcata*, Desf. (DC. pr. 2, p. 189.—M. *mauritanica*, Willd.—*Trifolium Melilotus indica*, γ, L.) ⊙ Cultivated at Algiers and Alexandria. Fl. small, yellow, Jan. and Feb.; fr. March.
- TRIFOLIUM, L. (DC. pr. 2, p. 189.) *Trefoil*.
1. *incarnatum* L. (DC. o. c. p. 190;—B. M. 10, t. 328.) ⊙ Meadows of S. Europe. Fl. largish, crimson, Jan. and Feb.; fr. March.
 2. *arvense*, L. (DC. l. c.;—E. B. 14, t. 944.) ⊙ Europe. Fl. very small, pale reddish; and fr. C. S.
 3. *tappaceum*, L. (DC. pr. 2, p. 191.) ⊙ S. Europe. Fl. small, white, Feb.; fr. March and April.
 4. *alexandrinum*, L. (DC. pr. 2, p. 193;—Roxb. H. B. p. 58.) ⊙ Egypt. Fl. small, yellowish, Feb.; fr. March and April.
 5. *stellatum*, L. (DC. pr. 2, p. 197;—E. B. 22, t. 1545;—Roxb. H. B. p. 58.) ⊙ England. S. Europe. Fl. small, rose; and fr. Jan. and Feb.
 6. *strictum*, L. (DC. pr. 2, p. 198.) ⊙ S. Europe. Hungary. Fl. small, white, Jan. and Feb.; fr. March.
 7. *Michelianum*, Savi. (DC. pr. 2, p. 201.) ⊙ S. Europe. Fl. small, greenish-white, Feb.; fr. March.
 8. *spumosum*, L. (DC. pr. 2, p. 202;—Roxb. H. B. p. 58;—Gärtn. fr. 2, p. 334, t. 153.) ⊙ S. Europe. Fl. small, red. In H. C. G. fl.; and fr. Jan. and Feb. (Roxb.)
 9. *resupinatum*, L. (DC. pr. 2, p. 202.) ⊙ S. Europe. Fl. small, purplish, Feb.; fr. March.
- LOTUS, L. (DC. pr. 2, p. 209.)
1. *ornithopodioides*, L. (DC. l. c.) ⊙ S. Europe. Fl. small, yellow, Jan. and Feb.; fr. March.
 2. *peregrinus*, L. (DC. l. c.—L. *oligoceros*, Lam.) ⊙ S. Europe. Fl. small, yellow, Jan. and Feb.; fr. March.
 3. *jacobæus*, L. (DC. pr. 2, p. 210;—B. M. 3, t. 79;—Roxb. H. B. p. 58.) † St. James's Island. Fl. smallish, yellowish-brown, Jan. and Feb.; fr. 0.
 4. *diffusus*, Soland. (DC. pr. 2, p. 213;—E. B. 13, t. 925.) ⊙ England. S. Europe. Fl. small, yellow, Feb. and March.; fr. 0.
 5. *odoratus*, Sims. (B. M. 30, t. 1233;—DC. pr. 2, p. 214.) ♀ Barbary. Fl. small, yellow, Feb. and March.; fr. 0.
- CYAMOPSIS, DC. (pr. 2, p. 215;—W. and A. pr. 1, p. 196.)
1. *psoraloides*, DC. (o. c. p. 216;—W. and A. o. c. p. 197;—J. Grah. Cat. B. pl. p. 46;—Wight. icon. 1, t. 248.—*Dolichos psoraloides*, Lam.—*D. fabaeformis*, L'Herit;—Roxb. fl. ind. 3, p. 316.—*Lupinus*



trifoliatum, Cav. icon. 1, t. 59.—*Psoralea tetragonoloba*, L.) © Native place uncertain. Fl. small, rose-coloured. In H. C. G. fl. Jan. and Feb. (Roxb.) Cultivated for the sake of the fruit, which is eaten like French beans, being delicate and of a pleasant taste.

PSORALEA, L. (DC. pr. 2, p. 216;—W. and A. pr. 1, p. 197.)

1. *corylifolia*, L. (DC. o. c. p. 218;—W. and A. o. c. p. 198;—Burm. ind. t. 49;—Roxb. fl. ind. 3, p. 387;—J. Grah. Cat. B. pl. p. 46;—B. M. 18, t. 665.—*Trifolium unifolium*, Forsk.) হাকোচ *Hakaoch*. © ♂ Arabia. Both Peninsulas of India. Bengal, (Serampore.) Deyra-Dhoon. Kheree jungle. Fl. small, pale lilac, with the wings and keel dark purple-tipped, C. S.; fr. H. S.

Several of the Cape species have been cultivated here repeatedly, but without success.

INDIGOFERA, L. (DC. pr. 2, p. 221;—W. and A. pr. 1, p. 198.)

1. *linifolia*, Retz. (DC. o. c. p. 222;—W. and A. l. c.;—Roxb. Corom. 2, t. 196;—fl. ind. 3, p. 370;—Wight. icon. 1, t. 313;—J. Grah. Cat. B. pl. p. 46.—*J. polygonoides*, Wendt.—*Hedysarum linifolium*, L.—*Spharidophorum*, Desv. journ. 3, p. 125, t. 6, f. 35.) ভাদড়া *Bhangra*. ♂ Both Peninsulas of India. Bengal, (Serampore.) Sutana-ghur. Fl. small, dark purple; and fr. nearly whole year.
β. *albiflora*; fl. white.
2. *glandulosa*, Roxb. (fl. ind. 3, p. 372;—DC. pr. 2, p. 223;—W. and A. pr. 1, p. 199;—Wight. icon. 2, t. 330.) ♂ Circars. Fl. small, red. In H. C. G. fl. R. and C. S.; fr. C. S. Of the seeds, the Natives of the hilly countries make meal, which they bake into bread, and use as an article of diet, when more agreeable food is scarce. Cattle are fond of the plant. (Roxb.)
3. *enneaphylla*, L. (DC. pr. 2, p. 229;—W. and A. pr. 1, p. 199;—Roxb. fl. ind. 3, p. 376;—Wight. icon. 2, t. 403.—*Hedysarum prostratum*, L.—Burm. ind. t. 55, f. 1.) ♀ Melloon, Promé, Seguen. Dindygul Hills, alt. 1800, f. Saharanpore. Fl. small, bright red. In H. C. G. fl.; and fr. the whole year. (Roxb.) Cattle eat it greedily.
4. *uniflora*, Buch. (Roxb. fl. ind. 3, p. 374, excl. syn. Rheed. L. and Pluk.;—W. and A. pr. 1, p. 199;—J. Grah. Cat. B. pl. p. 46.—Wight. icon. 2, t. 333.) ♀ Mysore. Fl. small, red. In H. C. G. fl.; and fr. the whole year. (Roxb.)
5. *pentaphylla*, L. (DC. pr. 2, p. 230;—W. and A. pr. 1, p. 200;—Wight. icon. 2, t. 385.—*J. fragrans*, Retz.;—DC. l. c.;—Roxb. fl. ind. 3, p. 375.—*J. glabra*, L.;—DC. l. c.) ♂ Fl. small, purple. In H. C. G. fl. R. and C. S.; fr. C. S. (Roxb.)
6. *viscosa*, Lam. (DC. pr. 2, p. 227;—W. and A. pr. 1, p. 200;—Roxb. fl. ind. 3, p. 377;—Wight. icon. 2, t. 404.—*Galega Colutea*, Burm. ind. p. 172.) ♂ Both Peninsulas of India. Bengal, (Serampore.) Fl. small, greenish-red, R. and C. S.; fr. C. S.

7. *argentea*, L. (*Spr. syst.* 3, p. 375, excl. syn. *J. coloratæ*, *Roxb.*)
 5 Egypt.
8. *paucifolia*, Delile. (*fl. d'Egypt.* p. 107, t. 37, f. 22;—*DC. pr.* 2, p. 224;—*W. and A. pr.* 1, p. 201;—*Wight. icon.* 2, t. 331.—*J. argentea*, *Hb. Banks*;—*Roxb. fl. ind.* 3, p. 374; not *Lam.*—*Bremontiera Ammoxylon*, β . *Burmanni*, *DC. pr.* 2, p. 353.—*Burm. zeyl.* t. 82.) 5 Egypt. Tanjore. Ceylon. Fl. small, greenish-red, R. S.; fr. C. S.
9. *tinctoria*, L. (*DC. pr.* 2, p. 224;—*W. and A. pr.* 1, p. 202;—*Roxb. fl. ind.* 3, p. 379;—*J. Grah. Cat. B. pl.* p. 46;—*Wight. icon.* 2, t. 365.—*L. indica*, *Lam. ill.* t. 626, f. 1.—*L. sumatrana*, *Gärtn. fr.* p. 317, t. 148, f. 4;—*Rheed.* 1, t. 54.) नील *Neel. Common Indigo-plant.*
 5 Found wild at Quilon and in some parts of the Concan. Fl. small, greenish-rose, R. S.; fr. C. S.
10. *coerulea*, *Roxb.* (*fl. ind.* 3, p. 377;—*W. and A. pr.* 1, p. 203;—*Wight. icon.* 2, t. 366.—*L. tinctoria*, β . *brachycarpa*, *DC. ? pr.* 2, p. 224.) 5 Rajamundry Circars. Dindygul Hills. Fl. small, yellowish-red. In H. C. G. fl. R. and C. S. (*Roxb.*) From the leaves of this plant Dr. Roxburgh extracted a most beautiful, light Indigo, and in a greater quantity than he ever got from the common Indigo plant.
11. *polygonata*, *Wall.* 5 Ceylon. Comes near to *L. coerulea*.
12. *pulchella*, *Roxb.* (*fl. ind.* 3, p. 382;—*W. and A. pr.* 1, p. 203;—*Wight. icon.* 2, t. 367.—*L. purpurascens*, *Roxb. o. c.* p. 383.—*L. cassioides*, *Rottl.*;—*DC. pr.* 2, p. 225.) 5 Neelgherries, Dindygul Hills; alt. 3000, f. Circar Hills. Fl. smallish, light-purple, R. S.; fr. C. S. (*Roxb.*)
13. *atropurpurea*, *Buch.* (*Roxb. fl. ind.* 3, p. 381;—*DC. pr.* 2, p. 225;—*B. M.* 58, t. 3065;—*B. Reg.* 21, t. 1744;—*Wight. icon.* 2, t. 369.) 5 Nepal. Fl. smallish, dark purple, R. and C. S.; fr. C. S.
12. *violacea*, *Roxb.* (*fl. ind.* 3, p. 380;—*B. M.* 61, t. 3348.) 5 Hurdwar Mountains. Fl. middle-sized, purplish violet, Feb. and March.
13. *elliptica*, *Roxb.* (*fl. ind.* 3, p. 380.) 5 Eastern parts of Bengal. Fl. smallish, bright-rose. In H. C. G. fl. Feb. and March. (*Roxb.*)
14. *arborea*, *Roxb.* (*fl. ind.* 3, p. 381;—*Wight. icon.* 2, t. 368.) 5 Shree-naghur. Fl. smallish, bright red violet. In H. C. G. fl. H. S. (*Roxb.*)
15. *uncinata*, *Roxb.* (*fl. ind.* 3, p. 282.) 5 Pegu. Fl. small, reddish pale greenish yellow. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
16. *Dosua*, *Buch?* (*J. virgata*, *Roxb. H. B.* 1814, p. 57;—*fl. ind.* 3, p. 383; not *DC.*—*J. heterantha*, *Wall.*) 5 Nepal. In H. C. G. fl. H. S. (*Roxb.*)
17. *trita*, L. (*DC. pr.* 2, p. 232;—*W. and A. pr.* 1, p. 203;—*Roxb. fl. ind.* 3, p. 371;—*J. Grah. Cat. B. pl.* p. 46;—*Wight. icon.* 1, t. 315, and 2, t. 386.—*J. cinerea*, *Willd.*;—*DC. l. c.*;—*Roxb. o. c.* p. 372.—*J. canescens*, *Lam.*;—*DC. pr.* 2, p. 224.—*J. hedysaroides*, *Lam.*;—*DC.*



- pr. 2, p. 232.—*J. arcuata*, Willd.;—*DC. l. c.*—*J. rigida*, Willd.; *DC. pr. 2, p. 224.*) ♂ Both Peninsulas of India. Bengal. (Serampore.) Delhi. Banks of the Jumna. Fl. small, reddish green; and fr. nearly the whole year.
18. *flaccida*, Kön. (*Roxb. fl. ind. 3, p. 375*;—*W. and A. pr. 1, p. 204*;—*Wight. icon. 2, t. 387.*—*J. scabra*, Roth.;—*DC. pr. 2, p. 229.*) ♂ Samulcottah. Dindygul Hills. Fl. small, greenish-red; and fr. nearly the whole year.
19. *hirsuta*, L. (*DC. pr. 2, p. 228*;—*Lam. ill. 626, f. 3*; not *Jacq. icon. rar. 4, t. 569*;—which is *I. lateritia*, Willd. and *I. ferruginea*, Schum.;—*Roxb. fl. ind. 3, p. 376*;—*W. and A. pr. 1, p. 204*;—*J. Grah. Cat. B. pl. p. 46*;—*Burm. zeyl. t. 14*;—*Rheed. 9, t. 30.*) ♂ Mauritius. Napalry. Nathpur. Quilon. Abundant on Malabar Hill. Bombay. Taong-Dong. Fl. small, deep rose-coloured, R. and C. S.; fr. C. S.
20. *Brunoniana*, Grah. (*Wall. pl. as. rar. 3, t. 279.*) ♂ Prome Mountains. Fl. smallish, deep rose. In H. C. G. fl. C. S.
- CLITORIA, L. (*DC. pr. 2, p. 233*;—*W. and A. p. 1, p. 205.*)
1. *heterophylla*, Lam. (*DC. l. c.*;—*B. M. 47, t. 2111*;—*Roxb. fl. ind. 3, p. 321.*) ♀. Mauritius. Fl. largish, sky-blue; and fr. the whole year.
2. *ternatea*, L. (*DC. pr. 2, p. 233*;—*W. and A. pr. 1, p. 205*;—*Roxb. fl. ind. 3, p. 321*;—*Gurtu. fr. 2, p. 321, t. 149, f. 3*;—*J. Grah. Cat. B. pl. p. 47*;—*B. M. 37, t. 1542*;—*C. lascivia*, Boj. (*Hort. Maurit. p. 92.*) *Rheed. 8, t. 38*;—*Rumph. 5, t. 31.*) नील अपराजिता *Neel-uparajita*. ♀. Cuba. Arabia. Moluccas. Both Peninsulas of India. Bengal. (Serampore.) Assam. Fl. large, blue, and fr. whole year. Root and powdered seed purgative. (*Roxb.*)
3. *albiflora*, শ্বেত অপরাজিতা *Shwet-uparajita*. Fl. white.
3. *virginiana*, L. (*DC. pr. 2, p. 234*;—*B. Reg. 13, t. 1074*;—*Roxb. H. B. p. 55.*—*C. calcarigera*, *Salisb. par. t. 51.*) ♀. Hedges of Virginia, Carolina, Jamaica, St. Domingo and Porto-Rico. Fl. large, blueish lilac; and fr. the whole year.
4. *brasiliانا*, L. (*DC. pr. 2, p. 234*;—*Roxb. H. B. p. 55*;—*J. Grah. Cat. B. pl. p. 47.*—*C. amoena*, Roth.) ♀. Brazil. Cayenne. Fl. large blue; and fr. the whole year.
5. *Plumieri*, Turp. (*DC. pr. 2, p. 234*;—*B. Reg. 4, t. 268.*—*C. racemosa*, Moç. and Sessé.—*C. calcarata*, L. Herit.) ♀. St. Domingo, Mexico. Fl. large, white, tinged with purple, R. and C. S.; fr. C. S.
6. *macrophylla*, Wall. (*Cat.*) Prome. Has been introduced into H. C. G. Fl. ?
- NEUROCARPUM, Desv. (*DC. pr. 2, p. 335.*)
- ? 1. *erectum*, (*Clitoria erecta*, *Roxb. H. B. p. 56.*) ♂ America. (*Roxb.*) Fl. large, lilac purplish, dark purple dotted, R. and C. S.; fr. C. S. (*Roxb.*) We have not seen the fruit.



SHUTERIA, W. and A. (*pr.* 1, *p.* 207.)

1. *involutrata*, W. and A. (*l. c. annot.*—*Glycine involutrata*, *Wall. pl. as. rar.* 3, *t.* 241.) 5 ∪ Mountains of Nepal. Fl. small, pale, rose-coloured, May.

JOHNIA, W. and A. (*pr. (add. and corr.) p.* 1, *p.* 449.—*Notonia*, *W. and A. pr.* 1, *p.* 207.)

1. *Wightii*, W. and A. (*Notonia Wightii*, *W. and A. o. c. p.* 208.—*Soja Wightii* *Grah.*) 5 ∪ Dindygul Hills. Mysore. Colemala. In H. C. G. ? Fl. ?

GLYCINE, L. (*DC. pr.* 2, *p.* 241 ;—*W. and A. pr.* 1, *p.* 208.)

1. *labialis*, L. (*Roxb. fl. ind.* 3, *p.* 318 ;—*W. and A. l. c.* ;—*Wight. icon.* 1, *t.* 168.—*G. debilis*, *Ait.* ;—*DC. l. c.* ; not *Roxb.*—*G. parviflora*, *Lam.* ;—*DC. o. c. p.* 242.) बन कुलाय *Bun-kulay*. 5 ∪ Both Peninsulas of India. Bengal, (Serampore.) Bolahat. Fl. small, rose-coloured, R. S. ; fr. C. S.
2. *debilis*, *Roxb.* (*fl. ind.* 3, *p.* 317 ; not *Ait.*) माशानी *Mashanee*. 4. ∪ Bengal, (Serampore.) Fl. minute, deep reddish violet, R. S. ; fr. C. S.
3. *dilecta*, *Wall.* (*Pueraria Wallichii*, *DC.*) 5 Nepal.

PSEUDARTHRIA, W. and A. (*pr.* 1, *p.* 209.)

1. *viscida*, W. and A. (*l. c.* ;—*Wight. icon.* 1, *t.* 286.—*Hedysarum viscidum*, *L.* ;—*Roxb. fl. ind.* 3, *p.* 356.—*Desmodium viscidum*, *DC. pr.* 2, *p.* 336.—*Rhynchosia viscida*, *DC. pr.* 2, *p.* 387.—*Glycine viscida*, *Willd.* ;—*Burm. zeyl. t.* 84, *f.* 1.) 4. Ceylon, Travancore, Dindygul ; alt. 2500. f. Bengal, (Serampore.) Fl. small, deep purple, R. and C. S. ; fr. C. S.

TEPHROBIA, Pers. (*DC. pr.* 2, *p.* 248 ;—*W. and A. pr.* 1, *p.* 209.)

1. *suberosa*, *DC.* (*l. c. p.* 249 ;—*W. and A. o. c. p.* 210 ;—*Wight. ill.* 1, *t.* 82 ;—*J. Grah. Cat. B. pl. p.* 47.—*T. sericea*, *DC. l. c.* ; not *Pers.* nor *DC. o. c. p.* 255.—*Cytisus sericeus*, *Willd.*—*Robinia suberosa* and *sennoïdes*, *Roxb. fl. ind.* 3, *p.* 327, and 328.) 5 Alpine Valleys in Mysore, Madura, Tinnevely, and Northern Circars. Abundant on the rocky hills to the eastward of Belgaum and in the Wasua Ghaut, Dinagepore. Fl. large, bright purple, June and July ; fr. O. Seeds used to poison fish. (*Dr. Gibson.*)
2. *fruticosa*, *DC.* (*pr.* 2, *p.* 249.—*Robinia fruticosa*, *Roxb. fl. ind.* 3, *p.* 328.) 5 ∪ Interior of Bengal. Fl. middle-sized, rose-coloured, R. S. ; fr. C. S.
3. *candida*, *DC.* (*Pr.* 2, *p.* 249 ;—*W. and A. pr.* 1, *p.* 210 ;—*J. Grah. Cat. B. pl. p.* 47.—*Robinia candida*, *Roxb. fl. ind.* 3, *p.* 327.) 5 Assam. Khassya Mountains. Deyra-Dhoon. Kheree Jungle. Fl. large, white, R. S. ; fr. C. S.
4. *macrophylla*, *Wall. MSS.* (*Robinia macrophylla*, *Roxb. fl. ind.* 3, *p.* 329.—*Pongamia* ? *macrophylla*, *Grah. in Wall. Cat.*) 5 ∪ Interior of Bengal. Fl. smallish, white, June and July ; fr. April.



5. *ferruginea*, Wall. MSS. (*Robinia ferruginea*, Roxb. *fl. ind.* 3, p. 329. —*Pongamia ferruginea*, Grah. in Wall. Cat.) 5 Assam. In H. C. G. Fl. R. S.
6. *racemosa*, W. and A. (*pr.* 1, p. 210. —*Robinia racemosa*, Roxb. *fl. ind.* 3, p. 329. —*Pongamia*? *racemosa*, Grah. in Wall. Cat.) 5 Forests of the Circar Mountains. Fl. large, rose-coloured, R. S.; fr. Sept. and Oct.
7. *toxicaria*, Pers. (*DC. pr.* 2, p. 249. —*Galega toxicaria*, Swz. —*G. Sinapon*, Buchoz.) 5 W. Indies. Cayenne. In H. C. G. Fl. ?
8. *ochroleuca*, Pers. (*DC. pr.* 2, p. 250. —*Galega ochroleuca*, Jacq. *icon. rar.* 1, t. 150; —*Roxb. H. B.* p. 57. —*G. pubescens*, Lam.) 5 W. Indies. Fl. smallish, pale sulphur; and fr. nearly the whole year.
9. *tinctoria*, Pers. (*DC. pr.* 2, p. 252; —*W. and A. pr.* 1, p. 111; —*Wight. icon.* 2, t. 388. —*T. hypargyrea*, *DC. o. c.* p. 253. —*T. nervosa*, Pers.; —*DC. o. c.* p. 254. —*Galega Heyneana*, Roxb. *fl. ind.* 3, p. 384.) 5 Mysore. Fl. smallish, dull red; and fr. C. S.
10. *senticosa*, Pers. (*W. and A. pr.* 1, p. 211; —*DC. pr.* 2, p. 254; —*Wight. icon.* 2, t. 370. —*T. spinosa*, *β. W. and A. o. c.* p. 214. —*Galega senticosa*, L. —*G. pentaphylla*, Roxb. *fl. ind.* 3, p. 384.) 5 Mysore. Fl. smallish, dull reddish. In H. C. G. fl. and fr. C. S. (*Roxb.*)
11. *coccinea*, Wall. (*pl. as. rar.* 1, t. 60.) 5 Banks of the Irawaddi. Fl. smallish, scarlet, R. S.
12. *incana*, Grah. (*W. and A. pr.* 1, p. 212; —*Wight. icon.* 2, t. 371. —*G. incana*, Roxb. *fl. ind.* 3, p. 385.) 5 Mysore. Fl. small, reddish; and fr. C. S.
13. *villosa*, Pers. (*DC. pr.* 2, p. 251; —*W. and A. pr.* 1, p. 212. —*Galega villosa*, L.; —*Roxb. fl. ind.* 3, p. 385; —*Burm. zeyl. t.* 33.) 5 Ceylon. Coromandel. Bengal, (Serampore.) Fl. smallish, whitish; and fr. the whole year.
14. *diffusa*, W. and A. (*pr.* 1, p. 213; —*Galega diffusa*, Roxb. *fl. ind.* 3, p. 387.) 5 Dindygul, Arcot. Delhi. Banks of the Jumna. In H. C. G. fl.; and fr. C. S. (*Roxb.*)
15. *purpurea*, Pers. (*W. and A. pr.* 1, p. 213.)
α (*T. purpurea*, *DC. pr.* 2, p. 251; —*J. Grah. Cat. B. pl.* p. 47. —*T. lanceæfolia*, Lk.; —*DC. l. c.* —*Galega purpurea*, L.; —*Roxb. fl. ind.* 3, p. 386. —*G. tinctoria*, Lam; *Roxb. l. c.*; not L. —*Burm. zeyl. t.* 32; —*Rheed. 1, t.* 55.) बन नील *Ban-neel*. 5 Mauritius. Bushire, Ceylon. Concan. Deccan. Deera. Coromandel. Kyouk Talong, Yenangheurn. Segau. Malloon. Tavoy. Bengal, (Serampore.) Monghir. Delhi. Banks of the Jumna. Assam. Fl. small, purple, R. S.; fr. C. S. *Roots* bitter, a decoction considered good in dyspepsia.
β. (*Galega lanceæfolia*, Roxb. *fl. ind.* 3, p. 386. —*T. amena*, Wall. —*Wight. icon.* 2, t. 372.) Zangibar Indigo. 5 Circars. Tavoy. Fl. small, dark purple. In H. C. G. fl. and fr. C. S. (*Roxb.*) Fl. white, violet; and fr. whole year.

16. *spinosa*, Pers. (DC. pr. 2, p. 254;—W. and A. pr. 1, p. 214;—Wight. icon. 2, t. 372.—*Galega spinosa*, L.;—Roxb. fl. ind. 3, p. 383.) ☞ Coromandel.

17. *urophylla*, Wall. Khassya Hills.

AMORPHA, L. (DC. pr. 2, p. 256.)

1. *fruticosa*, L. (DC. l. c.;—B. Reg. 5, t. 427.) ☞ Carolina. Florida. Fl. small, dark purple, R. S.; fr. C. S.

2. *fragrans*, Swt. (A. nana, Sims.;—B. M. 47, t. 2112; not Nutt.—A. coerulea, Roxb. H. B. p. 54.) ☞ Fl. small, indigo-coloured. In H. C. G. fl. March. (Roxb.) N. America.

ROBINIA, L. DC. pr. 2, p. 261.)

1. *Pseudacacia*, L. (DC. l. c.;—Lam. ill. t. 606, f. 1.—*Æschynomene Pseudacacia*, Roxb. H. B. p. 56.—*Pseudacacia odorata*, Moench.) ☞ N. America, from Canada to Carolina. Fl. white, sweet-scented. Was introduced into H. C. G. in 1808, but had not fl. up to 1814.

SESBANIA, Pers. (DC. pr. 2, p. 264;—W. and A. pr. 1, p. 214.)

1. *cegypliaca*, Pers. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 47;—Wight. icon. 1, t. 32.—*Æschynomene Sesban*, L.; Roxb. fl. ind. 3, p. 332.—*Æ. indica*, Burm. ind. p. 169.—*Coronilla Sesban*, Willd.) *செய்யா* *Suyantee*, 5 Ceylon. Both Peninsulas of India. Bengal, (Serampore,) Assam. Saharunpore. Fl. middle-sized, R. and C. S.; fr. C. S. Cultivated and extensively used in the plain parts of the Deccan as a substitute for the bamboo. (Dr. Gibson.) Wood said to make the best charcoal for gunpowder. (Roxb.) Leaves used by the Natives as a poultice to promote suppuration. (Wight.)

a. *bicolor*; (Rheed. 6, t. 27.) Fl. orange, dark-purple.

β. *concolor*; (Burm. zeyl. t. 41.) Fl. yellow, somewhat dark purple-dotted on the banner.

2. *aculeata*, Pers. (DC. pr. 2, p. 265, excl. syn.;—W. and A. pr. 1, p. 214;—J. Grah. Cat. B. pl. p. 48.—*Æschynomene spinulosa*, Roxb. fl. ind. 3, p. 333.—*Æ. cannabina*, Roxb. o. c. p. 335; not Retz.—*Æ. bispinosa*, Jacq. icon. rar. 3, t. 564.—*Coronilla aculeata*, Willd.) *ধনিচা* *Dunicha*. ☞ Both Peninsulas of India. Bengal, (Serampore,) Gungachara. Saharunpore, Fl. largish, yellow, purple-dotted, Aug. and Sept.; fr. Nov. and Dec. Fibres of bark used for drag-ropes, and nets.

3. *procumbens*, W. and A. (pr. 1, p. 215;—J. Grah. Cat. B. pl. p. 48.—*Æschynomene procumbens*, Roxb. fl. ind. 3, p. 337.) ☞ Peninsula of India. Bengal, (Serampore.) Fl. smallish, yellow, Sept. and Oct.; fr. Nov. and Dec. Cattle eat it.

4. *uliginosa*, (*Æschynomene uliginosa*, Roxb. fl. ind. 3, p. 334.) ☞ Bengal, (Serampore.) Fl. smallish, purplish-yellow, R. S.; fr. C. S.

AGATI, Rheed. (DC. pr. 2, p. 266;—W. and A. pr. 1, p. 215.)

1. *grandiflorum*, Desv. (W. and A. l. c.;—J. Grah. Cat. B. pl. p. 48. *Æschynomene grandiflora*, Roxb. fl. ind. 3, p. 330.) *বক* *Buko*, 5 Mo-



luccas. Both Peninsulas of India, Bengal, (Serampore,) Assam. Fl. large, nearly the whole year; fr. C. S. Employed for training the beetle-plant. *Wood* only fit for fuel. Tender *leaves, flowers* and young *legumes* much eaten by the Natives; the young *shoots* also by cattle.

α. *albiflorum*; flowers white. (A. *grandiflora*, Desv.; DC. l. c.—*Æschynomene grandiflora*, L.—*Coronilla grandiflora*, Willd.—*Sesbania grandiflora*, Pers.—*Rheed*. 1, t. 51;—*Rumph*. 1, t. 76.)

β. *coccineum*; flowers scarlet. (A. *coccinea*, Desv.;—DC. l. c.—*Æschynomene coccinea*, L.—*Coronilla coccinea*, Willd.—*Sesbania coccinea*, Pers.—*Rumph*. 1, t. 77.)

γ. *variegatum*; flowers white and scarlet.

δ. *coccineo-plenum*; flowers double-scarlet.

SUTHERLANDIA, R. Br. (DC. pr. 2, p. 273.)

1. *frutescens*, R. Br. (DC. l. c.;—*Colutea frutescens*, L.;—B. M. 6, t. 181;—*Roxb. H. B.* p. 56.) 5 C. G. H. Fl. large pale yellowish scarlet. In H. C. G. fl. May, June and July; fr. Sept. and Oct. (*Roxb.*)

ASTRAGALUS, L. (DC. pr. 2, p. 281.) *Milk Vetch*.

1. *scorpioides*, Pourr. (DC. o. c. p. 289.—A *subbiflorus*, Lag.) ⊙ Spain, about Madrid. Fl. small, blue; and fr. C. S.
2. *hamosus*, L. (DC. pr. 2, p. 290;—*Gärtn. fr.* 2, p. 339, t. 154;—*Roxb. H. B.* p. 57.—A. *austriacus*, Delarb.) ⊙ From Spain to the Crimea. N. Africa. Fl. small, yellowish; and fr. C. S.
3. *beticus*, L. (DC. pr. 2, p. 291;—A. *uncinatus*, Mönch.—A. *triangularis*, Munt.) ⊙ Spain. Sicily. Levant. Barbary. Fl. small, yellowish; and fr. C. S.

- * *Crotalaria Berteriana*, DC. 5 Guadeloupe.—C. *anagyroides*, H. B. Kth. 5 Caracas.—C. *mollicula*, H. B. and Kth. 5 Mexico.—C. *vitellina*, Ker.; B. Reg. 6, t. 447. 5 Brazil.—C. *alata*, Roxb. 4. Mussooree.—C. *rubiginosa*, Willd. 5 Neelgherries. Dindygul.—C. *barbata*, Grah. 4. Neelgherries.—C. *mysorensis*, Roth. 5 Mysore, Courtallum.—C. *speciosa*, Heyne; Wight, icon. 1, t. 29. 4. Mysore.—C. *longipes*, W. and A. 5 Colemala.—C. *lunulata*, Heyne. Wight, icon. 2, t. 480. 5 Tanjore.—C. *superfoliata*, Wight. 5 Dindygul.—C. *candicans*, W. and A. 5 Neelgherries.—C. *madurensis*, Wight. Madura. Neelgherries.—C. *obtecta*, Grah. Wight, icon. 1, t. 208. 5 Peninsula of India.—C. *hirsuta*, Willd. 4. Samulcottah.—C. *bifaria*, L. Wight icon. 1, t. 30. 4. Tanjore.—C. *linifolia*, L. 5 Peninsula of India.—C. *biflora*, L. 4. Peninsula of India.—C. *crassifolia*, Buch. Goalpara. Nepal. Taong-Dong.—C. *Burhia*, Buch. Delhi.—C. *Willdenowiana*, DC. 5 Travancore.—C. *Notonii*, W. and A. 5 Neelgherries. Awvery.—C. *neglecta*, W. and A. 5 Gingie Hills.—C. *herniarioides*, W. and A. 4. Arcot.—C. *orizensis*, Roxb. 4. Circars. Travancore.—C. *digitata*, Hook. 5 Madura Hills.—C. *Grahamiana*, W. and A.

5 Dindygul.—*C. rhizophylla*, Grah. Khassya Mountains.—*Lupinus albus*, L. ☉ Levant.—*L. Termis*, Forsk. ☉ Egypt.—*L. hirsutus*, L. ☉ Spain.—*L. angustifolius*, L. ☉ S. Europe.—*L. microcarpus*, Sims.; B. M. 50, t. 2413. ☉ Chili.—*L. subcarnosus*, Hook.; B. M. 63, t. 3467. ☉ Texas.—*L. texensis*, Hook. B. M. 63, t. 3492. ☉ Texas.—*L. bicolor*, Lindl.; B. Reg. 13, t. 1109. ☉ Banks of the Columbia River.—*L. micranthus*, Dougl.; B. Reg. 15, t. 1251. ☉ California.—*Pycnospora nervosa*, W. and A. 5 Courtallum.—*Genista canariensis*, L.; B. Reg. 3, t. 217. 5 Canaries.—*G. linifolia*, L.; B. M. 13, t. 442. 5 S. Europe. N. Africa.—*Anthyllis tetraphylla*, L.; B. M. 3, t. 108. ☉ S. Europe.—*A. hamosa*, Desf. ☉ Barbary.—*A. lotoides*, L. ☉ Spain.—*Medicago obscura*, Retz. ☉ S. France.—*M. rugosa*, Lam. ☉ S. Europe.—*M. tuberculata*, Willd. ☉ S. Europe.—*M. coronata*, Lam. ☉ S. Europe. Egypt.—*Pocockia cretica*, Ser. ☉ Candia. Barbary.—*Tetragonolobus purpureus*, Mönch. (Lotus tetragonolobus, L.; B. M. 5, t. 151.) ☉ S. Europe.—*T. biflorus*, Ser. ☉ Barbary.—*Indigofera argentea*, L. 5 Egypt.—*I. Dosua*, Buch. 5 Nepal.—*I. cinerascens*, DC. 5 Mauritius.—*I. mucronata*, Spreng. 5 Jamaica.—*I. echinata*, Willd.; Wight. icon. 1, t. 316. 4. Coromandel.—*I. aspalathoides*, Vahl.; Rheed. 9, t. 37. 4. Coromandel.—*I. trifoliata*, L.; Wight icon. 1, t. 314. 4. Dindygul. Nepal.—*Cilitoria arborescens*, Ait.; B. M. 59, t. 3165. 5 Trinidad.—*C. acuminata*, Grah. Tavoy.—*Neurocarpum simplicifolium*, Kth. 5 Trinidad.—*N. guianense*, Desv. 5 Guiana.—*Martia physalodes*, Leand. 5 ∪ Rio Janeiro.—*Cologania angustifolia*, Kth. 4. ∪ Mexico.—*C. Broussonetii*, DC. 4. ∪ S. America?—*Galactia pendula*, Pers. B. Reg. 4, t. 269. 5 ∪ Jamaica, Cayenne.—*G. tenuiflora*, W. and A. 5 Mountains near Pondicherry.—*G. sericea*, Pers. 5 ∪ Bourbon.—*G. cubensis*, Kth. 4. ∪ Havannah.—*Odonia tomentosa*, Bert. 4. ∪ St. Domingo.—*Vilmorinia multiflora*, DC. 5 Hayti.—*Barbieria polyphylla*, DC. 5 Porto Rico.—*Shutera vestita*, W. and A. 5 ∪ Dindygul Hills.—*Dumasia congesta*, Grah.; Wight. 2, t. 445. 5 ∪ Neelgherries.—*D. pubescens*, DC.; B. R. 12, t. 962. 5 ∪ Nepal.—*Glycine hedysaroides*, Willd. 5 Guinea.—*G. biloba*, Lindl. B. Reg. 17, t. 1418. 4. ∪ Mexico.—*Chatocalyx vincentinus*, DC. (*Glycine vincentina*, Ker.; B. Reg. 10, t. 799.) 5 ∪ St. Vincent.—*Dalea Lagopus*, Willd. ☉ Mexico.—*D. tuberculata*, Lag. 5 Mexico.—*D. mutabilis*, Willd.; B. M. 51, t. 2486. 4. Mexico, Cuba.—*Tephrosia caribæa*, DC. 5 W. Indies.—*T. corronillefolia*, DC. 5 Bourbon.—*T. fusca*, W. and A. 5 Dindygul.—*T. Hookeriana*, W. and A. 5 Trichinopoly.—*T. argentea*, Pers. 5 Peninsula of India.—*T. maxima* Pers. 5 Samulcottah.—*Eysenhardtia amorphoides*, H. B. and Kth. 5 Mexico.—*Nissolia fruticosa*, Jacq. 5 ∪ Carthagina.—*N. racemosa*, DC. 5 ∪ W. Indies.—*Müllera moniliformis*, L. fil. 5 Surinam.—*Lonchocarpus macrophyllus*, H. B. Kth. 5 S. America.—*L. dominicensis*, DC. 5 St. Domingo.—*L. violaceus*, H. B. Kth. 5 Guadeloupe.

—*Poitea galegioides*, Vent. 5 St. Domingo.—*P. viciaefolia*, DC. 5 St. Domingo.—*Sabinea florida*, DC. 5 St. Thomas. St. Jean.—*Sesbania occidentalis*, Pers. 5 S. America.—*Daubentonia punicea*, DC. 5 Mexico.—*D. longifolia*, DC. 5 Mexico.—*Corynella polyantha*, DC. 5 St. Domingo.—*Diphyssa carthagenensis*, Jacq. 5 Carthageria.

C. HEDYSARÆE, DC.

(Pr. 2, p. 307;—W. and A. pr. 1, p. 216.)

ORNITHOPUS, L. (DC. pr. 2, p. 311.)

1. *perpusillus*, L. (DC. o. c. p. 312;—E. B. 6, t. 369.) © Europe. Barbary. Fl. very small, greenish-white and red, C. S.; fr. Feb.

ORMOCARPUM, Beauv. (DC. pr. 2, p. 314;—W. and A. pr. 1, p. 216.)

1. *sennoides*, DC. (o. c. p. 315;—W. and A. l. c.;—Wight. icon. 1, t. 292.—*Hedysarum sennoides*, Willd.;—Roxb. fl. ind. 3, p. 216.) 5 Circars, Vandalore. Fl. about middle-sized, yellow, sweet scented; and fr. R. and C. S. Root stimulant, tonic.

ZORNIA, Gmel. (DC. pr. 2, p. 316;—W. and A. pr. 1, p. 217.)

1. *angustifolia*, Sm. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 48.—*Hedysarum diphyllum*, a. L.;—Roxb. fl. ind. 3, p. 353;—Rheed. 9, t. 82.) © Coromandel, Bombay. In H. C. G. fl. R. and C. S.; fr. C. S. (Roxb.)

STYLOSANTHES, Swz. (DC. pr. 2, p. 317;—W. and A. pr. 1, p. 218.)

1. *mucronata*, Willd. (DC. o. c. p. 318;—W. and A. l. c.—*Arachis fruticosa*, Retz.;—Roxb. fl. ind. 3, p. 282.—*Hedysarum hamatum*, Burm. ind. p. 167;—Burm. zeyl. t. 106, f. 2.) 5 Ceylon, Coromandel. In H. C. G. fl. R. and C. S.; fr. Feb. (Roxb.)

ÆSCHYNOMENE, L. (DC. pr. 2, p. 320;—W. and A. pr. 1, p. 218.)

1. *aspera*, L. (DC. l. c.;—W. and A. o. c. p. 219;—Wight. icon. 1, t. 299.—*Æ. lagenaria*, Lour.—*Hedysarum lagenarium*, Roxb. fl. ind. 3, p. 365.) কুল শোনা Phool-sola. 2. Coromandel. Bengal, (Serampore.) Silhet. Assam. Saharunpore. Fl. middle-sized, brownish orange, R. S.; fr. C. S. The larger plants are particularly light, white, and spongy. They are gathered during April and May, and converted by the Natives of Bengal into a great variety of toys, floats for fishing nets, gentlemen's hats &c.

2. *Roxburghii*, Spreng. (syst. 3, p. 322.—*Æ. subviscosa*, DC. pr. 2, p. 321.—*Smithia aspera*, Roxb. fl. ind. 3, p. 343.) ভাট শোনা Bhat-sola. © Bengal, (Serampore.) Fl. middle-sized, bright yellow, R. S.; fr. C. S.

3. *paludosa*, Roxb. (fl. ind. 3, p. 333.) কট শোনা Kat-sola. © Bengal, (Serampore.) Fl. middle-sized, bright-yellow, purple-dotted, R. S.; fr. C. S.

4. *indica*, L. (DC. pr. 2, p. 320;—W. and A. pr. 1, p. 219;—J. Grah. Cat. B. pl. p. 48;—Wight. icon. 2, t. 405.—*Hedysarum Neli-tali*, Roxb. fl. ind. 3, p. 365;—Rheed. 9, t. 18.) © Coromandel. Bombay. Nepal. Fl. small, reddish-yellow, R. S.; fr. C. S.



SMITHIA, Ait. (DC. pr. 2, p. 323;—W. and A. pr. 1, p. 220.)

1. *sensitiva*, Ait. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 48;—Roxb. fl. ind. 3, p. 342.—S. *geminiflora*, Roth.;—DC. l. c.;—Rheed. 9, t. 38.) कलकुशुन्दा Kulkushunda. २. Coromandel. Bombay. Tavoy. Bengal, (Serampore.) Silhet. Assam. Kheree-jungle, Deyrah-Dhoon. Fl. small, yellow, R. S.; fr. C. S. Makes excellent hay. (Roxb.)

LOURRA, Neck. (DC. pr. 2, p. 323;—W. and A. pr. 1, p. 221.)

1. *Vespertilionis*, Desv. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 49;—Wight. icon. 1, t. 285.—Hedysarum *Vespertilionis*, L.; Jacq. icon. rar. 4, t. 566;—Roxb. fl. ind. 3, p. 352.) चामचिकी Cham-chi-kee. ३. Coromandel. Bombay. Bengal, (Serampore.) Assam. Fl. small, whitish; and fr. the whole year.

URARIA, Desv. (DC. pr. 2, p. 324;—W. and A. pr. 1, p. 221.)

1. *picta*, Desv. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 50;—Wight. icon. 2, t. 411.—Doodia *picta*, Roxb. fl. ind. 3, p. 368.—Hedysarum *pictum*, Jacq. icon. rar. 3, t. 567;—Roxb. H. B. p. 57.) शङ्कर जूता Sunkur-juta. ४. Coromandel. Common in the districts S. E. of Surat. Bengal, (Serampore.) Morung. Saharunpore. Nepal. Fl. small, red, R. and C. S.; fr. C. S.

2. *crinita*, Desv. (DC. pr. 2, p. 324.—Doodia *crinita*, Roxb. fl. ind. 3, p. 369.—Hedysarum *crinitum*, L.;—Roxb. H. B. p. 57;—Burm. ind. t. 56.) ३ Tavoy. Amherst. Rangoon. Khassya Mountains. Assam. Fl. middle-sized, rose-coloured, R. and C. S.; fr. C. S.

3. *lagopodioides*, DC. (pr. 2, p. 324, under the name of U. *lagopoides*;—W. and A. pr. 1, p. 222;—Wight. icon. 1, t. 289.—Hedysarum *lagopodioides*, L.;—Burm. ind. t. 53, f. 2.;—Roxb. H. B. p. 57.—Doodia *lagopodioides*, Roxb. fl. ind. 3, p. 366.—Lespedeza *lagopoides*, Pers.) गोरुक्का चकूली Gorukhya-chakoolya. Hind: Goluk-chakulee. ५ Both Peninsulas of India. Bengal, (Serampore.) Assam. Fl. small, rose-coloured, R. and C. S.; fr. C. S.

4. *alopecuroides*, Wight. (icon. 1, t. 290.—U. *Lagopus*, Royle. ill. p. 201, t. 33, f. 1.—Hedysarum *alopecuroides*, Roxb. H. B. p. 57; not Spreng.—Doodia *alopecuroides*, Roxb. fl. ind. 3, p. 368.) ४. Banks of the Irawaddi. Khassya and Morung Mountains. Kheree jungle. Deyra-Dhoon. Sirmore. Kamaon. Fl. middle-sized, rose-coloured, R. and C. S.; fr. C. S.

5. *hamosa*, Wall. (W. and A. pr. 1, p. 222;—Wight. icon. 1, t. 284.—Hedysarum *hamosum*, Roxb. H. B. p. 57.—Doodia *hamosa*, Roxb. fl. ind. 3, p. 367.) ३ Interior of Bengal. Fl. middle-sized, rose-coloured, R. and C. S.; fr. C. S.

- ? 6. *styracifolia*, W. and A. (pr. 1, p. 222;—Hedysarum *styracifolium*, L.—H. *retroflexum*, L.—H. *procumbens*, Roxb. fl. ind. 3, p. 345.—Nicolsonia *styracifolia*, Desv.—Desmodium *retroflexum*, DC. pr. 2, p. 336.) ४. Coromandel. Tavoy. Silhet. Fl. small, purplish. In H. C. G. fl. R. and C. S.; fr. C. S. (Roxb.)



- floribunda*, Wall.—Near to *U. hamosa*, but larger in all the parts, and the pods with six joints.
8. *cordifolia*, Wall. (*pl. as. rar.* 1, t. 37.) 5 Prome, Taong-Dong. Fl. small, pale-greenish, R. and C. S.; fr. C. S.
9. *campanulata*, Wall. (*Cat.*) 5 Taong-Dong. Fl. small, whitish, R. and C. S.; fr. C. S.
10. *retrofracta*, Wall. (*Cat.*) 5 Moulmein. Tavoy. Fl. greenish-white, C. S.
- DESMODIUM, DC. (*pr.* 2, p. 325;—*W. and A. pr.* 1, p. 223.)
1. *umbellatum*, DC. (*l. c.*;—*W. and A. o. c. p.* 224;—*J. Grah. Cat. B. pl. p.* 49.—*Hedysarum umbellatum*, L.; not Roxb.—*Hedysarum arbo-reum*, Roxb. *fl. ind.* 3, p. 361;—*Burm. zeyl. t.* 51;—*Rumph.* 4, t. 52.) 5 Moluccas. Singapore. Sagaen. Penang. Mauritius. Ceylon. Districts S. E. of Surat. Near Belgaum, always growing on the banks of streams. Fl. small, greenish-white, April and May; fr. R. and C. S.
2. *congestum*, Wall. (*W. and A. pr.* 1, p. 224;—*Wight. icon.* 1, p. 209.—*Hedysarum umbellatum*, Roxb. *fl. ind.* 3, p. 360, excl. syn. *Burm.* not L.) 5 Circars. Travancore. Fl. small, greenish-white; and fr. C. S.
3. *cephalotes*, Wall. (*W. and A. pr.* 1, p. 224;—*Wight. icon.* 2, t. 373.—*Hedysarum cephalotes*, Roxb. *fl. ind.* 3, p. 360.) 5 Mauritius. Travancore. Prome. Pegu. Rangoon. Chittagong. Assam. Nepal. Fl. greenish-white, May, June and July; fr. C. S.
4. *triquetrum*, DC. (*pr.* 2, p. 326;—*W. and A. pr.* 1, p. 224;—*J. Grah. Cat. B. pl. p.* 49.—*Hedysarum triquetrum*, L.;—*Burm. ind. t.* 52, f. 2. *H. alatum*, Roxb. *fl. ind.* 3, p. 348;—*Burm. zeyl. t.* 81.) 5 Ceylon. Coromandel. Malabar Hill. Salsette, &c. Prome. Chappedong. Bengal. Cawnpore. Assam. Fl. small, pale violet, R. and C. S.; fr. C. S.
5. *alatum*, DC. (*pr.* 2, p. 326.—*Hedysarum triquetrum*, Roxb. *fl. ind.* 3, p. 347; not L.) 5 Peninsula of India. Banks of the Irawaddi. Moulmein. Bengal. Assam. Fl. small, pale rose-coloured, purple-dotted, R. and C. S.; fr. C. S.
6. *latifolium*, DC. (*W. and A. pr.* 1, p. 225.) 5 Fl. small, bright purple, R. and C. S.; fr. C. S.
- a. *Roxburghii*, W. and A. (*l. c.*—*D. latifolium*, DC. *pr.* 2, p. 328. excl. syn. Plum;—*Wight. icon.* 1, t. 270;—*J. Grah. Cat. B. pl. p.* 49. excl. syn. Pluk.—*Hedysarum latifolium*, Roxb. *fl. ind.* 3, p. 350;—*B. Reg.* 5, t. 355.) Coromandel. Hilly parts of the Concan. Assam. Nepal.
7. *collinum*, Wall. (*Hedysarum collinum*, Roxb. *fl. ind.* 3, p. 349;—*Wight. icon.* 1, t. 272.) 5 Circars. Fl. small, bright violet. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)
8. *gangeticum*, DC. (*pr.* 2, p. 327;—*W. and A. pr.* 1, p. 225, excl. syn. *Hedysarum collinum*, Roxb.—*Wight. icon.* 1, t. 271.—*Hedysarum gangeticum*, L.;—*Roxb. fl. ind.* 3, p. 349.) *সাঁওলা* *Salpan*, 5 Both

Peninsulas of India. Bengal, (Serampore.) Monghir. Silhet. Assam. Kamaon. Fl. small, R. and C. S.; fr. C. S.

α . *albiflorum*; fl. white.

β . *purpureum*; fl. purple.

9. *diffusum*, DC. (*pr.* 2, p. 336;—*W. and A. pr.* 1, p. 226, excl. *Hedysarum quinquangulatum*, Roxb.;—*Wight. icon.* 1, t. 298.—*Hedysarum auriculatum*—by a mistake “*articulatum*”—*Roxb. fl. ind.* 3, p. 355.) © Both Peninsulas of India. Interior of Bengal. Fl. minute, rose-coloured, R. and C. S.; fr. C. S. Greedily eaten by cattle.
10. *quinquangulatum*, Wight. (*icon.* 1, t. 293.—*Hedysarum quinquangulatum*, *Roxb. fl. ind.* 3, p. 355.) 5 Bengal. Fl. small, blue, R. and C. S.; fr. C. S. Greedily eaten by cattle.
11. *recurvatum*, Grah. (*W. and A. pr.* 1, p. 226;—*J. Grah. Cat. B. pl.* p. 49;—*Wight. icon.* 2, t. 374.—*Hedysarum recurvatum*, *Roxb. fl. ind.* 3, p. 358.) 5 Travancore. Common on the Ghauts. Cawnpore. Fl. small, bluish-white, R. S.; fr. C. S.
12. *elongatum*, Wall. (*Cat.*—*D. diffusum*, DC. *pr.* 2, p. 335, No. 88, not p. 336, No. 106;—*Wight. icon.* 2, t. 409.—*Hedysarum diffusum*, *Roxb. fl. ind.* 3, p. 357; not Willd.) 5 Interior of Bengal. Nepal. Taong-Dong. Prome. Fl. small, bright blue, R. and C. S.; fr. C. S.
13. *canescens*, DC. (*pr.* 2, p. 328.—*Hedysarum canescens*, *L.*;—*Roxb. H. B. p.* 57.—*H. scaberrimum*, *Ell.*) 4. Dry forests of Carolina and Virginia. Fl. small, pale purple, R. and C. S.; fr. C. S.
14. *paniculatum*, DC. (*pr.* 2, p. 329.—*Hedysarum paniculatum*, *L.*;—*Roxb. H. B. p.* 57.) 4. Dry forests and fields from N. York to Carolina. Fl. reddish purple, small, R. and C. S.; fr. C. S.
15. *viticinum*, Wall. (*Cat.*) 5 Nepal. Fl. small, reddish, R. and C. S.; fr. C. S.
16. *nutans*, Wall. (*Cat.*—*B. M.* 55, t. 2867.) 5 Sirmore. Fl. middle-sized, bluish-purple, May, June and July; fr. C. S.
17. *tuberosum*, (*Hedysarum tuberosum*, *Roxb. fl. ind.* 3, p. 363.—*Pueraria tuberosa*, DC. *pr.* 2, p. 240;—*W. and A. pr.* 1, p. 205;—*J. Grah. Cat. B. pl.* p. 47;—*Wight. icon.* 2, t. 412.—*Kadsumi*, *Banks. icon. Kämpf.* t. 25.) 5 C. Circars. Malabar Hill near Walkeshwar village. Hurdwar. Kherce-jungle. Deyra-Dhoon. Japan. Fl. middle sized, blue, March; fr. O. Roxb. distinctly says: “Legumes 2-6 jointed.” The root peeled and bruised into a cataplasm is employed by the Natives of the mountains where it grows, to reduce swellings of the joints. (*Roxb.*)
18. *ancistrocarpon*, Ledeb. (*DC. pr.* 2, p. 331.) 5 Brazil. R. S.
19. *gyrans*, DC. (*pr.* 2, p. 326;—*W. and A. pr.* 1, p. 227;—*J. Grah. Cat. B. pl.* p. 49;—*Wight. icon.* t. 294.—*Hedysarum gyrans*, *L.*;—*Jacq. icon. rar.* 4, t. 564;—*Roxb. fl. ind.* 3, p. 351.) বন চাঁড়াল *Buncharal*. 5 Both Peninsulas of India. Bengal, (Serampore.) Assam. Kheree-jungle. Deyra-Dhoon. Kamaon. Fl. small, dull-orange, R. and C. S.; fr. C. S.



20. *gyroides*, DC. (*pr.* 2, p. 326;—*W. and A. pr.* 1, p. 227.—*Hedysarum gyroides*, *Roxb. H. B. p.* 57.) 5 Bengal. Assam. Nepal. Fl. small, yellowish, Oct. and Nov.; fr. Dec. and Jan.
21. *polycarpum*, DC. (*pr.* 2, p. 334;—*W. and A. pr.* 1, p. 227;—*J. Grah. Cat. B. pl. p.* 49.—*Wight. icon.* 2, t. 406.—*D. heterocarpum*, DC. o. c. p. 337.—*D. capitatum*, DC. o. c. p. 336.—*D. angulatum*, DC. o. c. p. 335.—*D. siliquosum*, DC. o. c. p. 336.—*Hedysarum heterocarpum* L.—*H. polycarpum*, *Lam. ill. t.* 628.—*H. capitatum*, *Burm. ind. t.* 54, f. 1.—*H. conicum*, *Poir.*—*H. siliquosum*, *Burm. ind. t.* 55, f. 2.—*H. purpureum*, *Roxb. fl. ind. 3, p.* 358.—*Burm. zeyl. t.* 53, f. 1, 2.) 5 Ceylon. Both Peninsulas of India. Bengal. Assam. Kamaon. China. Gambiers' Island in the Pacific Ocean. Fl. largish, bright bluish-purple, R. S.; fr. C. S.
21. *triflorum*, DC. (*pr.* 2, p. 334;—*W. and A. pr.* 1, p. 229, excl. α ;—*J. Grah. Cat. B. pl. p.* 49, excl. *Hedysarum reptans*, *Roxb.* and syn. *Burm. zeyl. f. 1, t.* 54.—*Wight. icon.* 1, t. 292.—*Hedysarum triflorum*, *Willd.*;—*Roxb. fl. ind. 3, p.* 353.—*H. stipulaceum*, *Burm. ind. t.* 54, f. 2.—*Eschynomene triflora*, *Poir.*—*Burm. Zeyl. t.* 54, f. 2.) बुद्धादि Koodaliya. 4. Ceylon. Both Peninsulas of India. Bengal. (Serampore.) Monghir. Nepal. Fl. small, blue; and fr. whole year. The Natives apply the fresh plant bruised to wounds that do not heal well.
22. *heterophyllum*, DC. (*pr.* 2, p. 334.—*D. triflorum* α . majus, *W. and A. pr.* 1, p. 229;—*Wight. icon.* 1, t. 291.—*Hedysarum reptans*, *Roxb. fl. ind. 3, p.* 354; not *Poir.*—and consequently not *Desmodium reptans*, DC. o. c. p. 333.—*H. heterophyllum*, *Willd.*;—*Burm. zeyl. t.* 54, f. 1.) 4. Ceylon. Both Peninsulas of India. Bengal. (Serampore.) Nepal. Fl. small, white, R. and C. S.; fr. C. S. This species with *No.* 21, is cultivated in the garden here, and they both continue distinct.
23. *parvifolium*, DC. (*pr.* 2, p. 334;—*W. and A. pr.* 1, p. 229.—*Hedysarum tenellum*, *Don. pr. fl. nep.* 243; not *Kth.*) 4. Nepal. Fl. small, C. S.
24. *orbiculatum*, Wall. (*Cat.*—*Hedysarum orbiculatum*, *Roxb. H. B. p.* 57;—not *Rottl.*) 5 Silhet. In H. C. G. fl. Sept. and Oct.; fr. C. S. (*Roxb.*)
25. *barbatum*, Wall. (*Cat.*) Nepal. In H. C. G. fl. ?
26. *divergens*, Wall. (*Hedysarum divergens*, *Roxb. H. B. p.* 57; not Mühl.) 5 Silhet. Fl. and fr. C. S. (*Roxb.*)
27. *patens*, Wight. (*icon.* 2, t. 407.—*Hedysarum patens*, *Roxb. H. B. p.* 57; *fl. ind. 3, p.* 362.) 4. Moluccas. Fl. small, purple, R. and C. S. fl. C. S. (*Roxb.*)
28. *Hardwickianum*, (*Hedysarum rhombifolium*, *Roxb. H. B. p.* 57; not Ell.) 5 Hindoosthan. Fl. Oct. and Nov. fr. C. S. (*Roxb.*)
- DICERMA, DC. (*pr.* 2, p. 339;—*W. and A. pr.* 1, p. 230.)
1. *pulchellum*, DC. (l. c.;—*W. and A. l. c.*;—*Wight. icon.* 2, t. 418.—*Hedysarum pulchellum*, L.;—*Roxb. fl. ind. 3, p.* 361.—*Phyllodium*



pulchellum, Desv.—*Zornia pulchella*, Pers.—Burm. *zeyl.* t. 52.)
 जटोसांजपाणी *Juta-salpanes*. 5 Mauritius, Ceylon. Both Peninsulas of
 India, Bengal, (Serampore,) Assam. Kheree-jungle Deyra-Dhoon. Fl.
 small, greenish sulphur, R. and C. S.; fr. C. S.

HEDYSARUM, L. (DC. *pr.* 2, p. 340.)

1. *coronarium*, L. (DC. *o. c.* p. 341.—Gürtl. *fr.* 2, p. 346; t. 155, f. 5;
 —Roxb. *H. B.* p. 57.) 4. Meadows of Italy. Fl. small, deep-red, and
 fr. C. S.

LESPEDRZA, Michx. (DC. *pr.* 2, p. 348;—*W. and A. pr.* 1, p. 231.)

1. *junceæ*, Pers. (DC. *l. c.*—*Hedysarum junceum*, L. *fl. dec.* 1, t. 4;—
 Roxb. *fl. ind.* 3, p. 362.—*Anthyllis cuneata*, Dum.—*Hedysarum*
sericeum, Thunb.; not Vahl. nor Bieb.) 5 Siberia. New Holland.
 Japan. Nepal. Fl. small, white, R. and C. S.; fr. C. S.

ALBAGI, Tournef. (DC. *pr.* 2, p. 352;—*W. and A. pr.* 1, p. 232.)

1. *Maurorum*, Tournef. (DC. *l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B.*
p. 50.—*Hedysarum Albagi*, L.;—Roxb. *fl. ind.* 3, p. 344.—*Albagi*
mannifera, Desv.—*A. nepalensium*, DC.—*Ononis spinosa*, Hasselt.
 not L.—*Manna hebraica*, Don. *pr. fl. nep.* p. 246.) जवसा *Juvasa*.—
Hebrew Manna plant. 5 Deserts of Egypt. Syria and Mesopotamia.
 Monghir. Benares. Delhi. Common in Guzerat and S. Maharatta Coun-
 try. Scinde. Fl. smallish, red. Introduced into H. C. G. in 1810, but
 had not fl. in 1814. Affords a grateful food for the Camel in desert
 places, (Royle.) The Hebrew Manna exudes from its leaves and
 branches. In the hot season when almost all the smaller plants die,
 this sends forth leaves and flowers. (Dr. Gibson.)

ALYSICARPUS, Neck. (DC. *pr.* 2, p. 352.; *W. and A. pr.* 1, p. 1, p. 232.)

1. *monilifer*, DC. (*o. c.* p. 353;—*W. and A. l. c.*;—*Hedysarum monili-*
ferum, L.;—Burm. *ind. t.* 52, f. 3.;—Roxb. *fl. ind.* 3, p. 345.) 5
 Coromandel. Moulmein. In H. C. G. fl. R. and C. S.; fr. C. S. (Roxb.)
2. *vaginalis*, DC. (*pr.* 2, p. 353;—*W. and A. pr.* 1, p. 233.—*Hedysarum*
vaginale, L.;—Roxb. *fl. ind.* 3, p. 345. excl. syn. Burm.—*H. bupleri-*
folium, Roxb. *o. c.* p. 346.) कुरिला *Kurila*. 5 Both Peninsulas of India.
 Ceylon. Bengal, (Serampore.) Monghir. Fl. small, greenish-purple,
 R. and C. S.; fr. C. S.

3. *bupleurifolius*, DC. (*pr.* 2, p. 352;—excl. syn. *primum* Pluk. *amalth.*
p. 189. t. 443. f. 4;—*W. and A. pr.* 1, p. 233;—*J. Grah.-Cat. B.*
pl. p. 50. excl. syn. Roxb.—*Hedysarum bupleurifolium*, L.; not Roxb.
 —*B. M.* 41, t. 1722.—*H. gramineum*, Retz.;—Roxb. *Corom.* 2, t.
 194;—*fl. ind.* 3, p. 346;—*Rheed.* 9, t. 32.) 5 Peninsula of India.
 Bengal, (Serampore.) Fl. smallish, rose-orange, R. and C. S.; fr. C. S.

4. *styracifolius*, DC. (*pr.* 2, p. 353, excl. syn.;—*W. and A. pr.* 1, p.
 234;—*J. Grah. Cat. B. pl.* p. 50.—*A. cylindraceus*, Desv.—*Hedysa-*
rum glumaceum, Kōn.;—Roxb. *fl. ind.* 3, p. 347;—*Roth.*; not Willd.
 nor Vahl.) ♂ Arcot, Coromandel, Ava. In H. C. G. fl. R. and C.
 S.; fr. C. S. (Roxb.)



3. *Heyniamus*, W. and A. (pr. 1, p. 234.—*Hedysarum styracifolium*, Roxb. fl. ind. 3, p. 347; not L.) 5 Coromandel. In H. C. G. fl. R. and C. S.; fr. C. S. (Roxb.)

* *Scorpiurus levigata*, Sibth. and Sm. © Archipelagus.—*S. purpurea*, Desf. © Algiers.—*S. vermiculata*, L. © Coasts of the Mediterranean.—*Coronilla cretica*, L. © Candia.—*Arthrolobium* (*Astrolobium*, DC.) *ebracteatum*, DC. © Portugal, Spain, Italy.—*A. repandum*, DC. © Barbary.—*A. scorpioides*, DC. © S. Europe.—*Ornithopus compressus*, L. © S. Europe. Barbary.—*Hippocrepis scabra*, DC. © Murcia.—*H. multisiliquosa*, L. © S. Europe. Barbary.—*H. unisiliquosa*, L. © S. Europe. Barbary.—*Securigera Coronilla*, DC. © S. Europe.—*Picetia squamata*, DC. 5 St. Thomas.—*P. aristata*, DC. 5 St. Cruze.—*Amicia glandulosa*, H. B. Kth. 5 N. Granada.—*A. Zygomis*, DC. 5 Mexico.—*Poiretia scandens*, Vent. 5 St. Domingo.—*Myriadenus tetraphyllus*, DC. 4. Jamaica.—*Geissaspis cristata*, W. and A. 4. Courtallum.—*Zornia zeylonensis*, Pers.; Burm. zeyl. t. 50, f. 1. © Ceylon. Coromandel.—*Z. thymifolia*, H. B. Kth. 5 Mexico.—*Stylosanthes procumbens*, Swz. 5 Jamaica.—*Adesmia longiseta*, DC. 4. S. America.—*Æschynomene sensitiva*, Swz. 5 Jamaica, Brazil.—*Smithia ciliata*, Royle. ill. t. 35, f. 2. 4. Mussooree.—*Lourea obcordata*, Desv. Java.—*L. reniformis*, DC. Suburbs of Canton.—*Uraria crinita*, Desv. 3. *macrostachya*, Wall. pl. as. rar. 2, t. 110. 5 Amherst. Tavoy.—*Nicolsonia cayennensis*. 5 Cayenne.—*Desmodium rufescens*, DC.; Wight. ill. t. 79. 5 Neelgherries.—*D. strangulatum*, W. and A. 4. Peninsula of India.—*D. reniforme*, DC.; Burm. ind. t. 52, f. 1. 4. Coromandel. Prome. Taong-Dong.—*D. sequax*, Wall. pl. as. rar. 2, t. 157. 5 Kamaon.—*D. auricomum*, Grah. Tavoy.—*D. Perrottetii*, DC. 5 Guiana.—*D. angustifolium*, DC. 5 Mexico.—*D. Alamani*, DC. 4. Mexico.—*D. Aparines*. DC. 4. Mexico.—*D. incanum*, DC. 5 Jamaica. *D. supinum*, DC. 5 Jamaica.—*D. molle*, DC. 5 St. Thomas.—*D. mauritianum*, DC. 5 Mauritius.—*D. Scalpe*, DC. 5 Bourbon.—*D. oxybracteum*, DC. 5 Mauritius.—*Dicerna elegans*, DC. 5 Canton.—*D. biarticulatum*, DC.; Wight. icon. 2, t. 419.—Burm. zeyl. t. 50, f. 2. 5 Peninsula of India. Ceylon. Paghamew.—*Taverniera sparteæ*, DC.; Burm. ind. t. 51, f. 2. 5 Peninsula of India.—*Hedysarum capitatum*, Desf. B. M. 31, t. 1251. © Barbary.—*H. humile*, L. 4. S. Europe.—*Eleiotis sororia*, DC. 4. Peninsula of India.—*Lepedeza eriocarpa*, DC. Nepal.—*Alysicarpus nummularifolius*, DC. 5 Peninsula of India, Ceylon. Martaban.—*A. longifolius*, W. and A.; Wight. icon. 1, t. 251. 4. Cornfields in N. Circars.—*A. Wallichii*, W. and A. 5 Nepal, Taong-Dong.—*A. belgaumensis*, Wight. icon. 1, t. 92. 5 Ram Ghaut.—*Bremoniera Ammozylon*, DC. 5 Mauritius.

D. VICIÆ, Bronn.

(*DC. pr. 2, p. 353;—W. and A. pr. 1, p. 235.*)

CICER, L. (*DC. pr. 2, p. 354;—W. and A. l. c.;—Roxb. fl. ind. 3, p. 324;—J. Grah. Cat. B. pl. p. 50;—B. M. 49, t. 2274;—Wight. icon. 1, t. 20.*) बूटे कलाय *Boot-kulay*. चना *Chuna*. Chickpea. Chiches. © Spain. Italy. Levant. Cultivated in India. Fl. middle-sized, bluish-purple, and fr. C. S. Dr. Christie, in *Madras Journal of Science*, No. 13, mentions that an acid, (oxalic acid) exudes from all parts of the plant, which is collected by the ryots, and used in their curries instead of vinegar. (*J. Grah.*)

VICIA, L. (*DC. pr. 2, p. 354.*)

1. *Faba, L.* (*Faba vulgaris, Mönch.*—*DC. pr. 2, p. 354.*) *Garden Bean.* © Environs of the Caspian Sea. Cultivated in India. Fl. large, white, striped and dotted with black, Nov. and Dec.; fr. Jan. and Feb.

β. *equina, Horse-Bean. Ticks.* Cultivated in Nepal.

2. *onobrychioides, L.* (*DC. pr. 2, p. 358;—B. M. 48, t. 2206.*) *Saint-Foin Vetch.* © Europe. Fl. large, indigo-coloured, C. S. Affords an excellent fodder.

3. *atropurpurea, Desf.* (*DC. pr. 2, p. 359;—B. Reg. 11, t. 871.*) © Algiers. Fl. largish, purple, Feb. and March; fr. March.

4. *sativa, L.* (*DC. pr. 2, p. 360;—E. B. 5, t. 334;—Roxb. fl. ind. 3, p. 323.*) बड़ चना *Buro-chuna*, बज्जनी आकरी *Jhurjhunee-ankuree*. Common *Vetch.* © Europe. Domesticated in Bengal and the Northern Provinces of India. Fl. middle-sized, bright purple, variegated with white-rose, C. S.; fr. Feb. and March.

ERVUM, L. (*DC. pr. 2, p. 366;—W. and A. pr. 1, p. 235.*)

1. *Lens, L.* (*DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 50.*—*E. dispernum, Roxb. and Willd.;—DC. l. c.*—*Cicer Lens, Roxb. fl. ind. 3, p. 324.*—*Lens esculenta, Mönch.*—*Cicer punctulatum, Hortul.*) बड़ मसूर *Buro-musoor*.—*Lentil Tare.* © Europe. Cultivated in Bengal, and other adjoining provinces. Fl. small, pale-blue, and fr. C. S.

2. *hirsutum, L.* (*DC. pr. 2, p. 366;—W. and A. pr. 1, p. 235;—E. B. 14, t. 970;—Roxb. fl. ind. 3, p. 323.*—*Vicia Mitchelli, Rafin;—DC. pr. 2, p. 360.*) ছোট মসুর *Choto-musoor*. *Hairy Tare.* © Fields of Europe. Domesticated in Bengal and N. India. Fl. small, pale-lilac, and fr. C. S. In the Upper Provinces used for fodder.

3. *tetraspermum, L.* (*DC. pr. 2, p. 367.*—*E. B. 17, t. 1223.*) *Smooth Tare* © In corn-fields Europe, Himalayas. Fl. small, pale blue, and fr. C. S.

PISUM, L. (*DC. pr. 2, p. 368.*)

1. *sativum, L.* (*DC. l. c.;—Roxb. fl. ind. 3, p. 321.*—*J. Grah. Cat. B. pl. p. 50.*) मटर *Mutar*. *Pea.* © Native place unknown. Cultivated in India. Fl. large, white, or variegated with red, and fr. C. S.



α. macrocarpum, Ser. Sugar Pea.

β. quadratum, L. ছোট মটর *Choto-mutur*. Grey Pea.—A small greenish variety of this much cultivated in Bengal.

γ. agreste; Patna, or common white field-pea.

LATHYRUS, L. (DC. pr. 2, p. 369.)

1. *palustris*, L. (DC. o. c. p. 371.—*Fl. Dan.* t. 399;—*Roxb. H. B.* p. 56.) ৭. N. Europe. Fl. smallish, blue violet, with reddish banner, C. S.
2. *Aphaca*, L. (DC. o. c. p. 372;—*E. B.* 17, t. 1167;—*Roxb. fl. ind.* 2, p. 322.) জঙ্গলী মটর *Jungle-mutur*. Yellow Vetchling. ৩. Corn-fields of Europe. Common in Bengal, (Serampore) and near the banks of rivulets in N. India. Fl. middle-sized, lemon-coloured, and fr. C. S. Ripe seeds narcotic when eaten abundantly, but when young perfectly harmless.
3. *Nissolia*, L. (DC. pr. 2, p. 372;—*E. B.* 2, t. 112.) Crimson Grass Vetch. ৩. England. S. Europe. Fl. middle-sized, crimson, and fr. C. S.
4. *sativus*, L. (DC. pr. 2, p. 373;—*B. M.* 4, t. 115;—*Roxb. fl. ind.* 3, p. 322;—*J. Grah. Cat. B. pl.* p. 51.—*Cicerula alata*, *Mönch.*) তেঁতুলি *Teora*. খেসারী *Khesaree*. Blue-flowered Chickling Vetch. ৩. Spain. Cultivated in India. Domesticated about Serampore. Fl. large, blue, and fr. C. S. Affords much wholesome green fodder. Seeds eaten by the Natives.
5. *annuus*, L. (DC. pr. 2, p. 373.) ৩. Spain. Fl. small, yellow; fr. C. S.
6. *hirsutus* L. (DC. pr. 2, p. 373;—*E. B.* 18, t. 1255.) ৩. England, S. Europe. Fl. smallish, light blue crimson, C. S.; fr. Feb. and March.
7. *odoratus*, (DC. pr. 2, p. 374;—*B. M.* 2, t. 60;—*Roxb. H. B.* p. 56.) Sweet Pea. ৩. S. Europe.? Fl. large, lilac deep-crimson, sweet-scented, C. S.
8. *tingitanus*, L. (DC. pr. 2, p. 374;—*B. M.* 3, t. 100;—*B. Reg.* 16, t. 1388; *Roxb. H. B.* p. 56.) Tangier Pea. ৩. Tangier. Fl. large deep crimson, C. S.; fr. H. S.
9. *articulatus*, L. (DC. pr. 2, p. 375;—*B. M.* 8, t. 253;—*Gärtn. fr.* 2, p. 331, t. 152.—*Clymenum bicolor*, *Mönch.*) ৩. S. Europe. Fl. largish, white crimson, C. S.; fr. H. S.
10. *cornutus*, Horn. (DC. pr. 2, p. 376.) ৩. Native place unknown. Fl. smallish, purple, C. S.

* *Vicia setifolia*, H. B. Kth. ৭. Mexico.—*V. Pseudocracca*, Bertol. ৩. Pisa.—*V. villosa*, Roth. ৩. Germany.—*V. disperma*, DC. ৩. S. France.—*V. pimpinelloides*, Mauri. ৩. Rome.—*V. incisa*, Bieb. ৩. Tauria.—*V. cordata*, Wulf. ৩. Germany.—*V. peregrina*, L. ৩. S. Europe.—*V. lutea*, L.; *E. B.* 7, t. 481. ৩. England. S. Europe.—*V. hybrida*, L.; *E. B.* 7, t. 482. ৩. England. S. Europe.—*V. narbonensis*, L. ৩. S. Europe.—*Ervum nigricans*, Bieb. ৩. Tauria.—*E. Lenticula*, Schreb. ৩. Austria.—*E. Ervilia*, L. ৩. S. Europe.—*E. monanthon*, L. ৩. S. Europe.—

Lathyrus sphericus, Retz. ⊙ S. Europe.—*L. angulatus*, L. ⊙ S. Europe. N. India.—*L. selifolius*, L. ⊙ S. Europe.—*L. Cicera*, L. ⊙ Spain.—*L. grandiflorus*, Sims.; B. M. 44, t. 1938. ⊙ Italy.—*L. clymenoides*, DC. ⊙ Mauritius.—*L. bithynicus*, Lam.; E. B. 26, t. 1842. ⊙ Levant. S. France.—*L. alatus*, Ten. ⊙ Italy.—*L. Clymenum*, L. ⊙ S. Europe.—*L. tenuifolius*, Desf. ⊙ Algiers.—*L. Ochrus*, DC. ⊙ S. Europe.

E. PHASEOLEÆ,—BRONN.

(DC. pr. 2, p. 381;—*W. and A. pr.* 1, p. 236.)

ABRUS, L. (DC. l. c.;—*W. and A. l. c.*)

1. *preparatorius*, L. (DC. l. c.;—*W. and A. l. c.*;—*Roxb. fl. ind.* 3, p. 257; *J. Grah. Cat. B. pl.* p. 51.;—*Gärtn. fr. p.* 328, t. 151. f. 5.—*A. pauciflorus*, Desv.—*A. minor*, Desv.;—*Rheed. S. t.* 39;—*Rumph. 5, t.* 32.) ॐ Both Peninsulas of India. Moluccas. Bengal, (Serampore.) Assam. Fl. largish, C. S.; fr. H. S.

a. erythrospermus. Seeds red, with a black eye; flowers rose-coloured. ॐ Koonch.

β. *leucospermus*. Seeds white, with a black eye; flowers white. ॐ Shwet-koonch.

γ. *melanospermus*. Seeds black, with a white eye; flowers white. ॐ Kalo-koonch. Seeds generally used by the Native jewelers as a weight, almost uniformly weighing exactly one grain, troy.—*Root* employed as a substitute for liquorice, being sweet and mucilaginous. (*Roxb.*)

2. *pulchellus*, Wall. (*Cat.*) ॐ Khassya Mountains. Nepal. Fl. purple, largish, C. S.; fr. H. S.

KENNEDYA, Vent.

1. *monophylla*, Vent. (*Malm.*—*B. Cab.* 8, 758)

β. *longeracemosa*, Lindl. (*B. R.* 16. t. 1336.—*Glycine bimaculata*, Curt. *B. M.* 3, t. 263.) N. Holland.

2. *prostrata*, R. Br. (*Hort. Kew. ed. alt.* 4. 299.—*Glycine coccinea*, Curt. *B. M.* 8, t. 270.) N. S. Wales. C. S.

RHYNCHOSIA, Lour. (*W. and A. pr.* 1, p. 237.)

1. *medicaginea*, DC. (*pr.* 2, p. 336;—*W. and A. o. c. p.* 238.—*Dolichos medicagineus*, Lam.;—*Roxb. fl. ind.* 3, p. 315; excl. sp. char. and descript.—*Dolichos scarabæoides*, *Roxb. l. c.* excl. syn.—*Burm. zeyl.* t. 84, f. 2.) ॐ Travancore. Delhi, Banks of the Jumna. Fl. small, yellow. In H. C. G. fl., and fr. C. S. (*Roxb.*)

WISTARIA, Nutt.

1. *sinensis*, DC. (*pr.* 2, p. 390.—*Glycine sinensis*, Sims. *B. M.* 46. t. 2083. *B. Reg.* 8. t. 650.—*B. Cab.* 8. t. 778.) ॐ China. H. S.

FLEMINGIA, Roxb. (DC. pr. 2, p. 351;—*W. and A. pr.* 1, p. 241.)

1. *stricta*, Roxb. (*Corom.* 3, t. 248;—*fl. ind.* 3, p. 342;—DC. l. c.;—*W. and A. l. c.*;—*Wight. icon.* 2, t. 329.) L. 5 Circars. Tavoy. Fl. middle-sized, streaked with yellow, red and violet, R. and C. S.; fr. C. S.



2. *congesta*, Roxb. (*fl. ind.* 3, p. 340;—*DC. pr.* 2, p. 351;—*W. and A. pr.* 1, p. 241;—*Wight. icon.* 2, t. 390.—*Rhynchosia crotalarioides*, *DC. pr.* 2, p. 387.—*Crotalaria macrophylla*, *Willd.*) বড় সাজপানী *Buro-salpanee*. ♀ Both Peninsulas of India. Bengal, (Soonderbuns, Calcutta, Serampore.) Assam. Fl. smallish, pale rose, crimson-veined, R. S.; fr. C. S.
3. *semialata*, Roxb. (*Corom.* 2, t. 249;—*fl. ind.* 3, p. 340;—*DC. pr.* 2, p. 351;—*W. and A. pr.* 1, p. 241, annot.—*Wight. icon.* 2, t. 326.) ♀ Both Peninsulas of India. Morung and Khassya Mountains. Assam. Nepal. Fl. smallish, rose, streaked with green, R. and C. S.; fr. C. S.
4. *procumbens*, Roxb. (*fl. ind.* 3, p. 338;—*J. Grah. Cat. B. pl.* p. 51;—*Wight. icon.* 2, t. 408.) ♀ Mahableshwar. Mountains north of Oude. Fl. small, purple. In H. C. G. fl. C. S.; fr. H. S. (*Roxb.*)
5. *prostrata*, Roxb. jun. (*fl. ind.* 3, p. 338.) ♀ China. Fl. small, pale yellowish-purple, Nov.; fr. C. S.
6. *nana*, Roxb. (*fl. ind.* 3, p. 339;—*DC. pr.* 2, p. 351;—*W. and A. pr.* 1, p. 242, annot.—*Wight. icon.* 2, t. 389.) ♀ Banks of the Ganges near Hurdwar. Fl. small, pale greenish rose, H. S.
7. *lineata*, Roxb. (*fl. ind.* 3, p. 341;—*DC. pr.* 2, p. 351;—*W. and A. pr.* 1, p. 242.—*J. Grah. Cat. B. pl.* p. 51;—*Wight. icon.* 2, t. 327.) *Hedysarum lineatum*, *Burm. ind.* t. 513, f. 1.—*Lespedeza lineata*, *Pers.*—*Onobrychis lineata*, *Desv.*) ♀ Coromandel, Guzerat. Prome. Malloon, Khassya Mountains. Assam. Fl. small, greenish white purple, R. S.; fr. C. S.
8. *strobilifera*, R. Br. (*DC. pr.* 2, p. 341;—*W. and A. pr.* 1, p. 243;—*J. Grah. Cat. B. pl.* p. 51;—*Wight. icon.* 1, t. 267;—*B. Reg.* 8, t. 617.—*Hedysarum strobiliferum*, *L.*;—*Roxb. fl. ind.* 3, p. 350.—*Zornia strobilifera*, *Pers.*—*Linn. fl. zeyl.* t. 3.) ♀ Ceylon. Coromandel. Common on the Ghauts, and throughout the hilly parts of the Concan, generally growing in patches. Penang. Khassya Mountains. Assam. Fl. small, greenish white, somewhat streaked with red, R. and C. S.; fr. C. S.
9. *bracteata*, *Wight. (icon.* 1, t. 268.—*Hedysarum bracteatum*, *Roxb. fl. ind.* 3, p. 351.) ♀ Dinagapore. Fl. minute, rose, R. and C. S.; fr. C. S.
10. *Chappar*, Buch. ♀ Lalgunj. Deyra-Dhoon. Taong-Dong. In H. C. G. *PHASOLUS*, *L.* (*DC. pr.* 2, p. 390;—*W. and A. pr.* 1, p. 243.)
1. *Caracalla*, *L.* (*DC. l. c.*;—*B. Reg.* 4, t. 341;—*J. Grah. Cat. B. pl.* p. 51.) ♀ S. America. Introduced at Goa by the Portuguese. Fl. large, lilac, sweet-scented, C. S.
2. *vulgaris*, *L.* (*DC. pr.* 2, p. 392;—*W. and A. pr.* 1, p. 342;—*Roxb. fl. ind.* 3, p. 287;—*J. Grah. Cat. B. pl.* p. 51.) French Bean. Common Kidney Bean. Haricot. ☉ ☾ Cashmere. Cabul. Cultivated in gardens. Fl. middle-sized, white, C. S.; fr. C. S. and H. S.

3. *nanus*, L. (*W. and A. pr.* 1, p. 243;—*Roxb. fl. ind.* 3, p. 291.—*P. compressus*, DC. *pr.* 2, p. 392.—*P. romanus*, Savi.—*P. saponaceus*, Savi.;—DC. *v. c.* p. 393.) *Common Dwarf Kidney Bean*. ☉ Native place unknown. Cultivated. Fl. smallish, white, and fr. C. S.
4. *lunatus*, L. (DC. *pr.* 2, p. 393;—*W. and A. pr.* 1, p. 244;—*Roxb. fl. ind.* 3, p. 287;—*J. Grah. Cat. B. pl.* p. 51.—*P. maximus*, Sloane. *jam.* t. 111, f. 1;—*Roxb. fl. ind.* 3, p. 288. excl. No. 3.) *Lima Bean*. *Country French Beans*. *Country Haricot*. ♂. ♀. Peninsula of India. Dapoory. Bengal. Fl. small, greenish, C. S.; fr. H. S. Six varieties cultivated for the table. The Natives rarely use any part of the plant, nor have they any name for it.
5. *multiflorus*, Willd. (DC. *pr.* 2, p. 329;—*W. and A.* 1, p. 244.)
 - a. *coccineus*, (*P. vulgaris*. β. *coccineus*, L.—*P. indicus* flore coccineo seu purpureo, *Moris. hist.* 2, sect. 2, cap. 2, par. 1, n. 4, p. 69, t. 5, f. 4.) *Scarlet runner*. ☉ H. S. 1842.
6. *rostratus*, Wall. (*pl. as. rar.* 1, t. 63;—*W. and A. pr.* 1, p. 244;—*J. Grah. Cat. B. pl.* p. 51;—*Wight. icon.* 1, t. 34.—*P. alatus*, *Roxb. fl. ind.* 3, p. 288; not L.;—*Rheed* 8, t. 42). বন বরভি *Bun-burbuti*. ২. ☉ Coromandel. Common throughout the Concaus. Bengal, (Serampore.) Fl. large, deep rose-purple, C. S.; fr. H. S. *Roots* tuberous, eaten by the Natives. (*J. Grah.*)
7. *semirectus*, L. (DC. *pr.* 2, p. 396;—*B. Reg.* 9, t. 743;—*Roxb. H. B.* p. 55.) ☉ W. Indies. Fl. large, red. In H. C. G. fl. and fr. Nov. and Dec. (*Roxb.*)
8. *fuscus*, Wall. (*pl. as. rar.* 1, t. 6.) ২. ☉ Prome. Fl. middle-sized, pale-yellow, variegated with brown, heavy smelling, whole year; fr. C. S.
9. *dolichoides*, *Roxb. (fl. ind.* 3, p. 290.) ২. ☉ Chittagong. Fl. large, dark-purple. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
10. *calcaratus*, *Roxb. (fl. ind.* 3, p. 289;—*W. and A. pr.* 1, p. 245.) ♂. ☉ Cultivated in Mysore. Fl. large, yellow. In H. C. G. fl. C. S.; fr. H. S. (*Roxb.*)
11. *minimus*, *Roxb. (fl. ind.* 3, p. 290.) ☉ ☉ China. Fl. small, greenish-yellow, and fr. Nov. and Dec. (*Roxb.*)
12. *sublobatus*, *Roxb. (fl. ind.* 3, p. 288.) ঘোড়া মুগ *Ghora-moog*. ☉ ☉ Bengal, (Serampore.) Fl. largish, greenish-yellow, and fr. C. and H. S.
13. *Mungo*, L. (DC. *pr.* 2, p. 395;—*W. and A. pr.* 1, p. 245;—*Roxb. fl. ind.* 3, p. 292;—*J. Grah. Cat. B. pl.* p. 51.—*P. hirtus*, *Retz.*) হালি মুগ *Hali-moog*. *Green Gram*. ☉ Native place unknown. Cultivated by the Natives, to whom the grain is of great importance, especially in times of famine. Fl. largish, greenish-yellow, and fr. C. S. β. *melanospermus*; (*Phaseolus* Max.; *Roxb. fl. ind.* 3, p. 295;—*L. ?*—*Rheed* 8, t. 50.) কাল মুগ *Kalo-moog*. *Black Gram*. ☉ Native place unknown. Cultivated by the Natives, but not so much as the Green Gram. Fl. largish, greenish-yellow, and fr. C. S.



14. *Roxburghii*, W. and A. (pr. 1, p. 246.—*P. radiatus*, Roxb. fl. ind. 3, p. 296; not L.) माश कुलाय *Mash-kulay*. © Circars. Travancore, Malabar. Bengal, (Serampore,) in a cultivated state only. Fl. middle-sized, yellow, and fr. C. S. This species is the most esteemed of all the leguminous plants, and bears the highest price. Of the meal the Natives make bread for many of their religious ceremonies. Its produce is about thirty-fold. Cattle eat the straw of this species, whereas they reject that of the preceding one.
α. *chlorospermus*. Seeds green.
β. *melanospermus*. Seeds black, small.
15. *trilobus*, Ait. (Roxb. fl. ind. 3, p. 298;—W. and A. pr. 1, p. 246;—Wight. icon. 1, t. 94;—J. Grah. Cat. B. pl. p. 52.—*Dolichos trilobatus*, L.;—DC. pr. 2, p. 399;—Burm. ind. t. 50, f. 1.—*Glycine triloba*, L.—*Dolichos stipulaceus*, Lam.) मूगानी *Mooganee*. २. Coromandel. Common in the Deccan and Bengal, (Serampore.) Fl. small, yellow, and fr. C. S. Cultivated, in which state it was only found by Dr. Roxburgh. Seeds gathered and eaten by the poor. Affords good fodder.
16. *aconitifolius*, Jacq. (obs. 3, p. 2, t. 52;—DC. pr. 2, p. 394;—Roxb. fl. ind. 3, p. 299;—W. and A. pr. 1, p. 247;—J. Grah. Cat. B. pl. p. 53.—*Dolichos dissectus*, Lam.) मूठे *Moot*. © Coromandel. Oude. Cultivated in the Deccan, Goozerat and the Upper Provinces as fodder. Fl. small, yellow, and fr. C. S.
17. *aureus*, Roxb. (fl. ind. 3, p. 297.) सोना मूग *Sona-moog*. © Bengal, (Serampore) in a cultivated state only. The seeds form an article of diet with the Natives, and are to be found in every bazar. (Roxb.)
18. *torosus*, Roxb. (fl. ind. 3, p. 298.) श्वेत माश *Shwet-mash*. © Cultivated in Nepal. Fl. sulphur. In H. C. G. fl. and fr. C. S. (Roxb.)
19. *glaber*, Roxb. (fl. ind. 3, p. 291.) © Mauritius, where it is cultivated under the name of *Lentille Creole*. Fl. large, bright, yellow, R. and C. S.; fr. Feb.
20. *angustifolius*, Roxb. (H. B. p. 55.) © China? In H. C. G. fl. R. S.; fr. C. S. (Roxb.) If this is not the same with *P. angustifolius*, Grah. (Wall. Cat.) Mussooree, Nepal, the latter name must be altered.
- Sora, Mönch. (DC. pr. 2, p. 396;—W. and A. pr. 1, p. 247.)
1. *hispida*, Mönch. (DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 52.—*S. japonica*, Savi.—*Dolichos Soja*, L.; Jacq. icon. rar. t. 145;—Roxb. fl. ind. 3, p. 314.—Kämpf. amoen. p. 837, t. 838.) गारि कुलाई *Gari-kulay*. © Japan. Moluccas. Nepal. Taong-Dong. Cultivated in gardens. Fl. smallish, reddish-purple, and seeds black, C. S. Seeds in Japan commonly eaten in soups. (G. Don.)
β. *leucosperma*. Seeds white; flowers yellow.
- DOLICHOS, L. (DC. pr. 2, p. 396;—W. and A. pr. 1, p. 247.)
1. *glutinosus*, Roxb. (fl. ind. 3, p. 312;—W. and A. o. c. p. 248.—*Glycine viscosa*, Roth.—*Rynchosia viscosa*, DC. pr. 2, p. 387.)



শিম বাতাজী *Shim-batrajee*. ☉ ☾ Peninsula of India. Bengal, (Serampore.) Fl. largish, yellow, and fr. C. S.

2. *uniflorus*, Lam. (*DC. pr. 2, p. 398*;—*W. and A. pr. 1, p. 248*;—*J. Grah. Cat. B. pl. p. 52*.—*D. biflorus*, *Roxb. fl. ind. 3, p. 313*; not L.) কুলথ কলাই *Kooltho-kulay*. ☉ ☾ Coromandel, where it is chiefly found in a cultivated state, and called *Horse-gram plant*. Also cultivated in the Deccan and Bengal, (Serampore.) Fl. small, sulphur, and fr. C. S. Seeds grey. Produce about sixty-fold in a good soil and favorable season.

β. *melanospermus*. Seeds jet black.

Seeds of both varieties are employed on the Coast of Coromandel promiscuously to feed cattle, and in times of scarcity, as an article of food among the Natives. Cattle are fond of the straw. (*Roxb.*)

3. *falcatus*, Klein. (*DC. pr. 2, p. 398*;—*W. and A. pr. 1, p. 249*;—*Roxb. fl. ind. 3, p. 311*, excl. syn. Pluk. and Lour.—*J. Grah. Cat. B. pl. p. 52*.) ২. ☾ Peninsula of India. Fl. large, bluish purple. In H. C. G. fl. and fr. Jan. and Feb. (*Roxb.*)

4. *pilosus*, *Roxb.* (*fl. ind. 3, p. 312*;—*DC. pr. 2, p. 397*;—*W. and A. pr. 1, p. 249*.) ঠাকুরি কলাই *Takuri-kulay*. ২. ☾ Circars. Travancore. Bengal, (Serampore.) Prom. Nepal. Fl. large, blue, R. S.; fr. C. S. Cattle eat the straw of this plant. (*Roxb.*)

5. *sinensis*, L. (*W. and A. pr. 1, p. 250*, excl. omnibus syn. præter Catjang.) বরভূতি *Burbuti*. ☉ ☾ Commonly cultivated. Fl. largish, R. S.; fr. C. S.

a. *eccremocarpus*. (*D. sinensis*, *DC. pr. 2, p. 399*;—*Roxb. fl. ind. 3, p. 302*, excl. *D. sesquipedalis*, L.;—*B. M. 48, t. 2232*;—*J. Grah. Cat. B. pl. p. 52*;—*Rumph. 5, t. 134*.) Fl. lilac-purplish; fr. pendulous.

aa. *leucospermus*. Seeds white. Most esteemed for the table.

ββ. *phæospermus*. Seeds brown.

- β. *orthocarpus*. (*D. tranquebariensis*, *Jacq. hort. vind. 3, t. 70*;—*DC. pr. 2, p. 400*.—*D. Catjang*, *Roxb. fl. ind. 3, p. 303*;—not L.—*Rheed. 8, t. 41* ?) Fl. pale blue, greenish yellow; fr. erect.

aa. *leucospermus*. Seeds white.

ββ. *phæospermus*. Seeds brown.

γγ. *melanospermus*. Seeds black.

6. *vevillatus* ? Kth. (*DC. pr. 2, p. 339*.) Fl. pale blue. S. America, R. S. 1840.

7. *unguiculatus*, *Jacq.* (*Hort. vind. 1, t. 23*;—*DC. pr. 2, p. 400*;—*Roxb. H. B. p. 55*.) ☉ ☾ Barbadoes. In H. C. G. fl. and fr. C. S. (*Roxb.*)

8. *gangeticus*, *Roxb.* (*fl. ind. 3, p. 310*.) ♂ ২. ☾ Banks of the Ganges. Fl. large, yellow. In H. C. G. fl. and fr. whole year. (*Roxb.*) This species we have not seen. In *Wall. Cat.* it is only marked: "Hb. *Roxb.*" The Bengalee name, *bun-burbuti*, is by the Natives here applied only to *P. rostratus*, *Wall.*



9. *phaseoloides*, Roxb. (*fl. ind.* 3, p. 316.) ५. China. Fl. largish violet. In H. C. G. fl. Nov. and Dec.; fr. Jan. and Feb. (*Roxb.*)
10. *herandrus*, Roxb. (*H. B.* p. 55.) Silhet. ५. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
11. *azureus*, Roxb. (*H. B.* p. 55.) Silhet. ५. In H. C. G. fl. Oct. and Nov.; fr. C. S. (*Roxb.*)
- LABLAB, Adans. (*DC. pr.* 2, p. 401;—*W. and A. pr.* 1, p. 250.)
1. *vulgare*, Savi. (*DC. l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 52;—*Wight. icon.* 1, t. 57, 203.—*Dolichos Lablab, L.—Roxb. fl. ind.* 3, p. 305.) ० or ५. Fl. and fr. C. S. Commonly cultivated in the Moluccas, both Peninsulas of India, Ceylon, Bengal, (Serampore.) Assam, &c.
- a. *dumetorum*.—(*Dolichos spicatus, Kön.—Rumph.* 5, t. 141, f. 1.)
বন শিম *Bun-shim*. Common about Serampore. Fl. smallish, purple. Seeds dark grey, mottled. Not cultivated.
- β. *sepiarium*.—In hedges, near Samulcota. Differs from a in being very downy. Fl. red. Seeds dark grey, mottled. Not cultivated.
- γ. *Annapa*; Roxb.—Coromandel. Whole plant of a heavy disagreeable smell. Much cultivated on the Coast, and yields in a good soil about forty-fold. The seeds bear a low price, compared to most other sorts of grain, and are much eaten by the poorer classes, particularly when rice is dear. They are not palatable, but reckoned wholesome substantial food. Cattle are also fed with the seed, and greedily eat the straw. (*Roxb.*)
- δ. *albiflorum*, (*Dolichos albus, Lour.—D. bengalensis, L.—Rumph.* 5, t. 37.) শ্বেত শিম *Shwet-shim*. Fl. smallish, white. Cultivated in gardens and supported by poles, often forming arbours about the doors of the poor Natives. The tender pods eaten like French beans; the seeds never. The plant has no disagreeable smell.
- ε. *rubriflorum*; (*Rumph.* 5, t. 136.) জীয়া শিম *Jeea-shim*. Cultivated like the last, and much esteemed by the Natives. Fl. red.
- ρ. *purpurascens*; গুড়দল শিম *Goordal-shim*. Fl. large, purplish. A larger variety. Cultivated like ε. Legumes broader, with the seeds more remote than any of the other varieties.
- η. *purpureum*, DC. (*pr.* 2, p. 401.—*Dolichos purpureus, Jacq. fragm.* 45, t. 55;—*B. Reg.* 10, t. 830;—*Smith exot. bot.* t. 71.—*D. Lablab, B. M.* 23, t. 896.) রক্ত শিম *Rukto-shim*. Stem and the large flowers purple. Pods deep purple.
2. *cultratum*, DC. (*pr.* 2, p. 402;—*W. and A. pr.* 1, p. 251.—*Dolichos lignosus, Roxb. fl. ind.* 3, p. 307; not L.—*D. cultratus, Thunb.*;—*Willd.*) ५. All the varieties of this species are cultivated during the cold season in the gardens and about the doors of the Natives, forming not only cool, shady arbours, but furnishing them with an excellent pulse for their curries, &c. in their tender pods. In short, adds Dr. Rox-

burgh, these and the four last mentioned cultivated varieties of *L. vulgare*, may be called the *kidney-beans of the Asiatics*.

a. rectum; Pods straight; seeds reddish; flowers, white, large, পাঞ্চ শিম *Panch-shim*.

β. falcatum minus; Pods falcate, size of the little finger; flowers white, largish. বাধনকো শিম *Baghonuko-shim*.

γ. falcatum majus; Pods falcate, much longer than in *β*; flowers purple. দুধ পিটুলী শিম *Dood-pituli-shim*.

δ. gladiatum, flore albo; Pods gladiate-clavate, length of the little finger. সাদা জামাই পলি শিম *Sada-jamai-puli-shim*.

ε. gladiatum, flore purpureo; Flowers reddish purple; pods as in *γ*. পিটুলী জামাই পলি শিম *Pitulee-jamai-puli-shim*.

ρ. macrocarpum; the largest of all. Fl. red; pods 6-8 inches long; seeds black with a white eye. গৈচি শিম *Gychi-shim*.

PACHYRRHIZUS, Rich. (*DC. pr.* 2, p. 402;—*W. and A. pr.* 1, p. 251.)

1. *angulatus*, Rich. (*DC. l. c.*;—*W. and A. l. c.*;—*J. Gralh. Cat. B. pl.* p. 53.—*Dolichos bulbosus*, L.;—*Roxb. fl. ind.* 3, p. 309;—*Rumph.* 5, t. 132.) শকর আলু *Shukur-aloo*. ২. *α* S. America. Cultivated in India. Fl. largish, blue, R. and C. S.; fr. Feb. and March. Root tuberous, like a turnip in consistence and taste, eaten by the Malays. No other part of the plant is used.

PSOPHOCARPUS, Neck. (*DC. pr.* 2, p. 403;—*W. and A. pr.* 1, p. 252.)

1. *tetragonolobus*, DC. (*l. c.*;—*W. and A. l. c.*;—*J. Gralh. Cat. B. pl.* p. 52.—*Dolichos tetragonolobus*, L.;—*Roxb. fl. ind.* 3, p. 305;—*Rumph.* 5, t. 133.) চারি কোণা শিম *Chari-kona-shim*, Goa Bean. *Chevauz de Frize Bean*. ২. *α* S. America? Cultivated in India, and the Mauritius. In the latter place it is called *Pois carré*. Fl. large, blue, C. S.; fr. Feb. and March. Pods used like French beans.

CANAVALIA, DC. (*pr.* 2, p. 403;—*W. and A. pr.* 1, p. 252.)

1. *gladiata*, DC. (*o. c. p.* 404;—*W. and A. o. c. p.* 253;—*J. Gralh. Cat. B. pl.* p. 52.—*Dolichos gladiatus*, Jacq. *icon. rar.* 3, t. 560;—*Roxb. fl. ind.* 3, p. 300, excl. syn. Sloane. *D. ensiformis*, Lour. ex. pte.;—L.?—*Rheed.* 8, t. 44;—*Rumph.* 5, t. 135, f. 1.) মাখন শিম *Makhun-shim*. ২. *α* Fl. large, R. S.; fr. C. S. Its half-grown pods afford a passable vegetable.

a. erythrosperma, flore rubro. Flowers and seeds red. রক্ত মাখন শিম *Rang-makhun-shim*. Cultivated.

β. erythrosperma, flore albo. Seeds red; flowers white. ছোট সাদা মাখন শিম *Choto-sada-makhun-shim*. Cultivated.

γ. leucosperma. Flowers and large seeds white. বড় সাদা মাখন শিম *Buro-sada-makhun-shim*. Pods about two feet long, often twenty-seeded. This variety is considered the most wholesome of them all, and is extensively used at the tables of Europeans, as well as by the Natives of Silhet, where the plant is indigenous.



8. *spodiosperma*. Seeds grey; flowers red. Pegu. Silhet. Not cultivated.
2. *virosa*, W. and A. (pr. 1, p. 253; excl. syn. Rumph.—*J. Grah. Cat. B. pl.* p. 53.—*C. gladiata*. β . DC. pr. 2, p. 404.—*Dolichos virosus*, Roxb. fl. ind. 3, p. 301.—*D. ensiformis*, Lour. ex. pte.—*Rheed.* 8, t. 45.) काल शिम Kalo-shim. काठे शिम Kat-shim. σ . $\curvearrowright$ Cochin China. Peninsula of India. Bengal, (Serampore,) &c. Fl. large, rose purplish, R. S.; fr. C. S. Considered by the Natives a poisonous plant.
3. *obtusifolia*, DC. (pr. 2, p. 404;—*W. and A. pr.* 1, p. 253;—*J. Grah. Cat. B. pl.* p. 53.—*Dolichos obtusifolius*, Lam.—*D. rotundifolius*, Vahl;—*Roxb. fl. ind.* 3, p. 302;—*Rheed.* 8, t. 43.) σ . $\curvearrowright$ Coromandel. The Concan. Fl. large, bluish rose, R. S.; fr. C. S.
4. *obcordata*, (*Dolichos obcordatus*, Roxb. fl. ind. 3, p. 303.) $\varnothing$. $\curvearrowright$ China. Fl. large, red violet, odoriferous, R. S.; fr. C. S.
5. *mollis*, Wight and Arn. $\varnothing$. Neelgherries. Dindygul.
6. *incana*, Wall. (*Buchanan.* 1814.)
7. *bracteata*, Wall. Goruckpur. Mountains near Ava.
- MUCUNA, Adams, (DC. pr. 2, p. 404;—*W. and A. pr.* 1, p. 253.)
1. *monosperma*, (DC. o. c. p. 406;—*W. and A. o. c.* p. 254;—*J. Grah. Cat. B. pl.* p. 53;—*Wight. icon.* 1, t. 35;—*Hook. Bot. Misc.* 2, p. 346; suppl. t. 12.—*Carpopogon monospermum*, Roxb. fl. ind. 3, p. 283.) $\varnothing$. $\curvearrowright$ Coromandel. Bombay. Khassya Mountains. Assam. Kheree jungle. Deyra-Dhoon. Fl. large, dark purple, C. S.; fr. H. S. Produces the Brahminee vegetable called *Negro Bean*. (*Dr. Lush.*) Cattle do not eat it.
2. *atropurpurea*, DC. (pr. 2, p. 406;—*W. and A. pr.* 1, p. 254;—*J. Grah. Cat. B. pl.* p. 53.—*Carpopogon atropurpureum*, Roxb. fl. ind. 3, p. 287.) $\varnothing$. $\curvearrowright$ Courtallum, Travancore. S. Concan. Fl. large, dark-purple, Feb. and March; fr. R. S.
3. *gigantea*, DC. (pr. 2, p. 404;—*W. and A. pr.* 1, p. 254;—*Hook. Bot. Misc.* 2, p. 357; suppl. t. 14;—*J. Grah. Cat. B. pl.* p. 53.—*Dolichos giganteus*, Willd.—*Carpopogon giganteum*, Roxb. fl. ind. 3, p. 287;—*Rheed.* 8, t. 36.) $\varnothing$. $\curvearrowright$ Negapatam. The Concan. Soonderbuns. Fl. large, sulphur-coloured, R. and C. S.; fr. H. S.
4. *pruritus*, Hook. (*Bot. Misc.* 2; suppl. t. 13;—*W. and A. pr.* 1, p. 255;—*J. Grah. Cat. B. pl.* p. 53.—*Carpopogon pruriens*, Roxb. fl. ind. 3, p. 283; excl. syn. L.—*Rheed.* 8, t. 35;—*Rumph.* 5, t. 142.) अजकनी *Alkushée*. Cow Itch. $\odot$ $\curvearrowright$ Moluccas. Both Peninsulas of India. Bengal, (Serampore.) Assam. Kheree jungle. Deyra-Dhoon. Fl. large, dark purple, C. S.; fr. H. S.
5. *utilis*, Wall. (*Wight. icon.* 1, t. 280.) *Pois noir de Bourbon*, $\odot$ $\curvearrowright$ Extensively cultivated in the Mauritius and Van Diemen's Land as a table vegetable, and also as fodder for cattle. Fl. very large, dark purple blackish, R. and C. S.; fr. Feb. and March. Certainly dif-



ferent from *No. 4*, which has been cultivated in the garden here for many years, without its pods becoming less stinging.

6. *capitata*, W. and A. (*pr. 1, p. 255*, and not DC. who has omitted the plant.—*Carpopogon capitatum*, *Roxb. fl. ind. 3, p. 284*, as to the cultivated plant.) ☉ ◡ Native place unknown. In H. C. G.?
7. *nivea*, Buch. (*DC. pr. 2, p. 406*;—*W. and A. pr. 1, p. 255. annot.*—*Carpopogon niveum*, *Roxb. fl. ind. 3, p. 285*.) খামাচ *Khamach*. ☉ ◡ Bengal, (Serampore.) Fl. very large, white, R. S.; fr. C. S. By removing the exterior velvety skin of the large, fleshy, tender pods, they are, when dressed, a most excellent vegetable for the table, and the full grown beans are scarcely inferior to the large garden beans of Europe. (*Roxb.*)
8. *imbricata*, DC. (*pr. 2, p. 406*.—*Carpopogon imbricatum*, *Roxb. H. B. p. 54*.) ঙ ◡ Silhet. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
9. *bracteata*, DC. (*pr. 2, p. 406*.—*Carpopogon bracteatum*, *Roxb. H. B. p. 54*.) ঙ ◡ Chittagong. In H. C. G. fl. C. S. (*Roxb.*)

CANTHAROSPERMUM, W. and A. (*pr. 1, p. 255*.)

1. *pauciflorum*, W. and A. (*l. c.*—*Cajan scarabæoides*, *Pet. Th.*—*Dolichos scarabæoides*, *L.*;—*Roxb. fl. ind. 3, p. 315*, excl. sp. char. and descript.—*D. medicagineus*, *Roxb. l. c.* excl. syn.—*Rynchosia? scarabæoides*, *DC. pr. 2, p. 387*.) বানর কলাই *Baur-kulay*. ♂ ◡ Madagascar. Bourbon. Mauritius. Ceylon. Peninsula of India, Bengal, (Serampore.) Khassya and Monghir Hills. Assam. Mussoorie. Nepal. Fl. small, yellow, R. and C. S.; fr. C. S. Eaten by cattle.

CAJANUS, DC. (*pr. 2, p. 406*;—*W. and A. pr. 1, p. 256*.)

1. *indicus*, Spreng. (*syst. 3, p. 248*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 53*.) অড়র *Urur*. ঙ Ceylon. Both Peninsulas of India. Bengal, (Serampore.) Assam. Fl. largish, and fr. C. S. Cultivated. The seeds (দাল *dal*) are much esteemed by the Natives, who hold them third in rank among the leguminous seeds. Cattle greedily eat the tender parts of the plant, whether green or dry; the dry wood is excellent fuel, and well adapted for producing fire by friction.

α. flavus; (*C. flavus*, *DC. l. c.*—*Cytisus Cajan*, *L.*;—*Jacq. Obs. 1, t. 1*;—*Roxb. fl. ind. 3, p. 325*, excl. syn. *Rheed.*)

β. bicolor; (*C. bicolor*, *DC. l. c.*—*Cytisus Cajan*, *β. Lam.*—*C. Pseudo-cajan*, *Jacq. hort. vind. 2, t. 119*.—*Rheed. 6, t. 13*.)

CYLISTA, Ait. (*DC. pr. 2, p. 410*;—*W. and A. pr. 1, p. 259*.)

1. *scariosa*, Ait. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. Corom. 1, t. 92; fl. ind. 3, p. 320*;—*J. Grah. Cat. B. pl. p. 54*.) ঙ ◡ Mountainous parts of the Circars. Common on the ghauts and hilly parts of the Concan. Abundant in Kennery jungles. Salsette. Fl. middle-sized, yellow, R. and C. S.; fr. C. S.

CYANOSPERMUM, W. and A. (*pr. 1, p. 259*.)

1. *tomentosum*, W. and A. (*o. c. p. 260*;—*Wight. ill. t. 84*.—*Cylista tomentosa*, *Roxb. Corom. 3, t. 221*;—*fl. ind. 3, p. 319*;—*DC. pr. 2,*



p. 410;—*J. Grah. Cat. B. pl. p. 54.*) 5 (Dindigul. Mysore. Fl. middle-sized, sulphur, R. and C. S.; fr. C. S.

EAYTHRINA, L. (*DC. pr. 2, p. 410*;—*W. and A. pr. 1, p. 260.*)

1. *Crista galli*, L. (*Lam. encycl. 2, 391*, excl. syn. Jacq.—*Sweet. fl. gard. Ser. 3, No. 214*, not B. Reg. nor B. Cab. which is *E. laurifolia*, Jacq.—*Past. B. M. 3, 175.*) Brazil. Fl. C. S.
2. *herbacea*, L. (*DC. o. c. p. 411*;—*B. M. 22, t. 877*;—*Roxb. H. B. p. 53.*) 4. Sandy fields and forests of Carolina, Florida and Mississippi. Fl. large, crimson, C. S.; fr. H. S.
3. *resupinata*, Roxb. (*Corom. 3, t. 220*;—*fl. ind. 3, p. 257.*) 4. Cawn-pore. Fl. largish, bright scarlet, C. S.; fr. H. S.
4. *cafra*, Thumb. (*DC. pr. 2, p. 412*;—*B. Reg. 9, t. 736*;—*B. M. 50, t. 2431*;—*Roxb. H. B. p. 53.*) 5 S. Africa. Fl. large, greenish dull red, April; fr.
5. *arborescens*, Roxb. (*fl. ind. 3, p. 256*;—*Corom. 3, t. 219*;—*DC. pr. 2, p. 412.*) 5 Nepal. Fl. large, bright scarlet. In H. C. G. fl. Sept. and Oct. (*Roxb.*)
6. *indica*, Lam. (*DC. pr. 2, p. 412*;—*W. and A. pr. 1, p. 260*;—*Roxb. fl. ind. 3, p. 249*;—*Wight. icon. 1, t. 58*;—*J. Grah. Cat. B. pl. p. 54.*—*E. Corallodendron, β. L.*—*Rheed. 6, t. 7*;—*Rumph. 2, t. 76.*) পালিতা মন্ডার *Palita-mundar*. 5 Coromandel. Common throughout the Concans. Amherst, Martaban, Bengal, (Serampore.) Assam. Fl. large, greenish dark purple scarlet, Feb. and March; fr. June and July. Wood light and soft, much used by toy-makers; also generally employed for constructing Catamarans. (*Wight.*) The tree is used to support the black pepper vine, to protect young coffee trees, &c.
7. *stricta*, Roxb. (*fl. ind. 3, p. 251*;—*W. and A. pr. 1, p. 260*;—*J. Grah. Cat. B. pl. p. 54.*) 5 Travancore. Elephantia. The Ghauts. Fl. large, greenish dark purple scarlet, March; fr. May.
8. *suberosa*, Roxb. (*fl. ind. 3, p. 253*;—*W. and A. pr. 1, p. 260*;—*J. Grah. Cat. B. pl. p. 54.*) 5 Circars. Pretty common in the Mahal districts east of the Ghauts. Goozeerat. Kandesh. Fl. large, whitish rose scarlet, March and April; fr. O.
9. *sublobata*, Roxb. (*fl. ind. 3, p. 254*;—*W. and A. pr. 1, p. 261.*) L. 5 Circars. Fl. like those of the preceding species. Introduced into H. C. G.
10. *ovalifolia*, Roxb. (*fl. ind. 3, p. 254*;—*Wight. icon. 1, t. 247.*) হরি কঁকড়া *Huri-kankra*. L. 5 Bengal, (Serampore.) Fl. very large, scarlet, variegated with orange, sulphur and dark purple, Feb.; fr. April.
11. *glauca*, Willd. (*DC. pr. 2, p. 413.*) L. 5 Caracas. Cumana. Fl. large, scarlet, Feb.; fr.

* *Abrus fruticulosus*, Hb. Madr. *Wight. icon. 1, t. 33.* 5 Palamcottah. Malabar.—*Sweetia longifolia*, DC. 5 Hotter parts of America.

—*S. filiformis*, DC. 5 ∪ *ibid.*—*Teramnus uncinatus*, Swz. 5 ∪ Jamaica.—*T. volubilis*, Swz. 5 ∪ Jamaica.—*Anphodus ovatus*, Lindl.; B. Reg. 13, t. 1101. 5 ∪ Trinidad.—*Rhynchosia caribæa*, DC. (*Glycine caribæa*, Jacq.; B. Reg. 4, t. 275.) 5 W. Indies.—*R. punctata*, DC. 4 ∪ Cayenne.—*R. phaseoloides*, DC. (*Glycine phaseoloides* Swz.; B. M. 49, t. 2284.) 5 ∪ Cayenne.—*R. macrophylla*, DC. 5 ∪ Havannah.—*R. reticulata*, DC. 5 ∪ Jamaica. St. Cruze.—*R. velutina*, W. and A. 5 ∪ Negapatam.—*R. densiflora*, DC. 5 ∪ Cunnawady hills. Taong-Dong. Segæen.—*R. rufescens*, DC. 5 ∪ Gingie hills.—*R. suaveolens*, DC. 5 Peninsula of India. Mussooree.—*R. cana*, DC. 5 Dindygul hills.—*Wisteria Consequana*, Loud. (*Glycine sinensis*, B. Reg. 8, t. 650.) 5 ∪ China.—*Apios tuberosus*, Mönch. (*Glycine Apios*, L.; B. M. 30, t. 1198.) 4 Carolina.—*Phaseolus radiatus*, L. ∅ Peninsula of India.—*Flemingia Wallichii*, W. and A. 5 Peninsula of India.—*F. Grahamiana*, W. and A. 5 Peninsula of India.—*F. Wightiana*, Grab. 5 Peninsula of India.—*F. capitata*, Buch. Sukanaghur.—*F. Phursia*, Buch. Gorukpore.—*Nomismia nummularia*, W. and A.; Wight. icon. 1, t. 283. 4 ∪ Peninsula of India.—*N. capitata*, W. and A.; Wight. icon. 1, t. 295. 4 ∪ Peninsula of India.—*N. aurea*, W. and A. 4 ∪ Peninsula of India.—*Pyrrhotrichia tuberosa*, Hb. Arn. 4 Nepal. Khassya Mountains.—*Cyrtotropis carnea*, Wall. pl. as. rar. 1, t. 62.—*Vigna glabra*, Savi. ∅ Georgia.—*Parochetus major*, Don.; Wight. icon. 2, t. 483. 4 Neelgherries. Nepal.—*P. communis*, Buch.; Royle. ill. t. 35, f. 1. 4 Nepal.—*P. oxalisfolius*, Royle. Mussooree.—*Dioclea Jacquiniana*, DC. 5 ∪ Martinique.—*Mucuna hirsuta*, W. and A. Peninsula of India.—*M. urens*, DC. 5 ∪ W. Indies.—*Atylosia Candollii*, W. and A. 5 Neelgherries.—*A. Lawii*, Wight. icon 1, t. 93. 5.—*A. major*, W. and A. 5 Neelgherries.—*A. rugosa*, W. and A. 5 Neelgherries.—*Dunbaria ferruginea*, W. and A. 5 ∪ Neelgherries.—*D. latifolia*, W. and A. 5 ∪ Dindygul hills.—*Cyanospermum albidiflorum*, W. and A. (*Cylista albidiflora*, Sims; B. M. 43, t. 1859.) 5 ∪ Mauritius. Bourbon.—*Erythrina carnea*, Ait.; B. Reg. 16, t. 1327. 5 Vera Cruz.—*E. Corallodendron*, L. 5 W. Indies.—*E. poianthes*, Brot.; B. Reg. 15, t. 1246. 5 Native place unknown. Cultivated in Portugal. *E. speciosa*, Andr.; B. Reg. 9, t. 750. 5 W. Indies.—*E. velutina*, Willd.; B. M. 60, t. 3227. 5 Carracas. Cultivated at Madeira.—*E. Crista galli*, L.; B. M. 47, t. 2161. 5 Brazil.—*Rudolphia volubilis*, Willd. 5 ∪ St. Domingo.—*R. rosea*, Tussac. 5 ∪ St. Domingo.

F. DALBERGIEÆ, BRONN.

(DC. pr. 2, p. 415;—W. and A. pr. 1, p. 261.)

BUTEA, KÖN (DC. pr. 2, p. 414;—W. and A. l. c.)

1. *frondosa*, Roxb. (Corom. 1, t. 21;—fl. ind. 3, p. 244;—DC. pr. 2, p. 415;—W. and A. l. c.;—Hook Bot. miscel. 3, p. 102; suppl. t. 32;—J. Grak. Cat. B. pl. p. 54. *Erythrina monosperma*, Lam.—



Rheed 6, t. 16, 17.) *पलश Pulash*.—*Palasi*. *Asiat. Res.* 3, p. 469, and 4, p. 229. A venerable and holy tree; gave its name to the celebrated plain of "Plassey" in Bengal. 5 Circars. Negapatam, Travancore. Common in the Concan, Kandesh and Goozerat. Bengal, (Serampore.) Chittagong. Silhet. Khassya Mountains. Assam. Saharunpore. Fl. very large, deep orange, Feb., March and April; fr. May and June.—From fissures and wounds in the bark issues, during the hot season, a beautiful red juice, soon hardening into a ruby coloured, brittle, astringent *gum*; which, however, soon loses its colour by exposure to the air. *Seeds* considered anthelmintic by the Natives. An infusion of the *flowers* of this and the next species dye cotton, previously prepared with alum, a bright yellow, which may be changed by an alkali into deep reddish-orange. (*Roxb.*)

2. *superba*, *Roxb.* (*Corom.* 1, t. 22;—*fl. ind.* 3, p. 247;—*DC. pr.* 2, p. 415;—*W. and A. pr.* 1, p. 261.) 5 Circars. Kheree jungle. Deyra Dhoon. Fl. very large, deep orange, scarlet, March; fr. 0. The same gum exudes from fissures in the bark as in No. 1.

3. *parviflora*, *Roxb.* (*fl. ind.* 3, p. 248;—*DC. pr.* 2, p. 415;—*W. and A. pr.* 1, p. 261;—*J. Grah. Cat. B. pl.* p. 54;—*Wight icon.* 1, t. 210.) 5 Rajamundree Circar. Hilly parts of the Concan. Assam. Oude. Fl. small, white, Nov. and Dec.; fr. April and May.

4. *sericophylla*, *Wall. (Cat.) Tavoy*. In H. C. G. fl.?

MEIZOTROPIS, (*Colyx campanulatus*, 4 *dentatus*. Corolla papilionacea, petalis inæqualibus; carinâ cæteris longiore, vexillo ovato, recurvo; alis incurvis. Stamina 9-1. Ovarium 2-ovulatum. Legumen Buteæ. Frutex inermis adpresse sericeo-pubescent. Folia 3-foliolata. Foliola racemique Buteæ.)

1. *buteæformis*, 5 Jyntea Hills. alt. 3000 f. Fl. 10 lines long, scarlet, nearly the whole year; fr. C. S. Seeds received from Mr. W. Griffith.

PONGAMIA, *Lam.* (*DC. pr.* 2, p. 416;—*W. and A. pr.* 1, p. 262.)

1. *glabra*, *Vent.* (*Malm. t.* 28;—*DC. l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 55;—*Wight. icon.* 1, t. 59—*Galedupa Indica, Lam.*;—*Roxb. fl. ind.* 3, p. 239.—*Robinia mitis, L.*—*Dalbergia arborea, Willd.*;—*Rheed. 6, t. 3.*) कुरुंजा *Kurunja*. 5 Coromandel. Common throughout the Concan, the Deccan, Amherst. Penang. Banks of the Saluen. Bengal, (Serampore.) Patna. Assam. Kheree jungle. Deyra-Dhoon. Fl. middle-sized, bright purple, H. S.; fr. C. S. Wood light, white, firm, used for a variety of economical purposes. Leaves eaten by cattle. Seeds yield by expression a fixed oil, which the Natives use externally in eruptive diseases.

2. *marginata*, *Grah.* (*Galedupa marginata, Roxb. fl. ind.* 3, p. 241.) 5 Khassya Mountains. Fl. largish, rosy-white, April and May; fr. Sept. and Oct.

3. *uliginosa*, *DC.* (*pr.* 2, p. 416;—*W. and A. pr.* 1, p. 262;—*Hook. bot. misc.* 3, p. 301. (misprinted. *P. religiosa*) *suppl. t.* 41. (engraved

by mistake *P. triphylla*)—*J. Grah. Cat. B. pl. p. 55.*—*Galedupa uliginosa, Roxb. fl. ind. 3, p. 243.*—*Robinia uliginosa, Willd.*—*Dalbergia heterophylla, Willd.;—DC. pr. 2, p. 417;—Rheed 8, t. 46.)* পানী জলী *Panee-luta* 5 1 Both Peninsulas of India. Bengal. Soonderbuns, (Serampore.) Fl. middle-sized, pale rose-coloured. April and May; fr. R. S.

? 4. *sericea*, Vent. (*DC. pr. 2, p. 416.*) 5 Java. In H. C. G. Fl. ?

5. *heterocarpa* ? Wall. MSS. 5 1 Burma. Has not fl. here yet.

MILLETTIA, W. and A. (*pr. 1, p. 263.*)

1. *elliptica*, W. and A. (*l. c. annot.*—*Galedupa elliptica, Roxb. fl. ind. 3, p. 242.*—*Pongamia elliptica, Wall. pl. as. rar. 3, t. 237;—Wight icon. 2, t. 420.*) 5 1 Amboyna. Malay Islands. Banks of the Attran. Fl. largish, pale rose, March; fr. Aug.

? 2. *piscidia*, W. and A. (*l. c.—Wight. icon. 1, t. 86.*—*Galedupa piscidia, Roxb. fl. ind. 3, p. 240.*) 5 Khassya Mountains. Assam. Fl. largish, white. In H. C. G. fl. June and July; fr. C. S. (*Roxb.*) Bark and flowers powdered and thrown into water, intoxicate fish, which thus are easily taken. (*Roxb.*)

BRACHYPTERUM, Benth. (Sub-Genus of *Dalbergia, W. and A. pr. 1, p. 264.*)

1. *scandens*, Benth. (*Wight. icon. 1, t. 275.*—*Dalbergia scandens, Roxb. Corom. 2, t. 192;—fl. ind. 3, p. 232;—DC. pr. 2, p. 417;—W. and A. pr. 1, p. 264;—J. Grah. Cat. B. pl. p. 55;—Rheed. 6, t. 22.)* নোয়া লতা *Noa-luta* 5 1 Coromandel Coast. Travancore. Jungly tracts of the Concan. Mawul districts. Shores of the Bay of Siam. Chittagong. Bengal. (Serampore.) Assam. Fl. smallish, pale rose, fragrant, Aug.; fr. C. S. Well adapted for covering trellises.

DALBERGIA, L. (*DC. pr. 2, p. 416;—W. and A. pr. 1, p. 264.*)

1. *oajeinensis*, Roxb. (*fl. ind. 3, p. 220;—DC. l. c.—Wight. icon. 2, t. 391.*) L. 5 Oude. Kheree jungle. Deyra-Dhoon. Kemaon, Sirmore. Fl. smallish, pale rose, sweet scented, H. S.; fr. Sept. and Oct. Wood highly valued for various purposes. Pillars for houses made of it. (*Roxb.*)

2. *latifolia*, Roxb. (*Corom. 2, t. 113;—fl. ind. 3, p. 221;—DC. pr. 2, p. 416;—W. and A. pr. 1, p. 264;—J. Grah. Cat. B. pl. p. 55.*) শ্বেত শাল *Shwet-sal* L. 5 Circar Mountains. S. Concan. Banks of the Kalinadi river, South Mahratta Country. Bengal, (Serampore.) Khassya Mountains. Assam. Fl. small, white, H. S.; fr. Sept. and Oct. Wood of the centre of the trunk and large branches, (*Black Wood*), greenish or greenish-black, with lighter coloured veins running in various directions, heavy, sinking in water, close grained, admitting of the finest polish, and universally employed for making furniture. On the coasts of Coromandel and Malabar, the tree grows to an immense size, the trunk sometimes measuring fifteen feet in circumference, exclusive of the bark. In Bengal the wood is not so



- heavy as on the coast, though equally beautiful, and very much used for furniture. (*Roxb.*)
3. *Sissoo*, *Roxb.* (*fl. ind.* 3, p. 223;—*DC. pr.* 2, p. 416;—*W. and A. pr.* 1, p. 264;—*J. Grah. Cat. B. pl.* p. 55.) *†* *Sissoo*, L. 5 Coromandel. Kennery jungles. Hills about Nagotnah. Goozerat. Bengal, (Serampore.) Assam. Kheree jungle. Deyra-Dhoon. Fl. small, yellowish-white, H. S.; fr. C. S. Wood very strong, greyish brown, with darker coloured veins, but not very durable. Supplies ship-builders in Bengal with crooked timbers and knees. (*Roxb.*)
 4. *emarginata*, *Roxb.* (*fl. ind.* 2, p. 224.) *Andaman Sissoo*, L. 5 Andaman Islands. Fl. small, white, fragrant. In H. C. G. fl. Sept.; fr. March. (*Roxb.*) A valuable timber tree. (*Roxb.*)
 5. *frondosa*, *Roxb.* (*fl. ind.* 3, p. 226;—*DC. pr.* 2, p. 417;—*W. and A. pr.* 1, p. 266.) L. 5 Ceylon. Courtallum. Travancore. Fl. small, bluish-white, May and June; fr. Aug. Sept. and Oct. Timber useful for many purposes. (*Roxb.*)
 6. *paniculata*, *Roxb.* (*Corom.* 2, t. 114;—*fl. ind.* 3, p. 227;—*DC. pr.* 2, p. 417;—*W. and A. pr.* 1, p. 265;—*J. Grah. Cat. B. pl.* p. 55.) L. 5 Circars. Colemala. Courtallum. Mawul districts, above the Ghauts. Moulmein. Assam. Oude. Fl. small, bluish-white. In H. C. G. fl. H. S.; fr. C. S. (*Roxb.*) Wood white, firm, but less useful than that of some of the other species.
 7. *zeylanica*, *Roxb.* (*fl. ind.* 3, p. 228.) L. 5 Ceylon. Troglā. In H. C. G. fl. May and June; fr. Aug. Sept. and Oct. (*Roxb.*)
 8. *robusta*, *Roxb.* (*H. B.* p. 53;—*DC. pr.* 2, p. 417;—*Wight, icon.* 1, t. 244.—*D. Krowee, Roxb. fl. ind.* 3, p. 229.) L. 5 Assam. Nepal. Fl. small, white. In H. C. G. fl. H. S.; fr. C. S. (*Roxb.*) Wood dark-brown, too porous for furniture, but seemingly fit for various other purposes. (*Roxb.*)
 9. *marginata*, *Roxb.* (*fl. ind.* 3, p. 230.) *☞* Silhet. Flowers white. In H. C. G. fl. R. S.; fr. H. S. (*Roxb.*)
 10. *sympathetica*, *Nimmo.* (*J. Grah. Cat. B. pl.* p. 55;—*Rheed.* 8, t. 40.) *☞* Feb. and March. The Ghauts.
 11. *tamarindifolia*, *Roxb.* (*fl. ind.* 3, p. 233;—*Wight, icon.* 1, t. 242.) *☞* Assam. In H. C. G. fl. March and April; fr. Jan. (*Roxb.*)
 12. *rimosa*, *Roxb.* (*fl. ind.* 3, p. 233.) L. *☞* Silhet, Assam. Fl. small, greenish-white, fragrant, March and April; fr. Nov. and Dec.
 13. *stipulacea*, *Roxb.* (*fl. ind.* 3, p. 233;—*Wight, icon.* 1, t. 243.) *☞* Silhet. Fl. small, blue. In H. C. G. fl. March and April; fr. Nov. (*Roxb.*)
 14. *reniformis*, *Roxb.* (*fl. ind.* 3, p. 226.) *☞* Silhet. In H. C. G. fl. March and April; fr. Nov. and Dec. (*Roxb.*)
 15. *spinosa*, *Roxb.* (*fl. ind.* 3, p. 233;—*W. and A. pr.* 1, p. 266.) *☞* Chit-tagong. Rangoon. Moulmein. Soonderbuns. Introduced in 1841.
 16. *glauca*, *Wall. Cat.*—Martaban. In H. C. G. Fl. ?

17. *pulchra*, (D. tephrosioides, *W. and A. pr.* 1, p. 210. *annot.*—*Tephrosia pulchra*, *Colebr. ; Wall. Cat.*) Khassya Mountains. In H. C. S. Fl. ?
 - PTEROCARPUS, L. (*DC. pr.* 2, p. 418;—*W. and A. pr.* 1, p. 266.)
 1. *santalinus*, L. (*DC. o. c.* p. 419;—*W. and A. l. c.*;—*Roxb. fl. ind.* 3, p. 234.) रुक्त चन्दन *Rukto-chundun*. 5 Coromandel. Paulghaut Mountains. In H. C. G. fl. H. S. (*Roxb.*) From this tree is obtained the red *Sandal-wood*, chiefly employed by dyers and colour-manufacturers.
 2. *indicus*, Willd. (*DC. pr.* 2, p. 419;—*Roxb. fl. ind.* 3, p. 238;—*Rumph.* 2, t. 70.) L. 5 China. Moluccas. Malay Islands. Fl. smallish, deep yellow, fragrant, April and May; fr. Oct. and Nov.
 3. *Marsupium*, *Roxb.* (*Corom.* 2, t. 116;—*fl. ind.* 3, p. 234;—*DC. pr.* 2, p. 418;—*W. and A. pr.* 1, p. 266;—*J. Grah. Cat. B. pl.* p. 56; excl. syn. *Rheed.*) L. 5 पीत शनि *Peet-sal*. Columala. Neelgherries. Common in some parts of the Concans. Rajpeepla jungles. Assam. Fl. smallish, white, tinged with yellow, R. S.; fr. H. S. *Wood* reddish, employed by the Natives for making doors, window frames, &c. *Bark and leaves* afford gum *Kino*, exported in considerable quantities from Malabar. (*Dr. Gibson.*) Long ago Dr. Roxburgh had said: "The specimen of the *gum Kino Tree*, in the Banksian Herbarium, is perfectly like *P. Marsupium*."
 4. *dalbergioides*, *Roxb.* (*fl. ind.* 3, p. 236;—*DC. pr.* 2, p. 418;—*W. and A. pr.* 1, p. 267;—*Wight. icon.* 1, t. 246.) *Andaman Red Wood-Tree*. L. 5 Andaman Islands. Fl. smallish, yellow, fragrant, June and July; fr. Nov. and Dec. An immense tree. Trunk sometimes above fifteen feet in circumference. *Wood* not unlike Mahogany, but more heavy, red and coarse in the grain. That of the *root* beautifully variegated, closer grained, and darker coloured. (*Roxb.*)
 5. *Draco*, L. (*DC. pr.* 2, p. 418;—*Roxb. H. B.* p. 53.—*P. officinalis*, *Jacq. amer.* t. 183, f. 2.—*P. hemiptera*, *Gürtn. fr.* 2, p. 351, t. 156, f. 2.) 5 Guadeloupe. Introduced into H. C. G. in 1812. Fl. ? Yields the *Dragon's blood* of the shops.
- * *Butea minor*, Buch. Nepal. Khassya Mountains.—*B. gyrocarpa*, *Grah.* Penang.—*B. Gibsonii*, *J. Grah.* 5 Buglana jungles about Jooneer. Between Poona and Mahableshwur. Carpenters prefer it to all other woods requiring toughness of fibre; as for shafts of gigs, &c.—*Endespermum scandens*, Bl. 5 Java.—*Pongamia atropurpurea*, *Wall. pl. as. rar.* 1, t. 78. Moulmein, Amherst. Penang.—*P. ovalifolia*, *W. and A. Wight. icon.* 2, t. 328. 5 Peninsula of India.—*Millettia rubiginosa*, *W. and A.*; *Wight. icon.* 1, t. 207. Courtallum.—*M. splendens*, *W. and A.* Peninsula of India.—*Dalbergia sissooides*, *Grah.* Neelgherries, Courtallum.—*D. congesta*, *Grah.* Neelgherries.—*D. rubiginosa*, *Roxb.* *Corom.* 2, t. 115. 5 Circars.—*D. volubilis*, *Roxb.* *Corom.* 2, t. 191. Circars.



—*Pterocarpus Wallichii*, W. and A.; Wight. ill. 1, t. 78.—*P. suberosus*, Pers. 5 Guiana.—*P. Rokrii*, Vahl. 5 Guiana.—*P. sapindoides*, DC. 5 S. America.—*P. gummifer*, Bert. 5 St. Domingo.—*Sommerfeldtia lunata*, Lindl. 5 Guiana. W. Indies.—*Ecastaphyllum Brownei*, Pers. 5 W. Indies.—*E. Monetaria*, DC. 5 Surinam.—*Amerimum Brownei*, Swz. 5 Jamaica.—*Brya Ebenus*, DC. 5 W. Indies.—*Deguelia scandens*, Aubl. 5 Guiana.

G. SWARTZIAE, DC.

(pr. 2, p. 422.)

- * *Swartzia pinnata*, Willd. 5 Trinidad.—*S. grandiflora*, Willd. 5 Trinidad, St. Vincent.—*S. simplicifolia*, Willd. 5 W. Indies.—*S. parviflora*, DC. 5 Cayenne.—*S. ochracea*, DC. 5 Buenos Ayres.—*S. triphylla*, Willd. 5 Guiana.—*S. tomentosa*, DC. Cayenne, where it is called *Bois pagaie blanc*.—*Baphia nitida*, Lodd.; B. Cab. 4, t. 367. 5 Sierra Leona.

H. GEOFFREAE, DC.

(pr. 2, p. 473;—*W. and A. pr. 1*, p. 279.)

ARACHIS, L. (DC. o. c. p. 474;—*W. and A. l. c.*) *Earth-nut*.

1. *hypogaea*, L. (DC. l. c.;—*W. and A. o. c. p.* 280;—*Roxb. fl. ind.* 3, p. 280;—*J. Grah. Cat. B. pl.* p. 60.—A. Asiatica, *Lour.*—A. africana, *Lour.*—*Rumph.* 5, t. 156, f. 2.) अटके कुन्नाइ *Atke-kulay*. मूद्ग कली *Moong-phullee*. ☉ Hot parts of America. Domesticated in Africa, Asia, and S. Europe. Fl. small, bright-yellow, R. and C. S.; fr. Feb. The pods, which grow under ground, are sold in the bazars. Seeds eatable, tasting somewhat like almonds or nuts, and used as a common article of diet in S. America. A sweet oil which does not turn rancid, is expressed from them, and an agreeable orgeade prepared from their paste, mixed with water and sugar. (*A. Richard.*)

- * *Voandzeia africana*, Pet. Th. ☉ Madagascar, S. Africa.—*Peraltea lupinoides*, H. B. and Kth. 5 New Spain.—*Brongniartia mollis*, H. B. and Kth. 5 New Spain.—*Andira inermis*, H. B. and Kth. 5 Jamaica.—*A. retusa*, H. B. and Kth. 5 Cayenne.—*Geoffroya spinosa*, Jacq. 5 S. America, about Carthagenæ.—*G. violacea*, Pers. 5 Guiana.—*Brownea Rosa*, Pers. 5 W. Indies.—*B. coccinea*, Jacq. 5 W. Indies.—*B. latifolia*, Jacq. 5 Trinidad.—*B. grandiceps*, Jacq. 5 Caracas.—*Dipterix odorata*, Willd. 5 Guiana.—(*Tonquin Bean.*)

I. CASSIÆ, DC.

(pr. 2, p. 478;—*W. and A. pr. 1*, p. 280.)

GLEDDITSCHIA, L. (DC. pr. 2, p. 479.)

1. *triacanthos*, L. (DC. l. c.;—*Spreng. syst.* 3, p. 918.) 5 Virginia. Carolina. Has not fl. here.
2. *sinensis*, Lam. (DC. l. c.;—*Spreng. o. c. p.* 919;—*J. Grah. Cat. B. pl.* p. 60.—*G. horrida*, Willd.—*Mimosa fera*, *Lour.*;—*Roxb. fl. ind.* 2, p. 560.) L. 5 China. Fl. small, green, C. S.; fr. R. S.



GYMNOCLADUS, Lam. (DC. pr. 2, p. 479.)

1. *canadensis*, Lam. (DC. o. c. p. 480;—*Michx.* fl. 2, p. 241, t. 51.—*Guilandina dioica*, L.) 5 Forests of Canada, New York, Tennessee, Ohio and Kentucky. Introduced into H. C. G. before 1814. Fl. ?
GUILANDINA, Juss. (DC. pr. 2, p. 480;—*W. and A. pr.* 1, p. 280.)

1. *Bonduc*, L. (DC. l. c.;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl.* p. 60.—*G. Bonducella*, L.—*Cæsalpinia Bonduc*, Roxb. fl. ind. 2, p. 362.—*C. Bonducella*, Fleming; *As. res.* 2, p. 159;—*Roxb. o. c. p.* 357.—*Rheed.* 2, t. 22.—*Rumph.* 5, t. 48 and t. 49, f. 1.) नाटो *Nata*. नाटो कुरुंजी *Nata-kurunja*. L. 5 Moluccas. Ceylon. Coromandel. Bombay. Ava. Bengal. (Serampore.) Assam. Fl. largish, sulphur, R. S.; fr. C. S. One of the seeds of this plant pounded into a paste with three or four pepper-corns, and taken from three to four times a day in a decoction of Chiruta is an excellent febrifuge. The seeds are intensely bitter and powerfully tonic, and should not be neglected, at least, as an adjuvant, where bark and quinine disagree with the constitution. The whole plant is well adapted for hedges.

CÆSALPINIA, L. (DC. pr. 2, p. 481;—*W. and A. pr.* 1, p. 280.)

1. *paniculata*, Roxb. (fl. ind. 2, p. 364;—DC. l. c.;—*W. and A. o. c. p.* 281;—*J. Grah. Cat. B. pl.* p. 60;—*Wight. icon.* 1, t. 36.—*C. scandens*, Kön.; *Roth*;—DC. o. c. p. 482.—*Guilandina paniculata*, Lam.—*Rheed.* 6, t. 19.) L. 5 Travancore. Malabar. Banks of the Saweeree, between Dagsaum and Mahar. Estuaries of the Irawaddi. Ceylon. Fl. largish, yellow, fragrant. In H. C. G. fl. C. and H. S.; fr. R. S. (Roxb.)
2. *Sappan*, L. (DC. pr. 2, p. 482;—*W. and A. pr.* 1, p. 281;—*Roxb. Corom.* 1, t. 16;—fl. ind. 2, p. 357;—*J. Grah. Cat. B. pl.* p. 60.—*Rheed.* 6, t. 2;—*Rumph.* 4, t. 21.) बकुम *Bukum*. L. 5 Moluccas. Ceylon. Coromandel. Bengal. (Serampore.) Fl. largish, yellow, H. S.; fr. C. S. Affords the Red wood of commerce, which is extensively exported as a dye wood.
3. *digyna*, Rottl. (DC. pr. 2, p. 482;—*W. and A. pr.* 1, p. 281.—*C. oleosperma*, Roxb. fl. ind. 2, p. 357.) अमल कुटि *Umul-keochi*. L. 5 Peninsula of India. Bhaugulpore. Fl. largish, yellow. In H. C. G. fl. R. S.; fr. C. S. (Roxb.) From the seeds is expressed an oil, which in some parts of the country is used to burn in lamps. (Roxb.)
4. *mimosoides*, Lam. (DC. pr. 2, p. 482;—*W. and A. pr.* 1, p. 281;—*J. Grah. Cat. B. pl.* p. 60.—*Wight. icon.* 2, t. 392.—*C. Simora*, Buch. p. 359.) 5 Mysore. Malabar. Mahim woods, Bombay. Chappedong. Fl. largish, sulphur, nearly the whole year; fr. H. S.
5. *sepiaria*, Roxb. (fl. ind. 2, p. 360;—*W. and A. pr.* 1, p. 282;—*J. Grah. Cat. B. pl.* p. 61;—*Wight. icon.* 1, t. 37.—*Reichardia* ? *decapetala*, Roth.;—DC. pr. 2, p. 484.) *Mysore-thorn*, L. 5 My-



sore. Cunawady. Tavoy. Ava. Nepal. Kemaon. Generally used as a fence in the *Bagayat* lands of the Deccan. Hyder Ali surrounded fortified places with it, as it forms an almost impenetrable fence. Domesticated in Bengal, (Serampore.) Fl. middle-sized, bright sulphur. R. and C. S. ; fr. C. S.

6. *resupinata*, Roxb. (*fl. ind.* 2, p. 362.) L. 5 ∪ Moluccas. Fl. smallish, bright yellow. In H. C. G. fl. R. S. ; fr. C. S. (*Roxb.*)

7. *tortuosa*, Roxb. (*fl. ind.* 2, p. 365.) L. 5 ∪ Sumatra. Fl. large, yellow, streaked with red. In H. C. G. fl. Feb. and March ; fr. R. S. (*Roxb.*)

8. *Coriaria*, Willd. (*DC. pr.* 2, p. 483.—*Poinciana Coriaria*, *Jacq. am.* p. 123, t. 175, f. 37.) 5 Sea-coasts of Curaçao, Carthagera, St. Domingo and St. Thomas. Has not fl. here yet. *Pods.* in the W. Indies, called *Libidibi*, used for tanning.

COLVILLEA, Bojer.

1. *racemosa*, Bojer. (*B. M.* 61, 3325-26.) 5 Madagascar. C. S. 1840.

POINCIANA, L. (*DC. pr.* 2, p. 483 ;—*W. and A. pr.* 1, p. 282.)

1. *pulcherrima*, L. (*DC. o. c.* 484 ;—*W. and A. l. c.* ;—*Roxb. fl. ind.* 2, p. 355 ;—*B. M.* 25, t. 995 ;—*J. Grah. Cat. B. pl.* p. 61 ;—*Rheed.* 6, t. 1 ;—*Rumph.* 4, t. 20.) कृष्ण चूड़ा *Krishno-choora*. L. 5 Moluccas. Both Peninsulas of India. Bengal. (Serampore.) Fl. large, sweetish-scented, and fr. whole year. Domesticated in the W. Indies.

a. *bicolor*. Fl. orange, variegated with crimson.

β. *concolor*. Fl. throughout bright yellow.

2. *elata*, L. (*DC. pr.* 2, p. 484 ;—*W. and A. pr.* 1, p. 282 ;—*Roxb. fl. ind.* 2, p. 355 ;—*J. Grah. Cat. B. pl.* p. 61.) 5 Coromandel. Malabar. Goozerat. Arcot. Fl. large, yellow. In H. C. G. fl. ; and fr. whole year. (*Roxb.*)

3. *regia*, Bojer. (*B. M.* 56, t. 2884.) b Madagascar. Fl. very large, bright scarlet, variegated with yellowish, R. S.

4. *Gilliesii*, Hook. (*Bot. misc.* 1, p. 129, t. 34.) 5 Chili, about Mendoza. Fl. sulphur, of a sickly disagreeable smell, R. S.

MEZONEURUM, Desf. (*DC. pr.* 2, p. 484 ;—*W. and A. pr.* 1, p. 282.)

1. *cucullatum*, W. and A. (*o. c.* p. 283 ;—*J. Grah. Cat. B. pl.* p. 61.—*Cæsalpinia cucullata*, *Roxb. fl. ind.* 2, p. 358.) L. 5 ∪ Travancore. Lanowlee grove, Kandalla. Ravines about Parr. Soonderbuns. Assam. Fl. largish, greenish dark red yellow, R. S. ; fr. 0. in H. C. G. C. S. (*Roxb.*)

2. *enneaphyllum*, W. and A. (*pr.* 1, p. 283. *annot.*—*Cæsalpinia enneaphylla*, *Roxb. fl. ind.* 2, p. 363.) L. 5 ∪ Fl. yellow, fragrant. In H. C. G. fl. R. and C. S. ; fr. C. S. (*Roxb.*)

3. *sumatranum*, W. and A. (*pr.* 1, p. 283. *annot.*—*Cæsalpinia sumatrana*, *Roxb. fl. ind.* 2, p. 366.) L. 5 ∪ Sumatra. Fl. largish, orange, tinged with pink. In H. C. G. fl. H. and R. S. ; fr. C. S. (*Roxb.*)



HEMATOXYLON, L. (DC. pr. 2, p. 485.)

1. *campechianum*, L. (DC. l. c.) *Log-wood*. 5 Campeche. Cultivated in Jamaica. Fl. small, purple-sulphur, fragrant, Jan. and Feb.; fr. April and May. Wood exported from America as dyewood.

PARKINSONIA, L. (DC. pr. 2, p. 485;—W. and A. pr. 1, p. 283.) *Jerusalem Thorn*. *Genet épineux*.

1. *aculeata*, L. (DC. o. c. p. 486;—W. and A. o. c. p. 284;—Roxb. H. B. p. 31;—J. Grah. Cat. B. pl. p. 61.) 5 W. Indies. S. America. Domesticated in India. Fl. smallish, sulphur, sweet-scented, and fr. nearly the whole year.

CERATONIA, L. (DC. pr. 2, p. 486.)

1. *Siliqua*, L. (DC. l. c.;—B. Repos. 9, t. 567;—Gärtn. fr. 2, p. 310. t. 146, f. 1.) *Carob Tree*, 5 S. Europe. N. Africa. Levant. Fl. small, brownish yellowish, C. S.; fr. O. Flesh of the pod of a mild sugary taste, nourishing, gently aperient, and much eaten by the people where the tree grows. In Egypt a syrup is prepared from it, and used to preserve other fruits. (A. Richard.) Prof. Lindley has recommended, through Dr. Royle, the introduction of this tree into the northern parts of India, especially into such places as are occasionally visited by famine. The plant seeking its nourishment under ground, is so independent of surface irrigation and so retentive of life, that according to M. Bové, a tree supposed to be 300 years old, which was cut down during the French invasion of Egypt, sprang up again thirty years after on wells being sunk in its neighbourhood. The crop of the Carob trees is very abundant, some of them yielding from 800 to 900 pounds of pods. Prof. Lindley adds, that during the Peninsula war, the horses of the British cavalry often thrived upon the seeds of the Carob trees. The same is the case with cattle, mules, and asses in Egypt, Syria, and S. Europe. (Lond. encycl. of pl. p. 868.)

HARDWICKIA, Roxb. (DC. pr. 2, p. 486;—W. and A. pr. 1, p. 284.)

1. *binata*, Roxb. (Corom. 3, t. 209;—fl. ind. 2, p. 423;—DC. o. c. p. 487;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 61.) L. 5 Mountains of Coromandel. Guzelhete-pass. Common in Lulling-pass, between Malligaum and Dhoolea. Fl. small, yellowish. Introduced into H. C. G. in 1800; but had not fl. up to 1814.
2. *pinnata*, Roxb. (fl. ind. 2, p. 425;—DC. pr. 2, p. 487;—W. and A. pr. 1, p. 284.) 5 Travancore. Introduced into H. C. G. in 1809, but had not fl. up to 1814.

JONESIA, Roxb. (DC. pr. 2, p. 487;—W. and A. pr. 1, p. 284.)

1. *Asoca*, Roxb. (fl. ind. 2, p. 218;—DC. l. c.;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 62;—B. M. 57, t. 3018;—Wight. icon. 1, t. 206.—J. pinnata, Willd.—*Saraca arborescens*, Burm. ind. t. 25, f. 2.—S. indica, L.—Rheed. 5, t. 59.) অশোক *Ushok*. Coromandel. Ram Ghaut. Martaban. Khassya Mountains. Assam. Fl. smallish,



orange-scarlet, during the night fragrant, March and April; fr. Aug. and Sept.

2. *scandens*, Roxb. (*fl. ind.* 2, p. 220.) 5 ~ Sumatra. Introduced into H. C. G. in 1804, but had not fl. up to 1814.

J. triandra, Roxb. (*fl. ind.* 2, p. 220.) Malay Archipelago, is not mentioned in Roxb. H. B.

DALHOUSIÆA, Grah. (*Wall. Cat.*)

1. *bracteata*, Grah. (*Wight. icon.* 1, t. 263.—*Podalyria bracteata*, Roxb. *fl. ind.* 2, p. 317.) L. 5 Khassya Mountains. Fl. large, white. In H. C. G. fl. May and June; fr. Dec. and Jan. (*Roxb.*)

AXHERSTIA, Wall. (*pl. as. rar.* 1, p. 1.)

1. *nobilis*, Wall. (*pl. as. rar.* 1, c.) 5 Martaban. Woods near Pogoan. Fl. very large, scarlet, variegated with white and yellow. Fl. in March; fr. O.

TAMARINDUS, L. (*DC. pr.* 2, p. 488;—*W. and A. pr.* 1, p. 285.)

1. *indica*, L. (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. fl. ind.* 3, p. 215;—*J. Grah. Cat. B. pl.* p. 62.—*T. occidentalis*, *Gärtn. fr.* 2, p. 310, t. 146, f. 2;—*DC. o. c.* p. 489;—*Jacq. amer.* p. 10, t. 10, and t. 179, f. 198;—*Rheed.* 1, t. 23;—*Rumph.* 2, t. 23.) তিমুরী *Tim-tooree*. আমনি *Ambi*.—*Tamarind-tree*. L. 5 Moluccas. Both Peninsulas of India. Bengal, (Serampore.) Assam. Fl. middle-sized, somewhat orange, streaked with scarlet, slightly sweet-scented, May and June; fr. Jan. and Feb.—*Wood* durable, hard, beautifully veined. *Leaves* eaten by the natives in their curries. *Pulp* of the fruit slightly aperient. *Kernels*, like those of the mangoe, eaten in times of scarcity and famine; reduced to a fine powder and boiled they form a tenacious paste, and a strong wood-cement, if thin glue is added. (*Roxb.*) The paste, simply smeared on the skin, has the property of rapidly promoting suppuration in indolent (*blind*) boils. (*Wight.*)

α. oxycarpa. Fruit sour.

β. melicarpa. Fruit sweetish.

γ. rhodocarpa. Pulp of the fruit rose-coloured. This variety makes a very fine preserve, and yields a beautiful deep red-colour approaching to purple. (*Roxb. l. c.*)

CATHARTOCARPUS, Pers. (*syn.* 1, p. 459.—*Cassia*, L. sect. 1, *Fistula*;—*DC. pr.* 2, p. 489;—*W. and A. pr.* 1, 285.)

1. *Fistula*, Pers. (*l. c.*—*Cassia Fistula*, L.;—*DC. o. c.* p. 490;—*W. and A. l. c.* excl. *C. rhombifolia*, Roxb.;—*Roxb. fl. ind.* 2, p. 333;—*J. Grah. Cat. B. pl.* p. 62;—*Gärtn. fr.* 2, p. 313, t. 147, f. 1.—*Lam. ill.* t. 332.—*Rheed.* 1, t. 22.—*Rumph.* 2, t. 21.) শোনাধু *Sonaloo*. বানর কাঠি গাছ *Banur-lati-gachh*. 5 Moluccas. Both Peninsulas of India. Bengal, (Serampore.) Assam. Oude. Foot of the Himalayas Fl. large, bright yellow, fragrant, May and June; fr. (বানর কাঠি *Banur-lati*.) Feb. and March. The sweetish secretion surrounding the seeds is slightly aperient.

2. *rhombifolius*, G. Don. (*Mill. dict.* 2, p. 453.—*Cassia rhombifolia*, *Roxb. fl. ind.* 2, p. 334;—*Wight. icon.* 1, t. 269.) 5 Ceylon. Fl. large, bright yellow. In H. C. fl. May and June; fr. Feb., March and April. (*Roxb.*)
 3. *nodosus*, (*Cassia nodosa*, *Buch.*;—*Roxb. fl. ind.* 2, p. 336;—*Wight. icon.* 2, t. 410.) 5 Chittagong. Fl. large, rose-coloured, fragrant, April and May; fr. Feb. and March.
 4. *javanicus*, Pers. (*syn.* 1, p. 459.—*Cassia javanica*, L.;—*DC. pr.* 2, p. 490;—*Wight. icon.* 1, t. 252;—*J. Grah. Cat. B. pl.* p. 62.—*C. Bacillus*, *Gärtn. fr.* 2, p. 313;—*Roxb. fl. ind.* 2, p. 337.—*Rumph.* 2, t. 22.) 5 Moluccas. Java. Malay Islands. Fl. large, rose-coloured, fragrant, April and May; fr. Feb.
 5. *marginatus*, G. Don. (*Mill. dict.* 2, p. 453.—*C. marginata*, *Roxb. fl. ind.* 2, p. 338; not Willd.—*C. Roxburghii*, *DC. pr.* 2, p. 489;—*W. and A. pr.* 1, p. 286;—*Wight. ill.* 1, t. 83.) 5 Gingie hills. Ceylon. Fl. middle-sized, nearly inodorous, more or less rose-coloured, R. S.; fr. March and April.
 6. *brasiliensis*, (*C. grandis*, *Pers. syn.* 1, p. 459.—*Cassia grandis*, L. *fil.*;—*Roxb. H. B.* p. 31.—*C. mollis*, *Vahl.*;—*Jacq. fragm.* t. 85, f. 3.—*C. brasiliensis*, *Lam.*;—*DC. pr.* 2, p. 489.) L. 5 W. Indies. Guiana. Brazil. Fl. smallish, sweet-scented, deep-rose, March, April, and May; fr. Feb., March and April.
 7. *bacillaris*, (*C. Bacillus*, *Pers.*;—*B. Reg.* 11, t. 881, excl. *syn.* *Gärtn.*—*Cassia bacillaris*, L. *fil. suppl.* p. 231;—*Roxb. H. B.* p. 31.) 5 Surinam. Fl. middle-sized, sulphur, inodorous, Nov. and Dec.; fr. R. S.
- CASSIA, L. (*DC. pr.* 2, p. 489;—*W. and A. pr.* 1, p. 285.)
1. *bicapsularis*, L. (*DC. o. c.* p. 494;—*W. and A. o. c.* p. 286;—*Roxb. H. B.* p. 31;—*J. Grah. Cat. B. pl.* p. 62.—*C. sennoides*, *Jacq. icon. rar.* 1, t. 170;—*DC. l. c.*—*Senna bicapsularis*, *Roxb. fl. ind.* 2, p. 342.) L. 5 W. Indies. S. America. Domesticated about Serampore. Fl. largish, gold-coloured, Sept. and Oct.; fr. Feb. and March.
 2. *Sophora*, L. (*DC. pr.* 2, p. 492;—*W. and A. pr.* 1, p. 287;—*Roxb. H. B.* p. 31;—*J. Grah. Cat. B. pl.* p. 62.—*C. esculenta*, *Roxb. H. B.* p. 31.—*Senna Sophora*, *Roxb. fl. ind.* 2, p. 347.—*S. esculenta*, *Roxb. o. c.* p. 346;—*Rheed.* 2, t. 52;—*Rumph.* 5, t. 97, f. 1;—*Burm. zeyl.* t. 98.—To these *syn.* may be added: *C. coromandeliana*, *Jacq. fragm.* 67, t. 100;—*DC. l. c.*—*C. sopheroides*, *Collad.*;—*DC. o. c.* p. 506.—*C. torosa*, *Cav.*—*DC. o. c.* p. 491.) কালকান্দা *Kalkusoonda*. © Moluccas. Ceylon. Both Peninsulas of India. Bengal, (Serampore,) Assam, Nepal. Fl. middle-sized, yellow, R. and C. S.; fr. Feb. and March. Smell of this plant heavy and disagreeable. Leaves eaten by the Natives in their curries.
 - β. *purpurea*; (*C. purpurea*, *Roxb. H. B.* p. 31;—*B. Reg.* 10, t. 856.—*Senna purpurea*, *Roxb. fl. ind.* 2, p. 342.) কালকান্দা



Kalo-kalkasoonda. ☉ Coromandel Mountains. Bengal, (Serampore.)
Assam.

3. *corymbosa*, Lam. (DC. *pr.* 2, p. 492;—*B. M.* 17, t. 633.—*C. crassifolia*, *Ort.*—*C. falcata*, *Dum. Cours. bot. cult. ed.* 2, v. 6, p. 35.)
♂ Buenos Ayres. Fl. large, gold-coloured, C. S.; fr. Feb. and March.
4. *alata*, L. (DC. *pr.* 2, p. 492;—*W. and A. pr.* 1, p. 287;—*Wight. icon.* 1, t. 258;—*J. Grah. Cat. B. pl.* p. 62;—*Roxb. H. B.* p. 31.—*C. bracteata*, *L. fil.*—*C. herpetica*, *Jacq. obs.* 2, t. 45, f. 2.—*Senna alata*, *Roxb. fl. ind.* 2, p. 349;—*Rumph. auct. t.* 18.) দাছ মর্দান *Dadoo-murda*. L. ♂ W. Indies. Cultivated in India. Domesticated about Serampore. Fl. large, orange yellow, heavy smelling, Sept. and Oct.; fr. Feb. The *fresh leaves* well rubbed into the parts affected once or twice a day, very frequently cure ringworms.
5. *obtusa*, *Roxb. (H. B. p. 31;—W. and A. pr.* 1, p. 288.—*C. Senna*, *Hb. L.* from Kōn.—*Senna obtusa*, *Roxb. fl. ind.* 2, p. 344.) ♀ Mysore. Paghamew. Fl. small, yellow, and fr. whole year. *Leaves* used as a substitute for *Senna* in Mysore.
6. *elongata*, Lem. Lisane. (*C. lanceolata*, *W. and A. pr.* 1, p. 288; excl. all the syn. except *Roxb.*'s.;—*Royl. ill. t.* 37, not *Forsk.*;—*J. Grah. Cat. B. pl.* p. 62, excl. syn. *Gärtn.* and *Lam.*—*Senna officinalis*, *Roxb. fl. ind.* 2, p. 346, excl. syn. *Gärtn.* and *L.*—*Cassia Senna*, *Roxb. H. B. p. 31*, excl. syn. *L.* and native place.) সোনা পাট *Sona-pat.*—*Tinnevely Senna*. ♂ Tinnevely. Goozerat, about Dholka. Fl. middle-sized, gold-coloured, R. and C. S.; fr. Feb. and March. *Leaves* milder in operation than the Alexandrian *Senna*, and occasioning no gripes. The plant comes near to *C. lanceolata*, *Forsk.*; but is a distinct species, according to *Lindley*.
7. *C. florida*, Vahl. (DC. *pr.* 2, p. 499;—*W. and A. pr.* 1, p. 288;—*J. Grah. Cat. B. pl.* p. 63.—*C. sumatrana*, *Roxb. H. B. p. 31;—DC. pr.* 2, p. 506.—*Senna sumatrana*, *Roxb. fl. ind.* 2, p. 347.) ♂ Sumatra. Banks of the Irawaddi. Cultivated in gardens. Fl. large, yellow, whole year; fr. Feb. and March. A very useful tree in Sumatra. It is of rapid growth, and its wood is not inferior to Ebony when old. (*Roxb.*)
8. *Berryana*, (*C. glauca*, *Roxb. H. B. p. 31*; not *Lam.*—*Senna glauca*, *Roxb. fl. ind.* 2, p. 351.) L. ♂ The Carnatic. Fl. large, yellow. In H. C. Gr., where it was introduced, by Dr. Berry, in 1800; Fl. Oct. and Nov.; fr. March and April. (*Roxb.*)
9. *glauca*, Lam. (DC. *pr.* 2, p. 495;—*W. and A. pr.* 1, p. 289;—*J. Grah. Cat. B. pl.* p. 63;—*C. arborescens*, Vahl;—*Roxb. H. B. p. 31*; not *Mill.*—*C. sulphurea*, *DC. o. c.*—*C. surattensis*, *Burm. ind. p. 97.*—*C. enneaphylla*, *Kōn.*—*C. planisiliqua*, *Burm. o. c. p. 98.*—*Senna arborescens*, *Roxb. fl. ind.* 2, p. 345.—*Rheed. 6, t. 9, 10.*) ♂ Coromandel. Ava. Cultivated in gardens. Fl. large, sulphur, R. and C. S.; fr. Feb. and March.

10. *suffruticosa*, Kön. (DC. pr. 2, p. 496;—W. and A. pr. 1, p. 289.—C. speciosa, Roxb. H. B. p. 31.—Senna speciosa, Roxb. fl. ind. 2, p. 347.) 5 Deyra Dhoon. Banks of the Irawaddi. Martaban. Tavoy, Singapore. Cultivated in gardens. Fl. large, yellow, the whole year; fr. Feb. and March.
11. *auriculata*, L. (DC. pr. 2, p. 496;—W. and A. pr. 1, p. 290;—Roxb. H. B. p. 31;—J. Grah. Cat. B. pl. p. 63.—Senna auriculata, Roxb. fl. ind. 2, p. 349.) 5 Ceylon. Coromandel. Sterile tracts of the Decan and Goozerat.—Fl. large, bright yellow, Oct. Nov. and Dec.; fr. Feb. and March.—Bark astringent, used by the natives to tan and dye leather of a buff colour. (Roxb.) Workers in iron employ the root in tempering iron with steel. (Dr. Gibson.) Branches made into native tooth-brushes. (Dr. Burn.)
12. *biflora*, L. (DC. pr. 2, p. 495;—B. M. 21, t. 810;—B. Reg. 16, t. 1310.) 5 W. Indies. S. America. Fl. large, yellow, C. S.; fr. Feb.
13. *aversiflora*, Herb. (B. M. 53, t. 2676.) 5 Brazil. Fl. largish, yellow, C. S.; Feb. and March.
14. *morilandica*, L. (DC. pr. 2, p. 498;—Roxb. H. B. p. 31.) 5 Temperate N. America. Fl. middle-sized, yellow, R. and C. S.; fr. Feb. and March. Leaves used in N. America as a substitute for Alexandrian Senna.
15. *ligustrina*, L. (DC. pr. 2, p. 498;—B. Reg. 2, t. 109;—B. M. 43, t. 1829;—Roxb. H. B. p. 32.) 5 America, from Cayenne to Virginia. Fl. large, yellow-orange, was introduced into H. C. G. in 1800, but had not fl. up to 1814.
16. *frondosa*, Ait. (DC. pr. 2, p. 496;—Roxb. H. B. p. 32.) 5 Hot parts of America. W. Indies. Introduced into H. C. G. in 1800, but had not fl. up to 1814.
17. *australis*, Sims. (B. M. 53, t. 2676;—B. Reg. 16, t. 1322.) 5 N. Holland. Fl. largish, bright-yellow, C. S.; fr. 0.
18. *aurata*, Roxb. (H. B. p. 32.—Senna aurata, Roxb. fl. ind. 2, p. 342.) 5 Malay Islands. Fl. middle-sized, gold-coloured, R. and C. S.; fr. C. S.
19. *hirsuta*, L. fil. (not Desv.—DC. pr. 2, p. 497.—C. caracassana, Jacq. hort. schön. t. 270.) 5 S. America. Fl. largish, bright-yellow, R. and C. S.; fr. Feb. and March.
20. *occidentalis*, L. (DC. pr. 2, p. 497;—W. and A. pr. 1, p. 200;—B. Reg. 1, t. 83;—Roxb. H. B. p. 31;—J. Grah. Cat. B. pl. p. 63.—Senna occidentalis, Roxb. fl. ind. 2, p. 343.) 5 W. Indies. Hot parts of America. Senegambia. Domesticated nearly all over India. It has like the next species, a most offensive, sickening smell. Leaves purgative.
21. *Tora*, L. (W. and A. pr. 2, p. 200;—J. Grah. Cat. B. pl. p. 63.—C. obtusifolia, Burm. ind. p. 95, excl. syn.—C. foetida, Salisb.—C. gallinaria, Collad.—Rumph. 5, t. 97, f. 2.) 5 Fl. small, yellow, R. and C. S.; fr. C. S. Leaves purgative.



- α. diffusa*; (C. Tora, DC. pr. 2, p. 493;—Roxb. H. B. p. 31.—Senna Tora, Roxb. fl. ind. 2, p. 340.) চকুন্দা Chakunda. Both Peninsulas of India. Ceylon. Moluccas. Bengal, (Serampore.) Assam. Senegambia.
- β. erecta*; (C. Tagera, Lam.;—DC. pr. 2, p. 494; not L.—C. toroides, Roxb. H. B. p. 31.—Senna toroides, Roxb. fl. ind. 2, p. 341;—Rheed. 2, t. 43.) Mysore.
22. *Absus*, L. (DC. pr. 2, p. 500;—W. and A. pr. 1, p. 291;—Roxb. H. B. p. 31.—Senna Absus, Roxb. fl. ind. 2, p. 340;—Burm. zeyl. t. 97.) ♂ Ceylon. Coromandel. Monghir Mountains. Deyra-Dhoon. Senegambia. Fl. small, yellow, and fr. the whole year.
23. *Chamæcrista*, L. (DC. pr. 2, p. 503;—Roxb. H. B. p. 32.) © W. Indies. Carolina. Virginia. Fl. small, yellow, and fr. nearly whole year.
24. *Burmanni*, DC. (pr. 2, p. 502.—C. flexuosa, Burm. fl. cap. prod. p. 12. excl. syn.) © C. G. H. Fl. small, yellow, and fr. C. S.
25. *nictitans*, L. (DC. pr. 2, p. 503;—Roxb. H. B. p. 32.—Grimaldia assurgens, Schrank.) © W. Indies. Carolina. Pennsylvania. Fl. small, yellow, R. S.; fr. C. S.
26. *Wallichiana*, DC. (pr. 2, p. 505, excl. syn. Roxb.;—W. and A. pr. 2, p. 292.) ♂ Peninsula of India. Bengal, (Serampore.) Tavoy. Mussooree. Nepal. Fl. small, yellow, R. S.; fr. C. S.
27. *Telfairiana*, Wall. (Cat.) ♂ Mauritius. Fl. small, yellow, and fr. the whole year.
28. *angustissima*, Lam. (DC. pr. 2, p. 505;—W. and A. pr. 1, p. 292.—C. sensitiva, Roxb. H. B. p. 32.—Senna sensitiva, Roxb. fl. ind. 2, p. 353;—Rumph. 6, t. 67, f. 1.) ♂ Both Peninsulas of India. Moluccas. Bengal, (Serampore.) Maldah. Assam. Mussooree. Nepal. Fl. small, yellow, R. S.; fr. C. S.
29. *pumila*, Lam. (DC. pr. 2, p. 504;—W. and A. pr. 1, p. 292.—C. prostrata, Roxb. H. B. p. 32.—Senna prostrata, Roxb. fl. ind. 2, p. 352.) ♂ Coromandel. Monghir. Fl. small, yellow. In H. C. G. fl. R. S.; fr. C. S. (Roxb.) Cattle eat it.
30. *Leschenaultiana*, DC. (pr. 2, p. 504.—Cassia dimidiata, Roxb. H. B. p. 32.—Senna dimidiata, Buch.;—Roxb. fl. ind. 2, p. 352.) © Bengal, (Serampore.) Nepal. Fl. small, yellow, R. S.; fr. C. S.
31. *tenella*, Roxb. (H. B. p. 32.—Senna tenella, Roxb. fl. ind. 2, p. 354.) ♂ Bengal, (Serampore.) Fl. small, yellow, R. S.; fr. C. S.
32. *Kleinii*, W. and A. (pr. 1, p. 293;—Rheed. 9, t. 21.) ♂ Travancore. Fl. small, yellow. Has been introduced into H. C. G. ?
33. *exigua*, Roxb. (H. B. p. 31.—Senna exigua, Roxb. fl. ind. 2, p. 339.) © Bengal. Fl. small, yellow. In H. C. G. fl. R. S.; fr. C. S. (Roxb.)
34. *palmata*, Wall. (Cat.) Tavoy. Martaban. In H. C. G.
35. *fulgens*, Wall. (Cat.) Native place unknown. In H. C. G.

SCHOTIA, Jacq. (*DC. pr. 2, p. 507.*)

1. *speciosa*, Jacq. (*Icon. rar. 1, t. 75;—B. Repos. 5, t. 348.*) 5 C. G. H. Senegambia. Has not fl. here.

OMPHALOBium.

1. *Schotia*, Jacq. (*Eccl. ined.*) 5 C. G. H. R. S. 1840.

CYNOMETRA, L. (*DC. pr. 2, p. 509;—W. and A. pr. 1, p. 293.*)

1. *cauliflora*, L. (*DC. l. c.;—W. and A. l. c.;—Roxb. H. B. p. 32.—Lam. ill. t. 331, f. 2;—J. Grah. Cat. B. pl. p. 63;—Rumph. 1, t. 62.*) 5 Moluccas. Java. Sumatra. Penang. Cultivated in gardens. Fl. small, white. Introduced into H. C. G. in 1800, but had not fl. up to 1814.

INTSIA, Pet. Th.

1. *madagascariensis*, DC. (*pr. 2, p. 509.*) 5 Madagascar.
2. *polyandra*, Roxb. (*Corom. 3, t. 286;—fl. ind. 2, p. 372;—DC. pr. 2, p. 509;—W. and A. pr. 1, p. 294.*) L. 5 Assam. Fl. largish, white, March and April; fr. July and Aug. Timber very useful.

OUTEA, Aubl. (*DC. pr. 2, p. 510.*)

1. *bijuga*, DC. (*o. c. p. 511.*)—*Macrolobium bijugum*, Colebr. *Linn. soc. trans. 12, t. 19.*) 5 Singapore. Has not fl. here, though cultivated for more than 10 years.

HYMENEA, L. (*DC. pr. 2, p. 511;—G. Don's Mill. dict. 2, p. 458.*)

1. *Courbaril*, L. (*DC. l. c.;—G. Don's Mill. dict. l. c.;—Lam. ill. t. 330, f. 1;—DC. leg. mem. 12, t. 26, f. 120, germ.;—Jacq. amer. pict. p. 63, t. 264, f. 65;—Roxb. H. B. p. 31;—J. Grah. Cat. B. pl. p. 63.*) *Gum Anime Tree. Courbaril Locust Tree.*—L. 5 S. America. Petals an inch long, here pure white. Filaments here pure white. Fl. June and July; fr. 0. The filamentose, white substance contained in the pods is sweet as honey, and greedily eaten by the Indians, while fresh purgative, but afterwards losing this quality. Between the principal roots of the tree exudes a fine transparent resin, white, yellowish or red, which is collected in large lumps, and called by the English Gum Anime, though, according to Martius, "the genuine Anime is the produce of a species of *Leica*, and very nearly allied to *Elemi*." The *Courbaril* resin (*American Copal*, Mart.) makes the finest varnish that is known, superior even to the Chinese lac. "For this latter use it is dissolved in the highest rectified spirits of wine. It burns readily, and with a clear flame, emitting a grateful and fragrant smell, for which reason it is sometimes ordered by way of fumigation in the chambers of persons labouring with asthmas or suffocative catarrhs. Its vapours not only strengthen the head, but all parts of the body affected with cold. Some apply it outwardly, dissolved in oil or spirits of wine, to strengthen the nerves. An oil may be distilled from it, useful in palsies, and contractions of the sinews. The inner bark is an excellent vermifuge in spirit or decoction. The timber of old trees is reckoned excellent, and is in great request for wheel-work



in sugar mills, particularly for cogs to the wheels, being extremely hard and tough. It is so heavy that a cubic foot weighs a hundred pounds. It also takes a fine polish." (*G. Don.*)

TRACHYLOBIUM, Hayne. (*G. Don's Mill. dict. p. 158.*)

1. *Lamarckianum*, Hayne. (*G. Don. o. c. p. 159.*—*Hymenæa verrucosa*, *Lam. ill. t. 330, f. 2*; not *Gärtn. nor Lam. dict.*) 5 Madagascar. Fl. an inch long, pure-white, R. S.; fr. C. S.

BAUHINIA, L. (*DC. pr. 2, p. 512*;—*W. and A. pr. 1, p. 294.*)

1. *porrecta*, Swz. (*DC. o. c. p. 513*;—*B. M. 41, t. 1708.*) L. 5 Jamaica. St. Domingo. Fl. largish, white, often with a tinge of rose, H. S.; fr. 0.

2. *malabarica*, Roxb. (*fl. ind. 2, p. 321*;—*W. and A. pr. 1, p. 294.*) L. 5 Malabar. Prome. Malloon. Assam. In H. C. G. fl. Oct. and Nov.; fr. 0.

3. *acuminata*, L. (*DC. pr. 2, p. 513*;—*W. and A. pr. 1, p. 295*;—*Roxb. fl. ind. 2, p. 324*;—*J. Grah. Cat. B. pl. p. 63.*—*B. candida*, *Ait.*; *DC. l. c.*;—not *Roxb.*—*Rheed. 1, t. 34.*) কাঞ্চন *Kanchun*. L. 5 Mauritius. Ceylon. Both Peninsulas of India. Bengal, (Serampore.) Assam. Fl. large, pure white, and fr. whole year.

4. *tomentosa*, L. (*DC. pr. 2, p. 514*;—*W. and A. pr. 1, p. 295*;—*Roxb. fl. ind. 2, p. 323*;—*J. Grah. Cat. B. pl. p. 63*;—*Rheed. 1, t. 35*;—*Burm. zeyl. t. 18, bis.*) 5 Mauritius. Ceylon. Coromandel. The Concans. Patna. Assam. Oude. Nepal. Fl. large, pale sulphur, H. and R. S.; fr. C. S. Dried leaves and young flowers used by the Natives in certain dysenteric affections.

5. *racemosa*, Lám. (not *Vahl.*—*W. and A. pr. 1, p. 295*;—*J. Grah. Cat. B. pl. p. 64.*—*B. parviflora*, *Vahl.*;—*DC. pr. 2, p. 514*;—*Roxb. fl. ind. 2, p. 323.*) 5 Mysore. Common on the ghauts and hilly parts of the Concans. Monghir. Kherree Pass. Bengal, (Serampore.) বন রাজ *Bun-raj*. Fl. small, white, May and June; fr. C. S. Bark used for making matches. (*J. Grah.*)

6. *microphylla*, Hortul. (*Loud. Hort. Brit. p. 165, No. 10681.*) 5 S. America. Fl. middle-sized, white, and fr. nearly the whole year.

7. *variegata*, L. (*W. and A. pr. 1, p. 296*;—*J. Grah. Cat. B. pl. p. 64.*)

a. *purpurascens*; (*B. variegata*, L.;—*DC. pr. 2, p. 514*;—*Roxb. fl. ind. 2, p. 319*;—*Rheed. 1, t. 32.*) রক্ত কাঞ্চন *Rukto-kanchun*. 5 Serampore. Pateram. Monihari. Puraniya. (*Buch.*) Four petals light purple; the fifth deep purple, tinged with cream and red. Fl. large, Feb. and March; fr. R. S.

β. *candida*; (*Bauhinia candida*, *Roxb. fl. ind. 2, p. 318*;—not *Ait.*) কান রাজ *Kano-raj*. 5 Bengal, (Serampore.) Kuvarikot. Islamnaghur. Oude. (*Buch.*) Assam. Nepal. Prome. Four petals white; the fifth somewhat sulphur within. Fl. large, Feb., March and April; fr. C. S.

8. *purpurea*, L. (*W. and A. pr.* 1, p. 296;—*J. Grah. Cat. B. pl.* p. 64;—*Roxb. fl. ind.* 2, p. 320; not DC.—*B. coromandeliana*, DC. *pr.* 2, p. 515;—*Rheed.* 1, t. 33.) देव कश्मि Deva Kanchun. L. 5 Mauritius. Coromandel Mountains. Banks of the Irawaddi. Martaban. Assam. Oude. Kheree Pass. Fl. very large, deep rose, C. S.; fr. H. S.
9. *triandra*, Roxb. (*fl. ind.* 2, p. 320;—*G. Don's Mill. dict.* 2, p. 461.) 5 Bengal. Fl. large, white, Oct. and Nov.; fr. C. S.
10. *retusa*, Roxb. (*fl. ind.* 2, p. 322;—*G. Don's Mill. dict.* 2, p. 46; not Poir.) 5 Native place unknown. Fl. small, pale yellow, purple dotted, R. and C. S.; fr. March. From wounds made in the bark issues a brownish, mild gum, like that of the cherry-tree. (*Roxb.*)
11. *Vahlil*, W. and A. (*pr.* 1, p. 297;—*J. Grah. Cat. B. pl.* p. 64.—*B. racemosa*, *Vahl. symb.* 3, p. 56, t. 62;—DC. *pr.* 2, p. 515;—*Roxb. fl. ind.* 2, p. 325.) L. 5 C. S. Circars. Tull Ghauts. Ravines at Kandalla. Morung Mountains. Kheree Pass. Deyra-Dhoon. Kemaon. Fl. largish, white, gradually becoming cream-coloured, March and April, fr. C. S. Leaves, often a foot each way, firm, tough, durable, collected in the N. Circars, and sold in the bazars for plates, lining baskets, covering packets, thatching houses, &c. Seeds eaten raw; when ripe tasting like Cashew-nuts. (*Roxb.*) Bark employed in making rope.
12. *corymbosa*, Roxb. (*fl. ind.* 2, p. 329;—DC. *pr.* 2, p. 515;—*B. Reg. ann.* 1839, t. 47.) 5 China. Fl. middle-sized, white, with a faint tinge of rose, fragrant, April; fr. R. S.
13. *anguina*, Roxb. (*Corom.* 3, t. 285;—*fl. ind.* 2, p. 328;—DC. *pr.* 2, p. 516;—*W. and A. pr.* 1, p. 298, excl. *B. piperifolia*, Roxb.;—*J. Grah. Cat. B. pl.* p. 64;—*Rheed.* 8, t. 30, 31.) L. 5 S. Concan. Assam. Fl. very small, white, R. S.; fr. C. S.
14. *scandens*, L. (excl. syn. *Rheed.*;—*Roxb. fl. ind.* 2, p. 326;—*Wight. icon.* 1, t. 264;—*J. Grah. Cat. B. pl.* p. 64.—*B. Lingua*, DC. *pr.* 2, p. 516;—*Rheed.* 8, t. 29;—*Rumph.* 5, t. 1.) L. 5 Moluccas. Concan. Assam. Fl. smallish, whitish, becoming yellowish, March and April; fr. Oct.
15. *semibifida*, Roxb. (*fl. ind.* 2, p. 330;—*Wall. pl. as. rar.* 3, t. 253.—*Wight. icon.* 1, t. 263.) 5 Malay Islands. Fl. largish, white, becoming yellowish, Oct. and Nov.; fr. April and May.
16. *integrifolia*, Roxb. (*fl. ind.* 2, p. 331;—*G. Don's Mill. dict.* 2, p. 462.) L. 5 Penang. Fl. small, pale yellowish. In H. C. G. Fl. ?
17. *diphylla*, Buch. (*Symes' Trav. to Ava*, t. 7.—*G. Don's Mill. dict.* 2, p. 463.) 5 Banks of the Irawaddi, at Yenangheun. Taong-Dong. Fl. middle-sized, pure white, June and July; fr. 0
18. *Roxburghiana*, (*B. emarginata*, *Roxb. in Hb. Lamb.*—*G. Don's Mill. dict.* 2, p. 462; not Mill. dict. No. 5, which is a S. American tree,



introduced into England in 1700.) ५ On the sides of the Himalayas, above Rajpore. Sirmore. Kamrup. A brownish gum is collected from this plant. (Royle.)

19. *piperifolia*, Roxb. (*fl. ind.* 2, p. 327.) L. ५ Assam. In H. C. G. Fl. ?

20. *bidentata*, Jack.—Penang.

21. *brachycarpa*, Wall. (*Cat.*)—Taong-Dong.

22. *polycarpa*, Wall. (*Cat.*)—Banks of the Attran.

23. *speciosa*, Roxb. (*Herb.*)

24. *aurantiaca*, Bojer. ५ Madagascar.

25. *Richardiana*, Wall. 5 Madagascar. Fr. ripe in Dec.

CERCIS, L. (*DC. pr.* 2, p. 518.)

1. *canadensis*, L. (*DC. l. c.*—*Siliquastrum cordatum*, Mönch.) 5 N. America, from Canada to Virginia.—Introduced into H. C. G. in 1798, but had not fl. up to 1814.

CASTANOSPERMUM, Cunningham.

1. *australe*, Cunningham. (*Hook. B. misc.* p. 241. t. 51, 52.) 5 Australia.

* *Coulteria mollis*, Kth. ५ S. America.—*C. tinctoria*, H. B. and Kth. ५ Carthage.—*Cæsalpinia aboensis*, Vaupell. ५ Goozerat.—*C. Nuga*, DC. Rumph. 5, t. 50. ५ S. Mahratta Country.—*C. brasiliensis*, L. ५ W. Indies.—*C. bahamensis*, Lam. ५ Bahama Islands.—*C. Crista*, L. ५ Jamaica.—*C. Cacalaco*, H. B. and Kth. ५ Mexico.—*Mezoneurum hymenocarpum*, W. and A. ५ Taong-Dong.—*Pterolobium lacerans*, R. Br. ५ Wight. icon. 1, t. 196. Vendalore. Circars. Tavoy.—*Pomaria glandulosa*, Cav. ५ N. Spain.—*Tachigalia paniculata*, Aubl. 5 Guiana.—*T. trigona*, L. 5 Guiana.—*T. bijuga*, DC. 5 Brazil.—*Moldenhawera floribunda*, Schrad. 5 Brazil.—*Heterostemon mimosoides*, Desf. 5 Brazil.—*Colvillea racemosa*, Bojer; B. M. 61, t. 3325-26. 5 W. Coast of Africa. Cultivated at Madagascar.—*Cassia bracteata*, L. fil. 4, Surinam.—*C. lanceolata*, Forsk. ५ Egypt.—*C. fraxinifolia*, H. B. and Kth. ५ S. America.—*C. Browniana*, H. B. and Kth. ५ Mexico.—*C. strobilacea*, H. B. and Kth. ५ S. America.—*C. chrysotricha*, Coll. ५ Guiana.—*C. macranthera*, DC. ५ Brazil.—*C. quinquangulata*, Rich. ५ Cayenne.—*C. Apoucouita*, Aubl. ५ Guiana.—*C. argentea*, H. B. and Kth. ५ Mexico.—*C. oxyadena*, DC. ५ Jamaica.—*C. tomentosa*, L. ५ Neelgherries. S. America.—*C. mexicana*, Jacq. ५ Mexico.—*C. montana*, Heyne. ५ Neelgherries.—*C. Barclayana*, Swt. ५ N. Holland.—*C. diphylla*, Lam. ५ Cayenne. St. Domingo.—*C. Herbertiana*, Lindl.; B. Reg. 17, t. 1422. ५ Barbadoes.—*Cathartocarpus ferrugineus*, G. Don. 5 Brazil.—*C. moschatus*, G. Don. 5 S. America.—*C. speciosus*, G. Don. 5 S. America.—*C. Trinitatis*, G. Don. 5 Trinidad.—*C. fistuloides*, G. Don. 5 Mexico.—*Exostylis venusta*, Schott. 5 Brazil.—*Metrocynia Commersonii*, DC. ५ Madagascar.—*Melanoxylon Brauna*, Schott. 5 Brazil.—*Acosmium lentiscifolium*, Schott. ५ Brazil.—*Cyno-*



metra ramiflora, L. 5 Rheed. 4, t. 31. Rumph. 1, t. 63. Trincomalee. S. Concan.—*Intsia madagascariensis*, DC. 5 Madagascar.—*Eperua falcata*, Aubl. 5 Guiana.—*Parivoa grandiflora*, Aubl. 5 Cayenne.—*Outea multijuga*, DC. 5 Guiana.—*O. guianensis*, Aubl. 5 Guiana.—*Vouapa bifolia*, Aubl. 5 Guiana. Brazil.—*V. Simira*, Aubl. 5 Guiana.—*V. staminea*, DC. 5 Guiana.—*Hymenaea venosa*, Vahl. 5 Cayenne.—*H. confertiflora*, Mart. 5 Brazil.—*H. Candolleana*, H. B. and Kth. 5 Mexico.—*Trachylobium Martianum*, Hayne. 5 Brazil.—*T. Hornemannianum*, Hayne. 5 S. America.—*T. Görtnerianum*, Hayne. 5 Madagascar.—*T. floribundum*, Hayne. 5 S. America.—*Schnella microstachya*, Raddi. 5 Brazil.—*S. macrostachya*, Raddi. 5 Brazil.—*Bauhinia divaricata*, L. 5 S. America.—*B. Pes caprae*, Cav. 5 Mexico.—*B. aurita*, Ait. 5 Jamaica.—*B. Pauletia*, Pers. 5 Panama.—*B. forficata*, Lk.; B. M. 66, t. 3741. 5 Brazil.—*B. inermis*, Pers. 5 Mexico.—*B. ungula*, Jacq. 5 Caraccas.—*B. picta*, DC. 5 Banks of the Magdalena.—*B. splendens*, H. B. and Kth. 5 Banks of the Orinocco.—*B. Outimonta*, Aubl. 5 Guiana.—*B. guianensis*, Aubl. 5 Guiana.—*B. suaveolens*, H. B. and Kth. 5 N. Spain.—*B. cumanaensis*, H. B. and Kth.; B. Reg. 14, t. 1133. 5 Cumana.—*Palovea guianensis*, Aubl. 5 Guiana.—*Bowdichia virgilioides*, H. B. and Kth. 5 Mouth of the Orinocco, where it is called Alcornoco.—*Crudia spicata*, Willd. 5 Guiana.—*C. aromatica*, Willd. 5 Guiana.—*Dialium Indum*, L. 5 Java.—*D. divaricatum*, Vahl. 5 Guiana.—*Codarium acutifolium*, Afz. 5 Sierra Leona.—*Vatairea guianensis*, Aubl. 5 Guiana.

L. MIMOSÆ, R. Br.

(DC. pr. 2, p. 424;—W. and A. pr. 1, p. 267.)

ENTADA, Adans. (DC. l. c.;—W. and A. l. c.)

1. *Purssetha*, DC. (pr. 2, p. 425;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 56.—E. monostachya, DC. l. c.—*Purssetha*, L. No. 644. in fl. zeyl.—*Mimosa*, No. 219. L. fl. zeyl.—M. scandens, L. ex. pte;—Roxb. fl. ind. 2, p. 554.—M. Entada, L.—*Acacia scandens*, Willd.—Rheed. 8, t. 32, 33, 34, and 9, t. 77;—Rumph. 5, t. 4.) गिलगिरी Gila-gachh. 5 Lanowlee grove, near Candalla. Pretty common along the range of the Ghauts. Wanjura in Bamsari. Connatare. Moluccas. Penang. Moulmein. Banks of the Saluen. Silhet. Assam. Nepal. Fl. small, pale yellow, H. S.; fr. C. S.—Seeds used by the Ghaut-people as an antifebrile medicine (Dr. Gibson); by the natives in Nepal for washing their hair. (Royle.)

2. *polystachya*, DC. (pr. 2, p. 425;—*Mimosa polystachya*, L.—Jacq. am. p. 265, t. 183, f. 93.) L. 5 Woods in Martinique and Guadeloupe. Guiana.—Introduced in 1840.

MIMOSA, L. (DC. pr. 2, p. 425;—W. and A. pr. 1, p. 263.)

1. *sensitiva*, L. (DC. o. c. p. 426;—B. Reg. 1, t. 25;—Roxb. H. B. p. 41.) 5 Brazil. Fl. small, purple, R. S.; fr. C. S.



2. *pedica*, L. (DC. *pr.* 2, p. 426 ;—*B. Reg.* 11, t. 941 ;—*Roxb. fl. ind.* 2, p. 564 ;—*J. Grah. Cat. B. pl.* p. 56.) बाजक *Najuk*, ५. Brazil. Cultivated in India. Fl. small, purple, R. S. ; fr. C. S.—Commonly called *Sensitive Plant*, the leaves falling on the slightest touch.
3. *hamata*, Willd. (DC. *pr.* 2, p. 427 ;—*W. and A. pr.* 1, p. 268 ;—*J. Grah. Cat. B. pl.* p. 56.) ५ Peninsula of India. Common about Surat. Has been introduced into H. C. G.
4. *asperata*, Willd. (DC. *pr.* 2, p. 428 ; *mem.* 12, t. 63 ;—*Roxb. H. B.* p. 41.) ५ Jamaica. Vera Cruz. Demerara. In H. C. G. fl. R. S. ; fr. C. S. (*Roxb.*)
5. *rubicaulis*, Lam. (DC. *pr.* 2, p. 429 ;—*W. and A. pr.* 1, p. 268 ;—*J. Grah. Cat. B. pl.* p. 56.—*M. octandra*, *Roxb. Corom.* 2, t. 200 ;—*fl. ind.* 2, p. 564.) कूची कौंटी *Kochee-kanta*. ५ ∪ Peninsula of India. Bengal, (Serampore.) Silhet. Assam. Deyra-Dhoon. Fl. small, purple, gradually becoming whitish, H. S. ; fr. C. S.
6. *mutabilis*, *Roxb.* (*fl. ind.* 2, p. 564.) ५ ∪ Banks of the Ganges, near Benares. Fl. small, purple, gradually becoming whitish, R. S. ; fr. C. S. (*Roxb.*) Perhaps not different from No. 5.
- PARKIA, R. Br. (*W. and A. pr.* 1, p. 279.)

1. *biglandulosa*, W. and A. (l. c. ;—*J. Grah. Cat. B. pl.* p. 57.—*Mimosa pedunculata*, *Roxb. fl. ind.* 2, p. 551.) L. ५ Malay Islands. Fl. small, white, May ; fr. C. S. The Malays are said to be fond of the garlic-tasting seeds, and of the mealy matter which surrounds them.
2. *Roxburghii*, G. Don. (*Mill. dict.* 2, p. 397.—*Mimosa biglobosa*, *Roxb. fl. ind.* 2, p. 551 ; not Jacq.) L. ५ Assam. Silhet. Fl. small, white, Dec. ; fr. April.

GAGNEBINA, Neck.

1. *Richardiana*, Wall. ५ Madagascar. C. S. 1841.

INGA, Plum. (DC. *pr.* 2, p. 432 ;—*W. and A. pr.* 1, p. 268.)

1. *dulcis*, Willd. (DC. o. c. p. 436 ;—*W. and A. l. c.* ;—*J. Grah. Cat. B. pl.* p. 56 ;—*Wight. icon.* 1, t. 198.—*Mimosa dulcis*, *Roxb. Corom.* 1, t. 99 ;—*fl. ind.* 2, p. 556.) L. ५ Philippine Islands. Cultivated in India. Fl. small, yellowish-greenish, C. S. ; fr. H. S. Timber of good quality. Pods filled with a sweet, firm, nourishing pulp. (*Roxb.*)
2. *Unguis cati*, Willd. (DC. *pr.* 2, p. 436.—*Mimosa Unguis cati*, L. ;—*Jacq. schön.* 2, t. 34 ;—*Roxb. H. B.* p. 40.) L. ५ W. Indies. Cumana. Fl. small, pale greenish, with the filaments at base purplish, C. S. ; fr. H. S. Seeds in America eaten by goats, and sometimes by the Negroes ; frequently brought to England and strung as beads. Bark astringent, used in lotions and fomentations in the W. Indies. (*G. Don.*)
3. *xylocarpa*, DC. (*pr.* 2, p. 439 ;—*W. and A. pr.* 1, p. 269 ;—*J. Grah. Cat. B. pl.* p. 57.—*Mimosa xylocarpa*, *Roxb. Corom.* 1, t. 100 ;—

- fl. ind. 2, p. 543.*—*Acacia xylocarpa, Willd.*) L. 5 Coromandel. Hilly parts of the Concan. Parr Ghaut. Pegu. Assam. Fl. small, white, H. S.; fr. Aug. Timber remarkably strong and durable, used for knees, crooked timbers, &c. in ship-building. (*Roxb.*)
4. *bigemina, Willd.* (*DC. pr. 2, p. 439*;—*J. Grah. Cat. B. pl. p. 57.*—*Mimosa bigemina, L.*; *Vahl.*—*M. lucida, Roxb. fl. ind. 2, p. 544*;—*Rheed. 6, t. 12.*) L. 5 The Concans. Melloon. Prome. Assam. Lower Nepal. Fl. small, white, H. S.; fr. C. S.
5. *umbellata, Willd.* (*DC. pr. 2, p. 439*;—*G. Don's Mill. dict. 2, p. 393*; not p. 391. No. 59;—*W. and A. pr. 1, p. 270.*—*I. corcondiana, DC. o. c. p. 441.*—*Mimosa umbellata, Vahl.*—*M. bigemina, Kün. in hb. L.*; not L.—*M. corcondiana, Roxb. H. B. p. 40*;—*fl. ind. 2, p. 556.*) 5 Coromandel. Fl. small, whitish, H. S.; fr. C. S.
6. *Kawahurinee*, (*Mimosa heterophylla, Roxb. fl. ind. 2, p. 545*; not *Inga heterophylla, Willd.*) L. 5 Silhet. In H. C. G. fl. Feb., March and April; fr. May and June. (*Roxb.*) A useful timber-tree. (*Roxb.*)
7. *Kæringa*, (*Mimosa Kæringa, Roxb. fl. ind. 2, p. 543.*) L. 5 Peninsula of Malacca. Has been introduced into H. C. G. before 1814. Seeds covered with an edible, fleshy pulp. (*Roxb.*)
8. *umbrosa, Wall.* (*pl. as. rar. 2, t. 124*;—*G. Don's Mill. dict. 2, p. 393.*) L. 5 Khassya Mountains. Fl. small, fragrant, white; fr. R. S.
- ? 9. *anomala, Kth.* (*Mim. 70, t. 22*;—*DC. pr. 2, p. 442.*—*Mimosa grandiflora, L'Herit*;—*Roxb. H. B. p. 41.*—*Acacia grandiflora, Willd.*) 5 Mexico, near Pascuaro, and on Mount Jorullo. In H. C. G. fl. R. and C. S. (*Roxb.*)
10. *madagascariensis*, Rich. Bourbon.
11. *fasciculata, Willd.* DC. 5 Brazil.
- DARLINGTONIA, DC. (*pr. 2, p. 443.*)
1. *brachyloba, DC.* (*Acacia brachyloba, Willd.*—*Mimosa brachyloba, Roxb. H. B. p. 41.*—*M. illinoensis, Michx.*;—*Roxb. H. B. p. 41.*) Meadows in the region of Illinois and Kentucky. 4. Flowers small, white. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
- DESMANTHUS, Willd. (*DC. pr. 2, p. 443*;—*W. and A. pr. 1, p. 270.*)
1. *natans, Willd.* (*DC. o. c. p. 444*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 57.*—*Mimosa natans, Roxb. Corom. 2, t. 119*; *fl. ind. 2, p. 553.*—*M. prostrata, Lam.*—*Neptunia oleracea, Lour.*—*Rheed. 9, t. 20.*) पानी बाँझक *Panee-najuk*. © Tanks in both the Peninsulas of India. Cochin-China. Bengal, (Serampore.) Silhet. Assam. Fl. small, reddish, R. and C.; fr. C. S.
2. *triquetrus, Willd.* (*DC. pr. 2, p. 444*;—*W. and A. pr. 1, p. 270*;—*J. Grah. Cat. B. pl. p. 57.*—*Mimosa triquetra, Vahl.*;—*Roxb. fl. ind. 2, p. 552.*—*M. natans, L. fil. suppl.*; not Willd.) 4. Coromandel. Surat. In H. C. G. fl. and fr. the whole year. (*Roxb.*)
3. *virgatus, Willd.* (excl. syn. Pluk. and Rheed.—*DC. pr. 2, p. 445*;—*W. and A. pr. 1, p. 270*;—*B. M. 51, t. 2454.*—*Mimosa virgata,*



- L.*;—*Jacq. vind. t. 80*;—*Roxb. H. B. p. 41.*) 5 India. W. Indies. Fl. small, white, R. S.; fr. C. S.
4. *punctatus*, Willd. (*DC. pr. 2, p. 445.*—*Mimosa punctata*, *L.*—*M. Adenanthera*, *Roxb. fl. ind. 2, p. 554.*) 5 Jamaica. St. Domingo. Guadeloupe. Fl. small, white, and fr. the whole year.
- CAILLEA, G. and P. (*Lindl. Nat. Syst. p. 157.*—*Dichrostachys*, *W. and A. pr. 1, p. 271*; according to Lindl.)
1. *cinerea*, G. and P. (*Dichrostachys cinerea*, *W. and A. l. c.*;—*Wight. icon. 2, t. 357*;—*J. Grah. Cat. B. pl. p. 57.*—*Mimosa cinerea*, *L.*;—*Roxb. Corom. 2, t. 174*; *fl. ind. 2, p. 561.*—*Desmanthus cinereus*, *Willd.*;—*DC. pr. 2, p. 445.*—*Acacia Dalea*, *Desv.*;—*DC. o. c. p. 459.*—*Burm. zeyl. t. 2.*) 5 Fl. small, rose-coloured yellow, H. S.; fr. Aug. Ceylon. Coromandel. Common on the sterile plains of the Deccan. Delhi. Patna. Paghamew.
- ADENANTHERA, *L.* (*DC. pr. 2, p. 446*;—*W. and A. pr. 1, p. 271.*)
1. *pavonina*, *L.* (*DC. l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 57*;—*Roxb. fl. ind. 2, p. 370*;—*Wight. ill. 1, t. 80.*—*Rheed. 6, t. 14*;—*Rumph. 3, t. 109.*) रुक्ता चन्दन *Ruckto-chundun. L.* 5 Moluccas. Both Peninsulas of India. Bengal, (Serampore.) Silhet. Assam. Fl. small, yellow, fragrant, H. S.; fr. R. and C. S. Inner wood of large trees deep red, hard, durable and yielding a dye, with which the Brahmins, after religious bathing, mark their foreheads. Seeds bright scarlet, worn by women as beads, and on account of their equality (each of them weighing four grains) used by goldsmiths and jewellers for weights. (*Roxb.*)
2. *falcata*, *L.* (*DC. pr. 2, p. 446*;—*Rumph. 3, t. 111.*) *L.* 5 Moluccas. Fl. small, yellowish. Introduced in 1838.
- PROSOPIS, *L.* (*DC. pr. 2, p. 446*;—*W. and A. pr. 1, p. 271.*)
1. *spicigera*, *L.* (*DC. l. c.*;—*W. and A. l. c.*;—*Roxb. H. B. p. 32*;—*Corom. 1, t. 63*;—*J. Grah. Cat. B. pl. p. 57.*—*P. spicata*, *Burm. ind. t. 25, f. 3.*—*Adenanthera aculeata*, *Roxb. fl. ind. 2, p. 371.*) शमी *Shumee.* 5 Coromandel. Goozerat. Furukabad. Delhi. Saharunpore. Fl. small, yellow, C. S.; fr. R. S. Pods containing a large quantity of a brown, mealy, sweetish substance, which the natives eat. (*Roxb.*)
2. *dulcis*, *Kth.* (*Mim. p. 110, t. 34*;—(*DC. pr. 2, p. 447.*—*Acacia lævigata*, *Willd.*—*Mimosa lævigata*, *Roxb. H. B. p. 41.*) 5 N. Spain. Fl. small, greenish-white. Introduced into H. C. G. in 1811 from the Mauritius, but had not fl. in 1814.—*Pulp* of the pods very sweet, and eaten by the inhabitants of N. Spain. (*G. Don.*)
- ACACIA, Neck. (*DC. pr. 2, p. 448*;—*W. and A. pr. 1, p. 272.*)
1. *Catechu*, Willd. (*DC. pr. 2, p. 458*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 58.*—*A. polyacantha*, *Willd.*;—*DC. o. c. p. 459.*—*A. Wallichiana*, *DC. o. c. p. 458.*—*Mimosa Catechu*, *L.*; *Roxb. fl. ind. 2, p. 562*, excl. No. 38, *p. 563*; No. 41 and 42; *Corom. 2, t. 174*;—

- M. *Catechuoides*, *Roxb. fl. ind.* 2, p. 562.) *খলুর গাছ* *Khuera-ghach*.
5 Coromandel. Hills about Vear, Salsette; and in some parts of the N. Concan. Yenangheun. Tavoy. Bengal, (Serampore.) Monghir. Rajmahl. Morung Mountains. Assam. Delhi. Nepal. Fl. small, white, H. and R. S.; fr. C. S. The old high-coloured wood, owing to the transference into it of astringent matter, is used for making the astringent extract known under the name of *Catechu*, formerly called *Japan earth*.
2. *Suma*, Buch. (*Mimosa Suma*, *Roxb. fl. ind.* 2, p. 563, excl. syn. Willd.) *শাই কঁটা* *Shai-kanta*. 5 Bengal, (Serampore, Calcutta.) Fl. small, white, R. S.; fr. C. S.
3. *Sundra*, DC. (*pr.* 2, p. 458;—*W. and A. pr.* 1, p. 273.—*A. Chundra*, *Willd.*—*Mimosa Sundra*, *Roxb. Corom.* 3, t. 225; *fl. ind.* 2, p. 562.) 5 Mountains of Coromandel. Soonderbuns. Fl. small, yellow, R. S.; fr. C. S. Wood hard, chocolate-coloured. (*Roxb.*)
4. *ferruginea*, DC. (*pr.* 2, p. 458;—*W. and A. pr.* 1, p. 273.—*Mimosa ferruginea*, *Roxb. fl. ind.* 2, p. 561.) L. 5 Circars, Courtallum. Fl. small, pale yellow. In H. C. G. fl. H. S.; fr. C. S. (*Roxb.*) Bark very astringent. (*Roxb.*)
5. *latronum*, Willd. (*DC. pr.* 2, p. 460;—*W. and A. pr.* 1, p. 273;—*J. Grah. Cat. B. pl.* p. 58.—*Mimosa latronum*, *Kön.*;—*L. fil. suppl.* excl. spec. char.;—*Roxb. fl. ind.* 2, p. 559.—*M. cornigera*, *L. suppl.* p. 438.) 5 Coromandel. Common in the barren tracts of the Deccan. Fl. small, fragrant, white, becoming yellowish. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
6. *modesta*, Wall. (*pl. as. rar.* 2, t. 130;—*G. Don's Mill. dict.* 2, p. 412;—*J. Grah. Cat. B. pl.* p. 58.) 5 In the dry Bangur land between Saharunpore and Delhi. Fl. small, white, fragrant. Probably in H. C. G., as the shrub has been introduced from Bengal into the Horticultural Society's Garden at Bombay.
7. *dumosa*, W. and A. (*pr.* 1, p. 274.—*Mimosa latronum*, *L. fil. suppl.* as to spec. char.—*M. dumosa*, *Roxb. fl. ind.* 2, p. 559.) 5 In the dry Bangur land between Saharunpore and Delhi. Fl. small, whitish, R. and C. S.
8. *lophantha*, Willd. (*DC. pr.* 2, p. 457;—*B. Reg.* 5, t. 361;—*B. M.* 47, t. 2108.—*Mimosa distachya*, *Vent.*—*M. elegans*, *Andr.*) 5 N. Holland. Fl. small, yellowish. Has been introduced into H. C. G. Fl. ?
9. *stipulata*, DC. (*pr.* 2, p. 469;—*W. and A. pr.* 1, p. 274;—*J. Grah. Cat. B. pl.* p. 58.—*Mimosa stipulata*, *Roxb. H. B.* p. 40.—*M. stipulacea*, *Roxb. fl. ind.* 2, p. 549.) L. 5 Courtallum. Common in the Ghauts, about Kanalla, &c. Banks of the Attran. Assam. Deyra-Dhoon. Fl. small, white rose-coloured, H. S.; fr. G. S. One of the largest trees of the genus.
10. *Smithiana*, Wall. (*Mimosa Smithiana*, *Roxb. fl. ind.* 2, p. 550.) L. 5 Chittagong. Silhet. Fl. small, white, May; fr. Dec.



11. *arborea*, Willd. (DC. pr. 2, p. 469.—*Mimosa arborea*, L.—*M. filicifolia*, Lam.—*Sloan. hist. Jam.* 2, t. 182, f. 1, 2.) 5 Jamaica. Portorico. Fl. small, pale flesh-coloured. Has been introduced into H. C. G. Fl. ?
12. *amara*, Willd. (DC. pr. 2, p. 469 ;—*W. and A. pr.* 1, p. 274 ;—*J. Grah. Cat. B. pl.* p. 58 ?—*Mimosa amara*, Roxb. *Corom.* 2, t. 122 ; *fl. ind.* 2, p. 548.) 5 Coromandel. Fl. small, yellow, H. S. ; fr. C. S. Bark bitter, astringent. (Roxb.)
13. *mollis*, Wall. (*pl. as. rar.* 2, t. 177 ;—*G. Don's Mill. dict.* 2, p. 421.) 5 Himalayas ; alt. 6000 f. in 30° N. L. Fl. small, yellow. Has been introduced into H. C. G. Fl. ?
14. *fruticosa*, (*Mimosa fruticosa*, Roxb. *fl. ind.* 2, p. 549.) L. 5 China. Fl. small, white, April ; fr. O.
15. *myriophylla*, Grah. (*Wall. Cat.*—*Mimosa microphylla*, Roxb. *fl. ind.* 2, p. 549 ; not *Acacia microphylla*, Willd.) 5 Khassya Mountains. Fl. minute, greenish yellow. In H. C. G. fl. May and June ; fr. March and April. With the bark of this tree the Mountaineers make an intoxicating liquor, which they drink as we do beer. (Roxb.)
16. *Wightii*, Grah. (*W. and A. pr.* 1, p. 274.—*Mimosa pulchella*, Roxb. *fl. ind.* 2, p. 548 ; not *Acacia pulchella*, R. Br.) 5 Malabar. Dindygul. Introduced into H. C. G. by Dr. Berry, in 1804, but had not fl. up to 1814.
17. *odoratissima*, Willd. (DC. pr. 2, p. 466 ;—*W. and A. pr.* 1, p. 275 ;—*J. Grah. Cat. B. pl.* p. 58.—*A. lomatocarpa*, DC. o. c. p. 467.—*Mimosa odoratissima*, L. *suppl.* p. 437 ;—Roxb. *Corom.* 2, p. 120 ;—*fl. ind.* 2, p. 546.—*M. marginata*, Lam.—*Rheed.* 6, t. 5.) L. 5 Coromandel. The Concans and Neelgherries. Moulmecin. Tavoy. Monghir Mountains. Assam. Fl. pale, yellowish, fragrant, May and June ; fr. C. S. Timber hard, strong.
18. *elata*, Grah. (*Wall. Cat.*—*Mimosa elata*, Roxb. *fl. ind.* 2, p. 546.) L. 5 Banks of the Irawaddi, and the Attran. Tavoy. Assam. Deyra-Dhoon. Fl. small, white, May and June ; fr. C. S. Timber of good quality. (Royle.)
19. *Kalkora*, (*Mimosa Kalkora*, Roxb. *fl. ind.* 2, p. 547.) L. 5 Assam. In H. C. G. fl. May and June ; fr. C. S.
20. *Sirissa*, Buch. (*A. speciosa*, Willd. ;—DC. pr. 2, p. 467 ;—*W. and A. pr.* 1, p. 275 ;—*J. Grah. Cat. B. pl.* p. 58.—*Mimosa speciosa*, Jacq. *ic. rar.* 1, p. 198.—*M. Sirissa*, Roxb. *fl. ind.* 2, p. 544.) সিরীশ Sireesha. L. 5 Coromandel. Bombay. Paghamew. Chittagong. Bengal, (Serampore.) Soonderbuns. Silhet. Assam. Monghir. Deyra-Dhoon. Fl. small, white, fragrant, H. and R. S. ; fr. C. S. Timber large, dark coloured, very hard, close-enough-grained for furniture. Large masses of very pure gum are often seen on this tree. (Roxb.)
21. *frondosa*, Willd. (DC. pr. 2, p. 468 ;—*W. and A. pr.* 1, p. 275.—*A. Coranja*, Buch. in *Wall. Cat.*) 5 Patna. (Buch.) Fl. small, white,



- R. S.; fr. C. S. Pods three to five inches long, 7 lines broad, 10-20 seeded.
22. *glauca*, Willd. (DC. pr. 2, p. 467;—J. Grah. Cat. B. pl. p. 58.—Mimosa *glauca*, L.;—Roxb. H. B. p. 41.) L. 5 S. America. Fl. small, white, R. S.; fr. C. S. Common in gardens.
23. *tomentosa*, Willd. (DC. pr. 2, p. 462;—W. and A. pr. 1, p. 276;—J. Grah. Cat. B. pl. p. 59.—Mimosa *tomentosa*, Roxb. fl. ind. 2, p. 558; Rottl.—M. Kleinii, Poir.) बाबुली दाबुली *Salsain-babula*. 5 Coromandel. Common in Deccan and Kandesh jungles, also in the Sholapore districts. Bengal, (Serampore.) Fl. small, white, rather offensive, C. and H. S.; fr. R. S.
24. *horrida*, Willd. (DC. pr. 2, p. 460.—M. *horrida*, L.—M. *leucacantha*, Jacq. Schönb. t. 393.—M. *eburnea*, Lam. not Willd.—Acacia *capensis*. Burch.—Mimosa *capensis*, Burm.; Roxb. H. B. p. 41.) 5 S. Africa. Arabia. Fl. small, yellow. Introduced into H. C. G. in 1799, but had not fl. up to 1814.
25. *tortuosa*, Willd. (DC. pr. 2, p. 461.—Mimosa *tortuosa*, L.;—Roxb. H. B. p. 41.) 5 Sandy fields of Jamaica. St. Thomas. Fl. small, yellow. Introduced into H. C. G. in 1807, but had not fl. up to 1814.
26. *arabica*, Willd. (DC. pr. 2, p. 461;—W. and A. pr. 1, p. 277;—J. Grah. Cat. B. pl. p. 59.—Mimosa *arabica*, Lam.;—Roxb. Corom. 2, t. 149;—fl. ind. 2, p. 557.) दाबुली *Babula*. 5 Peninsula of India. Bengal, (Serampore.) Sukanaghur. Saharunpore. Fl. small, bright-yellow, fragrant, May and Oct.; fr. March. Produces, with *A. speciosa*, and *Vachellia Farnesiana*, a gum, which is used as a substitute for Gum Senegal, and Gum Arabic. Wood strong, tough, durable, making excellent knees and crooked timber in ship-building. Bark astringent, used for tanning leather, and to dye various shades of brown. A decoction of the bark employed as a substitute for soap. (Roxb.) Seeds and pods of great value to the shepherd in the hot season, as food for his flock, when grass is scarce. (Dr. Gibson.) This officer suggested some years ago to plant the waste part of the Deccan with this tree, as it grows rapidly and requires no water.
27. *vera*, J. Bauh. (DC. pr. 2, p. 461.—Mimosa *nilotica*, L.) True *Acacia* or *Gum Arabic-tree*. Egyptian thorn. 5 Africa, from Senegal to Egypt. Fl. small, yellow. Has been introduced into H. C. G. Fl. ?
28. *leucophlœa*, Willd. (DC. pr. 2, p. 462;—W. and A. pr. 1, p. 277;—J. Grah. Cat. B. pl. p. 59.—A. *alba*, Willd. DC. l. c.—Mimosa *leucophlœa*, Roxb. Corom. 2, t. 150;—fl. ind. 2, p. 558.—M. *alba*, Rottl.) 5 Coromandel. Common in some parts of the South Mahratta country, and in the Sholapore districts between the Bheema and Krishna. Delhi. Fl. small, pale yellowish, R. S.; fr. C. S. Bark astringent. The natives distil an ardent spirit from it, mixed with



- palm-wine and a little coarse sugar. On this account, the trees are farmed in some places from Government. (*Roxb. Law.*)
29. *pennata*, Willd. (*DC. pr. 2, p. 464* ?—*W. and A. pr. 1, p. 277* ;—*J. Grah. Cat. B. pl. p. 59.*—*A. megaladena, Desv.* ;—*DC. o. c. p. 465.*—*Mimosa pennata, L.* ; excl. syn.—*M. torta, Roxb. fl. ind. 2, p. 566.*—*M. ferruginea, Rottl.* ;—*DC. pr. 2, p. 431.*) *L.* ५ ∪ Courtallum. Neelgherries. Ceylon. Gutpurba, near Duddi. Paghamew. Fl. small, yellow, *R. S.* ; fr. *H. S.*
30. *rugata*, Buch. (*A. concinna, DC. ; pr. 2, p. 464* ;—*W. and A. pr. 1, p. 277* ;—*J. Grah. Cat. B. pl. p. 59.*—*Mimosa concinna, Willd.* ;—*Roxb. fl. ind. 2, p. 565.*—*M. rugata, Lam.* ;—*DC. pr. 2, p. 431.*—*M. abstergens, Spr.* ;—*DC. l. c.*—*M. saponaria, Roxb.* ; in *E. I. C. mus. t. 498.*—*Burm. zeyl. t. 1.*) *बौद्धी Reeta, L.* ५ ∪ Peninsula of India. Banks of the Attran. Moulmein. Bengal, (Serampore.) Silhet. Assam. Nepal. Fl. small, white, *R. S.* ; fr. *C. S.* The thick, succulent legumes are sold in the bazar, and used as soap for washing the hair, &c. They are also employed by the Hindoos for marking the forehead. The leaves are acid, and used in cookery instead of tamarinds. (*Nimmo.*)
31. *Buchananiana*, (*Mimosa pennata, Roxb. fl. ind. 2, p. 565* ; excl. syn. Willd.—*A. pennata, Buch. in Wall. Cat.*) *L.* ५ ∪ Chittagong. Silhet. Assam. In *H. C. G. fl. R. S.* ; fr. *C. S.* (*Roxb.*)
32. *casia*, *W. and A.* (*pr. 1, p. 278.*—*A. alliacea, Buch.*—*A. Arrar, Buch.*—*A. intsioides, DC. pr. 2, p. 464.*—*Mimosa casia, L.* ; as to the reference to Plukenet's description ; *Roxb. ? fl. ind. excl. syn. Willd.*—*M. tenuifolia, Roxb. H. B. p. 41.*—*Pluk. t. 330, f. 1.*) ५ ∪ Coromandel. Olipur. Monghir. Saharunpore. In *H. C. G. fl. R. S.* ; fr. *C. S.* (*Roxb.*)
33. *Intsia*, Willd. (*DC. pr. 2, p. 464* ;—*W. and A. pr. 1, p. 278* ;—*J. Grah. Cat. B. pl. p. 59.*—*Acacia casia, Willd.* ; excl. syn. *Pluk.* ; *DC. pr. 2, p. 465.*—*Mimosa Intsia, L.* ;—*Roxb. fl. ind. 2, p. 565.*—*M. casia, L.* ; excl. syn. *Pluk.*, and therefore the name.—*Rheed. 6. t. 4.*) ५ ∪ Coromandel. Common on the Ghauts and throughout the jungly tracts of the Concan. Nawaubgunj. (*Buch.*) In *H. C. G. fl. R. S.* ; fr. *C. S.* (*Roxb.*)
34. *semicordata*, *Roxb. (H. B. p. 40.)* ५ Malabar. Introduced into *H. C. G.* in 1808, but had not fl. up to 1814.
35. *diluta*, *Wall. Nagpur.*
36. *Cavalum*, *Buch. (Roxb. H. B. p. 41.)* ५ Bengal. In *H. C. G. fl. C. S.* (*Roxb.*)
37. *herbacea*, *W. Ham. (Roxb. H. B. p. 41.)* ५ America. In *H. C. G. fl. R. S.* ; fr. *C. S.* (*Roxb.*)
38. *miamensis*, *W. Ham. (Roxb. H. B. p. 41.)* ५ America. In *H. C. G. fl. R. S.* (*Roxb.*)
39. *M. altissima*, *W. Lockhead. (Roxb. H. B. p. 41.)* ५ ∪ Trinidad. In *H. C. G. fl. Sept. and Oct. (Roxb.)*

VACHELLIA, W. and A. (Pr. 1, p. 272.)

1. *Farnesiana*, W. and A. (*I. c.*;—*J. Grah. Cat. B. pl.* p. 58;—*Wight. icon.* 1, t. 300.—*Mimosa Farnesiana*, L.;—*Roxb. fl. ind.* 2, p. 557.—*M. indica*, Poir.—*Acacia Farnesiana*, Willd.;—*DC. pr.* 2, p. 461.—*A. Indica*, Desv.;—*DC. o. c.* p. 462.) गुड़ बबुल *Gooya-babula*. L. 5. Fl. small, yellow, fragrant, Dec. and Jan.; fr. R. S. Wood hard, tough, making excellent ship-knees and tent-pegs. Both Peninsulas of India. Bengal, (Serampore.) Scinde. Silhet. Assam. Nepal.

- * *Entada Gigalobium*, DC. 5 ∪ W. Indies.—*Mimosa polydactyla*, H. and B. 5 Guiana.—*Gagnebina tamariscina*, DC. 5 Mauritius.—*G. axillaris*, DC. 5 Mauritius.—*Inga geminata*, W. and A. 5 Ceylon.—*I. Konigii*, W. and A. 5.—*I. purpurea*, Willd.; B. Reg. 2, t. 129, 5 Martinique.—*I. Jiringa*, Jack. 5 Penang. Malacca.—*I. clypearia*, Jack. Penang. Singapore.—*I. Houstonii*, DC. (*Acacia Houstonii*, Willd.; B. Reg. 1, t. 98.) 5 Mexico.—*I. alba*, Willd. 5 Cayenne.—*I. rhoifolia*, Willd. 5 Brazil.—*I. Burgoni*, DC. 5 Guiana.—*Schrankia aculeata*, 2. Vera Cruz.—*S. leptocarpa*, DC. 2. St. Domingo.—*S. hamata*, H. and B. 2. S. America.—*Desmanthus lacustris*, Willd. 2. S. America.—*D. diffusus*, Willd. 2. Cumana.—*D. strictus*, Bertol. 5 W. Indies.—*Prosopis cumanensis*, Kth. 5 Cumana.—*P. domingensis*, DC. 5 St. Domingo.—*P. juliflora*, DC. 5 Jamaica.—*P. pallida*, Kth. 5 Peru.—*Acacia procera*, Willd. (*Mimosa procera*, Roxb. Corom. 2, t. 121.) 5 Coromandel.—*A. planifrons*, W. and A. 5 Tanjore.—*A. Roxburghii*, W. and A. (*Mimosa eburnea*, Roxb. Corom. 2, t. 199.) 5 Coromandel.—*A. eburnea*, Willd. 5 Coromandel.—*A. pilosa*, Bert. 5 Jamaica.—*A. hispidissima*, DC. 5 Jamaica.—*A. lophanthoides*, DC. 5 Jamaica.—*A. pulcherrima*, Willd. 5 Brazil.—*A. viridiflora*, Kth. 5 S. America.—*A. tamarindifolia*, Willd. 5 W. Indies.—*A. centrophylla*, DC. 5 Jamaica.—*A. Guilandina*, DC. 5 ∪ Cayenne.—*A. formosa*, Kth. 5 Mexico.—*A. leucocephala*, Pers. 5 S. America.—*A. brasiliensis*, Spreng. 5 Brazil.

ORDER CVII.—CONNARACEÆ, R. Br.—Lindl. Nat. Syst. p. 157.

Trees or shrubs of 5 genera. Of these, DC. pr. enumerates 7 species for S. America; 8 for Sierra Leona and Owaree; 2 for Madagascar; and 1 for Mauritius. In the E. Indies, our materials mention 6 species of *Connarus*; (Peninsula of India, Chittagong. Silhet.) 1 of *Omphalobium*; (Moluccas.) 5 of *Rourea*; (Ceylon. Silhet. Nicobar Islands,) and 3 of *Tetradium*. (Silhet? Cochin China.) Two species of *Connarus*, (*Roxburghii* and *microphyllus*, Hook. and Arn.) have been found in China. They belong, however, both to *Rourea*, according to W. and A. Properties unknown.



CONNARUS, L. (DC. *pr.* 2, p. 84 ;—*W. and A. pr.* 1, p. 143.)

1. *paniculatus*, Roxb. (*fl. ind.* 3, p. 139.) L. 5 Chittagong. Fl. small, yellow. In H. C. G. fl. June. (Roxb.) A large timber-tree.

2. *nitidus*, Roxb. (*H. B. p.* 49.) 5 Silhet. Fl. small, whitish, H. S. ; fr. Sept. and Oct.

3. *igneus*, Wall. MSS. 5 Native place ? Introduced in 1840.

ROUREA, Aubl. (*W. and A. pr.* 1, p. 143.)

1. *Sookurthoontee*, (Cnestis monadelpha, Roxb. *fl. ind.* 2, p. 454.)

সুকুর তুন্তী Sookur-toontee. 5 Chittagong. Silhet. Fl. small, white, fragrant, June and July ; fr. Oct.

* *Connarus monocarpus*, L. ; Rheed. 7, t. 26. 5 Travancore.—*C. pinnatus*, Lam. ; Wight. ill. 1, t. 64. 5 Coromandel, Concan. Goa jungles.—*C. pubescens*, DC. 5 Guiana.—*Omphalobium Lambertii*, DC. 5 Guiana.—*O. Perrottetii*, DC. 5 Guiana.—*Rourea santaloides*, W. and A. 5 Ceylon.—*R. emarginata*, W. and A. (Cnestis emarginata, Jack.)—*R. florida*, W. and A. (Cnestis florida, Jack.)—*R. mimosoides*, W. and A. (Cnestis mimosoides, Jack.) 5 Nicobar Islands.—*Cnestis glabra*, Lam. 5 Mauritius. Bourbon.

ORDER CVIII.—CHRYSOBALANACEÆ, Lindl. Nat. Syst. p. 158.

THE COCOA-PLUM TRIBE.

Trees or shrubs, referred by Lindl. to 11 genera. Of these, DC. *pr.* and Spreng. *syst.* assign 33 species to S. America, Mexico and the W. Indies ; 1 to Georgia in N. America ; 2 to Sierra Leone ; 1 to Senegal ; 1 to Bourbon ; — to Madagascar ; and 1 to New Holland. Two species have been found in India : *Prinsepia utilis*, in the Himalayas, and a *Parinarium* ? at Singapore. Fruit of several species of Chrysobalanus and Parinarium eatable.

CHRYSOBALANUS, L. (DC. *pr.* 2, p. 525.)

1. *Icaco*, L. (DC. *l. c.*—*Jacq. am.* 154, t. 94.) 5 S. America, and the W. Indies ; by the sea-side. Southern parts of N. America. Fl. white. Fruit eatable. Introduced into H. C. G. before 1814. Fl. ?

PRINSEPIA, Royle. (*Ill.* p. 206.)

1. *utilis*, Royle. (*o. c. t.* 38, f. 1.) 5 Common on the driest and most barren rocks of the Himalayas, as in the neighbourhood of Muttiana, in N. lat. $31\frac{1}{2}^{\circ}$, and at elevations of 5-6000 feet, where its seeds yield by expression a useful oil. Fl. nearly middle-sized, whitish. Has been in the garden here several years without flowering.

* *Chrysobalanus oblongifolius*, Schott. 5 Brazil.—*C. macrophyllus*, Schott. 5 Brazil.—*Moquilea guianensis*, Aubl. 5 Guiana.—*M. ca-*

nomensis, Mart. 5 Brazil.—*Conepia guianensis*, Aubl. 5 Guiana.—*C. Parillo*, DC. 5 Guiana.—*Acioa guianensis*, Aubl. 5 Guiana.—*Parinarium campestre*, Aubl. 5 Guiana.—*P. senegalense*, Perr. 5 Senegal.—*P. excelsum*, Hort. Trans. 5 Sierra Leone. Introduced at Goa.—*Grangeria borbonica*, Lam. 5 Bourbon.—*Licania incana*, Aubl. 5 Guiana.—*L. humilis*, Cham. 5 Brazil.—*Hirtella triandra*, Swz. 5 W. Indies. New-Spain.—*H. rugosa*, Pers. 5 St. Domingo. St. Thomas.—*H. hirsuta*, Lam. 5 Cayenne.—*H. racemosa*, Lam. 5 Guiana.

ORDER CIX.—CALYCANTHACEÆ, Lindl. Nat. Syst. p. 159.

THE CAROLINA ALLEPICE TRIBE.

Shrubs, referred by Lindl. to 2 genera: *Calycanthus*, with 3 N. American species; and *Chimonanthus*, with a Japanese one. Properties unimportant.

CALYCANTHUS, L. (DC. pr. 3, p. 2.)

1. *floridus*, L. (DC. l. c.;—B. M. 14, t. 503;—Roxb. H. B. p. 39.) 5 Shady banks of rivulets of Carolina. Fl. large, dark red-brown, sweetly apple-scented. Wood and roots strongly smelling of Camphor. Introduced into H. C. G. in 1804, but had not fl. up to 1814.

CHIMONANTHUS, Lindl. (DC. pr. 3, p. 2.)

1. *præcox*, Lindl. (in Wall. Cat.—C. fragrans, Lindl.; B. Reg. 5, t. 404.—*Calycanthus præcox*, L.;—B. M. 13, t. 466;—Roxb. fl. ind. 2, p. 672.) 5 Japan. Fl. large, greenish-white, inside crimson spotted, fragrant, Dec., Jan. and Feb.; fr. 0.

- * *Chimonanthus præcox*, β . *grandiflorus*, Lindl. (C. fragrans, β . *grandiflorus*, Lindl.; B. Reg. 6, t. 451.) 5 Japan.

ORDER CX.—CUNONIACEÆ, R. Br.—Lindl. Nat. Syst. p. 161.

Trees or shrubs, by Lindl. referred to 13 or 14 genera. Of these, DC. pr. enumerates 31 species for S. America and the W. Indies; 6 for New Holland and the South Sea Islands; 1 for Madagascar; 1 for Bourbon; 2 for S. Africa; and 4 for Java. Of the latter, 2 belong to *Cunonia*; and 2 to *Arnoldia*. Properties little known.

- * *Weinmannia glabra*, L. fil. 5 W. Indies.



ORDER CXL.—SAXIFRAGACEÆ, DC.—Lindl. Nat. Syst. p. 162.

THE SAXIFRAGE TRIBE.

Shrubs or undershrubs, seldom trees, most frequently little elegant herbs, exclusive of *Parnassia*, referred by Lindl. to 28 genera. Of these, DC. pr. assigns about 75 species to Europe; 42 to N. America; 20 to Siberia; 6 to S. America; 5 to Japan; 3 to Caucasus; 3 to Melville Island; 3 to Greenland; 2 to the Levant; 2 to N. Africa; 2 to the Straits of Magellan; 1 to China; 1 to Senegal; 1 to Nubia; 1 to S. Africa; 2 to N. W. Africa; 1 to Madeira; 1 to Iceland; 1 to Spitzbergen; 1 to Dahuria; 1 to Altaï; and 1 to the Sandwich Islands. In the E. Indies have been discovered about 34 species, viz. 6 of *Hydrangea*, (Nepal, Java, Assam,) 1 of *Ciamitis*, (Java,) 1 of *Adamia*, (Nepal,) 21 of *Saxifraga*, (Nepal, Khassya Mountains, Peer Punjal, Kunawar,) 1 of *Chrysosplenium*, (Nepal,) 1 of *Tiarella*, (Nepal,) 1 of *Astilbe*, (Nepal,) and 2 of *Vahlia*, (Coast of Coromandel.) Properties of no importance.

HYDRANGÆA, L. (DC. 3, p. 13.)

1. *Hortensia*, DC. (*l. c.*;—*J. Grah. Cat. B. pl. p.* 84.—*H. opuloides*, Lam.—*H. hortensis*, Sm.;—*B. M.* 13, t. 438;—*Roxb. H. B. p.* 34.)
♂ China. Japan. Fl. largish, rose-coloured, C. S.; fr. 0.

ADAMIA, Wall. (DC. pr. 3, p. 16.)

1. *cyanea*, Wall. (*tent. fl. nep.* 46, t. 36;—*pl. as. rar.* 3, p. 213;—*B. M.* 58, t. 3046.) ♂ Nepal. Fl. middle-sized, blue. Has been ten years in the garden here, without flowering.

SAXIFRAGA, L. (DC. pr. 3, p. 17.)

1. *ligulata*, Wall. (DC. o. c. p. 38;—*B. M.* 62, t. 3406.) ♀ Deyrah-Dhoon. Kemaon. Fl. large, white with a tinge of rose. Has been cultivated here for more than five years, without flowering.

* *Vahlia oldenlandioides*, Roxb. ☉ Tranquebar.—*V. viscosa*, Roxb. ☉ Tranquebar.—*Hydrangea quercifolia*, Bartr.; *B. M.* 25, t. 975. ♂ Florida.

ORDER CXII.—CRASSULACEÆ, DC.—Lindl. Nat. Syst. p. 163.

THE HOUSE-LEEK TRIBE.

Succulent herbs and shrubs, by Lindl. referred to 22 genera. Of these DC. pr. ascribes to S. America and Mexico 9 species; to N. America 9; to Europe 63; to Siberia 9; to Caucasus 9; to Iberia 2; to Dahuria 2; to the Levant 2; to China 3; to Japan 1; to New Holland 2; to Arabia 3; to Sierra Leone 1; to Madeira 6; to the Canaries 14; to N. Africa 8; and to the Straits of Magellan 1. Adding 4 *Köllerias*, S. Africa exhibits 304 species, (*Harvey*); the E. Indies 27; viz. 1 of *Tillæa*?

(Kemaon, Mussooree,) 1 of *Umbilicus*, (Mussooree,) 7 of *Kalanchoe*, (Neelgherries, Nundydroog, Mysore, Bengal, Moluccas, Deyra-Dhoon, Taong-Dong,) 1 of *Bryophyllum*, (Moluccas,) and 17 of *Sedum*, (Himalayas.) Properties unimportant.

SEPTAS, L. (DC. pr. 3, p. 388.)

1. *capensis*, L. (DC. l. c.) 2. C. G. H. Introduced in 1841.

KALANCHOË, Adans. (DC. pr. 2, p. 394;—*W. and A. pr.* 1, p. 359.)

1. *acutiflora*, Haw. (DC. o. c. p. 395.—*Vereia acutiflora*, Andr.;—*B. Repos.* 10, t. 610.) 5 India. Fl. smallish, white, C. S.

2. *laciniata*, DC. (*pl. grass. t.* 100;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p.* 81.—*Cotyledon laciniata*, L.—*Roxb. fl. ind.* 2, p. 456.—*Rumph.* 5, t. 96.) *हिरसागुर Himsagur*. 5 Moluccas. Java. Mauritius. Bourbon. Hills about Dharwar. Pandooghur Fort, near Wye. Bengal. (Serampore, Patna.) Fl. smallish, bright-yellow, R. S.; fr. C. S.

3. *heterophylla*, W. and A. (*pr.* 1, p. 360.—*Cotyledon heterophylla*, *Roxb. fl. ind.* 2, p. 456.) 5 Mysore. In H. C. G. fl. C. S.; fr. H. S. (*Roxb.*)

4. *teretifolia*, Wall. (*pl. as. rar.* 2, t. 166.) 5 Taong-Dong. Fl. smallish, yellow, C. S.; fr. H. S.

5. *varians*, Haw. (*K. subamplectens*, Wall. *pl. as. rar.* 2, t. 167.) Fl. smallish, yellow, C. S.; Deyra-Dhoon, Sirmore.

BRYOPHYLLUM, Salisb. (DC. pr. 3, p. 395;—*W. and A. pr.* 1, p. 360.)

1. *calycinum*, Salisb. (DC. o. c. p. 396;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p.* 82;—*B. M.* 34, t. 1409;—*Wight. in Hook. bot. misc.* 3, p. 100, *suppl. t.* 31.—*Kalanchoe pinnata*, Pers.—*Cotyledon pinnata*, Lam.—*C. calyceulata*, Soland.—*C. calycina*, Roth.—*C. rhizophylla*, *Roxb. fl. ind.* 2, p. 456.) 5 Moluccas. Introduced into H. C. G. by Lady Clive, in 1799, and thence spread all over Bengal; about Serampore, it now forms a dense jungle. Fl. large, purplish-green, C. S.; fr. H. S.

* *Tillæa muscosa*, L.; E. B. 2, t. 116. © Watery places of Europe.—*T. peduncularis*, Sm. © Buenos Ayres.—*Bulliarda Vaillantii*, DC. © France.—*B. aquatica*, DC. © Denmark, Germany.—*Crassula capitellata*, L. fil. © C. G. H.—*Kalanchoe spathulata*, DC. 5 China.—*K. crenata*, Haw. (*Cotyledon crenata*, Vent.; *B. M.* 35, t. 1436.) 5 Sierra Leone.—*K. ceratophylla*, Haw. 5 China.—*K. floribunda*, W. and A. 5 Nundydroog.—*Pistorinia hispanica*, DC. © Spain. Barbary.—*Escheveria coccinea*, DC. (*Cotyledon coccinea*, Cav.; *B. M.* 52, t. 2572.) 5 Mexico.—*E. gibbiflora*, DC. *B. Reg.* 15, t. 1247. 5 Mexico.—*E. racemosa*, Hort. Clarem.; *B. M.* 64, t. 3570. 5 Mexico?—*Sedum anglicum*, Huds.; E. B. 3, t. 171. © Europe.—*S. villosum*, L.; E. B. 6, t. 394. © Europe.—*S. rubens*, DC. © S. Europe.—*S. caespitosum*, DC. © S. Europe.—*Sempervivum stellatum*, Sm. (*S. villosum*, Ait.; *B. M.* 43, t. 1809.) © Madeira.



ORDER CXIII.—AMYRIDACEÆ, Lindl. Nat. Syst. p. 165.

Fragrant resinous trees or shrubs, by Lindl. referred to 6 genera. Of these, according to DC. pr. and Spreng. syst., 36 species have been found in S. America, Mexico and the W. Indies; 1 in Florida; and 1 in Guinea. Only one species (*Amyris alata*, Spreng.) has been found in S. Africa, (*Harvey*); and 4 species of *Sabia* in Nepal and the Khassya Mountains.

"All the species of the genus *Copaifera* yield the *Balsam of Copaiva*; but it is not in all of them of equal quality. *Myrospermum peruiferum*, produces a fragrant resin in much use for burning as a perfume, and for medicinal purposes, called the *Balsam of Tolu*. Both it and the *Balsam of Peru* are also yielded, according to Ach. Richard, by *M. toluiferum*." (*Lindl.*)

SABIA, Colebr. (*Roxb. fl. ind. ed. Carey* 2, p. 308;—*G. Don's Mill. dict.* 2, p. 69.)

1. *lanceolata*, Colebr. (*Roxb. o. c. p.* 309;—*Trans. Linn. soc.* 12, p. 355, t. 14;—*G. Don's Mill. dict. l. c.*) L. 5 ∪ Khassya Mountains. Fl. small, greenish, purple dotted, very fragrant, May.
2. *limoniacea*, Wall. (*Cat.*) 5 ∪ Khassya Mountains. Introduced here in 1840.

* *Amyris maritima*, Jacq. 5 Jamaica. Cuba.—*A. sylvatica*, Jacq. 5 S. America. St. Domingo. St. Thomas.—*A. brasiliensis*, Spreng. 5 Brazil.—*A. Plumieri*, DC. 5 W. Indies. Produces a sort of Gum-elemi.—*A. pinnata*, H. B. and Kth. 5 Tropical S. America.—*A. bipinnata*, Moç. and Sessé. 5 Mexico.—*Spathelia simplex*, L.; B. Reg. 8, t. 670. 5 Jamaica.—*Tapiria guianensis*, Aubl. 5 Guiana.—*Myrospermum frutescens*, Jacq. 5 Bushy places at Carthage and St. Martha.—*M. pubescens*, DC. 5 Carthage. Bark filled with resin, of a very grateful smell and taste.—*M. peruiferum*, DC. 5 Peru. New Granada. Mexico.—*M. toluiferum*, A. Rich. 5 S. America, on the banks of the river Magdalena.—*Copaifera Beyrichii*, Hayne. 5 Brazil.—*C. guianensis*, Desf. 5 Guiana.—*C. Martii*, Hayne. 5 Brazil.—*C. Jacquiniiana*, Hayne. 5 Trinidad. Martinique.—*C. multijuga*, Hayne. 5 Brazil. Produces Copaiva-balsam in the greatest abundance. (*Mart.*)

ORDER CXIV.—ANACARDIACEÆ.—Lindl. Nat. Syst. p. 166.

THE CASHEW TRIBE.

Trees or shrubs, rarely climbing, abounding in a resinous, sometimes highly poisonous juice and by Lindl. placed under 36 genera, excluding *Lunanea*, DC. which according to Hooker, is a species of *Sterculia*. Of

these, according to DC. pr. Spreng. Syst. and B. Reg., 46 species have been discovered in S. America, Mexico and the W. Indies; 9 in N. America; 5 in S. Europe; 3 in China and Japan; 3 in Mogador; 2 in Syria; 2 in N. Africa; 1 in the Canaries; 1 in Arabia; 1 in Mauritius; and 2 in the South Sea Islands. Exclusive of 6 species, belonging to other orders, S. Africa exhibits 44 species, (Harvey.) In the E. Indies our materials only mention 53 Anacardiaceæ; viz. 2 species of *Anacardium*; 7 of *Semecarpus*; 2 of *Holigarna*; 6 of *Mangifera*; 7 of *Buchanania*; 2 of *Melanorrhæa*; 2 of *Stagmaria*; 1 of *Gluta*, (Java,) 2 of *Syndesmis*, (Penang, Tavoy,) 1 of *Cambessedea*, W. and A. (Burma,) 1 of *Pistacia*? (Lour.) 1 of *Pegia* (Shevaggery Hills,) 1 of *Solenocarpus*, (Courtallum,) 1 of *Coniogeton*, (Java,) 13 of *Rhus*, (Nepal, Tavoy, Peninsula of India,) 1 of *Phlebociton* (Khasya Mountains,) 1 of *Odina*, (all over India,) 1 of? *Triceros*, (Lour.) 1 of? *Rumphia*, L. (Malabar,) and 1 of? *Thysanus*, (Lour.) "Wallich's list is very imperfect as regards this order, including only about 25 species. Blume has 23 for Java, excluding Zanthoxylaceæ which he includes in the order." (Wight.) Properties under the several species.

A. ANACARDIÆÆ, R. Br.

(DC. pr. 2, p. 62.)

ANACARDIUM, Rottb. (DC. l. c.;—W. and A. pr. 1, p. 168.)

1. *occidentale*, L. (DC. l. c.;—W. and A. l. c.;—Roxb. fl. ind. 2, p. 312;—J. Grah. Cat. B. pl. p. 40.—*Acajuba occidentalis*, Gärtn. fr. 1, p. 192, t. 40, f. 2.—*Cassuvium pomiferum*, Lam.;—Rheed. 3, t. 54.—*Rumph.* 1, t. 69.) हिजिलि बॉदाम *Hijili-badam*. 5 W. Indies. Mexico. S. America. Moluccas. Malabar and Parell Hills. Bombay. Salsette. Penang. Tavoy. Chittagong. Fl. smallish, greenish-red, Feb. and March; fr. R. S. The *Cashew-tree* annually exudes from 5-12 pounds weight of a fine semitransparent gum, like gum-arabic, and not inferior to it in virtue or quality. From the body of the tree is procured by tapping or incision a *milky juice*, which will stain linen of a deep black that cannot be washed out again. The *receptacle* of the fruit has an agreeable, acidulous, subastringent flavour, and is eaten like an apple. The juice expressed from it and fermented, yields a pleasant wine, and distilled, affords a spirit, far exceeding arrack or rum. The *Cashew-nut* springs from one end of the receptacle, and has two shells, between which there is a thick inflammable oil. This is very caustic, will raise blisters on the skin, and has often been very troublesome to those who have incautiously put the nuts into their mouths to break the shell. It has been used successfully in eating off ring-worms, cancerous, ulcers and corns, but it ought to be applied with caution. The *kernel*, when fresh, has a most delicious taste, and abounds with a sweet milky-juice. When older, it is usually roasted and then eaten as a moderately good substitute for almonds. (G. Don.)



SEMECARPUS, L. (*DC. pr. 2, p. 62*;—*W. and A. 1, p. 168*.)

1. *Anacardium*, L. (*DC. l. c.*;—*γ. W. and A. l. c.*;—*Roxb. fl. ind. 2, p. 83*;—*Corom. 1, t. 12*;—*J. Grah. Cat. B. pl. p. 41*.—*Anacardium latifolium*, *Lam. ill. t. 208*.—*A. officinarum*, *Gärtn. fr. 1, p. 191, t. 40, f. 1*.) **ভেলা** *Bhela*. L. 5 Coromandel. Common throughout the Concans, and in Goozerat, (whence, according to Dr. Gibson, a considerable quantity of nuts is exported.) Berar. Silhet. Assam, extending to Deyra-Dhoon and Kyarda. Fl. small, green, May, June and July; fr. Jan. and Feb. The wood of the *Marking-nut Tree* is of no use, partly on account of its softness, and partly because its abundance of acrid juice renders it dangerous to work. *Bark* mildly astringent, giving out in decoction a deep colour, which dyes brown of various shades. Wounded, it yields a dirty looking, brownish, soft gum, slowly dissolving in the mouth without much taste. The *receptacle* of the fruit roasted in ashes, is eaten by the natives, and tastes like roasted apples, whereas raw, it is astringent and acrid, leaving a painful sensation for some time on the tongue. The *green nuts*, well-pounded into a paste, make good bird-lime. The pure black, *acrid juice* of the nuts is employed by the natives to remove rheumatic pains, aches and sprains, though in tender constitutions it often produces inflammation, doing much more harm than good; but in general the rubbing on of the oil has not this effect, and is then an efficacious remedy. It is generally employed to mark all sorts of cotton-cloth. By a mixture of quick lime and water, the colour is improved, prevented from running, and fixed. (*Roxb.*)
 2. *Cassuvium*, *Roxb. (fl. ind. 2, p. 85*.—*Cassuvium Silvestre*, *Rumph. 1, t. 70*.) 5 Moluccas. Fl. small, greenish-yellow. In H. C. G. fl. H. S.; fr. R. S. (*Roxb.*) *Tender leaves* eaten at Amboina. The acrid juice of the stem employed to varnish shields, canes, &c. (*Rumph.*)
 3. *cuneifolius*, *Roxb. (fl. ind. 2, p. 86*;—*J. Grah. Cat. B. pl. p. 41*.) L. 5 Lanowlee Grove, Kandalla. Jungles about Parr. Hindoosthan. Nepal. Introduced into H. C. G. in 1808, but had not fl. up to 1814.
 4. *acuminatus*, *Wall. (Cat.) 5 Chittagong*. Introduced here five years ago, but has not fl.
 5. *odoratus*, *Wall. Royal garden at Ceylon*.
 6. *humilis*, *Wall. Prome*.
- HOLIGARNA, *Roxb. (DC. pr. 2, p. 63*;—*W. and A. pr. 1, p. 169*.)
1. *longifolia*, *Roxb. (Corom. 3, t. 282*;—*fl. ind. 2, p. 80*;—*DC. l. c.*;—*W. and A. l. c.*;—*J. Grah. Cat. B. pl. p. 41*.—*Rheed. 4, t. 9*.) L. 5 Travancore. Malabar. Hilly wooded parts of the Concan. Chittagong. Assam. Fl. small, whitish, January; fr. May and June. *Juice* of the wood, very acrid, employed in Malabar for varnishing shields. (*Buch.*)
 2. *racemosa*, *Roxb. (fl. ind. 2, p. 82*;—*W. and A. pr. 1, p. 169, annot.*) L. 5 Chittagong. Silhet. Assam. Fl. small, green, Feb. and March; fr. June and July. *Juice* of the wood acrid.



MANGIFERA, L. (DC. pr. 2, p. 63;—W. and A. pr. 1, p. 169.)

1. *indica*, L. (DC. l. c.;—W. and A. o. c. p. 170;—Roxb. fl. ind. 1, p. 641;—ed. Carey. 2, p. 435;—J. Grah. Cat. B. pl. p. 41.—M. montana, Heyne.—M. domestica, Gärtn. fr. 2, p. 95, t. 100.—Rheed. 4, t. 1, 2.—Rumph. 1, t. 25.) *आम्र* Am. L. 5 All over India, thriving northwards up to Nahn, alt. 4000 f., but its fruit does not ripen there. Fl. small, greenish-yellowish, Feb. and March; fr. May, June and July. Wood dull grey, porous, pretty durable if kept dry, but soon decaying by exposure to wet. In very large old trees, it acquires a light chocolate colour towards the centre of the trunk and larger branches, and is there hard, closer grained, and much more durable. From wounds in the bark issues a soft, reddish-brown gum-resin, hardening by age, and then much resembling Bdellium. Fruit too well known to require more than to be mentioned. Kernels large, seemingly containing much nourishment, but only used during times of scarcity and famine, when they are boiled in the steam of water and eaten. (Roxb.)
2. *sylvatica*, Roxb. (fl. ind. 1, p. 644;—ed. Carey. 2, p. 438;—J. Grah. B. pl. p. 41.) L 5 Khassya Mountains. Assam. Near Kennerly Caves, Bombay. Fl. small, white, tinged with rose, Sept. and Oct.; fr. Feb. and March. (Roxb.) Fruit eaten by the natives, where the tree grows, though by no means so palatable as even a bad domestic mango; also dried and kept for medicinal purposes. (Roxb.)
3. *Gandaria*, Roxb. (H. B. p. 18.) Moluccas. Introduced into H. C. G. in 1803, but had not fl. up to 1814.

CAMBESSEDEA, W. and A. (pr. 1, p. 170, annot.;—not Kth.)

1. *oppositifolia*, W. and A. (Mangifera oppositifolia, Roxb. fl. ind. 1, p. 640;—ed. Carey. 2, p. 434;—J. Grah. Cat. B. pl. p. 41.) 5 Rangoon. Fl. small, greenish sulphur, Feb. and March; fr. June and July. Wood reddish, hard, close-grained, and said to be durable. Fruit universally eaten in Burma. (Roxb.)

BUCHANANIA, Roxb. (DC. pr. 2, p. 63;—W. and A. pr. 1, p. 169.)

1. *latifolia*, Roxb. (fl. ind. 2, p. 385;—DC. o. c. p. 64;—W. and A. l. c.;—J. Grah. Cat. B. pl. p. 41.—Spondias elliptica, Rottl.) L. 5 Mountains of Coromandel. Common in the Barria jungles, east of Baroda. Jungles near Belgaum. Salsette. Moulmein. Hurdwar. Oude. Valleys of Deyra and Kyarda. Fl. small, greenish-white, Feb. and March; fr. R. S. Wood used for various purposes. Kernels a general substitute for almonds amongst the natives, and sold in the bazars. (Roxb.)
2. *angustifolia*, Roxb. (fl. ind. 2, p. 386;—Corom. 3, t. 262;—DC. pr. 2, p. 64;—W. and A. pr. 1, p. 169;—Wight. icon. 1, t. 101;—J. Grah. Cat. B. pl. p. 41.—Spondias simplicifolia, Rottl.—Mangifera axillaris, Lam.—Cambessedea, Kth.) 5 Mountains of Coromandel. Adjunta jungles. Fl. small, greenish, May and June; fr. Feb. and March.



3. *lanceaefolia*, Roxb. (*H. B. p.* 32.—*B. lancifolia*, Roxb. *fl. ind.* 2, p. 386;—not *B. lanceolata*, Wight.) L. 5 Chittagong. Introduced into H. C. G. in 1810, but had not fl. up to 1814. *Fruit* eaten by the natives. (Roxb.)

MELANORRHEA, Wall. (*pl. as. rar.* 1, p. 9;—*G. Don's Mill. dict.* 2, p. 67.)

1. *usitatissima*, Wall. (*o. c. t.* 11, 12;—*G. Don. l. c.*) L. 5 *Varnishing-tree of the Burmese*. Prome. Martaban. Moulmein. Tavoy. Has been in the garden here for five years, but has not flowered yet. This is identical with the majestic *Khen* or varnish-tree of Manipur, which perhaps does not differ from the varnish-tree of the Chinese. The varnish is procurable in great quantities from Manipur, where it is used for painting river-craft, and for varnishing vessels destined to contain liquid. The drug is conveyed to Silhet by the merchants. On being handled it occasions extensive crysipelatous swellings, attended with pain and fever, but never of long duration. In the neighbourhood of Prome, a considerable quantity of varnish is extracted from the tree, but very little at Martaban. Short joints of a thin sort of bamboo, sharpened at one end, and shut up at the other, are inserted in a slanting direction into holes made in the trunk and principal branches, and left there for 24 or 48 hours; after which they are removed, and their contents emptied into a basket previously varnished over. Sometimes a hundred bamboos may be seen sticking into the tree at once during the collecting season, which lasts as long as the tree is destitute of leaves, namely from January until April, and they are renewed as long as the juice will flow. Every article of household destined to contain liquid food is lacquered over with this juice in its pure state or variously coloured, after having previously been prepared with calcined bones. The process of drying is the most difficult part, being effected in a very slow and gradual manner by the varnished articles being placed in subterranean vaults for several months. The drug is also used as size-glue in the process of gilding; nothing more being required than to besmear the surface of the article to be gilded with it, and immediately to apply the gold leaf. The beautiful Pali writing of the religious order of the Burmese on ivory, palm leaves, or metal, is entirely done with this varnish in its native and pure state. (Wall.)

PISTACIA, L. (*DC. pr.* 2, p. 64.)

1. *vera*, L. (*DC. l. c.*) 5 Syria, from whence it was introduced into Italy by the emperor Vitellius, when he was legate in that province. It is now found throughout the whole region of the Mediterranean. Fl. small, brownish green. Has been introduced into H. C. G. Fl. ? Produces the *Pistachia* or *Pistach nuts*.
2. *Terebinthus*, L. (*DC. pr.* 2, p. 64.) *Venetian or Chian Turpentine-tree*. 5 S. Europe. N. Africa. The resin of this tree is the Chian or

Cyprus-turpentine, generally preferred for medical use to what is obtained from the fir-tribe. Has been introduced into H. C. G. Fl. ?

3. *Lentiscus*, L. (DC. pr. 2, p. 65;—B. M. 45, t. 1967.) कून्डू रूमी Koondoo-roomee. रूमी मस्तुकि Roomee-mastuki. Mastick-tree. 5 S. Europe. N. Africa. Fl. small, green. Produces the resin, usually called *Gum Mastick*. Has been introduced into H. C. G. Fl. ?

The first of these three species, under the name of *P. officinarum*, was introduced into H. C. G. in 1806, but had not fl. up to 1814.

B. RHODIÆ.

SUMACHINÆ, (DC. pr. 2, p. 66.)

RHUS, L. (DC. l. c.;—W. and A. pr. 1, p. 172.)

1. *glabra*, L. (DC. pr. 2, p. 67.) 5 N. America, from New England to Carolina, common in fields. Introduced into H. C. G. before 1814. Fl. ?
2. *succedanea*, L. (DC. pr. 2, p. 68;—Roxb. fl. ind. 2, p. 98.) 5 Japan. Kemaon. Nepal. Fl. small, yellow, Dec. Jan. Feb. and March; fr. March. (Roxb.)
3. *vernicifera*, DC. (pr. 2, p. 68.—R. vernix, L. mat. med. 151;—Thunb. jap. p. 121; not of others. R. juglandifolia, Wall.;—D. Don. pr. fl. nep. p. 248;—not Willd.) 5 Japan. Kemaon. Nepal. Gurhwal. In H. C. G. Fl. ? This is the *Japan varnish-tree*, which is said to be equally poisonous with the next species.
4. *venenata*, DC. (pr. 2, p. 68.—R. Vernix, L. sp. p. 380.—Toxicodendron pinnatum, Mill. dict. No. 5.) 5 N. America, from Canada to Carolina in low copses, where it is called *Poison Sumach* or *Poison Wood*. Introduced into H. C. G. in 1801, but had not fl. up to 1814. The whole tree is in a high degree poisonous, and the poison is communicated by touching or smelling any part of it. (Mill. dict.)
5. *Bucki-amela*, Roxb. (fl. ind. 2, p. 99.—R. Amela, G. Don. pr. fl. nep. p. 248.—R. semialata, β . Roxburghii, DC. pr. 2, p. 67.) 5 Kemaon. Shreenagur. Fl. small, greenish-yellow, Aug. and Sept.; fr. C. S.
6. *copallina*, L. (DC. pr. 2, p. 68;—Jacq. hort. schönb. t. 341.) 5 N. America, in dry fields and woods, particularly in a sandy soil, from New Jersey to Carolina. Introduced into H. C. G. before 1814. Fl. ?
7. *radicans*, L. (DC. pr. 2, p. 69;— β . vulgaris, B. M. 43, t. 1806.—Toxicodendron vulgare and volubile, Mill. dict.) 5 N. America, from Canada to Georgia, common in all woods, fields, and along fences. Introduced into H. C. G. in 1807, but had not fl. up to 1814. Like the preceding species it is poisonous to some persons, but in a less degree.
8. *Toxicodendron*, L. (DC. pr. 2, p. 69.—Toxicodendron pubescens, Mill. dict.) 5 N. America, creeping upon walls or trees. Introduced into H. C. G. before 1814. Fl. ?



9. *lycida*, L. (DC. pr. 2, p. 69;—Roxb. H. B. p. 22;—J. Grah. Cat. B. pl. p. 42.) 5 C. G. H. Has not fl. here, though cultivated for many years.
10. *paniculata*, Wall. (Cat.—G. Don's. Mill. dict. 2, p. 73.) 5 Burma. Fl. small, pale-green, Nov.; fr. H. S.
11. *laevigata*, L. (DC. pr. 2, p. 70.—R. elongata, Jacq. hort. schönbr. t. 344.) 5 C. G. H. Introduced into H. C. G. in 1799, but had not fl. up to 1814.
12. *parviflora*, Roxb. (fl. ind. 2, p. 100;—DC. pr. 2, p. 70;—J. Grah. Cat. B. pl. p. 42.) 5 Nepal. Kemaon. Fl. minute, greenish-yellowish, May, June and July; fr. 0.
13. *zanzibariensis*, Bojer. 5 Zanzibar. Introduced in 1840.
14. *caustica*, Hook. (Bot. Beech. p. 15, t. 7;—G. Don's Mill. dict. 2, p. 75.) 5 Chili. Has been introduced into H. C. G. Fl. ?
- PHLEBOCHITON, Wall. (Transact. of med. phys. soc. Calcutta, 7th vol. 2d part, p. 230.)
1. *extensus*, Wall. (l. c. p. 231.—Robergia hirsuta, Roxb. fl. ind. 2, p. 455 ?) L. 5 Khassya Mountains. Fl. small, white, Feb.; fr. April. Bark and tender parts aromatic.
- ODINA, Roxb. (W. and A. pr. 1, p. 171.)
1. *Wodier*, Roxb. (fl. ind. 2, p. 293;—W. and A. l. c.;—Royle. ill. t. 31, f. 2;—Wight. icon. 1, t. 60;—J. Grah. Cat. B. pl. p. 42.) जिडम Jiol. L. 5 Coromandel Mountains, Malabar Hill, Bombay, Elephanta. Pretty common on the Ghauts. Bengal, (Serampore.) Hindoosthan, northwards to the valleys of Deyra and Kyarda. Fl. small, greenish yellowish, externally purplish, Feb. and March; fr. Sept. and Oct. Wood of old trees close-grained, of a deep reddish mahogany colour towards the centre. This coloured part is serviceable for many purposes, and looks well. From wounds in the bark issues a gum which, when dry, is like pieces of dry-glue. (Roxb.)
2. *SCHINUS*, L.
1. *terebinthifolius*, Raddi. (DC. 2, p. 74.) 5 Brazil.

- * *Anacardium Rhinocarpus*, DC. L. 5 St. Martha, Tobago, New Granada.—*Semecarpus Grahamii*, Wight. icon. 1, t. 235. L. 5 The Ghauts.—*Mangifera fatida*, Lour. Rumph. 1, t. 28. L. 5 Cochin China, Moluccas, Sumatra, Penang.—*M. glauca*, Bl. 5 Moluccas.—*M. laxiflora*, Desv. 5 Mauritius.—*M. quadrifida*, Jack. 5 Sumatra.—*M. caesia*, Jack. 5 Sumatra.—*Buchanania intermedia*, Wight. icon. 1, t. 81. 5 Naggaree Hills, near Madras.—*B. lonchophylla*, (B. lanceolata, Wight. icon. 1, t. 237, not lanceifolia, Roxb.)—*Melanorrhæa glabra*, Wall. pl. as. rar. 3, t. 283. 5 Tavoy.—*Stagmaria verniciflua*, Jack. L. 5 Sumatra, Borneo.—*Gluta Banghas*, L. 5 Java.—*Syndesmis elegans*, Wall. 5 Penang.—*Pistacia mexicana*, H. B. and Kth. 5 Mexico.—*Astronium graveolens*, Jacq. 5 Carthage, St. Martha.—*Comocladia*

ilicifolia, Swz. 5 W. Indies.—*C. acuminata*, Moç. and Sessé. 5 Mexico.—*C. dentata*, Jacq. 5 Cuba. St. Domingo.—*C. mollissima*, H. B. and Kth. 5 Mexico.—*C. integrifolia*, Jacq. 5 Jamaica.—*Cyrtocarpa procera*, H. B. and Kth. 5 New Spain.—*Picramnia Antidesma*, Swz. 5 Jamaica.—*P. Tessonia*, DC. 5 Mexico.—*P. Tariri*, DC. 5 Guiana.—*Pegia Colebrookiana*, Wight icon. 1, t. 236. 5 Shevaggery hills.—*Solenocarpus indicus*, W. and A. Courtallum.—*Coniogeton arborescens*, Bl. 5 Java.—*Rhus juglandifolia*, Willd. 5 New Granada.—*R. Cavanillesii*, DC. 5 Mexico.—*R. decipiens*, W. and A. Burm. zeyl. t. 45; Wight. ill. 1, t. 75. Ceylon. Peninsula of India.—*R. mysorensis*, Heyne. Mysore.—*Mauria simplicifolia*, H. B. and Kth. 5 S. America.—*Duvaua ovata*, Lindl.; B. Reg. 19, t. 1568. 5 Chili.—*D. dependens*, DC.; B. Reg. 19, t. 1573. 5 Chili.—*D. latifolia*, Gillies; B. Reg. 19, t. 1580. 5 Chili.—*Schinus Molle*, L.; B. M. 61, t. 3339. 5 Brazil.

ORDER CXV.—QUERCACEÆ, (Corylaceæ, Mirb.—Lindl. Nat. Syst. p. 170.)

THE NUT TRIBE.

Trees or shrubs, containing among them the Oak, the Hazel Nut, the Beech, the Hornbeam and the Spanish Chestnut, and by Lindl. referred to 8 genera. Of these, Spreng. syst. enumerates 37 species from N. America; 34 from S. America and Mexico; 21 from Europe; 6 from Japan; 3 from the Levant; 2 from Caucasus and Tauria; 2 from China; 1 from N. Africa, with several others common to Europe and the Orient; and 1 from Terra del Fuego. In the E. Indies, according to our materials, have been discovered 60 species, viz. 2 of *Carpinus*; 2 of *Corylus*; 9 of *Castanea*; 46 of *Quercus*; and 1 of *Lithocarpus*;—most of them from Nepal, Kemaon, the Khassya Mountains, Rungpore, Chittagong, Assam, Darjeeling, Amherst, Penang, Singapore, and Taong-Dong. With Blume's plants of this order we are not acquainted.

CASTANEA, Tournef. (Spreng. syst. 3, p. 761, No. 3123;—Endl. gen. pl. 1, p. 275.) *Chestnut*.

1. *indica*, Roxb. (fl. ind. 3, p. 643;—Wall. pl. as. rar. 2, p. 105;—Wight. icon. 2, t. 417.) 5 Chittagong. Khassya and Nepal Mountains. In H. C. G. fl. Dec.; fr. Sept. Kernels eaten by Europeans and Natives, and may be compared to indifferent filberts. (Roxb.)
2. *vesca*, Gärtn. (fr. 1, p. 181, t. 352;—Spreng. syst. 3, p. 856.—Fagus *Castanea*, L.; E. B. 13, t. 886;—Roxb. H. B. p. 68.) *Common Chestnut Tree*. S. Europe. N. America. Introduced into H. C. G. in 1799, but had not fl. up to 1814.



3. *chinensis*, Spreng. (*syst.* 3, p. 856.—*C. pumila*, Roxb. *fl. ind.* 3, p. 644.—*Fagus Castanea*, Lour.; not L.) 5 China. Cochin China. Introduced into H. C. G. in 1807, but had not fl. up to 1814.
 4. *Roxburghii*, Lindl. (*Wall. pl. as. rar.* 2, p. 106.—*Quercus castanicaarpa*, Roxb. *fl. ind.* 3, p. 640.) L. 5 In H. C. G. fl. July and Aug.; fr. Nov. and Dec. (Roxb.)
 5. *tribuloides*, Lindl. (*Quercus tribuloides*, Sm.—*Q. ferox*, Roxb. *fl. ind.* 3, p. 639;—*Wight. icon.* 1, t. 218.) L. 5 Khassya and Nepal Mountains. Has been introduced into H. C. G. Fl. ?
- QUERCUS, L. (*Spreng. syst.* 3, p. 761, No. 3124;—*Endl. gen. pl.* p. 274.)
Oak.
1. *Phellos*, L. (*Spreng. o. c.* p. 857;—*Catesb. car.* 1, p. 16, t. 16;—*Roxb. H. B.* p. 68.) 5 N. America. Introduced into H. C. G. in 1800, but had not fl. up to 1814.
 2. *fenestrata*, Roxb. (*fl. ind.* 3, p. 633;—*Wight. icon.* 1, t. 219.) L. 5 Khassya Mountains. In H. C. G. fl. April and May; fr. Sept. and Oct. (Roxb.) Wood of good quality.
 3. *lanceifolia*, Roxb. (*fl. ind.* 3, p. 634;—*Wight. icon.* 1, t. 212.) L. 5 Garrow-hills, Assam. In H. C. G. fl. Dec.; fr. Oct. (Roxb.) Wood light coloured, like the English oak, but harder, and reckoned one of the most durable timbers where it grows. (Roxb.)
 4. *lappacea*, Roxb. (*fl. ind.* 3, p. 637;—*Wight. icon.* 1, t. 220.) Khassya Mountains. L. 5. In H. C. G. fl. Dec. and January; fr. Aug. and Sept. (Roxb.) Wood strong, in colour like that of the common oak, but harder and more close-grained. (Roxb.)
 5. *turbinata*, Roxb. (*fl. ind.* 3, p. 636;—*Wight. icon.* 1, t. 221, f. 1.) L. 5 Chittagong. In H. C. G. fl. April and May; fr. Sept. and Oct. (Roxb.) Wood only used for fuel. (Roxb.)
 6. *spicata*, Buch. (*in Rees. cyclop.*;—*Wall. pl. as. rar.* 1, t. 46;—not Humb.—*Q. squinata*, Roxb. *fl. ind.* 3, p. 638;—*Wight. icon.* 1, t. 213.) L. 5 Garrow-hills. Khassya Mountains. Nepal. Chittagong. In H. C. G. fl. Feb.; fr. Oct. (Roxb.) Wood lighter-coloured than English oak, but equally close-grained, and apparently as strong. (Roxb.)
 7. *semiserrata*, Roxb. (*fl. ind.* 3, p. 641;—*Wight. icon.* 1, t. 211.) L. 5 Garrow-hills, Khassya Mountains. In H. C. G. fl. Jan., Feb. and March; fr. Aug. and Sept. (Roxb.)
 8. *prinodes*, (*Q. serrata*, Roxb. *fl. ind.* 3, p. 641;—not Thunb. *fl. jap.* p. 176.) L. 5 Garrow-hills. In H. C. G. fl. Sept. and Oct. Timber useful. (Roxb.)
 9. *pedunculata*, Willd. (*Spreng. syst.* 3, p. 864.—*Q. Robur*, L.;—*E. B.* 19, t. 1342;—*Roxb. H. B.* p. 68.) Common British Oak. L. 5 Europe. Introduced into H. C. G. in 1798, but had not fl. up to 1814.

* *Castanea martabanica*, Wall. *pl. as. rar.* 2, t. 107. 5 Amherst.—*C. sphaerocarpa*, Lindl. (*Quercus armata*, Roxb.) L. 5 Khassya Mountains.



Assam.—*Quercus velutina*, Wall. pl. as. rar. 2, t. 150, b Tavoy.—*Q. lucida*, Roxb. b Penang.—*Q. muricata*, Roxb. L. b Penang.—*Q. acuminata*, Roxb. L. b Chittagong.—*Q. glomerata*, Roxb. L. b Penang.—*Q. hirsuta*, Lindl. b Silhet.—*Q. magnoliaefolia*, Née. Mexico.—*Q. lanceolata*, Humb. Mexico.—*Q. mexicana*, Humb. Mexico.—*Q. salicifolia*, Née. Mexico.—*Q. elliptica*, Née. Mexico.—*Q. ambigua*, Humb. Mexico.—*Q. stipularis*, Humb. Mexico.—*Q. xalapensis*, Humb. Mexico.—*Lithocarpus javensis*, Bl. Java.—*Synædryx ossea*, Lindl. China.

ORDER CXVI.—BETULACEÆ.—Lindl. Nat. Syst. p. 171.

THE BIRCH TRIBE.

Fine timber trees, or shrubs, referred to 2 genera. Of these, Spreng. syst. assigns 12 species to N. America; 8 to Europe; 2 to Siberia; 2 to S. America and Mexico; and 1 to Terra del Fuego. In the E. Indies have been discovered 11 forms, viz. 8 of *Betula*; and 3 of *Alnus*; all natives of Nepal. 1 (or perhaps 2) species of *Alnus* has been found in S. Africa. (Harvey.)

"Their bark is astringent, and sometimes employed as a febrifuge; but they are chiefly valued for their importance as ornaments of a landscape. Their wood is often light, and of inferior quality, but that of the Black Birch of N. America is one of the hardest we know." (Lindl.)

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- * *Betula nitida*, Don. Nepal.—*B. alnoides*, Buch. Nepal.—*B. utilis*, Don. Nepal.—*B. acuminata*, Wall. Silhet.—*Alnus jorullensis*, Kth. Mexico.—*A. ferruginea*, Kth. New Granada.

ORDER CXVII.—SCEPACEÆ.—Lindl. Nat. Syst. 1. p. 171.

Trees, of the following 3 genera containing 4 species. Properties nearly unknown.

LEPIDOSTACHYS, Wall. (Cat.—Lindl. Nat. Syst. p. 441. No. 21;—Endl. gen. pl. 1, p. 288.)

1. *Roxburghii*, Wall. (Cat.—Lindl. l. c.—*Alnus dioica*, Roxb. fl. ind. 3, p. 580.) L. b Khassya Mountains. In H. C. G. fl. March and April; fr. Sept. and Oct. (Roxb.) Timber hard, and used for various economical purposes. (Roxb.)

-
- * *Scepa villosa*, Lindl. Moulmein. Banks of the Saluen.—*S. stipulacea*, Lindl. Burma.—*Hymenocardia punctata*, Wall. Cat. Moulmein.



ORDER CXVIII.—HENSLOVACEÆ.—Lindl. Nat. Syst. p. 173.

Two trees, natives of tropical India, of unknown properties form this family.

- * *Henslowia pubescens*, Wall. pl. as. rar. 3, t. 221. Penang.—*H. glabra*, Wall. Cat. Silhet.

ORDER CXIX.—TREWIACEÆ, Lindl. Nat. Syst. p. 174.

Consists of a couple of trees, natives of tropical India.

TREWIA, L. (*Spreng. syst.* 3, p. 895, No. 3195.)

1. *nudiflora*, Spreng. (*syst.* 3, p. 906;—*Roxb. fl. ind.* 3, p. 837;—*J. Grah. Cat. B. pl.* p. 185.—*Tetragastris ossea*, *Gürt. fr.* 2, p. 130, t. 109, f. 5.—*Rottlera indica*, *Willd. Gott. diar. hist. nat.* 1, p. 8, t. 3.—*Rheed.* 1, t. 42.) *भिटुकी Pitulee*. L. 5 Coromandel. Parell Hill, Bombay. Common in the jungle between Nagotnah and the Pass leading to Judapore. Bengal, (Serampore.) Fl. small, whitish-greenish, H. S.; fr. R. S. Wood soft and of little value.
2. *atroviridis*, Wall. 5 Penang.

ORDER CXX.—URTICACEÆ, Endl.—Lindl. Nat. Syst. p. 175.

THE NETTLE TRIBE.

Trees, shrubs or herbs, often lactescent, by Gaudichaud referred (adding *Lepurandra*, Nimmo.) to 66 genera. Of these, Spreng. syst. enumerates 142 species from S. America, Mexico and the W. Indies; 20 from New Holland and the South Sea Islands; 18 from N. America; 18 from Mauritius and Bourbon; 12 from Arabia; 13 from Europe; 5 from China; 5 from Japan; 5 from Guinea; 4 from the Canaries; 3 from N. Africa; 3 from the Straits of Magellan; 2 from the Levant; 1 from Persia; 1 from Siberia; 1 from Madagascar; and 1 from Patagonia. Adding 1 *Laurophyllus*, 21 species have been discovered in S. Africa, (*Harvey*.) and in the E. Indies, according to Spreng. syst. *Roxb. fl. ind.* Wall. Cat. and Royle. ill. 298, viz. of *Urtica* 59; *Böhmeria* 11; *Procris* 21; *Parietaria* 1; *Cannabis* 1; *Antiaris* 1; *Conocephalus* 2; *Morus* 13; *Broussonetia* 1; *Ficus* 167; *Lepurandra* 1; *Dorstenia*? 1; *Artocarpus* 14; *Batis* 2; *Epicarpurus* 1; and *Trophis* 2. Properties under the different species.

A. URREEÆ, Gaudich.

(*Lindl. Nat. Syst.* p. 177.)

URTICA, L. (*Spreng. syst.* 3, p. 760. No. 3099;—*Endl. gen. pl.* 1, p. 283.)
Nettle.

1. *smilacifolia*, Wall. MSS. 5 Native place? Fl. minute, greenish, C. S.

2. *scabrella*, Roxb. (*fl. ind.* 3, p. 581;—*Spreng. syst.* 3, p. 837.) ५ Chittagong. Silhet. Assam. Fl. small, greenish, Aug. and Sept.; fr. Nov. and Dec. Harsh to the touch, but does not sting. (*Roxb.*)
3. *macrostachya*, Wall. (*Cat.*) ५ Nepal. Fl. small, greenish, C. S.; fr. H. S.
4. *penduliflora*, Wall. (*Cat.*) ५ Nepal. Fl. small, pale-greenish, C. S.; fr. H. S.
5. *viminea*, Wall. (*Cat.*) ५ Assam. Nepal. Fl. small, greenish, C. S.; fr. H. S.
6. *blanda*, Wall. MSS. ५ Native place? Fl. small, greenish, C. S.; fr. H. S.
7. *parviflora*, Roxb. (*fl. ind.* 3, p. 581.) ५ Rohilkund. Fl. minute, green, H. S.
8. *tuberosa*, Roxb. (*fl. ind.* 3, p. 583.—*Rumph.* 6, t. 12, f. 2.) চন্দর বুলী *Chundur-moollee*. ५ Moluccas. Bengal, (Serampore.) Fl. very small, greenish, R. S.; fr. C. S. *Roots* nutritious, eaten by the natives raw, boiled, or roasted. (*Roxb.*)
9. *dioeca*, L. (*Spreng. syst.* 3, p. 839;—*E. B.* 25, t. 1750;—*Roxb. H. B.* p. 67.) ५ Europe. Asia. N. America. Fl. small, green, C. S.; fr. H. S.
10. *urens*, L. (*Spreng. syst.* 3, p. 840;—*E. B.* 18, t. 1236;—*Roxb. H. B.* p. 67.) ५ Europe. Asia. N. America. Fl. small, whitish, C. S.; fr. H. S.
11. *pilulifera*, L. (*Spreng. syst.* 3, p. 840;—*E. B.* 3, t. 148.) ५ England. S. Europe. Middle Asia. Fl. small, whitish, C. S.; fr. H. S.
12. *suffruticosa*, Roxb. (*fl. ind.* 3, p. 584.) ५ Sumatra. Fl. small, greenish-yellow, R. S.; fr. C. S.
13. *decumana*, Rumph. (*Amb.* 6, t. 20, f. 1;—*Roxb. fl. ind.* 3, p. 587.) ५ Moluccas. Fl. small, greenish, R. and C. S. (*Roxb.*)
14. *pulcherrima*, Roxb. (*fl. ind.* 3, p. 588.) ५ Chittagong. Silhet. Goalpara. Fl. small, greenish, R. S.; fr. C. S.
15. *bicolor*, Roxb. (*fl. ind.* 3, p. 589.) ५ Mountains of Bareilly. In H. C. G. fl. R. S. (*Roxb.*)
16. *nivea*, L. (*Spreng. syst.* 3, p. 843.—*U. tenacissima*, *Roxb. fl. ind.* 3, p. 590.—*Rumph.* 5, t. 79, f. 1.) ५ Sumatra. Moluccas. China. Cochiu China. Japan. Mauritius. Silhet. Assam. Fl. small, greenish-yellow, Oct. and Nov. *Bark* abounding in fibres of very great strength and fineness. (*Roxb.*) To procure them the young shoots are cut down, dried and beaten, after which the rind is stripped off. (*Marsden.*)
17. *crenulata*, Roxb. (*fl. ind.* 3, p. 591; not Pers.) ५ Khassya Mountains. Fl. small, greenish, latter part of R. S. This plant stings dreadfully. Leschenault de la Tour (*Mem. Mus.* 6, p. 362,) happened slightly to touch with his fingers one of its leaves in H. C. G. The consequence was intolerable pain, without any swelling, extending to the armpit, and subsequently producing frequent sneezing, copious



running from the nose, and a contraction of the jaws. The pain abated somewhat after the lapse of two days, but returned in full force when the hand was put into water, and at last disappeared on the ninth day. A similar circumstance occurred, with precisely the same symptoms, to a workman in the Calcutta Garden. This man described the sensation, when water was applied to the stung part, as if boiling oil was poured over him. (Lindl.)

18. *involuta*, Roxb. (*H. B.* p. 67;—*fl. ind.* 3, p. 592; not Sims, *B. M.* vol. 51, t. 2481.) 5 Malay Islands. In *H. C. G. fl. R. S.* (Roxb.)
19. *heterophylla*, Roxb. (*fl. ind.* 3, p. 586;—*J. Grah. Cat. B. pl.* p. 187; not Vahl., which, excluding syn. Rheed., is the same with *U. palmata*, Forsk.—*Rheed.* 2, t. 41.) © Concans. Coromandel. Prome. Taong-Dong. Nepal. Fl. small, green, *R. S.*; fr. *C. S.* A very ferocious-looking plant, the least touch of which produces a most acute, though quickly subsiding pain. *Bark* abounding in fine, white, glossy, silk-like, strong fibres. (Roxb.)
20. *photeinophylla*, Cunnigh. 5 Morton Bay, 1839.

B. BÖHMERIÆ, Gaudich.

(Lindl. *Nat. Syst.* p. 177.)

BÖHMERIA, Jacq. (*Spreng. syst.* 3, p. 760, No. 3100.)

1. *salicifolia*, D. Don. (*Spreng. syst.* 3, p. 845.—*Urtica salicifolia*, Roxb. *H. B.* p. 67.) 5 Moluccas. Foot of the Himalayas, as far as Deyra-Dhoon. Introduced into *H. C. G.* in 1798, but had not fl. up to 1814. Its aggregated small berries yield an edible fruit. (Royle.)
2. *interrupta*, Willd. (excl. syn. Burm.—*Spreng. syst.* 3, p. 846.—*Urtica interrupta*, L.;—Roxb. *fl. ind.* 3, p. 585;—*J. Grah. Cat. B. pl.* p. 187.—*Rheed.* 2, t. 40.) জাল বিছনী *Lal-bichhutee*, © Bombay. Bengal, (Serampore.) Fl. small, pale greenish-yellowish, *R. S.*; fr. *C. S.* The hairs of this plant sting like those of the common English nettle.

PROCRIS, Commers. (*Spreng. syst.* 3, p. 760, No. 3101.)

1. *punctata*, Buch. (*Spreng. syst.* 3, p. 846.) 4 Khassya Mountains. Nepal. Fl. minute, greenish, *C. S.*

C. PARIETARIÆ, Gaud.

(Lindl. *l. c.*)

POUZOLZIA, Gaud. (*Horsf. pl. jav. var.* 1, p. 64.)

1. *pentandra*, Bennett. (*Horsf. o. c.* p. 66, t. 14.—*Urtica pentandra*, Roxb. *fl. ind.* 3, p. 583.—*Memorialis ciliaris*, Buch.) পিপিরি সারা *Pipiri-sara*, 2, Fl. very small, greenish, *R. S.*; fr. *C. S.* Bengal, (Serampore.) Nepal. Assam. Java.
2. *zeylanica*, Bennett. (*Horsf. o. c.* p. 67.—*Urtica alienata*, L.; Roxb. 3, p. 582.—*Parietaria zeylanica*, L.) © Ceylon. Fl. minute, brownish, *R. S.*; fr. *C. S.*



D. CANNABIÆ, (Cannabinæ, Bl.)

(Lindl. Nat. Syst. p. 177.)

CANNABIS, L. (*Spreng. syst.* 3, p. 894, No. 3178;—*Endl. gen. pl.* 1, p. 286.) *Hemp*.

1. *sativa*, L. (*Spreng. syst.* 3, p. 903;—*Roxb. fl. ind.* 3, p. 772;—*J. Grah. Cat. B. pl.* p. 187;—*Rheed.* 10, t. 60. (male,) t. 61. (female.) *Cannabis indica*, *Rumph.* 5, t. 77.) गन्जा Gunja. © Siberia. Tauria. Scythia. Thracia. (Herod. 4. 74.) whence the Hemp-plant was introduced into the West by the inhabitants of Marseilles; at least Hiero, the Syracusan, is said (Athen. 5. 40.) to have received it from the river Rhodus for ropes. Fl. small, greenish-white, and fr. the whole year. In India cultivated every where in the plains, near villages, for the sake of the intoxicating liquor called *bang*, which is prepared from it, also for the leaves which are smoked to cause intoxication. "In the Himalayas it is indigenous, extremely abundant at elevations of 6-7000 feet, and of very luxuriant growth, rising sometimes to a height of ten and twelve feet. Here though it likewise affords an intoxicating drug, it is also known for the tenacity of its fibre, which is employed by the mountaineers in Ghurwal and Sirmore for making a coarse sackcloth, and strong ropes for crossing their rivers." (*Royle*.) After so many experiments have been made to discover an efficient substitute for hemp, it is not a little remarkable that no attempts have been made to obtain the plant for commercial purposes, especially as its abundance and use in the North of India were fully known to Dr. Roxburgh, some twenty-six years ago, and by him placed before the public. The Grass-cloth of China would seem to be made of hemp, which the Malays use for sewing-thread and twine, and for making fishing-nets. That the hemp plant is highly narcotic, producing giddiness, symptoms of incipient intoxication, rush of blood to the head, bleeding from the nose, strangury, aphrodisiacal sensations, &c. is well known. Lately, however, it appears, from Dr. O'Shaughnessy's experiments with the *churrus* or hemp-resin, that this substance is an efficient remedy against traumatic tetanus. (*On the preparations of the Indian Hemp, or Gunjah, their effects on the animal system in health, and their utility in the treatment of tetanus, and other convulsive disorders. Calcutta, 1839.*)

E. CHLOROPHOREÆ, Gaudich.

(Lindl. Nat. Syst. p. 177.)

ANTIARIS, Leschen. (*Spreng. syst.* 1, p. 374, No. 550;—*Endl. gen. pl.* p. 280.)

1. *toxicaria*, Leschen. (*Spreng. syst.* 1, p. 492;—*Rumph.* 2, t. 87;—*Bl. Rumph.* p. 56, t. 22, 23.) *The Upas-tree of Java*. L. 5 Contains a most deadly poison that depends on the presence of *Strychnia*. Has been introduced in H. C. G. Fl.?



CONOCEPHALUS, Bl. (*Bijdrag. p.* 484;—*Lindl. in B. Reg.* 14, *t.* 1203;—*Endl. gen. pl.* 1, *p.* 281.)

1. *naucleiflorus*, Lindl. (*l. c.*—*C. suaveolens*, Bl. *pl. jav. rar.* 1, *p.* 47, *t.* 12.—*Urtica naucleiflora*, Roxb. (*H. B.* 1814.) *p.* 67;—*fl. ind.* 3, *p.* 592.) ८ Chittagong. Silhet. Assam. Fl. minute, yellowish, fragrant, H. and R. S.; fr. May and June.
2. *globulifer*, Bennett. (*Urtica globulifera*, Roxb. *fl. ind.* 3, *p.* 593.) ८ Silhet. Assam. In H. C. G. fl. H. and R. S.; fr. May and June.

F. MORRÆ, Gaudich.

(*Lindl. Nat. Syst. p.* 178.)

MORUS, L. (*Spreng. syst.* 1, *p.* 374, No. 551;—*Endl. gen. pl.* 1, *p.* 278.)
Mulberry.

1. *alba*, L. (*Spreng. syst.* 1, *p.* 492;—*Roxb. fl. ind.* 3, *p.* 594;—*J. Grah. Cat. B. pl. p.* 194.) ८ *सफ़ेद तूत* *Suphed-toot.* ५ Persia, Asia Minor. Found in gardens in several parts of India. Fl. small, greenish, end of C. S.; fr. March. Much cultivated in S. Europe, for its leaves to feed the silk-worm “Mr. Mutti, an Italian, commenced a plantation of standard trees at the Heera Baugh, near Poona, six or seven years ago, on the principle that as soon as they attained a certain size, their roots would strike beyond the sun’s influence, and render little irrigation necessary, at the same time that an equal quantity of leaves would be obtained from an equal space of ground, with the further advantage of growing annual crops between the rows of trees. The experiment has been successful, and small plantations under his direction are now gradually extending over the Deccan. One was made in Bombay, near Parell, of about 2000 trees, by Mr. De Ramos, in 1838. It bids fair to answer expectations. The plants are chiefly of the white St. Helena mulberry, to which Mr. Mutti gives the preference from its rapid growth, the small quantity of water required, and the nourishing qualities of its leaves.” (*J. Grah.*) *Morus alba* contains moroxylic acid in combination with lime. (*Turner.*)
2. *nigra*, L. (*Spreng. syst.* 1, *p.* 492;—*Roxb. H. B. p.* 67;—*J. Grah. Cat. B. pl. p.* 194.) ५ Persia. Introduced into H. C. G. in 1795, but had not fl. up to 1814. It is grown in Egypt for feeding silk-worms. (*Maccullough.*)
3. *atropurpurea*, Roxb. (*fl. ind.* 3, *p.* 595;—*J. Grah. Cat. B. pl. p.* 194;—*M. rubra*, *Lour.*) ५ China. Fl. small, greenish, Feb.; fr. March and April. Attempts to feed the silk-worm with the leaves of this species have not succeeded. (*Roxb.*)
4. *rubra*, L. (*Spreng. syst.* 1, *p.* 492;—*Roxb. H. B. p.* 67.) 5 N. America, from Canada to Florida. Fl. small, greenish, Oct. and Nov.
5. *indica*, L. (*Spreng. syst.* 1, *p.* 492;—*Roxb. fl. ind.* 3, *p.* 596;—*J. Grah. Cat. B. pl. p.* 194;—*Rumph. auct. t.* 5.) ८ *Toot.* 5 Native place unknown. Extensively cultivated in Bengal to feed silk-worms;

- the way in which this is done may be learnt from Roxb. l. c. Fl. small, greenish, Feb. ; fr. April.
6. *tatarica*, Pall. (*Pers. syn.* 2, p. 557 ;—*Pall. ross.* 2, p. 9, t. 52 ;—*Roxb. H. B.* p. 67 ;—*fl. ind.* 3, p. 598.) 5 Banks of the Wolga and Dnieper. Cultivated in gardens. In H. C. G. fl. Feb. (*Roxb.*)
 7. *paniculata*, Roxb. (*fl. ind.* 3, p. 599.—*Urtica fruticosa*, Bks. *Herb.*—*Rumph.* 4, t. 56.) 5 Moluccas. Fl. small, greenish, July ; fr. Sept. Taste of the ripe fruit sweetish. (*Roxb.*)
 8. *serrata*, Roxb. (*fl. ind.* 3, p. 596.—*M. cuspidata*, *Wall. Cat.*) 5 Kamaon. Sirmore, below Mussooree, and at Simla. Has been in the garden here more than fourteen years without flowering.
 9. *multicaulis*, Perottet. (*M. cucullata*, *Bonafons.*) 5 China. Philippine Islands. In H. C. G. Fl. 2 This species will probably entirely supersede the common white Mulberry for feeding silk-worms. (*Proceedings of Agric. and Hortic. Soc. Calcutta.* 1840, January, p. 9-13.)
 10. *scandens*, Wall. (*Cat.*—*J. Grah. Cat. B. pl.* p. 194.) 5 China. Fl. small, pale-green, C. S.
 11. *bifaria*, Wall. (*Cat.*) In H. C. G. Fl. ?

AMPALIS, Bojer.

1. *madagascariensis*, Bojer. (*Morus mauritiana*, *Jacq. icon. rar.* 3, t. 617.—*Spreng. syst.* 1, p. 492 ;—*Roxb. fl. ind.* 3, p. 599.—*M. Ampalis*, *Poir.*) 5 Madagascar. Fl. small, green, June and July ; fr. Sept. and Oct.

BROUSSONETIA, Vent. (*Spreng. syst.* 3, p. 893, No. 3170 ;—*Endl. gen. pl.* p. 278.)

1. *papyrifera*, Vent. (*Spreng. syst.* 3, p. 901 ;—*B. Repos.* 8, t. 488 ;—*B. M.* 50, t. 2358.—*Papyrius japonica*, *Lam. ; Poir.*—*Morus papyrifera*, *L.*) *Paper mulberry tree.* 5 Japan. Society Islands. New Zealand. Has been in the garden here more than twelve years without flowering. A kind of paper is manufactured from its bark by reducing it to a pulp, which is afterwards spread into sheets of greater or less thickness. (*Kämpf.*)

G. FICEÆ, Gaudich.

(*Lindl. Nat. Syst.* p. 178.)

FICUS, L. (*Spreng. syst.* 3, p. 758, No. 3075 ;—*Endl. gen. pl.* 1, p. 278.)
Fig.

1. *Carica*, L. (*Spreng. syst.* 3, p. 785 ;—*Gärtn. fr.* 2, p. 66, t. 91, f. 7 ;—*Roxb. fl. ind.* 3, p. 528 ;—*J. Grah. Cat. B. pl.* p. 194.) 5 *Doomoor.* Common cultivated Fig-tree. L. 5 5 S. Europe. N. Africa. Asia Minor. Cultivated in Arabia, Persia, and India. Fruit-receptacles solitary, sessile, turbinate, umbilicated, smooth, appearing March, April and May, ripening in June and July.
2. *triloba*, Buch. (*F. hirsuta*, *Roxb. H. B.* p. 65 ;—*fl. ind.* 3, p. 528 ; not Schott.—*F. hirta*, *Roxb. fl. ind.* 3, p. 531 ; not Vahl.) 5 Silhet.



- Assam. Fruit-receptacles in pairs, axillary, sessile, oval, very hairy, appearing H. S.; ripening R. S. Fruit eaten by the natives where the tree is indigenous. (Roxb.)
3. *caricoides*, Roxb. (*fl. ind.* 3, p. 529.) 5 Patna. Gya. Rohilcund. Fruit-receptacles axillary, solitary, long-peduncled, turbinate, umbilicate, wrinkled, appearing and ripening the whole year. Fruit not eatable. (Roxb.)
4. *virgata*, Roxb. (*fl. ind.* 3, p. 530; not Reinwardt.) 5 Rohilcund. Kemaon. Sirmore. Fruit-receptacles axillary, solitary, ovate, the size of a pea, longish-peduncled, appearing and ripening the whole year.
5. *urophylla*, Wall. N. E. Bengal.
6. *denticulata*, Vahl. (*symb.* 1, 83.—*enum.* 2, 202; not Bl.—F. *quercifolia*, Roxb. *fl. ind.* 3, p. 534.) 5 creeping. Sumatra. Fruit-receptacles axillary, solitary, peduncled, short-oval, warty, the size of a pea, appearing and ripening the whole year.
7. *rubescens*, Vahl. (F. *heterophylla*, Lam. *Spreng. syst.* 3, 785; not L. fil. ex. Vahl. l. c.;—Roxb. *fl. ind.* 3, p. 532;—Rheed. 3, t. 62.—F. *aquatica*, Kön. excl. F. *heterophylla*, L. fil.—Rheed. 3, t. 62.) গুড়ি শিওরা *Goori-shiora*. 5 Coromandel. Malabar Hill, Bombay. The Ghauts. Bengal, (Serampore.) Silhet. Assam. Fruit-receptacles axillary, paired, peduncled, round-turbinate, the size of a large gooseberry, scabrous, appearing and ripening the whole year. Bark of the root very bitter, given to remove pains in the bowels. (Roxb.)
8. *humilis*, Roxb. (*fl. ind.* 3, p. 535.) 5 creeping. Sumatra. Fruit-receptacles paired, axillary, peduncled, the size of a pea, oblong, elevatedly-umbilicate. In H. C. G. appearing and ripening the whole year. (Roxb.)
9. *repens*, Roxb. (*fl. ind.* 3, p. 535;—*Spreng. syst.* 3, p. 783.—F. *morifolia*, Vahl. *enum.* 2, 203? not Forsk, quæ F. *Forskählii*, Vahl. 196; nor Lam. quæ *lateriflora*, Vahl. p. 197, ideoq. *hd.* Willd. p. 1150.) হুই ভুয়র *Bhooi-doomoor*. 5 Creeping. Bengal, (Serampore.) Fruit-receptacles axillary, solitary, peduncled, obovate, roughish, the size of the point of the little finger, appearing and ripening the whole year.
10. *pisifera*, Wall. 5 Penang. Fruit-receptacles axillary, solitary, sessile, smooth, the size of a pea, ripening H. S.
11. *radicans*, Roxb. (*fl. ind.* 3, p. 536.) 5 radicant. Silhet. Fruit-receptacles axillary, solitary or paired, long-peduncled, globular, the size of a black currant; in H. C. G. appearing and ripening the whole year. (Roxb.)
12. *diadena*. (F. *biglandulosa*, Wall, not *biglandula*, Bl.) 5 China. C. S.
13. *albinervis*, Wall. Mauritius. H. S.
14. *scabrida*, Wall. Penang. R. S.
15. *mangifolia*, Wall. Penang. R. S.

16. *anabatos*, (*Ficus scandens*, *Roxb. fl. ind.* 3, p. 536; not Lam.) ५ ८
 Silhet. Fruit-receptacles axillary, paired, longish-peduncled, globular, rough, the size of a black currant; in H. C. G. appearing and ripening the whole year. (*Roxb.*)
17. *Goolereea*, *Roxb. (fl. ind.* 3, p. 538.) 5 Hindoosthan. Fruit-receptacles axillary, paired, long-peduncled, nearly globose, downy. Introduced into H. C. G. before 1814. Fl. ?
18. *Wassa*, *Roxb. (fl. ind.* 3, p. 539;—*Rumph.* 3, t. 94.) ५ Moluccas. Fruit-receptacles axillary, solitary or paired, peduncled, compressedly turnip-shaped, smooth, the size of a gooseberry, appearing in H. C. G. in H. S.; ripening, R. S. (*Roxb.*)
19. *indica*, L. (*Amen. acad.* 1, p. 27;—*Roxb. fl. ind.* 3, p. 539;—*J. Grah. Cat. B. pl.* p. 189; not Forsk. nor Lam. or Vahl.—*F. bengalensis*, L. *syst.*—*Rheed.* 1, t. 28.) ५ ८ *But. Banyan-tree*. L. ५ radicant. Fruit-receptacles axillary, paired, sessile, as large as a middle-sized cherry, appearing and ripening H. S. Common all over India, in some places of an immense size. Lieut. Colonel Sykes mentions one at the village of Mhow, in the Poonah Collectorate, with 68 stems descending from the branches, and capable of affording shade, under a vertical sun, to 20,000 men. (*Madr. Journ. of Science*, No. 22.) *Kabir Bur*, near Broach, now the gloomy recess of superstitions, and the haunt of its hateful birds, the owls and flying foxes. (*Nimmo*.) *Bark* smooth, light ash-coloured. *Wood* light, white, and porous. *Leaves* used by the Brahmins to eat off, for which purpose they are joined together by inkles. *Birdlime* is prepared from the tenacious milky juice, which every part of the tree yields in abundance on being wounded. Birds eat the fruit, and the seeds grow the better for having passed through them. If they drop in the axils of the leaves of the Palmyra-tree, (*Borassus flabelliformis*, L.) they grow, and extend their descending parts so as in time to embrace entirely the Palmyra, except its upper parts. In very old ones the top thereof is just seen issuing from the trunk of the Banyan itself, as if it grew from thence, whereas it runs down through its centre, and has its roots in the ground, the Palm being the oldest. (*Roxb.*)
20. *elastica*, *Roxb. (fl. ind.* 3, p. 541;—*Spreng. syst.* 3, p. 781;—*J. Grah. Cat. B. pl.* p. 190.) *Indian Rubber-tree*. L. ५ radicant. Khassya Mountains. Assam. Fruit-receptacles axillary, paired, sessile, oval, smooth, the size of an olive, appearing, H. S.; ripening, R. S. Every part of this tree abounds in a rich milky juice which furnishes about one-third of its weight of Caoutchouc, a substance also discovered by Dr. Roxburgh in *Urceola elastica*, *Roxb.*, *Willoughbeia edulis*, *Roxb.*, and *Melodinus monogynus*, *Forst.* With the milky juice the natives paint the insides of their vessels and baskets, and the Caoutchouc furnishes them with candles and flambeaux. (*Roxb.*) For a circumstantial account of this tree, see *Roxb.* l. c.



21. *laccifera*, Roxb. (*fl. ind.* 3, p. 545.) L. 5 Silhet. Fruit-receptacles axillary, sessile, oval, smooth, the size of a gooseberry, appearing H. S.; ripening R. S. (*Roxb.*)
22. *religiosa*, L. (*Spreng. syst.* 3, p. 778; not Forsk.;—*Roxb. fl. ind.* 3, p. 547;—*J. Grah. Cat. B. pl.* p. 190;—*Rheed.* 1, t. 27;—*Rumph.* 3, t. 91.) অশ্বথ *Ashwuth*. পিপ্পল *Pippul*. L. 5 Common all over India. Fruit-receptacles axillary, paired, sessile, depressed, the size of a small cherry, appearing H. S.; ripening R. S. Birds are very fond of the fruit, eat it greedily, and often drop the seeds in cracks of buildings, where they vegetate, occasioning great damage if not removed in time. Wood light and of little use.
23. *Rumphii*, Bl. (*p.* 437;—*Roxb. H. B.* p. 66;—*fl. ind.* 3, p. 548; not Bl.;—*Rumph.* 3, t. 91 and 92.) L. 5 Moluccas. Bengal, (Serampore.) Assam. Kemaon. গয়াশ্বথ *Guyashwuth*. Fruit-receptacles axillary, sessile, paired, globular, smooth, the size of a cherry, appearing H. S.; ripening R. S.
24. *Tsiela*, Roxb. (*fl. ind.* 3, p. 849;—*J. Grah. Cat. B. pl.* p. 191;—*Rheed.* 3, t. 63.) L. 5 Mountains and Plains of Coromandel. The Ghauts. Fruit-receptacles axillary, paired, sessile, round-turbinate, smooth, the size of a cherry, in H. C. G. appearing H. S.; ripening R. S. (*Roxb.*)
25. *venosa*, Ait. (*Spreng. syst.* 3, p. 779; not Willd.—*F. infectoria*, Willd.;—*Roxb. fl. ind.* 3, p. 551;—*J. Grah. Cat. B. pl.* p. 191;—*Rheed.* 3, t. 64.) পাকুড় *Pakoor*. L. 5 The Concans. Bengal, (Serampore.) Fruit-receptacles paired, axillary, sessile, globular, smooth, the size of a pea, appearing H. S.; ripening R. S.
26. *racemifera*, Roxb. (*fl. ind.* 3, p. 560;—*Rumph.* 3, t. 93.) 5 Sumatra. Fruit receptacles solitary, short-peduncled, shortly turbinate, flattish, on compound glomerate racemes, from the woody part of the tree below the leaves, in H. C. G. appearing and ripening throughout the year.
27. *rapiformis*, Roxb. (*fl. ind.* 3, p. 551.) 5 Moluccas. Fruit-receptacles axillary, solitary, short-peduncled, turnip-shaped, the size of a small medlar, appearing in H. C. G. in Sept. and Oct. (*Roxb.*)
28. *excelsa*, Vahl. (*Spreng. syst.* 3, p. 783;—*Roxb. fl. ind.* 3, p. 552;—*J. Grah. Cat. B. pl.* p. 191;—*Rheed.* 3, t. 58.) 5 Moluccas. Peninsula of India. Fruit-receptacles axillary, solitary or paired, peduncled, somewhat turbinate, smooth, the size of a cherry, appearing in June and July; ripening C. S.
29. *vagans*, Roxb. (*fl. ind.* 3, p. 537.) 5 $\cup$ radicant. Chittagong. Silhet. Fruit-receptacles axillary, paired or solitary, long peduncled, nearly globular, the size of a nutmeg, in H. C. G. appearing, H. S.; ripening R. S. (*Roxb.*)
30. *Blumii*, Wall. (*F. exasperata*, *Roxb. fl. ind.* 3, p. 555; not Vahl.—*Rumph.* 4, t. 63 ?) 5 Moluccas. Fruit-receptacles axillary, solitary,

or paired, peduncled, globular, size of a pea, rough, appearing in Sept. ; ripening in Dec. (*Roxb.*)

31. *nitida*, Thunb. (*Spreng. syst.* 3, p. 781 ;—*J. Grah. Cat. B. pl.* p. 190 ;—*Rheed.* 3, t. 55.) 5 China. Lower Nepal. Khassya Mountains. Penang. Coromandel. Fruit receptacles lateral, fascicled, globular, sessile, the size of a large pea, smooth, appearing C. S. ; ripening H. S. *Fruit* eaten by birds.
32. *polycarpa*, Roxb. (*fl. ind.* 3, p. 556.) 5 Moluccas. Penang. Singapore. Fruit-receptacles in fascicles from the trunk, and large branches, peduncled, globular, scabrous, the size of a large pea, in H. C. G. appearing and ripening R. S. (*Roxb.*)
33. *Roxburghii*, Wall. (*Cat.*—*F. macrophylla*, *Roxb. fl. ind.* 3, p. 556 ;—not Desf. nor Decaisne.) 5 Chittagong. Silhet. Nepal. Fruit-receptacles collected in bundles near the root of the stem, and on the lower parts of the branches, turnip-shaped, 8-12 ribbed, hairy, as large as the common fig, or larger, when ripe diffusing a strong scent of Russia leather, appearing and ripening throughout the year. *Fruit* eaten by the natives, where the tree is indigenous. (*Roxb.*)
34. *lanceolata*, Roxb. (*fl. ind.* 3, p. 557.) 5 Chittagong. Fruit-receptacles in bundles near the root of the trunk and larger branches, peduncled, warty, compressedly turbinate, deeply umbilicate, the size of a small common fig, appearing and ripening more or less throughout the year.
35. *glomerata*, Roxb. (*Corom.* 2, t. 123 ;—*fl. ind.* 3, p. 558 ;—*Spreng. syst.* 3, p. 781 ;—*J. Grah. Cat. B. pl.* p. 190. excl. syn. L. and Rheed. —*Rumph.* 3, t. 94.) যজ্ঞ দুমুর *Juguya-doomoor*. L. 5 Coromandel. Common about Vear on Salsette, and generally by the banks of water-courses throughout the Concans. Table-land of Mahableschwur. Bengal, (Serampore.) Fruit-receptacles short-peduncled, turbinate, nearly as large as a common fig, downy, umbilicated, appearing and ripening throughout the year. The *fruit* disagreeable, but eaten by the natives. (*Roxb.*)
36. *Cunia*, Buch. (*Roxb. fl. ind.* 3, p. 561.—*F. conglomerata*, *Roxb. o. c.* p. 559 ;—*J. Grah. Cat. B. pl.* p. 190, excl. syn. Rumph.—*Rheed.* 3, t. 61.) 5 Coromandel. The Concans. Taong-Dong. Moulmein. Raj-mahl. Oude. Nepal. Fruit-receptacles turbinate, ribbed, pedicelled, the size of a large filbert, hairy, umbilicated, generally in pairs or in threes, on long, procumbent, radical and cauline, compound, leafless branches, appearing and ripening throughout the year.
37. *congesta*, Roxb. (*fl. ind.* 3, p. 560.) 5 Moluccas. Fruit-receptacles short-peduncled, roundish-turbinate, smooth, the size of a filbert, heaped on radical and cauline, short, leafless, ramous branchlets, appearing and ripening throughout the year. (*Roxb.*)
38. *oppositifolia*, Roxb. (*Corom.* 2, t. 124 ;—*fl. ind.* 3, p. 561 ; excl. syn. Rheed.—*Spreng. syst.* 3, p. 784 ; excl. syn. *Dæmonum*.—*J.*



- Grah. Cat. B. pl. p. 191.*) কাক ডুমুর *Kaku-doomoor*. 5 Coromandel Hills east of Panwell. Kandella. Bengal, (Serampore.) Fruit-receptacles in axillary pairs, peduncled, globular, umbilicated, hairy, the size of a large nutmeg, or on cauline racemes, appearing and ripening throughout the year. This species is, from its being sown by birds, a great destroyer of houses and walls.
39. *Dæmonum*, Kön. MSS. (*Vahl. enum.* 2, p. 198; not Roth.;—*Roxb. fl. ind.* 3, p. 562;—*Spreng. syst.* 3, p. 784.) 5 Coast of the Tanjore Country. Fruit-receptacles in pairs, on long radical racemes, often under ground, or single or in pairs on the trunk and branches, obovate, very hairy, umbilicated, the size of a large nutmeg, in H. C. G. appearing and ripening throughout the year. (*Roxb.*)
40. *Ampelos*, Burm. (*ind. p.* 226.—*F. asperima*, *Roxb.*;—*Rheed.* 3, t. 60.) Hilly parts of the Concan.
41. *Benjamina*, L. (*Mant.*—*Roxb. fl. ind.* 3, p. 550;—*Rheed.* 1, t. 26.) Kamrup. Peninsula of India.
42. *artocarpifolia*, Wall. Penang. Dec. 1833.
G. DORSTENIÆ, Gaudich.
(*Lindl. Nat. syst. p.* 178.)
- DORSTENIA, L. (*Spreng. syst.* 3, p. 758. No. 3074;—*Endl. gen. pl.* 1, p. 278.)
1. *Contrayerva*, L. (*Spreng. syst.* 3, p. 777.—*Plum. ed. Burm. t.* 119;—*Jacq. icon. rar.* 4, t. 614.) 4. Peru, Mexico, and some of the W. India Islands. Fl. most minute, green, on a fleshy receptacle, R. S.; fr. C. S. but not often. Root bitterish, somewhat pungent, with a remarkable overpowering odour, sudorific, formerly used as an antidote to the bites of venomous animals. (*Fed.*)
H. ARTOCARPEÆ, Gaudich.
(*Lindl. Nat. Syst. p.* 178.)
- ARTOCARPUS, L. (*Spreng. syst.* 3, p. 758. No. 3082;—*Endl. gen. pl.* 1, p. 281.)
1. *integrifolius*, L. (*Suppl.*;—*Spreng. syst.* 3, p. 804;—*Roxb. Corom.* 3, t. 250;—*fl. ind.* 3, p. 522;—*B. M.* 55, t. 2833-34;—*J. Grah. Cat. B. pl. p.* 192.—*A. heterophylla*, Lam.—*Rademachia integra*, *Thunb. act. holm.* 36, p. 252.—*Polyphema Jaca*, *Lour.*—*Sitodium cauliflorum*, *Gärtn. fr.* 1, p. 345, t. 71, 72;—*Rheed.* 3, t. 26, 27, 28;—*Rumph.* 1, t. 30, 31.) কঁঠোলা *Kantal. Jack-fruit. Entire-leaved Bread-fruit.* 5 Moluecas. Both Peninsulas of India, Ceylon. Bengal, (Serampore.) Much cultivated. Fl. very minute, greenish or (the male) white, crowded on a large receptacle, so as to form an amentum, Jan. and Feb.; fr. May, June and July. Wood hard, approaching in appearance to mahogany, much used for furniture in Ceylon, and some other parts of India. The natives prepare their best birdlime from the tenacious white juice, which abounds in all the uneatable parts

of the fruit, and the young tender parts of the tree, and flows freely from recent wounds. The large *fruit*, which grows from the trunk and larger branches, forms to the natives, f. ex. in Ceylon, a considerable article of diet. *Seeds*, when roasted, not inferior to the best chestnuts. (Roxb.)

2. *Lacoocha*, Roxb. (*fl. ind.* 3, p. 524;—*J. Grah. Cat. B. pl.* p. 193.)

ডেফুল *Déphul*. Bengal, (Serampore.) Not uncommon in gardens. Fl. minute, internally rose-coloured; aments appearing in March, April and May.; fr. R. S. *Whole tree*, and unripe fruit containing much tenacious, milky juice. The *roots* dye yellow. *Male spadix* acid, astringent, eaten by the natives in their curries. *Fruit* eaten by the natives. (Roxb.)

3. *Chaplasha*, Roxb. (*fl. ind.* 3, p. 525.) L. 5 Chittagong. Tipperah.

Assam. Aments appearing from Feb. to May; fr. R. S. From this immense tree *canoes* are made for the Fennee and Gomootee rivers. The *wood* is also useful for many other purposes, particularly when it is to be employed under water. (Roxb.)

4. *echinatus*, Roxb. (*fl. ind.* 3, p. 527.) *Tampooni*. 5 Malay Islands. In H. C. G. fl. H. S. (Roxb.)

5. *incisus*, L. fil. (*B. M.* 55, t. 2869, 70, 71. α . and β .—Roxb. *fl. ind.* 3, p. 527;—*J. Grah. Cat. B. pl.* p. 192.)

α . *fruit seed-bearing*. (*Bread-nut*.—*Artocarpus incisus*, L. fil. *Spreng. syst.* 3, p. 804.—*Rademachia incisa*, Thunb. *act. holm.* p. 250, t. 36.—*Rima ou Fruit au Pain*, Sonn. *it. t.* 57-60.—*Soccus granosus*, Rumph. 1, t. 33.) *Fruit* muricated.

β . *without seeds*. (*Bread-fruit*.—*Artocarpus communis*, Forst. *gen. pl.* p. 102, t. 51.—*Soccus lanosus*, Rumph. 1, t. 32.) *Fruit* not muricated, but marked with reticulations, whose areolæ are flat, or but slightly prominent.

5 South Sea Islands, especially Otaheite. Molucca Islands. Java. Sumatra. Mauritius. Bourbon. Now domesticated, or at least much cultivated in the W. Indies, and on the American Continent, from Spanish Guiana to New-Granada. Thus, as Humboldt says, the western coast of America, washed by the Pacific Ocean, receives from a British settlement in the W. Indies, a production of the Friendly Islands. Introduced into H. C. G. before 1794, but had not fl. there up to 1814, the winters of Bengal being too cold for it.

6. *hirsutus*, Lam. (Roxb. *fl. ind.* 3, p. 521;—*Rheed.* 3, t. 32.) Malabar.

7. *serratus*, Roxb. (*H. B.* p. 66.) 5 Travancore. Introduced into H. C. G. in 1808, but had not fl. up to 1814.

8. *angustifolius*, Roxb. (*l. c.*) 5 Malay Islands. Introduced into H. C. G. in 1800, but had not fl. up to 1814.

MACLURA, Nutt. (*Endl. gen. pl.* 1, p. 278.)

1. *tinctoria*, D. Don. (*Loud. hort. brit.* p. 380, No. 23179.—*Broussonetia tinctoria*, Kth.;—*Spreng. syst.* 3, p. 901; excl. syn. Nutt.—*Morus*



tinctoria, L.) *Fustick*. 5 W. Indies. New-Granada. Brazil. Has not fl. here. *Fustick*, a yellow dye, is the *wood* of this tree.

2. *Calcar galli*, Lodd. MSS. ♂ Native place? Has not fl. here.

I. BATTIÆ, (Batideæ, Mart.)

(*Lindl. Nat. Syst. p.* 178.)

BATIS, P. Br. (*Spreng. syst.* 3, p. 893, No. 3169;—*Juss. gen. pl.* p. 443.)

- ? 1. *spinosa*, Roxb. (*fl. ind.* 3, p. 762, No. 1;—*Trophis spinosa*, Willd.;—*Spreng. syst.* 3, p. 902; not *Roxb. fl. ind.* 3, p. 762, No. 2;—*Rumph.* 5, t. 15, f. 2.) L. ♂ — Moluccas. Coromandel. Introduced into H. C. G. in 1802, but had not fl. up to 1814.

- ? 2. *fruticosa*, Roxb. (*fl. ind.* 3, p. 763.) ♂ Chittagong. In H. C. G. fl. Oct.; fr. May. (*Roxb.*)

- ? 3. *aurantiaca*, Wall. MSS. Native place? In H. C. G. Fl.?

EPICARPURUS, Bl. (*Bijdr.* p. 488;—*Endl. gen. pl.* 1, p. 277.)

1. *orientalis*, Bl. (*Trophis spinosa*, *Roxb. fl. ind.* 3, p. 762?) 5 Mountains of India. In H. C. G. fl. C. S.; fr. H. S. (*Roxb.*)

BROSIMUM, Swz. (*Spreng. syst.* 1, p. 6, No. 49;—*Endl. gen. pl.* 1, p. 279.)

1. *Alicastrum*, Swz. (*fl. ind. occ.* 1, t. 1, f. 1;—*Spreng. syst.* 1, p. 22;—*Roxb. H. B. p.* 71.) *Jamaica Bread-nut Tree*. 5 Jamaica. Introduced into H. C. G. in 1804, but had not fl. up to 1814. Abounds in a tenacious, gummy *milk*. Its *leaves* and *young shoots* are much eaten by cattle, but when they become old, they cease to be innocuous. The roasted *nuts* are used instead of bread, and have much the taste of Hazel nuts. (*Swz.*)

2. *utile*, Endl. (*l. c.*—*Galactodendron utile*, *Humb.*—*B. M.* 66, t. 3723-24.—*Palo de Vaca*, *Humb.*) *Cow Tree of the Caracas*. 5 *Stem* more than twenty feet in circumference at about five feet from the root, running up to a height of sixty feet, perfectly uninterrupted by either leaf or branch, when its vast arms and minor branches, most luxuriantly clothed with foliage, spread on every side, fully twenty-five or thirty feet from the trunk, and rise to an additional elevation of forty feet, so that this stupendous tree is upwards of a hundred feet high. Native place Caracas, more peculiarly on the Cordillera of the shore, at an elevation of about 4000 feet, in dense forests where the thermometer in May is 70°. Incisions made in the trunk of the tree are followed by a profuse flow of gluey, thickish *milk*, destitute of acidity, of an agreeable balsamic odour, and very nutritious. The negroes and free people, who work in the plantations, soak in it bread made of Maize, Cassava, &c. and generally grow stouter during the season when the *Palo de Vaca* yields most *milk*. (*Humb.*) In H. C. G. where, however, it does not thrive.

TROPHIS, P. Br. (*Spreng. syst.* 3, p. 893, No. 3172;—*Endl. gen. pl.* p. 281.

1. *aspera*, Retz. (*Spreng. syst.* 3, p. 902;—*Roxb. fl. ind.* 3, p. 761;—*J. Grah. Cat. B. pl.* p. 176.—*Streblus asper*, *Lour.*—*Achymus asper*,

Soland MSS.—*Rheed*. 1, t. 48.) শেওড়া *Sheora*. শাড়া গাছ *Shara-gachh*. 5 Coromandel. Malabar Hill, Bombay. Throughout the Concans. Cochin China. Ava. Bengal, (Serampore.) Fl. minute, greenish-yellow, C. S.; fr. H. S. Leaves employed by the Natives to polish ivory. Wood used for fuel. Berries greedily eaten by birds. (Roxb.)

- * *Urtica trinervia*, Roxb. 5 Chittagong.—*U. vesicaria*, Roxb. 5—*U. paniculata*, Roxb. 5 Moluccas.—*U. lineata*, Roxb. 5 Moluccas.—*U. inequalifolia*, Roxb. 5 Chittagong.—*U. Parietaria*, L. 5 Jamaica.—*U. grandifolia*, L. 5 W. Indies.—*U. Simsii*, (*U. involucrata*, Sims; B. M. 51, t. 2481; not Roxb.) 5 W. Indies.—*U. reticulata*, Swz.; B. M. 52, t. 2567. 5 Jamaica.—*U. rufa*, Swz. 5 Jamaica.—*U. Roxburghii*, (*U. acuminate*, Roxb. not Poir.) 5 Chittagong.—*U. acuminata*, Poir. 5 Mascarenhas Islands.—*U. elata*, Swz. 5 Jamaica.—*Böhmia caudata*, Swz. 5 Jamaica.—*B. macrophylla*, D. Don. 5 Nepal.—*B. platyphylla*, D. Don. 5 Nepal.—*B. frutescens*, Thunb. 5 Nepal.—*B. frondosa*, D. Don. Nepal.—*B. ternifolia*, D. Don. Nepal.—*B. nudiflora*, Willd. 5 Caracas.—*Procris urticæfolia*, Poir. St. Domingo.—*P. rupestris*, Buch. Nepal.—*P. monandra*, Buch. Nepal.—*P. integrifolia*, D. Don. Nepal.—*Forsköhllea tenacissima*, L. Egypt. Persia.—*Cecropia pellata*, L. 5 W. Indies.—*C. palmata*, Willd. 5 Brazil.—*C. concolor*, Willd. 5 Brazil.—*Broussonetia integrifolia*, Buch. 5 Goalpara.—*Morus laevigata*, Wall. Nepal. Saharunpore.—*M. viridis*, Buch. Patna.—*Ficus pedunculata*, Ait. 5 S. America.—*F. crassinervia*, Desf. 5 South America.—*F. populnea*, Willd. 5 S. America.—*F. cotinifolia*, Kth. 5 Mexico.—*F. rubrinervia*, Lk. 5 Brazil.—*F. acuminata*, Buch. B. M. 60, t. 3282. Silhet.—*F. comosa*, Roxb.; B. M. 61, t. 3305. 5 The Ghauts and hilly parts of the Concans.—*F. citrifolia*, Lam.; *Rheed*. 3, t. 57. 5 The Concans.—*F. terebrata*, Willd. *Rheed*. 3, t. 56. 5 The Concans.—*F. racemosa*, L. *Rheed*. 1, t. 25. 5 The Concans.—*F. palmoides*, (*F. palmata*, Roxb. not Forsk.) Penang.—*F. squamosa*, Roxb. 5 Rohilcund.—*F. laminosa*, Hardw. 5 Chinalee Mountains.—*D. scabrella*, Roxb. 5 Chittagong.—*F. fruticosa*, Roxb. 5 Chittagong.—*F. hederacea*, Roxb. 5 Chittagong.—*F. sclerophylla*, Roxb. L. 5 Chittagong.—*F. obtusifolia*, Roxb. not Kth. L. 5 Chittagong.—*Dorstenia Houstonii*, L.; B. M. 45, t. 2017. 4. New Spain.—*D. arifolia*, Lam. B. M. 51, t. 2476. 4. Brazil.—*D. ceratocanthos*, Lodd.; B. M. 54, t. 2760. 4. S. America?—*D. tubicina*, Ruiz. and Pav. B. M. 55, t. 2804. 4. Peru. Malabar.—*Artocarpus philippensis*, Lam. 5 Philippine Islands.—*A. Polyphema*, Pers. Rumph. 1, t. 31. 5 Penang.—*Lepurandra saccidora*, Nimmo. L. 5 Ravines at Kandalla.



SUB-ORDER.—CERATOPHYLLÆ, DC.—Lindl. Nat. Syst. p. 178.

Floating herbs, of 1 genus, and 5-6 species: 2 natives of Europe and 3-4 of the Peninsula of India. One of the latter also common to Egypt. Properties unknown.

CERATOPHYLLUM, L. (*Spreng. syst.* 3, p. 762, No. 3131;—*Endl. gen. pl.* p. 268.)

1. *verticillatum*, Roxb. (*Fl. ind.* 3, p. 624.) © Bengal, (Serampore.) Fl. Feb. and March, most minute; fr. H. S.

ORDER CXXI.—ULMACEÆ, Mirb.—Lindl. Nat. Syst. p. 178.

THE ELM TRIBE.

Trees or shrubs, by Lindl. referred to 6 genera. Of these Spreng. syst. assigns 9 species to S. America, Mexico and the W. Indies; 9 to N. America; 5 to Europe; 2 to Caucasus; 1 to Dahuria; 1 to Siberia; and 1 to Senegambia. In the E. Indies have been discovered according to Spreng. Wall. Cat. and Royle. ill. 5 species of *Ulmus*; (Nepal, Kemaon, Kunawur, Hurdwar, Chittagong,) and 13 of *Celtis*; (Nepal, Khassia Mountains, Circars, Penang, Singapore.) How many of the latter must be referred to *Sponia*, we have no means to ascertain.

The Elms are well known in Europe as good timber-trees. The same may be said of those found in India and its mountains. (*Royle.*)

ULMUS, L. (*Spreng. syst.* 1, p. 532, No. 1099;—*Endl. gen. pl.* 1, p. 276.)
Elm.

1. *integrifolia*, Roxb. (*Corom.* 1, t. 78;—*fl. ind.* 2, p. 68;—*Spreng. syst.* 1, p. 931;—*J. Grah. Cat. B. pl.* p. 188.) L. 5 Circar Mountains. Hurdwar. Foot of the Himalayas. Malabar Hill, Bombay, Salsette. Ghauts, near Arcot. In H. C. G. fl. C. S. Wood of good quality, and employed for a variety of uses, f. ex. for making carts, door-frames, &c. Forks of the branches used by the natives to protect their straw against cattle.
2. *virgata*, Roxb. (*fl. ind.* 2, p. 67;—*Wall. pl. us. rar.* 3, t. 290.) 5 China. Nepal. Kemaon. Mussooree. Fl. small, orange, Nov.; fr. Feb.
- CELTIS, Tourn. (*Spreng. syst.* 1, p. 532, No. 1101;—*Endl. gen. pl.* 1, p. 276.)
1. *australis*, L. (*Spreng. syst.* 1, p. 932.) L. 5, S. Europe. Barbary. In H. C. G. Fl. ?
2. *occidentalis*, L. (*Spreng. l. c.*—*Gärtn. fr.* 1, p. 374, t. 77, f. 3;—*Roxb. H. B.* p. 21.) L. 5 Tropical and North America. Fl. small, green, C. S.



SPONIA, Commers. (Endl. gen. pl. 1, p. 276.)

1. *orientalis*, (Celtis *orientalis*, L.;—Roxb. fl. ind. 2, p. 65;—J. Grah. Cat. B. pl. p. 189;—Buch. Trans. Linn. Soc. 17, p. 207, No. 1, 2, 3, 4, 5.—Rheed. 4, t. 40.) *जीवन* Jeehun. 5 Ceylon. Coromandel. Common along the foot of the Ghauts; Kennery forests, Salsette, &c. Bengal. (Serampore.) Silhet. Assam. Nepal. Fl. very small, green; and fr. the whole year. The inner bark of this tree, consisting of numerous reticulated fibres, forms a kind of natural cloth, used by the Garos for covering their nakedness. Leaves used by the Natives for polishing horn. (Buch.)
2. *tetrandra*, (Celtis *tetrandra*, Roxb. fl. ind. 2, p. 63.—C. Akata, Buch.; Trans. Linn. Soc. 17, p. 211.) 5 Coromandel. Assam. Oude. Nepal. Kemaon. Fl. very small, green, March; fr. Sept.

* *Ulmus erosa*, Roth. 5 Kemaon.—*U. lanceafolia*, Roxb.; Wall. pl. as. rar. 2, t. 200. L. 5 Chittagong.—*Celtis Roxburghii*, (C. *trinervia*, Roxb.; not Lam.) 5 Chittagong.—*C. tomentosa*, Roxb. 5 Chittagong.—*C. amboinensis*, Vent. 5 Silhet. Penang. Singapore.—*C. angustifolia*, Lindl. Penang.—*C. elongata*, Lindl. Silhet.—*C. cinnamomea*, Lindl. Silhet.—*Mertensia laevigata*, Kth. New Spain.—*M. zizyphoides*, Kth. New Granada.

ORDER CXXII.—ANTIDESMACEÆ,—Stilaginaceæ, Lindl. Nat. Syst.
p. 179.

Trees or shrubs, referred to 2 genera, *Antidesma* and *Falconeria*. Of the former, one species has been found in Madagascar, and 13 in the E. Indies, (Nepal. Khassya Mountains. Circars. Penang.) The latter includes but 2 species, both from the Himalayas. Properties almost unknown.

ANTIDESMA, L. (Spreng. syst. 1, p. 523, No. 940;—Endl. gen. pl. 1, p. 287.)

1. *tomentosum*, (Stilago *tomentosa*, Roxb. fl. ind. 3, p. 757.) 5 Silhet. Fl. minute, green, May and June; fr. Sept. and Oct.
2. *Bunius*, Spreng. (syst. 1, p. 826.—A. *alexiterium*, Spreng. l. c.;—J. Grah. Cat. B. pl. p. 186.—Stilago *Bunius*, L.;—Roxb. fl. ind. 3, p. 758;—Rheed. 4, t. 56;—Rumph. 3, t. 131, excl. A.) 5 Moluccas. Penang. Coromandel. Kandalla Ghaut. Assam. Nepal. Fl. minute, greenish, March and April; fr. Sept. Fruit acidulous, palatable.
3. *diandrum*, Spreng. (syst. 1, p. 826.—Stilago *diandra*, Roxb. Corom. 2, t. 166;—fl. ind. 3, p. 759.) 5 Circar Mountains. Assam. Nepal. Fl. very small, greenish, June; fr. C. S. Wood used for various purposes. Ripe berries eaten by the natives. (Roxb.)



4. *lanceolarium*, Wall. (*Cat.*—*Stilago lanceolaria*, Roxb. *fl. ind.* 3, p. 760.) L. 5 Chittagong. Fl. minute, greenish, May and June; fr. C. S.
5. *pubescens*, Roxb. (*Corom.* 2, t. 167;—*fl. ind.* 3, p. 770;—*Spreng. syst.* p. 826;—*J. Grah. Cat. B. pl.* p. 186;—*Rheed.* 5, t. 11.) 5 Circular Mountains. S. Concan. Fl. minute, greenish-yellow, H. S.; fr. R. S. Berries eaten by the natives. (*Roxb.*)
6. *paniculatum*, Roxb. (*fl. ind.* 3, p. 770;—*Spreng. syst.* 1, p. 826;—*J. Grah. Cat. B. pl.* p. 186.) খুদি জাম *Khoodi-jam*. 5 S. Concan. Penang. Bengal, (Serampore.) Silhet. Nepal. Fl. minute, pale greenish, April and May; fr. July. Berries acidulous, of a pleasant taste.
7. *macrophyllum*,
8. *acuminatum*,
9. *rugosum*, } Wall. MSS. Silhet. In H. C. G. Fl.

FALCONERIA, Royle, (*ill.* p. 354.)

1. *Wallichiana*, Royle. (*o. c. t.* 98, f. 3.) 5 Nepal. Lately introduced.

* *Antidesma sylvestre*, Lam. *Rheed.* 5, t. 26. 5 S. Concan.—*Falconeria insignis*, Royle, *ill.* t. 98, f. 2, 5 Deyra-Dhoon.

ORDER CXXIII.—MYRICACEÆ,—Lindl. Nat. Syst. p. 179.

THE GALE TRIBE.

Aromatic shrubs or trees, by Lindl. referred to 4 genera. Of these, according to Spreng. syst. 10 species are natives of S. America; 3 of N. America; 4 of S. Africa; 1 of the Azores; 1 of Europe; 4-5 are found in the E. Indies. The latter are 3-4 *Myricas*; (Nepal Mountains. Singapore. Peninsula of India.) and 1 *Putranjiva*, (Assam, and Khassya Mountains, Oude, Coromandel.) Royle observes that *Myrica sapida* is in his opinion not distinct from *M. integrifolia*.—*M. esculenta* and *octandra*, Buch. we find only in Spreng. c. p. pag. 47 and 48. Are they really distinct from Roxburgh's plant? Properties of no great importance. "*Comptonia asplenifolia*, Ait. possesses astringent and tonic properties, and is much used in the domestic medicine of the United States in cases of diarrhœa. *Barton.* 1, p. 224. The root of *Myrica cerifera*, L. is a powerful astringent, and wax is obtained in great abundance from its berries." (*Lindl.*)

MYRICA, L. (*Spreng. syst.* 1, p. 374, No. 554;—*Endl. gen. pl.* 1, 271.)

1. *integrifolia*, Roxb. (*fl. ind.* 3, p. 765.) L. 5 Khassya Mountains. In H. C. G. fl. December and January; fr. May. Fruit pickled by the natives, and used as a condiment. (*Roxb.*)
2. *sapida*, Wall. (*tent. fl. nep.* t. 45.) Himalayas, from the Sutlej to Silhet. Fruit agreeably flavoured. Introduced in 1840.



PUTRANJIVA, Wall. (*Endl. gen. pl.* 1, p. 287.)

1. *Roxburghii*, Wall. (*Cat.*;—*Royle. ill. t.* 100;—*Endl. ichnogr. t.* 19. —*Nageia Putranjiva*, *Roxb. fl. ind.* 3, p. 766;—*J. Grah. Cat. B. pl.* p. 196;—*Rheed. 7, t.* 59.) L. 5 Coromandel Mountains. Ravines at Nagotnah and Kandalla. Kennery jungles, Salsette. Jungles to the N. and E. of Belgaum. Concans. Silhet. Assam. Oude. Common along the foot of the Himalayas. Fl. minute, yellow, March and April; fr. January. Wood white, close grained, and very hard. Nuts strung by parents round the necks of their children to keep them in health. (*Roxb.*)

- * *M. mexicana*, Willd. Mexico.—*M. salapensis*, Humb. Mexico.—*M. arguta*, Humb. Mexico.—*M. segregata*, Jacq. Brazil.

ORDER CXXIV.—JUGLANDACEÆ, Lindl. Nat. Syst. p. 180.

THE WALNUT TRIBE.

Trees, referred to 4 genera. Of these Spreng. syst. enumerates 14 species from N. America; 1 from Greece, Asia Minor and Persia; 1 from Caucasus; and 1 from Jamaica and St. Domingo. In the E. Indies Wall. Cat. mentions 6 species; 3 of *Juglans*, (Nepal, &c. Taong-Dong. Tavoy. one of them the common Walnut, and 3 of *Engelhardtia*, (Nepal, Khas-sya Mountains. Penang. Singapore.) All valuable timber-trees.

JUGLANS, L. (*Spreng. syst.* 3, p. 762, No. 3127.) Walnut.

1. *regia*, L. (*Spreng. syst.* 3, p. 865;—*Lam. ill. t.* 781;—*Roxb. fl. ind.* 3, p. 631.) अखटवाटे *Akurot*. 5 Extends from Greece and Asia Minor, over Lebanon and Persia, probably all along the Hindoo Koosh to the Himalayas. Abundant in Cashmere. Sirmore. Kemaon. Nepal. Assam, and the Khassya Mountains. Introduced into H. C. G. in 1795, but had not fl. up to 1814. Walnuts are imported into Bengal from Cashmere, the Himalayas, the Khassya Mountains, &c.

ENGELHARDTIA, Leschen.

1. *Roxburghiana*, Lindl. (*Wall. pl. as. rar.* 2, t. 199.—*Juglans pterococca*, *Roxb. fl. ind.* 3, p. 631.) L. 5 Khassya Mountains. Kamrup forests. Nepal. Tenasserim Coast, &c. Fl. minute, yellowish. In H. C. G. fr. July and Aug. Wood light-coloured, used by turners. Bark thick, dark brown, containing much tannin. (*Roxb.*)

- * *Juglans baccata*, L. Jamaica.—*J. arguta*, Wall. Taong-Dong.—*Engelhardtia Colebrookiana*, Lindl.; *Wall. pl. as. rar.* 3, t. 208. Nepal.—*E. Wallichiana*, Lindl. Penang. Singapore.



ORDER CXXV.—CASUARINACEÆ, (Casuaraceæ, Lindl.
Nat. Syst. p. 181.)

Weeping trees, referred to a single genus, which according to Spreng. syst. contains 13 species: 10 from New Holland and the South Sea Islands; 1 from the Mascarenhas; 1 from E. Africa; and 2 from the E. Indies, one of which is also a native of the South Sea Islands. Timber excellent.

CASUARINA, L. (*Spreng. syst.* 3, p. 758, No. 3081;—*Endl. gen. pl.* 1, p. 271.)

1. *equisetifolia*, Forst. (*Spreng. syst.* 3, p. 803;—*Lam. ill. t.* 746;—*Roxb. H. B. p.* 66;—*Rumph.* 3, t. 57.) 5 Islands of the Pacific Sea. Moluccas. Introduced into H. C. G. before 1814. Here it has not fl. Wood reddish-grey, very heavy, hard. (*Rumph.*)

2. *nodiflora*, Forst. (*Spreng. syst.* 1. c.) 5 South Sea Islands. Introduced into H. C. G. in 1810. Fl.?

3. *muricata*, Roxb. (*fl. ind.* 3, p. 519;—*Spreng. syst.* 3, p. 804;—*J. Grah. Cat. B. pl.* p. 196.—*C. equisetifolia*, L. suppl. excl. syn. Forst.) L. 5 Coast along the Malayan Peninsula up to Chittagong. Now introduced into every part of the plains of India, where in some places it is completely domesticated, f. ex. in Lower Bengal, about Calcutta, Barrackpore, Serampore, &c. Fl. minute, greenish, Feb. and March; fr. C. S. Wood reddish, of a texture like Toon, but held in no estimation. (*Roxb.*)

4. *torulosa*, Ait. (*Spreng. syst.* 1. c.) 5 New Holland. Introduced into H. C. G. in 1811. Fl.?

5. *distyla*, Vent. (*Spreng. syst.* 3, p. 804.) 5 New Holland. Introduced into H. C. G. in 1811. Fl.?

* *Casuarina lateriflora*, Lam. 5 Mascarenhas Islands.

ORDER CXXVI.—DATISCACEÆ, Lindl. Nat. Syst. p. 182.

Herbs, by Lindl. referred to 3 genera: *Datisca*, L.; *Tetrameles*, R. Br.; and *Tricerastes*, Presl. The first has one species in S. Europe, Asia Minor, Iberia, Cashmere and Nepal; and another in Pennsylvania. The second is a Javanese genus. With the third we are not acquainted. Properties unimportant.

DATISCA, L. (*Spreng. syst.* 3, p. 895, No. 3191.)

1. *cannabina*, L. (*Spreng. syst.* 3, p. 906;—*Lam. ill. t.* 823.—*D. Nepa-lensis*, Don.?) 4. S. Europe, Asia Minor, Iberia, Kunawar, Cashmeer, Nepal. Has been introduced into H. C. G. Fl.?

* *Tetrameles nudiflora*, R. Br. Horsf. pl. as. rar. 1, p. 79, t. 17. L. 5 Java.



ORDER CXXVII.—LACISTEMACEÆ, Lindl. Nat. Syst. p. 183.

Small trees or shrubs, of 1 genus, and according to Spreng. syst. 5 species, all natives of Brazil and the W. Indies Properties unknown.

- * *Lacistema serrulatum*, Mart. nov. gen. t. 95. ☞ Brazil.—*L. Berterianum*, Mart. ☞ Cuba. St. Domingo.—*L. pubescens*, Mart; nov. gen. t. 94. ☞ Brazil.—*L. myricoides*, Swz. ☞ Jamaica.

ORDER CXXVIII.—CHLORANTHACEÆ, Lindl. Nat. Syst. p. 183.

Herbs or undershrubs, by Lindl. referred to 3 genera: *Ascarina*, Forst. with 1 species from the Society Islands: *Chloranthus*, Swz., with 3 from China and Japan, and 3 from the Khassya Mountains, Java, and Penang; and *Hedyosmum*, Swz. with 5 from the W. Indies and New Granada. The roots of *Chloranthus officinalis* have a fragrant camphorated smell, and an aromatic, somewhat bitter flavour. There seems no doubt that it is a stimulant of the highest order. (Lindl. from Blum. fl. Jav.)

CHLORANTHUS, Swz. (Spreng. syst. 3, p. 683, No. 3408;—Endl. gen. pl. 1, p. 265.)

1. *inconspicuus*, Swz. (Spreng. syst. 3, p. 750;—Roxb. H. B. p. 11.—*Nigrina plicata*, Thunb.—*Creodus odorifer*, Lour.) ☞ China. Japan. Fl. small, R. S.; fr. 0.

2. *erectus*, Wall. (Cat.) ☞ Khassya Mountains. Assam. In H. C. G. Fl. ?

- * *Chloranthus monostachys*, R. Br.; B. M. 48, t. 2190. ☞ China.—*C. brachystachys*, Bl. ☞ Penang.—*Hedyosmum nutans*, Swz. ☞ Jamaica.—*H. arborescens*, Swz. ☞ Jamaica.—*H. hirsutum*, Kth. New Granada.

ORDER CXXIX.—SAURURACEÆ, Lindl. Nat. Syst. p. 184.

Herbs, excluding *Spathium* and *Aponogeton*? referred to 2 genera: *Houttuynia*, with one species from Japan, Nepal, the Khassya Mountains and Cochin China; and *Saururus*, L. with 2 from N. America. Properties unknown.

HOUTTUYNIA, Thunb. (Spreng. syst. 1, p. 138, No. 371;—Endl. gen. pl. 1, p. 267.)

1. *cordata*, Thunb. (Spreng. syst. 1, p. 364;—Thunb. jap. t. 26;—B. M. 54, p. 2731;—Roxb. fl. ind.; ed. Carey, 1, p. 360.—*Polypara Cochinchinensis*, Swz.)



chinensis, Lour.) २. Japan. Nepal. Assam. Khassya Mountains. Cochin China. Has not fl. here. The plant, while young, is used as a potherb by the inhabitants of Nepal, as well as those of Cochin China.

ORDER CXXX.—PIPERACEÆ, Rich.—Lindl. Nat. Syst. p. 185.

THE PEPPER TRIBE.

Herbs, undershrubs or shrubs, by Lindl. referred to 4 genera. Of these, according to Spreng. syst. 188 are natives of S. America, Mexico and the W. Indies; 5 of the Mascarenhas Islands; 3 of the South Sea Islands; 1 of Guinea; and 1 of Carolina. 3-4 species have been discovered in S. Africa, (Harvey,) and 48 of *Piper* (Spreng; Roxb. Wall.) in the E. Indies, Moluccas, Sunda Islands, Ceylon, both Peninsulas of India, the Khassya Mountains, Assam, Nepal, Kemaon. Only a few herbaceous forms belong to the plains. Common Pepper, Cubebs and Betle are well known to every one. *Piper inebrians* is narcotic, and used by the South Sea islanders for preparing an intoxicating drink.

PIPER, L. (Spreng. syst. 1, p. 28, No. 130;—Endl. gen. pl. 1, p. 265.)

1. *Chaba*, W. Hunt. (Roxb. fl. ind. 1, p. 156; ed. Carey, 1, p. 158;—Spreng. syst. 1, p. 112.—P. Chuvya, Roxb. H. B. p. 4;—Rumph. 5, t. 116, f. 1.) चै Chui. ५ ∪ Moluccas. Singapore. Penang. Introduced into H. C. G. in 1808, but had not fl. up to 1814, nor has it fl. here during the last twelve years.
2. *nigrum*, L. (Spreng. syst. 1, p. 112;—Roxb. fl. ind. 1, p. 150; ed. Carey, 1, p. 153;—J. Grah. Cat. B. pl. p. 198;—B. M. 59, t. 3139;—Rheed. 7, t. 12.) गोमुरि Gol-murich. Black-pepper. ५ ∪ Sumatra. Courtallum, &c. Introduced into H. C. G. before 1793, but had not fl. up to 1814, nor, do I think, it has ever fl. in Bengal.
3. *trioecum*, Roxb. (fl. ind. 1, p. 151; ed. Carey, 1, p. 153;—J. Grah. Cat. B. pl. p. 199;—Spreng. syst. 1, p. 112.) ५ ∪ Rajamundri Circar. In abundance at Lanowlee, near Kandalla, clothing the trunks of high trees. Aments appearing R. and C. S.; fr. March.
4. *longum*, L. (Spreng. syst. 1, p. 413;—Roxb. fl. ind. 1, p. 154; ed. Carey, 1, p. 156;—J. Grah. Cat. B. pl. p. 199;—Rheed. 7, t. 14.) पिपूल Pipool. Long-pepper. ५ ∪ Banks of water-courses towards the Circar Mountains. S. Concan. Banks of the Irawaddi. Bengal, (Serampore.) Silhet. Aments appearing R. S.; fr. C. S.
5. *Betle*, L. (Spreng. syst. 1, p. 413;—Roxb. fl. ind. 1, p. 158; ed. Carey, 1, p. 160;—J. Grah. Cat. B. pl. p. 198;—B. M. 59, t. 3132;—Rheed. 7, t. 15;—Rumph. 5, t. 116, f. 2;—Burm. zeyl. t. 82, f. 2.) पाण Pan. Betle-leaf. ५ ∪ or creeping. Native place unknown. Cultivated all over India. Aments appearing R. and C. S.

6. *sylicum*, Roxb. (*fl. ind.* 1, p. 156; *ed. Carey*, 1, p. 158;—*Spreng. syst.* 1, p. 413.) 5 Khassya Mountains. Assam. Aments appearing, and fr. R. S.
 7. *cuneifolium*, Jacq. (*icon. rar.* 2, t. 214;—*Spreng. syst.* 1, p. 115.—*Peperomia cuneifolia*, Willd. *en.*) 4. Caracas. Introduced here a year ago. Has not fl. yet.
 8. *reptans*, Roxb. (*H. B.* p. 4.) Moluccas. 5 Rooting. In H. C. G. Aments appear and ripen R. and C. S. (*Roxb.*)
 9. *sarmentosum*, Roxb. (*fl. ind.* 1, p. 160; *ed. Carey*, 1, p. 162;—*Spreng. syst.* 1, p. 117.—*P. latifolium*, *Hunt*; *As. Res.* 9, p. 392; not Forst.) 5 Penang. Aments appearing, and ripening R. S.
 10. *peepuloides*, Roxb. (*fl. ind.* 1, p. 157; *ed. Carey*, 1, p. 159;—*Spreng. syst.* 1, p. 117.) *Silhet Long-pepper*. 5 Rooting. Khassya Mountains. Silhet. Introduced into H. C. G. in 1811, but had not fl. up to 1814.
 11. *clusiæfolium*, Jacq. (*icon. rar.* 2, t. 213.—*Peperomia clusiæfolia*, *Hook*; *B. M.* 56, t. 2943.) 4. W. Indies. Introduced in 1840.
 12. *pereskiaefolium*, Jacq. (*collect.* 4, p. 126;—*Pers. syn.* 1, p. 34.—*P. peireskiaefolium*, *Spreng. syst.* 1, p. 119.—*Peperomia pereskiaefolia*, *Humb.*;—*Hook. exot. fl. t.* 67.) 4. Caracas. Introduced in 1841.
 13. *magnoliæfolium*, Jacq. (*coll.* 3, p. 210; *ic. rar.* 2, t. 213.) 4.
- * *Piper Malamiri*, L. Rheed. 7, t. 16. S. Concan. Goalpara.—*P. lanchites*, Röm. and Sch. (*P. lanceolatum*, Roxb. not Ruiz. and Pav.) Moluccas. Penang.—*P. stenophyllum*, (*P. angustifolium*, Roxb. not Lam.) Moluccas.—*P. saxatile*, Wall. Nepal. Khassya Mountains.—*P. ribesioides*, Wall.; *pl. as. rar.* 1, t. 91. Chappedong.—*P. subpel-tatum*, Willd. Penang. Mauritius.—*P. plantagineum*, Buch. Goalpara.—*P. colubrinum*, Lk. 5 Brazil.—*P. nitidum*, Swz. 5 Jamaica.—*P. acuminatum*, L.; *B. M.* 44, t. 1882. 4. W. Indies.—*P. reniforme*, Poir. (*Peperomia reniformis*, *Hook. exot. fl. t.* 164.) 5 St. Vincent.—*Laurea tiliaefolia*, Gaudich, 5 Guiana.—*Ottonia Anisum*, *Spreng.* 5 Brazil.

ORDER CXXXI.—SALICACEÆ, Lindl. *Nat. Syst.* p. 186.

THE WILLOW TRIBE.

Trees or shrubs, of 2 genera: *Salix* and *Populus*. Of these, *Spreng. syst.* enumerates 75 species from Europe; 36 from N. America; 6 from S. America and Mexico; 3 from Dahuria; 1 from Iberia; 1 from Spitzbergen; 1 from Siberia; 1 from Melville Island; 1 from Japan; 1 from Patagonia; and 1 from Egypt. In the eastern and northern districts of S. Africa have been found several species of *Salix*. That of the Gariep (S.



Gariepina, Burch,) is, according to Burchell, one of the greatest ornaments of the noble river whose name it bears, (*Harvey*.) The E. Indies present, according to Wall. Cat. and Royle. ill. 2 species of *Populus*, (Himalayas); and 15 of *Salix*; 2 from Oude; 3 from the Peninsula of India; 1 from Lower Bengal; and the rest from the Himalayas.

The willows and poplars are valuable trees for their timber, or for economical purposes.

SALIX, L. (*Spreng. syst.* 1, p. 28, No. 129;—*Endl. gen. pl.* 1, p. 290.)
Willow.

1. *babylonica*, L. (*Spreng. syst.* 1, p. 99;—*Roxb. fl. ind.* 3, p. 754;—*J. Grah. Cat. B. pl.* p. 195.) *Weeping Willow*. 5 Greece. Asia Minor. Nepal. Cultivated in gardens. Fl. March.
2. *tetrasperma*, Roxb. (*Corom.* 1, t. 97;—*fl. ind.* 3, p. 753;—*Spreng. syst.* 1, p. 100;—*J. Grah. Cat. B. pl.* p. 195.) पानी जमा *Panee-juma*. 5 Kheree Pass, along the foot of the Mountains, and in other hot parts of India, as Bengal and the Peninsula. In the Presidency of Bombay, the vale of Yena, and other moist places, Mahableshwur; various places of the Southern Mahratta Country. Fl. H. and R. S.

* *Salix glabrescens*, Lindl. Oude. Rohileund.—*S. urophylla*, Lindl. Oude.—*S. Bonplandiana*, Humb. Mexico.—*S. aegyptiaca*, L. Egypt.—*S. paradoxa*, Humb. Mexico.—*Populus græca*, Ait. Greece.

ORDER CXXXII.—PLATANACEÆ, Lindl. Nat. Syst. p. 187.

Trees or shrubs of one genus, of which Spreng. syst. enumerates 4 species: 1 from Europe and Asia Minor; 2 from Asia Minor; and 1 from N. America. Wood very valuable.

* *Platanus orientalis*, L. 5 S. Europe. Asia Minor. Caucasus. Cashmere.

ORDER CXXXIII.—BALSAMACEÆ, Lindl. Nat. Syst. p. 188.

BALSAMIFLUE, BL.

Tall trees yielding balsam, (*Bl.*) contained in one genus, *Liquidambar*, of which Spreng. syst. enumerates 2 species, one from the warmer parts of N. America; the other from the neighbourhood of Smyrna. A third *Liquidambar cerasifolia*, Griff. (*Sedgwickia cerasifolia* Wall. et Griff.) is found in the E. Himalayas and Assam. "The fragrant resin Storax is yielded by several species of *Liquidambar*." (*Lindl.*)



ORDER CXXXIV.—MONIMIACEÆ, Lindl. Nat. Syst. p. 188.

Aromatic trees or shrubs, by Lindl. referred to 6 genera, of which Spreng. syst. enumerates 3 species from Madagascar and the Mascarenhas Islands; and 6 from S. America.

"All the parts of the bark and leaves exhale an aromatic odour, which is compared by travellers to that of Laurels or Myrtles. (DC.) Ruizia, the *Boldu* of Chili produces a succulent fruit which is eaten by the natives. Both the wood and leaves are very fragrant; the former makes a kind of charcoal, which is preferred beyond all other kinds by smiths. (Bridges.)" (Lindl.)

AMBORA, Juss. (*Endl. gen. pl.* 1, p. 313.)

1. *Tambourissa*, Lam. (*ill. t.* 784. — *Mithridatea quadrifida*, Willd. — *Roxb. H. B. p.* 2.) 5 Madagascar. Mascarenhas Islands. Introduced into H. C. G. in 1810, but had not fl. up to 1814.

* *Monimia rotundifolia*, Pet. Th. Mascarenhas Islands. — *M. ovalifolia*, Pet. Th. Mascarenhas Islands.

ORDER CXXXV.—ATHEROSPERMACEÆ, Lindl. Nat. Syst. p. 189.

Trees, referred by Lindl. to 3 genera: *Atherosperma*, Labill. with 1 species from N. Holland; *Laurelia*, Juss. with 1 from Chili; and *Citrosma*, Ruiz. and Pav., of which Spreng. syst. enumerates 18 species from S. America. Aromatic plants.

* *Atherosperma moschata*, Lindl. 5 New Holland.

ORDER CXXXVI.—PODOSTEMACEÆ, Lindl. Nat. Syst. p. 190.

Herbaceous floating plants, referred by Lindl. to 8 genera, of which Spreng. syst. enumerates 5 species from S. America; 1 from N. America; 2 from Madagascar; and 1 from Etruria, Chili and N. America; 2 species of *Podostemon*, (Wallichii R. Br. et Griffithii, Wall.) have been found on the Khassya Mountains.

* *Mniopsis scaturiginum*, Mart. Brazil.

ORDER CXXXVII.—CALLITRICHACEÆ, Lindl. Nat. Syst. p. 191.

Small annual aquatic herbs of 1 genus, containing, according to DC. 4 species from Europe and N. America. One species has been found on the Neelgherries. Properties unknown.

* *Callitriche verna*, L.; E. B. 11, t. 722. © Europe.

ORDER CXXXVIII.—SANTALACEÆ, R. Br.—Lindl. Nat. Syst.
p. 193.

THE SANDERS-WOOD TRIBE.

Herbs, shrubs or trees, referred to 18-20 genera. Of these Spreng. syst. enumerates 21 species for New Holland; 9 for Europe; 8 for N. America; 2-4 for Chili and Peru; 1 for Patagonia; and 1 for Japan. In S. Africa have been found 40 species, (*Harvey*.) and in the E. Indies, according to our materials, 10; viz. 1-2 of *Thesium*, (Peninsula, Himalayas); 1-2 of *Santalum*; 2 of *Osyris*, (Nepal, Peninsula); 1-2 of *Sphærocarya*, (Nepal, Khasiya Mountains); 1 of *Scleropyrum*, (Malabar); and 1 of *Octarillum*. (Lour.) Properties under *Santalum album*.

SANTALUM, L. (*Spreng. syst.* 1, p. 373, No. 538.)

1. *album*, L. (*Roxb. fl. ind.* 1, p. 442; *ed. Carey*, 1, p. 462;—*J. Grah. Cat. B. pl.* p. 177;—*B. M.* 60, t. 3235;—*Buch. journ. Mysore*, 1, p. 186 and 202—2, p. 117 and 132—3, p. 192;—*W. Griffith. On the ovulum of Santalum album*, in *Linn. soc. trans.* 18 vol. page 59-71.—*Santalum album*, *Rumph.* 2, t. 11.) चन्दन *Chundun. Sandal-Wood.* 5 China. Cochin China. Both Peninsulas of India, Assam. Fl. small, first straw-coloured, afterwards deep ferrugineous-purple, inodorous, and fr. nearly the whole year. Yields the Sandal-wood of commerce, which is usually cut into billets, and disposed of in that state. It is burnt to perfume temples and dwelling houses, both in China and India. Reduced to powder, it enters into a composition for marking the forehead. (*J. Grah. l. c.*)

- * *Osyris nepalensis*, Don. (*O. arborea*, Wall. Cat.) Nepal. Sirmore. Hurdwar.—*O. Wightiana*, J. Grah. Kandalla. Mahableschwur.—*Sphærocarya edulis*, Wall.; Wight. icon. 1, t. 255. Nepal.—*Scleropyrum Wallichianum*, Arn. Wight. icon. 1, t. 241.

ORDER CXXXIX.—ELÆAGNACEÆ, Lindl. Nat. Syst. p. 194.

THE OLEASTER TRIBE.

Trees or shrubs, by Lindl. referred to 4 genera, of which Spreng. syst. assigns 5 species to Japan; 3 to N. America; and 2 to Europe, Asia Minor, Tauria and Egypt. In the E. Indies have, according to Roxb. Wall. Cat. and Royle. ill. been discovered 8 species of *Elæagnus*, (Himalayas, Khasiya Mountains, Garrow Hills, Ludak, Neelgherries, Travancore, Ceylon, Sumatra, Java, (one also a native of Japan,) and *Hippophæ conferta*, Wall. a native of the Himalayas. Properties unimportant.

ELÆAGNUS, L. (*Spreng. syst. 1, p. 373, No. 535.*)

1. *triflora*, Roxb. (*fl. ind. 1, p. 439; ed. Carey, 1, p. 459;—Spreng. syst. 1, p. 489;—Burm. fl. zeyl. t. 39, f. 1.*) ५ Ceylon. Sumatra. Fl. small, white, C. S.; fr. H. S.
2. *conferta*, Roxb. (*fl. ind. 1, p. 440; ed. Carey, 1, p. 450;—Spreng. syst. 1, p. 489;—J. Grah. Cat. B. pl. p. 178.*) ५ Kandalla. Mahableshwur. Along the Ghauts. S. Concan. Cochin. Prome. Sogaen. Khassya Mountains. Nepal. Fl. small, straw-coloured, C. S.; fr. March. Fruit eaten by the natives, of an agreeable flavour. (*J. Grah. l. c.*)
3. *dulcis*, Roxb. (*H. B. p. 11;—J. Grah. Cat. B. pl. p. 178.*—*E. arboorea, Roxb. fl. ind. 1, p. 441?; ed. Carey, 1, p. 461;—Spreng. syst. 1, p. 489?*) L. ५ Silhet. Has not fl. here.
4. *parvifolia*, Wall. (*Royl. ill. p. 323, t. 81, f. 1.*) Nepal. Sirmore. Kemaon. ५ fl. small, white. In H. C. G. Fl.
5. *ferruginea*, Rich. (*Spreng. l. c.*) ५ Java. Neelgherries. Has not fl. here.

* *Elæagnus latifolia*, L. Ceylon. Travancore.

ORDER CXL. THYMELACEÆ, Lindl. Nat. Syst. p. 194.

THE MEZEREUM TRIBE.

Shrubs, seldom herbs, by Lindl. referred to 22 genera. Of these Spreng. syst. enumerates for New Holland and the South Sea Islands 46 species; for Europe 22; for S. America, Mexico and the W. Indies 9; for China 3; for Japan 1; for Siberia 2; for Caucasus 2; for Persia 1; for N. Africa 2, exclusive of those common with Europe; for the Levant 2, exclusive of those common with Europe; for N. America 1; and for the Straits of Magellan 1. In S. Africa have been discovered 80 species, (*Harvey*,) and in the E. Indies, according to Wall. Cat. and Royl. ill. 17, viz. 14 of *Daphne*, (Nepal, Khassya Mountains, Darjeeling, South Mahratta Country,) 1 of *Linostoma*, (Khassya Mountains), and 2 of *Cansjera*, (Malabar, Amherst,) to these Spreng. adds *Dais octandra*, L. with which we are not acquainted. For China Wall. Cat. has a new species, *Daphne viridiflora*.

A caustic, skin-blistering, tenacious bark characterises the order. A soft, smooth and tough paper is manufactured in Cochin China and Nepal from the inner bark of *Daphne cannabina*, Lour. The lace bark-tree of Jamaica is of this family.

DAPHNE, L. (*Spreng. syst. 2, p. 174, No. 1477.*)

1. *viridiflora*, Wall. (*Cat.*) ५ China. Fl. small, pale green and fr. the whole year.



S. indica, L. (Pers. syn. 1, p. 435;—Spreng. syst. 2, p. 236.) 5 China. New Holland. Has been introduced into H. C. G. Fl. ?
LINOSTOMA, Wall. (Cat.)

1. *decandrum*, Wall. (Cat.—Nectandra decandra, Roxb. fl. ind. 2, p. 425.)
L. 5 Silhet. Fl. largish, greenish-white, fragrant. In H. C. G. Fl. ?

* *Daphne mexicana*, Spreng. Mexico.—*D. tinifolia*, Swz. Jamaica.—*D. occidentalis*, Swz. Jamaica.—*D. involocrata*, Wall. Khassya Mountains.—*D. eriocephala*, Wall. Neelgherries. Hilly parts of S. Maharratta Country. Mahableshwur.—*Consjera Rheedii*, Gmel. (C. scandens, Roxb. Corom. 2, t. 103.) 5 Malabar Hill, Bombay. Elephantana. Salsette. The Ghauts. Circars.—*Lagetta lintearia*, Juss. (Lace-bark-tree.) 5 Jamaica.

ORDER CXLI.—HERNANDIACEÆ, Lindl. Nat. Syst. p. 195.

Trees of 2 genera and 4 species : 3 from Moluccas and South Sea Islands and 1 from Guiana. Properties under the species.

HERNANDIA, L. (Spreng. syst. 3, p. 759, No. 3097.)

1. *ovigera*, L. (Spreng. syst. 3, p. 835, excl. syn. Aubl. and Lam.;—Gärtn. fr. 1, p. 193, t. 40, f. 3;—Roxb. fl. ind. 3, p. 577.—Arbor ovigera, Rumph. 3, t. 123, as to flowers and fruit.) 5 Moluccas. Fl. small, white, Aug. Sept. and Oct.; fr. H. S.

INOCARPUS, Forst. (Spreng. syst. 2, p. 274, No. 1538)

1. *edulis*, Forst. (Spreng. syst. 2, p. 285;—Roxb. fl. ind. 2, p. 416;—J. Grah. Cat. B. pl. p. 106;—Rumph. 1, t. 65.) Otaheite Chestnut-tree. L. 5 Society and Friendly Islands. New Hebrides. Amboyna. Java. Fl. small, very pale yellow, fragrant, H. S.; fr. Aug. and Sept. Kernels edible, but by no means pleasant to the taste. Bark astringent, used in dysentery. The inhabitants of New Guinea smear the heads of their arrows with the expressed resinous juice.

* *Hernandia sonora*, L. (Rumph. 2, t. 85.) 5 Moluccas.—*H. guianensis*, Aubl. 5 Guiana.

ORDER CXLII.—AQUILARIACEÆ, Lindl. Nat. Syst. p. 196.

THE AGALLOCHUM TRIBE.

Trees containing the following 2 genera and 4 species.

AQUILARIA, Lam. (Spreng. syst. 2, p. 281, No. 1669;—Arn. in Lind. Nat. Syst. p. 442, No. 24.)

1. *Agallocha*, Roxb. (fl. ind. 2, p. 422;—DC. pr. 2, p. 59;—Royle ill. t. 36, f. 1.) অগ্নি Ugoor. Agallochum. Aloe's wood. Agila wood. Eagle



wood. L. 5 Mountainous tracts E. and S. E. of Silhet. Fl. small, green, March and April; fr. R. S. Contains a fragrant resinous substance of a dark colour. It is considered a cordial by some Asiatic nations, and has been prescribed in Europe in gout and rheumatism. (*Ainslie.*)

* *Aquilaria malaccensis*, Lam. 5 Malacca.—*A. sinensis*, Spreng. L. 5 China.—*Gyrinops Walla*, Gärtn. 5 Ceylon.

ORDER CXLIII.—PROTEACEÆ, Juss.—Lindl. Nat. Syst. p. 197.

Shrubs or trees, by Lindl. referred to 42 or 43 genera. Of these, Spreng. syst. enumerates 219 species for New Holland and the South Islands; 20 for S. America; 1 for Abyssinia; and 1 for the Straits of Magellan. In S. Africa have been found 200 species (*Harvey.*); and in the E. Indies, according to Bennett 11 of *Helicia*, (Khassya Mountains, Java, Singapore, Penang, Tavoy, Martaban.) To these may, perhaps, be added *Cylindria rubra*, Lour. (Cochin China.)

"Of no known use, except as fire wood, for which they are commonly employed at C. G. H. The fruit of *Guevina Asellana*, Mol. is sold like nuts in the markets of Chili." (*Lindl.*) At least 2 of the Indian species, *Helicia robusta* and *excelsa*, R. Br. are large timber trees.

GUEVINA, Molin.

1. *Avellana*, Mol. (*Spreng. syst.* 1, 472.) 5 Chili. 1840.

GREVILLEA, R. Br.

1. *robusta*, Cunningham. 5 B. M. 59, 3184. New Holland.

* *Helicia excelsa*, R. Br. L. 5 Chittagong. Coast of Martaban.—*H. attenuata*, R. Br. Penang. Khassya Mountains.—*H. glabrata*, R. Br. Tavoy.—*H. robusta*, Wall. Khassya Mountains.—*Rhopala sessilifolia*, Rich. Guiana.—*R. nitida*, Rudg. Guiana.

ORDER CXLIV.—LAURACEÆ, Lindl. Nat. Syst. p. 200.

THE CINNAMON TRIBE.

Trees, often of great size, seldom shrubs, by Lindl. referred to 45 or perhaps 46 genera. Of these, Spreng. syst. enumerates about 50 for S. America, Mexico, and the W. Indies; 12 for N. America; 7 for Japan; 7 for China, including those of Nees; 7 of New Holland; 3 of the Canaries; 2 of Madagascar; 1 of Mauritius; and 1 of S. Europe. In S. Africa has



been found only one species, *Laurus bullata*, a tall forest tree, whose fine grained, dark coloured wood is much used in cabinet work, under the unpromising name of 'Stinkwood,' so called from the offensive smell of the fresh sawn timber. When made into furniture, the better specimens have much the appearance of Rose-wood, and take a fine polish, (Harvey.) In the E. Indies alone, according to Nees, (Systema Laurinarum) we find 86 species: viz. 2 of *Polyadenia*; 6 of *Daphnidium*; 1 of *Benzoin*; 1 of *Dodecadenia*; 6 of *Litsa*; 25 of *Tetranthera*; 1 of *Cylicodaphne*; 1 of *Actinodaphne*; 1 of *Endiandra*; 2 of *Cryptocarya*; 2 of *Beilschmiedia*; 1 of *Cecidodaphne*; 4 of *Machilus*; 8 of *Ocotea*; 3 of *Alseodaphne*; 2 of *Camphora*; and 20 of *Cinnamomum*. The greater part of these inhabit Nepal, the Khassya Mountains, Assam, the Circars, the Neelgherries, the Peninsula of Malacca with the adjacent Islands, the Moluccas, and Java. But few species have been found in the plains. Cinnamon, Camphor, Sassafras, Benzoin, the Avocado Pear, and Laurel-leaves are the most important products of this order, and are too well known to require details.

CINNAMOMUM, Burm. (Nees, in Wall. pl. as. rar. 2, p. 73.)

1. *obtusifolium*, Nees. (l. c.—*Laurus obtusifolia*, Roxb. fl. ind. 2, p. 302.

L. Bejolgota, Buch. trans. Linn. Soc. 13, 2. p. 559; excl. *Laurus malabathrica*, Roxb.) L. 5 Mountainous countries immediately east of Bengal. Fl. small, greenish-yellow, Jan. and Feb.; fr. July and Aug. Timber very useful for various purposes. (Roxb.)

2. *iners*, Reinw. (Nees, l. c.—Wight. icon. 1, t. 122, et t. 130;—J.

Grah. Cat. B. pl. p. 173.—Rheed. 1, t. 57.) Wild Cinnamon. L. 5 Along the great range of the Ghauts, and in the hilly parts of the Concans and Malabar. Java. Penang. Moulmein. Attran. Chappedong. Fl. small, greenish-yellow, C. S. The leaves on being bruised have a strong spicy smell. Billets of this tree are often sold together with other kinds of firewood, by the wood-cutters. (Nimmo.) In H. C. G. ? Fl. ?

3. *eucalyptoides*, Nees. (l. c.—*Laurus malabathrica*, Soland MSS.;—

Roxb. fl. ind. 2, p. 297.) 5 Malabar Mountains. Introduced into H. C. G. before 1794, but had not fl. up to 1814. It must, however, have fl. afterwards, since the dried specimens, examined by Prof. Nees. v. Essenbeck, had been gathered there. The leaves have a strong, acrid, clove-like taste and odour, somewhat tinged with camphor. (Nees.)

4. *nitidum*, Nees. (l. c.;—Hook. exot. fl. t. 176, excl. syn. *Cinnamomum*

Cassia, Nees, Disput.—Wight. icon. 1, t. 124.—*Laurus nitida*, Roxb. fl. ind. 2, p. 300.) 5 Sumatra. Fl. small, pale yellowish, Feb. and March; fr. May and June. Taste and odour of the bark cinnamon-like. (Nees.)

5. *zeylanicum*, Nees. (l. c. p. 74.) 5 Ceylon. Fl. small, greenish-white,

Jan. and Feb.; fr. May and June.—True Cinnamon-tree. দালচিনি গাছ
Dalchini-gachh.

- β. *latifolium*, Roxb. (*H. B.* p. 30.—*C. zeylanicum*, *Wight. icon.* 1, t. 123.)
- γ. *angustifolium*, Roxb. (*l. c.*—*Wight. icon.* 1, t. 128.—*Laurus Cassia*, *B. M.* 40, t. 1636.—*Cinnamomum perpetue florens*, *Burm. zeyl.* p. 63, t. 28.—*Rheed.* 1, t. 57.)
6. *albiflorum*, Nees. (*o. c. p.* 75.—*Wight. icon.* 1, t. 140.—*C. camphoratum*, *Bl.*—*Laurus Cassia*, *Roxb. fl. ind.* 2, p. 297, excl. syn. Willd. and *Rheed.*) 5 Nepal. Tipperah. Fl. small, white, Feb. March and April; fr. June and July. Bark smelling and tasting strongly of camphor and cinnamon.
7. *dulce*, Nees. (*l. c.*—*C. chinense*, *Bl.*—*Laurus dulcis*, *Roxb. fl. ind.* 2, p. 303;—*Wight. icon.* 1, t. 138.) 5 China. Fl. small, pale yellowish, March and April; fr. R. S.—*Leaves* and *bark* of a sweet aromatic taste and odour. (*Roxb.*)
8. *Culitlawan*, Nees. (*l. c.*—*Wight. icon.* 1, t. 137.—*Laurus Culitlawan*, *Roxb. fl. ind.* 3, p. 299;—*Laurus Caryophyllus*, *Lour.*—*Cortex caryophyllioides*, *Rumph.* 2, t. 14.) 5 Moluccas. Cochin China. Fl. small, white, inodorous. In H. C. G. fl. March and April. (*Roxb.*) Bark smelling like a mixture of *sassafras* and *cloves*, yielding by distillation an essential oil which the inhabitants of Amboyna esteem an excellent remedy in retention of urine, when given in a dose of six drops twice a day. (*Roxb.*)
9. ? *recurvatum*, *Wight. icon.* 1, t. 133.—*Laurus recurvata*, *Roxb. fl. ind.* 2, p. 301.) 5 China. In H. C. G. fl. April and May. (*Roxb.*)
10. *caudatum*, Nees. (*o. c. p.* 76.) 5 Nepal. Has not fl. here.
- CAMPHORA, Nees, (*Wall. pl. as. rar.* 2, p. 72.)
1. *officinatum*, Bauh. (*Nees. l. c.*—*Laurus Camphora*, *L.*; *B. M.* 53, t. 2658.—*L. camphorifera*, *Kämf. amoen.* t. 771;—*Roxb. fl. ind.* 2, p. 304.) कर्पूर *Kurpoor. Officinal Camphor-tree.* 5 China. Japan. Fl. small, pale greenish-yellow, March and April.
2. *glandulifera*, Nees. (*l. c.*—*Laurus glandulifera*, *Wall.*; *trans. med. and phys. soc. Calcutta*, 1, p. 45, with a plate.) L. 5 Nepal Mountains. Fl. small, odoriferous, yellowish-greenish. Has not fl. here. Wood pale yellow, very light, possessing little strength, while fresh strongly smelling of camphor, unfit for furniture. (*Wall.*)
3. *porrecta*, (*C. Parthenoxylon*, *Nees. l. c.*—*Laurus Parthenoxylon*, *Jack. mal. misc.* 1, p. 28.—*L. porrecta*, *H. B.* p. 30;—*Roxb. fl. ind.* 2, p. 308.—*L. Pseudo-sassafras*, *Bl.*) L. 5 Penang. Sumatra. Java. Fl. small, pale yellow. In H. C. G. fl. C. S.; fr. May. (*Roxb.*) Wood strong and durable, if not exposed to wet. (*Jack.*)
- OCOTEA, Aubl. (*Nees. o. c. p.* 70.)
1. *glaucescens*, Nees. (*o. c. p.* 71.—*Laurus glaucescens*, *Roxb. fl. ind.* 2, p. 307.—*L. sylvestris*, *Bks. Herb.*) L. 5 Silhet. Northern Circars. Fl. small, greenish-yellowish, Feb. March and April; fr. May and June. Timber used by the natives for many economical purposes. (*Roxb.*)



2. *lanceolaria*, (O. lanceolata, Nees. l. c.—*Laurus lanceolaria*, Roxb. *fl. ind.* 2, p. 309.) 5 Khassya Mountains. Nepal. Fl. small, pale yellowish, Feb. March and April; fr. May and June. Wood employed by the natives for many useful purposes. (Roxb.)
3. *mollis*, Wall. 5 Burma.
- PERSEA, Gärtn. (Nees, in Wall. *pl. as. rar.* 3, p. 32.)
1. *gratissima*, Gärtn. (Nees. l. c.—Gärtn. *fil. fr.* 3, p. 222;—Bl. *Bijd.* p. 567;—J. *Grah. Cat. B. pl.* p. 174;—B. *Reg.* 15, t. 1258.—*Laurus Persea*, Jacq. *obs. fasc.* 1, p. 37;—Roxb. *H. B.* p. 30.) *Avocado*, and *Subaltern's butter-tree* of the W. Indies. *Alligator pear*. 5 Tropical America. Cultivated in India. Fl. small, pale-greenish, Feb. and March; fr. July and August.
- BEILSCHMIEDIA, Nees. (Wall. *pl. as. rar.* 2, p. 69.)
1. *Roxburghiana*, Nees. (l. c.—*Laurus bilocularis*, Roxb. *fl. ind.* 2, p. 311.) 5 Tipperah. Fl. small, yellow, March and April; fr. June.
- AGATHOPHYLLUM, Juss. (Spreng. *syst.* 2, p. 444;—Endl. *gen. pl.* 1, p. 318.)
1. *aromaticum*, Willd. (Spreng. *syst.* 2, p. 460;—Roxb. *H. B.* p. 36.—*Ravensara aromatica*, Sonner. *it.* 2, t. 127.—*Evodia Ravensara*, Gärtn. *fr.* 2, p. 101, t. 103, f. 2.) L. 5 Madagascar. Introduced into H. C. G. in 1802, but had not fl. up to 1814.
- CRYPTOCARYA, R. Br. (Nees, in Wall. *pl. as. rar.* 2, p. 69.)
1. *floribunda*, Nees. (l. c.) 5 Silhet. Has been introduced into H. C. G. Fl. ?
- SASSAFRAS, Nees. (Wall. *pl. as. rar.* 2, p. 68.)
1. *officinatum*, (*Laurus Sassafra*, L.;—*Pers. syn.* 1, p. 450;—Roxb. *H. B.* p. 30;—*Catesb. car.* 1, p. 55, t. 55.—*Persea Sassafra*, Spreng. *syst.* 2, p. 270.) 5 N. America. Introduced into H. C. G. in 1809, but had not fl. in 1814. Produces the bark and root in commerce called *Sassafra*.
- BENZOIN, Nees. (Wall. *pl. as. rar.* 2, p. 63.)
1. *odoriferum*, Nees. (l. c.—*Laurus Benzoin*, L.; *Pers. syn.* 1, p. 450;—*Commel. hort.* 1, p. 189, t. 27;—Roxb. *H. B.* p. 30;—Spreng. *syst.* 2, p. 265.) 5 N. America. Introduced into H. C. G. before 1814. Fl. ?
- TETRANTHERA, Jacq. (Nees, in Wall. *pl. as. rar.* 2, p. 64.)
1. *lanceifolia*, Roxb. (*fl. ind.* 3, p. 822;—Nees. o. c. p. 65.) 5 Silhet. In H. C. G. fl. Feb. March and April; fr. R. S. (Roxb.)
2. *Roxburghii*, Nees. (l. c.—*Litsæa sebifera*, *Pers. syn.* 2, p. 4.—*Tomex sebifera*, Willd.—*Laurus involucrata*, Retz.—*Tetranthera apetal*, Gärtn. *fr.* 3, p. 225, t. 222, f. 2.)
- a. *T. apetal*, Roxb. (*Corom.* 2, p. 147;—*fl. ind.* 3, p. 819 excl. *syn.* Lour.—*Litsæa apetal*, *Pers. syn.* 2, p. 4.—*Tetranthera citrifolia*, Juss.;—Spreng. *syst.* 2, p. 266.) কুকুর চিতা *Kookoor-chita*. 5 Peninsula of India. Bengal, (Serampore.) Assam. Tropical

New Holland. Fl. small, greenish-yellowish, May and June; fr. R. S.

3. *laurifolia*, Jacq. (*Hort. schönb.* 1, t. 113;—*Nees. o. c. p.* 66;—*Spreng. syst.* 2, p. 66. excl. syn. Lour.—*Roxb. fl. ind.* 3, p. 823;—*B. Reg.* 11, t. 893.—Tomex Tetranthera, *Willd.*—*Litsea Tetranthera*, *Pers. syn.* 2, p. 4.) 5 China. Bengal, (Serampore.) Fl. small, yellowish-greenish, May and June; fr. at the end of the rains.
4. *monopetala*, Roxb. (*fl. ind.* 3, p. 821;—*Corom.* 2, t. 148;—*Nees. l. c.*) বড় কুকুর চিতা *Buro-Kookoor-chita*. 5 Peninsula of India. Bengal, (Serampore.) Oude. Assam. Silhet. Nepal. Fl. small, yellowish-greenish, May and June; fr. R. S.
5. *glauca*, Wall. (*Nees. l. c.*) 5 Khassya Hills, 1823. In H. C. G. Fl. ?
6. *nitida*, Roxb. (*fl. ind.* 3, p. 818;—*Nees. o. c. p.* 67.) 5 Assam. Garrow-hills. Fl. small, greenish-yellowish, July and Aug.; fr. April. A useful timber tree, from which are made canoes full fifty feet long. (*Roxb.*)
7. *macrophylla*, Roxb. (*fl. ind.* 3, p. 822.) 5 Silhet. In H. C. G. fl. April; fr. Aug. (*Roxb.*)
8. *quadriflora*, Roxb. (*fl. ind.* 3, p. 821.) 5 Garrow-hills. In H. C. G. fl. Feb. and March; fr. R. S. (*Roxb.*)
9. *fruticosa*, Roxb. (*fl. ind.* 3, p. 823.) 5 Silhet. In H. C. G. fl. June and July; fr. C. S. (*Roxb.*)
10. *glabra*, Roxb. (*H. B. p.* 73.) 5 Coromandel. In H. C. G. fl. H. S.; fr. R. S. (*Roxb.*)
11. *foliosa*, Wall. (*Cat.*—*Tetradenia foliosa*, *Nees.* 5 Silhet Has not fl. here yet.

LAURUS, Plin. (*Nees in Wall. pl. as. rar.* 2, p. 62.)

1. *nobilis*, L. (*Spreng. syst.* 2, p. 65;—*Nees l. c.*;—*Blacw. t.* 175;—*Plenck. t.* 315;—*Roxb. H. B. p.* 30.) *Sweet Bay*. 5 S. Europe. Levant. Introduced into H. C. G. in 1794, but had not fl. up to 1814.

* *Cinnamomum aromaticum*, Nees; Wight. icon. 1, t. 136. China in gardens.—*C. pauciflorum*, Nees. 5 Silhet.—*C. ovalifolium*, Wight. icon. 1, t. 125. Ceylon.—*C. villosum*, Wight. icon. 1, t. 127. Ceylon.—*C. multiflorum*, Wight. icon. 1, t. 126. β. Ceylon.—*C. multiflorum*, Wight. icon. 1, t. 131. α. Ceylon.—*C. dubium*, Nees; Wight. icon. 1, t. 135. Ceylon.—*Ocotea sericea*, Nees. 5 Nepal.—*O. attenuata*, Nees. 5 Khassya Mountains.—*O. paniculata*, Nees. 5 Nepal.—*O. pubescens*, Nees. 5 Nepal.—*O. pallida*, Nees. 5 Nepal.—*O. ligustrina*, Nees. Singapore.—*Machilus odoratissimus*, Nees. (Rumph. 3, t. 42.) L. 5 Nepal. Assam. Singapore. Cochin China. Amboyna.—*M. macranthus*, Nees. Neelgherry.—*M. peduncularis*, Nees. 5 Penang.—*Hufelandia pendula*, Nees. 5 W. Indies.—*Cecidodaphne glaucescens*, Nees. 5 Silhet.—*Cryptocarya amygdalina*, Nees. 5 Patgong.—*Mes-*



Cylodaphne Canelilla, Nees. 5 Brazil.—*Aydendron Pichurim*, Nees. 5 Tropical America.—*Acrodictidium triandrum*, Nees. 5 Tropical America.—*Misanthea Capitata*, Schlecht. 5 Mexico.—*Cylicodaphne Wightiana*, Nees. 5 Neelgherry.—*Persea grandis*, Nees. Tavoy.—*Tetranthera angustifolia*, Nees. 5 Goalpara.—*T. attenuata*, Wall. Silhet.—*T. saligna*, Nees. Silhet.—*T. polyantha*, Wall. 5 Silhet.—*T. lata*, Wall. 5 Silhet.—*T. oblonga*, Wall. 5 Nepal.—*T. myristicifolia*, Wall. Penang.—*T. Panamanja*, Buch. 5 Goalpara.—*Litsea umbrosa*, 5 Khassya Mountains.—*L. furfuracea*, 5 Penang. Singapore.—*L. zeylanica*, Nees. Wight. icon. 1, t. 132. Ceylon.—*L. consimilis*, Nees. Kemaon.—*L. lanuginosa*, Nees. 5 Nepal.—*Dodecadenia grandiflora*, Nees. 5 Nepal.—*Daphnidium melastomaceum*, Nees. Khassya Mountains.—*D. caudatum*, Nees. Khassya Mountains.—*D. pulcherrimum*, Nees. 5 Nepal.—*Polyadenia reticulata*, Nees. 5 Goalpara.—*P. grandis*, Nees. 5 Penang.

ORDER CXLV.—ILLIGERACEÆ, Lindl. Nat. Syst. p. 202.

Trees or shrubs, referred by Lindl. to 2 genera: *Illigera*, Bl. and *Gyrocarpus*, Jacq. with the first we are unacquainted. The second has 1 species in S. America; 1 in the E. Indies; and 2 in New Holland. Properties nearly unknown.

GYROCARPUS, Jacq. (Nees. in *Wall. pl. as. rar.* 2, p. 68.)

1. *asiaticus*, Willd. (Nees. *l. c.*—*Gyrocarpus Jacquini*, *Roxb. Corom.* 1, t. 1;—*fl. ind.* 1, p. 445; *ed. Carey.* 1, p. 465;—*Spreng. syst.* 1, p. 489;—*Pers. syn.* 1, p. 145, excl. syn.—*G. americanus*;—*J. Grah. Cat. B. pl.* p. 250.) 5 Coromandel Mountains. Banks of the Krishna, near Nalutwar. Fl. very small, greenish-yellowish, C. S. Wood white, very light, when procurable, used in preference to others to make Catamarans. (*Roxb.*)

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- * *G. americanus*, Jacq. 5 New Granada.—*G. sphenopterus*, R. Br. Endl. ichnogn. t. 43. 5 Tropical N. Holland.—*G. rugosus*, R. Br. 5 Tropical New Holland.

ORDER CXLVI.—CASSYTHACEÆ, Lindl. Nat. Syst. p. 202.

Parasitical, leafless, twining herbs or undershrubs, of one genus and six species; 4 from New Holland; 1 from St. Vincent; and 1 from the E. Indies. Properties unknown.



CASSYTA, L. (Nees. in Wall. pl. as. rar. 2, p. 69.)

1. *filiformis*, L. (Nees. l. c.;—Pers. syn. 1, p. 450;—Bl. bidr. p. 574;—Spreng. syst. 2, p. 271, ex. pte.; Roxb. fl. ind. 2, p. 314;—J. Grah. Cat. B. pl. p. 175; not Hook.—Calodium Cochinchinense, Lour.—Rheed. 7, t. 44;—Rumph. 5, t. 184, f. 4.) আকাশ বুলী Akash-bullee.
2. Moluccas, Ceylon. Both Peninsulas of India. Arabia. Bengal, (Serampore.) Fl. small, white, C. S.; fr. Feb.

* *C. americana*, Nees. (*C. filiformis*, Hook. exot. t. 167.) St. Vincent.

ORDER CXLVII.—PENÆACEÆ, R. Br.—Lindl. Nat. Syst. p. 203.

Much branched, small shrubs, referred to 3 genera containing 20 species, all natives of S. Africa, (Harvey.) Several plants, belonging to this order, have been introduced from C. G. H. but none have lived through the R. S.

ORDER CXLVIII.—NEPENTHACEÆ, Lindl. Nat. Syst. p. 205.

THE FITCHER-PLANT TRIBE.

Herbaceous or half-shrubby caulescent plants, of 1 genus, and 6 species: 1 from Madagascar; 1 from Cochin China; 1 from Java; and at least 2-3 from Singapore and Malacca. Properties unknown.

NEPENTHES, L. (Spreng. syst. 3, p. 9. No. 2423.)

1. *distillatoria*, Ait. (*L.*?—Lodd. Cab. t. 1017;—B. M. 55, t. 2798, (male.) *N. indica*, Lam.—*N. Phyllamphora*, (female.) B. M. 53, t. 2629, excl. syn. Willd. Poir. Lour. and Rumph.) ♂ Fl. small, male, green with a red column of stamens, C. S. Khassya Mountains.

* *N. Rafflesiana*, Jack. Singapore.—*N. ampullacea*, Jack. Singapore.

ORDER CXLIX.—ARISTOLOCHIACEÆ, Lindl. Nat. Syst. p. 205.

THE BIRTHWORT TRIBE.

Herbs or shrubs, often twining or trailing, by Lindl. referred to 8 genera. Of these, Spreng. syst. enumerates 38 species from S. America, Mexico and the W. Indies; 13 from Europe and N. Africa; 7 from N. Ame-



rica; 3 from Syria and Asia Minor; 2 from Japan; (1 of them *Heterotropa asaroides*, Morr. and Decaisne); 2 from the Mascarenhas Islands; and 1 from New Holland. Of Indian species, have been discovered 4 of *Bragantia*; (Cochin China, Ceylon, the Concan,) and 5 of *Aristolochia*, (Java, Peninsulas of India, Bengal, Hindoostan, Khassya Mountains.) *Aristolochia rotunda*, *longa* and *Clematitis* are like the order in general, tonic and stimulating. *A. fragrantissima* of Peru possesses antidyserenteric properties. *A. Serpentaria* is considered a powerful stimulant in the so-called adynamic fevers.

ARISTOLOCHIA, L. (*Spreng. syst.* 3, p. 683, No. 3050.)

1. *anguicida*, L. (*Spreng. syst.* 3, p. 751;—*Pers. syn.* 2, p. 527;—*Jacq. amer. t.* 144, ed. *piet. t.* 220;—*Roxb. H. B. p.* 64.) ५ ∪ Carthageria. Mexico. In H. C. G. fl. R. S. (*Roxb.*)
2. *indica*, L. (*Spreng. syst.* 3, p. 751;—*Pers. syn.* 2, p. 527;—*Roxb. fl. ind.* 3, p. 489;—*J. Grah. Cat. B. pl. p.* 178, excl. syn. Rumph.—*Rheed. 8, t.* 25.) ईश्वर मूल *Ishwur-mool.* ५ ∪ Rangoon. Penang. Coromandel. Cross-Island, Bombay Harbour. Hills throughout the Concan. Bengal, (Serampore.) Hindoosthan. New Holland. Fl. largish green, brownish red, R. S.; fr. C. S. Root nauseously bitter, considered by the natives to possess virtues against lues and menostasia. (*Ainslie.*)
3. *acuminata*, Lam. (*Spreng. syst.* 3, p. 751;—*Pers. syn.* 2, p. 527;—*Roxb. fl. ind.* 3, p. 480;—*J. Grah. Cat. B. pl. p.* 178.) ५ ∪ Mauritius. Banks of the Irawaddi. Taong-Dong. Penang. Chittagong. Courtallum. S. Concan. Silhet. Fl. largish, dark-greenish-purple, H. and R. S.; fr. C. S.
4. *saccata*, Wall. (*pl. as. rar.* 2, t. 103.) ५ ∪ Nepal. Khassya Mountains. Fl. dark-purple, internally yellow, Nov. and Dec.; fr. O.
5. *odoratissima*, L. (*Spreng. syst.* 3, p. 752;—*Pers. syn.* 2, p. 526;—*Sloan. hist.* 1, p. 162, t. 104;—*Roxb. H. B. p.* 64.) ५ ∪ Jamaica. Mexico. Introduced into H. C. G. before 1814. Fl. ?
6. *labiosa*, Ker. (*B. Reg.* 9, t. 689;—*B. M.* 52, t. 2545;—*Spreng. syst.* 3, p. 753.) ५ ∪ Brazil. Has been introduced into H. C. G. Fl. ?
7. *cymbifera*, Mart. (*Spreng. syst.* 3, p. 753;—*Mart. nov. gen. and sp. pl.* 1, p. 76, t. 49;—*B. Reg.* 18, t. 1543.) ५ ∪ Brazil. Introduced in 1841.
8. *bracteata*, Retz. (*Spreng. syst.* 3, p. 754;—*Pers. syn.* 2, p. 527;—*Roxb. fl. ind.* 3, p. 490;—*J. Grah. Cat. B. pl. p.* 178.) ५ ∪ Coromandel, near Madras. Abundant on dark red, or black soil in the Deccan. Banks of the Jumna. Fl. dark-purple, and fr. nearly the whole year. Every part of this plant is nauseously bitter. The dried leaves are anthelmintic. Two of them fresh rubbed up in a little water, and given to an adult for a dose, once in twenty-four hours, are considered a cure for purging with gripes. (*Roxb.*) The

natives squeeze the juice of this plant into wounds to kill worms.
(Dr. Gibson.)

9. *Clematitis*, L. (spec. 2, p. 1364.—*E. B.* 6, t. 368.) ∩ Europe. Fl. July 1841.

10. *fatens*, Lindl. (*B. Reg.* 21, t. 1824.) ∩ W. Indies.

11. *brasiliensis*, Mart. ∩ Brazil.

TRICHOPUS, Gärtn. (*Trichopodium*, Lindl.—*Endl. gen. p.* 345, No. 2165.)

? 1. *piperifolius*, Wall. ∩ Khassya Hills.

* *A. gigantea*, Mart. 5 ∩ Brazil.—*A. cordiflora*, Humb. 5 ∩ S. America.—*A. hastata*, Kth. 5 ∩ Cuba.—*A. rumicifolia*, Mart. 5 ∩ Brazil.—*A. fatida*, Kth. 5 ∩ Mexico.—*A. cynanchifolia*, Mart. 5 ∩ Brazil.—*A. galeata*, Mart. 5 ∩ Brazil.—*A. trilobata*, L.; B. Reg. 17, t. 1399. 5 ∩ W. Indies.—*A. caudata*, Booth. 5 ∩ B. Reg. 17, t. 1453. Brazil.—*Bragantia Wallichii*, R. Br. Rheed. 6, t. 28. 5 S. Concan.—*Heterotropa asaroides*, Morr. and Decaisne, 24. Japan.

ORDER CL.—AMARANTACEÆ, R. Br.—Lindl. Nat. Syst. p. 207.

THE AMARANT-TRIBE.

Herbs or shrubs, sometimes climbing, by Lindl. excluding *Cyathula* and *Leiospermum*, referred to about 40 genera. Of these Spreng. syst. enumerates about 100 species for S. America, Mexico, and the W. Indies; 29 for N. Holland and Van Diemen's Land; 10 for N. America; 5 for Europe; 4 for Arabia; 2 for China and Japan; 1 for Middle Asia; 1 for Iberia; 1 for Tauria; 1 for E. Africa; 1 for Madagascar; 1 for the Mascarenhas Islands; and 1 for Guinea. In S. Africa, including *Blepharolepis*, Nees, have been discovered 11 species, (*Harvey*); and in the E. Indies, according to Martius, Roxb. flor. and Wall. Cat., about 70; viz. 2 of *Digera*; 3 of *Deeringia*; 3 of *Allmannia*; 20 of *Amarantus*; 5 of *Ærua*; ? 1 of *Polychroa*, (Lour.); 8 of *Celosia*; 1 of *Cladostachys*; 2 of *Gomphrena*; 2 of *Alternanthera*; 2 of *Psilotrichum*; 2 of *Centrostachys*; 8 of *Achyranthes*; 8 of *Desmochaeta*; 1 of *Pupalia*; and 2 of *Polyscalis*. Properties under the species.

DIGERA, Forsk. (*Spreng. syst.* 1, p. 519, No. 874;—*Endl. gen. pl.* 1, p. 303.)

1. *muricata*, Mart. (*Desmochaeta alternifolia*, DC.—*Cladostachys alternifolia*, Swt.—*Achyranthes alternifolia*, L.;—*Hb. Banks*;—*Roxb. fl. ind.* 1, p. 674; ed. Carey, 2, p. 500. *Achyranthes muricata*, Lam.; not L.) লতা মহড়ি *Luta-muhoori*. ∩ Both Peninsulas of India. Bengal, (Serampore.) Fl. small, red, R. S.; fr. C. S. Leaves and tender tops used by the natives in their curries. (*Roxb.*)



DEERINGIA, R. Br. (*Spreng. syst.* 1, p. 522, No. 923;—*Endl. gen. pl.* p. 304.)

1. *indica*, Spreng. (*syst.* 1, p. 816.—*D. celosioides*, Roxb. *fl. ind.* 1, p. 682; *ed. Carey*, 2, p. 511;—*J. Grah. Cat. B. pl.* p. 168; not R. Br.—*Celosia baccata*, Kön. in Retz. obs.—*Rumph.* 5, t. 83, f. 2.) ঘোঁরা মুনী *Ghol-muhnee*. ৫ Moluccas. Both Peninsulas of India. Bengal, (Serampore. Monghir.) Silhet. Nepal. Saharunpore. Fl. small, greenish, C. S.; fr. H. S.
2. *staminea*, Wall. 1830.
3. *tetragyna*, Roxb. (*fl. ind.* 1, p. 683; *ed. Carey*, 2, p. 512.) ৫ Mo-
lucas. Fl. small, pale greenish-white. In H. C. G. fl. C. S.; fr. H. S. (*Roxb.*)

ALLMANNIA, R. Br. (*Lindl. Nat. Syst.* p. 208.)

1. *nodiflora*, R. Br. (*Wall. Cat.*—*Chamissoa nodiflora*, Mart.—*Celosia nodiflora*, L.—*Achyranthes nodiflora*, L.;—*Roxb. fl. ind.* 1, p. 678; *ed. Carey*, 2, p. 505.—*Burm. Zeyl.* t. 5, f. 2.) © Coromandel, Ceylon. In H. C. G. fl. and fr. the whole year.

AMARANTUS, L. (*Spreng. syst.* 1, p. 532, No. 1095;—*Endl. gen. pl.* 1, p. 303.)

- + 1. *tenuifolius*, Willd. (*Spreng. syst.* 1, p. 926;—*Roxb. fl. ind.* 3, p. 602.—*J. Grah. Cat. B. pl.* p. 602.) ঘোঁরা নটে *Gheenti-nutee*. © Peninsula of India. Bengal, (Serampore.) Fl. minute, green, and fr. R. S.

- + 2. *polygonoides*, Roxb. (*fl. ind.* 3, p. 602;—*Wight. icon.* 2, t. 512.—L.) চেরু নটে *Cheroo-nuti*. © Bengal, (Serampore.) Fl. minute, greenish, and fr. C. S. Though not cultivated, the natives use it as a pot-herb, as it is considered very wholesome, especially for convalescents. (*Roxb.*)

- + 3. *polygamus*, L. (*Spreng. syst.* 1, p. 927;—*Roxb. fl. ind.* 3, p. 603;—*J. Grah. Cat. B. pl.* p. 169;—*Rumph.* 5, t. 82, f. 1.) চাঁপা নটে *Champa-nuti*. Fl. minute, greenish, and fr. R. S. Peninsula of India, Bengal, (Serampore,) &c. Cultivated all over the southern parts of Asia.

β *ruber*. A reddish variety. লাল চাঁপা নটে *Lal-champa-nutee*.

4. *Blitum*, L. (*Spreng. syst.* 1, p. 927;—*Roxb. H. B.* p. 67;—*E. B.* 31, t. 2212.) © Europe. Fl. minute, greenish, R. S.

5. *tristis*, L. (*Spreng. syst.* 1, p. 928;—*Roxb. fl. ind.* 3, p. 604;—*J. Grah. Cat. B. pl.* p. 169;—*Wight. icon.* 2, t. 514;—*Rumph.* 5, t. 82, f. 2.) © Cultivated all over India. Fl. minute, green, H. and R. S.; fr. R. S.

6. *campestris*, Willd. (*Spreng. syst.* 1, p. 927;—*Pers. syn.* 2, p. 559.) © Bengal, (Serampore,) &c. Fl. minute greenish, H. S. and R. S.; fr. R. S. Cultivated.

7. *polystachys*, Willd. (*Spreng. syst.* 1, p. 928;—*Pers. syn.* 2, p. 550.) © Bengal, (Serampore,) &c. Fl. minute, greenish, H. and R. S.; fr. R. S. Cultivated.



8. *viridis*, L. (*Spreng. syst.* 1, p. 927;—*Roxb. fl. ind.* 3, p. 605;—*J. Grah. Cat. B. pl.* p. 169.) © Jamaica. Brazil. Peninsula of India. Bengal. Fl. minute, greenish, and fr. R. S. *Tender tops* eaten by the natives, though not so much esteemed as those of the cultivated species. (*Roxb.*)

9. *lividus*, L. (*Spreng. syst.* 1, p. 928;—*Pers. syn.* 2, p. 560;—*Roxb. fl. ind.* 3, p. 605.) গোবড়া নটি *Gobura-nuti*. © Virginia. Bengal, (Serampore.) Fl. minute, greenish, and fr. R. S. Cultivated.

+ 10. *oleraceus*, L. (*Spreng. syst.* 1, p. 928;—*Roxb. fl. ind.* 3, p. 605;—*J. Grah. Cat. B. pl.* p. 169.) © Peninsula of India. Bengal, (Serampore.) &c. Fl. minute, greenish, and fr. R. S. Several varieties cultivated as pot-herbs, of which the following are remarkable:—

a. *viridis*; the common green sort. Most cultivated.

β. *ruber*; a beautiful variety, with a clear bright red stem, branches, petioles, nerves, and veins, and the leaves themselves rather rust-coloured.

γ. *albus*; all the parts that are red in β are here of a clear, shining white colour. সাদা নটি *Sada-nuti*. Much cultivated in Bengal.

δ. *giganteus*, Kön.; five to eight feet high, with a stem as thick as a man's wrist. The tender succulent tops of the stems and branches are sometimes served up on our tables, as a substitute for asparagus. (*Roxb.*)

+ 11. *gangeticus*, L. (*Spreng. syst.* 1, p. 928.—*Roxb. fl. ind.* 3, p. 606.) রাঙ্গা শাক *Ranga-shak*. লাল শাক *Lal-shak*. © Bengal, (Serampore.) Assam, &c. Fl. small, greenish or reddish, and fr. R. S. Varieties of this species many, tolerably permanent, differing chiefly in colour from green with the slightest tinge of red, to rufous, liver-colored, and bright red. They are more generally used among the natives of Bengal than any other species or variety, and with No. 10, differ from No. 3, 5, 6 and 7, in not admitting of being cut, with the hope of succeeding crops from the same roots. (*Roxb.*)

+ 12. *lanceolatus*, Roxb. (*fl. ind.* 3, p. 607.—*A. lanceæfolius*, *Roxb. H. B. p.* 67.) দাঁশ পাটে নটি *Bans-pata-nuti*. © Bengal, (Serampore.) Fl. minute, greenish, and fr. R. S. The leaves and tender tops are eaten by the natives in their curries. (*Roxb.*)

④ 13. *atropurpureus*, Roxb. (*fl. ind.* 3, p. 608.) লাল নটি *Lal-nuti* কড়া নটি *Kunka-nuti*. © Bengal, (Serampore.) Fl. minute, greenish and fr. R. S. Cultivated as a pot-herb by the natives of Bengal, who sometimes call it দাঁশ পাটে লাল নটি *Bansh-pata-lal-nuti*.

14. *tricolor*, L. (*Spreng. syst.* 1, p. 927;—*Roxb. fl. ind.* 3, p. 668;—*J. Grah. Cat. B. pl.* p. 169.) © China. Common in gardens. Fl. minute, greenish, and fr. nearly the whole year.

15. *melancholicus*, L. (*Spreng. syst.* 1, p. 927;—*Roxb. fl. ind.* 3, p. 608.) © Common in gardens. Fl. minute, greenish, and fr. R. S.

16. *fasciatus*, Roxb. (*fl. ind.* 3, p. 609.) তুন তুন নটি *Toon-toon-nuti*.

Curcul
oleraceus



বন নটি *Bun-nuti*. ⊙ Peninsula of India. Bengal, (Serampore.) Fl. minute, greenish, and fr. R. S.

17. *hybridus*, L. (*Spreng. syst.* 1, p. 929;—*Roxb. fl. ind.* 3, p. 609.) ⊙ Virginia. Persia. In H. C. G. fl. R. S. (*Roxb.*)

+ 18. *frumentaceus*, Buch. (*Roxb. fl. ind.* 3, p. 609.) ⊙ Mysore. Coimbatore, where this large luxuriant species is extensively cultivated for its seed chiefly, the flour of which forms a great article in the diet of the natives. In H. C. G. fl. R. and C. S.; fr. C. S. (*Roxb.*)

19. *retroflexus*, L. (*Spreng. syst.* 1, p. 929;—*Roxb. H. B.* p. 67.) ⊙ Italy. N. America. Fl. small, greenish, R. S.; fr. C. S.

20. *caudatus*, L. (*Spreng. syst.* 1, p. 929;—*Roxb. H. B.* p. 67;—*J. Grah. Cat. B. pl.* p. 169.) *Love lies bleeding*. ⊙ Persia. Common in gardens. Fl. small, deep-red, C. S.; fr. H. S.

21. *paniculatus*, L. (*Spreng. syst.* 1, p. 929;—*Roxb. H. B.* p. 67.) ⊙ N. America. W. Indies. Fl. minute, green, and fr. R. S.

22. *hypochondriacus*, L. (*Spreng. syst.* 1, p. 929;—*Roxb. H. B.* p. 67.) ⊙ Virginia. Fl. minute, deep-red, and fr. C. S.

+ 23. *spinosus*, L. (*Spreng. syst.* 1, p. 929;—*Roxb. fl. ind.* 3, p. 611;—*Wight. icon.* 2, t. 513;—*J. Grah. Cat. B. pl.* p. 169;—*Rumph.* 5, t. 83, f. 1.) কঁটা নটি *Kanta-nuti*. ⊙ Cochin China. Both Peninsulas of India. Bengal, (Serampore.) Assam. Fl. minute, green, R. and C. S.; fr. C. S.

ÆRUA, Forsk. (*Spreng. syst.* 1, p. 522, No. 919;—*Endl. gen. pl.* p. 303.)

1. *lanata*, Juss. (*Spreng. syst.* 1, p. 815;—*J. Grah. Cat. B. pl.* p. 168.—*Achyranthes lanata*, L.;—*Roxb. fl. ind.* 1, p. 676; *ed. Carey*, 2, p. 503.

—*A. villosa*, Forsk.—*Illecebrum lanatum*, L.—*W.*—*Lour.*—*Rheed.* 10, t. 29;—*Burm. zeyl.* t. 26, f. 1.) ছায়া *Chhaya*. ♂ Peninsula of India. Arabia. Ceylon. Cochin China. Bengal, (Serampore.) Fl. small, white, C. S.; fr. H. S.

2. *javanica*, Juss. (*Spreng. syst.* 1, p. 815.—*Æ. tomentosa*, Forsk.—*Æ. ægyptiaca*, Gmel.—*Achyranthes alopecuroides*, Lam.—*A. javanica*, Pers.—*A. incana*, *Roxb. fl. ind.* 1, p. 671; *ed. Carey*, 2, p. 495.—*Iresine javanica*, *Burm. ind.* t. 65, f. 2.—*I. indica*, *Burm. ind.* t. 65, f. 1.—*Illecebrum javanicum*, L.—*Celosia lanata*, L.) ♂ ♀ Arabia. Ceylon. Peninsula of India. Kyouk Talong. Java. Oude. Fl. small, white, and fr. whole year.

3. *Monsoniæ*, Mart. (*Achyranthes Monsoniæ*, Pers.—*Roxb. fl. ind.* 1, p. 673; *ed. Carey*, 2, p. 499;—*Spreng. syst.* 1, p. 817.—*A. pungens*, Lam.—*Celosia Monsoniæ*, Retz.;—*J. Grah. Cat. B. pl.* p. 168.—*Illecebrum Monsoniæ*, L.) ⊙ Both Peninsulas of India. Bengal. Fl. minute, rose-coloured, C. S.; fr. H. S.

4. *scandens*, Mart. (*Achyranthes scandens*, *Roxb. fl. ind.* 1, p. 676; *ed. Carey*, 2, p. 503.) হরিয়া *Nooriya*. ♀ Bengal, (Serampore. Monghir.) Prome. Taong-Dong. Morung Mountains. Nepal. Kemaon. Fl. minute, white, Aug. Sept. and Oct.; fr. C. S.



CELOSIA, L. (*Spreng. syst.* 1, p. 522, No. 917;—*Endl. gen. pl.* 1, p. 304.)
Cockscomb.

1. *argentea*, L. (*Spreng. syst.* 1, p. 814;—*Roxb. fl. ind.* 1, p. 678; *ed. Carey*, 2, p. 507;—*J. Grah. Cat. B. pl.* p. 167.—*C. pyramidalis*, *Burm. ind.* t. 25, f. 1.—*C. albida*, *Willd.*—*C. margaritacea*, L.—*Rheed.* 10, t. 38, 39.) শ্বেত মূর্গা *Shwet-moorya*. ☉ Cochin China. Ceylon. Both Peninsulas of India. Bengal, (Serampore, Monghir.) Silhet. Nepal. Sirmore. Fl. small, white, and fr. C. S.
2. *cristata*, L. (*Spreng. syst.* 1, p. 814;—*Roxb. fl. ind.* 1, p. 679; *ed. Carey*, 2, p. 508;—*J. Grah. Cat. B. pl.* p. 168;—*Rumph.* 5, t. 84.) ☉ Japan. China. Commonly cultivated in gardens. Fl. small, and fr. C. S.
a. *rubra*; লাল মূর্গা *Lal-moorga*. Fl. red or purple.
β. *aurea*; হলদী মূর্গা *Huldee-moorga*. Fl. gold-coloured.
3. *comosa*, Retz. (*Röm. and Sch. syst. veg.* 5, p. 465;—*Roxb. fl. ind.* 1, p. 679; *ed. Carey*, 2, p. 509.) ☉ Sumatra. In H. C. G. fl. and fr. C. S. (*Roxb.*)
4. *cernua*, *Roxb.* (*fl. ind.* 1, p. 680; *ed. Carey*, 2, p. 509.) ☉ Rajmahl hills. Fl. small, purple, at last becoming white at the edges. In H. C. G. fl. and fr. C. S.

GOMPHRENA, L. (*Spreng. syst.* 1, p. 523, No. 931;—*Endl. gen. pl.* 1, p. 301.)

1. *globosa*, L. (*Spreng. syst.* 1, p. 822;—*Roxb. fl. ind.* 2, p. 63;—*J. Grah. Cat. B. pl.* p. 168;—*Rheed.* 10, t. 37;—*Rumph.* 5, t. 100, f. 2.) *Globe amarant.* ☉ Native place uncertain. Common in gardens. Fl. small. R. S.; fr. C. S.
a. *kermesina*; লাল গুল মুকমল *Lal-gool-mukmul*. Fl. crimson. (B. M. 55, t. 2815.)
β. *alba*; সফেদ গুল মুকমল *Sufed-gool-mukmul*. Fl. white.

2. *decumbens*, Jacq. (*Spreng. syst.* 1, p. 823;—*Jacq. schonbr.* t. 482.) ☉ Mexico. Fl. small, whitish, and fr. C. S.

ALTERNANTHERA, Forsk. (*Endl. gen. pl.* p. 301.)

1. *sessilis*, R. Br. (*Röm. and Sch. syst. veg.* 5, p. 554;—*R. Br. pr.* 1, p. 417;—*J. Grah. Cat. B. pl.* p. 168.—*A. repens*, Forsk.—*A. triandra*, *Lam.*—*Illecebrum sessile*, L.; *Lour.*—*Gomphrena sessilis*, L.—*Achyranthes ficoidea et sessilis*, *Lam.*—*A. triandra*, *Roxb. fl. ind.* 1, p. 678; *ed. Carey*, 2, p. 505.—*Allaganthera* Forskālī, *Mart.*—*Paronychia sessilis*, *Desf.*—*Rheed.* 10, t. 11;—*Rumph.* 6, t. 15, f. 1;—*Burm. Zeyl.* t. 4, f. 2.) শাণ্টি *Shanchi*. ☉ New Holland. Cochin China. Moluccas. Ceylon. Both Peninsulas of India. Arabia. Bengal, (Serampore, Monghir.) Fl. minute, white, R. and C. S.; fr. C. S.

PSILOTRICHUM, Bl. (*Bijdr.* p. 544;—*Endl. gen. pl.* p. 302.)

- ? 1. *ferrugineum*, *Endl.* (*Leiospermum ferrugineum*, *Wall. Cat.*; not *Leiospermum*, *Don.*—*Achyranthes ferruginea*, *Roxb. fl. ind.* 1, p. 675; *ed. Carey*, 2, p. 502.) রক্ত শেলেন্চি *Rukto-shelenchi*. ☉ Bengal, (Serampore.) Fl. minute, crimson, R. and C. S.; fr. C. S.

ACHYRANTHES, L. (*Endl. gen. pl.* 1, p. 303.)

1. *aspera*, L. (*Spreng. syst.* 1, p. 817;—*Roxb. fl. ind.* 1, p. 672; *ed.*



Carey, 2, p. 496;—*J. Grah. Cat. B. pl. p.* 168; excl. *Rheed.* 10, t. 79. and syn. *Rumph.*—*A. obtusifolia*, *Lam.*—*A. indica*, *Roth.*—*Rheed.* 10, t. 78.—*Burm. zeyl. t.* 50, f. 3.) *অপাং Upang.* ♂. Both Peninsulas of India. Bengal, (Serampore.) Nepal. Fl. small, greenish, and fr. nearly the whole year.

DESMOCHÆTA, DC. (*Endl. gen. pl.* 1, p. 303.)

1. *atropurpurea*, DC. (*Spreng. syst.* 1, p. 817;—*J. Grah. Cat. B. pl. p.* 168.—*Achyranthes atropurpurea*, *Lam.*—*A. lappacea*, *L.*;—*Roxb. fl. ind.* 1, p. 673; ed. *Carey*, 2, p. 500;—*Rheed.* 10, t. 59;—*Burm. zeyl. t.* 18, f. 1.) *দুইয়া খুইয়া Duiya-Khuiya.* ♂. Courtallum. Bombay. Bengal, (Serampore, Monghir.) Lower Nepal. Fl. minute, dark purple, R. and C. S.; fr. C. S.

2. *velutina*, Wall. (*Cat.*) 4. Banks of the Irawaddi, at Yenangheun. Fl. small, whitish, R. and C. S.; fr. C. S.

PUPALIA, Mart. (*Endl. gen. pl.* 1, p. 303.)

1. *prostrata*, Mart. (*Desmochaeta prostrata*, DC.—*Spreng. syst.* 1, p. 818;—*J. Grah. Cat. B. pl. p.* 168.—*Achyranthes prostrata*, *L.*;—*Roxb. fl. ind.* 1, p. 674; ed. *Carey*, 2, p. 501.—*Cyathula geniculata*, *Lour.*—*Rheed.* 10, t. 79;—*Rumph.* 6, t. 11.) ② *Moluccas*. Peninsula of India. Fl. minute, greenish red or purple, and fr. C. S.

CENTROSTACHYS, Wall. (*Endl. gen. pl.* 1, p. 303.)

1. *aquatica*, Wall. (*Cat.*—*Endl. ichnogr.* t. 20.—*Achyranthes aquatica*, *Roxb. fl. ind.* 1, p. 673; ed. *Carey*, 2, p. 497.) 4. ? Coromandel. Moulmein. Silhet. Goalpara. Nepal. Fl. largish, green, R. S.; fr. Dec.

* *Digera ciliata*, Mart.—*Deeringia Amherstiana*, Wall. Simla. Sirmore. —*Allmania esculenta*, R. Br. Singapore.—*A. albida*, R. Br. Peninsula of India.—*Erua brachiata*, Mart. Coromandel. Banks of the Irawaddi, at Yenangheun.—*Gomphrena perennis*, L. 4. Rio Janeiro.—*G. hispida*, L. *Rheed.* 9, t. 72. S. Concan.—*Alternanthera denticulata*, R. Br. Doab. Silhet.—*Polyscalis sequax*, Wall. Nepal.—*Cladostachys frutescens*, D. Don. *Rumph.* 5, t. 83, f. 1. 5 Amboyna.—*Lestibudesia spicata*, Pet. Th. L. 5 Madagascar.—*Trommsdorffia aurata*, Mart. S. America.—*T. pulverulenta*, Mart.—S. America.—*Mogiphanes villosa*, Mart. Brazil.—*M. flavescens*, Mart. New Granada.—*Brandesia villosa*, Mart. Brazil.—*B. rufa*, Mart. Brazil.—*Bucholzia maritima*, Mart. Brazil.

ORDER CLI.—CHENOPODIACEÆ,—Lind. Nat. Syst. p. 208.

THE GOOSEFOOT TRIBE.

Herbs or undershrubs, by Lindl. referred to 51 genera. Of these, *Spreng. syst.* assigns about 85 species to Europe; 36 to New Holland and Van Diemen's Land; 16 to N. America; 15 to Siberia; 15 to S. America;



18 to N. Africa; 10 to Dahuria; 10 to Caucasus; 7 to Tauria; 4 to Arabia; 2 to the Levant; 2 to Japan; 1 to China; 1 to Tartary; 1 to Madeira; and 1 to the Canaries. In S. Africa, including two *Galenias*, have been found 22 species, (*Harvey*); and in the E. Indies, according to Wall. Cat and Roxb. flor. 18, viz. 2 of *Salicornia*; 5 of *Salsola*; 1 of *Spinacia*; 1 of *Azyris*; 1 of *Atriplex*; 6 of *Chenopodium*; and 2 of *Basella*.—Properties under the species.

SALICORNIA, L. (*Spreng. syst.* 1, p. 5, No. 29; —*Endl. gen. pl.* 1, p. 293.) *Glasswort*.

1. *brachiata*, Roxb. (*Fl. ind.* 1, p. 84; *ed. Carey*, 1, p. 82.) 5 Coromandel. Soonderbuns.—Fl. small, greenish, C. S.; fr. H. S.—This species, as well as the next, and *Salsola pudiflora*, grow so abundantly on the coasts of India, that by incineration they would be able to supply barilla enough to make soap and glass for the whole world. (*Roxb.*)—The 'sejee muttee' of the bazars, a coarse kind of barilla, is procured by the incineration of unknown plants, growing on the shores of the salt lakes which are scattered through the Indian deserts. (*Royle*.)

2. *indica*, Willd. (*Spreng. syst.* 1, p. 18; —*Roxb. fl. ind.* 1, p. 85; *ed. Carey*, 1, p. 83; —*J. Grah. Cat. B. pl.* p. 171.) জহ পালঙ্গ *Judoo-palung*. 5 Coromandel. Bombay. Soonderbuns. New Holland. Fl. very small, greenish, C. S.; fr. H. S. It is pickled by the natives. (*J. Grah.*)

SPINACIA, L. (*Spreng. syst.* 3, p. 894, No. 3179; —*Endl. gen. pl.* 1, p. 294.) *Spinach*.

1. *oleracea*, L. (*Spreng. syst.* 3, p. 903; —*Gärtn. fr.* 2, p. 198, t. 126, f. 4. —*Roxb. H. B.* p. 72; —*J. Grah. Cat. B. pl.* p. 171.) Common *Spinach*. © ♂ Arabia. (*Forsk.*) The Arabs were the first who introduced it into Spain. Fl. small, green, C. S.; fr. H. S.

2. *tetrandra*, Roxb. (*H. B.* p. 72; —*fl. ind.* 3, p. 771; not *Stev.*) © পিণিশ *Pinish*. Much cultivated in Bengal. Native place uncertain. Fl. very small, green, C. S.; fr. H. S. This pot-herb is much esteemed by the natives.

BLITUM, L. (*Spreng. syst.* 1, p. 6, No. 47; —*Endl. gen. pl.* 1, p. 295.)

1. *virgatum*, L. (*Spreng. syst.* 1, p. 22; —*B. M.* 8, t. 276; —*Roxb. H. B.* p. 2.) © S. France. Spain. Tartary. Fl. minute, greenish, H. S.

2. *capitatum*, L. (*Spreng. syst.* 1, p. 22.) © Tyrol. Switzerland. Fl. like those of No. 1, H. S.

BETA, L. (*Spreng. syst.* 1, p. 534, No. 1136; —*Endl. gen. pl.* 1, p. 295.) *Beet*.

1. *vulgaris*, L. (*Spreng. syst.* 1, p. 950; —*Gärtn. fr.* 1, p. 360, t. 75, f. 5; —*Roxb. H. B.* p. 21; —*J. Grah. Cat. B. pl.* p. 171.) Common *Beet*. ♂ S. Europe. N. Africa. Middle Asia. Fl. small, green, C. S.; fr. H. S.

a. *viridis*; Green Beet.

β. *rubra*; Red-rooted Beet.

γ. *alba*; White-rooted Beet.



2. *bengalensis*, Roxb. (*A. ind.* 2, p. 59.) ⊙ *পালং শাক Palang-shak*. Native place unknown. Commonly cultivated in Bengal and the N. Circars. Fl. small, green, and fr. C. S. Leaves (only) used by the natives in their curries.

CHENOPODIUM, L. (*Spreng. syst.* 1, p. 532, No. 1091; *Endl. gen. pl.* 1, p. 296.) *Goosefoot*.

1. *arabicum*, L. (*Spreng. syst.* 1, p. 919;—*E. B.* 10, t. 717;—*Roxb. H. B.* p. 21.) ⊙ N. Europe. Tauria, Greece. Fl. very small, minute, pale green, C. S.; fr. H. S.
2. *rubrum*, L. (*Spreng. syst.* 1, p. 920;—*E. B.* 24, t. 1721.) ⊙ Europe. Fl. very small, reddish-green, C. S.; fr. H. S.
3. *murale*, L. (*Spreng. syst.* 1, p. 920;—*E. B.* 24, t. 1722;—*Roxb. H. B.* p. 21.) ⊙ Europe. C. G. H. America, near Loxa. Fl. small, green, Feb. and March; fr. March.
4. *album*, L. (*Spreng. syst.* 1, p. 920.) ⊙ Europe, from Lapland down to Portugal and Tauria. Egypt. India. N. America. Fl. small, green, C. S.; fr. H. S. Used by the Natives of India as a pot-herb.
 - a. *album*; (*E. B.* 24, t. 1723;—*Roxb. fl. ind.* 2, p. 58.) চন্দন বেতু *Chundun-betoo*.
 - β. *viride*; (*Chenopodium viride*, Willd.;—*Roxb. l. c.*;—*J. Grah. Cat. B. pl.* p. 171.) বেতু শাক *Bettoo-shak*. Entirely green.
 - γ. *purpureum*, Roxb. (*l. c.*) লাল বেতু *Lal-betoo*. Angles of the stem and branches of a fine purple colour; leaves and the mealy panicles somewhat reddish. (*Roxb.*)
5. *ficifolium*, Sm. (*Spreng. syst.* 1, p. 920;—*E. B.* 24, t. 1724.—*C. viride*, *Curt. lond.* 2, t. 16; not Willd.) ⊙ Europe. Fl. small, green, Feb. and March; fr. March.
6. *hybridum*, L. (*Spreng. syst.* 1, p. 920;—*E. B.* 27, t. 1919.) ⊙ England. Tauria. Siberia. N. America. Fl. small, pale greenish, Feb. and March; fr. March.
7. *Quinoa*, Willd. (*Spreng. syst.* 1, p. 920;—*B. M.* 65, t. 3641.) ⊙ S. America, where along the Pacific, from the temperate parts of the Andes to the coast, it is the chief nourishment of the people. The seeds are either boiled in water into a sort of gruel, which, seasoned in various ways, especially with Pinento, is much relished by those who are accustomed to it;—or they are toasted and used as coffee. Fl. small, greenish, Feb.; fr. March and April.
8. *Botrys*, L. (*Spreng. syst.* 1, p. 920;—*Roxb. H. B.* p. 21.) ⊙ S. Europe. Siberia. Pennsylvania. New York. Fl. small, green, Jan. and Feb.; fr. March. Contains an essential oil, which renders it tonic and antispasmodic. The same is the case with the next species.
9. *ambrosioides*, L. (*Spreng. syst.* 1, p. 921;—*Roxb. H. B.* p. 21.) ⊙ S. America. Georgia. Portugal. Hungary. C. G. H. Fl. small, pale greenish, and fr. nearly throughout the year. Completely domesticated about Serampore.



10. *laciniatum*, Roxb. (*Fl. ind.* 2, p. 59.) ☉ Bengal, (Serampore, Calcutta.) Fl. small, greenish, and fr. Jan. Feb. and March.
- ATRIPLEX, L. (*Spreng.* 3, p. 912, No. 3207;—*Endl. gen. pl.* p. 295.)
1. *hortensis*, L. (*Spreng.* 3, p. 916;—*Roxb. H. B.* p. 21;—*J. Grah. Cat. B. pl.* p. 171.) Garden Orache. ☉ Greece. Tartary. Cultivated all over Europe. Fl. small, green or reddish, C. S.; fr. March. In the Deccan cultivated as a spinach. (*Dr. Lush.*)
- BOUSSINGAULTIA, H. B. and Kth. (*Spreng. syst. c. p.* p. 52.)
1. *baselloides*, H. B. and Kth. (*Spreng. c. p.* p. 108;—*Humb. nov. gen.* 7, t. 645, h.;—*B. M.* 64, t. 3620.) 5 ∩ Neighbourhood of Loxa, in the Quitinian Andes. Fl. small, whitish.
- BASELLA, L. (*Spreng. syst.* 1, p. 534, No. 1135;—*Endl. gen. pl.* 1, p. 298.)
1. *cardifolia*, Lam. (*Spreng. syst.* 1, p. 950;—*Roxb. fl. ind.* 2, p. 105.—*B. lucida*, L.;—*Spr. l. c.*;—*Roxb. l. c.*—*Rheed.* 7, t. 24.) शूँई शाक *Pooi-shak*. २. ∩ Fl. small, rose-coloured, Jan., Feb., March; fr. H. S. A native of most parts of India, and much cultivated as a pot-herb.
- β. *rubra*; (*B. rubra*, *Spreng. l. c.*—*Rumph.* 5, t. 154, f. 2.) रुक्ता शूँई *Rukto-pooi*. रुक्ता वन शूँई *Rukto-bum-pooi*, when wild.
2. *alba*, L. (*Spreng. syst.* 1, p. 950;—*Roxb. fl. ind.* 2, p. 104, excl. var.;—*J. Grah. Cat. B. pl.* p. 170, excl. all the syn., except. *Rumph.* 5, p. 417.) सफेद शूँई *Sufed-pooi*. २. ∩ All over India. Cultivated. वन सफेद शूँई *Bun-sufed-pooi*, when wild.
- SALSOLA, L. (*Spreng. syst.* 1, p. 532, No. 1093;—*Endl. gen. pl.* 1, p. 298.) Saltwort.
1. *indica*, Willd. (*Röm. and Sch. syst. veg.* 6, p. 239;—*Roxb. fl. ind.* 2, p. 62;—*J. Grah. Cat. B. pl.* p. 170.) २. Coast of Coromandel. Salsette. Soonderbuns. Fl. very small, greenish, H. S. Leaves eaten by the natives where the plant grows, and considered very wholesome. (*Roxb.*)
2. *nudiflora*, Willd. (*Röm. and Sch. l. c.*;—*Roxb. o. c. p.* 60;—*J. Grah. Cat. B. pl. l. c.*) २. Native place, &c. the same as in No. 1.
- * *Rhagodia linifolia*, R. Br. 5 Tropical New Holland.—*Salsola macrophylla*, R. Br. 5 Tropical New Holland.—*Dysphania littoralis*, R. Br. २. Tropical New Holland.

ORDER CLII.—TETRAGONIACEÆ, Lindl. Nat. Syst. p. 209.

Herbs or shrubs, referred by Lindl. to 4 genera, which according to *Spreng. syst.* contain 14 species from S. Africa; 5 from S. America, Mexico, and the W. Indies; 1 from Mozambique; 1 from Europe; 1 from the



Canaries, N. Africa, and Arabia; and 1 from N. Zealand. In the E. Indies have been found only the following species:—

SESUVIUM, L. (*DC. pr.* 3, p. 453;—*W. and A. pr.* 1, p. 361.)

1. *repens*, Rottl. (*DC. l. c.*;—*W. and A. l. c.*—*S. Portulacastrum*, *Roxb. fl. ind.* 2, p. 509;—*J. Grah. Cat. B. pl.* p. 248; not L.—*Rumph.* 6, t. 72, f. 1.) 4. Sea-shores of Salsette, Orun, Trauquebar, Moulmein, &c. Soonderbuns. Fl. small, green, internally white, H. S.

β. *Wightianum*, Saugor Island, Soonderbuns. 4. R. S. 1841.

TETRAGONIA, L.

1. *expansa*, Ait. (*B. M.* 50, 2362.) 4 Japan. New Zealand.

* *Aizoon hispanicum*, L. © Spain.

ORDER CLIII.—PHYTOLACCACEÆ, Lindl. Nat. Syst. p. 210.

THE VIRGINIAN POKE TRIBE.

Herbs, undershrubs or trees referred by Lindl. to 7 or 8 genera, of which Spreng. syst. assigns 12 species to S. America and Mexico; 1 to N. America; 1 to the Canaries; 1 to Abyssinia, and 1 to Japan. In the E. Indies have been found 1 species of *Phytolacca*; 1 of *Rivina*; 1 of *Gisekia*; and 2 of *Bosea*? (Lour. Roxb.) Their native places are Nepal, Patna, the two Peninsulas of India, and Cochin China. Properties unimportant.

PHYTOLACCA, L. (*Spreng. syst.* 2, p. 284, No. 1744.)

1. *decandra*, L. (*Spreng. syst.* 2, p. 441;—*B. M.* 24, t. 931;—*Roxb. H. B.* p. 35.) 4. Jamaica. Virginia. New England. Fl. smallish, reddish-greenish, Feb. and March; fr. H. S. Formerly used as an antirheumatic and purgative. Leaves acrid, but loosing this quality by boiling, and then eatable.
2. *octandra*, L. (*Spreng. syst.* 2, p. 441;—*Lam. ill.* t. 393;—*Roxb. H. B.* p. 35.) 4. Mexico. Fl. smallish, white, Feb. and March; fr. H. S.
3. *acinosa*, Roxb. (*fl. ind.* 2, p. 458.) 4. Nepal. Choor. In H. C. G. fl. Feb. and March; fr. H. S. Leaves acrid, loosing that quality by boiling, and then eaten by the natives. (*Roxb.*)
4. *dioeca*, L. (*Spreng. syst.* 2, p. 441;—*L'Herit. stirp.* 1, p. 145, t. 70.) 5 S. America. Fl. smallish, white, March; fr. H. S.

RIVINA, L. (*Spreng. syst.* 1, p. 370, No. 482.)

1. *lavis*, L. (*Spreng. syst.* 1, p. 452;—*Lam. ill.* t. 81, f. 2;—*B. M.* 49, t. 2333;—*Roxb. H. B.* p. 11.) 5 W. Indies. Fl. small, white, and fr. the whole year. Domesticated about Serampore.



GISEKIA, L. (*Spreng. syst.* 1, p. 535, No. 1151.)

1. *pharnaceoides*, L. (*Spreng. syst.* 1, p. 971;—*Roxb. Corom.* 2, t. 183;—*H. B.* p. 22;—*J. Grak. Cat. B. pl.* p. 250.—*Kölreutera molluginoides*, Murr.) ⊙ Coromandel. The Concans. Banks of the Irrawaddi. Saharunpore. Egypt. In H. C. G. fl. and fr. C. S. (*Roxb.*)

- * *Phytolacca mexicana*, Swt. (*P. icosandra*, Sims.; B. M. 53, t. 2633.)
♀. Mexico.—*P. bogotensis*, Humb. ♀. Bogota.—*P. icosandra*, L. ♀. W. Indies.—*P. stricta*, Hofm. ♀. S. America.—*Rivina humilis*, L.; B. M. 43, t. 1781: ♂ W. Indies.—*R. brasiliensis*, L. ♂ W. Indies.—*Bosea? trinervia*, Roxb. L. ♂ Kandalla Ghaut. Circars.

ORDER CLIV.—POLYGONACEÆ, Lindl. Nat. Syst. p. 211.

THE BUCK-WHEAT TRIBE.

Herbs, rarely shrubs, or trees, by Lindl. (adding *Ampelgynum*,) referred to 25 genera. Of these about 44, according to Spreng. syst. belong to Europe; 34 to S. America, Mexico, and the W. Indies; 30 to N. America; 24 to Siberia; 18 to New Holland and the South Sea Islands; 10 to N. Africa; 12 to Japan and China; 5 to the Levant; 4 to Thibet and Mongolia; 2 to Caucasus; 2 to the Canaries; 1 to Iceland; 1 to Dahuria; 1 to Arabia; 1 to Tristan d'Acunha; 1 to Madagascar; 2 to Cochin China; 1 to the Moluccas, and 1 to Java. In S. Africa have been found 20 species, (*Harvey*); and in the E. Indies, according to Meisner and Roxb. fl. 64: viz. 1 of *Königia*, (also a native of Iceland.); 6 of *Rumex*; 1 of *Oxyria*; 4 of *Rheum*; 2 of *Coccoloba*; 1 of *Ceratogon*; 1 of *Ampelgynum*; 46 of *Polygonum*; and 3 of *Fagopyrum*. Properties under the species.

POLYGONUM, L. (*Spreng. syst.* 2, p. 175, No. 1510;—*Endl. gen. pl.* 1, p. 306.)

1. *orientale*, L. (*Spreng. syst.* 2, p. 257; *Meisner in Wall. pl. as. rar.* 3, p. 54;—*B. M.* 6, t. 213.) C. B. S. India. Japan. New Holland.
β. *pilosum*, Meisn. (*l. c.*—*Polygonum pilosum*, *Roxb. fl. ind.* 2, p. 286.—*Lagunea Cochinchinensis*, *Lour.*) বড় পানী মরিচ *Burapance-murich*. ⊙ Bengal, (Serampore.) Fl. small, white, R. S.; fr. C. S.
2. *nutans*, Roxb. (*fl. ind.* 2, p. 285.) ⊙ Native place uncertain. Fl. small, white. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*)
3. *tomentosum*, Willd. (*Spreng. syst.* 2, p. 257;—*Meisn. in Wall. pl. as. rar.* 3, p. 55;—*Roxb. fl. ind.* 2, p. 287.) ⊙ Both Peninsulas of India. Ceylon. Bengal, (Serampore.) Saharunpore. Fl. small, white, R. S.; fr. C. S. Cattle eat this species greedily. (*Roxb.*)



4. *lanigerum*, R. Br. (*Spreng. syst.* 2, p. 258;—*Meisn. in Wall. pl. as. rar.* 3, p. 55;—*P. lanatum*, *Roxb. fl. ind.* 2, p. 285.) শেত পানী মরিচ *Shwet-paneemurich*. © New Holland. Nepal. Neelgheries. Bengal, (Serampore.) Fl. small, white, R. S.; fr. C. S.
 5. *barbatum*, L. (*Spreng. syst.* 2, p. 257;—*Meisn. in Wall. pl. as. rar.* p. 56;—*Roxb. fl. ind.* 2, p. 289.) © Both Peninsulas of India. Bengal. Saharunpore. China. Japan. Fl. small, rose-coloured. In H. C. G. fl. R. S.; fr. C. S. (*Roxb.*) Cattle eat it greedily. (*Roxb.*) Seeds carminative. (*Ainslie.*)
 6. *glabrum*, Willd. (*Spreng. syst.* 2, p. 258;—*Meisn. in Wall. pl. as. rar.* 3, p. 57, excl. syn. *P. tenellum*, *Roxb. H. B.*;—*Roxb. fl. ind.* 2, p. 287;—*J. Grah. Cat. B. pl.* excl. syn. *Rheed.* 10, t. 80; *B. M.* and *P. orientale*, L.—*Rheed.* 12, t. 77.) © Both Peninsulas of India. Bengal, (Serampore.) Saharunpore. Fl. small, rose-coloured, R. S.; fr. C. S.
 7. *tenellum*, *Roxb. (fl. ind.* 2, p. 289.) © Bengal, (Serampore.) Fl. small, white, R. S.; fr. C. S.
 8. *rivulare*, Kön. (*Roxb. fl. ind.* 2, p. 290;—*J. Grah. Cat. B. pl.* p. 172. —*Rheed.* 12, t. 76.) © Peninsula of India. Bengal, (Serampore.) Fl. small, rose-coloured, R. S.; fr. C. S.
 9. *staccidum*, *Roxb. (fl. ind.* 2, p. 291.) পানী মরিচ *Panee-murich*. © Bengal, (Serampore.) Fl. small, white, R. S.; fr. C. S.
 10. *horridum*, Buch. (*Roxb. fl. ind.* 2, p. 291;—*Meisn. in Wall. pl. as. rar.* 3, p. 58.) ১ Penang. Khassya Mountains. Assam. Nepal. Introduced into H. C. G. in 1810, but had not fl. up to 1814.
 11. *perfoliatum*, L. (*Spreng. syst.* 2, p. 259;—*Roxb. fl. ind.* 2, p. 288;—*Meisn. in Wall. pl. as. rar.* 3, p. 59;—*Burm. ind. t.* 31, f. 2;—*Lam. ill. t.* 315, f. 3.) ১ Khassya Mountains. Nepal. In H. C. G. fl. and fr. throughout the year. (*Roxb.*)
 12. *herniarioides*, Delil. (*Spreng. syst.* 2, p. 256;—*Meisn. in Wall. pl. as. rar.* 3, p. 62.—*P. Dryandri*, *Spreng. syst.* 2, p. 255.—*P. elegans*, *Roxb. fl. ind.* 2, p. 291;—*Soland*; not Tenore.) ২ Egypt. Oude. Bengal, (Serampore. Monghir. Silhet.) Fl. minute, rose-coloured, and fr. Jan., Feb. and March.
 13. *aviculare*, L. (*Spreng. syst.* 2, p. 255;—*F. B.* 18, t. 1252;—*Roxb. H. B.* p. 29.) © Europe. Asia. N. America. Fl. very small, greenish-white-red, May and June.
- AMPELYGONUM, Lindl. (*B. Reg.* 1838, *app.* p. 62.)
1. *chinense*, Lindl. (*l. c.*—*Polygonum chinense*, L.;—*Spreng. syst.* 2, p. 254;—*Meisn. in Wall. pl. as. rar.* p. 60;—*Roxb. fl. ind.* 2, p. 289; *J. Grah. Cat. B. pl.* p. 172;—*Burm. ind. t.* 30, f. 3.) ১ Japan. China. Java. Nepal. Kemaon. Khassya Mountains. Assam. Burma. Neelgherry. Dindygul. Courtallum. Bangalore. Mahableshwar. Hills about Parr. Fl. small, white, nearly the whole year, but especially H. S.



FAGOPYRUM, Tournef. (Meisn. in Wall. *pl. as. rar.* p. 63;—Endl. *gen. pl.* 1, p. 307.)

1. *esculentum*, Mönch. (Meisn. *l. c.*—Polygonum *Fagopyrum*, L.;—Spreng. *syst.* 2, p. 254;—Roxb. *fl. ind.* 2, p. 292;—E. B. 15, t. 1044.) *Common Buck-wheat*. ♂ Fl. small, pale rose, C. S.; fr. H. S. Central Asia. Cultivated all over the mountainous countries N. of Bengal. This like the following species, is used as food :—
2. *tataricum*, Gärtn. (fr. 2, p. 182, t. 119, f. 6.—Polygonum *tataricum*, L.;—Spreng. *syst.* 2, p. 254;—Gmel. *sib.* 3, p. 64, t. 13, f. 1.) ♂ Tartary. Fl. small, pale rose, C. S.; fr. H. S.
3. *cymosum*, Meisn. (Wall. *pl. as. rar.* 3, p. 63.) ♀. Assam. Nepal. Has been introduced into H. C. G. by Mr. Webb. Fl. ?

CERATOGONUM, Meisn. (Wall. *pl. as. rar.* 3, p. 63;—Endl. *gen. pl.* 1, p. 308.)

1. *atriplicifolium*, Meisn. (*l. c.*) ♀ ? Native place uncertain. In H. C. G. **COCCOLOBA**, L. (Spreng. *syst.* 2, p. 175, No. 1509;—Endl. *gen. pl.* 1, p. 308.) *Sea-side Grape*.

1. *wifera*, L. (Spreng. *syst.* 2, p. 252;—B. M. 59, t. 3130;—Roxb. *H. B.* p. 29.) ♀ W. Indies. S. America. Fl. small, whitish, fragrant, April; fr. Oct. *Fruit* sweetish-acid, rather agreeable, but not much esteemed, though generally sold in the markets.—Wood, when boiled in water, gives out a red colour; it is also employed for Cabinet-work. (Hook.)
2. *crispata*, Buch. (Roxb. *fl. ind.* 2, p. 292.) ♀. Nepal. In H. C. G. fl. C. S. (Roxb.)
3. *pubescens*, Linn. (B. M. 59, t. 3166.) ♀ W. Indies.
4. *excoriata*, L. (excl. syn. Pluk.) ♀ W. Indies.

RUMEX, L. (Spreng. *syst.* 2, p. 15, No. 1385.—Meisn. in Wall. *pl. as. rar.* 3, p. 63;—Endl. *gen. pl.* 1, p. 308.) *Dock*.

1. *sanguineus*, L. (Pers. *syn.* 1, p. 394;—E. B. 22, t. 1533.) ♀. Europe. Virginia. Fl. small, greenish-yellowish. Has not fl. here, though cultivated for many years.
2. *pulcher*, L. (Spreng. *syst.* 2, p. 160;—Pers. *syn.* 1, p. 395;—E. B. 22, t. 1576.) ♀. Europe. Fl. small, pale-yellow. Has not fl. here, though cultivated for many years.
3. *Wullichianus*, Meisn. (Wall. *pl. as. rar.* 3, p. 64; not Röm. and Sch.—R. *acutus*, Roxb. *fl. ind.* 2, p. 208, not L.; nor R. *Roxburghianus*, Röm. and Sch. which is R. *tuberosus*, Roxb. in Willd. *Hb.*) বন পালাদ *Ban-palang*. ♂ Bengal. (Serampore.) Assam. Oude. Fl. small, yellowish, Jan., Feb. and March; fr. April. Every part of this plant possesses a considerable degree of astringency and bitterness, but no acidity. (Roxb.)

4. *vesicarius*, L. (Spreng. *syst.* 2, p. 160;—Meisn. in Wall. *pl. as. rar.* 3, p. 64;—Roxb. *fl. ind.* 2, p. 209;—J. Grah. *Cat. B. pl.* p. 172.) হুক পালাদ *Chook-palang*, *Country Sorrel*. Fl. small, reddish, R. S.;



fr. C. S. ☉ Africa. Cultivated in gardens all over Asia for culinary and medicinal purposes.

5. *Acetosa*, L. (*Spreng. syst.* 2, p. 461 ;—*E. B.* 2, t. 127 ;—*Roxb. H. B.* p. 26.) *Common Sorrel*. ♀. Europe. Has not fl. here.

6. *Acetosella*, L. (*Spreng. syst.* 2, p. 461 ;—*E. B.* 24, t. 1674 ;—*Roxb. H. B.* p. 26.) ♀. Europe. Fl. small, red, Feb. and March, but seldom ; fr. 0.

EMEX, Neck. (*Spreng. syst.* 2, p. 162 ;—*Endl. gen. pl.* 1, p. 308.)

1. *spinosus*, Campd. (*Spreng. l. c.*—*Rumex spinosus*, L.) ☉ Portugal. Sicily. Greece. N. Africa. Fl. small, greenish, Feb. and March ; fr. April.

* *Fagopyrum emarginatum*, Meisn. (*Polygonum emarginatum*, Roth ; B. Reg. 13, t. 1065.) Nepal.—*Coccoloba longifolia*, L. ♀ W. Indies.—*C. tenuifolia*, L. ♀ Jamaica.—*C. diversifolia*, Jacq. ; Hook exot. fl. t. 102. ♀ St. Domingo.—*C. punctata*, L. ♀ W. Indies.—*C. nivea*, Jacq. ♀ Jamaica.—*Triplaris americana*, L. ♀ S. America.—*Podopterus mexicanus*, H. and B. ♂ Mexico.

ORDER CLV.—PETIVERIACEÆ, Lindl. Nat. Syst. p. 212.

Herbs or undershrubs, of 2-3 genera and as many species, natives of S. America and the W. Indies. *Sequiera asiatica*, Lour. most likely does not belong to the order. Properties unknown.

PETIVERIA, L. (*Spreng. syst.* 2, p. 164, No. 1402.)

1. *alliacea*, L. (*Spreng. syst.* 2, p. 168.) ♂ Jamaica. Yields a strong smell of garlic. Introduced into H. C. G. before 1814. Fl. ?

* *Sequiera americana*, L. S. America.

ORDER CLVI.—SCLERANTHACEÆ, Lindl. Nat. Syst. p. 213.

Small herbs, referred to 3 genera containing 8 species : 4 from N. Holland and the South Sea Islands ; 3 from Europe ; and 1 from S. America. They are of no known use.

SCLERANTHUS, L. (*DC. pr.* 3, p. 378.)

1. *annuus*, L. (*DC. l. c.* ;—*E. B.* 5, t. 351.) ☉ Europe. Levant. N. America. Fl. small, pale green, Feb. and March.

* *Guilleminea illecebroides*, H. B. and Kth. ♀. Quito.



ORDER CLVII.—NYCTAGINACEÆ, Lindl. Nat. Syst. p. 213.

THE MARVEL-OF-PERU TRIBE.

Herbs, shrubs or small trees, by Lindl. referred to 16 genera. Of these, Spreng. syst. assigns 42 species to S. America, Mexico and the W. Indies; 4 to N. America; 2 to New Holland; 1 to the Society Islands; 1 to Madagascar; 1 to Europe, and 1 to Egypt. 1 species of *Boerhaavia* has been found in S. Africa, according to Burchell. In the E. Indies have been discovered 5 species of *Boerhaavia*; 4 of *Pisonia*; 1 of *Oxia*, (Lour.) and — of *Epilithes*, Bl. Properties unimportant.

MIRABILIS, L. (*Spreng. syst.* 1, p. 501, No. 570;—*Endl. gen. pl.* 1, p. 311.) *Marvel-of-Peru*.

1. *Jalapa*, L. (*Spreng. syst.* 1, p. 536;—*B. M.* 11, t. 371;—*Roxb. H. B.* p. 16;—*J. Grah. Cat. B. pl.* p. 167.—*Nyctago hortensis*, Juss.—*Rheed.* 10, t. 75;—*Rumph.* 5, t. 89.) कृष्ण केलि *Kishno-keli*. ♀. Peru. Domesticated in our gardens; fl. and fr. whole year. Root purgative, whence the plant was formerly supposed to be the true Jalap-plant. Flowers large.

α. *kermesina*; Flowers crimson.

β. *kermesino-alba*; ditto, crimson-white.

γ. *alba*; ditto white.

δ. *flava*; ditto yellow.

ε. *flavo-alba*; ditto yellow-white.

2. *longiflora*, L. (*Spreng. syst.* 1, p. 536;—*Sm. exot. bot.* 1, t. 23;—*Roxb. H. B.* p. 16.) ♀. Mexico. Introduced into H. C. G. in 1807, but had not flowered up to 1814.

OXYRAPHUS, L'Herit. (*Spreng. syst.* 1, p. 128, No. 199;—*Endl. gen. pl.* 1, p. 311.) *Umbrella-wort*.

1. *viscosus*, L'Herit. (*Spreng. syst.* 1, p. 180;—*B. M.* 13, t. 434.—*Mirabilis viscosa*, Cav.) ♀. Peru. Fl. middle-sized, deep-rose. C. S.

BOERHAAVIA, L. (*Spreng. syst.* 1, p. 24, No. 65;—*Endl. gen. pl.* 1, p. 311.)

1. *erecta*, L. (*Spreng. syst.* 1, p. 36, excl. syn.—*B. procumbens*, *Hb. Banks*;—*Roxb. fl. ind.* 1, p. 146; ed *Carey* 1, p. 148;—*J. Grah. Cat. B. pl.* p. 167;—*Rheed.* 7, 56;—*Burm. ind.* 1.) ♀. A very troublesome Weed common all over India. Fl. minute, and fr. whole year.

α. *rosea*; গাদা পুর্ণা *Gada-poorna*. Fl. deep-rose.

β. *alba*; শ্বেত পুর্ণা *Shwet-poorna*. Fl. white.

2. *repanda*, Willd. (*Pers. syn.* 1, p. 36;—*Roxb. H. B.* p. 2.) ♀. St. Helena. Fl. minute, C. S; fr. H. S.

PISONIA, Plum. (*Spreng. syst.* 2, p. 164, No. 1401;—*Endl. gen. pl.* 1, p. 312.)

1. *villosa*, Poir. (*Spreng. syst.* 2, p. 168.—*P. aculeata*, *Roxb. fl. ind.* 2, p. 217;—*J. Grah. Cat. B. pl.* p. 167; not L.) বাঘচড়া *Baghachura*.



- 5 ∪ Peninsula of India. Bengal, (Serampore.) Fl. small, greenish-white, March and April; fr. C. S. Makes impenetrable hedges.
2. *aculeata*, L. (Spreng. *l. c.*—*Lam. ill. t.* 861;—*Gärtn. fr.* 1, p. 367, t. 76, f. 4.) 5 ∪ W. Indies. Fl. small, greenish-whitish, March and April.
3. *mitis*, Willd. H. C. G. in 1814.
- BUGINVILLEA, Juss.
1. *spectabilis*, Willd. *sp.* 2, p. 348;—*Lam. ill. suppl.* 5, p. 359.—*Tricycla spectabilis*, Poir. 5 ∪ Rio Janeiro. August 1839.

* *Mirabilis dichotoma*, L. 2. Mexico.—*M. suaveolens*, Humb. 2. Mexico. Already introduced into Bombay.—*M. hybrida*, Lepel. 2. New Granada.—*Orybaphus aggregatus*, Cav. 2. New Spain.—*O. glabrifolius*, Vahl. 2. New Spain.—*Allionia violacea*, L. 2. Cumana.—*A. incarnata*, L. 2. Cumana.—*Tricycla spinosa*, Cav. 5 Buenos Ayres.—*Reichenbachia hirsuta*, Spreng. 5 Brazil.—*Salpianthus arenarius*, Humb. 5 Mexico.

ORDER CLVIII.—MENISPERMACEÆ, DC.—Lindl. Nat. Syst. p. 214.

THE COCCULUS TRIBE.

Twining shrubs, rarely trees, excluding *Brannea*, *Bagalatta* and *Tiliacora*, and adding *Cyclea*, Arn., referred by Lindl. to 20 genera. Of these, DC. pr. and Spreng. syst., enumerate 26 species for S. America, Mexico and the W. Indies; 4 for N. America; 3 for Madagascar; 3 for Japan; 3 for Timor; 1 for Senegal; 1 for Owaree; 1 for Arabia; 1 for Egypt; 1 for Mozambique; 1 for Mauritius; 1 for Dahuria; and 1 for the South Sea Islands. In S. Africa have been discovered 4 species, (*Harvey*); and in the E. Indies about 60; viz. 1 of *Anamirta*; 3 of *Clypea*; 1 of *Cyclea*; 35 of *Cocculus*; 1 of *Epibaterium*, (*Nephroia*, Lour.); 1 of *Pselium*, (Lour.); 2 of *Gynostemma*, (Bl.); 8 of *Cissampelos*; 1 of *Stephania*, (Lour.); 4 of *Phytocrene*; 1 of *Natsiatum*; 1 of *Coccinium*; *Cocculus hexagynus*, Colebr. belongs to South China. — Properties under the species.

ANAMIRTA, Colebr. (*W. and A. pr.* 1, p. 446.)

1. *Cocculus*, W. and A. (*l. c.*;—*J. Grah. Cat. B. pl.* p. 4.—*A. paniculata*, Colebr. *Linn. soc. trans.* 13, p. 52 and 66.—*Menispermum Cocculus*, L.; *Gärtn. fr.* 1, p. 219, t. 70, f. 7.—*M. heteroclitum*, Roxb. *fl. ind.* 3, p. 817.—*Cocculus suberosus*, W. and A. *pr.* 1, p. 11;—DC. *pr.* 1, p. 97.—*C. orbiculatus*, DC. *o. c.* p. 98; excl. syn. Pluk.—*C. lacunosus*, DC. *o. c.* p. 97.) 5 ∪ Circar Mountains. The Concan. Fl. small, greenish. In H. C. G. Fl. ? Seeds ascertained to be an irritating poison to quadrupeds and fishes, owing to the Picrotoxine



they contain, and which is so active, that twelve grains given to a dog killed it in five minutes, notwithstanding the copious vomiting the dose excited. *Seeds* (*Cocculus indicus* of the shops) used to adulterate beer, though prohibited under a penalty of from £200 to 500 on the seller. (*Wight*.)

CLYPEA, Bl. (*W. and A. pr. 1, p. 14.*)

1. *hernandifolia*, W. and A. (*l. c.*—*Cissampelos hernandifolia*, Willd.;—*DC. pr. 1, p. 100*;—*Roxb. fl. ind. 3, p. 842*.—*C. hexandra*, *Roxb. o. c. p. 841*, excl. syn?) निमूका *Nimooka* ५ ८ Peninsula of India. Bengal, (Serampore.) Assam. Fl. minute, greenish, R. S.
2. *glabra*, W. and A. (*pr. 1, p. 450*, annot.—*Cissampelos glabra*, *Roxb. fl. ind. 3, p. 840*.—*Cocculus Roxburghianus*, *DC. 1, p. 96.*) ५ ८ Silhet. Fl. minute, yellowish, May; fr. Oct. and Nov. Root very large, acrid, used medicinally by the natives of Silhet.

CYCLEA, Arn. (*Wight. ill. 1, p. 22.*)

1. *Burmanni*, Arn. (*l. c.*—*Clypea Burmanni*, *W. and A. pr. 1, p. 14.*—*J. Grah. Cat. B. pl. p. 5.*—*Cocculus Burmanni*, *DC. pr. 1, p. 96*;—*C. peltatus*, *DC. l. c.*—*Menispermum peltatum*, *Lam.*—*Wal-tjedde, Gärtn. fr. 2, p. 488, t. 180, f. 12*;—*Rheed. 7, t. 49*;—*Burm. zeyl. t. 101.*) ५ ८ Coromandel. The Concans. Ceylon. Has been introduced into H. C. G.? Fl.?

CISSAMPELOS, L. (*DC. pr. 1, p. 100*;—*W. and A. pr. 1, p. 14.*)

1. *convolvulacea*, Willd. (*W. and A. l. c.*;—*Roxb. fl. ind. 3, p. 842*, excl. syn. *Rheed.*—*J. Grah. Cat. B. pl. p. 5.*) ५ ८ Dindygul. Rajmahl. Nepal. Fl. small, greenish, R. S.
2. *mauritiana*, Pet. Th. ५ Mauritius.

COCCULUS, Bauh. (*DC. pr. 1, p. 96*;—*W. and A. pr. 1, p. 11.*)

1. *cordifolius*, DC. (*o. c. p. 97*;—*W. and A. o. c. p. 12*;—*J. Grah. Cat. B. pl. p. 4.*—*♂ Wight. icon. 2, t. 485, ♀ ibid. t. 486.*—*C. convolvulaceus*, *DC. l. c.*—*Menispermum cordifolium*, Willd.;—*Roxb. fl. ind. 3, p. 81.*—*M. glabrum*, *Klein*; not Kön.) गुलुञ्चा *Gooluncha*. ५ ८ Peninsula of India. Bengal, (Serampore.) Assam. Fl. small, yellowish. H. and R. S.; fr. C. S. Used extensively in a variety of diseases by the native practitioners of India, especially in such as are attended by febrile symptoms not of a high inflammatory kind, and in fevers of debility. The parts used are the root, stems, and leaves, from which a decoction called *Pachuna* is prepared. A sort of extract called *Palo* is obtained from the stem, and considered an excellent remedy in urinary affections and gonorrhœa. (*Trans. med. and phys. soc. Calc. 3, p. 298.*) From fifteen to thirty grains of the powdered root constitute a good emetic. (*Wight*.)
2. *crispus*, DC. (*pr. 1, p. 97.*—*Menispermum crispum*, L.—*M. verrucosum*, *Fleming*; *Roxb. fl. ind. 3, p. 808*;—*Rumph. 5, t. 44, f. 1.*) ५ ८ Moluccas. Sumatra. Java. Fl. small, greenish, Feb. and March. Used against intermittent fevers among the Malays.



3. *acuminatus*, DC. (*pr.* 1, p. 99;—*W. and A. pr.* 1, p. 12;—*Deless. icon. sel.* 1, t. 95;—*J. Grah. Cat. B. pl.* p. 5.—*C. radiatus*, DC. *l. c.*—*Menispermum acuminatum*, *Lam.*—*M. radiatum*, *Lam.*—*M. polycarpon*, *Roxb. fl. ind.* 3, p. 816.—*Tiliacora racemosa*, *Colebr.*; *Linn. soc. trans.* 13, p. 67.—*Braunea menispermoides*, *Willd.*; as to the leaves and male flowers.—*Rheed. 7, t. 3.*) दोषजती *Baghaluta*, तिलियाकुरा *Tiliyakura*. ५ ∩ Both Peninsulas of India. Bengal, (Serampore.) Onde. Assam. Fl. small, cream-coloured, sweet-scented, H. and R. S.; fr. C. S.
 4. *villosus*, DC. (*pr.* 1, p. 98;—*W. and A. pr.* 1, p. 13.—*C. sepium*, *Colebr.*—*Menispermum villosum*, *Lam.*; not *Roxb.*—*M. hirsutum*, *L. Roxb. fl. ind.* 3, p. 814; excl. syn. *Gärtn.*—*M. myosotoides*, *L.*) इच्छुर *Huyer*. ५ ∩ Both Peninsulas of India. Bengal, (Serampore.) Hurdwar. Fl. minute, greenish, R. S.; fr. C. S. The juice of the ripe berries makes a good, durable, bluish-purple ink. A decoction of the fresh roots, with a few heads of long pepper, in goat's milk, is administered by the natives for rheumatic pains, half a pint every morning. It is considered heating, laxative, and sudorific. Curry is made of the leaves for patients who are under a course of the roots. (*Roxb.*)
 5. *incanus*, *Colebr.* (*Menispermum villosum*, *Roxb. fl. ind.* 3, p. 812;—not *Lam.*) ५ ∩ Chittagong. Silhet. In H. C. G. fl. R. S. (*Roxb.*)
 6. *tomentosus*, *Wall.* (*Cat.*—*Menispermum tomentosum*, *Roxb. fl. ind.* 3, p. 813.) पद्म गुलुञ्चा *Pudmo-gooluncha*. ५ ∩ Bengal, (Serampore.) Fl. small, green, C. S.; fr. H. S.
 7. *hexagynus*, *Colebr.* (*Menispermum hexagynum*, *Roxb. fl. ind.* 3, p. 816;—*Spreng. syst.* 2, p. 155.) ५ ∩ South of China. In H. C. G. fl. whole year. (*Roxb.*)
 8. *triandrus*, *Wall.* (*Cat.*—*Menispermum triandrum*, *Roxb. fl. ind.* 3, p. 816.) ५ ∩ Penang. In H. C. G. fl. R. S. (*Roxb.*)
 9. *palmatum*, DC. (*pr.* 1, p. 98;—*B. M.* 57, t. 2970, 71.—*Menispermum palmatum*, *Lam.*—*M. Columba*, *Roxb. fl. ind.* 3, p. 807.) कुलम्बा *Kulumbo*. ५ ∩ Forests on the coast of Mozambique. Fl. small, green, R. S. much cultivated in the Mauritius. This plant produces the well known *Calumba root*, so much esteemed for its powerful antiseptic, tonic, and astringent properties.
 10. *laurifolius*, DC. (*pr.* 1, p. 100;—*Deless. icon. select.* 1, t. 97.) 5 Nepal, Kemaon. Fl. small, yellowish-greenish, H. S.; fr. O.
 11. *calophyllus*, *Wall. MSS.* In H. C. G. Fl. ?
 12. *megaspermus*, (*Menispermum megaspermum*, *Roxb. H. B. p.* 72.) ५ ∩ Silhet. In H. C. G. fl. H. S. (*Roxb.*)
- MENISPERMUM, L. (*DC.* 1, p. 102.)
1. *canadense*, L. (*DC. l. c.*;—*B. M.* 44, t. 1910.) ५ ∩ N. America. Has not fl. here.



COSCINIUM, Colebr. (Lindl. nat. syst. p. 216.)

1. *fenestratum*, Colebr. (Menispermum fenestratum, Gärtn. fr. 1, p. 219. t. 46, f. 5;—DC. pr. 1, p. 103;—Roxb. fl. ind. 3, p. 809.) 5 (Ceylon. Has been introduced into H. C. G. ?)

- * *Cocculus macrocarpus*, W. and A.; Wight. ill. 1, t. 7. Rheed. 11, t. 62. 5 (The Ghauts.—*C. malabaricus*, DC. 5 (S. Concan.—*C. Plukenetii*, DC. 5 (Tanjore.—*C. oleracea*, Buch. Gungachara.—*Gynostemma pedatum*, Bl. Java.—*G. simplicifolium*, Bl. Java.—*Phytocrene gigantea*, Wall. pl. as. rar. 3, t. 216. 5 (Martaban, near Amherst.—*P. bracteata*, Wall. Penang.—*P. palmata*, Wall. Penang.—*P. oblonga*, Wall. Penang.—*Natsiatum herpeticum*, Buch. Bagduyar.

ORDER CLIX.—LARDIZABALACÆ.

(Sub-Order ? Lardizabaleæ,—Lindl. Nat. Syst. p. 216.)

Twining shrubs, seldom trees, (Burasaia) of 3 genera, DC. pr. enumerates 3 species for Chili and Peru; 1 for Madagascar; and 1 for China. The published Indian species are the following :—

STAUNTONIA, DC. (pr. 1, p. 96.—Hollböllia, Wall.)

1. *latifolia*, R. Br. (Hollböllia latifolia, Wall. tent. fl. ncp. t. 16.) 5 (Nepal. Kemaon. Has not fl. here.

- * *S. angustifolia*, R. Br. (Hollböllia angustifolia, Wall. tent. fl. ncp. t. 17.) 5 (Nepal.

ORDER CLX.—BREXIACÆ, Lindl. Nat. Syst. p. 218.

The following are the only published species of this order, the properties of which are unknown.

BREXIA, Pet. Thouars. (Spreng. syst. 1, p. 520, No. 879.)

1. *madagascariensis*, Ker. (B. Reg. 9, t. 730;—Spreng. syst. 1, p. 792;—c. p. p. 94.—Venana madagascariensis, Lam.;—Roxb. fl. ind. ed. Carey, 2, p. 312.) 5 Madagascar. Fl. large, pale green, H. S.; fr. R. S.
2. *spinosa*, Lindl. (B. Reg. 11, t. 872;—Spreng. syst. c. p. p. 94;—B. heterophylla, Bojer.—Thecophrasta serratifolia, Hortul.) 5 Madagascar. In H. C. G.

- * *B. chrysophylla*, Swt. 5 Madagascar.



ORDER CLXI.—ERICACEAE, DC.—Lindl. Nat. Syst. p. 220.

THE HEATH TRIBE.

Undershrubs, shrubs or trees, by Lindl. referred to 43 genera. Of these, Spreng. syst. enumerates about 50 species from N. America; 46 from S. America, Mexico and the W. Indies; 26 from Europe; 9 from Siberia; 6 from the Mascarenhas Islands; 4 from the Straits of Magellan; 2 from the Levant, 1 from Caucasus; 1 from Dahuria; 1 from Madeira; 1 from the Canaries; 1 from Greenland; 2 from New Zealand; 3 from China; and 1 from Japan. In S. Africa, have been discovered 450 species, (*Harvey*); and in the E. Indies, according to Wall Cat. and Royl. ill, 22; viz. 8 of *Andromeda*; 1 of *Cassiope*; 3 of *Gaultheria*; and 10 of *Rhododendron*.—To the E. Indian Ericaceae must be added the Javanese species of *Diplosia*, *Vireya*, and *Hymenanthus*, Bl. Exclusive of Java, all the Indian plants of this order have been found on the Himalayas, the Khassya Hills, and the Neelgherries ones excepted.—General properties astringent and diuretic.

RHODODENDRON, L. (*Spreng. syst.* 2, p. 275, No. 1548.)

1. *arboreum*, Sm. (*exot. bot. t.* 9;—*B. Reg.* 11, t. 890;—*Spreng. syst.* 2, p. 292;—*Hook. exot. fl. t.* 168;—*Swt. fl. gard.* 3, t. 250.—*R. puniceum*, *Roxb. fl. ind.* 2, p. 409.—*R. purpureum*, *Buch. MSS.*) 5 Nepal. Kemaon. Fl. large, dark scarlet. In H. G. G. fl. April and May, (*Roxb. H. B. p.* 33.)—*Wood* used for making gun-stocks. (*Hurdwicke*.)

* *Gaultheria fragrantissima*, Wall. 5 Nepal.

ORDER CLXII.—VACCINIACEAE, Lindl. Nat. Syst. p. 221.

THE BILBERRY TRIBE.

Shrubs or small trees, by Lindl. referred to 8 genera. Of these, Spreng. syst. assigns 30 species to S. America, Mexico, and the W. Indies; 30 to N. America; 3 to Europe; 3 to Japan; 1 to the Society Islands; 1 to Madagascar; 1 to Armenia; and 1 to Madeira. In the E. Indies, according to Wall. Cat. and Royl. ill., have been discovered 10 species; viz. 3 of *Vaccinium*; 2 of *Gaylussacia*; and 6 of *Thibaudia*;—all natives of the Khassya Mountains, except 1 from the Neelgherries; 1 from Tavoy, and 1 from Java.—Properties unimportant.

VACCINIUM, L. (*Spreng. syst.* 2, p. 171, No. 1421.)

1. *Sprengelii*, Wall. (*Cat.*) 5 Khassya Mountains.—Has not fl. here.
2. *secundum*, Wall. 5 Neelgherries.
3. *Schmidianum*, Wall. 5 Neelgherries.



THIBAUDIA, Pav. (*Spreng. syst.* 2, p. 275, No. 1553.)

1. *variegata*, Wall. (*Cat.*;—*Royle. t.* 79, *f.* 1.—*Ceratostema variegatum*, *Roxb. fl. ind.* 2, p. 413.—*Agapetes variegata*, *D. Don.*; in *G. Don's Mill. dict.* 3, p. 862.) ♂ Garrow Hills. Khassya Mountains. Fl. large, red and rose-coloured, with the mouth greenish, *C. S.*; fr. June and July. (*Roxb.*)
2. *vaccinacea*, Wall. (*Cat.*—*Ceratostema vaccinaceum*, *Roxb. fl. ind.* 2, p. 412.) ♂ Garrow Hills, Khassya Mountains. Fl. small, white, tinged with green, March and April; fr. June and July. (*Roxb.*)
3. *setigera*, Wall. (*Cat.*—*Agapetes setigera*, *D. Don.*; in *G. Don's Mill. dict.* 3, p. 862.) ♂ Khassya Mountains. Fl. largish, red, internally pale red, Feb. fr. 0.

* *Thibaudia loranthiflora*, Wall. Tavoy.—*T. acuminata*, Wall. Khassya Mountains.—*Gaylussacia serrata*, Lindl. Khassya Mountains.

ORDER CLXIII.—EPACRIDACEÆ,—Lindl. *Nat. Syst.* p. 222.

Shrubs or small trees, by Lindl. referred to 26 genera, containing more than 150 species, all natives of N. Holland and South Sea Islands. Properties unimportant.

* *Leucopogon malayanus*, Jack. ♂ Singapore, the only Indian species yet discovered.

ORDER CLXIV.—PRIMULACEÆ, Vent.—Lindl. *Nat. Syst.* p. 223.

THE PRIMROSE TRIBE.

Herbs, by Lindl. referred to 24 genera. Of these, *Spreng. syst.* enumerates about 65 species for Europe; 20 for N. America; 14 for S. America; 12 for Siberia; 10 for New Holland and the South Sea Islands; 6 for Caucasus; 5 for the Levant; 3 for N. Persia; 2 for Dahuria; 2 for China; 1 for Japan; 2 for Altai; 1 for N. Africa; 1 for Tauria; 1 for Arabia; 1 for Bourbon; 2 for Greenland; 1 for Patagonia; 1 for the Straits of Magellan. Five species have been found in S. Africa. (*Harvey.*); and about 47 in the Himalayas; viz. 8 of *Androsace*; 22 of *Primula*; 14 of *Lysimachia*; 1 of *Anagallis*; 1 of *Centunculus*; and 1 of *Samolus*. (*D. Don. Wall. Cat. Royle. ill.*) Properties of no importance.

PRIMULA, L. (*Spreng. syst.* 1, p. 504, No. 616.)

1. *denticulata*, Sm. (*exot. bot.* 2, t. 114;—*Roxb. fl. ind. ed. Carey*, 2,



- p. 17; Spreng. syst. 1, p. 574, c. p. p. 56.)* 4. Khassya Mountains. Nepal.—Fl. in H. C. G., C. S.
2. *prolifera*, Wall. (*Roxb. fl. ind. ed. Carey, 2, p. 18;—Spreng. syst. 1, p. 574.*) 4. Khassya Mountains. In H. C. G. fl. C. S.
- CYCLOAMEN, L. (*Spreng. syst. 1, p. 504, No. 613.*)
1. *persicum*, Mill. (*Spreng. syst. 1, p. 572;—B. M. 2, t. 44.*) 4. Greece. Has been introduced into H. C. G. Fl. ?
- ANDROSACE, L. (*Spreng. syst. 1, p. 504, No. 617.*)
1. *nana*, Horn. (*Loud. hort. brit. p. 56, No. 3756.*) ☉ Fl. small, white, C. S. Denmark.
- CENTUNCULUS, L. (*Spreng. syst. 1, p. 369, No. 457.*)
1. *minimus*, L. (*Spreng. syst. 1, p. 440;—E. B. 8, t. 531.*) ☉ Europe. Fl. very small, rose-coloured, Feb.
- ANAGALLIS, L. (*Spreng. syst. 1, p. 503, No. 610.*)
1. *arvensis*, L. (*Pers. syn. 1, p. 173;—E. B. 8, t. 529.—A. phœnicea, Lam.—Spreng. syst. 1, p. 570.*) ☉ Europe. Middle Asia. N. America. Fl. smallish, scarlet, C. S.; fr. March.
- β *coerulea*; (*A. arvensis, Roxb. fl. ind. ed. Carey, 2, p. 24; excl. syn.*) ☉ Kemaon, Nepal. Khassya Mountains. Fl. light blue, C. S.
2. *coerulea*, Schreb. (*Pers. syn. 1, p. 173;—Spreng. syst. 1, p. 570;—E. B. 26, t. 1823.*) ☉ Europe. Middle Asia. Fl. smallish, blue, Feb.

ORDER CLXV.—MYRSINACEÆ,—Lindl. Nat. Syst. p. 224.

Shrubs, rarely climbing, or trees, by Lindl. referred to 20 genera. Of these, Spreng. syst. and Alph. DC. enumerate 59 species for S. America, Mexico and the W. Indies; 4 for Japan; 5 for New Holland and the South Sea Islands; 6 for Bourbon and Mauritius; 3 for Madagascar; 1 for N. America; 1 for the Canaries; 1 for the Azores; and 1 for China. Harvey assigns 15 species to S. Africa. In the E. Indies have, according to Alph. DC., (including *Oncinus*) been discovered 102 species; viz. 2 of *Ægiceras*; 13 of *Myrsine*; (including *M. acuminata*, Royle.); 1 of *Badula*, (Ceylon); 54 of *Ardisia*; 13 of *Embelia*; 2 of *Choripetalum*; 2 of *Samara*, (Roxb.); 14 of *Mesa*; and 1 of *Oncinus*, (Lour.) To these must be added 6 species uncertain as to their genus. Most of them inhabit the Himalayas, Assam, the Khassya Mountains, the Circars, Neelgherries, and the Mountains of the ultra-gangetic Peninsula of India, and of Java. But few species have been found in the plains. Properties almost unknown.

BADULA, Juss.

1. *Barthesia*, Alph. DC. 5 Bourbon. Mauritius. Sept. 1839.



ÆGICERAS, Gärtn. ; Kön. ; R. Br. (*Spreng. syst.* 1, p. 509, No. 699 ;—*G. Don. in Mill. dict.* 4, p. 7, 8.)

1. *fragrans*, Kön. (*Ann. bot.* 1, p. 129 ;—*Spreng. syst.* 1, p. 641 ;—*G. Don. l. c.* p. 8 ; excl. syn. Rumph.—*Hook. bot. misc.* 3, p. 84, t. 21 ;—*J. Grah. Cat. B. pl.* p. 104.—*Æ. majus* Gärtn. fr. 1, p. 216, t. 46, f. 1, excl. syn. Rumph. ;—*Roxb. fl. ind.* 3, p. 130.—*Æ. obovatum*, *Bl. bijdr.* p. 693.—*Æ. floridum*, *Röm. and Sch. syst.* 4, p. 512.—*Rhizophora corniculata*, *L.*—*Rheed.* 6, t. 36.) इक्षरी *Hulsee.* 5 N. Holland. Moluccas. Java. Coasts of both Peninsulas of India. Soonderbuns. Fl. smallish, white, fragrant, H. S. Bees give it the preference to all other shrubs, in attaching their combs to it. (*Dr. Heddle's MSS. Report.*)

MYRSINE, L. R. Br. (*Spreng. syst.* 1, p. 510, No. 718 ;—*G. Don's Mill. dict.* 4, p. 9.)

1. *bifaria*, Wall. (*Roxb. fl. ind. ed. Carey*, 2, p. 296 ;—*Spreng. syst. c. p.* p. 68 ;—*G. Don's Mill. dict.* p. 9.—*M. potama*, *D. Don.*) 5 Nepal. Kemaon. Fl. small, white with a tinge of rose. Has not fl. here, though cultivated for more than fourteen years.
 2. *semiserrata*, Wall. (*Roxb. fl. ind. ed. Carey*, 2, p. 293 ;—*Spreng. syst. c. p.* p. 68 ;—*Wall. tent. fl. nep.* 1, p. 34, with a plate ;—*G. Don's Mill. dict.* p. 9.) 5 Smaller hills and highest mountains of Nepal. Fl. small, pale rose-coloured. Has not fl. here yet.
 3. *capitellata*, Wall. (*Roxb. fl. ind. ed. Carey*, 2, p. 295 ;—*tent. fl. nep.* t. 25 ;—*Spreng. syst. c. p.* p. 69 ;—*G. Don's Mill. dict.* p. 10 ;—*B. M.* 60, t. 3222.) 5 Mountains of Nepal. Fl. small, greenish, G. S. ; fr. 0. Wood hard, durable, heavy, and, like that of No. 2, esteemed by the hill people for various carpenter's work. Fruit eatable. (*Wall.*)
 4. *melanophleas*, R. Br. (*Spreng. syst.* 1, p. 663 ;—*G. Don's Mill. dict.* 4, p. 10.—*Sideroxylon melanophleum*, *L.* ; *Jacq. hort. vind.* 1, p. 89, t. 71 ;—*Roxb. H. B.* p. 17 ;—*Manglila melanophleas*, *Pers.*—*Chrysophyllum melanophleum*, *Lam.*—*Scleroxylon melanophleum*, *Willd.*—*Romeria melanophlea*, *Thunb. nov. gen. in Röm. arch.* 2, B. p. 1.) 5 C. G. H. Fl. small, greenish, Sept. and Oct. ; fr. 0.
- ARDISIA*, Swz. (*Spreng. syst.* 1, p. 510, No. 717 ;—*G. Don's Mill. dict.* 4, p. 13.)
1. *colorata*, Roxb. (*fl. ind.* 1, p. 581 ; *ed. Carey*, 2, p. 271.) 5 Khas-sya Mountains. Fl. small, red. In H. C. G. fl. and fr. whole year. (*Roxb.*) Here it has not ever flowered.
 2. *lanceolata*, Roxb. (*fl. ind.* 1, p. 583 ; *ed. Carey*, 2, p. 275 ;—*G. Don's Mill. dict.* 4, p. 14.) 5 Penang. Has not fl. here as yet.
 3. *paniculata*, Roxb. (*fl. ind.* 1, p. 580 ; *ed. Carey*, 2, p. 270 ;—*Spreng. syst.* 1, p. 661 ;—*G. Don's Mill. dict.* 4, p. 14 ;—*B. M.* 50, t. 2364 ;—*B. Reg.* 8, t. 638.) 5 Chittagong. Silhet. Fl. smallish, rose-coloured, April.



4. *flaribunda*, Wall. (*Roxb. fl. ind.*; ed. Carey, 2, p. 272;—*G. Don's Mill. dict.* 4, p. 15.) ♀ Nepal, or Sheopore. Fl. smallish, red. In H. C. G. fl.?
 5. *humilis*, Vahl. (*Spreng. syst.* 1, p. 662;—*Vahl. symb.* 3, p. 40;—*G. Don's Mill. dict.* 4, p. 15.—*A. solanacea*, *Roxb. Corom.* 1, t. 27; *fl. ind.* 1, p. 580; ed. Carey, 2, p. 269;—*B. M.* 40, t. 1677;—*J. Grah. Cat. B. pl.* p. 104;—*Spreng. syst.* 1, p. 661.—*A. littoralis*, *Andr.*;—*B. Repos.* 10, t. 630.—*A. umbellata*, *Roxb. fl. ind.* 1, p. 582; ed. Carey, 2, p. 273;—*Lodd. B. Cab.* 6, t. 531.) बम जमि *Bun-jam.* ♀ Ceylon. Both Peninsulas of India. Bengal, (Serampore.) Nepal. Sumatra. Java. Fl. smallish, pale rose-coloured, and fr. the whole year.
 6. *pedunculosa*, Wall. (*Roxb. fl. ind.*; ed. Carey, 2, p. 279;—*Spreng. syst. c. p.* p. 68.) ♀ Silhet. Fl. small, reddish. Has been in the garden here many years, without flowering.
 7. *nereifolia*, Wall. (*Cat.*—*G. Don's Mill. dict.* 4, p. 15.) ♀ Silhet. Has not fl. here.
 8. *nutans*, Alph. DC. (*G. Don's Mill. dict.* 4, p. 16.—*A. punctata*, *Bl. bijdr.* p. 687; not Lindl.) ♀ Java. Has been introduced in H. C. G. Fl.?
 9. *oxyantha*, Wall. (*Cat.*—*G. Don's Mill. dict.* 4, p. 16.) ♀ Khassya Mountains. Has been introduced into H. C. G. Fl.?
 10. *crenulata*, Vent. (*Choiz. t.* 5;—*G. Don's Mill. dict.* 4, p. 18;—*Spreng. syst.* 1, p. 662.) ♀ Portorico. Mexico. Has been introduced into H. C. G. Fl.?
 11. *odontophylla*, Wall. (*Cat.*;—*G. Don's Mill. dict.* 4, p. 18;—*B. Reg.* 22, t. 1892.) ♀ Khassya Mountains. Has been introduced into H. C. G. Fl.?
 12. *mollis*, Bl. (*bijdr.* p. 689;—*G. Don's Mill. dict.* 4, p. 18.) ♀ Java. Has been introduced into H. C. G. Fl.?
 13. *hymenandra*, Wall. (*Roxb. fl. ind.*; ed. Carey, 2, p. 282;—*Wall. pl. as. rar.* 2, t. 175;—*G. Don's Mill. dict.* 4, p. 19;—*Spreng. syst. c. p.* p. 68.) ♀ Khassya Mountains. Has been many years in the garden here, without flowering.
 14. *glandulosa*, *Roxb. (fl. ind.* 1, p. 584; ed. Carey, 2, p. 276;—*Spreng. syst. c. p.* p. 68;—*G. Don's Mill. dict.* 4, p. 19.) ♀ Silhet. Fl. small, white, R. S.
 15. *citrifolia*, Wall. } Similar to *A. umbellata*. In H. C. G. Fl.?
 16. *nana*, Colebr. }
 17. *pubigera*, Wall. ♀ Khassya Mountains.
 18. *glaucescens*, Wall. ♀ Khassya Mountains.
 19. *Candoliana*, Wall. ♀ Khassya Mountains.
- EMBELIA, JUSS. (*Spreng. syst. c. p.* p. 50;—*G. Don's Mill. dict.* 4, p. 20.)
1. *Ribes*. Burma. (*fl. ind.* p. 62, t. 23;—*Roxb. fl. ind.* 1, p. 586; ed. Carey, 2, p. 285;—*Spreng. syst. c. p.* p. 69;—*G. Don's Mill. dict.* 4, p. 20;—*J. Grah. Cat. B. pl.* p. 104.—*E. ribesoides*, *L.*; *fl. zeyl.*



No. 403.) L. 5 Ceylon. Both Peninsulas of India. Khassya Mountains. Fl. minute, greenish-yellowish. In H. C. G. fl. Feb. and March; fr. Aug. and Sept. (Roxb.) With the fruit of this plant the natives adulterate black pepper. (Roxb.)

2. *villosa*, Wall. (Roxb. fl. ind.; ed. Carey, 2, p. 289;—Spreng. syst. c. p. p. 69;—G. Don's Mill. dict. 4, p. 20.) 5 Rajmahl. Tavoy. Fl. small, whitish. In H. C. G. Fl. H. S.

3. *nutans*, Wall. (Roxb. fl. ind.; ed. Carey, 2, p. 290;—Spreng. syst. c. p. p. 69;—G. Don's Mill. dict. p. 21.) 5 Khassya Mountains. Fl. small, greenish-white, of an unpleasant odour, Dec. and Jan.

4. *robusta*, Roxb. (fl. ind. 1, p. 587; ed. Carey, 2, p. 287;—Spreng. syst. c. p. p. 69;—G. Don's Mill. dict. 4, p. 21.) 5 Rajmahl Hills. Fl. small, greenish-white, R. S.; fr. C. S.

CHORIPETALUM, Alph. DC. (G. Don's Mill. dict. 4, p. 21.)

1. *aurantiacum*, Alph. DC. (l. c.—Myrsine? *aurantiaca*, Wall.;—Roxb. fl. ind.; ed. Carey, 2, p. 300;—Spreng. syst. c. p. p. 69.) 5 Peninsula of India. Fl. small, orange, March.

? 2. *Reevesianum*, Wall. MSS. In H. C. G. Fl. ?

? CORYNOCARPUS, Forst. (Spreng. syst. 1, p. 519, No. 858;—G. Don's Mill. dict. 4, p. 23.)

1. *lævigatus*, Forst. (Spreng. syst. 1, p. 781;—G. Don. l. c.) 5 New Zealand. Has been introduced into H. C. G. Fl. ?

MÆSA, Forsk. (G. Don's Mill. dict. 4, p. 21.)

1. *ramentacea*, Wall. (Roxb. fl. ind.; ed. Carey, 2, p. 230. annot.;—G. Don's Mill. dict. 4, p. 22.—*Bæobotrys ramentacea*, Roxb. fl. ind. 1, p. 558; ed. Carey, 2, p. 231;—Spreng. syst. c. p. p. 84.) L. 5 Khassya Mountains. Burma. Fl. small, greenish-yellow, March and April; fr. Oct. and Nov.

2. *nemoralis*, Wall. (G. Don's Mill. dict. 4, p. 22.—*Bæobotrys nemoralis*, Forst. nov. gen. p. 22;—Vahl. symb. 1, p. 19;—Roxb. fl. ind. 1, p. 559; ed. Carey, 2, p. 232;—Spreng. syst. 1, p. 760.) L. 5 Silhet. Fl. small, white, Feb. and March; fr. May.

3. *lanceolata*, (M. indica, Wall.—G. Don's Mill. dict. 4, p. 22.—*Bæobotrys indica*, Roxb. fl. ind. 1, p. 557; ed. Carey, 2, p. 230;—Spreng. syst. 1, p. 760, c. p. p. 84;—B. M. 46, t. 2052.—*B. lanceolata*, Vahl. symb. 1, p. 19, t. 6;—Spreng. syst. 1, p. 760.—*Mæsa*, Forsk. fl. ægypt. arab. p. 22, t. 11.) L. 5 Arabia. Wynaad. Martaban. Taong Dong. Chittagong. Khassya Mountains. Aseam. Mussooree. Nepal. Fl. small, white, March and April; fr. May.

4. *argentea*, Wall. (G. Don's Mill. dict. 4, p. 22.—*Bæobotrys argentea*, Roxb. fl. ind.; ed. Carey, 2, p. 233;—Spreng. syst. c. p. p. 84.) 5 Mussooree. Nepal. Fl. small, white. In H. C. G. Fl. ?

5. *macrophylla*, Wall. (G. Don's Mill. dict. 4, p. 22.—*Bæobotrys macrophylla*, Roxb. fl. ind.; ed. Carey, 2, p. 234;—Spreng. syst. c. p. p. 84.) 5 Nepal. Fl. small, white, March and April.



JACQUINIA, L.

1. *ruscifolia*, Jacq. (*Amer. p.* 54.) 5 S. America.

CLAVIJA, Ruiz. and Pav.

1. *ornata*, D. Don. (*B. Reg.* 21, t. 1764.) 5 Caraccas. March 1840.

* *Ægiceras ferreum*, Blume. Rumph. 3, t. 79. 5 Java.—*Wallenia laurifolia*, Swz. 5 Jamaica.—*W. angulata*, Jacq. schönb. 1, t. 30. 5 Cultivated in the gardens of the Mauritius.—*Weigeltia myrianthos*, Alph. DC. 5 Surinam.—*Conomorpha oblongifolia*, Alph. DC. 5 Brazil.—*C. laxiflora*, Alph. DC. 5 Banks of the Amazon.—*Cybianthus pendulinus*, Mart. 5 Brazil.—*C. cuneifolius*, Mart. 5 Brazil.—*Myrsine madagascariensis*, Alph. DC. 5 Madagascar.—*M. Rapanea*, R. Br. 5 Guiana.—*M. coriacea*, R. Br. 5 Jamaica.—*M. Trinitatis*, Alph. DC. 5 Trinidad.—*Badula micrantha*, Alph. DC. 5 Bourbon. Mauritius.—*B. Sieberii*, Alph. DC. 5 Mauritius.—*B. crassa*, Alph. DC. 5 Bourbon. Mauritius.—*Oncostemum Commersonianum*, Ad. Juss. 5 Madagascar.—*Ardisia divergens*, Roxb. 5 Penang.—*A. amherstiana*, Alph. DC. 5 Amherst.—*Embelia canescens*, Jack. 5 —.—*Choripetalum undulatum*, Alph. DC. 5 — Nepal.—*Jacquinia aurantiaca*, Ait. B. M. 40, t. 1639. 5 Sandwich Islands.—*J. armillaris*, Jacq. 5 Jamaica.—*J. pubescens*, H. B. and Kth. 5 Banks of the Amazon.—*Theophrasta Jussieui*, Lindl. 5 St. Domingo.

ORDER CLXVI.—SAPOTACEÆ, Endl.—Lindl. Nat. Syst. p. 225.

THE SAPPODILLA TRIBE.

Trees and shrubs, referred by Lindl. (excluding *Hunteria* and *Acosta*, and adding *Isonandra*, Wight.) to 14 genera. Of these, Spreng. syst. enumerates 38 species for S. America, Mexico, and the W. Indies; 3 for Mauritius, (including 2 from Wall. Cat.); 6 from New Holland and the Friendly Islands; 4 from N. America; 1 from Arabia; 1 from N. Africa; and 1 from Guinea. In S. Africa, have been found 10 species, (*Harvey*.); and in the E. Indies 22; viz. 2 of *Chrysophyllum*; 5 of *Mimusops*; 7 of *Bassia*; 6 of *Sideroxylon*; and 2 of *Isonandra*;—nearly all natives of Nepal, Assam, the Khasya Mountains, the Circars, the Concans, the Mountains of India east of the Ganges, Ceylon, the Moluccas, and Java. Properties under the species.

ACHRAS, L. (*Spreng. syst.* 2, p. 12, No. 1316;—*G. Don's Mill. dict.* 4, p. 33.)

1. *Sapota*, L. (*Spreng. syst.* 2, p. 132;—*G. Don. l. c.*;—*Roxb. fl. ind.* 2, p. 181;—*J. Grah. Cat. B. pl.* p. 106;—*B. M.* 58, t. 3111 and 3112.)
Common Sapota. Bully-tree. L. 5 W. Indies. Abundantly cultivated,

throughout all the hot parts of South America for the sake of its fruit. Not uncommon in our gardens. Fl. smallish, whitish, H. S.; fr. R. S. *Timber* considered of great service in the making of shingles for corn houses. *Bark* astringent, and commonly known by the name of *Cortex jamaicensis*, according to Browne, being frequently administered to the Negroes in lieu of Jesuit's Bark, and found to answer all the purposes of that medicine. From every part of the tree a tenacious, viscid, white juice issues. *Fruit* in appearance like an old, decayed potato, yet one of the most luscious in the W. Indies; but so abounding in an acrid milk, that it cannot be eaten until it is completely ripe; or, according to French authors, until it almost begins to be putrid. *Seeds* aperient, diuretic. (*Hook. l. c.*)

α. Fruit elliptic or ovate. (*Jacq. am. p. 57, t. 41.*—*Browne, jam. p. 200, t. 19, f. 3.*)

β. Fruit roundish, somewhat depressed. (*Jacq. am. l. c. t. 41. β.* *Achras Zapotilla, Browne, jam. p. 200.*—*Sloane, jam. 2, p. 171, t. 230;*—*ibid. p. 172, t. 169, f. 2.*)

LUCUMA, Juss. (*Spreng. syst. 1, p. 510, No. 723;*—*G. Don's Mill. dict. 4, p. 33.*)

1. *mammosa*, Juss. (*Gen. pl. p. 152;*—*Gärtn. fl. fr. 3, p. 129;*—*Spreng. syst. 1, p. 667;* *G. Don. l. c.*—*Achras mammosa, L.; Roxb. H. B. p. 25.*—*A. Sapota major, Jacq. am. 56, t. 182, f. 19;* *ed. pict. p. 32, t. 59.*)—*Sapota mammosa, Mill. dict. No. 2;*—*Gärtn. fr. 2, p. 104.*—*Sloane, jam. 2, p. 124, t. 218.*) L. 5 S. America. W. Indies.—*Common Mammee Sapota.* Fl. small, whitish. *Fruit, (American Marmalade,)* large, oval or top-shaped, covered with a brownish rough skin, under which is a soft pulp, of a russet colour, very luscious, which is called natural marmalade, from its likeness to marmalade of quinces. Was introduced from China into H. C. G. in 1807, but had not fl. up to 1814.

CHRYSOPHYLLUM, L. (*Spreng. syst. 1, p. 510, No. 722;*—*G. Don's Mill. dict. 4, p. 31.*)

1. *Cainito*, L. (*Spreng. syst. 1, p. 666;*—*G. Don. l. c.;*—*Jacq. am. p. 51, t. 37, f. 1;* *ed. pict. p. 30, t. 51;*—*Lam. ill. t. 120;*—*Gärtn. fr. 3, p. 120, t. 201;*—*B. M. 58, t. 3072;*—*Roxb. H. B. p. 17;*—*Browne, jam. p. 171, t. 14, f. 2;*—*Sloane, jam. 2, p. 170, t. 229.*) *Star-apple.* L. 5 W. Indies. S. America. Fl. small, yellowish-white, H. S.; fr. R. S. The Star-apple is a well known fruit in the W. Indies, where, however, it appears to be more esteemed by the natives, than it is by Europeans. (*Hook.*)
2. *macrophyllum*, G. Don. ? (*Mill. dict. 4, p. 32.*) L. 5 Sierra Leona. In H. C. G. Fl. ?
3. *Roxburghii*, G. Don. (*Mill. dict. 4, p. 33.*—*C. acuminatum, Roxb. fl. ind. 1, p. 599;* *ed. Carey, 2, p. 345;*—*J. Grah. Cat. B. pl. p. 105;* not, *Lam.*) 5 Khassya Mountains. Assam. Fl. minute, pale yellow.



April and May; fr. Oct. *Fruit* greedily eaten by the natives, though the pulp is nearly insipid, and uncommonly clammy, adhering to the lips and knife with great tenacity. (*Roxb.*)

4. *oblongum*, Wall. 5 Khassya Hills, 1828.

IMBRICARIA, Commers. (*Juss. gen. pl. p. 152*;—*G. Don's Mill. dict. 4, p. 35.*)

1. *Commersonii*, G. Don. (*l. c.*—*Mimusops Imbricaria*, Willd.;—*Spreng. syst. 2, p. 208*;—*Bl. bijdr. p. 675.*) 5 Bourbon. Mauritius. Java. In gardens. Has been cultivated here for many years, without flowering.

MIMUSOPS, L. (*Spreng. syst. 2, p. 170, No. 1419*;—*G. Don's Mill. dict. 4, p. 34.*)

1. *Elengi*, L. (*Spreng. syst. 2, p. 208*;—*G. Don. l. c.*;—*Gärtn. fr. 1, p. 198, t. 42, f. 4*;—*Roxb. Corom. 1, t. 14; fl. ind. 2, p. 236*;—*J. Grah. Cat. B. pl. p. 106*;—*Rheed. 1, t. 20*;—*Rumph. 2, t. 63.*) बकुल *Bukul*. 5 Moluccas. Ceylon. Both Peninsulas of India, Bengal, (Serampore.) Silhet. FL. middle-sized, white, fragrant, H. S.; fr. R. S. A very ornamental tree, on account of its fragrant flowers generally found in the gardens of the Natives, and round Mussulman Mausoleums.

2. *Kauki*, L. (*Spreng. syst. 2, p. 208*;—*G. Don's Mill. dict. 4, p. 35*;—*Roxb. fl. ind. 2, p. 238*;—*J. Grah. Cat. B. pl. p. 106*;—*R. Br. pr. 1, p. 531*.—*Mimusops dissectus*, *Spreng. l. c.*;—*B. M. 59, t. 3157, excl. syn.*—*Mimusops hexandra*, *Roxb.*—*Achras dissecta*, *Forst.*—*A. Balata*, *Aubl*;—*Rheed. 4, t. 25*;—*Rumph. 3, t. 8.*) 5 New Holland. Moluccas. Malay Islands. Malabar. Gour. FL. middle-sized, yellowish white, faintly tinged with rose, H. S. An unctuous fluid exudes from this tree. *Fruit* esculent, agreeably acid, on which account the tree is extensively cultivated in China, Manila, and Malabar. The leaves pounded and mixed with the roots of *Curcuma* and with *Ginger*, are used as cataplasms for tumours. (*Hook.*)

3. *hexandrus*, *Roxb.* (*Corom. 1, t. 15; fl. ind. 2, p. 238*;—*Spreng. syst. 2, p. 208*;—*G. Don's Mill. dict. 4, p. 35*;—*J. Grah. Cat. B. pl. p. 106.*) 5 Mountainous parts of the Circars. Malabar Hill. Bombay. FL. smallish, whitish, H. S.; fr. R. S. Wood much used in Guzerat for a variety of purposes, such as making sugar-mill-beams, well-frames, and other things where toughness is required. *Fruit* eatable. (*Dr. Gibson.*)

4. *Erythroxylon*, Bojer. 5 Mauritius. Bourbon.

BASSIA, Kön. (*Spreng. syst. 2, p. 442, No. 1746*;—*G. Don's Mill. dict. 4, p. 35.*)

1. *longifolia*, L. (*Spreng. syst. 2, p. 447*;—*G. Don. l. c.*;—*Gärtn. fr. 2, p. 104, t. 104, f. 2*;—*Roxb. fl. ind. 2, p. 523.*) 5 Southern part of the Coast of Coromandel. Malabar. Ceylon. FL. middle-sized, whitish, May; fr. Aug. and Sept. Wood as hard and durable as teak, but not so easily worked, nor is it procurable of such length. The leaves are



boiled in water, and given as a medicine in several diseases. The *bark* is a cure for the itch. The *flowers*, which fall in May, are gathered by the common people, dried in the sun, roasted, and eaten as food. They are also bruised and boiled to a jelly, and made into small balls, which are sold, or exchanged for fish, rice, &c. The *milk* of the *green fruit*, and of the tender bark is given as a medicine. The *oil* pressed from the *fruit* is used for lamps. It is the principal ingredient in making country soap, and to the common people a substitute for ghee and cocoa-nut in their curries and other dishes. Cakes are made of it, and many of the poor get their livelihood by selling these sweet oil-cakes. The cake, left after the oil is expressed, is used for washing the head, and carried as a small article of trade to those countries where the tree is not to be found. (*Roxb.*)

2. *latifolia*, Roxb. (*Ceram.* 1, *t.* 19; *fl. ind.* 2, *p.* 526;—*Spreng. syst.* 2, *p.* 447, excl. syn. Forst.;—*G. Don's Mill. dict.* 4, *p.* 36;—*J. Griseb. Cat. B. pl.* *p.* 107.) बहुला *Muhooa*. *b* Mountainous parts of the Circars. Bengal. Malabar Hill. Bombay. Throughout the Concans. Guzerat. Malwa. Fl. middle-sized, white, with a tinge of green and cream-colour, March and April; fr. July and Aug. *Wood* hard, very strong, and proper for naves of wheel-carriages. *Flowers* eaten raw by the natives. An ardent spirit is distilled from them by the hill-people. The *seeds* yield by expression a large quantity of concrete oil, which is used to adulterate ghee, for frying cakes, and by the poorer people to burn. There is frequently to be found a drop of whitish, soft, tasteless resin on the apices of the flowers, before they open. (*Roxb.*)
3. *butyracea*, Roxb. (*As. Res.* 8, *p.* 477;—*fl. ind.* 2, *p.* 527;—*Spreng. syst. c. p.* *p.* 189;—*G. Don's Mill. dict.* 4, *p.* 36;—*D. Don. pr. fl. nep.* *p.* 146.) *b* Almora Hills. Nepal. Fl. smallish, white. Has not fl. here as yet. This tree produces a vegetable butter. The *Kernels* are bruised into the consistence of cream, and then put into a cloth bag, with a moderate weight laid upon them, and left to stand till the oil or fat is expressed. This becomes immediately of the consistence of hog's lard, and is of a delicate white colour. It is much esteemed in rheumatism and contractions of the limbs. It is also used by the natives of rank perfumed as an unction. The pulp of the *fruit* is eaten by some. (*Roxb.*)

SIDEROXYLON, L. (*Spreng. syst.* 1, *p.* 510, No. 721;—*G. Don's Mill. dict.* *p.* 28.)

1. *inermis*, L. (*Spreng. syst.* 1, *p.* 666;—*G. Don. l. c.*;—*Mill. ill. t.* 299.—*S. Argan, Lam. ill. No.* 2455, *t.* 120, *f.* 1.—*Romeria inermis, Thunb. in Röm. arch.* 2, *p.* 2.) *b* C. G. H. Fl. small, white. Has not fl. here, though it has been in the garden many years.
2. *regium*, Wall. (*Cat.*) L. *b* Pegu. Has been introduced into H. C. G. Fl. ?



Achras sessiliflora, Poir. 5 Mauritius.—*Lucuma Bonplandii*, Humb. L. 5 Havannah.—*L. campechianum*, H. B. and Kth. 5 Mexico.—*L. salicifolium*, H. B. and Kth. 5 Mexico.—*Chrysophyllum aquaticum*, H. B. and Kth. 5 Inundated places near the Orinoco.—*C. monopyrenum*, Swz; B. M. 61, t. 3303. 5 Jamaica.—*C. acuminatum*, Lam. 5 Cayenne.—*C. bicolor*, Poir. 5 Portorico.—*C. argenteum*, Jacq. 5 Martinique.—*C. sessiliflorum*, Poir. 5 Cayenne.—*C. granatense*, Spreng. 5 New Granada.—*Mimusops obtusifolius*, Lam. 5 Mauritius.—*Bassia sericea*, Bl. 5 Java.—*B. cuneata*, Bl. L. 5 Java.—*B. Parkii*, G. Don. 5 African Butter-tree, Bambara.—*Bumelia pallida*, Swz. 5 Fields in Jamaica.—*B. nervosa*, Vahl. 5 Cayenne.—*B. celastrina*, H. B. and Kth. 5 Mexico.—*B. buxifolia*, Willd. 5 Cumana.—*B. ferox*, Cham. and Schlecht. 5 Mexico.—*Hornschuchia Bryotrophes*, Nees, Brazil.—*H. Myrtilus*, Nees, Brazil.—*Sideroxylon cinereum*, Lam. 5 Mauritius.—*S. tomentosum*, Roxb. Corom. 1, t. 28. 5 The Ghauts.—*S. Wallichianum*, G. Don. (*S. rugosum*, Wall. Cat.; not Röm and Sch.) 5 Penang.—*Omphalocarpus procerus*, Beauv. L. 5 Guinea.—*Isonandra lanceolata*, Wight, icon. 2, t. 359. 5 Peninsula of India?—*I. villosa*, Wight, icon. 2, t. 360. 5 Peninsula of India?

ORDER CLXVII.—DIOSPYRACEÆ.—EBENACEÆ, Vent.—Lindl.
Nat. Syst. p. 226.

THE EBONY TRIBE.

Trees or shrubs, by Lindl. referred (adding *Euclea*) to 8 genera. Of these, Spreng. syst. assigns 11 species to New Holland and the Friendly Islands; 7 to S. America, Mexico, and the W. Indies; 6 to the Mascarenhas; 2 to N. America, and 1 to N. Africa, and S. Europe. *Diospyros vaccinoïdes*, Hook. belongs to China. In S. Africa have been found 30 species. (*Harvey*.) and in the E. Indies, according to Spreng., Roxb. and Wall. Cat., 42 species of *Diospyros*; and 2 of *Maba*. They are all discovered in the islands of the Indian Archipelago and in both Peninsulas of India; *Diospyros* extending from the Khassya Mountains to the Himalayas.

“Remarkable only for the hardness and blackness of the wood of some species, and for the eatable quality of the fruit. The former is well known under the name of Ebony and Ironwood; the latter is occasionally introduced from China as a dry sweetmeat. It is noted for extreme acerbity before arriving at maturity.” (*Lindl.*)

DIOSPYROS, L. (*Spreng. syst.* 2, p. 170, No. 1412; *G. Don's Mill. dict.* 4, p. 38.)

1. *tomentosa*, Roxb. (*fl. ind.* 2, p. 532;—*G. Don. l. c.*;—*Wight. icon.* 1, t. 182, 83.) তমাল *Tumal*. L. 5 N. of Bengal, extending to Kheree



- jungle. Fl. small, whitish, April and March; fr. O. Wood hard, black, heavy. (*Roxb.*)
2. *Chloroxylon*, *Roxb.* (*Corom.* 1, t. 49; *fl. ind.* 2, p. 538;—*Spreng. syst.* 2, p. 204;—*G. Don's Mill. dict.* 4, p. 38.) 5 Coast of Coromandel, among the Circars. Fl. small, white. In H. C. G. fl. March and April. (*Roxb.*)
3. *cordifolia*, *Roxb.* (*Corom.* 1, t. 50; *fl. ind.* 2, p. 538;—*Spreng. syst.* 2, p. 204;—*G. Don's Mill. dict.* 4, p. 38.) বন গাব *Bun-gab.* 5 Peninsula of India, Bengal. (Serampore. Monghir.) Fl. small, greenish-white, March and April; fr. R. S.
4. *sylvatica*, *Roxb.* (*Corom.* 1, t. 47; *fl. ind.* 2, p. 537;—*Spreng. syst.* 2, p. 203;—*G. Don's Mill. dict.* 4, p. 40.) 5 Circars. Introduced into H. C. G. in 1803, but had not fl. up to 1814.
5. *reticulata*, *Willd.* (*Spreng. syst.* 2, p. 203;—*G. Don's Mill. dict.* 4, p. 40.) 5 Mauritius. Has not fl. here, though cultivated for many years.
6. *Ebenaster*, *Retz.* (*Spreng. syst.* 2, p. 203;—*G. Don's Mill. dict.* 4, p. 40.—*D. Ebumum, L. suppl.* p. 440;—*Wight. icon.* 1, t. 188;—*J. Grah. Cat. B. pl.* p. 108.—*Hebenaster, Rumph.* 3, t. 6. ?) 5 Ceylon. Fl. small, greenish, March, April and May; fr. R. S. This is the Ebony tree of Ceylon, said to produce the true Ebony wood of commerce, which however, seems to be the product of several species.
7. *Sapota*, *Roxb.* (*fl. ind.* 2, p. 535;—*G. Don's Mill. dict.* 4, p. 40;—*J. Grah. Cat. B. pl.* p. 108.—*Sapotte nigra, Sonner. et. nov. Guin.* p. 45, t. 14, 15, 16.) 5 Mauritius. Fl. smallish, yellowish, March and April; fr. R. S.
8. *ramiflora*, *Roxb.* (*fl. ind.* 2, p. 535;—*G. Don's Mill. dict.* 4, p. 40; *Wight. icon.* 1, t. 189.) L. 5 Tipperah. Fl. small, white, March and April; fr. Jan. and Feb. Wood strong, very hard. Pulp of the fruit edible. (*Roxb.*)
9. *Melanoxylon*, *Roxb.* (*Corom.* 1, t. 46; *fl. ind.* 2, p. 530;—*Spreng. syst.* 2, p. 203;—*G. Don's Mill. dict.* 4, p. 40.) L. 5 Ceylon, Malabar, Coromandel, Orissa, &c. Coromandel Ebony tree.—In H. C. G. fl. April and May; fr. Aug., Sept. and Oct. (*Roxb.*) Centre of large trees black, constituting the *Ebony*, surrounded with white and soft wood, which is soon destroyed by time and insects. Ripe fruit astringent, not very palatable, eaten by the natives. Bark astringent, used in the form of powder and mixed with black pepper against dysentery by the natives. (*Roxb.*)
10. *montana*, *Roxb.* (*Corom.* 1, t. 48; *fl. ind.* 2, p. 538;—*Spreng. syst.* 2, p. 203;—*G. Don's Mill. dict.* 4, p. 40;—*J. Grah. Cat. B. pl.* p. 107.) 5 Circar Mountains. Hills eastward of Panwell, extending northwards to Ruenka Lake, near Nahu. Fl. small, green, delightfully fragrant, March and April; fr. O.



11. *discolor*, Willd. (*Spec.* 4, p. 1108, excl. syn.;—*Pers. syn.* 2, p. 624.—D. Mabola, *Roxb. H. B.* p. 40;—*B. Reg.* 14, t. 1139;—*G. Don's Mill. dict.* 4, p. 40.—*Embryopteris discolor*, *G. Don. o. c.* p. 41.—*Cavanillea philippensis*, *Desrouss. in encycl. meth. suppl.* 3, p. 663, t. 454.) 5 Philippine Islands. Flowers middle-sized, yellowish-white, March and April; fr. R. S.
12. *stricta*, Roxb. (*fl. ind.* 2, p. 539;—*G. Don's Mill. dict.* 4, p. 40.) 5 Tipperah. Lately introduced. In H. C. G. fl. March and April. (*Roxb.*)
13. *vaccinioides*, Hook. (*exot. fl.* t. 139;—*Wall. Cat.*—*Vaccinium fragrans*, *Wall.*) 5 China. Penang. Singapore. Fl. small, white. In H. C. G. Fl. ?
14. *Embryopteris*, Pers. (*Spreng. syst.* 2, p. 208, excl. syn. Gärtn. Lam. and Willd.;—*B. Reg.* 6, t. 499.—*D. glutinosa*, Kōn.—*Roxb. fl. ind.* 2, p. 533;—*J. Grah. Cat. B. pl.* p. 107.—*Embryopteris glutinifera*, *Roxb. Corom.* 1, t. 70;—*G. Don's Mill. dict.* 4, p. 41, excl. syn. Lam.—*Rheed.* 3, t. 41.) 5 *Gab.* 5 Peninsula of India. Bengal, (Serampore.) Silhet. Assam. Hurdwar. Deyra-Dhoon. Fl. smallish, white, March and April; fr. R. S. Wood of an indifferent quality, and not much used. Ripe fruit very astringent, rather unpalatable, eaten by the natives. Its viscid mucus is used for paying the bottoms of boats, and in Malabar, according to Rheedee, for book-binding, both on account of its adhesiveness and its being obnoxious to worms. The unripe fruit contains a large proportion of tannin. An infusion is employed to steep fishing nets in, that they may be more durable. (*Roxb.*)
15. *racemosa*, Roxb. (*fl. ind.* 2, p. 536;—*Wight. icon.* 2, t. 415.—*Embryopteris racemosa*, *G. Don's Mill. dict.* 4, p. 41.) 5 Khassya Mountains. Tipperah. In H. C. G. fl. March and April. (*Roxb.*)
16. *Kaki*, L. (*Spreng. syst.* 2, p. 204;—*Roxb. fl. ind.* 2, p. 527;—*Lour.*; *J. Grah. Cat. B. pl.* p. 107;—*Wight. icon.* 2, t. 416.—*Embryopteris Kaki*, *G. Don's Mill. dict.* 4, p. 41.—*Diospyros chinensis*, *Bl. cat. hort. brit.* p. 110.—*Kaki*, *Kämpf. amon.* t. 106.) L. 5 Japan. China. Cochin China. Nepal. Cultivated in gardens. In H. C. G. fl. Feb. and March; fr. R. S. (*Roxb.*) Pulp of the fruit edible, tolerably pleasant, though by no means equal to a good apple. (*Roxb.*) Fruit preserved in the same manner as the fig, by sprinkling meal or sugar over them.
17. *nigricans*, Wall. (*Cat.*) Silhet. In H. C. G. Fl.
18. *grandifolia*, Wall. 5 Mauritius.
19. *heterophylla*, Wall. 5 Burma.
20. *calycina*, Wall. 5 Khassya Hills.
21. *grata*, Wall. 5 Khassya Hills.
- ROYENA, L. (*Spreng. syst.* 2, p. 282, No. 1686; *G. Don's Mill. dict.* 4, p. 42.)
1. *villosa*, L. (*Spreng. syst.* 2, p. 360;—*G. Don's Mill. dict.* l. c.—R.



scabra, Burm. pr. 13.) 5 C. G. H. Has been cultivated here for many years, without flowering.
 MABA, Forst. (Spreng. syst. 2, p. 11, No. 1303;—G. Don's Mill. dict. 4, p. 43.)

1. *buxifolia*, Pers. (Spreng. syst. 2, p. 125;—G. Don. l. c.—Ferreola *buxifolia*, Roxb. Corom. 1, t. 45;—fl. ind. 3, p. 790.) 5 Circular Mountains. Fl. small, yellowish, H. S.; fr. C. S. Wood dark-coloured, remarkably hard, and durable. Berries universally eaten, when ripe of a pleasant taste. (Roxb.)

* *Diospyros salicifolia*, Willd. 5 S. America.—*D. macrophylla*, Bl. 5 Java.—*D. obtusifolia*, Willd. L. 5 Mexico.—*D. serrata*, Buch. L. 5 Nepal.—*D. cerasifolia*, D. Don. 5 Nepal.—*D. frutescens*, Bl. 5 Java.—*D. obovata*, Jacq. 5 Jamaica.—*D. bracteata*, Roxb. 5 Doab.—*Pouteria guianensis*, Aubl. 5 Gujana.

SUB-ORDER : STYRACEÆ, Rich.—Lindl. Nat. Syst. p. 227.

A very unsettled order, requiring a complete re-examination.—Trees or shrubs, (excluding *Hopea*, L.) by Lindl. referred to 8 or 9 genera. Of these, Spreng. syst. enumerates 24 species for S. America, Mexico and the W. Indies; 4 for N. America; 1 for Asia Minor and S. Europe; and 1 for China. In the E. Indies have been found according to Spreng., Roxb. and Wall. Cat., 27 species of *Symplocos*; 5 of *Styrax*; and 1 of *Decadia*. (Lour.) all natives of the mountains of India. Only one has been discovered in the plains of Bengal. *Styrax Benzoin* is a native of Sumatra, and *Decadia* of Cochin China. Properties unimportant.

SYMPLOCOS, L. (Spreng. syst. 3, p. 331, No. 2626;—G. Don's Mill. dict. 4, p. 1.)

1. *ferruginea*, Roxb. (fl. ind. 2, p. 542;—G. Don's Mill. dict. 4, p. 2.) 5 Khassya Mountains. Fl. middle-sized, yellow, Sept. and Oct.
2. *spicata*, Roxb. (fl. ind. 2, p. 541;—G. Don's Mill. dict. 4, p. 2.) 5 Khassya Mountains. Assam. Fl. small, yellow, R. S.; fr. C. S. Nuts hard, about the size of a pea, strung like beads, by the natives and hung round the necks of their children to prevent evil. (Roxb.)
3. *racemosa*, Roxb. (fl. ind. 2, p. 539;—G. Don's Mill. dict. 4, p. 2.) लोथ Lodh. 5 Burdwan. Midnapore. Nepal. Kemaon. Fl. small, lively yellow, Dec.; fr. May. Bark much in request as a mordant in dyeing red with *Rubia cordifolia*, L. The red powder (*Abeer*) used by the natives during the *Hoollee* holidays is made of the bark of this tree. (Roxb.)
4. *pulcherrima*, Wall. 5 Nepal.



STYRAX, L. (*Spreng. syst.* 2, p. 274, No. 1539;—*G. Don's Mill. dict.* 4, p. 4.)

1. *serrulatus*, Roxb. (*fl. ind.* 2, p. 415;—*G. Don. o. c. p.* 5.) 5 Chittagong. Fl. largish. In H. C. G. fl. H. S.; fr. R. S. (*Roxb.*)

2. *Benzoin*, Dryand. (*philos. trans.* 77, p. 308, t. 12;—*Spreng. syst.* 2, p. 285;—*G. Don's Mill. dict.* 4, p. 6;—*Roxb. fl. ind.* 2, p. 416;—*Bl. bijdr.* p. 671.) 5 Sumatra. Introduced into H. C. G. in 1812. Fl. ? This tree produces the gum-resin called Benzoin, of which the only preparation is *flores benzoës*, a medicine now nearly out of use.

* *Symplocos Alstonia*, L'Herit. 5 New Granada.—*S. coccinea*, H. and B. 5 Mexico.—*S. serrulata*, H. and B. 5 New Granada.—*S. mucronata*, H. and B. 5 Mexico.—*S. martinicensis*, L. 5 Martinique.—*S. Cipoanima*, L'Herit. 5 Guiana.—*S. sinica*, Ker.; B. Reg. 9, t. 710. 5 China.—*Styrax floridus*, Pohl. 5 Brazil.—*S. ferrugineus*, Pohl. 5 Brazil.—*S. erymophyllus*, Pohl. 5 Rio Janeiro.—*S. acuminatus*, Pohl. 5 Rio Janeiro.—*S. reticulatus*, Mart. 5 Brazil.—*S. aureus*, Mart. 5 Brazil.—*Paralea guianensis*, Aubl. L. 5 Guiana.—*Diclidanthera penduliflora*, Mart. 5 Brazil.—*D. laurifolia*, Mart. 5 Rio Janeiro.

ORDER CLXVIII.—ILICIACEÆ, AQUIFOLIACEÆ, DC.—Lindl. Nat. Syst. p. 228.

THE HOLLY TRIBE.

Trees or shrubs, by Lindl. referred to 14 genera. Of these, DC. pr. and Spreng. syst. enumerate 28 for S. America, Mexico, and the W. Indies; 20 for N. America; 9 for Japan; 2 for Europe; 2 for Madagascar; 1 for Mauritius; 1 for the Canaries; 1 for Madeira; 1 for China; 1 for the Straits of Magellan; 1 for N. Africa; and about 10 for S. Africa. In the East Indies have, according to Spreng. and Wall. Cat. been discovered about 14 species of *Ilex* or *Prinos*; and 2 of *Monetia*. With the exception of *Monetia tetraconiha*, an inhabitant of the plains of India, all the Indian forms of this order have been found in the Himalayas, the Khassya Mountains, the Neelgherries, and the mountains about Penang, Singapore and Moulmein. Properties unimportant.

CASSINE, L. (*Spreng. syst.* 1, p. 533, No. 1110;—*G. Don's Mill. dict.* 2, p. 12;—DC. pr. 2, p. 11.)

1. *barbara*, L. (*Spreng. syst.* 1, p. 939;—*G. Don. o. c. p.* 13;—DC. o. c. p. 12.) 5 C. B. S. Introduced in 1840.

ILEX, L. (DC. pr. 2, p. 13;—*G. Don's Mill. dict.* 2, p. 16.)

1. *excelsa*, Wall. (Cat.—*Cassine excelsa*, Wall.;—*Roxb. fl. ind.*; ed. Carey, 2, p. 376;—*Spreng. syst. c. p.* p. 123; *G. Don's Mill. dict.* 2, p. 13.)

5 Nepal. Kemaon. Has been introduced into H. C. G. Fl. ?



ASTEROGYNE, Wall.

1. *coriaria*, Wall. (Casearia? pentandra, Wall. MSS.)

? *MONETIA*, L'Herit. (*Spreng. syst.* 1, p. 369, No. 465;—*G. Don's Mill. dict.* 4, p. 105;—*Harvey, gen.* p. 411.)

1. *tetracantha*, G. Don. (*l. c.*—*M. barlerioides*, L'Herit. *stirp. nov.* t. 1;—*Spreng. syst.* 1, p. 442;—*Roxb. fl. ind.* 3, p. 765;—*Hareey, l. c.*—*Azima tetracantha*, Lam.) त्रिकोण जाली *Trikanta-jalee*. 5 S. Africa. Peninsula of India. Bengal, (Serampore.) Fl. small, yellow, and fr. the whole year.

* *Myginda microphylla*, DC. 5 St. Domingo.—*M. rotundata*, Lam. 5 the Antilles.—*M. uragoga*, Jacq. 5 Carthagera.—*M. ilicifolia*, Lam. 5 St. Domingo.—*M. myrsinoides*, H. B. and Kth. 5 Hot places of Peru.—*M. pallens*, Sm. 5 Antigua.—*M. latifolia*, Swz. 5 W. Indies.—*Ilex dipyrrena*, Wall.; pl. as. rar. 3, t. 292, 5 Nepal.—*I. chinensis*, Sims; B. M. 46, t. 2043. 5 China.—*I. ovalifolia*, Meyer. 5 S. America.—*I. salicifolia*, Jacq. 5 Mauritius.—*I. odorata*, Buch. 5 Nepal.—*Prinos Godajam*, Colebr.; Wall. pl. as. rar. 3, t. 261. Khassya Mountains.—*Macoucoua guianensis*, Aubl. 5 Guiana.—*Monetia diacantha*, Willd. 5 The Concan.

ORDER CLXIX.—NOLANACEÆ, Lindl. Nat. Syst. p. 229.

Herbs or undershrubs, by Lindl. referred to 3 genera, of which 8 species of *Nolana* inhabit Peru and Chili; 4 of *Dichondra*, S. America, Mexico, and the West Indies; one (*D. repens*, Forst.) also being common to Carolina, New Holland, Van Diemen's Land and Ava; and 1 of *Falkia*, S. Africa. Properties unknown.

NOLANA, L. (*Spreng. syst.* 1, p. 570, No. 714;—*G. Don's Mill. dict.* 4, p. 479.)

1. *atriplicifolia*, Hortul. (ex *D. Don. in Swt. fl. gard. n. s. t.* 305;—*G. Don's Mill. dict.* 4, p. 479.—*N. grandiflora*, Lehm.) ☉ Peru. Fl. large, blue, internally white-yellow, March.

2. *prostrata*, L. fil. (*Dec.* 1, t. 2;—*Spreng. syst.* 1, p. 660;—*G. Don's Mill. dict.* 4, p. 479;—*B. M.* 19, t. 731;—*Roxb. H. B.* p. 13.—*N. prostrata* (gallinacea) Pers.—*Teganium procumbens*, Schmid; icon. 67, t. 18.) ☉ Sandy places near the sea, Peru. Fl. largish, pale blue, dark-purple streaked, March; fr. April.

3. *puradoxa*, Lindl. (*B. Reg.* 10, t. 865;—*Spreng. syst. c. p. p.* 67;—*G. Don's Mill. dict.* 4, p. 479.—not Sims.) ☉ Chili, on the sea shore, about Concepcion. Fl. large, pale blue, with a whitish centre, March.



4. *tenella*, Lindl. (*Hort. soc. trans.* 7, p. 252;—*G. Don's Mill. dict.* 4, p. 479.—*N. paradoxa*, Sims.;—*B. M.* 52, t. 2604, excl. syn. Lindl.) ☉ Chili. Fl. large, pale blue, with a whitish-sulphur-coloured centre, March.

- * *Nolana spathulata*, Ruiz. and Pav. ☉ Peru.—*N. coronata*, Ruiz. and Pav. ☉ Peru.—*N. inflata*, Ruiz. and Pav. ☉ Peru, near Cumana.—*N. revoluta*, Ruiz. and Pav. ☉ Peru.—*Dichondra repens*, Forst. 2. America. N. Holland. Van Diemen's Land. Taong-Dong. Ava.—*D. caroliniana*, Michx. 2. New Orleans.—*D. sericea*, Swz. 2. Jamaica. Mexico.—*D. argentea*, Willd. 2. Mexico.

ORDER CLXX.—CUSCUTACEÆ, Lindl. Nat. Syst. p. 230.

Twining, parasitical, leafless herbs, with 1 genus, (*Cuscuta*.) and about 30 species; viz. 12 for S. America, Mexico, and the W. Indies; 3 for Europe; 2 for New Holland (1 also Indian); 2 for S. Africa; 1 for Caucasus; 1 for China; 1 for Persia; 1 for N. America, and 7 for the E. Indies. The latter have been found in Nepal, the Khassya Mountains, Bengal, both Peninsulas of India, and Cochin China.

CUSCUTA, L. (*Spreng. syst.* 9, p. 527, No. 1010; *G. Don's Mill. dict.* 4, p. 303.) Dodder.

1. *reflexa*, Roxb. (*Corom.* 2, t. 104; *fl. ind.* 1, p. 446; *ed. Carey*, 1, p. 466;—*Spreng. syst.* 1, p. 864;—*G. Don's Mill. dict.* 4, p. 305;—*J. Grah. Cat. B. pl.* p. 134, excl. syn. Hook.) হুদী আলগোলা লতা *Huldee-algosa-luta*. ☉ Coromandel. The Concan. Mahableschwur. Guzerat. Bengal, (Serampore, Silhet.) Parasitic on trees and shrubs. Fl. small, white, Feb. and March; fr. April.
2. *sulcata*, Roxb. (*fl. ind.* 1, p. 447; *ed. Carey*, 1, p. 467;—*Spreng. syst.* 1, p. 864;—*G. Don's Mill. dict.* 4, p. 305;—*J. Grah. Cat. B. pl.* p. 134.) ☉ Martaban. Bombay. Bengal, (Serampore, Silhet.) Adhering to *Amarantus oleraceus*, L., and some other plants during the cold season. Fl. small, white, March; fr. April.
3. *capitata*, Roxb. (*fl. ind.* 1, p. 448; *ed. Carey*, 1, p. 468;—*Spreng. syst.* 1, p. 864;—*G. Don's Mill. dict.* 4, p. 305.) আলগোলা *Algosa*. ☉ Bengal, (Serampore.) Growing on the lower part of the stems of *Crotalaria juncea*. Fl. small, white, Feb. and March; fr. April and May.
4. *aggregata*, Roxb. (*fl. ind.* 1, p. 447; *ed. Carey*, 1, p. 467.) ☉ Accidentally introduced into H. C. G. amongst flax-seed from Bagdad,—and there flowering in March. (Roxb.)

- * *C. monogyna*, Vahl. ☉ Levant.—*C. australis*, R. Br. ☉ New Holland.—*C. carinata*, R. Br. ☉ New Holland. Cochin China.—*C. corymbosa*,



Ruiz. and Pav. © Peru.—*C. odorata*, Ruiz. and Pav. © Lima.—*C. grandiflora*, H. B. and Kth. © Sta Fé de Bogota.—*C. americana*, L. © Jamaica.—*C. jalapensis*, Schlecht. ♀, Mexico.—*C. Hookeri*, Swt. (*C. reflexa* β. *verrucosa*, Hook exot. fl. t. 150.) © Coromandel. Mysore.—*C. macrantha*, G. Don. (*C. grandiflora*, Wall. Cat; not H. B. and Kth.) © Nepal.

ORDER CLXXI.—CONVOLVULACEÆ, R. Br.—Lindl. Nat. Syst.
p. 231.

THE BINDWEED TRIBE.

Herbs or shrubs, usually twining, rarely creeping, or erect, by Lindl. referred to 28 genera. Of these, though much underrating, Spreng. syst. enumerates about 150 for S. America, Mexico and the W. Indies; 18 for Europe; 16 for N. America; 8 for N. Africa; 6 for Guinea; 7 for the Canaries; 5 for Siberia; 4 for E. Africa; 4 for the Mascarenhas Islands; 2 for Madagascar; 4 for Arabia; 4 for China; 3 for Japan; 3 for Tauria; 2 for the Orient; 1 for Dahuria; 1 for Persia; and 1 for the Azores. Many are common to several parts of the world. In S. Africa, excluding *Falkia*, *Retzia*, *Lonchostoma* and *Cuscuta*, have been found 23 species, (*Harvey*); in N. Holland and the South Sea Islands more than 50; (R. Br.) and in the E. Indies, according to Choisy, 130; viz. 5 of *Rivea*; 31 of *Argyreia*, (including *A. floribunda*, Wall.); 1 of *Blinkworthia*; 2 of *Moorcroftia*; 2 of *Quamoclit*; 3 of *Batatas*; 3 of *Pharbitis*; 3-4 of *Calonyction*; 2 of *Lepistemon*; 53 of *Ipomoea*; 6 of *Convolvulus*; 4 of *Aniseia*; 1 of *Calystegia*; 1 of *Hewittia*; 1 of *Skinnera*; 4 of *Porana*; 2 of *Neuropeltis*; 4 of *Breweria*; 1 of *Cressa*; and 2 of *Evolvulus*. They are to be found everywhere both in the mountains and plains, but most abundantly on the latter.

"Their roots abound in an acrid milky juice, which is strongly purgative; this quality depends upon a peculiar resin, which is the active principle of the Jalap, the Scammony, and the others whose roots possess similar qualities." (*Lindl.*)

RIVEA, Choisy. (*G. Don's Mill. dict.* 4, p. 253.)

1. *tiliaefolia*, Choisy. (*G. Don. l. c.*;—*J. Grah. Cat. B. pl.* p. 127.—*Convolvulus tiliaefolius*, *Desrouss. in Lam. dict.* 3. p. 544.—*C. gangeticus*, *Roxb. fl. ind.* 1, p. 467; *ed. Carey*, 2, p. 46.—*Ipomoea tiliaefolia*, *Röm. and Sch.*—*I. gangetica*, *Swt.*—*I. campanulata*, *L.*; not *Lour.*) 5 (Philippine Islands. Both Peninsulas of India, Bengal, (Serampore.) Mauritius. C. G. H. W. Indies. Peru. Fl. very large, pale rose-coloured, tinged with purple, with a dark purple eye. C. S.; fr. H. S. β. *leucantha*. Flowers white.



2. *ornata*, Choisy. (*G. Don's Mill. dict.* 4, p. 254.—*Lettsomia ornata*, *Roxb. fl. ind.* 1, p. 496; *ed. Carey*, 2, p. 86.—*Argyreia ornata*, *Swt.*—*Convolvulus candicans*, *Roth.*; not hb. Willd.) ५ (Coromandel. Monghir. Cawnpore. Nepal. Fl. very large, pure white, with a pale greenish eye, R. S.; fr. C. S.
 3. *Bona nox*, Choisy. (*G. Don's Mill. dict.* 4, p. 254.—*Lettsomia Bona nox*, *Roxb. fl. ind.* 1, p. 494; *ed. Carey*, 2, p. 84.—*Argyreia Bona nox*, *Swt.*—*Rivea fragrans*, *Nimmo*;—*J. Grah. Cat. B. pl.* p. 127.) कनसी बत्ता *Kulmee-luta*. Clove-scented creeper. Midnapore creeper. ५ (The Concans. Guzerat. Bengal, (Serampore, Midnapore.) Fl. large, pure white, expanding at sun-set, and perfuming the air to a considerable distance with a fragrance resembling that of the finest cloves, R. S.; fr. C. S. Leaves used by the natives in their curries.
- ARGYREIA, Lour. (*G. Don's Mill. dict.* 4, p. 254.)
1. *speciosa*, Swt. (*G. Don. l. c.*;—*J. Grah. Cat. B. pl.* p. 128.—*Convolvulus speciosus*, *L. suppl.* p. 137, excl. the country.—*C. nervosus*, *Burm. ind. t.* 20, f. 1.—*Ipomoea speciosa*, *Pers.*;—*B. M.* 51, t. 2446.—*Lettsomia nervosa*, *Roxb. fl. ind.* 1, p. 488; *ed. Carey*, 2, p. 78.—*L. speciosa*, *Roxb. H. B.* p. 13;—*Rheed.* 11, t. 61.) বিচ তারুকা *Bichtaruka* ५ (Coromandel. Malabar-hill, Malabar. Deccan. Bengal, (Serampore.) Hindoosthan. Deyra Dhoon. Java. Isle of France. Fl. large, deep rose-coloured, R. and. C. S.; fr. March. The upper side of the leaves is used by natives to act as a discutient; the under, or white side, as a maturant. (*Dr. Gibson.*)
 2. *zeylanica*, (A. pomacea, Choisy. *G. Don's Mill. dict.* 4, p. 255, excl. *Lettsomia strigosa*, *Roxb.*, *Ipomoea strigosa*, *Roth.* and *Convolvulus capitatus*, *Vahl*.—*Lettsomia pomacea*, *Roxb. H. B.* p. 13;—*fl. ind.* 1, p. 493; *ed. Carey*, 2, p. 83.—*Ipomoea zeylanica*, *Gärtn. fr.* 2, p. 482, t. 178, f. 1.) ५ (Mysore. Ceylon. Dindygul. Fl. large, rose-coloured. In H. C. G. fl. from May till Nov., fr. C. S. (*Roxb.*)
 3. *splendens*, Swt. (*G. Don's Mill. dict.* 4, p. 255;—*J. Grah. Cat. B. pl.* p. 128.—*Lettsomia splendens*, *Roxb. fl. ind.* 1, p. 487; *ed. Carey*, 2, p. 75.—*Convolvulus splendens*, *Horn. hort. hafn. suppl.* p. 123.—*Ipomoea splendens*, *Sims.*; *B. M.* 53, t. 2628.) L. ५ (Chittagong. Fl. large, pale rose-coloured, with a white eye. R. and C. S.; fr. H. S.
 4. *cuneata*, Ker. (*B. Reg.* 8, t. 661;—*G. Don's Mill. dict.* 4, p. 255.—*J. Grah. Cat. B. pl.* p. 128.—*Lettsomia cuneata*, *Roxb. fl. ind.* 1, p. 491; *ed. Carey*, 2, p. 81.—*Convolvulus cuneatus*, *Willd.*—*Ipomoea atrosanguinea*, *Sims.*;—*B. M.* 47, t. 2170.) ५ (Mysore. Mawul districts, above the Ghauts. Fl. large, crimson, C. S.; fr. March.
 5. *laurifolia*, (A. elliptica, Choisy;—*G. Don's Mill. dict.* 4, p. 255;—*J. Grah. Cat. B. pl.* p. 128.—*Convolvulus ellipticus*, *Spreng.*—*Ipomoea elliptica*, *Roth.*—*Convolvulus laurifolius*, *Roxb. H. B.* (1814,) p. 13.—*fl. ind.* 1, p. 470; *ed. Carey*, 2, p. 50.—*Ipomoea laurifolia*, *Swt.*) ५ (

- Ceylon. Mysore. Common on the Ghauts. Mahableschwur. Taong-Dong. Lower Nepal. FL. middle-sized, rose-coloured, with a dark-purple eye, Nov. and Dec. ; fr. March.
6. *argentea*, Choisy. (*G. Don's Mill. dict.* 4, p. 255.—*Lettsomia argentea*, *Roxb. fl. ind.* 1, p. 489; *ed. Carey*, 2, p. 79.) ছোট বিচ ভাড়া *Chhotu-bich-taruka*. ॐ ◡ Chittagong. Calcutta, (Serampore). Silhet. FL. large, deep rose-coloured, R. S. ; fr. C. S.
 7. *multiflora*, (*A. Roxburghii*, *Choisy*, *G. Don's Mill. dict.* 4, p. 255.—*Ipomea Roxburghii*, *Sweet.*—*I. multiflora*, *Roxb. H. B.* (1814,) p. 84;—*fl. ind.* 1, p. 499; *ed. Carey*, 2, p. 89;—not Röm. and Sch.) ॐ ◡ Bengal. FL. very large, rose-coloured, with a bright red eye, C. S. ; fr. H. S.
 8. *malabarica*, Choisy. (*G. Don's Mill. dict.* 4, p. 256;—*J. Grah. Cat. B. pl.* p. 128, excl. syn. *Roxb.*—*Convolvulus malabaricus*, *L.*; not *Roxb.*—*Ipomea malabarica*, *Röm. and Sch.*;—*Rheed.* 11, t. 51.) ॐ ◡ Cochin China. Java. Mysore. Common on the Ghauts, Mahim woods. FL. largish, cream-coloured, with a dark purple eye. Has been introduced into H. C. G. ? Root cathartic. (*Vaupell.*)
 9. *Wallichii*, Choisy. (*G. Don's Mill. dict.* 4, p. 256.—*Convolvulus erythrocarpus*, *Wall. Cat.*) ॐ ◡ Taong-Dong. FL. large, rose-coloured, C. S.
 10. *capitata*, Choisy. (*G. Don's Mill. dict.* 4, p. 256.—*Convolvulus capitiformis*, *Poir.*—*C. capitatus*, *Vahl.*—*Ipomea capitata*, *Röm. und Sch.*—*Lettsomia strigosa*, *Roxb. fl. ind.* 1, p. 491; *ed. Carey*, 2, p. 80;—*H. B.* p. 13.—*Ipomea trichotoma*, *Bl. bijdr.* p. 717.) ॐ ◡ Java. Tavoy. Madras. Silhet. Goalpara. FL. large, rose-coloured, with a purple eye, Oct. and Nov. ; fr. H. S.
 11. *setosa*, Choisy. (*G. Don's Mill. dict.* 4, p. 256.—*Lettsomia setosa*, *Roxb. fl. ind.* 1, p. 490; *ed. Carey*, 2, p. 80.—*Convolvulus strigosus*, *Spreng.*—*Ipomea strigosa*, *Roth.*) ॐ ◡ Northern Circars. Sukana-ghur. Lower Nepal. Island of Timor. FL. largish, rose-coloured, Dec. and January; fr. March.
 12. *aggregata*, Choisy. (*G. Don's Mill. dict.* 4, p. 257;—*J. Grah. Cat. B. pl.* p. 128.—*Lettsomia aggregata*, *Roxb. fl. ind.* 1, p. 488; *ed. Carey*, 2, p. 76.—*Convolvulus orixensis*, *Röttl.*—*C. imbricatus*, *Spreng.*—*Ipomea imbricata*, *Roth.*) ॐ ◡ Ceylon. Coromandel. Mysore. Orissa. Taong-Dong. Ava. FL. smallish, pale rose-coloured, C. S. ; fr. Feb. and March.
 13. *cymosa*, Swt. (*G. Don's Mill. dict.* 4, p. 257.—*Lettsomia cymosa*, *Roxb. fl. ind.* 1, p. 492; *ed. Carey*, 2, p. 82.) ॐ ◡ Mountains of Malabar. FL. large, rose-coloured. In H. C. G. fl. C. S. ; fr. H. S. (*Roxb.*)
 14. *acuta*, Lour. (*G. Don's Mill. dict.* 4, p. 257;—*J. Grah. Cat. B. pl.* p. 128.—*A. festiva*, *Wall. pl. as. rar.* 1, t. 76.) ॐ ◡ China. FL. large, white, Sept. ; fr. January.
 15. *floribunda*, Wall. MSS. In H. C. G.



QUAMOCLIT, Tournet. (*G. Don's Mill. dict.* 4, p. 258.)

1. *phoeniceum*, Choisy. (*G. Don. l. c.*;—*J. Grah. Cat. B. pl.* p. 129.—*Ipomoea phoenicea*, *Roxb. fl. ind.* 1, p. 502; *ed. Carey*, 2, p. 92.—*Convolvulus phoeniceus*, *Spreng.*—*Ipomoea angularis*, *Willd.* ?) ☉ ☽
Moluccas. Coromandel. Bengal. Fl. large, bright scarlet, C. S.; fr. H. S.
2. *coccineum*, Choisy. (*G. Don's Mill. dict.* 4, p. 258.—*Ipomoea coccinea*, *L.*; *Roxb. H. B.* p. 14;—*B. M.* 7, t. 221.—*Convolvulus coccineus*, *Spreng.*) ☉ ☽ St. Domingo. New Spain. Carolina. Fl. largish, scarlet, tinged with orange, C. S.; fr. H. S.
3. *hederifolium*, Choisy. (*G. Don's Mill. dict.* 4, p. 259.—*Ipomoea hederifolia*, *L.*—*Convolvulus hederifolius*, *Spreng.*) ☉ W. Indies. Fl. large, violaceous, C. S.; fr. H. S.
4. *pennatum*, (*Q. vulgare*, Choisy. *G. Don's Mill. dict.* 4, p. 260;—*J. Grah. Cat. B. pl.* p. 129.—*Ipomoea Quamoclit*, *L.*;—*B. M.* 7, t. 244; *Lam. ill.* t. 104, f. 1;—*Roxb. fl. ind.* 1, p. 503; *ed. Carey*, 2, p. 93.—*Convolvulus pennatus*, *Desrouss.*—*C. Quamoclit*, *Spreng.*—*C. pennatifolius*, *Salisb.*;—*Rheed.* 11, t. 60;—*Rumph.* 5, t. 155, f. 2.)
লাল কামলতা *Lal-kamaluta*. ☉ ☽ North and South America. Mauritius. E. Indies, northwards as far as Deyra-Dhoon. Fl. largish, scarlet, R. S.; fr. C. S.
β. *rubrum*; fl. deep-red. রক্ত কামলতা *Rukto-kamaluta*.
γ. *album*; fl. white, tinged at base with green. শ্বেত কামলতা *Shwet-kamaluta*.

BATATAS, Rumph. (*G. Don's Mill. dict.* 4, p. 260.)

1. *edulis*, Choisy. (*G. Don. l. c.*;—*J. Grah. Cat. B. pl.* p. 129.—*Convolvulus Batatas*, *Michx.*;—*L.*; *Roxb. fl. ind.* 1, p. 483; *ed. Carey*, 2, p. 69.—*Ipomoea Batatas*, *Lam.*, excl. syn. Feuillée.—*Convolvulus esculentus*, *Spreng.*—*C. edulis*, *Thunb.*—*Ipomoea Catesbaei*, *Meyer.*)
Sweet or Spanish Potatoe. 4. ∞ East Indies. Cultivated every where within the tropics. Fl. largish, pale rose-coloured, with a purple eye, Feb. and March; fr. C. S.
α. *erythrorrhiza*; Tubers red. লাল শকরকন্দ আলু *Lal-shukarkundo-aloo*.
β. *leucorrhiza*; Tubers white. সফেদ শকরকন্দ আলু *Sufed-shukarkundo-aloo*. The red variety is always preferred, and is in general cultivation all over the warmer parts of Asia.
2. *paniculata*, Choisy. (*G. Don's Mill. dict.* 4, p. 261;—*J. Grah. Cat. B. pl.* p. 129.—*Convolvulus paniculatus*, *L.*;—*Sthum. pl. guin.* p. 94;—*Roxb. fl. ind.* 1, p. 478; *ed. Carey*, 2, p. 63.—*Ipomoea paniculata*, *R. Br.*;—*B. Reg.* 1, t. 62; not *Burm.*—*I. mauritiana*, *Jacq. hort. schönbr.* 2, t. 200.—*I. gossypifolia*, *Willd. enum.*—*I. eriosperma*, *Beauv.*—*I. quinqueloba*, *Willd.*;—*Röm. and Sch.*—*I. insignis*, *Andr.*; *B. Repos.* t. 636;—*B. Reg.* 1, t. 75;—*B. M.* 43, t. 1790.—*Convolvulus gossypifolius*, *Spreng.*—*C. insignis*, *Spreng.*—*C. roseus*, *H. B. and*

Kth.—*Rheed.* 11, t. 49.) *दुई कुमड़ा Bhovin-Koomra.* ५ (New Holland. Java. Guinea. Cayenne. Banks of the Orinoco. Both Peninsulas of India. Bengal, (Serampore.) Silhet. Assam. Fl. large, rose-coloured, with a dark purple eye, C. S.; fr. H. S. Root cathartic, and as such used by the natives. Cattle eat it. (*Roxb.*)

3. *pentaphylla*, Choisy. (*G. Don's Mill. dict.* 4, p. 261;—*J. Grah. Cat. B. pl.* p. 129;—*Convolvulus pentaphyllus*, *Roy*;—*L. amæn*;—*Schum. pl. guin.*;—*Roxb. H. B.* p. 14.—*C. aphyllus*, *Viviani*.—*C. munitus*, *Wight. ill. ind. bot.* p. 17, t. 7.—*C. hirsutus*, *Roxb. fl. ind.* 1, p. 479; *ed. Carey*, 2, p. 65.—*Ipomoea pentaphylla*, *Jacq. icon. rar. t.* 319.—*I. pilosa*, *Cav. icon.* 4, t. 323.) ☉ (Sandwich and Friendly Islands. W. Indies. S. America. Guinea. Mauritius. Bourbon. Hindoostan. Peninsula of India. Fl. largish, white, R. S.; fr. C. S.

4. *cissoïdes*, Choisy. (*G. Don's Mill. dict.* 4, p. 261.—*Convolvulus cissoïdes*, *Vahl*.—*C. calycinus*, *H. B. and Kth.*) ☉ (Tropical America. Cultivated in H. C. G. (*Choisy.*)

5. *viscida*, (*Convolvulus viscidus*, *Roxb. H. B.* p. 14;—not *Lindl. Herb.*)

२. (W. Indies. Fl. middle-sized, pure white, C. S.; fr. H. S.

PHARBITIS, Choisy. (*G. Don's Mill. dict.* 4, p. 262.)

1. *purpurea*, (*P. hispida*, *Choisy*;—*G. Don. l. c.*—*Convolvulus purpureus*, *L.*; *Roxb. H. B.* p. 13;—*H. B. and Kth.*—*C. mutabilis*, *Salisb.*—*C. glandulifer*, *Spreng.*—*Ipomoea purpurea*, *Lam.*—*I. hispida*, *Zuccag.*—*I. Zuccagni. Röm and Sch.*—*I. glandulifera*, *Ruiz. and Pav.*—*I. intermedia*, *Schult.*—*I. discolor*, *Spreng.*—*Convolvulus discolor*, *Roxb. H. B.* p. 14.) ☉ (S. America. Cultivated in gardens. Fl. large, C. S.; fr. H. S.

α. *purpurea*; (*Convolvulus purpureus*, *B. M.* 4, t. 113.) Fl. light purple coloured.

β. *violacea*; Fl. violet.

γ. *elata*; (*Convolvulus purpureus*, var. *elator*, *B. M.* 25, t. 1005.) Fl. white, with 5 crimson, blue edged spots.)

δ. *varia*; (*Convolvulus purpureus*, var. *varius*, *B. M.* 41, t. 1682.) Fl. striped with blue and red.

ε. *leucantha*; Fl. white.

2. *Nil.* Choisy. (*G. Don's Mill. dict.* 4, p. 262;—*J. Grah. Cat. B. pl.* p. 130, excl. all the syn. except. *Roxb.* and *B. Reg.* 4, t. 276.—*Convolvulus Nil. L.*—*Ipomoea Nil. Roth.*—*I. carulea*, *Kön.*;—*Roxb. fl. ind.* 1, p. 501; *ed. Carey*, 2, p. 91;—*B. Reg.* 4, t. 276.) *नील कजरी Neel-kulmee.* ☉ Found every where within the tropics, both in America, Africa, and Asia. Common in most parts of India, (Serampore.) Fl. large pale blue, R. S.; fr. C. S. Seeds sold in the native druggist's shops, under the name of *Kala-dana*, as an effectual, quickly operating, and safe cathartic. Thirty to forty grains of the seeds, previously roasted gently, and powdered, make a sufficient dose for an adult. (*Roxb.*)



3. *coerulescens*, Choisy. (Pharbitis Nil. β . *coerulescens*, G. Don's Mill. dict. 4, p. 262.—*Ipomoea coerulescens*, Roxb. fl. ind. 1, p. 500; ed. Carey, 2, p. 90.) 4. $\curvearrowright$ Native place uncertain. Fl. large, lively pale-blue in the morning, gradually growing darker, C. S.; fr. H. S.

4. *hederacea*, Choisy. (G. Don's Mill. dict. 4, p. 263.—*Ipomoea hederacea*, L.; Jacq. icon. rar. 1, t. 36;—R. Br.; B. Reg. 1, t. 85.) $\odot$ $\curvearrowright$ N. America. Mexico. S. America. New Holland. Fl. large, bluish-violet, March and April; fr. R. S.

5. *diversifolia*, Lindl. (B. Reg. 23, t. 1938.) $\odot$ $\curvearrowright$ Very like *P. purpurea* and *hederacea*.

CALONYCTION, Choisy. (G. Don's Mill. dict. 4, p. 263.)

1. *speciosum*, Choisy. (G. Don. l. c. excl. syn. Sweet.—*Ipomoea Bonanox*, L.; B. M. 20, t. 752.—*Convolvulus Bonanox*, Spreng.;—Sloane. jam. p. 55, hist. 1, p. 151, t. 96, f. 1.) 4. $\curvearrowright$ Tropical America. Fl. very large, white, fragrant, and fr. nearly throughout the year.

2. *Roxburghii*, G. Don. (Mill. dict. 4, p. 263;—J. Grah. Cat. B. pl. p. 130.—C. *speciosum*, a. Choisy.—*Ipomoea grandiflora*, Roxb. fl. ind. 1, p. 497; ed. Carey, 2, p. 87, not L.—Rheed. 11, t. 8.) इन्डिया कजरी *Doodiya-kulmee*. दल कजरी *Dal-kulmee*. 4. $\curvearrowright$ Both Peninsulas of India. Bengal, (Serampore.) Tirhoot. Assam. Nepal. Fl. very large, white, fragrant, and fr. nearly the whole year.

β . *muricatum*.

3. *muricatum*, G. Don. (Mill. dict. 4, p. 264;—J. Grah. Cat. B. pl. p. 130.—C. *speciosum*, β . Choisy.—*Ipomoea muricata*, Jacq. hort. schönbr. 3, t. 323;—Roxb. fl. ind. 1, p. 499; ed. Carey, 2, p. 89.—*Convolvulus muricatus*, L. Mant.—*Ipomoea Bonanox*, β . *purpureascens*, Ker.; B. Reg. 4, t. 290.) $\odot$ $\curvearrowright$ Persia, Peninsula of India. Common along the Ganges, from Behar and Tirhoot up to Cawnpore. Lucknow. Deyra-Dhoon. Fl. large, pale rose-coloured, with a dark purple eye, R. S.; fr. C. S. Tumid peduncles used for culinary purposes. (Nimmo.)

4. *grandiflorum*, Choisy. (G. Don's Mill. dict. 4, p. 264.—*Convolvulus grandiflorus*, L. suppl. p. 136;—Andr. B. Repos. t. 403.—*Convolvulus latiflorus*, Desrouss.—*Ipomoea latiflora*, Röm. and Sch.) 4. $\curvearrowright$ W. Indies. Fl. very large, pure white, R. and C. S.; fr. H. S.

IPOMOEÆ, L. (G. Don's Mill. dict. 4, p. 265.)

A.—Stems creeping.

1. *reptans*, Poir. (Dict. suppl. 3, p. 460;—G. Don. l. c.;—J. Grah. Cat. B. pl. p. 130.—*Convolvulus reptans*, L.—C. *repens*, Vahl.; Willd.;—not L. nor Lam.—Roxb. fl. ind. 1, p. 482; ed. Carey, 2, p. 68.—*Ipomoea reptans*, β . *aquatica*, Poir.—I. *repens*, Roth.; Bl.; not Lam.—I. *aquatica*, Forsk.;—Rheed. 11, t. 52;—Rumph. 5, t. 155, f. 1.) कजरी शक *Kulmee-shak*. $\odot$ Coromandel. The Concans. Moluccas.



- China. Arabia. Bengal, (Serampore, Silhet.) Assam. Senegal. Fl. large, pale rose-coloured, with a dark purple eye, R. and C. S.; fr. C. S. The *tender tops and leaves* much esteemed and eaten by the natives of all ranks. (Roxb.)
2. *Pes capræ*, Sweet. (*G. Don's Mill. dict.* 4, p. 265;—*J. Grah. Cat. B. pl.* p. 130.—*I. maritima*, R. Br.;—*B. Reg.* 4, t. 319.—*I. orbicularis*, Ell.—*I. carnosa*, R. Br.—*I. brasiliensis*, Meyer.—*I. biloba*, Forsk.—*Convolvulus Pes capræ*, L.;—*Roxb. fl. ind.* 1, p. 486; *ed. Carey*, 2, p. 74.—*C. maritimus*, Desrouss.—*C. bilobatus*, Roxb. *fl. ind.* 1, p. 485; *ed. Carey*, 2, p. 73.—*C. brasiliensis*, L.;—*Willd.*; *Roxb. H. B.* p. 14.—*C. baubiniæfolius*, Salisb.;—*Rheed.* 11, t. 57;—*Rumph.* 5, t. 159, f. 1.) ছাগল খুড়ি *Chhagul-khoori*. দোপাটী লতা *Dopatee-lata*. 4. Sandwich Islands. New Holland. S. America. Bourbon. Arabia. Mauritius. Ceylon. Moluccas. China. Both Peninsulas of India. Soonderbuns. Fl. large, purplish rose-coloured, fr. nearly the whole year. Very useful on the sandy beaches, where it grows, in helping to bind the loose soil, and in time rendering it sufficiently stable to bear grass. Goats, horses and rabbits eat it. (Roxb.) The natives boil the *leaves* and apply them externally as an anodyne in cases of colic. (*J. Grah.*)
3. *repens*, Lam. (*I. rugosa*, Choisy. *G. Don's Mill. dict.* 4, p. 266;—*J. Grah. Cat. B. pl.* p. 131.—*Convolvulus rugosus*, Rottl. *Willd.*;—*Röm. and Sch.*—*C. flagelliformis*, Roxb. *fl. ind.* 1, p. 481; *ed. Carey*, 2, p. 68.—*C. Bedalamba*, Spreng.—*I. Bedalamboe*, Röm. and Sch.;—*Rheed.* 11, t. 58.) 4. Mysore. Bombay. Fl. large, pure white, and fr. most part of the year.
4. *gangetica*, (*I. reniformis*, Choisy;—*G. Don. l. c.*;—*J. Grah. Cat. B. pl.* p. 131.—*Convolvulus reniformis*, Roxb. *fl. ind.* 1, p. 481; *ed. Carey*, 2, p. 67.—*C. gangeticus*, L. *Amoen.*—*Evolvulus emarginatus*, Burm. *ind. t.* 30, f. 1.—*E. gangeticus*, L. *spec.*) হুই কামড়ি *Bhooin-kamri*. 4. Peninsula of India. Umerapura, Bengal, (Serampore.) Fl. small, bright yellow, and fr. C. S.
- B.—Stems erect or diffuse, not twining.
5. *tridentata*, Roth. (*G. Don's Mill. dict.* 4, p. 266, excl. *Convolvulus viscidus*, Roxb.;—*J. Grah. Cat. B. pl.* p. 131.—*Convolvulus tridentatus*, L.;—*Roxb. fl. ind.* 1, p. 475; *ed. Carey*, 2, p. 56.—*Evolvulus tridentatus*, L.;—*Burm. ind. t.* 16, f. 3;—*Rheed.* 11, t. 65.) 6. Ceylon. Both Peninsulas of India. Bengal, (Serampore.) Fl. small, yellow, R. S.; fr. C. S.
6. *filiformis*, (*I. filicaulis*, Bl. *Bijdr.* p. 721;—*G. Don's Mill. dict.* 4, p. 266.—*J. Grah. Cat. B. pl.* p. 131.—*Convolvulus filicaulis*, Vahl. *Schum. pl. guin.* p. 92.—*C. hastatus*, Desrouss.—*C. simplex*, Pers.—*C. Medium*, Lour.;—*Ait.*—*Roxb. fl. ind.* 1, p. 474; *ed. Carey*, 2, p. 56; not L.—*C. filiformis*, Thunb.—*C. denticulatus*, Desrouss;—*Spreng.*—*C. angustifolius*, Desrouss;—*Vahl.*—*Ipomoea denticulata*, R. Br.;



—*B. Reg.* 4, t. 317.—*I. angustifolia*, *Jacq. icon. rar.* t. 317;—*Rheed*, 11, t. 55.) ☉ ♂ China. Japan. New Holland. America. C. G. H. Guinea. Ceylon. Java. Both Peninsulas of India. Bengal, (Serampore.) Fl. middle-sized, straw-coloured, more yellow at the plaits, with a crimson eye, R. and C. S.; fr. C. S.

C.—Stems twining.

7. *Turpethum* R. Br. (*G. Don's Mill. dict.* 4, p. 268;—*B. Reg.* 4, t. 279;—*Roth*, ;—*J. Grah. Cat. B. pl.* p. 131.—*Convolvulus Turpethum*, *L.*;—*B. M.* 46, t. 2093;—*Roxb. fl. ind.* 1, p. 476; *ed. Carey*, 2, p. 57;—*Hook. bot. misc.* 3, p. 297;—*Wight. ill. suppl.* t. 88.) তেঁতুলী *Teooree*. त्रिवृत् *Trivrit*. ५. New Holland. Otaheite. Friendly and Marianne Islands. Ceylon. Both Peninsulas of India. Bengal, (Serampore.) Fl. largish, white, with a tinge of cream-colour, R. and C. S.; fr. H. S. Bark of the root employed by the natives as a purgative, which they use fresh, rubbed up with milk. About six inches in length of a root as thick as the little finger is reckoned a common dose. Cattle do not eat the plant. (*Roxb.*)
8. *lactea*, Wall. Assam.
9. *straminea*, Wall. Mergui. Dec. 1840.
10. *pileata*, *Roxb. (fl. ind.* 1, p. 504; *ed. Carey*, 2, p. 94;—*G. Don's Mill. dict.* 4, p. 269.—*Convolvulus pileatus*, *Spreng.*) ५. China. Fl. middle-sized, rose-coloured. In H. C. G. fl. and fr. Nov. to Feb. (*Roxb.*)
11. *atropurpurea*, Choisy. (*G. Don's Mill. dict.* 4, p. 269.—*Convolvulus atropurpureus*, Wall.;—*Roxb. fl. ind.*; *ed. Carey*, 2, p. 54;—*pl. as. rar.* 1, p. 43.—*Ipomoea sphærocephala*, *D. Don. pr. fl. nep.* p. 98, excl. syn. *Roxb.*) ५. Nepal. Gossain Than. Fl. large, deep-purple. Has fl. in H. C. G.?
12. *barbata*, Choisy. (*G. Don's Mill. dict.* 4, p. 269.—*Convolvulus barbatus*, Wall. *pl. as. rar.* 2, t. 155.) ५ Rangoon. Banks of the Irrawaddi. Fl. largish, pale-yellowish. Has been introduced into H. C. G. Fl.?
13. *hispida*, (*I. sessiliflora*, *Roth. G. Don's Mill. dict.* 4, p. 269;—*Wight. icon.* 1, t. 169;—*Röm. and Sch.*—*Convolvulus sessiliflorus*, *Spreng.*—*C. hispidus*, *Vahl.*—*C. sphærocephalus*, *Roxb. fl. ind.* 1, p. 472; *ed. Carey*, 2, p. 53.—*C. tamnifolius*, *Klein; Röm. and Sch.*—*Ipomoea sphærocephala*, *Swt.*;—not *D. Don.*) ☉ Arcot. Dindygul. Madras. Prome. Interior of Bengal, (Serampore, Bhaugulpore, Monghir.) Nepal. Cape Verde Islands. Fl. small, rose-coloured, C. S.; fr. H. S. β . *leucantha*; fl. white. (Serampore.)
14. *polyanthes*, *Röm. and Sch. (G. Don's Mill. dict.* 4, p. 270.—*Convolvulus umbellatus*, *L. sp.* p. 221;—*Roxb. H. B.* p. 14; not *Ipomoea umbellata*, *L. sp.* p. 227.) ५. Martinique. St. Domingo. Jamaica. Cuba, about Havannah. Fl. smallish, bright yellow, with a tinge of green, C. S.; fr. H. S.

15. *ochracea*, G. Don. (*Mill. dict.* 4, p. 270.—*Convolvulus ochraceus*, *Lindl. B. Reg.* 13, t. 1060.) © Gold Coast of Guinea. Fl. largish, orange-yellow, with a dark purple eye, and fr. C. S.
16. *sidaefolia*, Choisy;—(*G. Don's Mill. dict.* 4, p. 272.—*Convolvulus sidaefolius*, *H. B. and Kth.*—*C. domingensis*, *Desrouss.*—*C. multiflorus*, *H. B. and Kth. not Mill.*—*C. lævicaulis*, *Willd.*—*C. proliferus*, *Willd.*—*Ipomoea ceylanica*, *Moon.*) 5 W. Indies, Mexico, Ceylon.—Fl. largish, white, with a yellow bottom, and marked with five black spots, C. S.; fr. H. S.
17. *staphylina*, Röm. and Sch. (*G. Don's Mill. dict.* 4, p. 272.—*Ipomoea racemosa*, *Roth.*; not *Poir.*—*C. malabaricus*, *Roxb. fl. ind.* 1, p. 469; *ed. Carey*, 2, p. 49, excl. syn. *L. and Rheed.*—*C. racemosus*, *Röttl. and Auct.*; not *Spreng.*—*C. Kleinii*, *Spreng.*) 5 Co-romandel. Penang. Fl. smallish, pale rose-coloured, with a dark purple eye, C. S.; fr. H. S.
18. *cymosa*, Röm. and Sch. (*G. Don's Mill. dict.* 4, p. 472.—*Convolvulus cymosus*, *Desrouss.*—*C. bifidus*, β . *Vahl.*—*C. blandus*, *Roxb. fl. ind.* 1, p. 470; *ed. Carey*, 2, p. 50.—*Ipomoea bifida*, *Roth.*—*I. Heynei*, *Röm. and Sch.*—*I. blanda*, *Sweet.*—*Rumph.* 5, t. 158.) 4 Moluccas. Circar Mountains. Fl. large, pure white, Feb. and March; fr. C. S.
 β . *pilosa*, Choisy. (*G. Don. l. c.*—*Convolvulus cymosus*, β . *Desrouss.*—*C. bifidus*, *Vahl.*—*C. Rothii*, *Spreng.*—*C. lævis mas*, *Rumph.* 5, p. 431.—*C. pentagonus*, *Roxb. fl. ind.* 1, p. 485; *ed. Carey*, 2, p. 72.—*Ipomoea bifida*, *Röm. and Sch.*—*I. Rothii*, *Röm. and Sch.*—*I. cymosa*, *Roth.*; *Bl.*—*Convolvulus blandus*, β . *pubescens*, *Roxb. fl. ind.* 1, p. 469; *ed. Carey*, 2, p. 49.) Fl. like those in *a*.
19. *striata*, Pers. (*Syn.* 1, p. 183.—*I. sepiaria*, *Kön.*;—*Roxb. fl. ind.* 1, p. 499; *ed. Carey*, 2, p. 90;—*G. Don's Mill. dict.* 4, p. 273;—*J. Grah. Cat. B. pl.* p. 131.—*C. marginatus*, *Desrouss. in Lam.* 3, p. 558.—*C. striatus*, *Vahl.*—*Rheed.* 11, t. 53.) China. Java. Ceylon. Both Peninsulas of India. Bengal, (Serampore.) 4. बन कुलमी *Bun-kulmee*. Fl. largish, pale rose-coloured, with a dark purple eye, and fr. the whole year,
20. *carnea*, Jacq. (*Amer. p.* 26, t. 18, *ed. pict.* t. 25;—*G. Don's Mill. dict.* 4, p. 273;—*Roxb. H. B.* p. 14.—*Convolvulus carneus*, *Spreng.*) 4. America, near Carthagera. Fl. very large, pale-red, C. S.; fr. H. S.
21. *corymbosa*, Roth. (*G. Don's Mill. dict.* 4, p. 274.—*Convolvulus corymbosus*, *L.*;—*Desrouss.*—*Plum. ed. Burm.* t. 89, f. 2. *MSS. vol.* 2, t. 50.) 4. Tropical America. Fl. largish, white, C. S.; fr. H. S.
22. *cordifolia*, Carey's MSS. 5. Seeds, inscribed "Jamaica," sent to the late Dr. Carey by the Hon'ble and Revd. Mr. Herbert in 1822. Except the under page of the base of the leaves, glabrous. Leaves cordate-ovate, emarginate, mucronulate, soft, membranous, underneath pale, 1-5 inches both ways. Petioles $3\frac{1}{2}$ inches, exstipulate. Peduncles axillary, solitary, terete, longer than the petiole, shorter



than the leaf, at apex bearing a trichotomous, many-flowered cyme. *Pedicels* clavate, 4-5 lines. *Bractes* lanceolate, acute, fleshy, 1-2 lines. *Bracteoles* at the base of each pedicel generally 3, ovate, acute, minute, with the bractes caducous. *Sepals* 5, adpressed, obtuse, mucronulate, white-membrane margined, unequal; the three inner ones largest, 4-5 lines. *Corol* campanulate, one inch, pure white, roundly and emarginately 5-lobulate, with the fasciæ straw-coloured, and the tube internally dark-olive. *Filaments* white, at base orange, and covered with capitate down. *Anthers* white. Fl. Dec. and Jan.; fr. O.

23. *obscura*, Ker. (*B. Reg.* 3, t. 239;—*Röm. and Sch.*;—*G. Don's Mill. dict.* 4, p. 274;—*J. Grah. Cat. B. pl.* p. 131.—*I. solanifolia*, Barm. ind. p. 49.—*I. insuavis*, Bl.—*Convolvulus obscurus*, L.;—*Roxb. fl. ind.* 1, p. 472; ed. Carey, 2, p. 52.) ☉ Both Peninsulas of India. Bengal, (Serampore.) &c. Fl. largish, white, with cream-coloured plicæ, and a dark-purple eye, R. and C. S.; fr. H. S.
24. *stipulacea*, Swt. (*G. Don's Mill. dict.* 4, p. 276;—*J. Grah. Cat. B. pl.* p. 131.—*Convolvulus stipulaceus*, Roxb. *fl. ind.* 1, p. 484; ed. Carey, 2, p. 71; not of others.) ☿ The Concans. Chittagong. Fl. large, pure white, March and April; fr. R. S.
25. *platanifolia*, Röm. and Sch. (*Syst.* 4, p. 220, excl. syn. Pluk.—*I. fastigiata*, Swt.;—*G. Don's Mill. dict.* 4, p. 276;—*J. Grah. Cat. B. pl.* p. 131.—*I. cymosa*, Meyer, not Röm. and Sch.—*Convolvulus platanifolius*, Vahl. *ymb.* 3, p. 26.—*C. fastigiatus*, Roxb. *fl. ind.* 1, p. 468; ed. Carey, 2, p. 48.—*C. essequibensis*, Spreng.) ☿ W. Indies. Guiana. The Concans. Bengal, (Serampore.) Fl. large, purple, Feb. and March; fr. H. S.
26. *pilosa*, Swt. (*G. Don's Mill. dict.* 4, p. 276.—*Convolvulus pilosus*, Roxb. *fl. ind.* 1, p. 473; ed. Carey, 2, p. 55.) Mysore, Bengal. ☉ Fl. small, rose-coloured, C. S.; fr. H. S.
27. *dentata*, Willd. MSS. (*I. chryseides*, Ker.; *B. Reg.* 4, t. 270;—*G. Don's Mill. dict.* 4, p. 277;—*Wight. icon.* t. 157.—*Convolvulus dentatus*, Vahl. *ymb.* 3, p. 25;—*Roxb. fl. ind.* 1, p. 477; ed. Carey, 2, p. 62.—*C. chryseides*, Spreng.) ☿ China. Timor. Both Peninsulas of India. Bengal, (Serampore.) Assam. Fl. small, yellow, C. S.; fr. H. S.
28. *Wightii*, Choisy. (*G. Don's Mill. dict.* 4, p. 277.—*Convolvulus Wightii*, Wall. *pl. as. rar.* 2, t. 171.) ☿ Neelgherries. Fl. large, purplish-rose-coloured, C. S.
29. *lacunosa*, L. (*G. Don's Mill. dict.* 4, p. 277;—*Roxb. H. B.* p. 14.—*Convolvulus lacunosus*, Spreng.) ☿ Virginia. Carolina. Florida. Banks of the Arkansas. Fl. largish, white, with a purplish rim, C. S.
30. *macrorrhiza*, Michx. (*G. Don's Mill. dict.* 4, p. 277.—*I. Jalapa*, Pursh.; *B. Reg.* 4, t. 342.—*I. Michauxii*, Sweet.) ☿ Georgia and Florida, near the sea-shore. Fl. very large, white.

β. rubra. (*Convolvulus Jalapa*, Lam.;—*B. M.* 38, t. 1572.—*C. Jalapa*, *β. rosea*, Ker. *B. Reg.* 8, t. 521.) ♂ Mexico, about Vera Cruz. Fl. very large, deep rose-coloured, R. and C. S. This variety, has been introduced into Bengal by Lord Auckland. It is not the true Jalap Plant, nor does it, according to Dr. O'Shaughnessy's chemical analysis, contain any resin. The above-mentioned white-flowered variety, α. the Jalap of N. America, (*Convolvulus macrorrhizos*, Roxb. *H. B.* p. 14.) was introduced into H. C. G. in 1801, but had not flowered up to 1814.

The true Jalap of the shops is the product of *I. Jalapa*, Schiede and Deppe. (*G. Don's Mill. dict.* 4, p. 271;—*I. Purga*, Wenderoth.—*Convolvulus Jalapa*, *Houst. MSS. in Mill. dict. ed.* 8, No. 31;—*Linu. Mant.* 1, p. 43; not of others.—*Ipomoea Schiedeana*, Zucc.) It is a native of Mexico, in the woods of Chiconquiaco, from whence it is brought to Vera Cruz by the inhabitants of Jalapa or Xalapa. The plant is called Purga and Laschachne in Mexico, it abounds also on the eastern slope of the Cordillera of Anahuac, in the same latitude with the *Vanilla aromatica*, Swz, and *Smilax Sarsaparilla*, L., and in its wild state delighting in a dry sandy soil.

31. *trichophora*, Ell. (*fl. car.* 2, p. 260;—*G. Don's Mill. dict.* 4, p. 278.—*I. carolina*, Pursh. not L.—*Convolvulus carolinus*, Michx. *fl. amer. bor.* 1, p. 139;—*Desrouss. in Lam. dict.* 3, p. 563;—*Roxb. H. B.* p. 14.—*C. trichophorus*, Spreng.) ☉ Hedges in Carolina. Fl. large, pale purple, and fr. Feb. and March.
32. *coptica*, Roth. (*G. Don's Mill. dict.* 4, p. 278;—*J. Grah. Cat. B.* pl. p. 132.—*I. Brunetii*, Perr. *cat. MSS.* No. 150.—*Convolvulus copticus*, L. *Mant.* p. 559;—*Roxb. fl. ind.* 1, p. 477; *ed. Carey*, 2, p. 62.—*C. stipulatus*, *Desrouss. in Lam. dict.* 3, p. 546.) ☉ Senegal. Coromandel. Open glades about Kandalla. Fl. small, white, and fr. C. S.
33. *heptaphylla* (*I. pulchella*, Roth.; *nov. spec.* p. 115;—*Wight, icon.* 1, t. 156;—*G. Don's Mill. dict.* 4, p. 279, excl. *Convolvulus dasyspermus*, Spreng. and *C. digitatus*, Roxb.; not *I. pulchella*, *G. Don.* l. c. p. 276.—*Convolvulus bellus*, Spreng.—*C. heptaphyllus*, *Roxb. H. B.* (1814.) p. 14; *fl. ind.* 1, p. 480; *ed. Carey*, 2, p. 66.) ♀. Pagamew. Segæen. Fl. small, pale rose-coloured, with a purple eye, R. and C. S.; fr. C. S.
34. *tuberculata*, Röm. and Sch. (*G. Don's Mill. dict.* 4, p. 279.—*I. stipulata*, Jacq. *schönbr.* 2, t. 199.—*I. frutescens*, Desf. *cat. par.* p. 74.—*I. tuberculosa*, Desf. *cat. par.* p. 74.—*Convolvulus tuberculatus*, *Desrouss. in Lam. dict.* 3, p. 545;—*H. B. and Kth. nov. gen.* 3, p. 108.—*C. digitatus*, *Roxb. fl. ind.* 1, p. 479; *ed. Carey*, 2, p. 65.) ♀. China. Sandwich-Islands. S. America. Peninsula of India. Fl. very large, white-lilac-purple, nearly the whole year; fr. H. S.
35. *pedata*, (*I. dasysperma*, Jacq. *ect.* 1, (1816,) t. 89;—*G. Don's Mill. dict.* 4, p. 279.—*I. tuberculata*, Ker. 1, t. 86, anno. 1815, not Röm.



- and Sch.—*Convolvulus dasyspermus*, *Spreng. syst.* 1, p. 591.—1825.
C. pedatus, *Roxb. H. B.* (1814,) p. 14; *fl. ind.* 1, p. 478; *ed. Carey*, 2, p. 63.) © New Holland. China. Katmandu. Peninsula of India. Fl. large, deep cream-coloured tinged with yellow, and with a lilac-purple eye, C. S.; fr. H. S.
36. *sinuata*, *Ort.* (*Dec.* 7, p. 84;—*G. Don's Mill. dict.* 4, p. 4, p. 279.—*J. Grah. Cat. B. pl.* p. 132, excl. syn. R. Br.—*I. dissecta*, *Pursh.* not. R. Br.—*Convolvulus dissectus*, *L. Mant.* p. 204;—*Michx.*;—*Jacq. obs.* 2, p. 4, t. 28;—*hort. vind. t.* 159;—*Roxb. H. B.* p. 14.) ♀ Georgia. Florida. Cuba. Fl. largish, white, with a dark red eye, C. S.; fr. H. S.
37. *mucronata*, *Forst.* (1 *pendula*, *R. Br. pr.* p. 486;—*B. Reg.* 8, p. 632;—*G. Don's Mill. dict.* 4, p. 279.—*Convolvulus pendulus*, *Spreng.*—*C. mucronatus*, *Forst. pr. No.* 79.) ♀ New Holland. New Caledonia. Island of Tanna. Introduced in 1840.
38. *palmata*, *Forsk.* (*Descript.* p. 43;—*G. Don's Mill. dict.* 4, p. 280.—*I. cairica*, *Syl.*—*Convolvulus cairicus*, *L.*; *Vahl.*; *Willd.*; *B. M.* 19, t. 699.—*C. ægyptius*, *Berl. ægypt.* p. 73, t. 74.) ♀ Egypt. Guinea. Sandwich Islands. Fl. very large, lilac, with a dark purple eye and star, C. S.; fr. H. S.
39. *Pes tigridis*, *L.* (*G. Don's Mill. dict.* 4, p. 280;—*Roxb. fl. ind.* 1, p. 503; *ed. Carey*, 2, p. 93;—*J. Grah. Cat. B. pl.* p. 132.—*Convolvulus Pes tigridis*, *Spreng.*—*C. bryoniaefolius*, *Salisb.*; not Sims.—*Convolvuloïdes palmata*, *Mönch*;—*Rheed.* 11, t. 59.) जाइवि बत *Languli-bata*. © Manilla. Java. Ceylon. Both Peninsulas of India. Bengal, (Serampore,) &c. Fl. smallish, white, R. and C. S.; fr. C. S.
- β. *rubra*; flowers red, smaller.
40. *vitifolia*, *Swt.* (*Bl. bydr.* p. 709;—*G. Don's Mill. dict.* 4, p. 281;—*J. Grah. Cat. B. pl.* p. 132.—*Convolvulus vitifolius*, *L.*; *Burm. ind. t.* 18, f. 1;—*Roxb. fl. ind.* 1, p. 476; *ed. Carey*, 2, p. 61.) ♀ Travancore. Malabar Hill. Bombay. Silhet. Assam. Fl. large, bright sulphur, Jan. and Feb.; fr. H. S.
41. *tuberosa*, *L.* (*G. Don's Mill. dict.* 4, p. 281;—*Jacq. amer.* p. 37;—*J. Grah. Cat. B. pl.* p. 132;—*B. Reg.* 9, t. 768;—*Roxb. H. B.* p. 14; not Lour.—*Convolvulus tuberosus*, *Spreng. syst.* 1, p. 591.) ♂ Tropical America. Bourbon. Mauritius. Ceylon. Madras. Bombay. Fl. large, bright yellow, fragrant, C. S.; fr. H. S.
42. *hepaticifolia*, *L.* (*Burm. ind. t.* 20, f. 1;—*G. Don's Mill. dict.* 4, p. 281.—*Convolvulus hepaticifolius*, *Spreng. syst.* 1, p. 594.) © Ceylon. China. Fl. largish, purplish, C. S.; fr. H. S.
43. *Buchanani*, *Choisy.* (*G. Don's Mill. dict.* 4, p. 281.—*I. salicifolia*, *Roxb. fl. ind.* 1, p. 498; *ed. Carey*, 2, p. 88; not *Convolvulus salicifolius*, *Desrouss.*) © Bengal, (Rungpore.) Fl. large white, R. S.; fr. C. S. Introduced into H. C. G. by Dr. Buchanan.
44. *lactea*, *Wall. MSS.* (*Convolvulus lacteus*, *Wall. in Grah. Cat. B. pl.* p. 133.) In H. C. G.

CONVOLVULUS, L. (*G. Don's Mill. dict.* 4, p. 283.)

1. *tricolor*, L. (*Hort. cliff.* p. 19;—*G. Don. o. c.* p. 286;—*B. M.* 1, t. 27.) ☉ Sicily. Spain. Portugal. N. Africa. Fl. large, blue, with a whitish star, and yellowish throat, Feb.; fr. April.
2. *siculus*, L. (*Spec. p.* 223;—*G. Don's Mill. dict.* 4, p. 287;—*B. Reg.* 6, p. 445.) ☉ (Sicily. Spain. Morea. Candia. N. Africa. Teneriffe. Fl. small, blue, with a white throat, Feb. and March.
3. *arvensis*, L. (*Spec. p.* 218;—*G. Don's Mill. dict.* 4, p. 288;—*E. B.* 5, t. 312;—*Roxb. H. B.* p. 14;—*J. Grah. Cat. B. pl.* p. 132.—*C. chinensis*, *Ker.*;—*B. Reg.* 4, t. 322;—*C. Malcolmii*, *Roxb. fl. ind.* 1, p. 474; *ed. Carey*, 2, p. 55.) ♀. (Sandy fields and road-sides in Europe. China. Cochin China. Persia. Virginia. The Deccan in India. &c. Fl. large, deep rose-coloured, sweet scented, C. S.
4. *bryoniaefolius*, Sims. (*B. M.* 24, t. 943;—*G. Don's Mill. dict.* 4, p. 291.) ♀. (China. Fl. large, deep rose-coloured, with a crimson eye, C. S.; fr. H. S.
5. *macrocarpus*, L. (*Spec.* 222;—*G. Don's Mill. dict.* 4, p. 292.) ☉ Martinique. Fl. large, purplish, Feb.; fr. April.
6. *parviflorus*, Vahl. (*Symb.* 3, p. 29;—*G. Don's Mill. dict.* 4, p. 293;—*Roxb. fl. ind.* 1, p. 471; *ed. Carey*, 2, p. 51.—*Ipomoea paniculata*, *Burm. ind.* 21, t. 3.—*I. parviflora*, *Pers.*) ☉ (Java. Timor. Both Peninsulas of India. Fl. small, pure white, C. S.; fr. H. S.

ANISEIA, Choisy. (*G. Don's Mill. dict.* 4, p. 295.)

1. *calycina*, Choisy. (*G. Don. l. c.*—*Convolvulus calycinus*, *Roxb. fl. ind.* 1, p. 471; *ed. Carey*, 2, p. 51.—*C. Hardwickii*, *Spreng. syst. c. p.* p. 60.) ♀. (Cawnpore. Fl. small, pure white, and fr. C. S.

CALYSTEGIA, R. Br. (*pr. p.* 483; *G. Don's Mill. dict.* 4, p. 296.)

1. *hederacea*, Wall. (*Roxb. fl. ind.*; *ed. Carey*, 2, p. 94;—*G. Don. o. c. p.* 297;—*Convolvulus Wallichianus*, *Spreng.* ♀. (Nepal. Upper Assam. Penang. Fl. large, rose-coloured. Has been introduced into H. C. G. Fl.?

HEWITTIA, W. and A. (*Madr. Journ.*—*Shuteria*, Choisy;—*G. Don's Mill. dict.* p. 297,—not W. and A.)

1. *bicolor*, W. and A. (*l. c.*—*Shuteria bicolor*, Choisy;—*G. Don. l. c.*—*J. Grah. Cat. B. pl.* p. 183.—*Convolvulus bicolor*, *Vahl. symb.* 3, p. 25;—*Roxb. fl. ind.* 1, p. 475; *ed. Carey*, 2, p. 57;—*B. M.* 48, t. 2205.—*C. sublobatus*, *L. suppl.*—*C. involucratus*, *Ker.*;—*B. Reg.* 4, t. 318, not Beauv.—*Ipomoea bicolor*, *Swt. hort. brit.* p. 287.—*Calystegia Keriana*, *Swt. l. c.*) জব্বন কলমী *Jurud-kulmee*. ♀. (Both Peninsulas of India, Bengal, (Serampore.) &c. Fl. largish, yellowish, with a dark-purple eye, R. and C. S.; fr. H. S.

SKINNERIA, Choisy. (*G. Don's Mill. dict.* p. 297.)

1. *caespitosa*, Choisy. (*G. Don. l. c.*—*Convolvulus caespitosus*, *Roxb. fl. ind.* 1, p. 483; *ed. Carey*, 2, p. 70.) ☉ ♂. (Penang. Tavoy. Rungpore. Dinagapore. Assam. Fl. small, very pale yellow, C. S.; fr. H. S.



JACQUEMONTIA, Choisy.

1. *hastigera*, Bojer. (Mauritius. Nov. 1838.)PORANA, Burm. (*G. Don's Mill. dict.* 4, p. 298.)1. *volubilis*, L. (*Burm. ind. t.* 21, f. 1;—*Lam. ill. t.* 186;—*G. Don. l. c.*; *Roxb. fl. ind.* 1, p. 465; *ed. Carey*, 2, p. 40.—*Wight. icon.* 2, t. 347.) ♂ (Bengal. Timor. Straits of Sunda. Fl. small, white, C. S.; fr. H. S.)2. *racemosa*, Roxb. (*fl. ind.* 1, p. 466; *ed. Carey*, 2, p. 41;—*G. Don's Mill. dict.* 4, p. 298;—*J. Grah. Cat. B. pl.* p. 133.—*P. dichotoma*, Buch.;—*G. Don. pr. fl. nep.* p. 99.—*P. cordifolia*, Ledeb. *ind. sem. hort. dorp. suppl.* 1824, p. 6.—*Dinetus racemosus*, *Swt. brit. fl. gard. t.* 127.) ⊙ (Khasya Mountains. Nepal. Kemaon. Fl. small, white, Feb. and March; fr. H. S.)3. *paniculata*, Roxb. (*Corom.* 3, t. 285;—*fl. ind.* 1, p. 464; *ed. Carey*, 2, p. 39;—*G. Don's Mill. dict.* 4, p. 298.—*P. tomentosa*, Lesch. *MSS.*—*Dinetus paniculatus*, *Swt. hort. brit. p.* 289.) L. ♂ (Banks of the Irawaddi. Rajmahl. Gour. Silhet. Hurdwar. Saharunpore. Kemaon. Fl. small, white, C. S.; fr. H. S.)4. *grandiflora*, Wall. (*Roxb. fl. ind.*; *ed. Carey*, 2, p. 41;—*G. Don's Mill. dict.* 4, p. 298.) ⊙ (Nepal. Fl. large, rose-coloured. Has been introduced in H. C. G. Fl. ?)BREWERIA, R. Br. (*G. Don's Mill. dict.* 4, p. 299.)1. *Roxburghii*, Choisy. (*G. Don. l. c.*—*Convolvulus semidigynus*, *Roxb. fl. ind.* 1, p. 468; *ed. Carey*, 2, p. 47.) ♂ (Fl. large, pure white, C. S.; fr. H. S. Travancore. Courtallum. Penang. Amherst. Tavoy. Silhet. Shreenngur Mountains.)CRESSA, L. (*G. Don's Mill. dict.* 4, p. 300.)1. *indica*, Retz. (*G. Don. l. c.*;—*Roxb. fl. ind.* 2, p. 72;—*J. Grah. Cat. B. pl.* 133. excl. syn.) ⊙ Rice-fields, Bombay, after the rains. Sandy salt lands near the sea. Coromandel, &c. Fl. small, white, R. S.; fr. C. S.)EVOLVULUS, L. (*G. Don's Mill. dict.* 4, p. 300.)1. *alsinoides*, L. (*fl. zeyl.* p. 76;—*spec. p.* 392;—*G. Don's Mill. dict.* 4, p. 300;—*R. Br. pr. p.* 489;—*Roxb. fl. ind.* 2, p. 105.—*E. hirsutus*, *Lam. dict.* 3, p. 538;—*ill. t.* 216, f. 2;—*G. Don. l. c.*;—*Roxb. l. c. p.* 166;—*J. Grah. Cat. B. pl.* p. 133; not H. B. and Kth.—*Rheed.* 11, t. 64;—*Burm. zeyl. t.* 6, f. 1, and t. 9, f. 1.) ♀. Straits of Sunda. Ceylon. Both Peninsulas of India. Bengal, (Serampore, Monghir.) Kemaon. New Holland. Fl. small, blue, with a white tube, C. S.; fr. H. S.)2. *pilosus*, Roxb. (*fl. ind.* 2, p. 106.) ♀. Hindoostan. Fl. small, white C. S. (*Roxb.*)

* *Rivea hypocrateriformis*, Choisy. ♂ (Malabar hill, Bombay, &c.—*R. ? obtecta*, Choisy. ♂ (Tavoy, Amherst.—*Maripa scandens*, Aubl.)

5 Guiana.—*M. erecta*, Meyer. 5 Guiana.—*Argyreia bracteata*, Choisy. 5 Peninsula of India.—*A. Leschenaultii*, Choisy. 5 Neelgherries.—*A. neelgherryana*, Choisy. 5 Neelgherries.—*A. populifolia*, Choisy. 5 Assam.—*A. fulgens*, Choisy. 5 Quilon.—*A. pallida*, Choisy. 5 Paghamew.—*A. venusta*, Choisy. 5 Assam.—*A. ampla*, Choisy. 5 Nepal.—*A. barbigera*, Choisy. 5 Prome.—*A. rubicunda*, Choisy. 5 Toang-Dong.—*A. tomentosa*, Choisy. 5 Banks of the Irrawaddi.—*Blinkworthia lycioides*, Choisy. 5 Banks of the Irrawaddi.—*Humbertia madagascariensis*, Lam. 5 Madagascar.—*Moorcroftia adpressa*, Choisy. 5 Penang.—*M. penangiana*, Choisy. 5 Penang.—*Quamoclit vitifolium*, G. Don. 5 S. America.—*Q. eustachianum*, G. Don. 5 Mexico.—*Q. hastigerum*, G. Don. 4 Mexico.—*Q. sanguineum*, G. Don. 4 Sta. Cruz.—*Q. dichotomum*, G. Don. 5 New Granada.—*Q. grandiflorum*, G. Don. 4 Mexico.—*Batatas heterophylla*, G. Don. 4 Cuba. New Spain.—*B. bignonioides*, G. Don. 4 Cayenne.—*Pharbitis insularis*, Choisy. 5 New Holland.—*P. barbata*, G. Don. 5 Virginia.—*P. villosa*, G. Don. 5 Peru.—*Calonyction asperum*, Choisy. 5 Silhet.—*Exogonum bracteatum*, Choisy. 4 New Spain.—*E. repandum*, Choisy. 5 Martinique.—*Lepistemon Wallichii*, Choisy. 4 Silhet.—*Ipomoea arborescens*, G. Don. 5 Mexico.—*I. macrantha*, G. Don. 5 Mexico.—*I. triquetra*, Röm. and Sch. 4 W. Indies.—*I. sulphurea*, G. Don. 4 Mexico.—*I. petaloides*, Choisy. 4 Prome.—*I. bufalina*, Choisy. 5 Bourbon.—*I. tannifolia*, L. 5 Carolina.—*I. polycarpa*, G. Don. 4 Mexico.—*I. albivenia*, G. Don. 5 Algoa Bay.—*I. leucantha*, Jacq. 5 Tropical America.—*I. curasavica*, Röm. and Sch. 4 Curaçao.—*I. Jalapa*, Schiede and Deppe. 4 Mexico.—*I. rubens*, Choisy. 4 Assam.—*I. cumanensis*, G. Don. 4 Cumana.—*I. violacea*, L. 5 S. America.—*I. racemosa*, Poir. 5 St. Domingo.—*I. ferruginea*, Röm. and Sch. 5 S. America.—*I. Hookeri*, G. Don. 5 Mexico.—*I. pudibunda*, G. Don. 5 St. Vincent.—*I. gemella*, Roth. 5 Tranquebar.—*I. aristolochiaefolia*, G. Don. 4 Caracas.—*I. Funis*, Cham. and Schlecht. 5 Mexico.—*I. mutabilis*, Ker. 5 S. America.—*I. platensis*, Ker. 4 Banks of the Plata.—*I. setosa*, Ker. 4 Brazil.—*Jacquemontia cœrulea*, Choisy. 4 Guinea.—*J. azurea*, Choisy. S. America.—*Convolvulus pluricaulis*, Choisy. 4 Bhaugulpore.—*C. trichosanthes*, Michx. 5 Virginia.—*C. pentapetaloides*, L. 5 S. Europe.—*C. undulatus*, Cav. 5 S. Europe. N. Africa.—*C. elongatus*, Willd. 5 Canaries.—*C. littoralis*, L. 4 Portorico.—*C. Mechoacanna*, Willd. 4 New Spain.—*C. acetosellaefolius*, Desrouss. 4 Mauritius.—*C. Scammonia*, L. 4 Syria.—*C. quinqueslorus*, Vahl. 4 Bourbon.—*C. calystegioides*, Choisy. 4 China.—*Aniseia Medium*, Choisy. 5 Java.—*A. uniflora*, Choisy. 4 Assam. The Concans.—*A. barlerioides*, Choisy. 4 Goruckpore. Kemaon.—



A. satcifolia, Choisy. 2. St. Domingo.—*A. martinicensis*, Choisy. 2. Martinique.—*Polymeria calycina*, R. Br. 2. Tropical New Holland.—*P. pusilla*, R. Br. 2. Tropical New Holland.—*P. quadrivalvis*, R. Br. 2. Tropical New Holland.—*Porana acuminata*, Beauv. 5 (Guinea).—*Neuropeltis ovata*, Wall. 5 Amherst.—*Prevostea sericea*, G. Don. 5 (New Granada).—*P. heterantha*, G. Don. 2. (Brazil).—*Breweria elegans*, Choisy. 2. Prome.—*B. pannosa*, R. Br. 2. Tropical New Holland.—*B. media*, R. Br. 2. Tropical New Holland.—*B. linearis*, R. Br. 2. Tropical New Holland.—*Bonamia madagascariensis*, Pet. Th. 5 Madagascar.—*Cressa cretica*, L. 2 Candia.—*C. australis*, R. Br. 2 Tropical New Holland.—*Evolvulus nummularius*, L. 2. Jamaica.—*E. linifolius*, L. 2 Tropical New Holland. Jamaica.—*E. sericeus*, Swz. 2 Jamaica. Mexico.—*E. latifolius*, Ker. 2. Brazil.

ORDER CLXXII.—POLEMONIACEÆ,—Lindl. Nat. Syst. p. 232.

THE GREEK VALERIAN TRIBE.

Herbs, with an occasionally climbing stem, by Lindl. referred to 16 genera. Of these, according to Spreng. syst. B. Reg. (19, t. 1622, app.) B. M., and Royle, ill., about 60 species have been found in N. America, especially California; 22 in S. America and Mexico; 2 in Siberia; 1 in Europe and N. Asia; and 3-4 in the Himalayas. The latter are *Polemonium coeruleum* and *gracile*, if both really are distinct; and? *Cyananthus integer* and *lobatus*.—"Properties none, or unknown." (Lindl.)

POLEMONIUM, L. (*G. Don's Mill. dict.* 4, p. 238.)

1. *coeruleum*, L. (*G. Don. l. c.*;—*E. B.* 1, p. 14;—*Roxb. fl. ind.*; ed. Carey, 2, p. 24.) Greek Valerian. Jacob's Ladder. 2 N. Europe. Siberia. Kemaon. Fl. large, sky-blue, C. S. but very rarely.

2. *mexicanum*, Cervant. (*G. Don's Mill. dict.* 4, p. 239;—*B. M.* 6, t. 460.) 2. Mexico. Fl. large, pale-blue, C. S.

GILIA, Ruiz. and Pav. (*G. Don's Mill. dict.* 4, p. 244.)

1. *achilleæfolia*, Benth. (*G. Don. o. c.* p. 245;—*B. Reg.* 20, t. 1682;—*B. M.* 62, t. 3440.) 2 California. Fl. small, lilac-blue, March.

2. *capitata*, Dougl. (*G. Don. l. c.*;—*B. M.* 53, t. 2698;—*B. Reg.* 14, t. 1170.) 2 North-west America. Fl. small, blue, March.

COLLOMIA, Nutt. (*G. Don's Mill. dict.* 4, p. 246.)

1. *linearis*, Nutt. (*G. Don. l. c.*;—*B. M.* 56, t. 2893;—*B. Reg.* 14, t. 1166.) 2 N. America. Fl. small, rose-coloured, Feb. and March.

CALDASIA, Willd. (*G. Don's Mill. dict.* 4, p. 247.)

1. *heterophylla*, Willd. (*G. Don. l. c.*;—*B. Reg.* 2, t. 92.—*Bonplandia geminiflora*, Cav. icon. 6, t. 532.) 2 New Spain. Fl. smallish, pale blue, C. S.



- * *Phlox Drummondii*, Hook; B. M. 62, t. 3441. ☉ Texas.—*Linanthus dichotomus*, Benth. ☉ California.—*Leptosiphon grandiflorus*, Benth. ☉ California.—*L. androsaceus*, Benth. ☉ B. Reg. 20, t. 1710;—*L. densiflorus*, Benth. B. Reg. 20, 1725. ☉ California.—*Fenzlia dianthiflora*, Benth. ☉ California.—*Gilia tenuiflora*, Benth.; B. Reg. 22, t. 1888. ☉ California.—*G. tricolor*, Benth.; B. Reg. 20, t. 1704. ☉ California.—*Navaretia pungens*, Lindl. (*Gilia pungens*, Dougl. B. M. 57, t. 2977.) ☉ California.—*Löselia coccinea*, G. Don. ☿ Mexico.—*L. caerulea*, G. Don. ☿ Mexico.

ORDER CLXXIII.—COBÆACEÆ, D. Don.—Lindl. Nat. Syst. p. 233.

Climbing shrubs, of 1 genus, containing 2 species, both from S. America and Mexico.—Properties unknown.

- * *Cobaea scandens*, Cav. B. M. 22, t. 851. ☿ Mexico.—*C. macrostemma*, Pav. MSS; B. M. 66, t. 3780. ☿ Guayaquil.

ORDER CLXXIV.—HYDROLEACEÆ, Kth.—Lindl. Nat. Syst. p. 325.

Herbs or undershrubs, by Lindl. referred to about 7 genera. Of these, Choisy, and Lindl. assign 15 species to S. America; 3 to Carolina and Georgia; 1 to Unalaska; 1 to Madagascar; 1 to S. Africa; and 2 (*Hydrolea*) to the E. Indies. Properties unknown.

HYDROLEA, L. (*G. Don's Mill. dict.* 4, p. 249.)

1. *zeylanica*, Vahl. (*Symb.* 2, p. 46;—*G. Don. l. c.*;—*J. Grah. Cat. B. pl.* p. 127.—*Nama zeylanica*, L.;—*Roxb. fl. ind.* 2, p. 73.—*Steris javana*, L. *Mant.*—*Steris aquatica*, *Burm. ind. t.* 39, f. 3;—*Rheed.* 10, t. 28.) कंकड़ा *Kankhra*. ☉ Mexico. Rio Janeiro. Java. Ceylon. Both Peninsulas of India. Bengal, (Serampore.) Hindoostan. Lower Nepal. Fl. small, deep blue C. S.; fr. H. S.

WIGANDIA, Kth.

1. *urens*, Kth. (*Nov. gen. and sp.*) ☿ Mexico. Peru.

- * *Hydrolea quadrivalvis*, Walt. *β. inermis*. ☿ Guiana.—*H. spinosa*, L. B. Reg. 7, t. 566. ☿ S. America.—*Nama undulata*, H. B. and Kth. ☿ Mexico.—*N. origanifolia*, H. B. and Kth. ☿ St. Jago.—*N. longiflora*, Choisy. ☿ Mexico.—*Wigandia Kunthii*, Choisy. ☿ Mexico.



ORDER CLXXV.—LOBELIACEÆ, Juss.—Lindl. Nat. Syst. p. 235.

Herbs and shrubs, by Lindl. referred to 20 genera. Of these, Spreng. syst. enumerates for S. America, Mexico, and the W. Indies, about 68 species; for S. Africa, 34; for N. Holland, and the South Sea Islands 20; for N. America 12; for Europe 7; for the Mascarenhas Islands 3; for Japan 2; for China and for Kamtschatka 1. In the E. Indies have been found 1 species of *Piddingtonia*; and, according to Spreng. and Wall. Cat. and MSS. 14 of *Lobelia*, mostly mountain-plants, from the Himalayas down to Ceylon and the Peninsula of Malacca.

"All dangerous or suspicious, in consequence of the excessive acridity of their milk." (Lindl.)

PRATIA, Gaudich, (*G. Don's Mill. dict.* 3, p. 699.)

1. *radicans*, G. Don. (*o. c.* p. 700;—*J. Grah. Cat. B. pl.* p. 102.—*Lobelia radicans*, Willd. *spec.* 1, p. 948;—*Roxb. fl. ind.* 1, p. 507; *ed. Carey*, 2, p. 111; not Thunb.) ? China. Fl. smallish, rose-coloured, sweet-scented, R. and C. S.; fr. C. S.
2. *Careyana*, (*L. radicans* var. *major*, *Carey*, MSS.) © Native place uncertain. Fl. small, white, C. S.; fr. H. S.

PIDDINGTONIA, Alph. DC.

1. *begonifolia*, Alph. DC. (*Pratia begonifolia*, Lindl.;—*B. Reg.* 16, t. 1373;—*G. Don's Mill. dict.* 3, p. 699.—*Lobelia begonifolia*, Wall.; *Roxb. fl. ind.*; *ed. Carey*, 2, p. 115.—*L. obliqua*, Buch.;—*D. Don. pr. fl. nep.* p. 158.) ? Katmandu. Fl. smallish, purplish, C. S.

TUPA, G. Don. (*Mill. dict.* 3, p. 700.)

1. *Feuillei*, G. Don. (*l. c.*—*Lobelia Tupa*, L.;—*B. M.* 52, t. 2552;—*B. Reg.* 19, t. 1612.) ? Chili. Peru. A very poisonous species. Even the smell of the flowers will cause vomiting according to Feuillee, and the milk of it, if by any accident it touches the eyes, occasions blindness. Fl. large, reddish-scarlet. Has been introduced into H. C. G. Fl. ?

LOBELIA, L. (*G. Don's Mill. dict.* 3, p. 704.)

1. *persicifolia*, Lam. (*Dict.* 3, p. 584;—*G. Don. o. c.* p. 707.) ? Guadeloupe. Has been introduced into H. C. G. Fl. ?
2. *zeylanica*, L. (*G. Don. Mill. dict.* 3, p. 709;—*Roxb. fl. ind.*; *ed. Carey*, 2, p. 113.) ? China. Ceylon. Khassya Mountains. Fl. small, purple, C. S.
3. *triangulata*, Roxb. (*H. B.* p. 16.—*L. trigona*, *Roxb. fl. ind.*; p. 506; *ed. Carey*, 2, p. 111;—*G. Don's Mill. dict.* 3, p. 709.—*L. stipularis*, Roth.) © Peninsula of India. Prome. Bengal, (Serampore.) Khassya Mountains. Nepal. Kemaon. Fl. small, blue, R. and C. S.; fr. C. S.
4. *eurostos*, (*Lobelia robusta*, Wall. MSS.;—not Grah.) L. © Manipore. Fl. 1837. large, white, Jan. and Feb.; fr. H. S.



- * *Pratia hederacea*, Cham. 2. Brazil.—*Tupa salicifolia*, G. Don. (*Lobelia gigantea*, Smis. ; B. M. 32, t. 1325.) 5 Valparaiso.—*Syphocampylus macranthus*, Pohl. 5 Rio Janeiro.—*S. canus*, Pohl. 5 Brazil.—*S. villosulus*, Pohl. 2. Brazil.—*S. longipedunculatus*, Pohl. 2. Rio Janeiro.—*S. surinamensis*, G. Don. (*Lobelia surinamensis*, L. ; B. M. 7, t. 225.) 5 Surinam.—*S. Berterianus*, G. Don. 5 Guadeloupe.—*S. convolvulaceus*, Cham. 5 Brazil.—*S. lycioides*, Cham. 5 Brazil.—*Lobelia camporum*, Pohl. 2. Brazil.—*L. exaltata*, Schott. 2. Brazil.—*L. thapsoides*, Schott. 2. Rio Janeiro.—*L. pauciflora*, H. B. and Kth. 2. Mexico.—*L. rapunculoides*, H. B. and Kth. 2. Mexico.—*L. xalapensis*, H. B. and Kth. 2. Mexico.—*L. fenestralis*, Cav. 2. Mexico.—*L. inflata*, L. 2. Virginia.—*L. nummularioides*, Cham. 2. Brazil.—*L. reniformis*, Cham. 2. Brazil.—*L. aquatica*, Cham. 2. Brazil.—*L. Krausii*, Grah. 2. Dominique.—*L. racemosa*, Sims. ; B. M. 47, t. 2137. 5 Rio Janeiro.—*L. robusta*, Grah. 5 Hayti.—*L. fulgens*, Willd. 2. Mexico.—*L. splendens*, Willd. ; B. R. 1, t. 60. 2. Mexico.—*L. trialata*, Buch. (*L. micrantha*, Hook. exot. fl. t. 144.) 2. Nepal.—*L. nicotianifolia*, Heyne. 2. Bangalore. Kandalla.—*Monopsis conspicua*, Salisb. ; B. M. 36, t. 1499. 2. C. G. H.—*Hippobroma longiflorum*, G. Don. (*Lobelia longiflora*, Jacq. B. Reg. 14, t. 1200.) 2. Jamaica.—*Clintonia elegans*, Dougl. B. Reg. 15, t. 1241.) N. America.—*Jasione montana* L. ; E. B. 13, t. 882. 2. N. Africa.

ORDER CLXXVI.—CAMPANULACEÆ, R. Br.—Lindl. Nat. Syst.
p. 237.

THE CAMPANULA TRIBE.

Herbs or undershrubs, sometimes climbing, by Lindl. referred to 21 genera. Of the 311 species belonging to this order, only 19 are found in intratropical countries. Alph. DC. remarks, that "it is within the 36° and 47° N. lat. that in our hemisphere the greatest number of species is found; the chain of the Alps, Italy, Greece, Caucasus, the Altai range are their true country. In whatever direction we leave these limits, the number of species rapidly decreases. In the southern hemisphere, the Cape of Good Hope, (lat. 34° S.) is another centre of habitation, containing not fewer than 63 species." (Lindl.) In the E. Indies, have, according to Wall. Cat. and Royle ill., been found 36 species, viz. 1 of *Cephalostigma*, (Banks of the Irrawaddi,) 8 of *Codonopsis*, (Himalayas, one from the rocks of Pingee, on the banks of Irrawaddi,) 2 of *Wahlenbergia*, (one from Nepal; the other from the plains of India,) 24 of *Campanula*, (Himalayas, 1 from the Neelgherries; another from Prome,) and 1 of



Symphiandra. (Himalayas.) In these are included *Codonopsis lurida*, Lindl.; *Campanula pallida*, Wall. *C. lanceafolia*, Roxb. *C. integerrima*, Buch. and *C. ? repens*, Lour.

"Their milky juice is rather acrid, but nevertheless the roots and young shoots of some, particularly of *Campanula Rapunculus*, L. or Rampion, of *Phyteuma spicatum*, L., of *Canarina Campanula*, Lam. &c. are an occasional article of food. The chief value of the order, however, is its beauty." (Lindl.)

WARLENBERGIA, Schrad. (*G. Don's Mill. dict.* 3, p. 737.)

1. *capensis*, Alph. DC. (*G. Don. o. c. p.* 738.—*Campanula capensis*, L.;—*B. M.* 20, t. 782.—*Roella decurrens*, Andr.; *Bot. repos. t.* 238.) ⊙ C. G. H. Fl. large, externally bluish-green, internally dark-blue at the bottom, greenish just under the lobes, black-spotted within the lobes at the recesses, and the lobes violaceous, Feb. and March.

2. *hederacea*, Alph. DC. (*G. Don's Mill. dict.* 3, p. 739.—*Campanula hederacea*, L.; *E. B.* 2, t. 73.—*C. hederæfolia*, Salisb.—*C. arvatica*, Lag.—*Aikinia hederacea*, Salisb.—*Schultesia*, Roth.) ♀ N. W. Europe. N. America. Fl. smallish, bluish-rose-coloured, C. S.

3. *dehiscens*, Alph. DC. (*G. Don's Mill. dict.* 3, p. 740.—*Campanula dehiscens*, Roxb. *fl. ind.* 1, p. 504; *ed. Carey*, 2, p. 96;—*J. Gralh. Cat. B. pl. p.* 103.) ⊙ Mahableshwur. Bengal. (Serampore.) Khassya Mountains. Nepal. Fl. small, white, Jan. Feb. and March; fr. April.

4. *cernua*, Alph. DC. (*G. Don. l. c.*—*Campanula cernua*, Thunb.) ⊙ C. G. H. Fl. smallish, white and blue, March.

5. *hispidula*, Alph. DC. (*G. Don's Mill. dict.* 3, p. 742.—*Campanula hispidula*, Thunb.; L. excl. syn. *Comm. hort.* t. 37.) ⊙ C. G. H. Fl. smallish, blue, March.

PHYTEUMA, L. (*G. Don's Mill. dict.* 3, p. 746.)

1. *orbiculare*, L. (*G. Don. o. c. p.* 747;—*E. B.* 2, t. 142.—*P. cordatum*, Vill.—*B. M.* 36, t. 1466.) ♀ Europe. Fl. small, purplish-blue, C. S. but very rare.

CAMPANULA, L. (*G. Don's Mill. dict.* 3, p. 750.)

1. *laciniata*, L. (*G. Don. o. c. p.* 751.) ⊙ Archipelago. Fl. large, pale blue, March.

2. *Medium*, L. (*G. Don. l. c.*—*C. grandiflora*, Lam.) *Canterbury Bells*. ♂ S. Europe. Caucasus. Tauria. Fl. large, blue, June.

3. *divergens*, Willd. (*G. Don's Mill. dict.* 3, p. 754;—*Sweet fl. gard. n. s. t.* 256.—*C. spatulata*, Wald. and Kit. not Sm.—*C. nutans*, Vahl; *Horn*.—*C. cernua*, Hort. not Thunb.) ♂ Siberia. Hungary. Fl. large, violet blue, June.

4. *glomerata*, L. (*G. Don's Mill. dict.* 3, p. 755;—*E. B.* 2, t. 90.—*C. barbata*, Spreng.—*C. betonicaefolia*, Gilib.—*C. graminifolia*, Willerm.—*C. congesta*, Röm. and Sch.) ♀ Europe. Caucasus. Persia. Altai Mountains. Siberia. Fl. largish, bluish, violet, June.

5. *Trachelium*, L. (*G. Don's Mill. dict.* 3, p. 557;—*E. B.* 1, t. 12.—*C. gautelée*, Jaum. *St. Hil.*—*C. urticifolia*, Schmidt.—*C. cervicaria*,

- Fuchs.*; not L.) ♀. Europe. Caucasus. Tauria. Siberia. Fl. large, bluish, violet, May and June.
6. *rapunculoides*, L. (*G. Don's Mill. dict.* 3, p. 557;—*E. B.* 20, t. 1369.—*C. nutans*, *Lam.*; not Vahl. nor Wald. and Kit.—*C. urticifolia*, *Turr.* not Schmidt, All. and Willd.—*C. trachelium*, *Bull.*; not L.—*C. secunda*, *Schmidt.*—*C. morifolia*, *Salisb.*—*C. rigida*, *Stokes.*—*C. glabri-carpa*, *Schleich.*) ♀. Europe. Caucasus. Siberia. Fl. large, bluish-violet, June and July.
7. *bononiensis*, L. (*G. Don's Mill. dict.* 3, p. 757.—*C. thaliana*, *Wall.*) ♀. E. Europe. W. Asia. Italy. Germany. Caucasus. Fl. largish, bluish-violet, May and June, or C. S.
8. *rotundifolia*, L. (*G. Don's Mill. dict.* 3, p. 759;—*E. B.* 13, t. 866.—*C. uniflora*, *Huds.*; not L.—*C. minor*, *Lam.*—*C. variifolia*, *Salisb.*—*C. minuta*, *Savi.*—*C. Scheuchzeri*, *Lodd. Bot. Cab.* t. 485; not of others.—*C. heterophylla*, *Gray.*—*C. allophylla*, *Rafin.*) ♀. Europe. Siberia. N. America. Fl. largish, pale blue, June and July.
9. *pulla*, L. (*G. Don's Mill. dict.* 3, p. 760;—*B. M.* 51, t. 2492.) ♀. Transylvania. Bohemia. Austrian Alps. Fl. largish, indigo-coloured, May and June.
10. *Erinus*, L. (*G. Don's Mill. dict.* 3, p. 761;—*Sibth. and Sm. fl. græc.* t. 214.) ♀. S. Europe. Fl. small, pale bluish rose-coloured, May and June.
11. *drabefolia*, Sm. and Sibth. (*fl. græc.* t. 215;—*G. Don's Mill. dict.* 3, p. 761.) ☉ Island of Samos, near Athens. Fl. smallish, white-violaceous, Feb.
12. *fragilis*, Cyril. (*pl. fasc.* 1, p. 32, t. 11, f. 2;—*G. Don's Mill. dict.* 3, p. 762;—*B. Reg.* 20, t. 1738.—*C. diffusa*, *Vahl.*—*C. cochlearifolia*, *Vahl.*—*C. crassifolia*, *Nees.*) ♀. S. Europe. Fl. large, pale blue, May and June.
13. *peregrina*, L. (*G. Don's Mill. dict.* 3, p. 763;—*B. M.* 31, t. 1257.—*C. lanuginosa*, *Lam.*; not Willd.—*C. hirsutissima*, *Guss.*) ♀. Mount Lebanon. Aleppo. Fl. large, more or less dark violet, May.
14. *Rapunculus*, L. (*G. Don's Mill. dict.* 3, p. 765;—*E. B.* 4, t. 283.—*C. fastigiata*, *Gmel.*; not Dufour.—*C. coarctata*, *Gilib.*—*C. esculenta*, *Salisb.*—*C. elatior*, *Link.*—*C. glandulosa*, *Banks.*) ♂. N. Africa. Europe. Caucasus. Transylvania. Fl. middle-sized, blue, June.
15. *patula*, L. (*G. Don's Mill. dict.* 3, p. 765;—*E. B.* 1, t. 42.—*C. bellidifolia*, *Lapeyr.*—*C. decurrens*, L.) ♂. Fl. large, purplish-blue, June.

SPECULARIA, Heist. (*G. Don's Mill. dict.* 3, p. 768.)

1. *Speculum*, Alph. DC. (*G. Don. l. c.*—*Campanula Speculum*, L.;—*B. M.* 3, t. 102.—*Legouzia arvensis*, *Durand.*—*L. Durandi*, *Delarb.*—*Prismatocarpus Speculum*, *L'Herit.*—*Campanula pulchella*, *Salisb.*—*C. miroir de venus*, *Jaume.*—*C. cordata*, *Visiani.*) ☉ Europe. Fl. largish, violet blue, Feb. and March; fr. March.



2. *hybrida*, Alph. DC. (*G. Don's Mill. dict.* 3, p. 769.—*Campanula hybrida*, L.;—*E. B.* 6, t. 375.—*Prismatocarpus hybridus*, L'Her.—*P. confertus*, Münch.—*Legouzia hybrida*, Delarb.—*L. parviflora*, Gray.) Fl. small, rose-coloured, Feb. and March; fr. March.

TRACHELIUM, L. (*G. Don's Mill. dict.* 3, p. 769.)

1. *coeruleum*, L. (*G. Don. l. c.*;—*B. Reg.* 1, t. 72.) ♀. S. Europe. Fl. large, violaceous, May.

- * *Cephalostigma paniculatum*, Alph. DC. ♀. Prome. Banks of the Irawaddi.—*Campanumæa javanica*, Bl. ♀. ∪ Humid woods in Java.—*Codonopsis truncata*, Wall. Banks of the Irawaddi.—*C. parviflora*, Wall. Khassya Mountains.—*Canarina campanulata*, Lam.; B. M. 13, t. 444. ♀. Canary Islands.—*Microcodon glomeratum*, Alph. DC. ⊙ C. G. H.—*M. sparsiflorum*, Alph. DC. ⊙ C. G. H.—*Wahlenbergia graminifolia*, Alph. DC. ♀. Sicily.—*W. agrestis*, Alph. DC. ⊙ Nepal.—*Michauxia campanuloides*, L'Her. ♂. Levant.—*Campanula sylvatica*, Wall. Nepal.—*C. Alphonsii*, Wall. ♀. Neelgheeries.

ORDER CLXXVII.—SPHENOCLEACEÆ, Martius.—Lindl. Nat. Syst.
p. 238.

Comprehends only one genus, and the following marshy herb, whose properties are unknown.

PONGATIUM, JUSS. (*Gen. pl.* p. 423.)

1. *indicum*, Lam. (*Sphenoclea zeylanica*, Gärtn.; fr. 1, p. 113, t. 24, f. 5;—*Roxb. fl. ind.* 1, p. 507; ed. Carey, 2, p. 116;—*J. Grah. Cat. B. pl.* p. 248;—*Spreng. syst.* 1, p. 622.—*Rapania herbacea*, Lour.—*Gartnera Pongati*, Retz. obs. 6, p. 24;—*Rheed.* 2, t. 24.) জীল মরিচ *Jeel-murich*. ⊙ Ceylon. Both Peninsulas of India, Bengal, (Serampore.) Hindoosthan. Fl. very small, white; R. and C. S.; fr. C. S.

ORDER CLXXVIII.—STYLIDIACEÆ, Lindl. Nat. Syst. p. 240.

Herbs or undershrubs, by Lindl. referred to 3 genera. Of these 47 species belong to N. Holland and the South Sea Islands, and 1 to Terra del Fuego; 4 species have been found in India, viz. *Stylidium tenellum*, Swz. (Malacca.) *S. uliginosum*, Swz. (Ceylon.) *S. Wightianum*, Wall.; (Peninsula of India,) and *S. Kunthii*, Wall. (Silhet.) Properties unknown.



STYLIDIUM, Swz. (*G. Don's Mill. dict.* 3, p. 719.)

1. *tenellum*, R. Br. ? (*pr. p.* 571.—Swz. ?) ☉ Ditches about Serampore.
Fl. small, greenish-lilac, R. S. ; fr. C. S.

- * *Stylidium eriorrhizon*, R. Br. ♀ Tropical New Holland.—*S. floribundum*, R. Br. ♀ Tropical New Holland.—*S. capillare*, R. Br. Tropical New Holland.—*S. rotundifolium*, R. Br. ♀ Tropical New Holland.—*S. pedunculatum*, R. Br. ♀ Tropical New Holland.

ORDER CLXXIX.—GOODENIACEÆ, Lindl. Nat. Syst. p. 241.

Herbs, rarely shrubs, by Lindl. referred to 9 genera. Of these, 45 species have been found in New Holland and the South Sea Islands ; 24 (*Cyphia*) in S. Africa, (*Hervey*), and 1 (*Pentaphragma begonifolium*, Wall.) in Penang. Properties unknown.

CYPHIA, Berg. (*G. Don's Mill. dict.* 2, p. 718.)

1. *bulbosa*, Berg. (*G. Don. l. c.*—*C. capensis*, Gmel.—*Lobelia bulbosa*, L.—*L. Cyphia*, Gmel.) ♀ C. G. H. Introduced in 1841.

- * *Pentaphragma begonifolium*, Wall. ♀ Penang.—*Velleia spathulata*, R. Br. ♀ Tropical New Holland.—*V. pubescens*, R. Br. ♀ Tropical N. Holland.—*Leschenaultia filiformis*, R. Br. ♀ Tropical N. Holland.

ORDER CLXXX.—SCÆVOLACEÆ, Lindl. Nat. Syst. p. 242.

Herbs or shrubs, by Lindl. referred to 4 genera. Of these, 36 species have been discovered in New Holland, and in the South Sea Islands ; 1 in the W. Indies ; 1 in S. Africa, which is also common to New Holland and Cochin China ; and 3 (*Scævola*) in the E. Indies, one also common to Mauritius ; another to New Holland, and Cochin China. Properties unknown.

SCÆVOLA, L. (*G. Don's Mill. dict.* 3, p. 727.)

1. *Taccada*, Roxb. (*fl. ind.* 1, p. 527 ; *ed. Carey*, 2, p. 146 ;—*G. Don's o. c. p.* 728 ;—*J. Grah. Cat. B. pl.* p. 103, excl. syn. Bot. Mag.—*Lobelia Taccada*, Gärtn. fr. 1, p. 119, t. 25, f. 5 ;—*Rheed.* 4, t. 59 ?—*Rumph.* 4, t. 54.) ☿ Sea shores of the Moluccas, Malay Islands, Penang, Mauritius, &c. Fl. middle-sized, white, sweet-scented, and fr. whole year.

- * *Scævola Königii*, Vahl. ; B. M. 54, t. 2732. ☿ Tropical New Holland, Cochin China.—*S. Plumieri*, Vahl. ☿ W. Indies.—*S. sericea*, Forst.



♂ Tropical New Holland.—*S. oppositifolia*, Roxb. ♂ Moluccas—*S. ovalifolia*, R. Br. ♂ Tropical N. Holland.—*S. revoluta*, R. Br. ♂ Tropical N. Holland.—*S. angulata*, R. Br. ♂ Tropical New Holland.—*Dampiera ferruginea*, R. Br. ♂ Tropical N. Holland.

ORDER CLXXXI.—CINCHONACEÆ,—Lindl. Nat. Syst. p. 243.

THE COFFEE TRIBE.

Trees, shrubs, or herbs, by Lindl. (excluding *Uncaria*, *Tarenna* and *Cenotheca*, and adding *Neurocalyx*, *Oxystoma* and *Pilospermum*,) referred to 233 genera. Of these, DC. pr. enumerates about 870 species for S. America, Mexico, and the W. Indies; 54 for Guinea; 52 for New Holland and the South Sea Islands; 40 for the Mascarenhas Islands; 24 for Senegal; 22 for Madagascar; 18 for China; 14 for N. America, especially its southern provinces; 4 for Arabia; 3 for Zanguebar; 3 for Timor; 3 for Persia; 3 for Japan; 2 for the Canaries; 1 for S. Europe; 1 for St. Helena; 1 for Ascension; and 1 for Tristan d'Acunha. In S. Africa, excluding one *Rubia*, and several *Galiums*, have been found about 52 species; and in the E. Indies, according to DC., W. and A., and Wall. Cat., 695, viz.

Of Nauclea, 51.	Of Adenosacme, 3.
— Hymenopogon, 1.	— Xanthophytum, 1.
— Luculia, 1.	— Ophiorrhiza, 26.
— Hymenodictyon, 4.	— Argostemma, 8.
— Exostemma, 1. (<i>Röm. and Sch.</i>)	— Spiradiclis, 1.
— Zuccarinia, 1.	— Neurocalyx, 2.
— Lucinaea, 1.	— Dentella, 1.
— Mussaenda, 20.	— Hedyotis, 95.
— Gynopachys, 3.	— Kohautia, 2.
— Stylocoryne, 14.	— Metabolos, 10.
— Gardenia, 22.	— Axanthes, 5.
— Randia, 17.	— Urophyllum, 2.
— Griffithia, 1.	— Morinda, 21.
— Menestoria, 4.	— Myrmecodia, 2.
— Heliospora, 1.	— Hydnophytum, 2.
— Hyptianthera, 1.	— Hypobathrum, 1.
— Bertiera, 3.	— Mephitidia, 20.
— Petesia, 4. (<i>Bartl., Lour.</i>)	— Vangueria, 2.
— Petunga, 4.	— Guettarda, 7.
— Macrocnemum ? 2. (<i>Roxb.</i>)	— Timonius, 2.
— Wendlandia, 16.	— Hamiltonia, 3.
— Lerchea, 1.	— Leptodermis, 1.
— Greenia, 2.	— Myonima ? 1. (<i>Bartl.</i>)



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| Of Litosanthes, 1. | Of Coffea, 8. |
| — Nymphetodes, 1. | — Antherura, 1. (<i>Lour.</i>) |
| — Celospermum, 2. | — Psychotria, 38. |
| — Stigmanthus, 1. (<i>Lour.</i>) | — Cephaelis ? 1. (<i>Bl.</i>) |
| — Pæderia, 4. | — Geophila, 1-2. |
| — Amaracarpus, 1. | — Cephalanthus, 3. (<i>Lour., Roxb.</i>) |
| — Damnacanthus, 1. (<i>Gärtn.</i>) | — Borreria, 4. |
| — Canthium, 17. | — Santia, 1. |
| — Epithinia, 1. | — Euphyrena, 1. |
| — Chiococca ? 1. (<i>Bl.</i>) | — Spermacoce, 24. |
| — Ixora, 60. | — Knoxia, 12. |
| — Pavetta, 28. | — Myrtacarpus, 1. (<i>Cham. & Schl.</i>) |
| — Saprosmia, 2. | — Cuncea, 1. (<i>Buck.</i>) |
| — Polyozus, 2. (<i>Bl.</i>) | — Hydrophylax, 1. |
| — Grumilea, 4. | — Scyphiphora, 1. (<i>Gärtn.</i>) |
| — Rutidea ? 1. (<i>Bl.</i>) | |

Cinchonaceæ not sufficiently known as to their place.

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| Psilobium, 2. | Jackia, 1. |
| Platyerum, 1. (<i>Bartl.</i>) | Myrioneuron, 1. |
| Lecananthus, 1. | Pleotheca, 2. |

Species to be re-examined as to their section and genus.

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|-----------------------------|--------------------------------|
| Cupia auriculata, DC. | Randia polysperma, Roxb. |
| — truncata, DC. | Pæderia recurva, Roxb. |
| — scandens, DC. | — erecta, Roxb. |
| Genipa bufalina, Lour. | — ternata, Wall. |
| — flava, Lour. | — Wallikara, Juss. |
| Gardenia ? pubescens, Roth. | Polyozus barbatus, Sm. |
| Randia parviflora, Lam. | Cephalanthus procumbens, Lour. |
| — drupacea, DC. | — montanus, Lour. |

As that part of Wall. Cat., which contains the greatest part of his Cinchonaceæ, remains in R. Brown's hands unpublished, the number of Indian species cannot be exactly ascertained.

Properties, as far as India is concerned, under the species.

A. CINCHONÆ, A. Rich.

(*Cinchonaceæ*, DC. *pr.* 4, p. 343, *W. and A. pr.* 1, p. 390.)

NAUCLEA, L. (*DC. pr.* 4, p. 343 ; *W. and A. pr.* 1, p. 390.)

1. *undulata*, Roxb. (*fl. ind.* 1, p. 508 ; *ed. Carey*, 2, p. 117 ; — *DC. l. c.* ; *G. Don's Mill. dict.* 3, p. 466.) 5 Moluccas. Fl. small, orange, fragrant, May and June ; fr. March and April.
2. *condunata*, Roxb. (*Rees' cycl.* 24, No. 6 ; — *DC. pr.* 4, p. 344 ; — *G. Don's Mill. dict.* 3, p. 467. — *N. cordata*, Roxb. *fl. ind.* 1, p. 509 ; *ed. Carey*, 2, p. 118.) 5 Ceylon. Fl. small, bright yellow, fragrant. In H. C. G. fl. May and June ; fr. C. S. (*Roxb.*)



8. *macrophylla*, Roxb. (*fl. ind.* 1, p. 511; *ed. Carey*, 2, p. 120;—*DC. pr.* 4, p. 344;—*G. Don's Mill. dict.* 3, p. 467.) L. 5 Amboyna. Fl. small, pale yellow, sweet smelling. In H. C. G. fl. June and July. (*Roxb.*)
4. *ovalifolia*, Roxb. (*fl. ind.* 1, p. 516; *ed. Carey*, 2, p. 124;—*DC. pr.* 4, p. 344;—*G. Don's Mill. dict.* 3, p. 467.) 5 Silhet. Introduced into H. C. G. in 1811, but had not fl. up to 1814. (*Roxb.*)
5. *Cadamba*, Roxb. (*fl. ind.* 1, p. 512; *ed. Carey*, 2, p. —;—*DC.* 121 *pr.* 4, p. 344;—*G. Don's Mill. dict.* 3, p. 467;—*J. Grah. Cat. B. pl. p.* 87, excl. syn. W. and A. et. Rumph.—*Rheed.* 3, t. 33.) कदम्ब *Kudum*. L. 5 Common about the villages in S. Concan, Bengal, (Serampore.) Silhet, Patna, Gungachara. Fl. small, orange-coloured, sweet-scented, H. S.; fr. Oct. and Nov.
6. *parvifolia*, Roxb. (*Corom.* 1, t. 52; *fl. ind.* 1, p. 513; *ed. Carey*, 2, p. 122;—*DC. pr.* 4, p. 344;—*G. Don's Mill. dict.* 3, p. 467;—*W. and A. pr.* 1, p. 391;—*J. Grah. Cat. B. pl. p.* 87;—*Wight's ill.* 2, t. 123.—*N. parviflora*, *Pers. syn.* 1, p. 202.—*Cephalanthus pilulifer*, *Lam.*;—*DC. o. c. p.* 539.—*Nauclea orientalis*, *Gärtn. fr.* 1, p. 151, t. 30, f. 8, excl. syn.) L. 5 Coromandel. The Concans. Common in the Mawul districts. Bengal, (Serampore.) Monghir. Morung. Rajmahal Hills. Hurdwar. Deyra-Dhoon. Kheree Pass. Kemaon. Fl. small, yellow, H. and R. S.; fr. C. S.—*Wood* light chestnut-coloured, firm, close-grained, used for various purposes connected with gunnery, but soon rotting, if exposed to wet. (*Roxb. J. Graham.*)
7. *cordifolia*, Roxb. (*Corom.* 1, t. 53; *fl. ind.* 1, p. 514; *ed. Carey*, 2, p. 122;—*DC. pr.* 4, p. 346;—*G. Don's Mill. dict.* 3, p. 468;—*W. and A. pr.* 1, p. 391;—*J. Grah. Cat. B. pl. p.* 87.) কেজি কদম *Keli-Kudum*, L. 5 Coromandel Mountains. Common throughout the Concans. Banks of the Irawaddi. Taong-Dong. Bengal, (Serampore.) Hardwar. Deyra-Dhoon. Kheree Pass. Kemaon. Fl. small, yellow, R. S.; fr. April.—*Wood* coloured like that of the Box-tree, but much lighter, and at the same time very close-grained. It answers well for furniture; exposed to wet, it soon decays. (*Roxb.*)
8. *sessilifructus*, (*Uncaria sessilifructus*, *Roxb. fl. ind.* 1, p. 520; *ed. Carey*, 2, p. 130;—*DC. pr.* 4, p. 349;—*G. Don's Mill. dict.* 3, p. 471.) 5 〰 Chittagong. Khassya Mountains. Assam. In H. C. G. Fl. ?
9. *scandens*, Sm. (*Rees' cycl.* 24, No. 9, excl. syn. Rumph.—*Uncaria pilosa*, *Roxb. fl. ind.* 1, p. 520; *ed. Carey*, 2, p. 130;—*DC. pr.* 4, p. 348;—*G. Don's Mill. dict.* 3, p. 470;—*Wall. pl. as. rar.* 2, t. 170.) 5 〰 Chittagong. Nepal. Kemaon. In H. C. G. Fl. small, whitish.
10. *capitellata*, (*Nauclea microcephala*, *Wall. MSS.*; not Delil.) In H. C. G.
- LUCULIA, Sweet. (*DC. pr.* 4, p. 357;—*G. Don's Mill. dict.* 3, p. 480.)
1. *gratissima*, Sweet. (*Brit. fl. gard. t.* 145;—*DC. o. c. p.* 358;—*G. Don. l. c.*—*Cinchona gratissima*, *Wall. Roxb. fl. ind.*; *ed. Carey*, 2,

p. 154;—*tent. fl. nep.* 1, t. 21.—*Mussaenda* *Luculia*, Buch.;—*D. Don*.
pr. fl. nep. p. 139.) 5 Khassya Mountains. Nepal. Fl. large, rose-
coloured, fragrant. Has been introduced in H. C. G. Fl. ?

HYMENODICTYON, Wall. (*DC. pr.* 4, p. 358;—*G. Don's Mill. dict.* 3,
p. 480;—*W. and A. pr.* 1, p. 392.)

1. *thyrsiflorum*, Wall. (*DC. l. c.*;—*G. Don. l. c.*;—*J. Grah. Cat. B. pl.*
p. 87.—*Cinchona* *thyrsiflora*, Roxb. *fl. ind.* 1, p. 530; *ed. Carey*, 2, p.
251.) 5 Rangoon. Chittagong. Rajmahl. Salsette and Jowar jungles.
Fl. small, greenish yellow, fragrant, June and July; fr. Oct. Nov.
and Dec.

MANETTIA, Mutis, (*DC. pr.* 4, p. 362;—*G. Don's Mill. dict.* 3, p. 483.)

1. *cordifolia*, Mart. (*Sp. mat. med. bras.* 1, p. 19, t. 7;—*DC. o. c.* p.
363;—*G. Don. o. c.* p. 484;—*B. M.* 59, t. 3202.—*M. glabra*, Cham.
and Schlecht;—*DC. l. c.*;—*G. Don. l. c.*) 4. ∪ Hedges and margins
of woods in Brazil, in the province of Minas Geraes, at Villa Rica. Fl.
largish, scarlet, R. S.—*Roots* an excellent remedy in dropsy and
dysentery. (*Mart.*)

* *N. sessiliflora*, Roxb. 5 Chittagong.—*N. glabra*, Roxb. 5 Moluccas.
—*N. rotundifolia*, Roxb. 5 Chittagong.—*N. purpurea*, Roxb. Corom.
1, t. 54, 5 Circars.—*N. Gambir*, Hunt. 5 ∪ Singapore. Penang.
Malacca. Sumatra. Yields the best Gum Kino.—*N. acida*, Hunt. 5 ∪
Penang. Java.—*N. sclerophylla*, Hunt. 5 ∪ Penang.—*N. ovalifolia*,
(*Uncaria ovalifolia*, Roxb.) 5 ∪ Penang.—*N. lanosa*, Poir. 5 ∪
Penang.—*N. elliptica*, (*Uncaria elliptica*, R. Br.) 5 ∪ Penang.—*N.*
cirrhiiflora, (*Uncaria cirrhiiflora*, Roxb.) 5 ∪ Malay Islands.—*N. pe-*
dicellata, (*Uncaria pedicellata*, Roxb.) 5 ∪ Moluccas.—*N. guianensis*,
(*Uncaria guianensis*, Gmel.) 5 ∪ Guiana.—*Adina globiflora*, Salisb.
(*Nuclea Adina*, Sm.; *B. Reg.* 11. t. 895,) 5 China.—*Lecananthus*
erubescens, Jack. 5 Singapore.—*Stevensia buxifolia*, Poit. 5 St. Domin-
go.—*Coutarea speciosa*, Aubl. 5 Guiana.—*C. mexicana*, Zucc. and
Mart. 5 Mexico.—*Hillia longiflora*, Swz. *B. M.* 19, t. 721, 5 W.
Indies. Mexico.—*Hymenodictyum excelsum*, Wall.; *Wight. icon.* 1,
t. 79, 5 The Ghauts.—*H. obovatum*, W. and A.; *Wight. icon.* 1, t. 80.
5 Ram Ghaut.—*Exostemma caribaeum*, Röm. and Sch. 5 W. Indies.
Mexico.—*E. floribundum*, Röm. and Sch. 5 W. Indies.—*E. australe*,
St. Hil. 5 Brazil.—*Danaë fragrans*, Commers. 5 ∪ Mauritius.—*D.*
rotundifolia, Poir. 5 ∪ Mauritius.—*Manettia coccinea*, Willd. *B. Reg.*
9, t. 693. 5 ∪ Guiana.—*M. havannensis*, H. B. and Kth. 5 ∪ Havan-
nah.—*M. cuspidata*, Bert. 5 ∪ Jamaica. Mexico.—*M. villosa*, Cham.
and Schlecht. 4. ∪ Brazil.—*M. rosea*, Pohl. 5 ∪ Brazil.—*Bouvardia*
Jacquini, H. B. and Kth; (*B. triphylla*, var. *a.* *B. Reg.* 2, t. 107.) 5
Mexico.—*B. versicolor*, Ker.; *B. Reg.* 3, t. 245. 5 S. America.—*Caly-*
cophyllum candidissimum, DC. 5 Banks of the Orinocco.—*C. coccineum*,
DC. 5 Trinidad.



B. GARDENIÆ, Cham. and Schlecht.

(Gardeniaceæ, DC. pr. 4, p. 367;—W. and A. pr. 1, p. 393.)

MUSSENDA, L. (DC. pr. 4, p. 370;—G. Don's Mill. dict. 3, p. 489;—W. and A. pr. 1, p. 393.)

1. *frondosa*, L. (DC. l. c.;—G. Don. l. c.;—W. and A. l. c.;—Roxb. fl. ind. 1, p. 557; ed. Carey, 2, p. 227;—J. Grah. Cat. B. pl. p. 88;—B. Reg. 6, t. 517;—Wight. ill. 2, t. 124;—Rheed. 2, t. 17;—Burm. zeyl. t. 76.) ☞ Ceylon. Coromandel. Courtallum. Common on the Ghauts. Khassya Mountains. Lower Nepal. Fl. middle-sized, gold-coloured, H. and R. S.; fr. C. S.2. *corymbosa*, Roxb. (fl. ind. 1, p. 556; ed. Carey, 2, p. 226;—DC. pr. 4, p. 371;—G. Don's Mill. dict. 3, p. 490;—W. and A. pr. 1, p. 393.) ☞ Ceylon. Malabar. Silhet. Fl. middle-sized, bright orange, Aug. and Nov. In some parts of India the white floral leaves are brought to the table as an esculent herb. (Roxb.)3. *macrophylla*, Wall. (pl. as. rar. 2, t. 180;—Roxb. fl. ind.; ed. Carey, 2, p. 228;—DC. pr. 4, p. 371;—G. Don's Mill. dict. 3, p. 490.) ☞ Nepal. Fl. middle sized, deep orange, May, June and July.

STYLOCORYNA, Cav. (DC. pr. 4, p. 377;—G. Don's Mill. dict. 3, p. 494;—W. and A. pr. 1, p. 400.)

1. *Webera*, A. Rich. (Mem. soc. hist. nat. Par. 5, p. 248;—W. and A. o. c. p. 401;—Wight. icon. 1, t. 309;—J. Grah. Cat. B. pl. p. 89.—*Webera corymbosa*, Willd.;—Roxb. fl. ind. 1, p. 696; ed. Carey, 2, p. 533;—Gürtl. fr. 3, p. 71, t. 102;—B. Reg. 2, t. 119.—*Canthium corymbosum*, Pers.—*Rondeletia asiatica*, L.—*Cupia corymbosa*, DC. pr. 4, p. 394;—G. Don's Mill. dict. 3, p. 506.—*Tarenna zeylanica*, Gürtl. fr. 1, p. 139, t. 28;—DC. o. c. p. 396;—G. Don. o. c. p. 507.—*Polyozus maderaspatanus*, DC. o. c. p. 495;—G. Don. o. c. p. 577;—Rheed. 2, t. 23.) Fl. small, white, at last cream-coloured, fragrant, H. S.; fr. C. S. L. ☞ Coromandel. S. Concan. Goa jungles. Penang. &c. Young shoots frequently covered over with a resinous exudation. (Roxb.)2. *odorata*, W. and A. (pr. 1, p. 401; annot.—*Cupia odorata*, DC. pr. 4, p. 394;—G. Don's Mill. dict. 3, p. 507.—*Webera odorata*, Roxb. fl. ind. 1, p. 699; ed. Carey, 2, p. 535.) L. ☞ Khassya Mountains. Fl. middle-sized, white, very fragrant, May.3. *attenuata*, } Wall. (China.) Khassya hills. In H. C. G. Fl. ?
4. *coriacea*, }

BURCHELLIA, R. Br.

1. *capensis*, R. Br. (B. reg. 6, t. 466.—B. cab. 7, t. 646.) C. G. H.

GARDENIA, Ellis, (DC. pr. 4, p. 379;—G. Don's Mill. dict. 3, p. 496;—W. and A. pr. 1, p. 394.)

1. *florida*, L. (spec. p. 305;—DC. pr. 4, p. 379;—G. Don's Mill. dict. p. 496;—Roxb. fl. ind. 1, p. 703; ed. Carey, 2, p. 549;—Thunb. fl. jap. p. 108;—J. Grah. Cat. B. pl. p. 88, excl. syn. B. M. 1842;—



- B. Reg.* 6, t. 449;—*B. M.* 61, t. 3349.—*G. jasminoides*, *Soland.*)
गन्धराज *Gundha-raj*. 5 China. Cultivated in Japan, the Moluccas,
India. *C. G. H. &c.* Fl. large, white, fragrant, H. S.; fr. C. S.
β. *plena* (*Jasminum capense*, *Mill. dict. No.* 7, t. 180;—*Rumph. auct.*
14, t. 2.) 5 Cultivated in gardens. Fl. double, H. S.
* *ovalifolia*, (*B. M.* 53, t. 2627.) Fl. H. S. Cultivated in gardens.
2. *radicans*, Thunb. (*fl. jap.* p. 109, t. 20;—*DC. pr.* 4, p. 379;—*G.*
Don's Mill. dict. 3, p. 496;—*B. Repos.* 8, t. 491;—*B. Reg.* 1, t. 73;
—*B. M.* 43, t. 1842.) 5 Japan. Cultivated in the East Indies, and
at the C. G. H. Fl. largish, white, fragrant, simple, or oftener double,
(as in the above quoted plates.) H. S.
3. *coronaria*, Buch. (*Syme's emb. Ava*, p. 474, with a plate.—*G. costata*,
Roxb. H. B. p. 15; *fl. ind.* 1, p. 704; *ed. Carey*, 2, p. 550;—*DC.*
pr. 4, p. 380;—*G. Don's Mill. dict.* 3, p. 496.) 5 Chittagong. Fl.
very large, white, in the course of the day becoming deep yellow,
fragrant, April; fr. C. S.
4. *carinata*, Wall. (*Roxb. fl. ind.*; *ed. Carey*, 2, p. 560;—*DC. pr.* 4, p.
380;—*G. Don's Mill. dict.* 3, p. 496.) 5 Hills of Penang. Fl. larg-
ish, white, soon becoming yellow, fragrant, April and May.
5. *enneandra*, Kön. (*W. and A. pr.* 1, p. 394;—*J. Grah. Cat. B. pl.* p.
88?—*G. latifolia*, *Roxb. Corom.* 2, t. 134; *fl. ind.* 1, p. 706; *ed.*
Carey, 2, p. 552; excl. syn. Willd.; not Ait.;—*DC. pr.* 4, p. 380,
and *G. Don's Mill. dict.* 3, p. 497, excl. syn. Ait.) 5 Hills in the
Circars and Carnatic. Tull Ghaut. Guzerat. Jungles in Kandesh. Fl.
very large, in the morning pure white, in the evening yellow, fragrant,
April; fr. C. S.
6. *latifolia*, Ait. (*Hort. Kew.* 1, p. 294;—*Willd.*;—*Gärtn. fr.* 3, p. 78, t.
193, f. 3;—*W. and A. pr.* 1, p. 395;—*J. Grah. Cat. B. pl.* p. 88.)
5 Southern Peninsula of India. Duddi on the Gutpurba. Fl. like those
of No. 5, April and May; fr. C. S.
7. *lucida*, Roxb. (*fl. ind.* 1, p. 707; *ed. Carey*, 2, p. 553;—*DC. pr.* 4, p.
381;—*G. Don's Mill. dict.* 3, p. 497;—*W. and A. pr.* 1, p. 395;—*J.*
Grah. Cat. B. pl. p. 88.—*G. resinifera*, *Roth.*) 5 Circars. Culumala.
Elephanta. Kennery jungles. South Mahratta Country. Chittagong.
Fl. large, pure white, fragrant, March and April; fr. C. S. Furnishes
the gum called *Decamalee*. (*J. Grah.*)
8. *gunnifera*, L. (*fil. suppl.* p. 164;—*DC. pr.* 4, p. 381;—*G. Don's*
Mill. dict. 3, p. 497;—*Roxb. fl. ind.* 1, p. 709; *ed. Carey*, 2, p. 555;
—*W. and A. pr.* 1, p. 395;—*J. Grah. Cat. B. pl.* p. 88.—*G. arbo-*
rea, *Roxb. fl. ind.* 1, p. 708; *ed. Carey*, 2, p. 554;—*DC. l. c.*;—*G.*
Don. l. c.) 5 Circars. Gingie Hills. Ceylon. Very common about
Duddi, on the Gutpurba. Fl. large, white, in the evening becom-
ing yellow, fragrant, March and April; fr. C. S. From the buds,
and wounds made in the bark exudes a beautiful yellow resin.
(*Roxb.*)



9. *chinensis*, Carey MSS. 5 China. Fl. small, white, in the evening becoming yellow, March and April; fr. C. S.—*Unarmed*; *young shoots* densely pubescent; *leaves* opposite, one smaller than the other, cuneate-obovate, shortly apiculate, acute, membranous, along the nerves puberulous, otherwise glabrous, (1-3 inches by $\frac{1}{2}$ -1 $\frac{1}{2}$ inch.) *petioles* 1-3 lines; *flowers* axillary, solitary, short peduncled; *calyx* adpressedly hirtulous, tube cylindric, ecostate, as long as the tube of the corol, lobes 4-5, oval, acute, nearly the size of the lobes of the corol; limb of the corol sericeous, 5-parted, with the lobes oval, obtuse, equal; *anthers* subsessile in the fissures of the corol, recurved; *stigma* exsert, equally bilamellate; *berry* oval, (about 1 inch) slightly puberulous, 10-11 sulcate, 1-celled, many-seeded.
10. *Thunbergia*, L. (*fil. supp.* p. 162;—*B. M.* 25, t. 1004;—*Roxb. H. B.* p. 15;—*DC. pr.* 4, p. 382;—*G. Don's Mill. dict.* 3, p. 498.—*Thunbergia capensis*, *Montin.*—*Gardenia verticillata*, *Lam.*—*G. crassicaulis*, *Salisb. Lond. t.* 46.—*Bergkias*, *Sonner. it. nov. guin. t.* 17, 18; *journ. phys.* 3, p. 299, t. 3.) 5 C. G. H. Manilla. Fl. large, white, fragrant, June, but very seldom; fr. 0.
11. *Rothmannia*, L. (*fil. suppl.* p. 165;—*DC. pr.* 1, p. 382;—*G. Don's Mill. dict.* 3, p. 498;—*B. M.* 18, t. 690;—*Roxb. H. B.* p. 15.—*Rothmannia capensis*, *Thunb.*) 5 C. G. H. Fl. very large, white, crimson-spotted, fragrant. Introduced into H. C. G. in 1799, but had not fl. up to 1814.
12. *macrocarpa*, Carey MSS. 5 Seeds received from Messrs. Loddiges and Co., in 1822. Flowers very large, white, in the evening becoming yellow, fragrant, April and May; fr. C. S. *Branches* rigid, ash-coloured, powdery; *branchlets* tern, conform; *leaves* at the end of the branchlets, tern or quatern, very short-petioled, from oblong to cuneate obovate, obtuse, undulate, firm, coriaceous, puberulous; ($1\frac{1}{2}$ -3 $\frac{1}{2}$ inches, by $\frac{1}{2}$ -1 $\frac{1}{2}$ inch); *flowers* solitary and sessile at the ends of the branchlets, and at base surrounded with three, patent, elliptic, obtuse glabrous, equal small floral leaflets; *calyx* cylindric, rigid, (6 lines) 6 lineolate, puberulous, within adpressedly villous and glandularly dotted, at the mouth 6-8 toothed; the teeth rigid, laterally compressed, patent, obliquely ovate, sharply mucronate, (2 lines;) *tube of the corol* incurvedly erect, rigid, terete, thick fleshy, within 6 lineolate and villous, without obscurely 6-culcate and puberulous, from a narrowish base widening gradually till its mouth is 7 lines in diameter, very long, (3 inches); *limb* in 5-7 recurved, oblong, obtuse, fleshy, glabrous, equal laciniae (1-1 $\frac{1}{4}$ inch long, by 7-9 lines wide); *filaments* 6, pubescent, (1 line) inserted into the base of 6 oval foveolæ on the inside of the uppermost part of the corol-tube; *anthers* inserted by the middle of their back, erect, reaching to the mouth of the corol-tube; *stigma* clavate, at apex contortedly 6-lobulate, subexsert. *Drupe* oval, (2 $\frac{1}{2}$ -3 inches, by 1-1 $\frac{1}{4}$ inch) at apex deeply umbilicated, externally ash-coloured,



rugose and powdery, tough, thick, (6-8 lines) fibrous, ligueous, internally cream-coloured, glabrous, nitid, 5-costate. *Seeds* OO immersed in a fleshy, viscid, yellowish substance, ovate, biconvex. (2-2½ lines long.) Seems nearest allied to *G. ternifolia*, Thonn.

13. *amoena*, Sims. (*B. M.* 44, *t.* 1904;—*B. Reg.* 9, *t.* 735;—*DC. pr.* 4, *p.* 382;—*G. Don's Mill. dict.* 3, *p.* 498.) 5 China. Fl. large, white, having the lobes crimson on the outside during æstivation, March and April.
14. *turgida*, Roxb. (*fl. ind.* 1, *p.* 711; *ed. Carey*, 2, *p.* 557;—*DC. pr.* 4, *p.* 382;—*G. Don's Mill. dict.* 3, *p.* 498.) 5 Bhootan. Fl. largish, white, fragrant, March and April; fr. 0.
15. *campanulata*, (*fl. ind.* 1, *p.* 710; *ed. Carey*, 2, *p.* 556;—*DC. pr.* 4, *p.* 383;—*G. Don's Mill. dict.* 3, *p.* 498.) 5 Chittagong. Fl. largish, white, pale yellowish in the evening, March and April; fr. Nov. The fruit is used by the natives as a cathartic and anthelmintic, and also to wash out stains in silk. (*Roxb.*)
16. *densa*, Wall. (*Roxb. fl. ind.*; *ed. Carey*, 2, *p.* 559;—*DC. pr.* 4, *p.* 383;—*G. Don's Mill. dict.* 3, *p.* 499.) 5 Sheepoor in Nepal. Fl. small, yellowish-white, fragrant. Has been introduced into H. C. G. Fl. ?
17. *obtusifolia*, Roxb. (*H. B.* *p.* 15.) 5 Pegu. Introduced into H. C. G. in 1809, but had not fl. up to 1814.

OXYANTHUS, DC.

1. *hirsutus*, DC. 5 July 1840.

RANDIA, Houst. (*DC. pr.* 4, *p.* 384;—*G. Don's Mill. dict.* 3, *p.* 499;—*W. and A. pr.* 1, *p.* 396.)

1. *latifolia*, Lam. (*Dict.* 3, *p.* 24, *ill. t.* 156, *f.* 1;—*DC. pr.* 4, *p.* 385;—*G. Don's Mill. dict.* 3, *p.* 500.)—*R. aculeata*, L.—*Gardenia aculeata*, Ait.—*G. Randia*, Swz.;—*Roxb. H. B.* *p.* 15.) 5 Arid places among bushes in the W. Indies. Fl. middle-sized, white, H. S.; fr. C. S.
2. *dumetorum*, Lam. (*ill. t.* 156, *f.* 4;—*DC. pr.* 4, *p.* 385; excl. syn. Thunb.;—*G. Don's Mill. dict.* 3, *p.* 500;—*W. and A. pr.* 1, *p.* 397;—*J. Grah. Cat. B. pl.* *p.* 89.—*Canthium coronatum*, Lam.—*Gardenia dumetorum*, Retz.;—*Roxb. Corom.* 2, *t.* 136; *H. B.* *p.* 15.—*G. spinosa*, L.; not Thunb. nor Willd.—*Posoqueria dumetorum*, *Roxb. fl. ind.* 1, *p.* 713; *ed. Carey*, 2, *p.* 564.—*Ceriscus Malabaricus*, *Gärtn. fr.* 1, *p.* 140, under *Gardenia dumetorum*, *t.* 28, *f.* 4.) 5 Coromandel. Very common at Mahableshwur, along the Ghauts. Kennerly jungles. Guzerat. Deyra-Dhoon. Kheree Pass. Fl. small, white, April; fr. C. S. Fruit, when bruised, and thrown into ponds, soon intoxicates the fish. (*Roxb.*) Used as an emetic. An infusion of the bark of the root is given in S. India as a nauseating medicine. (*Roxb.*)
3. *longispina*, DC. (*pr.* 4, *p.* 386;—*G. Don's Mill. dict.* 3, *p.* 501;—*W. and A. pr.* 1, *p.* 398;—*J. Grah. Cat. B. pl.* *p.* 189.—*Gardenia longispina*, *Roxb. H. B.* *p.* 15.—*Posoqueria longispina*, *Roxb. fl. ind.*



- 1, p. 716; *ed. Carey*, 2, p. 566.) 5 Coromandel. Common in the jungles of Kandesb. Deyra Dhoon. Kheree Pass.—Flowers largish, pure white, fragrant, March and April; fr. C. S.
4. *nutans*, DC. (*pr.* 4, p. 386;—*G. Don's Mill. dict.* 3, p. 501;—*W. and A. pr.* 1, p. 397.—*Gardenia nutans*, *Roxb. H. B.* p. 15.—*Posoqueria nutans*, *Roxb. fl. ind.* 1, p. 714; *ed. Carey*, 2, p. 565.) L. 5 Native place uncertain. Fl. middle-sized, white, fragrant, March and April; fr. C. S.
5. *floribunda*, DC. (*pr.* 4, p. 386;—*G. Don's Mill. dict.* 3, p. 501;—*W. and A. pr.* 1, p. 398.—*Gardenia floribunda*, *Roxb. H. B.* p. 15.—*Posoqueria floribunda*, *Roxb. fl. ind.* 1, p. 719; *ed. Carey*, 2, p. 569.) 5 Coromandel. Fl. middle-sized, white, in the evening yellow. In H. C. G. fl. April and May; fr. C. S. (*Roxb.*)
6. *longiflora*, Lam. (*Dict.* 3, p. 26; *ill. t.* 156, f. 3; not *Salisb.*;—DC. *pr.* 4, p. 386;—*G. Don's Mill. dict.* 3, p. 501.—*Posoqueria longiflora*, *Roxb. fl. ind.* 1, p. 718; *ed. Carey*, 2, p. 568.—*P. multiflora*, *Bl.*—*Gardenia multiflora*, *Willd.*) L. 5 Chittagong. Penang. Fl. large, whitish, on the second day becoming yellow. H. S.; fr. C. S.
7. *fasciculata*, DC. (*pr.* 4, p. 386;—*G. Don's Mill. dict.* 3, p. 501.—*Gardenia fasciculata*, *Roxb. H. B.* p. 15.—*Posoqueria fasciculata*, *Roxb. fl. ind.* 1, p. 717; *ed. Carey*, 2, p. 568.) 5 Silhet. Fl. middle-sized, white, becoming yellow, fragrant. In H. C. G. fl. H. S.; fr. O. (*Roxb.*)
- ? 8. *rigida*, DC. (*pr.* 4, p. 386;—*G. Don's Mill. dict.* 3, p. 501.—*Posoqueria rigida*, *Wall.*;—*Roxb. fl. ind.*; *ed. Carey*, 2, p. 570.) 5 Deyra-Dhoo. Mountains of Nepal. Fl. large, white, fragrant. In H. C. G. Fl.?
9. *uliginosa*, DC. (*pr.* 4, p. 386;—*G. Don's Mill. dict.* 3, p. 500;—*W. and A. pr.* 1, p. 398;—*J. Grah. Cat. B. pl.* p. 89;—*Wight. icon.* 2, t. 397.—*Gardenia uliginosa*, *Retz.*;—*Roxb. Corom.* 2, t. 135;—*H. B.* p. 15.—*Posoqueria uliginosa*, *Roxb. fl. ind.* 1, p. 712; *ed. Carey*, 2, p. 563.) *পির আলু Pir-aloo*. 5 Coromandel. Banks of rivers in the Concan. South Mahratta Country. Ataveesy, where the Coolies roast and eat the fruit. Bengal, (Serampore,) Deyra-Dhoo. Kheree Pass. Fl. large, white, fragrant, H. S.; fr. C. S.
10. *armata*, DC. (*pr.* 4, p. 387;—*G. Don's Mill. dict.* 3, p. 501.—*Mussaenda spinosa*, *L. Mant. p.* 45;—*Jaeg. amer. t.* 49.—*Gardenia armata*, *Swz.*; not *Bartl.*—*G. tetracantha*, *Lam. dict.* 2, p. 609, not *Randia tetracantha*, DC.) 5 W. Indies. Carthagera. Fl. large, pure white, fragrant, H. S.
11. *decussata*, Wall. (*MSS.*—*Rondeletia tetrandra*, *Roxb. fl. ind.* 1, p. 524; *ed. Carey*, 2, p. 136.—*Wendlandia? tetrandra*, DC. *pr.* 4, p. 412;—*G. Don's Mill. dict.* 3, p. 519.) 5 Penang. Has been five years in the garden here, without flowering.
12. *cuneata*, Wall. 5 Ava. In H. C. G.

- ? 13. *polysperma*, Roxb. (*fl. ind.* 1, p. 527; *ed. Carey*, 2, p. 146;—*DC. pr.* 4, p. 389;—*G. Don's Mill. dict.* 3, p. 503.) ♂ Chittagong. In H. C. G. *fl.* May; fr. August and Sept. (*Roxb.*)
- ? 14. *scandens*, W. and A. (*pr.* 1, p. 401. annot.;—*Webera scandens, Roxb. fl. ind.* 1, p. 698; *ed. Carey*, 2, p. 534.—*Cupia scandens, DC. pr.* 4, p. 394;—*G. Don's Mill. dict.* 3, p. 507.) ♂ ♀ Silhet. Fl. large, white, becoming yellow, fragrant. In H. C. *fl.* April and May; fr. 0. (*Roxb.*)

HYPTIANTHERA, W. and A. (*pr.* 1, p. 399.)

1. *stricta*, W. and A. (*l. c.*—*Randia stricta, Roxb. fl. ind.* 1, p. 526; *ed. Carey*, 2, p. 145;—*DC. pr.* 4, p. 386;—*G. Don's Mill. dict.* 3, p. 501.—*Macrocnemium strictum, Roxb.*;—*Röm. and Sch. syst.* 5, p. 6;—*Sm. in Rees' cycl.*—*Rondeletia stricta, Roth.*;—*Röm. und Sch. v. c. p.* 234.) L. ♂ Khasia Mountains. Nepal. Fl. small, white, inodorous, April; fr. C. S.

PETUNGA, DC. (*pr.* 4, p. 398;—*G. Don's Mill. dict.* 3, p. 509.)

1. *Roaburghii*, DC. (*v. c. p.* 399;—*G. Don's Mill. dict. v. c. p.* 510.—*Randia racemosa, Roxb. fl. ind.* 1, p. 525; *ed. Carey*, 2, p. 144.) L. ♂ Lukshmee-poorā. Fl. small, pale greenish-white, inodorous, end of R. S.

- * *Sarcocephalus esculentus*, Sabin. ♂ Guinea.—*Lucinea Morindæ*, DC. (*Morinda polysperma*, Jack; *Roxb. fl. ind.*; *ed. Carey*, 2, p. 204.) ♂ Singapore.—*Amaïona guianensis*, Aubl. ♂ Cayenne.—*A. fagifolia*, Desf. ♂ Cayenne.—*Mussenda speciosa*, Poir. ♂ Caraccas.—*M. glabra*, Vahl; B. Cab. t. 1269. ♂ Singapore. Penang.—*M. pubescens*, Ait.; B. M. 46, t. 2099. ♂ China.—*M. Wallichii*, G. Don. (*M. longifolia*, Wall; not Lam.) ♂ Tavoy. Rangoon.—*M. Landia*, Lam. ♂ Mauritius.—*M. Stodmanni*, Michx. ♂ Mauritius.—*M. arcuata*, Lam. ♂ Mauritius.—*M. sericea*, Bl. ♂ Moluccas.—*Kutchubæ insignis*, Fisch. ♂ Guiana.—*Cassupa verrucosa*, H. and B. ♂ S. America.—*Tocoyena macrophylla*, H. B. and Kth. ♂ S. America.—*Posoqueria longiflora*, Aubl. ♂ Guiana.—*P. revoluta*, Nees. ♂ Brazil.—*Oxyanthus tubiflorus*, DC. (*Gardenia tubiflora*, B. M. 45, t. 1992.) ♂ Sierra Leona.—*Griffithia fragrans*, W. and A. Rheed. 5, t. 35. S. Concan. ♂—*Stylcoryne densiflora*, W. and A. 5 Penang.—*Genipa americana*, L. ♂ W. Indies.—*Gardenia calyculata*, Roxb. ♂ Hydrabad.—*G. elusiaefolia*, Jacq. ♂ Bahama Islands.—*G. anisophylla*, Jack. ♂ Penang.—*G. montana*, Roxb. ♂ Circars.—*G. pancea*, Lindl.; B. Reg. 23, t. 1952, ♂ S. America.—*Randia triflora*, Buch. ♂ Nepal.—*R. Mussendæ*, DC. ♂ Guiana, Mexico.—*Menestoria Tocoyenæ*, DC. ♂ Nepal.—*M. Hamellæ*, DC. ♂ Nepal.—*M. Mussendæ*, DC. ♂ Nepal.—*Helospora flavescens*, Jack. 5 Sumatra.—*Bertiera guianensis*, Aubl. ♂ Guiana.—*B. palustris*, A. Rich. ♂ Guiana.—*B. Zaluzania*, Gärtn. ♂ Mauritius.—*Petesia grandis*, Bartl. ♂ Mexico.—*Fernelia buxifolia*, Lam. 5 Mauritius.—



F. obovata. Lam. 5 Mauritius.—*Catesbæa latifolia*, Lindl. B. Reg. 10, t. 858. ♂ Havannah.—*C. spinosa*, L. ♂ Bahama Islands. B. M. 4, t. 131.

C. HEDYOTIDÆÆ. Cham. and Schlecht.

(DC. pr. 4, p. 401;—*W. and A. pr.* 1, p. 401.)

WENDLANDIA, Bartl. (DC. pr. 4, p. 411;—*G. Don's Mill. dict.* 3, p. 517;—*W. and A. pr.* 1, p. 402.)

1. *exserta*, DC. (l. c.;—*G. Don. o. c.* p. 518;—*W. and A. l. c.*—*Rondeletia exserta*, Roxb. *fl. ind.* 1, p. 523; *ed. Carey*, 2, p. 135.—*Rondeletia thyrsoiflora*, Roth.—*R. Heynei*, Röm. and Sch.—*R. oryssensis*, Roth.) 5 Peninsula of India. Gour. Nepal. Fl. small, pure white, fragrant, March.
2. *tinctoria*, DC. (pr. 4, p. 411;—*G. Don's Mill. dict.* 3, p. 518.—*Rondeletia tinctoria*, Roxb. *fl. ind.* 1, p. 522; *ed. Carey*, 2, p. 134.) 5 Burdwan. Midnapore. Fl. small, white, Dec. Jan. and Feb.; fr. May. Bark employed by the natives as a mordant in some of their dyes. (*Roxb.*)
3. *paniculata*, DC. (pr. 4, p. 411;—*G. Don's Mill. dict.* 3, p. 518.—*Rondeletia paniculata*, Roxb. *fl. ind.* 1, p. 521; *ed. Carey*, 2, p. 133.) 5 Malay Islands. Fl. minute, pure white. In H. C. G. fl. from March to June; fr. O. (*Roxb.*)

DENTECLA, Forst. (DC. pr. 4, p. 418;—*G. Don's Mill. dict.* 3, p. 524;—*W. and A. pr.* 1, p. 405.)

1. *repens*, Forst. (DC. o. c. p. 419;—*G. Don. l. c.*;—*W. and A. l. c.*;—*Roxb. fl. ind.* 1, p. 532; *ed. Carey*, 2, p. 159; excl. syn. Burm.—*J. Grah. Cat. B. pl.* p. 90.—*Oldenlandia repens*, L. *Mant. p.* 40; not Burm.—*Hedyotis repens*, Lam.;—*Rumph. 5, t.* 170, f. 4.) हुई पाटे *Bhoomi-pat.* © New Caledonia. Moluccas. Timor. Java. Ceylon. Both Peninsulas of India. Bengal, (Serampore,) &c. Fl. small, white, and fr. Feb. March and April.

HEDYOTIS, L. (DC. pr. 4, p. 419;—*G. Don's Mill. dict.* 3, p. 524;—*W. and A. pr.* 1, p. 405.)

1. *lineata*, Roxb. (*fl. ind.* 1, p. 365; *ed. Carey*, 1, p. 369;—DC. pr. 4, p. 420;—*G. Don's Mill. dict.* 3, p. 526.) © Chittagong. In H. C. G. fl. and fr. R. S. (*Roxb.*)
2. *scandens*, Roxb. (*fl. ind.* 1, p. 364; *ed. Carey*, 1, p. 369;—DC. pr. 4, p. 422;—*G. Don's Mill. dict.* 3, p. 527.) ♂ Silhet. In H. C. G. fl. H. S.; fr. R. S. (*Roxb.*)
3. *hispida*, Retz. (*Obs.* 4, p. 23; not Roth.;—DC. pr. 4, p. 420;—*G. Don's Mill. dict.* 3, p. 525;—*Roxb. fl. ind.* 1, p. 364; *ed. Carey*, 1, p. 368.—*Oldenlandia hispida*, Poir.) © China. Moluccas. Java. Fl. small, white. In H. C. G. fl. R. S. (*Roxb.*)
- β. *villosa*, (*Hedyotis Auricularia*, Roxb. *fl. ind.* 1, p. 365; *ed. Carey*, 1, p. 369, excl. syn. L. and Rheed.) © Khassya Mountains. Nepal. Introduced into H. C. G. in 1815.



4. *racemosa*, Lam. (*Enc.* 3, p. 76; *ill.* t. 62, f. 2;—*W. and A. pr.* 1, p. 414;—*Wight. icon.* 1, t. 312.—*Oldenlandia alata*, *Roxb. fl. ind.* 1, p. 421; *ed. Carey*, 1, p. 442; excl. syn. Kön.) গুন্ডহোভদুলে *Gundhobhadulee*. © Both Peninsulas of India. Bengal, (Serampore,) &c. Fl. small, white, and fr. R. S.
- ? β . *paniculata*, (*Oldenlandia paniculata*, *Roxb. fl. ind.* 1, p. 422; *ed. Carey*, 1, p. 443, excl. syn. Burm.; not DC. nor G. Don.) ♂ Moluccas. Fl. small, white. In H. C. G. fl. and fr. nearly the whole year.
5. *pumila*, L. (*Suppl.* p. 119;—*W. and A. pr.* 1, p. 414.—*Oldenlandia pumila*, DC. *pr.* 4, p. 425;—*G. Don's Mill. dict.* 3, p. 528.—*O. crystallina*, *Roxb. fl. ind.* 1, p. 422; *ed. Carey*, 1, p. 443;—DC. *o. c. p.* 426;—*G. Don. o. c. p.* 529.) পুন্খা *Punkha*. Peninsula of India. Bengal, (Serampore,) Mongh. © Fl. minute, white, R. S.; fr. R. and C. S.
6. *Burmänniana*, R. Br. (*W. and A. pr.* 1, p. 415;—*J. Grah. Cat. B. pl.* p. 90.—*H. biflora*, Lam.; *Roth.* not R. Br.—*H. diffusa*, *Willd.* according to Chamisso.—*Oldenlandia biflora*, Lam.; not L.;—DC. *pr.* 4, p. 426, and *G. Don's Mill. dict.* 3, p. 520, excl. syn. L.; *Roxb. fl. ind.* 1, p. 423; *ed. Carey*, 1, p. 445.—*O. triflora*, *Roxb. H. B. p.* 11.—*Gerontegia biflora*, Cham. and Schlecht.—*Rheed.* 10, t. 35.—*Burm. zeyl.* 22, t. 11.) ক়েত পাপড়া *Khet-papra*. © Ceylon. Both Peninsulas of India. Bengal, (Serampore,) &c. Fl. small, white, R. S.; fr. R. and C. S.
- β . *meizonantha*, (*Oldenlandia diffusa*, *Roxb. fl. ind.* 1, p. 423, excl. syn. Willd.) © Banda. Fl. largish, pure, white. In H. C. G. fl. R. S.; fr. R. and C. S. (*Roxb.*)
7. *Heynii*, R. Br. (*W. and A. pr.* 1, p. 416;—*J. Grah. Cat. B. pl.* p. 90;—*Hedyotis herbacea*, *Willd.* not L.—*Oldenlandia herbacea*, *Roxb. fl. ind.* 1, p. 424; *ed. Carey*, 1, p. 445; excl. syn. L.;—DC. *pr.* 4, p. 425; and *G. Don's, Mill. dict.* 3, p. 528; excl. syn. L.; and *Rheed* 10, t. 35;—*Rheed.* 10, t. 23.) © Peninsula of India. Fl. small, pure white, R. S.; fr. R. and C. S.
8. *dichotoma*, Kön. (not Cav.—*W. and A. pr.* 1, p. 416;—*Roth.*—*H. attenuata*, *Willd.*—*H. affinis*, *Röm. and Sch.*—*H. linifolia*, *Willd.*;—*Röm. and Sch.*—*H. diffusa*, *Spreng.* not *Willd.*—*Oldenlandia linifolia*, DC. *pr.* 4, p. 425;—*G. Don's Mill. dict.* 3, p. 529.—*O. capillaris*, DC. *l. c. p.* 426;—*G. Don. l. c. p.* 530.—*O?* *affinis*, DC. *o. c. p.* 428; *G. Don. o. c. p.* 531.—*O. pusilla*, *Roth.*—DC. *l. c.*;—*G. Don. l. c.*) © Trichinopoly. Travancore, Bengal, (Serampore.) Fl. small, white, R. S.; fr. R. and C. S.

RONDELETIA, Plum.

1. *odorata*, Jacq. (*B. Reg.* 22, 1905.—*R. speciosa*, *B. Cab.* 19, t. 1893,) 5 Cuba. Dec. 1840.

ORTHOSTEMMA, Wall.

1. *roseum*, Wall. 2. Mozambique. Fl. Sept. 1841.



- * *Macrocnemum jamaicense*, Lin. 5 Jamaica.—*Chimarrhis cymosa*, Jacq. L. 5 Martinique.—*C. turbinata*, DC. 5 Cayenne.—*Augustea lanceolata*, Pohl. 5 Brazil.—*A. parviflora*, Pohl. 5 Rio Janeiro.—*Portlandia grandiflora*, L.; B. M. 8, t. 286. 5 Jamaica.—*Isidorea amoena*, Rich. 5 W. Indies.—*Rondeletia laurifolia*, Swz. 5 Jamaica.—*R. levigata*, Ait. 5 Havannah.—*W. coriacea*, DC. 5 Deyra-Dhoon.—*Greenea Wightiana*, W. and A. 5 Peninsula of India.—*G. corymbosa*, (G. Jackii, W. and A.) 5 Penang.—*Sipanea glomerata*, H. B. Kth. 2. Banks of the Orinoco.—*S. pratensis*, Aubl. 5 Cayenne.—*Ophiorrhiza Mungos*, L. 2. Penang. Deyra-Dhoon.—*O. villosa*, Roxb. 2. Khassya Mountains.—*O. tomentosa*, Jack. 2. Penang.—*Argostemma rostratum*, Wall. 2. Khassya Mountains.—*Hedyotis uncinella*, Hook. and Arn. 5 China.—*H. Lawsoniae*, W. and A. 5 The Concans.—*H. stylosa*, R. Br. 5 Neelgherries.—*H. articularis*, R. Br. 5 Neelgherries.—*H. fruticosa*, L. 5 Penang.—*Anotis Cervantesii*, DC. 5 Mexico.—*Lerchea longicauda*, L. Java.

D. ISERTIÆ, A. Rich.

(DC. pr. 4, p. 425.)

- * *Gonzalea panamensis*, Pers. 5 Panama, Mexico.—*G. spicata*, DC. 5 Havannah.—*Isertia coccinea*, Vahl. 5 Cayenne.

E. HAMELIÆ, A. Rich.

(DC. pr. 4, p. 438.)

HAMELIA, Jacq.

1. *patens*, Jacq. (Amer. p. 71, t. 50.) 5 S. America. Fl. 1840.

- * *Sabicea cinerea*, Aubl. 5 Guiana.—*S. hirta*, Swz. 5 Jamaica.—*Urophyllum villosum*, Jack. 5 Penang.—*U. glabrum*, Jack. 5 Penang.—*Hamelia suaveolens*, H. B. and Kth. 5 Banks of the Magdalena.—*Alibertia edulis*, A. Rich. 5 Guiana. (Goiave noire.)—*Schradera polycephala*, DC. 5 Guiana.—*Brignolia acuminata*, DC. 5 Trinidad.—*Patima guianensis*, Aubl. 2. Marshes of Guiana.

F. CORDIERÆ, A. Rich.

(DC. pr. 4, p. 445.)

- * *Cordia triflora*, DC. 5 Guiana.

G. GUETTARDEÆ, Lindl.

(Guettardaceæ, Kth. DC. pr. 4, p. 446; W. and A. pr. 1, p. 418.)

MORINDA, Vaill. (DC. pr. 4, p. 446;—G. Don's Mill. dict. 3, p. 544;—W. and A. pr. 1, p. 418.)

1. *citrifolia*, L. (DC. l. c.;—G. Don. l. c.;—W. and A. o. c. p. 419;—Roxb. fl. ind. 1, p. 541; ed. Carey, 2, p. 196; J. Grah. Cat. B. pl. p. 90;—Lour.;—Gürt. fr. 1, p. 144, t. 29, f. 1;—Rheed. 1, t. 52;—Rumph. 3, t. 99.) 5 Moluccas. Cochin China. Pegu. Coromandel.

Much cultivated in the Bombay Presidency. Fl. small, white, H. and R. S; fr. R. S. *Roots* employed by the natives, like those of several other species, to dye red. (Roxb.)

2. *tinctoria*, Roxb. (*fl. ind.* 1, p. 543; *ed. Carey*, 2, p. 197;—*DC. pr.* 4, p. 447;—*G. Don's Mill. dict.* 3, p. 544;—*W. and A. pr.* 1, p. 419;—*J. Grah. Cat. B. pl.* p. 90.) अछ Uch 5. Common in most parts of India, (Serampore.) Fl. small, white, and fr. nearly the whole year. *Bark* of the roots used to dye red. The colour is fixed with alum, but it is neither bright nor durable. The green *fruits* are picked by the natives, and eaten with their curries. The *wood* is hard, very durable, variegated with red and white, and employed for gun-stocks in preference to all other kinds. (Roxb.)

3. *bracteata*, Roxb. (*fl. ind.* 1, p. 544; *ed. Carey*, 2, p. 198;—*DC. pr.* 4, p. 447;—*G. Don's Mill. dict.* 3, p. 544;—*W. and A. pr.* 1, p. 419;—*Wight. ill.* 2, t. 126;—*Bl. bijdr.* p. 1006;—*Rumph.* 3, t. 98.) 5 Moluccas, Andaman and Philippine Islands. Ganjam district. Fl. small, white, R. and C. S.; fr. C. S.

4. *exserta*, Roxb. (*fl. ind.* 1, p. 545; *ed. Carey*, 2, p. 199;—*DC. pr.* 4, p. 447;—*G. Don's Mill. dict.* 3, p. 544;—*W. and A. pr.* 1, p. 519;—*J. Grah. Cat. B. pl.* p. 90.) বন অচ Bun-uch. 5 Ataveesy-jungles. Bengal, (Serampore.) Fl. small, white, H. and R. S.; fr. C. S.

5. *multiflora*, Roxb. (*fl. ind.* 1, p. 546; *ed. Carey*, 2, p. 200;—*DC. pr.* 4, p. 447;—*G. Don's Mill. dict.* 3, p. 545.) 5 Berar. Fl. small, white, R. S.; fr. C. S. Cultivated about Nagpore for the sake of the *bark* of the *roots*, which is used to dye red. (Roxb.)

6. *angustifolia*, Roxb. (*fl. ind.* 1, p. 547; *ed. Carey*, 2, p. 201;—*DC. pr.* 4, p. 447;—*G. Don's Mill. dict.* 3, p. 545; not Roth.) 5 Chittagong. Fl. white March, fr. May.

7. *vagans*, Wall. 5 Fl. small, white, H. S. China.

VANGUERIA, Commers. (*DC. pr.* 4, p. 454;—*G. Don's Mill. dict.* 3, p. 549;—*W. and A. pr.* 1, p. 421.)

1. *edulis*, Vahl. (*Symb.* 3, p. 36;—*DC. l. c.*;—*G. Don. l. c.*;—*W. and A. l. c.*—*V. cymosa*, *Gärtn. fil.* 3, p. 75, t. 193.—*V. madagascariensis*, *Gmel.*—*V. Commersonii* *Desf.*;—*Jacq. hort. schonbr.* 1, t. 44.—*Vavanga chinensis*, *Rohr. Skrift. Naturh. Selsk. Kjöbenh.* 2, p. 207.—*Vavanga edulis*, *Vahl. l. c. t. 7.*) 5 Madagascar, from whence it has been introduced into the Mauritius, China, &c. Fl. small, white. Has been introduced into H. C. G. Fl. ?

2. *spinosa*, Roxb. (*fl. ind.* 1, p. 536; *ed. Carey*, 2, p. 172;—*DC. pr.* 4, p. 454;—*G. Don's Mill. dict.* 3, p. 550.—*Meynia spinosa*, *Lk.*;—*Röm. and Sch. mant.*) অয়না Muyna, L. 5 Bengal, (Serampore.) Fl. small, pale greenish, March and April; fr. R. S. *Fruit* eaten by the Natives.

3. *macrophylla*, Wall. 5 Chittagong.



GUETTARDA, L. (DC. *pr.* 4, p. 455;—*G. Don's Mill. dict.* 3, p. 550;—*W. and A. pr.* 1, p. 421.)

1. *speciosa*, L. (DC. *l. c.*;—*G. Don. l. c.*;—*W. and A. o. c. p.* 422;—*Lam. ill. t.* 154, *f.* 2;—*Roxb. fl. ind.* 1, p. 686; *ed. Carey*, 2, p. 521;—*J. Grah. Cat. B. pl.* p. 91;—*B. Reg.* 17, t. 1393;—*Wight. icon.* 1, t. 40.—*Cadamba jasminiflora*, *Sonner. voy.* 2, t. 128.—*Nyctanthes hirsuta*, L.—*Jasminum hirsutum*, *Willd.*; not L.—*Rheed.* 4, t. 47, 48.) 5 Coromandel, in gardens, Singapore. Fl. large, white, exquisitely fragrant. Has been introduced into H. C. G. Fl. ?

HAMILTONIA, *Roxb.* (DC. *pr.* 4, p. 462;—*G. Don's Mill. dict.* 3, p. 554;—*W. and A. pr.* 1, p. 423; not Mühl.)

1. *suaveolens*, *Roxb.* (*fl. ind.* 1, p. 554; *ed. Carey*, 2, p. 123;—DC. *l. c.*;—*G. Don. o. c. p.* 555.—*Spermadietyon suaveolens*, *Roxb. Corom.* 3, t. 236;—*R. Br. in B. Reg.* 4, t. 348.—*Lasianthus tubiflorus*, *Bl. bijdr.* p. 990.) L. 5 Rajmahl hills. Fl. small, white, fragrant, C. S.; fr. H. S.

- β, *azurea*, (*Hamiltonia scabra*, *Don. pr. fl. nep.* p. 137;—*G. Don's Mill. dict.* 3, p. 555.—*Spermadietyon azureum*, *Wall. Roxb. fl. ind.*; *ed. Carey*, 2, p. 225;—*B. Reg.* 15, t. 1235.) L. 5 Sirmore, Nepal. Fl. small, azure-blue, fragrant, C. S.; fr. H. S.

LEPTODERMIS, *Wall.* (DC. *pr.* 4, p. 462;—*G. Don's Mill. dict.* 3, p. 555.)

1. *lanceolata*, *Wall.* (*Roxb. fl. ind.*; *ed. Carey*, 2, p. 191;—DC. *l. c.*;—*G. Don. l. c.*) 5 Nepal Mountains. Fl. smallish, white, becoming pale rose, Nov. and Dec.

MYONIMA, *Commers.* (DC. *pr.* 4, p. 463;—*G. Don's Mill. dict.* 3, p. 556.)

1. *obovata* *Lam.* (*ill. No.* 1482, t. 68, *f.* 1; *dict.* 4, p. 397;—DC. *l. c.*;—*G. Don. l. c.*—*M. borbonica*, *Räusch.*) 5 Bourbon, where it is called *Bois de rat*. Introduced in 1841.

2. *multiflora*, *A. Rich.* (DC. *l. c.*;—*G. Don. l. c.*—*Ixora parviflora*, *Lam. ill. No.* 1473, t. 66, *f.* 2, excl. syn. *Rheed*; not *Vahl*.—*I. micrantha*, *Röm. and Sch.*—*Faramea corymbosa*, *Sieber. fl. maurit.* 2, No. 62; not *Aubl.*) 5 Mauritius. Has been introduced into H. C. G. Fl. ?

ANTIRRHŒA, *Commers.*

1. *verticillata*, DC. Bourbon.

* *Morinda pubescens*, Sm. 5 Mauritius.—*M. squarrosa*, Buch. 5 Kamrup.—*M. persicaefolia*, Buch. 5 Pegu.—*M. Roioe*, L. 5 W. Indies. Mexico.—*M. tomentosa*, Heyne. 5 Deccan.—*M. umbellata*, L.;—*Rheed*, 7, t. 27. 5 Courtallum, S. Concan.—*Mephitidia Roxburghii*, W. and A. (*Triosteum hirsutum*, *Roxb.*) 5 Chittagong.—*M. Wallichii*, W. and A. (*Nonatelia? hispida*, *Wall.*) 5 Khassya Mountains.—*Vangueria velutina*, Hook. B. M. 57, t. 3014. 5 Madagascar.—*Guettarda argentea*, Lam. 5 Cayenne.—*G. havanensis*, DC. 5 Havannah.—*G. odorata*, Lam. 5 Havannah.—*G. viburnoides*, Cham. and Schlecht. 5



Brazil.—*Malanea sarmentosa*, Aubl. 5 Guiana.—*Antirrhoea verticellata*, DC. 5 Bourbon.—*A. dioica*, Bory. 5 Mauritius.—*A. frangulacea*, DC. 5 Mauritius.—*Stenostomum lucidum*, Gärtn. 5 Jamaica.—*S. tomentosum*, DC. 5 Jamaica.—*Hamiltonia mysorensis*, W. and A. 5 Mysore.—*Psathura borbonica*, Gmel. 5 Bourbon.—*P. ternifolia*, A. Rich. 5 Mauritius.—*Myonima myrtifolia*, Lam. 5 Bourbon.—*Pyrostria oleoides*, Lam. 5 Bourbon.—*Octavia sessiliflora*, DC. 5 Guiana.—*Retiniphyllum secundiflorum*, H. and B. 5 Banks of Orinoco.—*Nonatelia racemosa*, Aubl. 5 Guiana.—*Gynochtodes coriacea*, Bl. 5 Java.—*Strumpfia maritima*, Jacq. 5 W. Indies.

H. PÆDERIÆ, DC.

(Pr. 4, p. 470;—W. and A. pr. 1, p. 424.)

PÆDERIA, L. (DC. pr. 4, p. 471;—G. Don's Mill. dict. 3, p. 561;—W. and A. l. c.)

1. *foetida*, L. (DC. l. c.;—G. Don, l. c.;—W. and A. l. c.;—Roxb. fl. ind. 1, p. 683; ed. Carey, 2, p. 517;—J. Grah. Cat. B. pl. p. 91.—Apocynum foetidum, Burm. ind. p. 71;—Rumph. 5, t. 160.) গুন্দাভাদুলী Gundahalee. গুন্ডাভাদুলী Gundo-bhadulee. 5 Moluccas. Both Peninsulas of India. Bengal, (Serampore.) Assam. Nepal. Japan. Flowers smallish, lilac-purple, like the whole plant, of a very offensive smell, C. S.; fr. H. S.—Root used by the Natives as an emetic. (Roxb.)

Roxburgh's two other species, *P. recurva*, (5 Chittagong,) and *P. erecta*, (5 Silhet) were introduced into H. C. G. in 1810, and the latter, with small, white corols, fl. there R. S.; fr. C. S. They do not, however, belong either to *Pæderia* or *Pæderiæ*, their horny albumen, and seeds grooved on the inside clearly placing them among *Coffeæ*. (W. and A. pr. 1, p. 424. annot.)

LECONTEA, A. Rich.

1. *Bojeriana*, A. Rich. 5 Madagascar. Bourbon. March, 1841.

* *Lecontea argentea*, A. Rich. 5 Madagascar.—*L. Bojeriana*, A. Rich. 5 Madagascar.—*Pæderia lanuginosa*, Wall. pl. as. rar. 2, t. 165. 5 Rangoon. Prome.

I. COFFEEÆ, Lindl.

(Coffeaceæ, DC. pr. 4, p. 472;—W. and A. pr. 1, p. 425.)

CANTHIUM, Lam. (DC. o. c. p. 473;—G. Don's Mill. dict. 3, p. 562;—W. and A. l. c.)

1. *parviflorum*, Lam. (dict. 1, p. 602;—DC. o. c. p. 474;—G. Don, l. c. p. 563.—W. and A. o. c. p. 426;—Roxb. Corom. 1, t. 53; fl. ind. 1, p. 534; ed. Carey, 2, p. 170;—J. Grah. Cat. B. pl. p. 91;—Gärtn. fil. 3, p. 93, t. 196.—Webera tetrandra, Willd.;—Rheed. 5, t. 36.) 5 Coromandel, South Mahratta country. Fl. small, yellow, H. S.; fr. Sept.
2. *parvifolium*, Roxb. (fl. ind. 1, p. 534; ed. Carey, 2, p. 170;—DC. pr. 4, p. 474;—G. Don's Mill. dict. 3, p. 563.) 5 Chittagong. Was



introduced into H. C. G. before 1814, but had not fl. up to that year.

3. *angustifolium*, Roxb. (*fl. ind.* 1, p. 533; *ed. Carey*, 2, p. 169;—*DC. pr.* 4, p. 479;—*G. Don's Mill. dict.* 3, p. 563.) 5 Chittagong. Silhet. Fl. small, greenish-yellow. Has been introduced into H. C. G. Fl.?

4. *recurvum*, Wall. MSS. } In H. C. G. Fl.?
5. *floribundum*, Wall. MSS. }

6. *chinense*, Pers. (*Syn.* 1, p. 200;—*DC. pr.* 4, p. 475, and *G. Don's Mill. dict.* 3, p. 564. excl. the locality of Madras.—*Gardenia spinosa*, Thunb.;—*Roxb. H. B.* p. 15.—*Randia spinosa*, Poir.) 5 China, near Macao. Eastern Border of Bengal, (*Carey*.) In H. C. G. fl. H. S.; fr. C. S. (*Roxb.*) W. and A., (*pr.* 1, p. 398, *annot.*) think it probable, that this plant may be their *Randia longispina*, β, *sylvestris*.

7. *longifolium*, Wall. 5 Khassya hills.

CHIOCOCCA, P. Browne, (*DC. pr.* 4, p. 482;—*G. Don's Mill. dict.* 3, p. 568.)

1. *racemosa*, Jacq. (*Amer. p.* 68;—*L. sp.* p. 246;—*DC. l. c.*;—*G. Don. l. c.*;—*B. Repos. t.* 284;—*Hook. fl. exot. t.* 93;—*Roxb. H. B.* p. 15.—*Lonicera alba*, *L. sp. ed.* 1, p. 175.) 5 Fl. small, pale yellow, fragrant, Aug. and Sept.; fr. 0. Hills of the W. Indies, Mexico and Carthagera.

IXORA, L. (*DC. pr.* 4, p. 485;—*G. Don's Mill. dict.* 3, p. 570;—*W. and A. pr.* 1, p. 427.)

1. *coccinea*, L. (*Spec. p.* 159, excl. syn.;—*W. and A. pr.* 1, p. 427;—*Wight. icon.* 1, p. 153;—*Roxb. fl. ind.* 1, p. 375; *ed. Carey*, 1, p. 385;—*J. Grah. Cat. B. pl.* p. 91.—*I. grandiflora*, R. Br.; *B. Reg.* 2, t. 152;—*DC. pr.* 4, p. 486;—*G. Don's Mill. dict.* 3, p. 570;—*Hook. bot. misc.* 3, p. 284; *suppl. t.* 35.—*I. propinqua*, R. Br. in *Wall. Cat.*;—*G. Don. l. c.*—*Ixora*, *L. fl. zeyl.* No. 22;—*Rheed 2*, t. 12;—*Burm. zeyl. t.* 57.) L. 5 China. Travancore. Ceylon. Martaban. Common in gardens. Fl. large, (22-24 lines) bright scarlet, and fr. the whole year.

2. *Bhanduca*, Roxb. (*fl. ind.* 1, p. 376; *ed. Carey*, 1 p. 386;—*DC. pr.* 4, p. 486, and *G. Don's Mill. dict.* 3, p. 570, excl. syn. *Rheed*;—*B. Reg.* 6, t. 513;—*Wight. icon.* 1, t. 149;—*J. Grah. Cat. B. pl.* p. 92, excl. syn. *Rheed*.—*I. coccinea*, L. ex Royen; not *L. sp.* p. 159.—*I. obovata*, Roth. 9) ३३३३ *Rungun*. 5 Hindoostan. (*Roxb.*) Common in Salsette. On the poor uncultivated land between Indapoor and Dasgaum, S. Concan. (*J. Grah.*) Fl. as large as those of No. 1, bright scarlet, the whole year; fr. C. S.

3. *stricta*, Roxb. (*fl. ind.* 1, p. 379; *ed. Carey*, 1, p. 388;—*DC. pr.* 4, p. 486;—*G. Don's Mill. dict.* 3, p. 571;—*W. and A. pr.* 1, p. 427;—*Wight. icon.* 1, t. 184;—*J. Grah. Cat. B. pl.* p. 92.—*I. coccinea*, Ait.; *B. M.* 5, t. 169;—*Lour.*;—*Osb. res.* p. 220;—not *L. sp.* p. 159, —*I. flammea*, Salisb.—*I. speciosa*, Willd. *enum.*—*Rumph.* 4, t. 47.)



- 5 China. Manilla. Moluccas. Cochin China. Fl. about 12 lines, from a lively orange to scarlet, gradually becoming deeper coloured, the whole year; fr. rarely.
- β. *incarnata*, Roxb. (*fl. ind.* 1, p. 379, obs.; *ed. Carey*, 1, p. 389;—*I. incarnata*, Roxb. *MSS.*; *Röm. and Sch.* excl. syn.; not *I. incarnata*, DC.—*Pavetta stricta*, *Bl. bijdr.* p. 950.) 5 China. Fl. pale rose-coloured; the whole year; fr. 0.
- γ. *alba*, Roxb. (*fl. ind.* 1, p. 380, obs.; *ed. Carey*, 1, p. 389.—*Ixora alba*, Roxb. *l. c.* excl. syn. L.—*I. blanda*, *Ker.*;—*B. Reg.* 2, t. 100;—*DC. pr.* 4, p. 487;—*G. Don's Mill. dict.* 3, p. 572.) 5 Bengal, in gardens, introduced from China. Fl. pure white, C. S.; fr. 0.
4. *lanceolata*, Lam. (*Dict.* 3, p. 343; excl. syn. except Rumph.—*I. longifolia*, Sm. in *Rees' cycl.*—*I. fulgens*, Roxb. *fl. ind.* 1, p. 378; *ed. Carey*, 1, p. 387; *Wight. icon.* 1, t. 151;—*Rumph.* 4, t. 46.) 5 Moluccas. Fl. largish, scarlet. In H. C. G. fl. nearly the whole year. (Roxb.)
5. *Notoniana*, Wall. (*W. and A. pr.* 1, p. 428;—*G. Don's Mill. dict.* 3, p. 571.) 5 Neelgherries. Fl. middle-sized, red. In H. C. G. Fl. ?
6. *rosea*, Wall. (Roxb. *fl. ind.*; *ed. Carey*, 1, p. 398;—*DC. pr.* 4, p. 487; *G. Don's Mill. dict.* 3, p. 571;—*B. M.* 50, t. 2428;—*B. Reg.* 7, t. 540; *B. Cab.* t. 729.) L. 5 Khassya Mountains. Fl. largish, (16 lines,) pale-rose-coloured, H. and R. S. chiefly; fr. 0.
7. *cuneifolia*, Roxb. (*fl. ind.* 1, p. 380; *ed. Carey*, 1, p. 390;—*DC. pr.* 4, p. 487;—*G. Don's Mill. dict.* 3, p. 572;—*W. and A. pr.* 1, p. 428;—*B. Reg.* 8, t. 648;—*B. Cab.* t. 1215.) L. 5 Dacca. Khassya Mountains. Fl. 10-11 lines, pure white, fragrant, March and April; fr. June and July.
8. *barbata*, Roxb. (*fl. ind.* 1, p. 384; *ed. Carey*, 1, p. 394, excl. syn. Rheed.;—*DC. pr.* 4, p. 487;—*G. Don's Mill. dict.* 3, p. 572;—*B. M.* 51, t. 2505;—*Wight. icon.* 1, t. 185.) L. 5 Native place unknown. Fl. 15-16 lines, pure white, sweet-scented, March, April and May; fr. June and July.
9. *undulata*, Roxb. (*fl. ind.* 1, p. 385; *ed. Carey*, 1, p. 395;—*DC. pr.* 4, p. 488;—*G. Don's Mill. dict.* 3, p. 572;—*W. and A. pr.* 1, p. 428;) *পালকা জুই Paluka-jooi*. 5 Bengal, (Serampore.) Monghir. Fl. 5 lines, pure white, sweet-scented, March and April; fr. June and July.
10. *acuminata*, Roxb. (*fl. ind.* 1, p. 383; *ed. Carey*, 1, p. 393;—*DC. pr.* 4, p. 488;—*G. Don's Mill. dict.* 3, p. 573.) L. 5 Assam. (Goalpara.) Fl. 2 inches, pure white, very fragrant, April and May; fr. Sept.
11. *parviflora*, Vahl. (*Symb.* 3, p. 2, t. 52;—*DC. pr.* 4, p. 488;—*G. Don's Mill. dict.* 3, p. 571;—*Roxb. fl. ind.* 1, p. 383; *ed. Carey*, 1, p. 393;—*W. and A. pr.* 1, p. 429;—*J. Grah. Cat. B. pl.* p. 92;—*Hook. bot. misc.* 3, p. 292; *suppl.* t. 34.—*I. alba*, Roxb. in *Rees' cycl.* not fl. ind.—*I. arborea*, Sm. in *Rees' cycl.*; *DC. l. c.*—*G. Don. o. c.* p. 572.—*I. Pavetta*, *Andr. B. Repos.* 1, t. 78; *Spreng.*; *Pers.*; not Roxb.—*I. decipiens*, *DC. l. c.*—*G. Don. o. c.* p. 573.—*Webera corymbosa*,



- Sm. herb*; not of others.) গুন্ডাল রুঙ্গুন *Gundhal-rungun*. 5 Coromandel. Elephanta. Common on the Ghauts, and in the jungles about Nagpore. Bengal, (Serampore.) Fl. 6 lines, pure white, very fragrant, March and April; fr. R. S. Dāk runners make torches of it. (*J. Grah.*)
12. *brachiata*, Roxb. (*fl. ind.* 1, p. 381; *ed. Carey*, 1, p. 391;—*DC. pr.* 4, p. 488;—*G. Don's Mill. dict.* 3, p. 573;—*W. and A. pr.* 1, p. 429. —*I. micrantha*, *Heyne.*) L. 5 Peninsula of India. Bengal, (Serampore.) Fl. 4-4½ lines, white, fragrant, March and April; fr. May and June.
13. *villosa*, Roxb. (*fl. ind.* 1, p. 383; *ed. Carey*, 1, p. 392;—*DC. pr.* 4, p. 488;—*G. Don's Mill. dict.* 3, p. 573;—*Wight. icon.* 1, t. 150.) L. 5 Silhet. Penang. Fl. 8-9 lines, white, fragrant, April and May; fr. Sept. and Oct.
14. *Colebrookii*, (*I. lanceolaria*, *Colebr.* not *lanceolata*, Lam.; *Roxb. fl. ind.* 1 p. 387; *ed. Carey*, 1, p. 397;—*DC. pr.* 4, p. 488;—*G. Don's Mill. dict.* 3, p. 572;—*W. and A. pr.* 1, p. 429, excl. syn. *Rheed.*) 5 Travancore. Fl. 11-12 lines, greenish, white, inodorous, March and April; fr. close of the R. S.
15. *erythrostylis*, Wall. MSS. S. 5 Fl. small, 2-2½ lines, white, with a tinge of rose underneath, fragrant, June and July; fr. O. *Tube of corol* 1 line, rose-coloured; lobes oval, obtuse; *style* and the exsert *stigma* deep red; *calyx* ¾ line, red, 4 toothletted; *corymbs* short-peduncled, trichotomous, greenish-dull red, puberulous; *leaves* subsessile, oblong, acute, at base cordate, firm, coriaceous, glabrous, 1½-3 inches long, by ¾-1½ inch across the middle; *stipules* from a broad base becoming laterally compressed and subulate. Not mentioned in Wall. Cat. though known in our gardens, under the above name, for the last 12 years at least.
16. *subsessilis*, Wall. (*Cat.*) 5 Khassya Mountains. Assam. In H. C. G. Fl. ?
17. *opaca*, R. Br. Wall. (*Cat.*) 5 Penang. In H. C. G. Fl. ?
18. *pallens*, Wall. (*Cat.*) 5 Banks of the Attran. In H. C. G. Fl. ?
19. *fasciculata*, Wall. 5 Khassya Hills.
20. *longiflora*, Rich. 5 Madagascar.
- PAVETTA, L. (*DC. pr.* 4, p. 490;—*G. Don's pr.* 3, p. 574;—*W. and A. pr.* 1, p. 430.)
1. *indica*, L. (*DC. l. c.*;—*G. Don. l. c.*;—*W. and A. o. c.* p. 431;—*J. Grah. Cat. B. pl.* p. 92;—*B. Reg.* 3, t. 198;—*Wight. icon.* 1, t. 148. —*Gärtn. fr.* 1, p. 116, t. 25, f. 1, excl. syn. *Rumph. and Burm.*—*P. alba*, *Vahl. symb.* 3, p. 11.—*Ixora paniculata*, *Lam. dict.* 3, p. 344. —*I. Pavetta*, *Roxb. fl. ind.* 1, p. 385; *ed. Carey*, 1, p. 395;—*Rheed.* 5, t. 10.) কুকুর চুড়া *Kookoor-choora*. L. 5 Coromandel. Mahableshwur. Along the Ghauts. Hills at Salsette. Bengal, (Serampore.) Chittagong. Silhet. Assam. Fl. an inch, white, fragrant, April and May; fr. R. S.

2. *tomentosa*, Sm. (*Rees' cycl.*;—*Roth.*;—*DC. pr.* 4, p. 490;—*G. Don's Mill. dict.* 3, p. 574;—*Wight. icon.* 1, t. 186; not Rich.—*Ixora tomentosa*, *Roxb. fl. ind.* 1, p. 386; *ed. Carey*, 1, p. 398.—*Pavetta velutina*, *Wall. Cat.*) कूँडे *Jooi*. L. 5 Peninsula of India. Tavoy. Banks of the Irawaddi. Bengal, (Serampore.) Monghir. Nepal. Kemaon. Fl. 11 lines, white, sweet-scented, March and April; fr. R. S.
 3. *longiflora*, Vahl. (*Symb.* 3, p. 12.) 5 Arabia. Java. Bourbon.
 4. *caffra*, Thunb. (*B. M.* 64, 3580.) 5 S. Africa.
- GRUMILEA, Gärtn. (*DC. pr.* 4, p. 495;—*G. Don's Mill. dict.* 3, p. 577;—*W. and A. pr.* 1, p. 432.)
1. *Reevesii*, W. and A. (*l. c.* annot.—*Psychotria Reevesii*, *Wall.*;—*Roxb. fl. ind.*; *ed. Carey*, 2, p. 164;—*DC. pr.* 4, p. 519;—*G. Don's Mill. dict.* 3, p. 596.) 5 China. Fl. small, green, inodorous, April.
- COFFEA, L. (*DC. pr.* 4, p. 498;—*G. Don's Mill. dict.* 3, p. 579;—*W. and A. pr.* 1, p. 435.)
1. *arabica*, L. (*Spec. p.* 245;—*DC. o. c. p.* 499;—*G. Don. l. c.*;—*W. and A. l. c.*;—*Roxb. fl. ind.* 1, p. 539; *ed. Carey*, 2, p. 193;—*Gärtn. fr.* 1, p. 118, t. 25, f. 3;—*J. Grak. Cat. B. pl.* p. 92;—*B. M.* 32, t. 1303;—*Wight. icon.* 1, t. 53.) कौण्डा *Kaou*.—*Coffee*. 5 Arabia Felix and Ethiopia, from whence it has been carried to nearly all parts of the world within the tropics. Fl. large, pure white, sweet-scented, March, April and May; fr. Nov., Dec. and Jan.
 2. *mauritiana*, Lam. (*Dict.* 1, p. 550; *ill. t.* 160, f. 2;—*DC. pr.* 4, p. 499;—*G. Don's Mill. dict.* 3, p. 581.—*C. arabica*, β . *Willd. spec.* 1, p. 974.—*C. sylvestris*, *Willd. MSS. in Röm. and Sch. syst.* 5, p. 201.—*C. myrtifolia*, *Roxb. H. B. p.* 15 ?) *Café-marron*, 5 Bourbon. Has been introduced into H. C. G. Fl. ?
 3. *bengalensis*, *Roxb. (fl. ind.* 1, p. 540; *ed. Carey*, 2, p. 194;—*DC. pr.* 4, p. 499;—*G. Don's Mill. dict.* 3, p. 591;—*W. and A. pr.* 1, p. 435.) बन कौण्डा *Bun-kaou*, 5 Bengal, (Serampore.) Khassya Mountains. Assam. Nepal. Fl. large, pure white, March, April and May; fr. H. S.
- PSYCHOTRIA, L. *DC. pr.* 4, p. 504;—*G. Don's Mill. dict.* 3, p. 584;—*W. and A. pr.* 1, p. 432.)
1. *undata*, Jacq. (*Hort. schönbr.* 3, p. 5, t. 260; *fragm. No.* 101;—*DC. pr.* 4, p. 513;—*G. Don's Mill. dict.* p. 591;—*Roxb. H. B. p.* 15.) 5 Bahama Islands. Fl. small, ($3\frac{1}{2}$ line,) pure white, inodorous, April and May; fr. 0.
 2. *laurifolia*, Swz. (*Pr. p.* 43; *fl. ind. occ.* p. 392;—*DC. pr.* 4, p. 516;—*G. Don's Mill. dict.* 3, p. 593.) 5 Jamaica. Hispaniola.—Has been introduced into H. C. G. Fl. ?
 - ? 3. *obtusifolia*, Lam. (*ill. t.* 161, f. 4;—*Poir. dict.* 5, p. 67;—*DC. pr.* 4, p. 519;—*G. Don's Mill. dict.* 3, p. 595.) 5 Madagascar.—Introduced in 1840.



4. *sphærocarpa*, Wall. (Roxb. *fl. ind.*; ed. Carey, 2, p. 161;—DC. pr. 4, p. 519;—G. Don's *Mill. dict.* 3, p. 595.) ☞ Khassya Mountains. Has been introduced into H. C. G. Fl.?
5. *stipulacea*, Wall. (Roxb. *fl. ind.*; ed. Carey, 2, p. 164;—DC. pr. 4, p. 519;—G. Don's *Mill. dict.* 3, p. 596.) ☞ Penang. Has been introduced into H. C. G. Fl.?
6. *adenophylla*, Wall. (Roxb. *fl. ind.*; ed. Carey, 2, p. 166;—DC. pr. 4, p. 520;—G. Don's *Mill. dict.* 3, p. 596.) ☞ Khassya Mountains. Has been introduced into H. C. G. Fl.?
7. *bicornis*, Wall. MSS. ☞ Khassya Hills, 1826.
8. *daphnoides*, Cunningh. (*B. M.* 60, t. 3228;—G. Don's *Mill. dict.* 3, p. 598.) ☞ New Holland. Has been introduced into H. C. G. Fl.?

CHASALIA, Commers.

1. *Boryana*, DC. ☞ Bourbon. Mauritius.

* *Amaracarpus pubescens*, Bl. ☞ Java.—*Canthium didymum*, Gärtn. ☞ Mahableshwur. Common along the Ghauts.—*C. horridum*, Bl. ☞ Among bushes, Java.—*C. Rheedei*, DC. ☞ Near Sewree Fort. Bombay.—*C. scandens*, Bl. ☞ Java.—*Psydrax dicoccos*, Gärtn. ☞ Ceylon.—*P. major*, A. Rich. ☞ Madagascar.—*Nescidia myrtifolia*, A. Rich. ☞ Mauritius.—*Diplospora viridiflora*, DC. (*Canthium dubium*, Lindl.; B. Reg. 12, t. 1026.) ☞ China.—*Epithinia malayana*, Jack. ☞ Malacca. Singapore.—*Siderodendron multiflorum*, A. Rich. ☞ Guiana.—*Declieuxia mexicana*, DC. ☞ Mexico.—*D. chiococcoides*, H. B. and Kth. ☞ Rio Janeiro.—*D. mucronulata*, Mart. ☞ Tropical Brazil.—*Tertrea martinicensis*, A. Rich. ☞ Martinique.—*Chiococca anguifuga*, Mart. ☞ Guiana.—*Margaris barbiger*, DC. ☞ Mexico.—*Saldinia Pseudo-morinda*, A. Rich. ☞ Madagascar.—*Scolosanthus versicolor*, Vahl. ☞ St. Cruz.—*Chomelia pubescens*, Cham. and Schlecht. ☞ Tropical Brazil.—*C. spinosa*, Jacq. ☞ Carthage.—*Ixora crocata*, Ker.; B. Reg. 10, t. 782. ☞ China.—*I. incarnata*, DC. ☞ Moluccas. Cultivated in Java.—*I. tenuiflora*, Roxb. ☞ Moluccas.—*I. congesta*, Roxb. ☞ Moluccas.—*I. pendula*, Jack. ☞ Penang.—*I. amboinica*, DC. ☞ Amboyna.—*I. longifolia*, G. Don. (*I. macrophylla*, Wall, not Bartl.) ☞ Penang.—*I. grandifolia*, R. Br. ☞ Singapore.—*I. nigricans*, R. Br. ☞ Penang.—*I. concinna*, R. Br. ☞ Singapore.—*I. densa*, R. Br. ☞ Penang.—*Coussarea violacea*, Aubl. ☞ Guiana.—*C. Frölichia*, A. Rich. ☞ Trinidad.—*Grumilea nigra*, Gärtn. ☞ Ceylon.—*Faramea sertulifera*, DC. ☞ Havannah.—*F. odoratissima*, DC. ☞ Jamaica.—*Strepelia guianensis*, A. Rich. ☞ Guiana.—*Coffea guianensis*, Aubl. ☞ Guiana. Trinidad.—*C. rosea*, Moç. and Sessé. ☞ Mexico.—*C. obovata*, Cham. and Schlecht. ☞ Mexico.—*C. tetrandra*, Roxb. ☞ Khassya Mountains.—*C. mexicana*, DC. ☞ Mexico.—*Rudgea ovalifolia*, Salisb. ☞ Guiana.—*R. lanceafolia*, Salisb. ☞ Guiana.—*Antherura rubra*, Lour. ☞ Cochin China.—*Ronabea erecta*,

Aubl. 5 Guiana.—*Antonia ovata*, Pohl. 5 Brazil.—*Psychotria leiocarpa*, Cham. and Schlecht. 5 Tropical Brazil.—*P. formosa*, Cham. and Schlecht. 5 Tropical Brazil.—*P. Mapuria*, Röm. and Sch. 5 Guiana.—*P. Simira*, Röm. and Sch. 5 Guiana.—*P. mollis*, Poir. 5 Mexico.—*P. aureola*, Bartl. 5 Mexico.—*P. nervosa*, Swz. 5 Jamaica.—*P. capitellata*, DC. 5 Trinidad.—*P. Roxburghii*, DC. 5 Moluccas.—*P. malayana*, Jack. (*P. aurantiaca*, Wall.) 5 Penang.—*Palicourea Selloviana*, DC. 5 Rio Janeiro.—*P. crocea*, Röm. and Sch. 5 Trinidad.—*P. triphylla*, DC. 5 Guiana.—*P. coccinea*, DC. 5 Portorico.—*Chasalia capitata*, DC. 5 Mauritius.—*C. coffeoides*, DC. 5 Mauritius.—*C. Fontanesii*, DC. 5 Mauritius.

K. CEPHAËLIDÆ, Cham. and Schlecht.

(*DC. pr. 4, p. 532.*)

GEOPHILA, D. Don. (*DC. pr. 4, p. 537*;—*G. Don's Mill. dict. 3, p. 608*;—*W. and A. pr. 1, p. 436.*)

1. *reniformis*, D. Don. (*pr. fl. nep. p. 136*;—*DC. l. c.*;—*G. Don. l. c.*;—*W. and A. l. c.*;—*Wight. icon. 1, t. 54*;—*Cham. and Schlecht.*—*G. diversifolia*, *DC. ? l. c.*—*Psychotria herbacea*, *L.*;—*Roxb. fl. ind. 1, p. 533*; *ed. Carey, 2, p. 161*;—*J. Grah. Cat. B. pl. p. 92*;—*Rheed. 10, t. 21.*) 4. S. Concan. Khassya Mountains. Nepal. Fl. small, pure white, inodorous, May and June; fr. O.

- * *Cephaelis tomentosa*, Willd. 5 Guiana. Trinidad.—*C. punicea*, Willd. 5 Jamaica.—*C. ruelliaefolia*, Cham. and Schlecht. 5 Equinoctial Brazil.—*C. justiciaefolia*, Rudge. 5 Banks of rivers in Guiana.—*C. violacea*, Willd. 5 Humid places in Guiana.—*C. Evea*, DC. 5 Woods in Guiana.—*C. Ipecacuanha*, A. Rich. 4. Brazil. Ipecacuanha-plant.—*Carapichea Aubletii*, DC. 5 Guiana.—*Suteria calycina*, DC. 5 Brazil.—*Patabea coccinea*, Aubl. 5 Guiana.

L. SPERMACOCEÆ, Cham. and Schlecht.

(*DC. pr. 4, p. 538*;—*W. and A. pr. 1, p. 436.*)

CEPHALANTHUS, L. (*DC. pr. 4, p. 538*;—*G. Don's Mill. dict. 3, p. 610.*)

1. *naucleoides* DC. (*o. c. p. 539*;—*G. Don. l. c.*—*Nauclea tetrandra*, *Roxb. fl. ind. 1, p. 516*; *ed. Carey, 2, p. 125.*) 5 Silhet. Fl. small, yellow, very fragrant, H. S.; fr. C. S.

SPERMACOCE, L. (*DC. pr. 4, p. 552*;—*G. Don's Mill. dict. 3, p. 619*;—*W. and A. pr. 1, p. 438.*)

1. *tenuior*, L. (*DC. l. c.*;—*G. Don. l. c.*) © W. Indies. Peru. Panama. Carolina.—Fl. small, white, R. and C. S.; fr. C. S. Domesticated about Serampore.
2. *hispida*, L. (*DC. pr. 1, p. 555*;—*G. Don's Mill. dict. 3, p. 621*;—*W. and A. pr. 1, p. 436*;—*Roxb. fl. ind. 1, p. 373*; *ed. Carey, 1, p. 379*;—*J. Grah. Cat. B. pl. p. 93*.—*S. hirta*, *Röttl.*—*S. scabra*, *Willd.*;—*DC. l. c.*;—*G. Don. l. c.*;—*Roxb. fl. ind. 1, p. 371*; *ed. Carey, 1, p. 377*;—*Rheed. 9, t. 76*;—*Burm. zeyl. t. 20, f. 3.*) © Ceylon. Penin-