

THE  
**BIRDS OF INDIA:**

BEING  
**A NATURAL HISTORY**

OF ALL  
THE BIRDS KNOWN TO INHABIT CONTINENTAL INDIA;

WITH  
*Descriptions of the Species, Genera, Families, Tribes, and Orders,  
and a Brief Notice of such Families as are not found in India,*

MAKING IT A  
**MANUAL OF ORNITHOLOGY**  
SPECIALLY ADAPTED FOR INDIA,

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*In Three Volumes.*

**VOL. III.**

Calcutta:

**GEORGE WYMAN AND CO., PUBLISHERS,**  
1A, HARE STREET, CALCUTTA

1864.





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## NATIVE LANGUAGES—~~ABBREVIATIONS~~.

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<i>B., Beng.</i>	Bengalee.	
<i>Bhot.</i>	Bhotia	( <i>Sikim</i> ).
<i>Can.</i>	Canarese.	
<i>H., Hind.</i>	Hindustani.	
<i>Lepch</i>	Lepcha.	( <i>Sikim</i> )
<i>Mahr</i>	Mahratta	
<i>Mal.</i>	Malayalam.	
<i>Sind</i>	Sindhi.	
<i>Tam.</i>	Tamul.	
<i>Tel.</i>	Telugu or Telinga.	

Besides these, a very few names are given from the language of the Gonds of Central India, the Mharis, an allied race, and the ~~Yarkles~~<sup>Yarkles</sup>, a nomade race in the Deccan.

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TO THE

## SECOND PART OF SECOND VOLUME.

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The author has at last the gratification of concluding his 'BIRDS of INDIA,' the compilation of which has occupied him incessantly for upwards of two years. The second part of this Volume has been delayed by the illness of the author, as well as by other causes beyond his control; and he is rejoiced to find, by the impatience of many of his correspondents and others, that the study of Ornithology is on the increase, and that the utility of the present work is already apparent. The number of species recorded is above one thousand, about double that of the Avi-fauna of Europe. The author mentions this to show that he has not been unnecessarily long over his task, about two years and one month; and that those who expected more were somewhat unreasonable in their views. Indeed, had he not been working under Government, and against time as it were, he certainly would have taken more time over the work, and the imperfections would have been fewer. None can be better aware than the author himself of the numerous imperfections and blemishes throughout the work, some of which have been kindly brought to his notice, and all of which he hopes to correct if a second edition be called for; and with this view, the author begs for information from all int



## PREFACE.

in the study of Ornithology, both with regard to any inaccuracies of the present work, and especially additional information on the habits, changes of plumage, &c, &c., of such birds as are least known. He is happy to be able to state that several gentlemen interested in the study of Indian Birds, some of them previously unknown personally to him, have commenced a correspondence, and given him some valuable notes on various species. They are too numerous to enumerate here, but he cannot refrain from mentioning Dr D. Scott, now at Umballa; Mr. F. Simson, B. C. S., Mr. Jos. Shillingford of Kolassee; and Mr. Brooks, Railway Engineer, Mirzapore. He much regrets that the length to which the second volume has extended, has prevented his adding a description of the Assamese and Burmese birds not included in the Birds of India, and the same reason has rendered it unadvisable to give that extended table of the geographical distribution of all the species which he proposed in the introduction to the first volume.

It is with no ordinary feelings of regret, that the author has to record here the death of the nobleman to whom this work was dedicated. Thus, two Viceroys, under whose patronage this book has been planned and carried out, have, in the short space of two years, gone to their long home. Lord Canning, to whom, he may say, this contribution to science owes its existence, ever took a lively interest in its progress, and brought it prominently before Lord Elgin, who warmly seconded his predecessor's views; and the author is glad to see that this liberality has been duly appreciated by the ~~the~~ world. He trusts that the next Viceroy will

## PREFACE.

enable the author to go on with the rest of his projected manuals. The volumes on Mammals and fishes are now nearly ready for the press, and if the author's special duty is continued, will be commenced immediately, and finished, he hopes, by the end of 1864.

*December 1863.*

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# THE BIRDS OF INDIA.

## VOL. II. PART II.

### ORD GEMITORES, PIGEONS

Syn. *Columbæ*, Latham.

Bill moderate or short, straight, compressed, the basal portion weak, and covered with a soft fleshy skin or membrane, in which the nostrils are situated; the apical portion arched or vaulted, and more or less curved down at the tip; wings generally long, pointed; tail variable, usually of twelve or fourteen feathers; tarsi short and stout, legs feathered to the joint; toes moderately long; hind toe on the same plane as the anterior ones.

There is no order of birds, perhaps, better marked than that of the Pigeons and Doves, and such is the marked physiognomy of these birds, that it does not require an Ornithologist to refer a bird of this order to its proper place; not more than one species at present existing, which could excite more than a momentary doubt in the mind of any one as to its real affinities.

The soft and often tumid and bulged base of the bill is smooth in some, scurfy in others, and the nostrils are usually pierced well in front; the apical portion of the bill varies much, slender and slightly curved in some, thick and much curved in others. The gape is tolerably wide, very wide in one family, and the face and lores are usually well plumed. The eyes are set rather far back, and give a peculiar physiognomy to the birds of this order. The wings are generally long, and more or less pointed; in some of the ground Pigeons, only, shorter and more rounded; and, in many, the first primary quills are notched on their inner webs, as in the *Falconidae*. The tail varies both in length and form, but is usually nearly even, or very slightly rounded, wedge-shaped in a few. It consists of twelve or fourteen feathers in most; of sixteen in a few; and it has been stated that there are only ten in one or two. The

tarsus is short and stout, but varies in the different families, and is more or less feathered in a few; the bare portion is covered with scutellæ in front. The feet are more or less elongated, the membrane of the toes sometimes bordering the scutellæ, and the soles are broad and flattened in one family. In a few of the arboreal Pigeons, the outer toe is slightly joined at the base to the middle one; but, in general, the toes are divided to the base.

In their internal anatomy, too, the Pigeons are well marked. The bony sternum is narrow, and has two notches on each side; the outermost one deep, whilst the inner one is often reduced to a foramen; the ridge is deep, and rounded off anteriorly, somewhat as in Parrots; and the furcula is flat, and destitute of any appendage. The crop is very large and double, and, in the breeding season, becomes glandular in both sexes, and secretes a milky fluid, which moistens the grains which they afterwards convey to their young. The gizzard is very muscular, the intestines long and slender, with minute cæca, and there is no gall bladder. The lower larynx is furnished with two pairs of muscles. Their feathers want the supplementary plume present in most *Rasores*; and, in many, the feathers on the back and rump have the shaft wide and flattened, especially at its basal portion, giving a sort of spinous character to the touch.

All Pigeons are monogamous in their habits, and both sexes assist in making the nest, incubating the eggs, and feeding the young. They make loosely-constructed nests of twigs, not interwoven, either on trees, or in holes of rocks or buildings, and never lay more than two eggs; in some genera only one, and their colour is always pure white. The young are born naked and blind; they take considerable time to reach maturity, and, long after they fly are fed by their parents, which disgorge the grain, &c. from their own craws. Pigeons feed on fruit and grain, never touching insect food, though a few eat small snails; and they alone, of all birds, drink by a continued draught. Their note is usually soft and expressive, being, in most, a sort of *Coo*, or low plaintive moan, in one group a rolling whistle.

Pigeons are found over all the world, but are most numerous in Australia and the Oceanic region. There are many in America,

but not of very varied forms; few in Europe and temperate Asia; and moderately abundant in India, increasing in the Malayan region both in types and numbers. Above 300 species are now known, all of very pleasing coloration, some of them very beautiful, and many adorned with bright metallic hues, and a rich changeable gloss. Most of them are highly fitted as food for man, and many are excellent eating.

Pigeons may be said to be intermediate to *Rasores* and *Insessores*, and Cuvier considered that they form the passage from one tribe to the other. Some Ornithologists place them as an aberrant family of the *Rasores*; others as the last of the *Insessores*. They approximate the *Rasores* by their vaulted beak, their large nasal fossæ, covered by a soft membrane, their crop dilatable externally, the form of their tarsus and foot, and their blunt nails, their massive form, and general physiognomy, and by their affording excellent food; whilst they hold to the *Insessores* by their monogamous habits, the young being hatched blind and helpless, the hind toe being on a level with the other three, and the short tarsus never being spurred. In their internal anatomy, too, they equally partake of both, having the thick gizzard of the *Rasores* and the small cæca and simple gastric glands of the *Insessores*. On the whole, I consider, with Wallace and others, that they approach the *Rasores* more nearly than they do the *Insessores*.

\*As stated in my Introduction, theoretically, I am inclined to regard them as an aberrant division of the *Rasores*. They are certainly hardly co-equal in value with the other five orders of birds, and one argument might be drawn in favor of their being rather a family than a tribe, from the fact of their presenting so great an uniformity of structure throughout, the other orders exhibiting a constant variation of type; but, for convenience of definition and practical purposes, I think it advisable to keep them distinct as Gray, Bonaparte, and Blyth have done.

The family of the *Insessores* to which, perhaps, they make the nearest approach, is that of the Cuckoos, and the most nearly related among the *Rasores* are the *Cracidae*, which agree with them in the structure of their feet, and the *Tinamidae*, both American groups.

I have selected MacGillivray's name for the order; its termination being conformable with that of the other orders.

Pigeons may be divided into the following families:—  
1. *Treronidæ*, fruit eating or Tree Pigeons; 2. *Columbidæ*, ordinary Pigeons and Doves, feeding partly on the ground and partly on trees; 3. *Gouridæ*, or ground Pigeons; and 4. *Didunculidæ*, consisting of a single form, to which perhaps ought to be added the *Didida*, founded for the extinct Dodo. Gray divides them, as I have done here, but, making the whole order of one family only, *Columbidæ*, our families are by him arranged as sub-families.

Bonaparte adds another, *Calanidæ*, separated from *Gouridæ*, and founded on the Nicobar Ground-pigeon; and latterly, he restricted *Gouridæ* to the gigantic Crowned Pigeons of New Guinea.

#### Fam TRERONIDÆ

Bill varied, short and thick in some, slender in others, the tip strong and vaulted; wings long, firm, the tail short or moderate in most, always of fourteen feathers; tarsus short, more or less feathered, the bare portion reticulated; inner toe a little shorter than the outer, which is slightly united at the base to the middle toe; claws short, well curved.

The Fruit-pigeons vary greatly in size, some of them being very large, others minute; and they also differ much in the strength of the bill. The wings of all are strong and firm, and their flight vigorous and rapid. The tail is broad, and, in almost all, consisting of fourteen feathers. They are exclusively frugivorous, and are found chiefly in India, including Malaya and Australia (with Oceanica), a very few occurring in Africa. They may be subdivided into the following sub-families:—

1st.—*Treroninæ*, Green Pigeons.

2nd.—*Carpophaginæ*, Imperial Pigeons.

3rd.—*Ptilopodinæ*, Green Doves.

#### Sub-fam. TRERONINÆ, Green Pigeons.

Bill stronger and thicker than in the two other sub-families; tail typically short; tarsi and feet stout, soft, with very broad soles.

The Green Pigeons are a well marked division, all having a marked physiognomy by which they can be recognised at a glance. They are of tolerably stout and massive form, and of a dull leaf-green colour, more or less varied with ashy and maroon above, with yellow on the wings, and with orange or buff beneath. The eyes of most are very beautiful, being blue with a red outer circle.

They are more or less gregarious according to the species. When hunting for fruit, they are continually gliding about the branches, like squirrels; and, from their strong feet, they can hang over to seize a fruit, and recover their position at once by the strong muscles of their legs. When perfectly quiet, they are very difficult to observe, from the similarity of their tints to that of leaves. They nidificate on trees, making a loose nest of twigs, and laying two white eggs. A few are found in Africa and Madagascar, but the majority are denizens of India and Malaya, not extending as far as Australia, but one species, at least, occurring as high north as Japan, although they appear to be rare in China. They all afford excellent eating, but the skin is very tough and thick, and ought to be removed.

Several divisions have been of late formed among the Green Pigeons, which were all formerly included under *Vinago*, Cuvier, *Treron* of Vieillot.

Gen. TRERON, Vieillot (as now restricted.)

Syn. *Toria*, Hodgson—postea *Nomeris*.

Char.—Bill very strong and deep; eyes surrounded by a nude space.

This genus, as at present limited, of which we have only one species in India, and that a doubtful member, is distinguished from all the others by its very strong bill, the horny portion of which is continued back to beyond the feathers of the forehead.

### 771. *Treron Nipalensis*, HODGSON.

*Toria*, apud Hodgson, As. Res. XIX. 164—BLYTH, Cat. 1381 (in part)—*Theria* (i. e., quasi rostrata), of the Nipalese.

## THE THICK-BILLED GREEN PIGEON.

*Descr.*—Male, crown ashy, paler on the forehead; rest of the plumage bright green, with the mantle and upper part of the wings of a deep and bright maronne; wing primaries and their larger coverts black; the other coverts margined with bright yellow, forming two and a half bands, the last bordering the green tertiaries; middle tail feathers green, the rest with a blackish medial band, and broad grey tips; beneath yellowish green, with a faint tinge of fulvous on the breast; under tail-coverts cinnamon colored.

The female differs in wanting the ashy head and maronne mantle of the male, in the lower tail-coverts being subdued white, barred with green, and the upper tail-coverts are tinged yellowish.

Bill glaucous green, with the soft portion at the sides of the upper mandible vermillion, forming a large and conspicuous spot. Legs bright vermillion; irides deep red-brown, with a blue inner circle; naked orbital skin livid blue. Length  $10\frac{1}{2}$  inches; extent 17; wing  $5\frac{3}{4}$ ; tail 4.

This species of Green Pigeon differs from all the other Indian ones by its extremely strong bill. If the other species of *Treron* do not, as stated, possess the third primary deeply sinuated on its inner web, it ought perhaps to be separated under Hodgson's generic name *Toria*; or it might be joined to *Osmotreron*, as an aberrant species, or placed under *Butreron*.

It has been found in the Himalayas, though apparently not very common, and extends rarely into Lower Bengal, and to some of the countries to the eastward.

The other recorded species of *Treron* are *T. psittacea*, Temm.; *T. curvirostra*, Gmelin; and *T. aromatica*, Gmel., all from Malaya; and *T. axillaris*, Gray, whose exact locality is unknown. *T. capellii*, Temm., has been separated by Bonaparte as *Butreron*. Its bill is almost vulturine in aspect, and the tail is rounded; but in its nude orbits and thick corneous bill, the preceding species accords sufficiently with it.

## Gen. CROCOPUS, Bonap.

*Char.*—Bill tolerably short and stout, with the soft basal portion occupying about half the length of the bill; the

inner web of the third primary distinctly sinuated; feet yellow.

This group differs from the other Indian ones by its larger size, more massive form, yellow feet, and the sexes very closely resemble each other. There are two nearly allied races in India, and a third in Burmah

## 772. *Crocopus Phoenicopterus*, LATHAM.

Columba, apud LATHAM—*C. militaris*, TEMMINCK—*C. Hardwickii*, GRAY—GOULD, Cent. Him. Birds, pl 58—BLYTH, Cat. 1384—*Hurrial*, II—*Hurriel* of some.

### THE BENGAL GREEN PIGEON.

*Descr*—Top of the head, and the sides of the base of the neck, (forming a demi-collar) ash-grey, contrasting with the yellow green of the back of the neck; a green tinge on the forehead; the rest of the plumage green; shoulders of the wing lilac in the male, and with a trace of the same in the female; the greater coverts margined with pale yellow, forming an oblique bar across the wing; the terminal two-fifths of the tail ash-grey above, deeply tinged with green, albescent beneath, with the medial portion blackish; beneath, the neck and breast are bright yellow-green, with a shade of fulvous, and the abdominal region ash-grey; the lower belly generally more or less mixed with green, but bright yellow in the middle, as are the tibial feathers; vent mingled white and green; under tail-coverts dull vinous maroon, with white tips, inclining to greenish in the female.

Bill whitish; feet deep yellow; irides carmine, with an outer circle of smalt blue. Length  $12\frac{1}{2}$  inches; extent 22; wing  $7\frac{1}{2}$ ; tail 5; bill at front  $\frac{1}{2}$ .

This Green Pigeon is found over all Bengal and Upper India, as far as the Dehra Doon, and extending eastward into Assam, Sylhet, and Tippera. It extends south as far as the Nerbudda, and I have killed it at Saugor, but there the next species is perhaps equally common. Tickell found it all through Chota



Nagpore. He states that it breeds in the thick damp forests to the southward, towards Sumbulpore, during the rains. Many breed in various parts of Lower Bengal; and, as Blyth remarks, in the hot weather, not during the rains. No exact localities have been pointed out as its breeding places there, but it probably leaves the more cultivated ground at this time, and betakes itself to the wilder and less frequented jungles, very probably nestling in the Sunderbuns. Blyth states that 'the young are brought to Calcutta for sale, as well as adults caught with bird-lime, and that they soon become reconciled to captivity, and will utter their musical notes freely in the cage; but are gluttonous and uninteresting birds in confinement, especially when fed on plantains, which they take to most readily, besmearing the feathers of the head and neck, to the great injury of their beauty; it is therefore desirable to get them, by degrees, to feed on soaked gram.'

### 773. *Crocopus Chlorigaster*, BLYTH.

Treron, apud BLYTH, J. A. S. XII 167—BLYTH, Cat. 1385—T. Jerdoni, STRICKLAND—V. militaris, apud JERDON, Cat. 286—Hurrial, H.—*Pacha guwa*, Tel.—*Pacha pora* Tam.

#### THE SOUTHERN GREEN PIGEON.

*Descr.*—This species differs from the last in having the whole top of the head ashy, devoid, in adults, of the slightest tinge of green on the forehead, and the whole under parts are green; the neck and breast, too, are less tinged with yellow, and shade gradually into the green of the abdomen; there is no trace of green upon the tail, except at its extreme base, which is uniformly ashy above.

Size of the last.—Wing barely 7 inches; tail 4½.

This species replaces the last throughout the greater part of the Peninsula of India, and Ceylon, but is rare north of the Nerbudda, though occasionally killed even in Lower Bengal. Its habits are of course very similar. It is very abundant in many parts of Southern India, especially along the fine avenues of trees met with in parts of Mysore and the Carnatic. I found it breeding in April and May in the jungly country south-east of

Chanda. It comes in large parties, generally about 9 A. M., to certain spots on river banks to drink, and after taking a draught of water, occasionally walks a few steps on the damp sand, appearing to pick up small pebbles, pieces of gravel or sand. Their call is very similar to that of the Bengal Green Pigeon.

*C. viridifrons* Bl., of Pegu and Tenasserim, is another nearly affined race of *Crocopus*, chiefly differing from *C. phœnicopterus*, which it very closely resembles, by its conspicuous green forehead, and the basal half of the tail being bright greenish-yellow. I procured it near Thyetinyo, and also recently in Upper Cachar. Blyth remarks that it is not improbably the species of *Crocopus* which is stated to inhabit China.

Gen. OSMOTRERON, Bonap.

Bill as in *Crocopus*, but more slender; legs always red; sexes differ conspicuously in plumage; of small size.

This division, adopted by Mr. Blyth, differs technically but little from the preceding one, but forms a very natural group, containing several very nearly related species from India and Malayana; and which, as Mr. Blyth remarks, hold the same relationship to the large *Hurrials*, as Doves do to Pigeons in ordinary parlance.

There are two types of coloration, the one without any maroon colour on the back, the other colored much as in *Treron*.

774. *Osmotreron bicincta*, JERDON.

Vinago, apud JERDON, Cat. 289—Ill. Ind. Orn. pl. 31—V. unicolor, JERDON, Cat. 289 bis (the female)—BLYTH, Cat. 1386—V. vernans, var. LESSON—*Chota hurrial*, H. and Beng.—sometimes *Koklah*—*Chitta putsa guwa*, Tel.

THE ORANGE-BREASTED GREEN PIGEON.

*Descr.*—Male, above green, brighter and more yellow on the forehead, with the usual yellow wing-band; occipital region and nape ash grey; tail grey, with a blackish medial band on all but its middle feathers; beneath green, yellowish on the throat, and with a large buff-orange patch on the breast, surmounted by a

narrow lilac band somewhat broader on the sides; vent pale yellow; under tail-coverts cinnamon colored, and the lower surface of the tail blackish, tipped with greyish white.

The female differs in wanting the blue and orange breast, in the whole lower surface being brighter green, and in the lower tail-coverts being mingled reddish ashy and buffy white.

Bill greenish glaucous; legs pinkish red; irides red, surrounded by a blue circle. Length about 11 inches; extent  $19\frac{1}{2}$ ; wing 6, or rather more; tail  $3\frac{3}{4}$ ; bill at front nearly  $\frac{3}{4}$ .

This very beautiful Green Pigeon is spread throughout the greater part of India and Ceylon, extending into Assam, and Burmah, as low as Tenasserim, but not recorded from the N. W. Provinces. I have seen it most abundant not far from the coast, both on the East and West of India, but it is not rare in Lower Bengal, though more common in Assam, Cachar, and the countries to the Eastward. It is generally in very numerous flocks, fifty and sixty or more, and flies with great rapidity. Layard found it breeding in Ceylon in May. The voice of the male is something like that of *Crocopus phœnicopterus*, but softer and more hurried. Blyth states that the young are often brought to the Calcutta market about June; that it has a less musical and less prolonged note than the *Hurriah*, but equally melodious.

The nearly allied species *O. vernans*, is found in the Malayan peninsula and islands, extending to New Guinea. It differs in being smaller, in the lilac band being of much greater extent, and in other points.

The next three species are very closely allied.

### 775. *Osmotreron malabarica*, JERDON.

III. Ind. Ornith., letter press to pl. 31—*Vinago aromatica*, JERDON, Cat. 287 (in part), and V. *affinis*, Cat. 288 (the female)—BLYTH, Cat. 1389 (in part)—*Poda putsa guwa*, Tel.

#### THE GREY-FRONTED GREEN PIGEON.

*Descr.*—Male, forehead pale ashy, or whitish-grey; mantle and wing-coverts maroon; the rest of the upper parts, with the lores,

eye-brow, face, and ear-coverts, green; wing-coverts broadly edged with bright yellow, and wing-feathers more or less edged with the same; tail green at the base, broadly tipped with ashy-white, and with a medial dark band, and the outermost feathers more or less marked with deep ashy on the inner webs; beneath green, yellowish on the throat and neck, and mixed with pale yellow on the vent and thigh-coverts; under tail-coverts cinnamon

The female differs in wanting the maroon colour, and in the under tail-coverts being mingled greenish, ashy, and white.

Bill glaucous green; legs pinky-red; irides red, with an outer circle of blue. Length about  $10\frac{1}{2}$  inches; extent 18; wing  $5\frac{3}{4}$ ; tail 4.

This species very closely resembles *Treron nipalensis* in coloration, but is at once distinguished by the very different and more slender bill, and it has no nude space round the eyes. It is found in most of the lofty forests of India, most abundant in Malabar, but I have killed it in Central India, and in the Eastern Ghats. It has the usual habits of the family, but does not, in general, associate in such large flocks as the last.

#### 776. *Osmotreron Phayrei*, BLYTH.

J. A. S. XXXI, p. 344—*Treron malabaricus*, apud BLYTH, Cat. 1389 (in part)—*V. aromatica*, apud SELBY, JARD. Nat. Libr. Pigeons, p. 97.

#### THE ASHY-HEADED GREEN PIGEON.

*Descr.*—Very similar to the preceding, *O. malabarica*, but distinguished by having the entire cap ash-colored in both sexes, and by the male having a large ochreous patch on the breast.

This species, formerly confounded with *O. malabaricus*, appears to represent it in Lower Bengal, where, however, rare, but it is abundant in Assam, Sylhet, and Burmah.

The next species differs from the two preceding ones in both sexes having the under tail-coverts colored as in the females only of the others, and, in this respect, resembles *O. chloroptera*, Blyth, of the Andamans and Nicobars,

777. *Osmotreron flavo-gularis*, BLYTH.

J. A. S. XXVI., 225.—*T. malabarica*, var. *pompadoura*, apud LAYARD—*V. aromatica*, var. JERDON, Cat. 287 (in part).

## THE YELLOW-FRONTED GREEN PIGEON.

*Descr.*—Very similar to *O. malabarica*, but appears to have constantly a yellowish forehead, a pure yellow throat, no buff patch on the breast, and the under tail-coverts are green in both sexes, with broad whitish tips. Dimensions of *malabarica*.

This nearly allied species was discriminated by Blyth from Ceylon specimens, whence sent by Layard, who procured it in the Mountain zone at the top of the Balcadna Pass, and at Ratnapura. I had long previously noticed it from the South of India as a variety of *Malabarica*, but am not aware what particular localities it affects.

*O. pompadoura*, Gmelin, from Ceylon, figured in Brown's Zoology, is another small species allied to the preceding; and *O. olax*, Temm., still smaller, appears to represent them in Malayana; whilst *O. fulvicollis*, Wagler, also from Malayana, Borneo, &c., differs from all by having the head and neck chestnut.

The next form differs from the others by the medial tail feathers being lengthened.

## Gen. SPHENOCERCUS, Gray.

Syn. *Sphenurus*, Swains.

*Char.*—Bill moderately slender and lengthened, the basal two-thirds or more, soft and tumid, and the corneous extremity feeble; a small nude space round the eyes; wings with the third primary not sinuated, as in the previous forms; tail wedge-shaped, with the central feathers much elongated and narrow in some species; soles of the feet slender, not broad and flat as in the others.

This genus, by the narrow toes, evidently leads from the true Green Pigeons towards the *Ptilopodinae*. It is entirely a mountain form.

778. *Sphenocercus sphenurus*, VIGORS.

Vinago, apud VIGORS—GOULD, Cent. Him. Birds, pl. 57—V. cantillans, BLYTH, Cat. 1391—*Kokla* or *Kokila*, H.—*Phoo-pho*, or *Kookhoo-pho*, Lepch.—*Coorbem*, Bhot

## THE KOKLA GREEN PIGEON.

*Descr.*—Male, general plumage green, with a ruddy tinge on the head and breast; shoulder of wings and mantle maroon, which also tinges the scapulars; a narrow yellow edging to the wing-coverts; quills dusky black; tail green above; the outer feathers slaty, with a dark sub-terminal band; beneath green; the breast brightly tinged with orange buff, extending more or less on the throat; vent and under tail-coverts pale cinnamon colour.

The female differs in wanting the ruddy tinge on the breast, and in the lower tail-coverts being mixed white and green.

Bill pale glaucous blue, almost white at the tip; irides blue and red; legs coral red; nude skin round eyes pale blue Length 13 inches; extent 21; wing 7; tail  $5\frac{1}{2}$ ; bill at front  $\frac{3}{4}$ .

The Kokla Green Pigeon is spread throughout the Himalayas, extending into the hilly regions of Assam and Sylhet. It frequents the zone from 4,000 to 8,000 feet, in winter perhaps descending lower, for Hutton remarks that they leave Mussooree in October, returning in April to breed. It is common at Darjeeling, but, as Tickell remarks, not so extensively gregarious as the common green pigeons of the plains. They frequent high trees, and feed of course exclusively on fruit. Hutton found them breeding in May and June, making the usual nest of dried twigs, and with two white eggs.

The male has a most agreeable note, more prolonged and musical than that of *Crocopus*. Blyth says of it:—"The notes bear some resemblance to the human voice in singing, and are highly musical in tone, being considerably prolonged and modulated, but always terminating abruptly, and every time the stave is repeated exactly as before, so that it soon becomes wearisome to an European ear." After moulting in confinement, the green colour, in some specimens, becomes replaced by a delicate pearl grey, and the russet tinge of the head and breast becomes pale

maronne. Mr. Blyth, described a caged specimen with these tints as *V. cantillans*.

The *Kokhila* is greatly prized as a cage-bird by the natives, and is occasionally brought for sale to Calcutta, and sells at a high price.

### 779. *Sphenocercus apicaudus*, HODGSON.

Treron, apud HODGSON—BLYTH, Cat. 1392—*Sampoon-pho*, Lpch.

#### THE PIN-TAILED GREEN PIGEON.

*Descr.*—Green, tinged with yellowish on the upper tail-coverts and on the lower parts, and the male, with the crown of the head and breast tinged with russet, as in the last species; primaries slaty black, two narrow yellow bars on the wing; tail, with the medial pair of feathers, yellow green at their base; grey at their tips, the others grey, with a medial blackish band; the central feathers much lengthened beyond the rest, and the elongated portion extremely narrow.

Bill glaucous blue, cere blue, legs coral-red; irides dark yellow. Length about 16 inches; extent 21; wing  $6\frac{1}{2}$ ; tail centre pair 8, next 5.

This elegant Green Pigeon has hitherto only been found in the South-east Himalayas, in Nepal and Sikim, extending, however, to the hill ranges of Assam. It is not so common near Darjeeling as the last species, and frequents a lower zone, being found in the warmer valleys. Its note is very similar to that of the last species, but less loud, musical, and prolonged.

A nearly allied species occurs in Malayana, *S. oxyurus*; and *S. Korthalsi*, Müll., from the Malayan Archipelago, is very like the Himalayan bird. One species, *S. Sieboldi*, inhabits Japan.

#### Sub-fam. CARPOPHAGINÆ, Fruit Pigeons.

Bill lengthened and slender, tolerably depressed at the base, with the terminal third or less of the upper mandible corneous; wings long; tail even, or slightly rounded, longer than in the *Treroninæ*; feet strong, with broad soles; tarsus well feathered.

These Pigeons are of very large size, and adorned, in many cases, with rich and metallic colors, with the lower parts usually pale and glossless. The tarsus is very short, and the feet broad, enabling them to grasp the branches well. The forehead is low in its profile, and the feathers advance on the soft portion of the bill. Their gape is wide, and they are enabled to swallow very large fruit; and the feathered portion of the chin advances far towards the tip of the lower mandible, thus increasing the width of the gape. All those whose nidification is known, lay but one egg.

Gen. CARPOPHAGA, Selby.

Syn *Muscadivores*, Lesson, apud Gray—*Ducula*, Hodgson (partly).

Char.—Those of the sub-family · plumage glossy metallic green, or coppery brown above; of large size.

I have joined Hodgson's genus *Ducula* to *Carpophaga*, as I have been unable to find any characters to separate them, except partly of color. There are, however, several types which might be distinguished as sectional. Some appear only to differ from the rest by having a knob developed at the base of the bill, and to these Bonaparte's name *Globucera* is applied.

### 780. *Carpophaga sylvatica*, TICKELL.

*C. ænea*, apud JERDON, Cat 284—BLYTH, Cat. 1401—Figured Beng. Sport Review, 1845, pl 3 —*C. pusilla*, BLYTH, Cat. 1402—*Dunkul* or *Doomkul*, H. also *Sona kabutra*, H.—*Burru harrial*, H. of some—*Pogonnah*, Mal.—*Kakarani guwa*, Tel.—*Imperial Pigeon* of Europeans in the South of India.

#### THE GREEN IMPERIAL PIGEON.

*Descr.*—Head, neck, and whole under parts, pearl-grey, purer on the crown and breast, and tinged elsewhere, and sometimes on the crown, with ruddy vinaceous; back, rump, wings, and tail, shining coppery green, brightest on the tail, and the quills slaty-grey without, dark blackish grey within; under tail-coverts deep chesnut, with which some of the feathers of the vent and flanks are also sprinkled; chin, orbital feathers, and round the base of the bill, white; axillaries buff.



Bill slaty, red at the base above, and bluish white at the tip ; irides and the nude orbits crimson ; legs lake red, pale on the soles. Length 18 to 19 inches ; extent 30 ; wing 8 to 9 ; tail 6.

It will be seen from the synonyms I have adopted that I do not consider Blyth's small race *C. pusilla*, from the South of India, distinct from the bird of Central India. Some specimens from the South are perhaps smaller than others from Northern and North-eastern India ; and examples from the East Coast are somewhat smaller than those from the West Coast ; but the supposed new species was founded on a peculiarly small specimen. Should I be correct, this fine Pigeon inhabits the whole of India, from Ceylon to Assam and Sylhet, not however, apparently, occurring in the Himalayas, nor in the North-western Provinces. It also is found in Burmah, and even extends through the Malayan Peninsula to Java and Sumatra, according to Blyth. It is only found in forest countries, and is very abundant in the Malabar forests, in Central India, Midnapore, and the wooded countries to the North-east generally.

According to my observations, it is not at all a mountain species, keeping to forests at low elevations, and I cannot recall ever having seen it as high even as 2,000 feet ; certainly it is more abundant at elevations from the level of the sea to 1,000 feet ; and Mr. Blyth was mistaken when he stated that the specimen sent him by myself, from which he made his *pusilla*, was from the Neilgherries ; indeed I have not even seen this Pigeon in the Wynaad. Layard, on the contrary, describes it as " extending into the low country in Ceylon, but their great haunt is certainly the mountain zone, though, from Dr Kelaart's observations, it does not appear to have been seen in very high lands." It associates usually in small parties, now and then uniting into flocks of twenty or more. It wanders about from place to place, looking for trees in fruit ; and, in the hot weather, visits the salt swamps on the Malabar Coast, in numbers, along with the next species, to feed on the buds of *Aricecunia*, and other trees of similar habit. I found it breeding in the forests of Central India in April and May, but was unable to get at any of the nests which I saw ; however, I was assured by a Shikaree that he found two eggs in one nest he

examined. Like the Green Pigeons, it betakes itself to river banks to drink, about 8 or 9 A. M., and again, I believe, in the afternoon. Its call is a low, deep, plaintive moan, called, however, by one writer, a 'harsh and croaking note, not unlike the croaking of a bull frog.' Tickell describes its call as deep and ventriloquous. The flesh is excellent eating. A writer in the *Bengal Sporting Review* states that, "a wounded bird will erect the feathers of its head and neck, and buffet with its wings the hand which captures it."

Blyth describes another species, *C. insularis*, from the Nicobars, with the upper parts darker, inclining to steel-blue, and the tail blue black. *C. ænea*, from the Moluccas, and *C. chalybura*, Bonap., from the Philippines, appear closely allied to our bird, and there are others described from the more distant islands.

The species of *Globicera* are distinguished by a fleshy knob at the base of the bill, which is said to be more highly developed in the male at the breeding season, but, otherwise, barely differs from *Carpophaga*. Nine species are recorded by Bonaparte, chiefly from the Oceanic region.

The next species, with some others, has been separated under Hodgson's generic name *Ducula*, but it scarcely differs, except in its less metallic colors. Bonaparte states that the tail is somewhat more lengthened, and the tips of the primaries less rounded.

### 781. *Carpophaga insignis*, HODGSON.

*Ducula*, apud HODGSON—BLYTH, Cat. 1404—*C. cuprea*, JERDON, Cat. 285—*C. badia*, RAFFLES?—*Dukul*, H. in Nepal.—*Phomok-pho*, Lepch.—*Tagyusam*, Bhot.

#### THE BRONZE-BACKED IMPERIAL PIGEON.

*Descr.*—The whole head, neck, and under parts, pale lilac-grey, in some parts tinged with ruddy; back and wings vinaceous brown, with a faint coppery gloss; rump and upper tail-coverts dusky cinereous; tail dusky, with its terminal fourth dull ashy above; chin white; under tail-coverts buffy white; tips of the tail beneath whitish grey.

Bill dull lake-red at the base, slaty at the tip; orbits lake red; irides red-brown in examples from the South of India, hoary-grey in Himalayan specimens; legs dull lake-red. Length 18 to 20 inches; extent 26 to 30; wing  $9\frac{1}{2}$ ; tail  $6\frac{3}{4}$  to 7; weight  $1\frac{1}{2}$  lb.

The female is a little smaller than the male, and the color of the upper parts less bronzed. One measured by Tickell, was 17 inches long, with the wing 9.

This fine Pigeon is found in the South-east Himalayas, and in the mountain regions of Malabar, in Coorg, the Wynaad, the Western slopes of the Neilgherries, and probably all along the higher ranges of the Ghâts, although not recorded by Col. Sykes. It is also found in the Khasia Hills, and in the mountains of Arracan, and possibly in other hill regions of Burmah. It is placed as distinct from *C. badia* of Java by Bonaparte and Gray, but appears to approach that species very closely. I at one time was inclined to consider the Southern species distinct from the Himalayan one, and the fact of the irides being colored differently would favor this supposition, but without further examples of both than are available in the Museum Asiatic Society, I cannot separate them.\* In general, it is an exclusive inhabitant of the mountain zones, from 2,000 feet to nearly 6,000 feet. I have killed it in Wynaad, in Coorg, on the Khoondah Ghât of the Neilgherries, and in Sikim, above Kursiong, where Major Tickell also procured it. It associates, in general, in small parties, or in pairs, frequenting the loftiest trees, and feeding on various fruits. Its note is something similar to that of the last, but still deeper, louder, and more groaning. Tickell calls it a deep, short and repeated groan,  
 wno wno wno

During the hot weather, from the middle of April to the first week in June, when the rains almost invariably commence on the Malabar Coast, large numbers of this Pigeon descend from the neighbouring mountainous regions of Coorg and Wynaad, to a large salt swamp in the neighbourhood of Cannanore, and there not only eat the buds of *Aricennia*, and other shrubs and plants that affect salt and brackish swamps, but also (as I was credibly informed by several native Shikarees, to whom I was first indebted

for the information of these Pigeons resorting there,) pick up the salt earth on the edge of the swamp, and of the various creeks and back waters that intersect the ground. I visited this place towards the end of May 1849, when many of the Pigeons had gone, as I was informed; but even then saw considerable numbers flying about and feeding on the buds of *Aricennia*, and then retiring a short distance to some lofty trees to rest. Although the day was unfavorable and rainy, I killed above a dozen of these fine Pigeons, and several Natives who were there with guns for the purpose of shooting them, assured me that they often killed from one to two dozens daily, simply remaining in one spot. Had I not secured the birds myself in this locality, I confess I would barely have credited the account I received of these mountain residents descending to the plains during the hottest season of the year. I presume that these Pigeons breed after their return to the hills, but I have no information on this head. It would be interesting to know if the Himalayan birds likewise visited the neighbourhood of the sea, and I am inclined to think it probable that they may do so; for, towards the end of May, I visited a forest near Kuisiong, where these Pigeons abound in June and July, and neither saw nor heard one.

Bonaparte gives as appertaining to *Ducula*, besides *badia*, already alluded to, *C. lacernulata*, *C. basilis*, *C. paulina*, *C. cineracea*, and *C. rosacea*, of Temminck; the first from Java, the others from the more distant islands, Celebes, Timor, &c. He separates the large white and black species, *C. bicolor*, *C. luctuosa*, and *C. grisea*, under the name *Myristicivora* of Reichenbach. The former of these is found in the Nicobar Islands, and the Southern part of the Malayan Peninsula, as well as in many of the islands. They have a comparatively short tail. Various other beautiful species from the Philippines, New Guinea, Australia, and Océanica, are separated by Bonaparte under the generic names of *Ptilocolpa*, *Zonæna*, *Hemiphaga*, *Megaloprepia* and *Sylphitreron*. A very large species, with a strong helmeted bill, from the Marquesas, has been described and figured by Bonaparte under the name *Sorresius galeatus*. Blyth indicates a short-winged type, which he calls *Dendrophaga*.

The sub-family *Ptilopodinae*, or Green Doves, are very closely allied structurally to the *Carpophaginae*, the bill being much as in that group, slender and somewhat lengthened, and the chin advancing far forwards beneath the lower mandible, but they have the toes lengthened, somewhat more slender, with the soles not quite so broad; and they are much smaller, many of them indeed quite diminutive. The wings and tail too are a trifle shorter. In some, the first primary is abruptly narrowed (*Ptilopodeæ*, Bon.), in others (*Chrysoenæ*, Bon.) not so. They have very brilliant but not metallic coloring, emerald green being the prevalent color, variously adorned with carmine, lake, bright yellow, &c. The tail consists usually of fourteen feathers, but in some only of twelve; in one genus, otherwise very closely allied, *Thouarsitreron*, Bonap., of sixteen; and Blyth states that one is said to have only ten rectrices. They chiefly inhabit the tropical Oceanic region, diminishing in number in the Malayan Isles, and only one species occurring in the Southernmost portion of the Malayan Peninsula, viz., *Ramplaculus jambu*. In the wild state they live, it is believed, entirely on fruit, but in confinement some will eat unhusked, and even boiled rice.

The sub-family *Alectroenadinæ*, Bonaparte, are from Madagascar, the Mauritius, and the Seychelle islands. They are somewhat larger, of black and red plumage, and, says Bonaparte, exhibit an analogy with *Dasyptili* and *Caloptorhynchi* among the Parrots. Blyth says that they appear to be Ground-pigeons of the frugivorous type.

#### Fam. COLUMBIDÆ, Bonaparte.

Bill horny at the apex only; tail, in almost all, of twelve feathers; gape not so wide as in the last family; tarsus lengthened; feet more fitted for walking on the ground.

This family comprises the Pigeons and Doves, ordinarily so called, which feed chiefly on grains, often on the shoots and buds of certain plants, and a few partially on fruit. They differ from the preceding family by their more terrestrial habits, for which their more lengthened tarsus and narrow toes fit them. They are of more dull and sombre colours, various shades of dark-blue,

red-brown, and grey predominating, often adorned with a beautiful iridescence or play of colours on the neck, and, in many, with a marked neck spot. They are found over both Continents, more sparingly, perhaps, and with fewer types, in America.

The *Columbidæ* may be divided according to their general tone of coloring and habits into *Lopholaminæ*, Crested-pigeons; *Palumbinæ*, Wood-pigeons; *Columbinæ*, Rock-pigeons; *Macropyginæ*, long-tailed Doves, and lastly *Turturinaæ*, true Doves, with perhaps one or more divisions of less extent.

The *LOPHOLEMINÆ*, or Crested-pigeons, are composed of a single genus and species, *Lopholæmus antarcticus*, a remarkable Australian form, with a double crest, which is very frugivorous, and which was by some formerly arranged with the last family.

#### Sub-fam. PALUMBINÆ, Wood-pigeons.

*Palumbæ*—Bonap. and Blyth.

Feet fitted for perching, the tarsus being somewhat shorter, and the feet more arboreal than in the succeeding groups; tail somewhat longer and more rounded.

The Wood-pigeons or Cushats are more frugivorous and budcaters than the ordinary Pigeons and Doves, and, were it not for having only twelve tail-feathers, and a different style of plumage, they might be ranked in the last family. They are peculiar to the Old World, are denizens of woods and forests, and feed partly on trees and partly on the ground.

The first two species differ very slightly from the true Cushats, and in a less degree from each other, and have been arranged in two genera; but as it is impossible to define them apart from each other, I shall retain them, as Blyth does in his Catalogue, under one generic form. That naturalist remarks elsewhere,—“The distinctions upon which this and other named divisions are based are so exceedingly recondite, that definition becomes impossible, and they are intelligible only when examples of the different species are compared and grouped together.”

Gen. *ALSOCOCHUS*, Tickell.

Syn. *Dendrotreron*, in part, Hodgson.

Bill small, much compressed; wings long and ample, 2nd quill equal to the 4th, 3rd longest, sinuated on its outer web beyond the middle; tail about even; lateral toes slightly unequal; claws stronger than in *Palumbus*, and somewhat more curved.

This form barely differs from *Palumbus*; the first species, however, with which Blyth associates *C. norfolciensis* of Australia, having a more tropical distribution, and being, perhaps, more strictly arboreal than the Cushats

### 782. *Alsocomus puniceus*, TICKELL

J. A. S. XI. 462—BLYTH, Cat. 1411.

#### THE PURPLE WOOD-PIGEON.

*Descr.*—General colour fine vinaceous ruddy, somewhat paler below; the feathers, especially of the upper parts, margined conspicuously with glossy changeable green and amethystine purple, the former colour prevailing on the neck and the sides of the breast, and the latter elsewhere, the whole top of the head, including the occiput, greyish white; wings and tail blackish; the primaries tinged externally with grey; rump and upper tail-coverts dusky, edged with glossy green; lower tail-coverts nigrescent.

Bill livid at the base, with a yellow tip; irides amber-colored, with an orange red outer circle; legs and feet dull lake. Length 16 inches; extent 24; wing 8 to  $8\frac{1}{2}$ ; tail 7.

The female only differs from the male in being a trifle smaller, and somewhat duller in its tints

This handsome Wood-pigeon is found, in India, only in the Eastern portion of Central India, extending to near the Sea coast in Midnapore, and probably southwards towards Cuttack. I never procured it on the Malabar Coast, nor in any part of Southern India, though it is occasionally met with in Ceylon. It appears to be more common to the East of the Bay of Bengal, in Assam, Arrakan (particularly the island of Ramree), and Tenasserim.

Tickell records that it occurs (in Singboom where he first observed it) in small parties of four or five, always along the banks of rivers which are shaded by large forest trees. They feed

chiefly on the fruit of the *Jamoon* (*Eugenia jambolana*) morning and evening, and roost during the heat of the day on the uppermost branches of lofty trees. They are wary, and difficult of approach. In Ceylon they appear to be migratory, and, according to Layard, feed on the fruit of the Cinnamon tree.

The next bird differs somewhat in its type and coloration, and is separated by systematists as *Dendrotreron*, Hodgson.

### 783. *Alsocomus Hodgsonii*, VIGORS.

Columba, apud VIGORS, P. Z. S. 1832—*C. nipalensis*, HODGSON—BLYTH, Cat 1410.

#### THE SPECKLED WOOD-PIGEON.

*Descr.*—Above, dark vinaceous-ruddy, with white specks on the medial wing-coverts; head, and the upper part of the front of the neck, cinereous, with more or less of a ruddy tinge; nape vinous-grey, with pointed clear grey tips; rump and upper tail-coverts dusky ash; outer wing-coverts greyish; quills brownish dusky, the first three primaries having a slight whitish outer margin (in some specimens); tail ashy black; sides of the neck, and lower parts vinous grey, with a ruddy mesial streak to each feather most developed on the breast, less so on the neck, and the lower abdomen becoming dark vinous; flanks speckled with white; under tail-coverts dusky-ash.

Bill purplish black; irides hoary; orbital space livid; legs and feet blackish green in front, yellow behind; claws pale yellow. Length 15 inches; extent 26; wing 9 to  $9\frac{1}{4}$ ; tail 6.

The female is rather smaller, with the blue grey of the head less pale and clear, and the ruddy parts duller.

This fine Pigeon inhabits the forests of the middle region of the Himalayas, ranging in Nepal, from 4,000 to 10,000 feet of elevation. In Sikim it keeps chiefly to the higher ranges, from 7,000 feet to 10,000 feet and upwards. It is not found on the outer range of hills in the North-west Himalayas, but is far from rare on the Tyne range and other mountains, somewhat in the interior, where Blyth was informed that it is tolerably numerous, frequenting the Pine-forests. They are generally seen in flocks



of six or seven, are very shy and difficult of approach, and live chiefly on berries.

An African Pigeon, *C. arquatrix*, is very closely allied to this, both in form and coloration.

Gen. PALUMBUS, Kaup.

*Char.*—Much as in the last genus, but the tarsus a trifle longer; tail shorter; sides of the neck adorned with a patch of light coloured feathers.

This is a very natural group of Pigeons, comprising the Cushat of England and a nearly allied race from the Himalayas and Chinese Tartary; together with a group of three somewhat smaller and darker colored species found respectively in the Himalayas, Southern India, and Ceylon, which, by their lesser size and tone of coloration, grade into the last group.

784. *Palumbus casiotis*, BONAPARTE.

*P. torquatus*, var. BLYTH, Cat. 1413.

THE HIMALAYAN CUSHAT.

*Descr.*—Above brownish grey; the head, cheeks, rump, and upper tail-coverts, pure ashy; nape, sides of neck, and shoulders glossed with changeable green and purple, on each side of the neck a large patch of fulvous or clayey cream color; edge of the wing, and a white longitudinal bar, formed by the outer edges of the primaries, white; winglet and primary-coverts blackish; tail grey at the base, blackish at the tip; beneath, the throat is pure ashy, the foreneck and breast vinaceous ruddy, paling on the belly, and albescent towards the vent; lower tail-coverts ashy; tail with a broad pale band.

Bill orange at the tip, whitish at the base; feet red. Length 17 inches; extent 30; wing  $10\frac{1}{4}$ ; tail 7; bill at front  $\frac{3}{4}$ .

The Himalayan Cushat differs from the European bird by the neck patch being clayey-buff instead of white, and much contracted in size; also in the less extent of the white border to the primaries. Mr. Blyth also notices that, whilst in European birds the green gloss prevails above the neck-patch and amethystine below, the reverse is the case in the Asiatic race.

This Wood-pigeon has only been found in the N. W. Himalayas, near Simla, and in the Alpine Punjab, and it visits the Salt range and the plains of the Punjab during winter. Its habits are said to be quite those of the European bird.

The European Cushat inhabits all Europe, Western Asia, and North Africa; lives in woods, and feeds on grain, peas, young shoots and leaves, acorns, beech-nuts, &c.

Next come the purely Indian group alluded to above.

### 785. *Palumbus pulchricollis*, HODGSON.

Columba, apud HODGSON, J. A. S. XIV. 866—BLYTH, Cat. 1414—GOULD, Birds of Asia, pt. VI., pl. 13—C. Elphinstonei, GRAY, Cat. Birds of Nepal—*Nampoong-pho*, Lepch.

#### THE DARJEELING WOOD-PIGEON.

*Descr.*—Above, general colour dusky grey; the head, cheeks, and ear-coverts pure light ashy; the sides of the neck glossed with green and purple, and a large neck-patch of rigid, glistening feathers, black at the base, with broad isabelline tips, and whitish at the extreme tip; tail blackish; beneath, pale vinous dove-grey, more or less whitish towards the vent, and subdued white on the lower tail-coverts; throat whitish; breast brightly glossed with green and purple.

Bill livid at the base, yellow at the tip; irides yellow; legs dull red; claws yellow. Length  $13\frac{1}{2}$  to 14 inches; wing  $8\frac{1}{2}$  to 9; tail  $4\frac{1}{4}$  to 5.

This Wood-pigeon, though belonging to the same group, differs conspicuously from the Neilgherry *P. Elphinstonei*, with which it was formerly confounded by Gray, by the color of the neck-patch, the less purple tint above, and the more vinous tint below. It has only been found, hitherto, in the South-eastern Himalayas, in Nepal and Sikim; and it frequents the higher elevations only, from 7,000 feet upwards. It is not very common about Darjeeling.

### 786. *Palumbus Elphinstonei*, SYKES.

*Ptilinopus*, apud SYKES, Cat. 138—JERDON, Cat. 283—JERDON, Ill. Ind. Orn., pl. 48—BLYTH, Cat. 1415—GOULD, Birds of Asia, pt. VI., pl. 12.

## THE NEILGHERRY WOOD-PIGEON.

*Descr.*—Above, the head and neck ashy; nuchal patch black, with small white tips; back of neck beyond this, and interscapulars cupreous ruddy, with some green reflections; rest of the upper plumage ruddy-brown, becoming dark-ashy on the rump and upper tail-coverts; the wings dusky, the lesser coverts mostly ruddy-cupreous, and the other coverts and quills, which are dusky black, more or less edged with the same, and the outer primaries conspicuously pale edged; tail dull black; beneath ashy, albescent on the throat, the neck and breast glossed with green, and the lower abdomen and vent albescent.

Bill and orbits deep red, the former with a yellow tip; irides ochre-yellow; legs and feet dull red. Length 15 to 16 inches; extent 25; wing 8 to  $8\frac{1}{4}$ ; tail  $5\frac{3}{4}$  to 6. Weight about 12 to 13 oz.

The Neilgherry Wood-pigeon or Imperial-pigeon, as it is sometimes called by residents on those hills, is found on the higher elevations of the Western Ghâts, probably on the Mahableshwar hills, as well as on the Neilgheries, in which locality alone I have observed it, at a height ranging from 6,000 to 8,000 feet and upwards. It ought to be found in Coorg; but has not, I believe, been recorded from elsewhere. On the Neilgheries, it frequents the sholas or dense woods, singly, or in small parties of five or six, feeding on various fruit and buds, and occasionally on small snails, to procure which it descends to the mossy banks, and I have, now and then, seen it on the ground outside a wood. I frequently found some small *Bulimi* in the crops of those I examined. Colonel Sykes states it to be a rare bird in the Deccan, and only found in the dense woods of the Ghâts.

A very closely allied race or species occurs in Ceylon, and has been named *Palumbus Torringtonii* by Kelaart. It differs from the Neilgherry bird in having the back and wings plain dark slaty, without a trace of the ruddy margining to the feathers; the head and neck are strongly tinged with vinaceous, with a whiter throat; and in some other points.

The genus *Janthænas*, Reichenbach, is appropriated by Bonaparte, for certain richly metallic Pigeons from the Oceanic region, which are placed among the *Carpophagæ* by Gray; and *Trocaza*

and *Turturæna*, Bonaparte, from Madeira, Mauritius, and Africa, comprise certain Pigeons placed by that ornithologist among the Wood-pigeons.

Sub-fam. COLUMBINÆ.—Rock-Pigeons, *Columbeæ*, Bonap.

Feet fitted for walking; tarsus longer and less feathered. Find their food mostly on the ground.

This family comprises the blue Rock-pigeons and the so-called Stock-pigeons and their allies, from some species of which our domestic Pigeons have sprung.

The first genus noticed is intermediate to the Cushats and the true Pigeons, as expressed by the name.

Gen. PALUMBÆNA, Bonap.

Feet fitted as much for perching as for walking on the ground. In form, coloring, habits, and nidification intermediate to *Palumbus* and *Columba*.

The well-known *C. ænas* of Europe is the type of this genus, which is essentially arboreal, and migratory.

### 787. *Palumbœna Eversmanni*, BONAPARTE.

*P. œnicapilla*, BLYTH—*Kummer-kulla*, H.

#### THE INDIAN STOCK-PIGEON.

*Descr.*—Dark ashy, with a whitish grey rump; crown and breast tinged with vinaceous; two or three black spots on the wings, forming the rudiments of bands, and the end of the tail black, its outermost feather white for the basal two-thirds of its exterior web, and showing a black, and then a narrow grey band towards its tip; beneath, the wings whitish, where dark ashy in the European bird.

Bill yellowish translucent; legs with a yellowish tinge; skin round the eye yellow; irides buff. Length  $11\frac{1}{2}$  inches; extent 24; wing 8; tail 4. Weight  $7\frac{1}{2}$  oz.

This Pigeon is a smaller bird than *P. ænas*, with a proportionally shorter tail, barely reaching beyond the tips of the wings. It differs, too, from the European bird in the rump being greyish

instead of white, in the crown being tinged with vinaceous, in the winglet having less black, and in the grey band of the tail, conspicuous in the European bird, being barely discernible in the Indian.

The Indian Stock-pigeon was discriminated, some years back, by Mr. Blyth, who has since considered it identical with Bonaparte's bird described from Western and Central Asia. It has been noticed in India, in Sindh, where found by Major Boys, and it doubtless occurs throughout various other districts of Northern India. It flies in pretty large flocks, and affects trees. A correspondent of the *Bengal Sporting Review* states that he saw them in hundreds at Hansi in March, 'but they soon disappeared. They feed in the fields, morning and evening, and roost in the day (and I suppose the night also) in trees, generally in the common Babul trees. To Europeans here (at Hansi) they are known as the Hill-pigeons.' They are probably migratory in India, breeding in Central Asia. Buchanan Hamilton, however, states that a wild Blue-pigeon breeds in Gorukpore in old plantations, and is a great consumer of grain. He, however, considered it the same as 'one that breeds on rocks on the banks of the Jumna and other places,' i. e. the common Blue-pigeon. They have most likely been frequently overlooked by sportsmen and others considering them simply to be the same as the common wild Blue-pigeon, *Col intermedia*, and I have observed at various stations certain flocks of Pigeons always settling during the day on trees. It is a much smaller bird, however, than the common Blue-pigeon of this country, whilst its analogue in Europe, *P. anas*, is larger than the wild Rock-pigeon, *C. livia*.

The European bird, *P. anas*, says Blyth, is called the Stock-pigeon, because it commonly builds in wood-land districts, in a cavity of some old, and often ivy-clad, pollard-stock, thus forming neither a platform nest like the Cushat, nor resorting to rocks like *C. livia*; but in more open country it resorts much to the deserted holes in Rabbit burrows, or it nestles under thick furze bushes. It is a winter bird of passage in England, supporting itself chiefly by beech-mast, and delighting to roost in the tallest beeches. The habits of our Indian species appear to be somewhat similar.

## Gen. COLUMBA, Lin. (as restricted.)

*Char.*—Feet fitted for walking on the ground, the tarsus being somewhat lengthened; nestle in holes of rocks, buildings, or wells; capable of domestication.

This genus comprises the Rock and House-pigeons, and various affined races of the Old World. They rarely perch on trees, and some never, roosting and nestling in caverns, hollows of rocks, sea-cliffs, recesses of buildings, &c.

788. *Columba intermedia*, STRICKLAND.

*C. livia*, var, BLYTH, Cat. 1417—*C. ænas*, apud SYKES, Cat. 144—JERDON, Cat. 290—Figured in *Beng. Sport Rev.* 1845, pl. IV.—*C. livia*, apud ADAMS, Birds of India, 208—*Kabutar*, H.—*Gudi pourai*, Tel, i. e. Pagoda-pigeon—*Kovilpora*, Tam. *Parwi*, Mahr.

## THE BLUE ROCK-PIGEON.

*Descr.*—Colour slaty-grey, darker on the head, throat, and breast, also on the upper and lower tail-coverts and tail, which last, has a blackish terminal band; nuchal feathers divergent at their tip, and brightly glossed with changeable green and amethystine; two black bars on the wing, formed by the greater coverts and the secondaries being tipped with black, on the outer web only; and the outermost tail-feather, with its external web, gradually more albescent to the base.

Bill blackish, with a white mealiness at the base above; irides dull orange; legs dull reddish-pink. Length 12 to 13 inches; extent 23; wing  $8\frac{1}{4}$  to 9; tail 5; bill  $\frac{3}{4}$ , shorter than in *P. ænicapilla*.

This common Blue Pigeon differs from *C. livia* of Europe only in having an ash-colored, instead of a pure white rump. This, however, appears to be constant, and as Blyth remarks, is also always observable in domesticated varieties in this country, when these assume the normal coloring.

The Blue Pigeon of India is one of the most common and abundant birds throughout the country, congregating in large flocks, and breeding wherever they can find suitable spots. They are

most partial to large buildings, such as Churches, Pagodas, Mosques, Tombs, and the like; frequently entering verandahs of inhabited houses, and building in the cornices. Holes in walls of cities or towns, too, are favorite places, and, in some parts of the country, they prefer holes in wells, especially, I think, in the West of India, the Deccan, &c. In default of such spots, they will breed in crevices and cavities of rocks, caverns, and sea-side cliffs; and I have often noticed that they are particularly partial to rocky cliffs by waterfalls. The celebrated falls of Gaissoppa are tenanted by thousands of Blue Pigeons, which here associate with the large Alpine Swift. It is more rare in forest countries generally than in the open country. It extends from Ceylon throughout India to the Himalayas, and also to Assam, Sylhet, and Burmah. It is doubtful if it occurs in Affghanistan, or in other parts of Central Asia. These Pigeons are held in favor by most natives, and almost venerated by some; and if they build in the house of a native, he considers it a most fortunate omen. They are, however, very destructive to grain, assembling in vast flocks in the cold weather, and, in general, the natives do not object to their being shot. They are undoubtedly the origin of most of the domestic Pigeons of India.

### 789. *Columba rupestris*, PALLAS.

Zoog. Ross. As., pl. 25—*C. livia*, pied variety, ADAMS, Birds of India, 208.

#### THE BLUE HILL-PIGEON.

*Descr.*—Like *intermedia*, but much lighter in its plumage. Top of head, and side of face, ashy-grey; back of neck glossed with green; wing-coverts and upper part of back light grey; the middle of the back white; upper tail-coverts dark ashy-grey; quills grey, with black shafts, and darker at the tips and on the outer webs; some of the larger wing-coverts, the winglet, and last secondaries, with a patch of greyish black, forming two indistinct curved bands; tail dark grey at the base, broadly tipped with black, and with a broad stripe of white between these two colors; the outer tail-feathers pure white from their bases on the external web,

tipped with black ; beneath, the chin is ashy-grey ; the neck purple glossed, and the upper part of the breast glossy green, blending into ashy light grey on the belly, flanks, and vent ; lower wing-coverts white, blending with grey towards the anterior margin of the wing.

Bill black ; cere grey ; irides red ; legs pink. Length  $12\frac{1}{4}$  inches ; extent 25 ; tail 5. Weight  $7\frac{1}{2}$  oz.

The above description is taken from Major Boys, who procured this Pigeon in Kumaon, where it is known as the pale blue Rock-pigeon. It is also, perhaps, as suggested by Blyth, the Hill-pigeon of Mussooree, which is said in summer to fly in small flocks to the Deyra Doon in the morning, returning to the hills in the evening ; and it is certainly the pied variety of the Blue Pigeon observed by Adams in Ladak, &c. Pallas' bird is said to be found in Central Asia, in Daouria, in hilly and rocky places. Specimens of this race of Pigeon appear to be unknown in most of our Museums, and would be highly acceptable.

Among the races allied to the two foregoing, are *C. livia* of the whole of Europe, Northern Asia to Japan, and Northern Africa, which breeds in extensive societies in rocky cliffs and caverns, especially on the seashore. It is said to feed much on the tops of plants, and also on Helices. It is the origin of most of the varieties of domestic Pigeons of Europe. Bonaparte separates from it *C. turricola*, of the South of Europe, Persia, &c., which wants the white rump of *livia*, and should, therefore, very closely approach the Indian *intermedia*. *C. Schimperi*, Bonaparte, found in very numerous flocks in the fields in Abyssinia, and perhaps *C. gymnophthalmos*, Gray, from Senegal, also appertain to this division.

The next bird differs considerably from all the others.

### 790. *Columba leuconota*, VIGORS.

P. Z. S. 1831—GOULD, Cent. Him. Birds, pl. 59—BLYTH, Cat. 1418—'The Snow-pigeon' of some sportsmen on the Himalayas, or Imperial Rock-pigeon of others.

#### THE WHITE-BELLIED PIGEON.

*Descr.*—The top of the head and ear-coverts ashy-black ; back of neck white ; interscapulars light brownish grey ; rump white ;



wings light brownish grey, pale ashy on the medial coverts; the primaries dull blackish towards their tips; the secondaries broadly tipped with dusky, and the tertiaries and their coverts having a sub-terminal dusky band and broad greyish tips, producing a series of three short bars, and a trace of a fourth; tail (with its upper coverts) ashy-black, with a broad greyish white bar occupying the third quarter from the base of its middle feather, and narrowing and curving forward to reach the tip of its outermost feathers, which are also white at their base on the outer webs.

Bill black; irides yellow; legs lobster-red. Length nearly 14 inches; wing  $9\frac{1}{2}$ ; tail 5.

This remarkably colored Pigeon is found on the Himalayas, chiefly towards the North-west, and is stated to frequent rocky heights and sequestered valleys, from 10,000 feet to the snow level, in large parties.

It feeds in the fields, returning to the rocks to roost; and is said to be shy and wary.

Other true *Columbinæ* of the Old World, are *C. guinea*, L. (*C. trigonigera*, Wagler), referred to *Stictænas*, Reichenbach, stated by some to be the common domestic Pigeon of Abyssinia; and *C. albitorques*, Rüppell, referred to *Tænænas*, Reichenbach, said to have the bill remarkably short.

There are a good many American Pigeons placed in this division by Bonaparte under his section *Americane* (*Picazurus*, of O. des Murs), distributed by him in four different genera

Sub-fam. MACROPYGINÆ, Bonap., Cuckoo-doves.

Head small; feet short; tail very long, graduated or wedge-shaped; wings rather short.

This division comprises a small group of Pigeons peculiar to the Indian region, more especially to the Malayan islands, and one species extending to Australia. They are distinguished by their long and broad tails; are more or less frugivorous in their habits, occasionally feeding on the ground, and, in their physiognomy, and partly in their coloration, they resemble Doves rather than Pigeons. Ruddy brown is the prevalent colour; in many disposed in narrow cross rays, as in the rufous phase of certain Cuckoos,