NO.	B.C.	
17	150	Antialcidas—succeeds to Lysias' kingdom.
18		Amyntas } follow Antialcidas.
19		Archebius }
20	161-140	Menander—reigns in Paropamisadæ, Nysa, Gand., Peuk., Taxila, Por. Reg., Cath., Patalene, Syr., Lar.
21	135	Strato—succeeds, with the exception of the countries of Pata., Syr., Lar., which fall to Mauas.
22		Hippostratus } follow Strato.
23		Telephus }
24	126	Hermæus—rules over Parop., Nysa, Gand., Peuk. (The Su-Sakas obtain Aria, Drangia, and Arach., from the Parthians).
25		Mauas—has Taxila, Por. Reg., Cath., Pata., Syr., Lar.
26	105	Kadphises—(*Yuchi*)—takes possession of Hermæus' kingdom, and Taxila from Mauas (Kozola Kadaphes).
27		Vonones }
28		Spalygis } Paropamisadæ.
29		Spalirises }
30	110	Azas—succeeds Mauas, obtaining also, in 90 B.C., Nysa, Gand., and Peuk.
31	80	Azilisas—succeeds Azas in the three latter, adding Taxila, and the Paropamisadæ.
32	80	The Soter Megas obtains the dominions of Azas, and subsequently those of Azilisas.
	60	The Yuchi again possess Parop., Nysa, and Tax., etc.
33	26	Gondophares—reigns in Ariana.
34		Abdagases (and Sinnakes or Adinnigaus)—ditto in ditto, less the Parop.
	A.D.	
35	44	Arsaces (Ornospades or Orthomasdes)—ditto, ditto.
36	107	Pakores Monnesses—ditto, ditto (Hiâtheleh in Bactriana. [36a Orthagnes.]
	207	Artemon—in Aria, Drangia, Arachosia.
		Sassanians.

'Numismatic Chronicle,' vol. viii., p. 175 (1843).

No. 4.

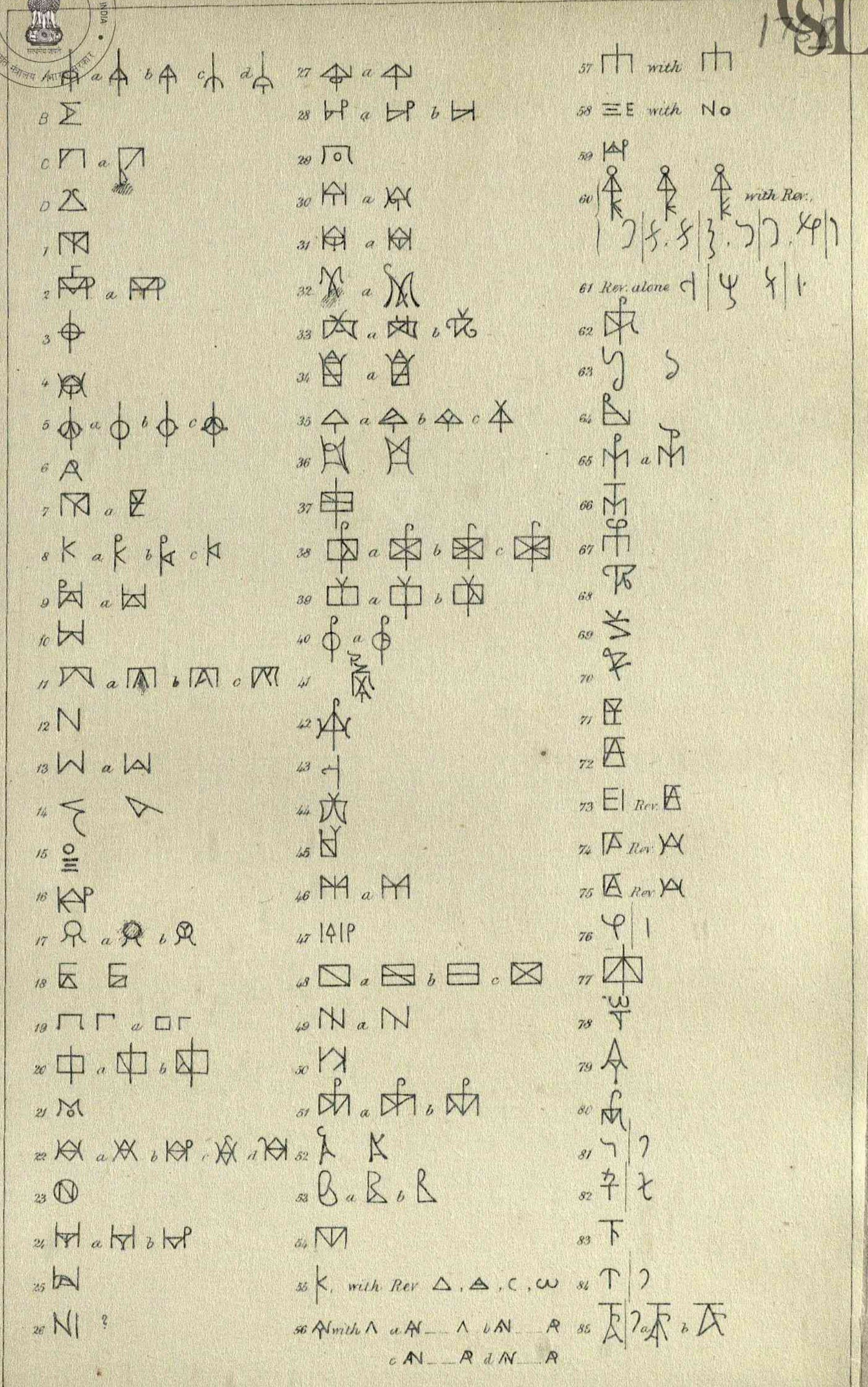
M. LASSEN'S LIST.

DIE GRIECHISCH-BAKTRISCHEN UND GRIECHISCH-INDISCHEN KÖNIGE.

1. DIE GRIECHISCH-BAKTRISCHEN.

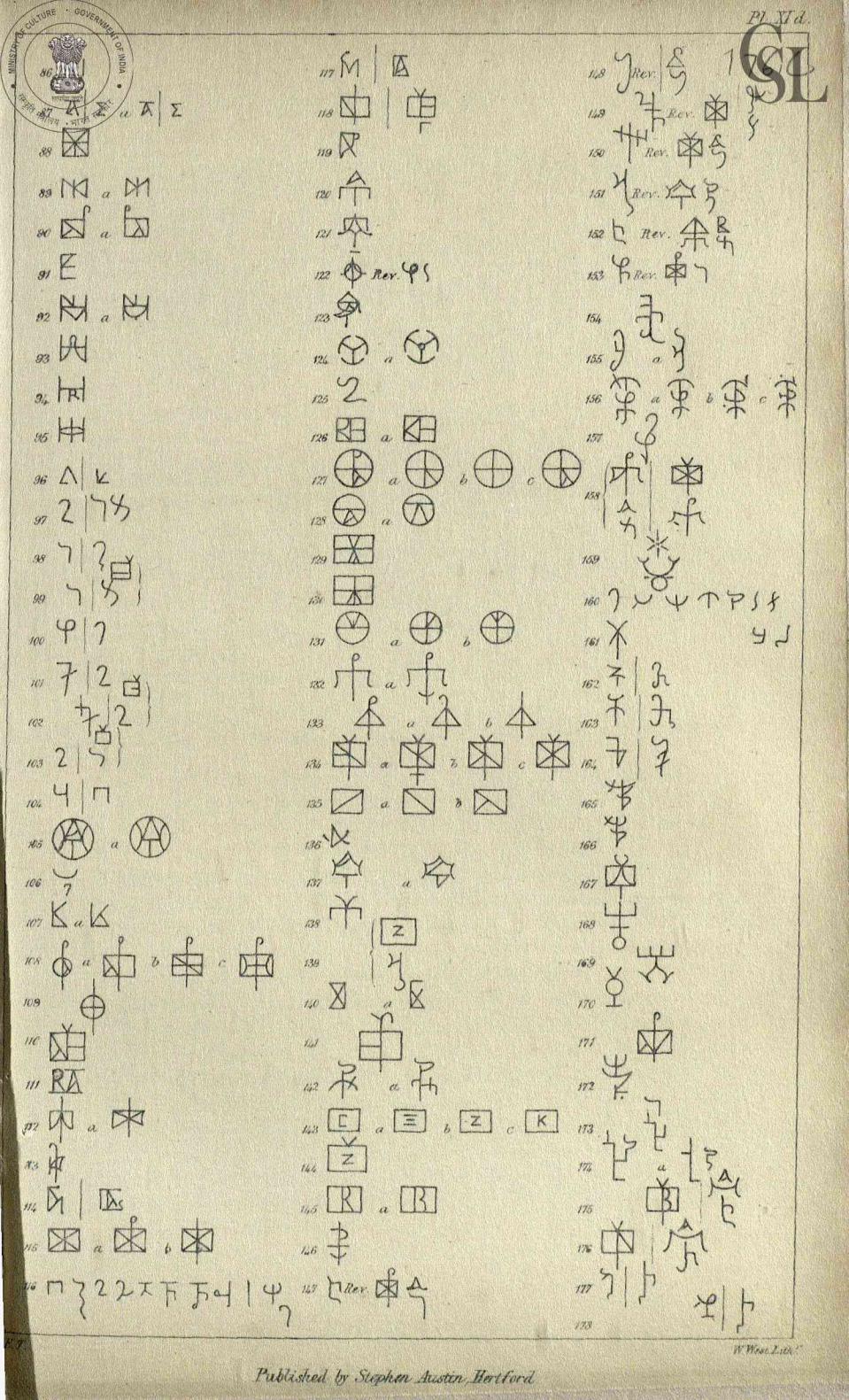
Diodotus I., vor 250 vor Chr. G.
Diodotus II., seit 237 . . . . . Agathokles, in Badakshan und am obern Indus seit 245.

Euthydemos, unabhängig seit 245;
in Baktrien seit . . . . 222; Pantaleon.
Demetrios, seit 205; beseigt um 165.
Eukratides, nach 180.
Heliokles, seit 160; Lysias, nach 165; Antimachus, seit 170.
Archebios, 150–140; Antialkides; . Philoxenes, um 160.
Amyntas.



W. West Lith.

Published by Stephen Austin Hertford.



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2. Die Griechisch-Indischen Könige.

Apollodotos, nach 160.
Zoïlos und Dionysios.
Menandros, seit 144.
Straton, um 124.
Hippostratos, nach 114.
Diomedes, Nikias, Telephos, zwischen 114 u. 100.
Hermaios, 100—85.

No. 5.

Die Indoskythischen und Parthischen Könige.

1. Çaka-Könige.

Mayes, nach 120 vor Chr G.
Azilises, um 100.
Azes, seit 95.
Spalirisos, um 60.
Vonones, kurz vor u. nach Chr. G.
Spalygis.
Yndopherres, um. 90.
Abdagases, von 40 bis 30.

2. Jueitchi-Könige.

Kadphises I., nach 85 vor Chr. G.
Kadaphes, und seine namenlosen Nachfolger etwa bis 60 v. Chr. G.
Kadphises II., seit 24 vor Chr. G., bis etwa 1.

3. Turushka-Könige.

Hushka oder Oerki, von etwa 10 vor bis 5 nach Chr. G.
Gushka, bis 10 nach Chr. G.
Kanishka, oder Kanerki, bis 40.
Balan, bis 45.
Oer Kenorano, bis 60.

'Indische Alterthumskunde,' vol. ii., p. xxiv., published 1852.

IV.—As I am compelled to avoid entering upon any such comprehensive revision of the general subject as should justify my attempting to recast the order of succession of the Greek princes of Bactria and Northern India, it becomes necessary that I should adopt, for the moment, some one of the lists above quoted, to serve as a basis for the arrangement of the annexed catalogue. I have therefore selected for the purpose that of Major Cunningham, as being more full in names, more facile of reference, and as grounded upon an examination of by far the most ample series of original specimens.

This outline, it will be seen, was published many years ago, and I have no doubt its author would now be prepared to subject it to extensive modifications. I shall perhaps be pardoned, therefore, for anticipating some of the more obviously needed emendations. In regard to the tables of monograms which accompany this catalogue (pls. xi.*c* and xi.*d*), it may be necessary to explain that a degree of difficulty has been experienced in the allocation of the several varieties of these enigmatical compounds. Some examples, that depart but slightly from combinations previously entered, have been inserted in

the plates independently in their modified form, in order to avoid the risk of the omission of what might eventually prove to be a separate symbol. And, further, some few monograms have been intentionally repeated, with a view to bring more distinctly together the complete group pertaining to a given monarch.

The perpendicular lines dividing the associate ciphers (60 *et seq.*) are inserted to mark the position in the field of the piece, in reference to the main device, occupied by each.

I. Diodotus.

1.—Gold.

Obverse:—Head of the king, with fillet, to the right.

Reverse:—Erect figure of Jupiter, in the act of hurling the thunderbolt; Ægis on the left arm; eagle in front of the left leg; a chaplet in the field; no monogram.

Legend:—ΒΑΣΙΛΕΩΣ ΔΙΟΔΟΤΟΥ.

R. Rochette, 'Jour. des Sav.;' 'Bibliothèque Impériale,' Captain Hay. (This last most perfect coin has, in addition to the other symbols, a spear head in the field under the left arm); 'Ariana Antiqua,' p. 218; 'Trésor de Numismatique,' pl. lxxii, 4.[1]

2.—Tetradrachma. Similar types (Cunningham, 'Numismatic Chronicle,' vol. viii., p. 178, and unpublished plates).

Monogram, No. 1, with I. The chaplet is omitted.

*)—Drachma. Similar types.

M. de Bartholomæi, 'Köhnes Zeitschrift,' 1843, p. 75, pl. fig. 1. Monogram, No. 2, with C.*a*; chaplet, etc.

Mr. Stokes' and British Museum Coins, Monograms indistinct.

Major Cunningham further cites in his table the Monogram No. 2[a] from the Coins of Diodotus ('Num. Chron.,' vol. viii., p. 179).

II. Agathocles.

1.—Tetradrachma (weight, 4 drachmes 14 grains Fr.)

Obverse:—Head, with fillet, to the right. ΔΙΟΔΟΤΟΥ ΣΩΤΗΡΟΣ.

Reverse:—Erect figure of Jupiter, as in Diodotus' coins.

Legend:—ΒΑΣΙΛΕΤΟΝΤΟΣ ΑΓΑΘΟΚΛΕΟΥΣ ΔΙΚΑΙΟΥ.

Monogram, No. 3 (with chaplet).

M. de Bartholomæi, 'Köhnes Zeitschrift,' 1843, pl. iii., fig. 2, p. 67.

An equally perfect coin of similar types, in the possession of Mr. J. Gibbs, Bombay Civil Service, has the monogram No. 4. The piece in question is stated to weigh 270 grains.

[1] Coins bearing similar devices, from the mint of Antiochus II., may be referred to in pl. ii., fig. 1, p. 25, vol. i. of this work; Burnes's 'Bokhárá,' pl. iii., fig. 8; 'Ariana Antiqua,' p. 219; 'Trésor de Numismatique,' lxxii., 3.—Monograms: Mr. Gibbs' coin (Tetrad.) A: (see pl. xlii., fig. 1 of this work); 'Bibliothèque Impériale,' B.; Captain Hay (Drachma) C; Mr. Freres' coin (Drachma) C.*a* associated with D.

2.—Tetradrachma. Plate xiii., fig. 3. (These leading numbers refer, in each case, to the plates inserted in this work.)

OBVERSE:—Head of king.

REVERSE:—Jupiter, with the left hand resting on a spear, and the right holding a figure of Diana Lucifera.

LEGEND:—BAΣIΛEΩΣ AΓAΘoKΛEoYΣ.

Monogram, No. 5. Mr. Gibbs.

'Ariana Antiqua,' pl. vi., fig. 3; 'Jour. des Sav.,' 1836, pl. ii., fig. 1; 'Trésor de Numismatique,' lxxiv.

a)—Drachma. Similar types.

Monogram, No. 3.

'Jour. des Sav.', June, 1834, pl. fig. 2. 'Grotefend' (1839), p. 29. 'Ariana Antiqua,' pl. vi., fig. 4. 'Bibl. Imp.,' Monogram, No. 5.

3.—Drachma.

OBVERSE:—Head of Bacchus, to the right.

REVERSE:—Panther, to the right, with a bunch of grapes in his fore-paw.

LEGEND:—BAΣIΛEΩΣ AΓAΘoKΛEoYΣ.

No Monogram.

'Jour. des Sav.', 1834, pl. fig. 1. 'Ariana Antiqua,' pl. vi., fig. 5. 'Trésor de Numismatique,' lxxiv., 2.

4.—◯ Copper. Types as in No. 3, with the exception that the spear which appears doubtfully on the obverse of the former class is here distinct and positive, while, in lieu of the bunch of grapes, a small vine is introduced in front of the panther on the reverse.

Monogram, No. 6. APαχωσία (?)

'Ariana Antiqua,' pl. vi., fig. 6. 'Num. Jour.', vol. vii., pl. iii., 30.

Mr. G. H. Freeling, Bengal Civil Service, has a cast (in silver) from an apparently genuine original of this coinage, which bears the detached letters ΦI in place of a monogram.

5.—□ Copper. Plate xxviii., fig. 9.

OBVERSE:—Panther to the right.

LEGEND.—BAΣIΛEΩΣ AΓAΘoKΛEoYΣ.

REVERSE:—Bacchante.

LEGEND, in Indian Pâlí, 𑀅𑀕𑀣𑀼𑀓𑀮𑀬𑁂𑀲 *Agathuklayesa.*

'Ariana Antiqua,' pl. vi., figs. 7, 8, 9.; and 'Jour. des Sav.,' 1835, pl. i., fig. 1.

Some varieties of these coins display mint marks or letters on the right of the Bacchante. The character is usually formed like a modern Hebrew ב *b*; it may be either an Arian 𐎃 *d* or a Pâlí 𑀦 *ne*; at times, again, it takes the form of an Arian 𐎄 *te* or *re*. An analogous piece, in the British Museum, exhibits the Greek letters ΣH, on the obverse.

III. PANTALEON.

1.—⊖ Debased silver (unpublished).

OBVERSE:—Type similar to No. 4. Agathocles.

REVERSE:—Ditto.

LEGEND:—BAΣIΛEΩΣ ΠANTAΛEoNTos.

No monogram. Mr. H. Brereton, Bengal Civil Service.

2.—□ Copper. Pl. xviii. fig. 8. [Types similar to No. 5. Agathocles.]
OBVERSE:—Panther.
LEGEND:—ΒΑΣΙΛΕΩΣ ΠΑΝΤΑΛΕΟΝΤΟΣ.
REVERSE:—Bacchante.
LEGEND, in Indian Pâli, 𑀧𑀦𑁆𑀢𑀮𑁂𑀯𑀲 *Pantalevasa.*
Monogram:—ב, ך, etc. 'Ariana Antiqua,' pl. vi. fig. 11.

IV. EUTHYDEMUS.

1.—Gold.
OBVERSE:—Head of king to the right, with fillet.
REVERSE:—Hercules seated on a rock, resting his club on a pile of stones.
LEGEND:—ΒΑΣΙΛΕΩΣ ΕΥΘΥΔΗΜΟΥ.
Monogram, No. 7, according to 'Ariana Antiqua,' pl. i., fig. 1.; quoted from Pellerin, 'Additions aux Médailles des Rois,' p. 95. The 'Bibl. Imp.' coin, to my perception, has the monogram copied under No. 7 *a*.

2.—Tetradrachma. Pl. ii., fig. 3.
OBVERSE:—As in No. 1.
REVERSE:—Hercules, etc., with his club resting on his right knee.[1]
Monograms, Nos. 8, 8*a*, A*a*, 9.
'Ariana Antiqua,' pl. i., figs. 2, 3, 4. 'Jour. des Sav.,' 1834, pl. fig. 2; 1835, pl. i., fig. 2.

a)—Drachma, similar types. Capt. Hay. Monogram, 8*a*.

Variant, pl. xiii. fig. 1. Reverse, type as in gold coin. Monogram, No. 10.
'Jour. des Sav.,' 1834, pl. fig. 3; Monogram, No. 11.
Other coins have Monograms, Nos. 12, A*b*, A*c*, A*a*. and A*d*.
'Ariana Antiqua,' pl. xxi. fig. 1, has 12 with A*b*.

a)—Drachma, similar types. 'Ariana Antiqua,' pl. xxi., fig. 2.

3.—Tetradrachma. Pl. xxxi. 3, and pl. xlii., figs. 2, 3.[2]
OBVERSE:—Head of King.
REVERSE:—Hercules standing, to the front; head encircled with a chaplet; on the left arm are the club and lion's skin; right hand extended.
Monogram, No. 5. 'Ariana Antiqua,' pl. i., fig. 11. Monogram 5*a*.

Variety. Other coins vary the reverse device, inasmuch as the extended right hand holds a second chaplet. British Museum, Monogram, No. 8*a* (weight, 260.4 gr.) Brereton ditto (weight, 258.5 gr.)

a)—Drachma, as No. 3 variety. 'Ariana Antiqua,' pl. i., fig. 12; 'Jour. des Sav.,' 1835, pl. i., fig. 3; British Museum, plated coin, Monogram 5 ?

4.—Didrachma.
OBVERSE:—Laurelled head of Apollo to the left.
REVERSE:—Tripod. R. Rochette, 'Jour. des Sav.,' Dec. 1838, p. 741.

[1] [Where the legends are omitted, they are to be understood to be identical with those cited on the latest occasion.]

[2] [I have had the obverses of the two coins, lately acquired by Messrs. Frere and Brereton, engraved, for the purpose of enabling numismatists to compare the portraiture, as here rendered, with the style of likeness prevailing on classes 1 and 2, an impression existing among our most practised antiquarians that the contrasting dies represent the busts of two independent monarchs, as opposed to the idea of a likeness of one and the same person at different periods of his life.]

5.—◯ Copper. Pl. xxxii., fig. 4.
OBVERSE:—Bearded head, to the right.
REVERSE:—Horse, free. 'Ariana Antiqua,' pl. i., figs. 13, 14, 15.

6.—⊙ Copper (small).
OBVERSE:—Head indistinct.
REVERSE:—Erect figure of Apollo to the left, with arrow in the right and bow in the left hand. 'Ariana Antiqua,' pl. ii., fig. 1.

7.—⊙ Copper.
OBVERSE:—Head as in No. 4.
REVERSE:—Tripod.
Monogram, No. 5*a*. Captain Hay; 'Trésor de Numismatique,' lxxii. 11; also 'Köhler,' pl. i. 3.[1]

V. DEMETRIUS.

1.—Tetradrachma. Head of king with fillet, to the right.
REVERSE:—Minerva armed, to the front.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ.
Monogram, No. 13, with the letter Δ above the figure.
'Jour. des Sav.,' 1835 (Hönigberger's coin), vol. i., p. 4, 1835; re-engraved in 'Ariana Antiqua,' pl. ii., fig. 3. 'Trés. de Num.,' lxxii. 14.

2.—Tetradrachma.
OBVERSE:—Head of king, to the right, with helmet fashioned like an elephant's head.
REVERSE:—Hercules, like No. 3, Euthydemus' device, but his right hand is upraised in the act of placing the chaplet on his brow.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ.
Mr. Gibbs' coin, monogram, No. 5. 'Köhler,' p. 321.
Monogram, No. 8*a*. R. Rochette, 'Jour. des. Sav.', 1838, p. 743.
B.M. coins, monograms, Nos. 5 (weight, 263·5 grs.), 8*a*, and 14 (inferior execution, weight, 236 grs.)

a)—Oboli. Plate xiii., fig. 2. Similar devices. 'Ariana Antiqua,' pl. ii., fig. 5. Monogram, 5. M. Raoul Rochette notices a Triobolus of this type, 'Jour. des Sav.', Deux. Supp. 16. 'Trésor Numismatique,' p. 149. Other monograms, 5*b*, 6, and 8*a*.

b)—No. 4, pl. ii., 'Ariana Antiqua,' has the neck of the king bare.
A second unpublished coin E. I. H. has the monogram No. 15 (ΟΞ).

3.—◯ Copper.
OBVERSE:—Head of Hercules.
REVERSE:—Apollo (?)
Monogram, No. 15. 'Ariana Antiqua,' pl. xxi., fig. 3.

[1] [I have not been able to obtain a sight of Köhler's work; I quote his coins from Grotefend, 'Die Münzen der Könige von Bactrien,' 1839. The original seems to have appeared under the following title: 'Köhler, Médailles grecques de Rois de la Bactriane, du Bosphore,' etc. Petersbourg, 1822, 8vo. 'Supplément à la suite des Méd. des Rois de la Bactriane,' *ibid*, 1823.]

4.—Copper.
OBVERSE as No. 3.
REVERSE:—Hercules; the right arm is upraised towards the head of the figure.
Cunningham, 'Jour. As. Soc. Beng.', vol. xi., pl. fig. 1.

5.—◯ Copper.
OBVERSE:—Elephant's head.
REVERSE:—The Caduceus.
'Jour. As. Soc. Beng.', vol. ix., p. 69; and vol. xi., pl. fig. 2.

VI. HELIOCLES.

1.—Tetradrachma.
OBVERSE:—Head of king to the right.
REVERSE:—Jove, standing to the front, with spear and thunderbolt.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΗΛΙΟΚΛΕΟΥΣ.
Grotefend, p. 30, quoting 'Catalogue d'Ennery,' p. 40.[1]
'Trésor de Numismatique,' lxxiii., 15.
'Ariana Antiqua,' pl. ii., fig. 6,
Monogram, No. 16.
British Museum coins, monograms, Nos. 11*a*, B (weight of piece, 259·6 grs.)
Mr. Gibbs' coin, monogram 17. Mr. Brereton, ditto. Lady Sale, No. 16.
A cast in the possession of Mr. Freeling has the letters ⌐|⌐ (No. 19) below the word ΔΙΚΑΙΟΥ on the reverse.

a).—Drachma. similar types. 'Bibl. Imp.' Monogram, 11*b*.

2.—Tetradrachma.
OBVERSE:—Helmeted head.
REVERSE:—Jupiter seated: the right hand holding a small figure of victory, the left resting on a spear.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΗΛΙΟΚΛΕ*ου*Σ.
Capt. Hay.

3.—◯ Plated copper (Drachma?).
OBVERSE:—Helmeted head, closely resembling that of Eukratides, within a marginal border of alternate drops and beads.
REVERSE:—Jove seated.
LEGEND (blundered):—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΙΛΙΟΚΛΕΟΥΣ.
Mr. E. C. Bayley; also, Capt. Hay.

a)—Drachma. Similar types.
Monogram Ω.
Capt. Hay.

4.—Hemidrachma.
OBVERSE:—Head of king.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΗΛΙΟΚΛΕΟΥΣ.
REVERSE:—Jove, as above, No. 1.
LEGEND, in Bactrian-Pálí or Arian characters, *Mdhdrajasa Dhramikasa Heliyakreyasa.*
'Ariana Antiqua,' pl. xxi., fig. 8. Monogram Σ.
The orthography of the name in the Arian varies at times to *Heliyakresasa* and *Eliyakreyasa;* the former occurs on a coin in the E. I. H., with the monogram No. 8*a*. Other hemidrachmas have monograms No. 20 and 20 with Σ.

[1] ['Catalogue des Médailles du Cabinet,' de M. d'Ennery. Paris, 1788.]

5.—□ Copper. Pl. xliii., fig. 7.
OBVERSE:—Head.
REVERSE:—Elephant to the left.[1]
'Ariana Antiqua,' pl. ii., fig. 7, monogram Σ. Other monograms, Nos. 8*a*. E. I. C. coin, 21. Mr. Frere, monogram No. 22.
These coins also differ occasionally in the expression of the Arian version of the name, exhibiting it as *Heliyakreyasa* and *Heliyakraasa*.

6.—□ Copper. Plate xliii., fig. 8. As No. 5, but the elephant on the reverse is to the right.

7.—□ Copper.
OBVERSE:—Elephant, to the right.
REVERSE:—Bull. Capt. Hay.[2]

8.—Copper. Plate xxviii., fig. 4. Degraded type.
OBVERSE:—Head.
REVERSE:—Figure as in No. 1. Legends corrupt and imperfect.

9.—Copper. Plate xv., figs. 12, 13, 14. Degraded type.
OBVERSE:—Head.
REVERSE:—Horse, free, to the left. Legends corrupt and imperfect.

VII. ANTIMACHUS ΘΕΟΣ.

1.—Tetradrachma.[3] (Cast.)
OBVERSE:—Head with fillet.
LEGEND:—ΔΙΟΔΟΤΟΥ ΣΩΤΗΡΟΣ.
REVERSE:—Standing figure of Jupiter, as in the gold coinage of Diodotus.
LEGEND:—ΒΑΣΙΛΕΥΟΝΤΟΣ ΑΝΤΙΜΑΧΟΥ ΘΕΟΥ.'
Monogram, No. 12.
Capt. Hay. Mr. Brereton has a similar forgery with the same monogram.

2.—Tetradrachma.
OBVERSE:—Head of king, to the right, with Causia.
REVERSE:—Neptune, to the front, with trident and palm-branch.
LEGEND:—ΒΑΣΙΛΕΩΣ ΘΕΟΥ ΑΝΤΙΜΑΧΟΥ.
'Köhler,' i. 10, reproduced by 'Mionnet,' sup. viii. 466.
Monogram, No. 23. British Museum coins, monogram No. 8*a* and 23. Lady Sale and Mr. Brereton, also No. 23.

a)—Drachma. British Museum, monogram No. 23.

[1] [The Arian legends, like the Greek, are ordinarily omitted after one insertion; where not otherwise noted, therefore, the succeeding coins are to be understood to bear similar epigraphs.]

[2] [I am indebted to Mr. E. C. Bayley, of the Bengal Civil Service, for most of these notices of Captain W. E. Hay's coins. I myself have seen only the silver pieces of that officer's valuable collection.]

[3] [It is needless to say that this important piece, which, though a cast, is evidently taken from a genuine antique, necessitates the promotion of Antimachus Theos to a close proximity, if not to a contemporaneous existence, with the founder of the Bactrian independence. This coin was not known in England when Art. iii., vol. i., went to press.]

[b]—Hemidrachma (31·7 grs.). British Museum coin, monogram No. 9*a*. A second, monogram No. 23.

Major Cunningham ('Jour. As. Soc. Beng.,' vol. ix., p. 872) describes a 'plated' hemidrachma of Antimachus Theos, with the monogram 'Xo.'

[c].—Obolus. 'Ariana Antiqua,' pl. xxi., fig. 12. Monogram 8*a*.

VIII. EUCRATIDES.

1.—Tetradrachma. Pl. xlii., fig. 2.

OBVERSE.—Bare head of the king, with fillet.

REVERSE:—Apollo, bow in the left, and arrow in the right hand.

LEGEND:—ΒΑΣΙΛΕΩΣ ΕΥΚΡΑΤΙΔΟΥ.

'Köhler,' 'Ariana Antiqua,' pl. iii., fig. 4, monogram No. 9*a*.[1]

Lady Sale, same monogram. See also 'Jour. des Sav.,' Sept., 1835, i. 5; 'Mionnet,' sup. viii.; British Museum coins, monograms Nos. 10, 24, 25; 'Bib. Imp.,' No. 26; M. le Duc de Luynes, No. 5*c*.

[a]—Drachma. Similar types. Pl. xiii. 6. General Fox, monogram 29.

2.—Obolus. Plate xxxii., fig. 10.

OBVERSE:—Bare head of king.

REVERSE:—Caps and palm-branches of Dioscuri. Same legend as No 1. Monograms, Nos. 8*a*, 13*a*, 27, 28, 28*a*.

3.—Obolus.

OBVERSE:—Helmeted head of king.

REVERSE:—As in No. 2.

'Ariana Antiqua,' pl. iii., fig. 5. Gen. Fox, monogram No. 13*a*. E. I. H., 13*a*, M, and 19*a*. British Museum, monog. 12—*i.e.* N.

4.—Tetradrachma.

OBVERSE:—Bare head of king, to the right, with fillet.

REVERSE:—Dioscuri, charging.

British Museum. Monogram 8*a*.

[a]—Drachma. Pl. xiii., fig. 6. Similar types.

'Jour. des Sav.,' 1836, ii., 3. 'Trés. de Num.,' pl. lxxiii. fig. 2. B.I., monogram 11.

5.—Tetradrachma. Pl. xlii, fig. 4, p. 126. (Weight of E. I. H. coin, with suspending loop, 255·7 grs.)

OBVERSE:—Helmeted head of king.

LEGEND:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΣ ΕΥΚΡΑΤΙΔΗΣ.

REVERSE:—Male and female heads, uncovered and unadorned with fillets.

LEGEND:—ΗΛΙΟΚΛΕΟΥΣ ΚΑΙ ΛΑΟΔΙΚΗΣ.

Monogram, No. 13*a*. 'Jour. As. Soc. Beng.,' vol. vii., pl. xxvii., fig. 1. Re-engraved in 'Ariana Antiqua,' pl. xxi., fig. 7, from the original coin.

Col. Sykes' cast, from a possibly genuine coin of this class, and a second reproduction from the same or a similar original, in the possession of Mr. Brereton, both have the monogram No. 5*c*.

[1] [Where the monogram facsimiles in the plates differ from the published specimens, it must be understood that my copy has been taken anew from the original piece, and does not follow the engraving, cited for the mere illustration of the numismatic classification.]

6.—Tetradrachma. Plate xiii., fig. 5. (Weight of selected specimens in the British Museum, 258 and 259 grains.)
OBVERSE:—Helmeted head, to the right.
REVERSE:—Dioscuri, charging.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
'Ariana Antiqua,' pl. iii., figs. 1, 2, 3. Monograms 13*a*, 27, 29. British Museum. Monograms, Nos. 5*c*, 11*c*, 13*a*, 29, 30, 31. Lady Sale, No. 28*a*. B. I. Monograms, M, 29. Mr. Bayley. Monogram, $\frac{\Phi}{O}$ with HT in the field. Capt. Robinson. Monograms 13*a*, 28*a*.
a)—Drachma. 'Jour. des Sav.,' 1834, pl. fig. 5: 1835, pl. i., fig. 6. 'Trés. de Num.,' lxxiii. 6. British Museum, monogram N. B.I. 28*b*. Hay, 5*c*.

7.—Tetradrachma.
OBVERSE:—Helmeted head of the king, to the left, with a portion of the bust displayed; the right arm raised in the act of darting a javelin.
REVERSE:—Dioscuri.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
Monogram 5*b* (?) 'Köhler,' i. 8. 'Trés de Num.,' pl. lxxiii, fig. 7.

8.—⊙ Copper.
OBVERSE:—Head of Apollo to the right.
REVERSE:—Horse, free, to the left.
LEGEND:—ΒΑΣΙΛΕΩΣ ΕΥΚΡΑΤΙΔΟΥ. 'Ariana Antiqua,' pl. iii., fig. 7.

9.—◯ Copper. Pl. xiii., fig. 7, Of similar devices and legends to No. 6. 'Ariana Antiqua,' pl. iii., fig. 8, monogram, No. 21. Mr. Bayley, No. 40.

10.—□ Copper.
OBVERSE:—Helmeted head, to the left, with javelin.
REVERSE:—Dioscuri.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
'Köhler.' 'Mionnet,' viii. 470. British Museum, monogram 32.

11.—⊙ Copper. Size, 3. British Museum.
OBVERSE:—Helmeted head to the left.
REVERSE:—A single horseman at the charge.

12.—□ Copper. Small coin. Pl. xxxii., fig. 11.
OBVERSE:—Bare head of king to the right.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
REVERSE:—Caps and palm-leaves of the Dioscuri.
LEGEND IN ARIAN:—*Mâhârajasa Eukrâtidasa.*
'Ariana Antiqua,' pl. iii., fig. 12. 'Trés. de Num.,' lxxiii. 13.

13.—□ Copper. Pl. xiii., figs. 8–10.
OBVERSE:—Helmeted head, as in No. 6.
REVERSE:—Dioscuri.
LEGEND IN ARIAN:—*Mâhârajasa Eukrâtidasa.*
Monograms, 17*a*, 21, 27, 28*a*, 31 with E, 33, 33*a*, 34, 34*a*, 35, 35*b*, 36, 37, 38, 39, 41, 43, 44, 45.
'Ariana Antiqua,' pl. iii., figs. 9, 10. 'Jour. des Sav.,' 1835, pl. i., fig. 7.

14.—□ Copper.
OBVERSE:—Helmeted head to the right.
REVERSE:—Seated figure to the left, with a small elephant at the side (as in Antialkides' coin, No. 1).
LEGEND indistinct. 'Ariana Antiqua,' pl. iii., fig. 11.

15.—□ Copper.
OBVERSE:—Helmeted head of king to the left, with javelin.
REVERSE:—A winged figure of Victory to the right, with chaplet and palm branch.
LEGEND defective. 'Ariana Antiqua,' pl. xxi., fig. 5, monogram 13*a*.

16.—□ Copper.
OBVERSE:—Helmeted head of king to the right.
REVERSE:—Victory to the left, extending a chaplet.
ARIAN LEGEND:—*(Maharajasa) Rajadirajasa Eukratidasa.*
'Ariana Antiqua,' pl. xxi., fig. 6, and British Museum, monogram 40*a*. Mr. Bayley, monogram, 40.
Additional monograms of Eucratides, Nos. 8*c*, 27*a*, 33*b*, 42.

IX. ANTIMACHUS ΝΙΚΗΦΟΡΟΣ.

1.—Hemidrachma. Plate xv., fig. 3.
OBVERSE:—Winged figure of Victory, to the left, with palm branch in her right, and fillet in her left hand.
LEGEND:—ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙΜΑΧΟΥ.
REVERSE:—King on horseback, to the right.
ARIAN LEGEND:—*Mahárajasa jayádhardsa Antimákhasa.*
'Ariana Antiqua,' pl. ii., fig. 16.
Prof. Wilson was under the impression that all these coins bore the same monograms, Nos. 31*a* ('Ariana Antiqua,' 274); they are now found to include the symbols classed under the following numbers, 27, 31, 46, and 46*a*.

2.—□ Copper. Pl. xv., 4.
OBVERSE:—Demeter, to the front; cornucopia on her left arm. Legend imperfect.
REVERSE:—Winged figure of Victory, to the left.
ARIAN LEGEND:—*Mahárajasa . . . . Antimakhasa.*
'Ariana Antiqua, pl. ii., fig. 16. Monogram Σ

3.—□ Copper.
OBVERSE:—The skin of an animal (?)
LEGEND:—ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙμαχου.
REVERSE:—Wreath and palm-branch.
ARIAN LEGEND:—*Mahárajasa . . . . Antimakhasa.*
'Ariana Antiqua,' pl. xxi., fig. 11. Monogram 47.
A silver cast of a genuine coin, in the possession of Mr. Bayley, definitely determines the attribution of this piece, contributing the full counterpart names as inserted above. It bears the monogram No. 27.[1]

[1] [See also Cunningham, 'Jour. As. Soc. Beng.,' April, 1840, p. 392.]

X. PHILOXENES.

1.—Didrachma. Plate xv., fig. 1.

OBVERSE:—Helmeted head of king, to the right.

LEGEND:—BAΣIΛEΩΣ ANIKHTOY ΦIΛOΞENOY.

REVERSE:—Horseman with helmet, as on the obverse of Antimachus Nikephorus' coins.

ARIAN LEGEND:—*Mâhârajasa Apaḍihatasa Pilasinasa.*

'Jour. des. Sav.,' 1836. ii., 5. 'Ariana Antiqua,' pl. ii., fig. 17.

Monogram No. 22*a*.

[a]—□ Hemidrachma, of similar devices. Monograms No. 48*a*, with Σ.

Mr. Bayley.

[b]—□ Obolus (?). Types and legends as above. The Arian name is written, *Phalasinasa*. Monogram No. 35*c*. Captain Robinson.

Mr. Frere has a silver cast of an apparently authentic didrachma, which supplies us with a variety of this obverse type. The king's head is here uncovered. On the reverse, traces of the monogram 31*a* are visible. The Arian transcript of the name commences with the letter *Phi*.

2.—□ Hemidrachma.

OBVERSE:—Bare head of king with fillet, to the right. Legend as above.

REVERSE:—Device and legend as in No. 1.

Monogram No. 48*a*, with Σ. 'Ariana Antiqua,' pl. xxi., fig. 13.

Colonel Abbott. Monograms, Nos. 22, 8.

3.—□ Copper. Plate iii., figs. 6, 7; plate xv., fig. 2.

OBVERSE:—Demeter, with the ordinary Greek legend.

REVERSE:—Humped bull, with the usual Arian legend; the initial of the name is indifferently expressed by *Pi* or *Phi*.

'Jour. des. Sav.,' 1836, ii., 6. 'Ariana Antiqua,' pl. ii. fig. 18.

Monogram Nos. 48*a*, 48*a* with Σ on reverse, 48, 49, 50. B.I., 51 (?) with a Bactrian ך *r* on reverse. Mr. Brereton. Monograms 22*a*, with an Arian *v* on reverse, 48*a* and 48*b*, with Σ on reverse.

4.—□ Copper.

OBVERSE:—Crowned figure, with a long spear.

LEGEND:—BAΣIΛEΩΣ ANIKHTOY ΦIΛOΞENOY.

REVERSE:—A figure of Victory. Captain Hay.

X[a]. ARTEMIDORUS.

1.—Hemidrachma.[1]

2.—□ Copper.

OBVERSE:—Erect figure, with the right arm upraised.

LEGEND:—BAΣIΛEΩΣ ANIκητου αρτεMIΔΩΡου.

REVERSE:—Bull, as in Philoxenes' copper coins.

ARIAN LEGEND:—(M)*âhârajasa Apaḍihâta*(*sa* A)*ti*(*midarasa*).

Mr. Bayley.

These legends have been completed from a more perfect coin figured and assigned by Major Cunningham ('Jour. As. Soc. Beng.,' 1854, p. 668).

[1] [Mr. Brereton deposes to the discovery of a coin of this description, which has passed from his own possession to that of Major Cunningham. He is under the impression that the types are—Obverse: King's head. Reverse: Minerva Promachos.]

I conclude that this Artemidorus is the monarch styled Artemon in Major Cunningham's list above cited; but if so, the style and fabric of his coinage must very materially alter his assumed date and position in the general list as determined by that numismatist.

XI. Nicias.

1.—□ Copper. Plate xlii., fig. 5.
Obverse:—Head of king, to the right.
Legend:—*βα*ϹΙΛΕѠϹ ϹѠΤΗΡΟϹ ΝΙΚΙ*ου*.
Reverse:—Horseman, as in No. 1, Philoxenes.
Arian Legend:—*Máhárajasa Tradatasa* . . kiasa.
Colonel T. Bush. See also Cunningham, 'Jour. As. Soc. Beng.,' vol. xi., p. 136.

XII. Apollodotus.

1.—◯ Hemidrachma. Plate iii., fig. 4; also pl. xiv., fig. 4.
Obverse:—Head of king.
Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΚΑΙ ΦΙΛΟΠΑΤΟΡΟΣ ΑΠΟΛΛΟΔΟΤΟΥ.
Reverse:—Thessalian Minerva to the left.
Arian Legend:—*Máhárajasa Tradatasa Apaladatasa.*[1]
Monograms, Nos. 38*a*, 38*b*, 51, 51*a*, 51*b*, 52, 53.
'Ariana Antiqua,' pl. iv., fig. 13.

2.—□ Hemidrachma. Plate xiv., fig. 5.
Obverse:—Elephant.
Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΑΠΟΛΛΟΔΟΤΟΥ.
Reverse:—Humped bull.
Legend as in No. 1. 'Ariana Antiqua,' pl. iv., fig. 14.
Monograms 22*b*, and the entire suite, together with the combinations indicated under each number, from 54 to 59, both inclusive.

3.—◯ Hemidrachma. Types and legends as No. 2.
'Ariana Antiqua,' pl. iv., fig. 15.

[1] [The Arian orthography of the name of Apollodotus varies considerably in the different specimens of his extensive mintages. I notice in some instances a dot at the foot of the initial *a*, which elsewhere constitutes the sign of the long sound of that vowel. This is the solitary occasion upon which I have observed its use in defining more precisely the power of the ordinary ʖ initial. And, however little, to our ideas, the exact definition of the phonetic elements of the name may require the hard *a* in this place, we can scarcely understand the sign as purporting anything else, especially when we observe the lax method of insertion or omission of the same quantitive mark in other words. The antepenultimate *d* is used indifferently in its simple form, or with the additional horizontal foot stroke, the precise import of which is yet undetermined; and, finally, the *d* occurs in its normal shape, with the dot of a following hard *a*. The penultimate is also subject to modification, usually appearing under the form of the proper ˥ = *t*, but at times bearing the foot stroke ordinarily reserved to distinguish the ˥ = *d*, of assimilate outline; but to show the irregularities practised in this respect, this extraneous mark is added to the *t* in the name, while on the same coin the special definition is rightly reserved to discriminate the ˥ = *d* from the ˥ = *t* in Tra*da*tasa. It must be added, however, that in some instances the superfluous foot stroke, in the penultimate of apalada*t*asa takes the form of an equally needless hard *a* medial.]

4.—□ Copper. Small coin.
OBVERSE:—Figure of Apollo, with bow and arrow, to the right.
Legend as in No. 1.
REVERSE:—Tripod. Legend as usual. Monogram, No. 38*a*.
Captain Robinson. Mr. Brereton, monogram 37 (?)

5.—○ Copper. Large coin. Plate xiv., fig. 6.
OBVERSE:—Apollo, with arrow, to the right. Legend as in No. 2.
REVERSE:—Tripod. Legend as in No. 1.
'Ariana Antiqua,' pl. iv., fig. 16. 'Jour. des Sav.,' 1834, pl. fig. 6.

Variant. ○ Copper. Coin of inferior execution. Legends arranged on three sides of a square, instead of in the usual marginal circle.
Bactrian monogram, *gi*, with *d* or *n*.
Cunningham, 'Jour. As. Soc. Beng.,' vol. ix., p. 867.

6.—□ Copper. Similar devices and legends to No. 5.
Monograms 63, 64.

7.—□ Copper. Plate xiv., fig. 7.
OBVERSE:—Apollo to the front, with the bow in the left and the arrow in the right hand. Legend as usual.
REVERSE:—Tripod. Legend as usual. 'Jour. des Sav.,' 1835, i. 7.
Variants. Small coin. Pl. xiv., fig. 8; also 'Ariana Antiqua,' pl. iv. figs. 17, 18, and small coin No. 19.
Monograms Nos. 8, 8*a*, 21, 52*a*, 57, and the entire suite 65—75.

8.—□ Copper. Middle size.
OBVERSE:—'Figure of Apollo standing to the left, clothed in the anaxyris, with chlamys behind, a quiver at his back; an arrow in his right hand, his left resting on his bow; inclosed in a frame of oblong globules, BAΣIΛEΩΣ BA [?] . . . . AΠoΛΛoΔoToT.'
REVERSE:—'Tripod; in the field, a symbol which seems to be a military ensign.'
Arianian inscription imperfect [*Apaladatasa*].
'Ariana Antiqua,' 291, quoting 'Jour. des Sav.,' Dec. 1838, p. 752.
B. I. Monogram 38*b*. Small coin, 38*a*. Col. Bush. Arian Monogram, No. 76.

9.—□ Copper. Small coin. Plate xlii., fig. 6. Unique.
OBVERSE.—Apollo as in No. 8. Legend altogether wanting.
REVERSE:—Symbol figured in the plate.
ARIAN LEGEND:—*Maharajasa Tradatasa Apaladatasa.* Col. T. Bush.

10.—□ Copper. Small coin.
OBVERSE:—Bull.
REVERSE:—Tripod, surrounded by a bossed margin. No Legends. B.I.

11.—□ Copper (middle size), indifferent execution.
OBVERSE:—Apollo (?) *seated*, to the right, a bow in left hand.
LEGEND:—BAΣIΛEΩΣ ΣΩTHPoΣ . . . . . oΔoToT.
REVERSE:—Tripod, within a frame. Legend imperfect, . . . *paladatasa* (?).
Monogram, No. 77. Mr. E. C. Bayley.

XIII. Zoilus.

1.—Hemidrachma.
Obverse:—Head of king, to the right, with fillet.
Legend:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΖΩΙΛΟΥ.
Reverse:—Hercules, as in Demetrius' coins, but the right hand holding the chaplet is not upraised.
Arian Legend:—*Mâhârajasa Dhramikasa Jhoilasa.*
Monogram, No. 30.
Lady Headfort, No. 31. Captain Robinson, No. 46. Colonel Abbott, No. 78. Mr. Bayley, No. 79.

2.—Hemidrachma.[1] These coins have a great similitude, in their die execution, to the small Philopator coins of Apollodotus.
Obverse:—As No. 1.
Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΖΩΙΛΟΥ.
Reverse:—Thessalian Minerva.
Arian Legend:—*Mâhârajasa Tradatasa Jhoilasa.* Monogram No. 60.
Colonel Abbott. Mr. Bayley, No. 80.

3.—□ Copper.
Obverse:—Head of Hercules covered with the lion's skin, to the right.
Legend:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΖΩΙΛΟΥ.
Reverse:—Club, with bow in its case, surrounded by a chaplet.
Arian Legend:—*Mâhârajasa Dhramikasa Jhoilasa.*
Monogram No. 79. Lady Headfort.

4.—◯ Copper. Similar types to the Apollodotus coin, No. 5, with the addition of a small elephant at the back of the figure, in the field of the obverse. Legends as in No. 2, but the Greek epigraph is less correctly rendered. Monograms Nos. 81, 82, 83.

5.—◯ Copper (small coin).
Obverse:—Elephant, to the right. Epigraph illegible.
Reverse:—Tripod.
Arian Legend:—*Mâhârajasa Tradatasa Jhoilasa.*
Arian Monograms, *dhi*, *Bh*, and *a* with *t*. Colonel Bush.

XIV. Diomedes.

1.—□ Copper. Plate xxviii., fig. 3.
Obverse:—Dioscuri standing, to the front.
Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΔΙΟΜΗΔΟΥ.
Reverse. Arian Legend:—*Mâhârajasa Tradatasa Diyamedasa.*
Monograms Nos. 31, 31 with Σ. Mr. Brereton. 48*a* with Σ.
'Ariana Antiqua,' pl. v., fig. 1.

[1] [Major Cunningham has published a degraded type of this class, which he supposes to have formed part of 'a coinage (that) was re-issued and perhaps imitated by the native chiefs in their own names.' 'Jour. As. Soc. Beng.,' (1854) p. 692, and pl. xxxv., fig. 11.]

XV. Dionysius.

1.—Hemidrachma (of inferior execution, similar in its aspect to the Philopater coins of Apollodotus).

Obverse:—Head with fillet, to the right.

Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΔΙΟΝΥΣΙΟΥ.

Reverse:—Thessalian Minerva.

Arian Legend:—*Mâhârajasa Tradatasa Dianisiyasa.*

Monogram (as in Apollodotus' coins), No. 60, standard type. Col. Abbott.

A second specimen gives the Σ in the name more after the form of a proper *sigma*. The outline of the *Ni*, in the Arian legend, is also modified in the duplicate coin, which, however, bears the same monogram.

2.—□ Copper.

Obverse:—Apollo, to the right, as in Apollodotus' coins.

Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΔΙΟΝΤΣΙΟΥ.

Reverse:—Tripod. Arian Legend imperfect.

Monogram No. 84, consisting of Arian letters, *Sh* and *A*. B.I., mon. 85. British Museum. 'Num. Chron.,' xvi., plate p. 108, fig. 5.

3.—□ Copper. Plate xlii., fig. 7. Unique.

Obverse:—As in No. 8, Apollodotus. No legend.

Reverse:—Device, as represented in the plate.

Arian Legend:—*Mâharajasa Tradatasa Diyanisiyasa.*

Colonel Bush.

XVI. Lysias.

1.—Hemidrachma. Plate xliii., fig. 4.

Obverse:—Head of king, with helmet in the shape of an elephant's head: similar to the Demetrius' type.

Legend:—ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΛΥΣΙΟΥ.

Reverse:—Hercules standing, to the front, as in the Demetrius' prototype.

Arian Legend:—*Mâhârajasa Apadihâtasa Lysikasa.*

'Ariana Antiqua,' pl. ii., fig. 9. Monogram 86. 'Ariana Antiqua,' pl. xxi., fig. 9. Monogram 87. B.I., monogram 85. Colonel Abbott. Monograms 8*a*, 86, 87.

2.—Hemidrachma.

Obverse:—Head of the king, with the ordinary helmet.

Reverse:—Hercules, as above. The legend varies in the Arian definition of the name, which at times exhibits the initial vowel *a*, and at others the letter *k*, as the penultimate.

The seven specimens of this mintage that I have had an opportunity of examining all have the monogram No. 86. 'Num. Chron.,' xvi., plate p. 108, fig. 1.

3.—□ Copper. Plate xiv., fig. 12.

Obverse:—Bust of king, to the right, head uncovered, with a club resting on the shoulder.

Reverse:—Elephant, to the right, as in Heliocles' coins. Legend as above, the name being usually spelt with a *k*.

'Ariana Antiqua,' pl. ii., fig. 10. 'Num. Jour.,' vii., pl. ii., 22. Monograms Nos. 8*a*, 22, 88*a*.

4.—⊙ Copper.
OBVERSE:—Bust of the king, as in No. 3.
REVERSE:—Elephant, to the right. (*Lisiasa.*)
Monogram No. 24*a*. Colonel Bush.

LYSIAS AND ANTIALKIDES.

1.—□ Copper.
OBVERSE:—Bare head of king, to the right.
LEGEND:—ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΛΥΣΙΟΥ.
REVERSE:—Caps and palm-branches of the Dioscuri.
ARIAN LEGEND:—*Mâhârajasa Jayadharasa* ANTIALIKIDASA.
Captain Hay.

XVII. ANTIALKIDES.

1.—Tetradrachma.
OBVERSE:—Bare head of king.
LEGEND:—ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙΑΛΚΙΔΟΥ.
REVERSE:—Jove enthroned, with a small figure of Victory in his right hand; minute elephant in front, etc.
ARIAN LEGEND:—*Mâhârajasa Jayadharasa Antialikidasa.*
Monogram No. 86. Colonel Abbott.

a).—Hemidrachma. Similar types. 'Ariana Antiqua,' pl. ii., fig. 12.
Monograms No. 8*b*, 22, 86.

2.—Drachma.
OBVERSE:—Head of king, with Causia.
REVERSE:—As in No. 1.
Monogram No. 31. B.I.

a).—Hemidrachma. Plate xviii., fig. 2.
In some specimens the small elephant faces the seated figure.
Monograms Nos. 8*b*, 22, 31, 86. 'Ariana Antiqua,' pl. ii., fig. 11.

3.—Hemidrachma.
OBVERSE:—Head, with the ordinary crested helmet.
REVERSE:—Device as usual.
Monograms 8*b*, 86. 'Ariana Antiqua,' No. 3, p. 277.

4.—◯ Copper.
OBVERSE:—Bust, with uncovered head. The right hand grasps the thunderbolt.[1]
REVERSE.—Caps and palms of the Dioscuri.
Monograms 8, 31, 86, 87. 'Ariana Antiqua,' No 6, p. 279.

5.—□ Copper. Plate xiv., figs. 9, 10, 11.
Similar devices.
These two classes of coins vary occasionally in the subordinate typical details,[2] and the Arian definition of the name is irregular in the general series, in the interchange of the dental and cerebral *d*, as the penultimate consonant.
Monograms, Nos. 8*a*, 22, 30 (ṛ), 49*a*, 87, 87*a*.

[1] [Major Cunningham supposes this to be the head of 'Jupiter Nicephorus.' 'Jour. As. Soc. Beng.,' vol. ix., p. 874.]
[2] [*Ex. Gr.*, 'Num. Chron.,' vii., pl. ii., fig. 21.]

XVIII. Amyntas.

1.—Didrachma. Much damaged. (Weight, 128 grs.)
Obverse:—Helmeted head, to the right.
Legend:—ΒΑΣΙΛΕΩΣ ΝΙΚΑΤΟΡΟΣ ΑΜΥΝΤΟΥ.
Reverse:—Thessalian Minerva, to the left.
Arian Legend:—*Mâhârajasa Jayadharasa Amitasa.*
British Museum. Monogram No. 20*a*.
'Num. Chron.,' xvi., plate p. 108, fig. 2.

2.—□ Copper. Plate xxxii., fig. 1.
Obverse:—Head of king, to the right.
Reverse:—Minerva armed, to the left.
Monogram No. 88. 'Ariana Antiqua,' pl. ii., fig. 14.

XIX. Archebius.

1.—Tetradrachma.
Obverse:—Bare head.
Legend:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΝΙΚΗΦΟΡΟΥ ΑΡΧΕΒΙΟΥ.
Reverse:—Jupiter standing to the front, with spear and thunderbolt.
Arian Legend:—*Mâhârajasa Dhramikasa Jayadharasa Arkhabiyasa.*
Monogram No. 89. Colonel Abbott.[1]

a).—Hemidrachma. Plate xxviii., fig. 1.
Similar types and legends.
'Ariana Antiqua,' pl. ii., fig. 8. Monogram No. 8*b*.

2.—Tetradrachma.
Obverse:—Helmeted head.
Reverse:—As No. 1.
Monogram No. 20*a*. Colonel Abbott.

3.—Hemidrachma.
Obverse:—Bust of the king with bare head, to the left, a javelin in the right hand, as in one of the common classes of Menander's coins (No. 2.)
Reverse:—Jove (Neptune?) as above.
Monograms, No. 8*a* with 90. 'Ariana Antiqua,' pl. xxi., fig. 10.

4.—◯ Copper.
Obverse:—Victory, to the right, extending a chaplet.
Reverse:—An owl. Monogram 89.
R. Rochette, 'Jour. des Sav.,' 1839, p. 104. 'Ariana Antiqua,' p. 280.

5.—□ Copper. Similar devices. British Museum monograms, Nos. 89 and 89*a*.
'Num. Chron.,' vol. xvi., pl. p. 108, fig. 3.

[1] [I regret to say that my available notes on the typical details of Colonel Abbott's coins are very imperfect. I was greatly pressed for time on the only opportunity I had of inspecting his rich and varied collection; and, at the moment, entertained no design of publishing the result of my scrutiny; hence my memoranda refer to doubtful and difficult readings, special coincidences of design, and monogrammatic data, rather than to the *die* specifications ordinarily demanded by exact numismatic science. Further, I have to note, that my compulsory haste denied me even a bare sight of the copper series of a cabinet whose silver specimens promised so much: and, indeed, whose contents in that metal, whether in regard to discretion of selection or perfection of preservation, are unequalled by any public or private collection I have hitherto examined.]

XX. MENANDER.

1.—Didrachma. (E. I. C. coin. Weight, 151·0 grs.)
OBVERSE:—Bare head of king, to the right.
LEGEND:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΜΕΝΑΝΔΡΟΥ.
REVERSE:—Thessalian Minerva, to the left.
ARIAN LEGEND:—*Mâhârajasa Tradatasa Menadrâsa.*
Monograms, Σ and 30. Mr. Brereton, monogram, 8*b*.
'Ariana Antiqua,' pl. iii., fig. 13.

a)—Hemidrachma. Plate iii., fig. 5. Same types. Monograms, 18*a*, 18 associated with 93 on the same field, 22*c*, 31, 46*a* repeated on the same coin, 79, 86 repeated, 86 with Γ, Ε, and Σ, severally associated on the same field, 91, 92, 93, 94, 95.
'Ariana Antiqua,' pl. iii., fig. 14.

2.—Didrachma (cast). British Museum.
OBVERSE:—Bare head of king, to the left; the right hand grasps a javelin.
REVERSE:—Minerva to the left. Monogram 27.

a)—Hemidrachma. Same types. Monograms, 8*b*, 22, 27, 31, 46, 46*a*, 86 with Σ.

b)—Hemidrachma. Pl. xiv., fig. 1. Similar devices, but Minerva faces to the right, and the legends are arranged in one continuous circular scroll.
Monograms, 27, 31*a*, 46.

3.—Didrachma.
OBVERSE:—Head of king with helmet, to the right.
REVERSE:—Minerva. Lady Headfort.

a)—Hemidrachma. Monograms, 8*b*, 22, 22*c*, 27, 31, 46*a* repeated, 86, with Σ, 91.
'Ariana Antiqua,' pl. iii., fig. 15.

4.—Hemidrachma.
OBVERSE:—Head of king, to the left, with helmet and javelin.
REVERSE:—Minerva. 'Ariana Antiqua,' pl. iv., fig. 2.

5.—Hemidrachma.
OBVERSE:—Helmeted head, as in No. 3.
REVERSE:—An owl. Monograms, 27, 31.

6.—□ Copper. Large coin. Weight, 550·5 grains.
OBVERSE:—Helmeted head of king, to the right.
REVERSE:—Horse, free. Monogram, No. 30 (?). Mr. Brereton.

7.—□ Copper. Weight, 316 grains.
OBVERSE:—Bull's head, to the front.
REVERSE:—Tripod.
Monograms, 8*a*; another coin (in weight, 228 grs.), 8*a*; a third, No. 31*a*, with an Arian *m* in the field. Mr. Brereton.

8.—□ Copper. Plate xxxii., fig. 8. Weight, 342 grains.
OBVERSE:—Bare head, to the right.
REVERSE:—A dolphin. Monogram 30, with Η on the field.
'Ariana Antiqua,' pl. iv., fig. 3.

9.—□ Copper.
OBVERSE:—Bare head, to the left, with javelin, as in No. 2.
REVERSE:—Minerva, to the right. Monograms, 27, 31, 71.
'Ariana Antiqua,' pl. iv., fig. 7.

10.—□ Copper. Plate xiv., fig. 3.
OBVERSE:—Helmeted head, to the right.
REVERSE:—Winged figure of Victory, to the right, with palm-branch and wreath. Monograms, 27, 31, 46, 71, 93.
'Ariana Antiqua,' pl. iv., figs. 5, 6.

a)—□ Copper.
REVERSE:—Victory, to the left.
Monograms, 31*a*, with B. Another coin has B alone.
'Ariana Antiqua,' pl. iv., fig. 4.
There are other subordinate varieties of these coins, see 'Ariana Antiqua,' p. 285.

11.—□ Copper. Plate xxxii., fig. 6.
OBVERSE:—Helmeted head, to the right.
REVERSE:—Owl. 'Ariana Antiqua,' pl. iv., fig. 8.

12.—□ Copper. Plate xxxii., fig. 5.
OBVERSE:—Helmeted head, to the right.
REVERSE:—Shield of Minerva. Monograms, M (?), 46, 46*a*.
'Ariana Antiqua,' pl. iv., fig. 12.

13.—□ Copper. Plate xxxii., fig. 9.
OBVERSE:—Boar's head.
REVERSE:—Palm branch. Monogram, H.
'Ariana Antiqua,' pl. iv., fig. 9.

14.—□ Copper. Plate xiv., fig. 2.
OBVERSE:—Elephant's head.
REVERSE:—Club of Hercules.
Monograms, 27, associated in the several instances with the isolated letters A Λ; 31, ditto, A Δ. Colonel Bush, Arian monogram, *San.*
'Ariana Antiqua,' pl. iv., fig. 10.

15.—□ Copper. Plate xxxii., fig. 7.
OBVERSE:—Wheel.
REVERSE:—Club. 'Ariana Antiqua,' pl. iv., fig. 11.

16.—□ Copper.
OBVERSE.—Minerva to the left, with a spear resting on her left arm—shield in front of the knee—right hand extended.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΜΕΝΑΝΔΡΟΥ.
REVERSE:—Indian lion, to the left.
ARIAN LEGEND:—*Mâhârajasa Dhramikasa Menandrasa.* British Museum.
Quoted also by Wilson, 'Ariana Antiqua,' p. 217, from an imperfect coin described by M. R. Rochette, 'Jour. des Sav.,' Dec. 1838, p. 751.

17.—□ Copper.
OBVERSE:—Elephant, to the left.
Legend imperfect, but exhibiting traces of the name of Menander:—
Βασιλεως Σωτηρος μενανδρου.
REVERSE:—An ankuṣ (or elephant-goad).
Arian Legend imperfect:—[*Mâhâra*]*jasa Trada*[*tasa*] . . . . .
Monogram, No. 96. Mr. Bayley.

XXI. STRATO.

1.—Didrachma. (Cast).
OBVERSE:—Helmeted head of the king, to the right.
LEGEND:—βασιλεωΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ στρΑΤΩΝΟΣ.
REVERSE:—Thessalian Minerva, to the left.
Arian Legend incomplete:— . . . . *Pratichasa Tradatasa Stratasa.*
Monogram, 20*a*. Capt. Hay

2.—Hemidrachma.
OBVERSE:—Bare head, to the right.
LEGEND:—ΒΑΣΙΛΕΩΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.
REVERSE:—Minerva.
ARIAN LEGEND:—*Mâhârajasa Pratichasa Tradatasa Stratasa.*
Two specimens. British Museum. Monogram, No. 8*a*.

3.—□ Copper.
OBVERSE:—Apollo, as in Apollodotus' coin, No. 7.
REVERSE:—Tripod.
E. I. H., monogram, No. 8*a*.

4.—□ Copper.
OBVERSE:—King's bust, with club resting on his right shoulder.
LEGEND:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.
REVERSE:—Victory.
ARIAN LEGEND:—*Mâhârajasa Tradatasa Stratasa.*
Monograms, No. 22*c* (?), 22*e*. Mr. Bayley.

5.—□ Copper.
OBVERSE:—Type as in No. 4.
LEGEND:—ΒΙΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΔΙΚΑΙΟΥ ΣΤΡΑΤΩΝΟΣ.
REVERSE:—Type as in No. 4.
ARIAN LEGEND:—*Mâhârajasa Tradatasa Dhramikasa Stratasa.*
Monogram No. 22*e*. British Musuem. Other monograms, Nos. 22 and 22*b*.

6.—◯ Copper.
OBVERSE:—Bare head of king to the right, as in the silver hemidrachmas.
LEGEND, imperfect:—ΒΑΣΙΛΕωσ επιφανουσ σωτηροσ ΣΤΡΑΤΩΝΟΣ.
REVERSE:—Victory with (palm branch? and) chaplet, to the right.
ARIAN LEGEND.—*Mâhârajasa Pradichasa (Tradata)sa Stratasa.*
Monogram 108*a*.? Colonel T. Bush.

XXI[a]. AGATHOCLEIA
(WIFE OF STRATO).

1.—□ Copper. Plate xxxii., fig. 2.
OBVERSE:—Female head, helmeted.
LEGEND:—ΒΑΣΙΛΙΣΣΑΣ ΘΕΟΤΡΟΠΟΥ ΑΓΑΘΟΚΛΕΙΑΣ.
REVERSE:—Hercules with club, seated.
ARIAN LEGEND:—*Mâhârajasa Tradatasa Dhramikasa Stratasa.*
Monogram No. 22*b*. Mr. Bayley.
'Ariana Antiqua,' pl. vi., fig. 10.

I notice in this place, irrespective of the order of time, a series of debased derivatives from the normal type of Strato's hemidrachmas (No. 2 *suprâ*), which are peculiarly identified with the original mintage, not only in obvious imitation, but in

the progressive degradation of certain associate pieces bearing that monarch's name, which have been found in company with the only considerable hoard of these coins that has as yet been discovered.[1]

The serial class is remarkable in that, while continuing the same standard devices as the prototype, it eventually lowers the title of *Mâhârâja*, on the reverse, into that of *Satrap*; and it is further interesting in the exemplification of the speedy obscuration of the Greek legends, while the Arian writing remains well-defined and intelligible, as in the parallel instance of the money of the Sáh kings, where the local Pálí appears in the highest perfection in the presence of the meaningless repetition of Greek outlines on the obverse. In its local aspect also, this particular hoard is instructive, as, although solitary specimens of these and kindred issues may have found their way to other parts of the country, yet the collection of so many successional coins, unmixed with foreign currencies, would seem to indicate an ordinary accumulation of every-day life, either made on the spot or gathered from the circulating medium of no remote locality.

Major Cunningham, in a paper in the 'Journal of the As. Soc. Beng.' (1854, p. 679), with persevering assiduity, endeavours to reconcile the degraded Greek legends with the indigenous inscriptions on the reverse, and essays to discover owners for the names—which read but vaguely even in their Arian form—amid the Hindú dynasties of Hustinápur and Dehli.[2]

Passing over the progressive steps of barbarization in the jumbled Greek legends of all those coins that bear the name of Strato on the reverse, and rejecting unconditionally the claim of Major Cunningham's ΡΟΣΑ ΣΤΩΝΟΣ to any separate identity, I come to the class of pieces which bear on their obverse variously the titles of ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ and ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ, followed by portions of a name or title which reads as PAZ and PAZIOBA. On the reverse this money exchanges the legend of *Mâhârajasa Tradatasa Stratasa* for *Chatrapasa apratichakrasa Ranjabalasa*.[3] Whether the PAZIOBA of the obverse legend be an imperfect attempt at a Greek rendering of the native name is of but little consequence, as we can hardly reconcile Ranjabala's humble titles on the reverse with the higher designation applied to Strato himself, or the more pompous ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ, assumed by that monarch's successors, which figure indifferently in contact with and contrast to the grade of *Satrap*, to whose dignities alone the former limits his claim. In brief, the coins would merely seem to exemplify an oft-recurring phase in Indian Imperialism, where the decline of the central power encourages, and at times necessitates, the effective assertion of independence by the local rulers, however much they may avoid or delay the overt act of positive disavowal of allegiance.

The monograms on the debased coins of Strato are entered under Nos. 97 to 99. Those on Ranjabala's money are reproduced as Nos. 100 to 104.[4]

[1] [Major Cunningham observes: 'The greatest number were procured at Mathura, on the Jumna, and were said to have been found in the ruins of the city, along with some rude hemidrachmas of Strato' ('Jour. As. Soc. Beng.,' vol. vii., 1854, p. 681). I do not know how many of these mixed pieces Major Cunningham obtained on this occasion, but my native coin-collector, who gleaned part of the remainder, brought me 84 coins, more than half of which number were Strato's.]

[2] [See Useful Tables *infrâ*. Table xix. *Râjapâla*.]

[3] [Major Cunningham makes it *Râjabâlasa*, but the better preserved coins give the suffix *n* in full distinctness. His translation of *Apratichakra*, as 'invincible with the the discus,' is satisfactory.]

[4] [No. 101 is interpreted by Major Cunningham as *Hasti* for *Hastinâpura*, the ancient Hindu capital on the Ganges above Meerut.]

XXII.—Hippostratus.

1.—Didrachma.

Obverse:—Bare head of king, to the right, with fillet.

Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΙΠΠΟΣΤΡΑΤΟΥ.

Reverse:—Standing figure of Demeter, with crested helmet, right hand extended, the left supports a cornucopia.

Arian Legend:—*Mâhârajasa Tradatasa Hipastratasa.*

Monogram, No. 85.

Mr. Bayley and B.M. 'Num. Chron.,' vol. xvi., pl. p. 108, fig. 5.

a).—Hemidrachma. Similar types. Monogram, No. 85. Captain Hay.

2.—Didrachma. (British Museum coin, weight 139 gr.)

Obverse:—Bare head of king, to the right, with fillet.

Legend:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΣΩΤΗΡΟΣ ΙΠΠΟΣΤΡΑΤΟΥ.

Reverse:—Helmeted figure on horseback, to the right; horse in motion.

Arian Legend:—*Mâhârajasa Tradatasa Mahâtasa Jayâtasa Hipastratasa.*

Monogram, No. 105.

Mr. Bayley, No. 105, with Arian *lo* on the field. Captain Hay, 105*a* with *lo*, and No. 106. M. N. (?) Col. Abbott, 38*a*. British Museum, No. 47*c*. 'Num. Chron.,' vol. xvi, pl. p. 108, fig. 4.

a).—Hemidrachma. Similar types. Monogram, 105*a*. Mr. Brereton.

3.—Didrachma. (British Museum coin; weight, 144·5 grains).

Obverse:—Device and legend as in No. 1.

Reverse:—Horseman, motionless. Legend as in No. 2.

Monogram, No. 105, with the several adjuncts of No. 106, and the detached Arian letters *lo* and *pri*. Mr. Bayley, British Museum, etc.

4.—□ Copper.

Obverse:—Apollo standing, to the right. Legend as in No. 1.

Reverse:—A tripod. Legend as in No. 1.

Monogram, 85. Mr. Bayley.

5.—□ Copper.

Obverse:—Jove enthroned. Legend as in No. 1.

Reverse:—Horse, standing, to the left.

Arian Legend:—*Mâhârajasa Tradatasa Jayatasa Hipastratasa.*

Cunningham, 'Jour. As. Soc. Beng.,' vol. xi., pl. fig. 9.

XXIII. Telephus.

1.—Major Cunningham has made public the only known coin of this king, ('Jour. As. Soc. Beng.,' vol. xi., p. 133), which he describes as follows:—

Obverse:—'An ancient giant, full front, with snaky legs, which curl upwards on each side.'

Legend:—ΒΑΣΙΛΕΩΣ ΕΥΕΡΓΕΤΟΥ ΤΗΛΕΦΟΥ.

Reverse:—'A draped male figure standing, to the left, his head crowned with rays, and holding in his right hand a spear; to the right, a clothed female figure, with a crescent on her head.'

Arian Legend:—*Mâhârajasa . . . . kramasa Taliphasa.*

Monogram, No. 107.

XXIV. HERMÆUS.

1.—Didrachma. Plate xviii., fig. 1. (Selected British Museum coins; weight, 140 and 144 grains).

OBVERSE:—Head of king, to the right.

LEGEND:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΕΡΜΑΙΟΥ.

REVERSE:—Jove enthroned, right hand extended.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Hermayasa.*

Monogram, E. I. C., Nos. 17*b*, 36, 108*b*.

'Ariana Antiqua,' pl. v., fig. 3.

British Museum monograms, 32*a*, 108, 108*a*, associated with 110. Mr. Brereton, 109. Colonel Bush. 108*c*.

a)—Hemidrachma. Similar types. Monograms, British Museum, 21, 33*b*, 48*c*, 90*a*, 111, 112. B. I. 113. Mr. Brereton, 22*b*. Captain Hay, 114. Mr. Freeling, 53*a*.

'Jour. des Sav.,' 1835, i. 13. 'Ariana Antiqua,' pl. v., fig. 3.

HERMÆUS AND CALLIOPE.

2.—Hemidrachma.

OBVERSE:—Male and female heads, to the right.

LEGEND:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΕΡΜΑΙΟΥ ΚΑΙ ΚΑΛΛΙΟΠΗΣ.

REVERSE:—Horseman, as in Antimachus' coins.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Hermayasa;* and at the bottom, in the reverse direction, *Kaliyapaya.*

'Ariana Antiqua,' pl. xxi., fig. 14. Capt. Robinson, Mr. Bayley, Mr. Brereton, etc., all have the same monogram, No. 108*a*.

3.—◯ Copper. Plate xviii., figs. 2, 3, 4. Identical in type and legends with No. 1.

'Ariana Antiqua,' pl. v., figs. 4, 5, 6.

Monograms, No. 115, with Bactrian letters *lo*, and No. 115*a*, with the several Bactrian letters classed under No. 116.

a)—◯ Copper. Small coins. Similar types.

4.—□ Copper. Plate xxviii., fig. 11.

OBVERSE:—Bust of king, with curiously arranged head dress.

LEGEND:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΕΡΜΑΙΟΥ.

REVERSE:—Horse standing to the right.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Hermayasa.*

Monograms, 31, 109.

'Ariana Antiqua,' pl. v., fig. 7.

a)—Variety. 'Ariana Antiqua,' pl. xxi., fig. 15. Head-dress as in Amyntas' coin, pl. xxxii., fig. 1, monogram 109.

Extra Monograms of Hermæus:—20*b*, 24*b*, 36*a*, 38, 108*b*, with Arian letters *k*, *s*; 115*a*, with elongated downstroke of *r* (or 115*b*), associated with the Bactrian letters *trâ*, *v*, *dh*, *sh*, and *n* (?); also 117 to 119 inclusive.

XXIV[a]. Su-Hermæus.

1.—⊙ Copper. Plate xviii., fig. 9; and pl. xxviii., fig. 10.
OBVERSE:—Head of king, to the right.
LEGEND, imperfect:—ΒΑΣΙΛΕΩΣ ΣΤΗΡΟΣ ΣΥ ΕΡΜΑΙΟΥ.
REVERSE:—Hercules standing with his club resting on the ground.
ARIAN LEGEND:—*Dhama Phidasa Kujula Kasasa Kushanayatugasa.*
'Ariana Antiqua,' pl. v., figs. 8, 9, etc.

These coins are usually deficient in monograms. In one case I notice the Bactrian combination No. 63 on the reverse field.
Major Cunningham conjectures these mintages to have formed a portion of the issues of Kozoula Kadphises (No. xxvi.), struck during the lifetime of Hermæus.—'Jour. As. Soc. Beng.,' 1854, p. 709.

XXV. Mauas.

1.—Didrachma. (Weight, 151·4 grains).
OBVERSE:—Male figure, to the front; right arm extended, the left supports a spear.
LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΜΑΥΟΥ.
REVERSE:—Victory, with chaplet, to the right.
ARIAN LEGEND:—*Rajadirajasa Mahatasa Moasa.*
Monogram, No. 38*b*.
British Museum, 38*b*. Capt. Robinson, No. 38*a*. Lady Sale's coin (weight, 143 grains), monogram, No. 89.

[a]—Hemidrachma. Similar types.
Capt. Robinson, monogram 38*a*. Capt. Hay, No. 64.

2.—Didrachma.
OBVERSE:—A biga, with horses at speed. The driver wears a helmet; the chief figure holds a spear, a nimbus surrounds his head.
REVERSE:—Jove enthroned, as in Hermæus' coins, with triple-pointed spear (trident?),
Monogram, No. 107*a*. Capt. Robinson.

3.—⊙ Copper. Plate xiii., fig. 4.
OBVERSE:—Elephant's head.
REVERSE:—Caduceus.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΑΥΟΥ.
Monogram, No. 89.
British Museum. 'Ariana Antiqua,' pl. viii., fig. 11.

4.—□ Copper (small coin).
OBVERSE:—Apollo, to the front, as in Apollodotus' coins: arrow in the right, and bow in the left hand.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΑΥΟΥ.
REVERSE:—Tripod.
ARIAN LEGEND:—*Mdhdrajasa Moasa.*
British Museum. Mr. Brereton.

5.—□ Copper.
OBVERSE:—Female figure, to the front, with spear; crescent above the head. Two six-pointed stars or constellations appear in the upper part of the field, one on each side of the figure.
LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΜΑΟΥ.
REVERSE:—Victory with chaplet, to the left.
ARIAN LEGEND:—*Rajadirajasa Mahatasa Moasa.*
Monogram, No. 120. British Museum, and less perfect coin B. I.

6.—□ Copper.
OBVERSE:—Jove enthroned, with small figure at the side.
REVERSE:—Female figure, as on the obverse of No. 5.
Monogram, No. 120. 'Ariana Antiqua,' p. 315.

Variety.
REVERSE:—Figure as above; but the crescent is strangely transformed, and the stars on the field are wanting.
Monogram 120. Mr. Brereton.

7.—○ Copper.[1]
OBVERSE:—Figure clothed in skins, with nimbus.
REVERSE:—Indian bull, to the left.
British Museum. Monogram, No. 89.
Monogram, No. 52. Mr. Bayley and Capt. Robinson.

8.—□ Copper. Plate xliii., fig. 11.
OBVERSE:—Male figure, with club and trident, flowing robes, etc.
Monogram, No. 121.
REVERSE:—Victory, with loose garments (similar to the figure on the obverse), and a varied style of chaplet.
'Ariana Antiqua,' pl. viii., fig. 10. Monogram, 122. B. I. Monogram, 123.

9.—□ Copper. Pl. xv., fig. 11.
OBVERSE:—Elephant.
REVERSE:—Seated figure.
Monogram, No. 115*b*. Mr. Frere.
'Jour. des Sav.,' 1839.

10.—□ Copper. Pl. xv., fig. 7.
OBVERSE:—Male figure, to the left, in flowing garments, holding a chaplet.
REVERSE:—Indian lion, to the right.
B.I. Monogram, 112*a*.

11.—○ Copper.
OBVERSE:—Hercules to the front, with club and lion-skin, the right hand rests upon the hip.
REVERSE:—Indian lion, to the left.
Monogram, No. 89. Mr. Brereton.

[1] [A coin of this type is engraved in Mr. H. T. Prinsep's 'Historical Results,' pl. v., fig. 1.]

12.—□ Copper.
OBVERSE:—Neptune, with trident, treading upon a prostrate figure.
REVERSE:—Figure surrounded with branches.
Monogrom, No. 120.
Colonel Nuthall. Mr. Brereton, and 'Ariana Antiqua,' p. 314.

13.—□ Copper.
OBVERSE:—Neptune, with the right foot placed on a prostrate figure as in No. 12; the left hand rests on a trident, while the right is raised in the act of hurling the thunderbolt.
REVERSE:—As in No. 12. Monogram, illegible. Lady Elliot.

14.—□ Copper.
OBVERSE:—As No. 13, except that Neptune holds a palm-branch in the left hand in lieu of the trident.
REVERSE:—As No 13.
Monogram, a modification of No. 115*b*. Mr. Bayley.

15.—□ Copper.
OBVERSE:—Horseman, with a fold of his dress flying loose behind him.
Monogram, illegible.
REVERSE:—Helmeted figure, in loose garments, moving to the right, holding a garland in the right and a spear in the left hand.
Monogram, *mi*. Mr. Bayley.

16.—□ Copper.
OBVERSE:—Horseman, with spear.
REVERSE:—Winged Victory, to the left, holding a chaplet in the right hand.
Monogram, No. 115*b*. Mr. Bayley.

17.—□ Copper..
OBVERSE:—Standing male figure, to the front; right arm uplifted, in the left a club.
Monogram, No. 115*b*, with an Arian *ti*.
REVERSE:—Indian bull, to the right.
Monogram, No. 115*a*. Mr. Bayley.
A second coin, in the possession of Mr. H. Brereton, gives the name clearly as MAYOY.

18.—□ Copper.
OBVERSE:—Elephant.
REVERSE:—Indian bull. Mr. Brereton. Capt. Hay.

XXVI. KADPHISES.

1.—Copper. Plate xxviii., fig. 12.
OBVERSE:—Head as in the Su-Hermæus' coins.
LEGEND:—KOPΣHAo [Variety, KOPoNAo] KOZOYAO KAΔΦIZOY.
REVERSE:—Hercules as above.
ARIAN LEGEND:—*Dhama Phidasa Kujula Kasasa Kushanayatugasa.*[1]
Monograms, Arian *dh* with *r*. 'Ariana Antiqua,' pl. xi., figs. 10, 11.

[1] [Major Cunningham, in the 'Jour. As. Soc. Beng.,' vol. vii. of 1854, p. 709, transcribes this legend as follows:—*Kujula Kasasa Kushanga Yathagasa Dhamapidasa.*

XXVI[a]. Kozola Kadaphes.

1.—⊙ Copper small coin. Plate xviii., figs. 13, 14, 15; and pl. xxviii., figs. 13, 14.
Obverse:—Youthful head.
Legend:—KoZoΛA KAΔAΦEL XOPAN ⊏T ZAΘoT.
Reverse:—A Scythic figure.
Arian Legend:—*Khashanasa Yauasa Kuyula* [*Kuyanla*?] *Kaphsasa Sachha dhani phidasa.*
Monogram, No. 124. Some specimens add the Bactrian letter inserted in the plate under No. 125.
'Ariana Antiqua,' pl. xi., fig. 14.

XXVI[b]. Kodes.

1.—Hemidrachma. Plate xiii., figs. 11, 12, 13.
Obverse:—Barbarously executed head of king.
Legend:—KωΔoT.
Reverse:—Erect figure, with flames issuing from the shoulders; the right hand rests upon a spear.
Legend:—PAHΘPoT MAKAP.
'Jour. des Sav.,' 1834, pl. fig. 8; 'Ariana Antiqua,' pl. ix., figs. 1, 2, 3, 5.

2.—Hemidrachma. Plate xxxii., figs. 16, 17, 18.
Obverse:—Head as above.
Reverse:—Horse's head. KωΔ.
'Jour. des Sav.,' 1834, pl. fig. 9. 'Ariana Antiqua,' pl. ix., figs. 4, 6, 7.

XXVII. Vonones (and Azas).

Class A.

I understand that Major Cunningham has discovered coins with the above combination of names. The specimens are engraved in his unpublished plates, but I do not consider myself authorized to quote them in any detail beyond this notice of the interesting historical fact they suffice to substantiate.

Vonones (and Spalahores).

Class B.

1.—Didrachma.
Obverse:—Azas' horseman with spear at the charge, to the right.
Legend:—BAΣIΛEΩΣ BAΣIΛEΩN MEГAΛoT oNΩNoT.
Reverse:—Jupiter with spear and bolts.
Arian Legend:—*Mdhdraja Bhrata Dhramikasa Spalahorasa.*
Monogram, No. 53*b*. Capt. Robinson.

a)—Hemidrachma. Pl. xv., fig. 5. Similar types and legends.
Monograms, 53*b*, 126. 'Ariana Antiqua,' pl. viii., fig. 8.

The nearly parallel epigraph on Kozola Kadaphes' money is transliterated and translated thus—*Kushanga Yathaasa Kujula Kaphsasa Sachha dharmapidasa*, 'Coin of the king of the Khushang Kujala Kaphsa, the crown of the true Dharma."]

2.—□ Copper. Plate xv., fig. 10.
OBVERSE:—Hercules, with club and lion's skin, right hand raised to the head.
LEGEND:—BAΣIΛEΩΣ BAΣIΛEΩN MEΓAΛoY oNΩNoY.
REVERSE:—Minerva, to the left, armed with shield and spear, right arm extended.
ARIAN LEGEND:—*Mâhârâja Bhrata Dhramikasa Spalahorasa.*
Monograms, No. 126. B.I. 126*a*.
'Jour. des Sav.,' 1835, pl. ii., fig. 20. 'Ariana Antiqua,' pl. viii., fig. 9.

3.—□ Copper.
OBVERSE:—As in No. 2.
REVERSE.—Device as in No. 2.
ARIAN LEGEND:—*Spahora Bhrata Dhramikasa Spalahorasa.*
Monogram, 126. Mr. Brereton.

VONONES (AND SPALAGADAMES, SON OF SPALAHORES.

CLASS C.

1.—Hemidrachma.
OBVERSE:—Azas' horseman, with spear.
LEGEND:—BAΣIΛEΩΣ BAΣIΛEΩN MEΓAΛoY oNΩNoY.
REVERSE:—Jupiter, with spear and bolts.
ARIAN LEGEND:—*Spalahora Putrâsa Dhramikasa Spalagadamasa.*
Monograms, British Museum coin, 127. Col. Sykes, 132*a*. Mr. Brereton, 48*c*, 128, 128*a*.

2.—□ Copper.
OBVERSE:—Hercules, as in No. 2, class B.
LEGEND:—BAΣIΛEΩΣ BAΣIΛEΩN μεγαλoY oNΩNoY.
REVERSE:—
ARIAN LEGEND:—*Spalhora Putrâsa Dhramiasa (Spala)gadamasa.*
Monogram, 128. Mr. Brereton.

SPALIRISES AND AZAS.

CLASS D.

1.—Didrachma.
OBVERSE:—Azas' horseman.
LEGEND:—BAϹIΛEWϹ MEΓAΛoY PΠAΛIPIϹoY.
REVERSE:—Jove, as above.
ARIAN LEGEND:—*Mâhârajasa Mahâtakasa Ayasa.*
Monogram, 130. Mr. Frere.

a)—Hemidrachma. Similar types.
Monogram, 129, with Bactrian letters, *si*. Mr. Brereton.

2.—◯ Copper.
OBVERSE:—Azas' horseman.
LEGEND:—BAϹIΛEWϹ MEΓAΛoY PΠAΛIPIϹoY.
REVERSE:—A bow and arrow.
ARIAN LEGEND:—*Mâhârajasa Mahâtakasa Ayasa.*
Monogram, 127*b*. Mr. Bayley.

Class *Ca*.

XXVIII. Spalyrios or Spalagadames (alone).

THE BROTHER OF THE KING.

1.—□ Copper. Pl. xv., fig. 9; pl. xxviii., fig. 6.

Obverse:—Azas' horseman.

Legend:—ϹΗΑΛΥΡΙΟϹ ΔΙΚΑΙΟΥ ΑΔΕΛΦΟΥ ΤΟΥ ΒΑϹΙΛΕΩϹ.

Reverse:—Hercules seated on a rock.

Arian Legend:—*Spalahora putrâsa Dhramiasa Spalagadamasa.*

Monograms, Nos. 48*c*, 127*c*, 128. 'Ariana Antiqua,' pl. viii., fig. 13.

Class *Da*.

XXIX. Spalirises (alone).

1.—Hemidrachma.

Obverse:—Azas' horseman; spear at the charge.

Legend imperfect:—ΒΑϹΙΛΕΩΝ ΒΑ . . . . . ΡΠΑΛΙΡΙϹου.

Reverse:—Neptune to the front, with trident and bolts.

Arian Legend:—*Mâhârajasa . . . . . Spalirisasa.*

Monogram, 48*c*. Capt. Hay.

2.—□ Copper. Plate xv., fig. 6; pl. xxviii., fig. 7.

Obverse:—Female figure, to the left.

Legend:—ΒΑϹΙΛΕΩΝ ΒΑϹΙΛΕΩϹ ΜΕΓΑΛΟΥ ΡΠΑΛΙΡΙϹΟΥ.

Reverse:—Jove enthroned.

Arian Legend:—*Mâhârajasa Mâhâtakasa Spalirisasa.*

Monograms, Nos. 131, 131*a*, and 131*b*.

'Ariana Antiqua, pl. viii., fig. 12.

XXX. Azas.

1.—Didrachma.

Obverse:—The standard Azas' type of horseman, to the right; the spear point slightly depressed.

Legend:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΟΥ.

Reverse:—Female figure, with palm-branch in the left, and a four-pointed object in the right hand, somewhat after the nature of the Scythian monograms, No. 169, etc.

Arian Legend:—*Mâhârajasa Rajarajasa Mahatasa Ayasa.*

Monogram, Captain Robinson, 132, with Arian letters, *mi*.

'Ariana Antiqua,' pl. vi., fig. 12. 'Jour. des Sav.,' 1835, ii., 16, monogram, 133 with *san*.

a).—Hemidrachmas.

Monograms, No. 133, with Arian letters *bh* and *dh*; No. 133, with the word *san*; No. 38*a*, with severally 53*b* and an Arian *t*; No. 38*a*, with a Greek A and an Arian *t*; No. 38*a*, with an Arian *t* alone; No. 134, with an Arian *si*; No. 134, with *dh* and *mi*.

'Ariana Antiqua,' pl. vi., fig. 18.

2.—Didrachma.

Obverse:—Horseman, as above.

Reverse:—Minerva Promachos, to the left.

Monograms 85; 85, with Arian *s* on obverse; 85 simple with 132; 133, with the Arian word *san*, and No. 63*a*.

a).—Hemidrachma.
Monograms, British Museum, 85; Captain Robinson, 85 simple with 132.

3.—Didrachma.
OBVERSE:—Horseman, as above.
REVERSE:—Jupiter, with spear and bolts.
Monograms, Capt. Robinson, 132*a* with *bh*. British Museum, 132*a* with *dh*.

4.—Variety of No. 3. Didrachma.
OBVERSE:—Horseman, as above, with the Arian letters *Pri* below the horse.
REVERSE:—Jove, with the spear or sceptre, triple-pointed, the points diverging from one centre; nimbus encircles the head.
Monogram, No. 85.

5.—Hemidrachma.
OBVERSE:—As above.
Monogram, Arian letters *li*.
REVERSE:—Jove, with triple-pointed sceptre; but the right hand is elevated in the act of throwing the thunderbolt.
Monograms, No. 85*a*, with an Arian *a*. Captain Robinson.

a).—Hemidrachma. Variant.
OBVERSE:—As above.
REVERSE:—Jupiter rayed, to the front, leaning on a spear; the bolts are held in the right hand low down.
Monogram, No. 135. Captain Robinson.

6.—Didrachma.
OBVERSE:—The Azas' horseman, to the right, without the spear; the right hand of the figure is extended above the horse's head.
Monogram, an Arian *s*.
REVERSE:—Minerva, to the right, helmeted and armed with buckler; right hand extended.
Monograms, Captain Robinson, 52, with *a*. Lady Elliot, double monogram, 138 and 139, without the Bactrian adjunct of the latter. Mr. Carne's collection, monogram, No. 141, with the several Arian letters *san*, *si*, *pi*, or *dh*.

(6).—Variety.
OBVERSE:—Horseman, as above, with whip in the right hand and bow behind the saddle.
REVERSE:—As in No. 6.
Monogram, 85 simple, with 133*b*.

a).—Hemidrachma.
Monogram 85. Mr. Bayley.

b).—Variety.
REVERSE:—Minerva, to the left.
Monograms, obverse, Arian *so*; reverse, 85. Mr. Brereton.

7.—Didrachma. Plate xvii., fig. 17 (?).

OBVERSE:—Horseman, as above, with whip in the right hand, bow at the back of the saddle.

REVERSE:—Standing figure, with spear, holding a small statue of Victory.

'Ariana Antiqua,' pl. vi., figs. 15, 16 (?), 17.

British Museum, monograms, 38*a* with 53, and Arian letters *t*, *bu*, *dh*, etc.; others, with *t*, omit No. 53. B.I., monogram, obverse, Arian *ji*; reverse, 134*a* associated with 53*b* and 63; a second, reverse, No. 42 with 136, and an Arian *dh*. Mr. Brereton, obverse, monogram, *san*; reverse, as in the first cited B.I. coin.

a).—Hemidrachma.

Monograms, No. 137, with *san*; a second; No. 138, with *dh* and *s*. Lady Elliot. Mr. Brereton, 38*a* with Arian *t*; a second, obverse, Arian *s*; reverse, 38*a* with 139.

8.—Didrachma. Plate xvii., fig. 15.

OBVERSE:—Horseman, as above.

Monogram, Arian *ti*.

REVERSE:—Minerva, with spear, to the right; bare head, and right arm extended.

Monogram, 85 simple with 133*a*. B.I., obverse, monogram, Arian *ti*; reverse, 85*b* with 133*b*.

'Ariana Antiqua,' pl. vi., fig. 13.

(8).—Variety. Billon.

REVERSE:—Similar figure, with triple-pointed spear.

Monogram, Arian *si* and 134*b*.

9.—Didrachma. Billon. Plate xvii., fig. 16.

OBVERSE:—As above.

REVERSE:—Neptune, with trident, to the front.

Monogram, No. 140, with *si*.

'Ariana Antiqua,' pl. vi., fig. 14.

10.—Hemidrachma. Plate xvii., fig. 18.

OBVERSE:—Horseman, as above, with bow and whip.

REVERSE:—Minerva, to the front, armed with spear and shield, the right arm upraised.

Monograms 135*a*, with *ssh*; 135*b* and Arian monogram 142, *sa shi ?* 135*b* with 39*a*. Another: obverse, monogram *a*; reverse, 140*a*, with an indistinct symbol like 132. Miscellaneous: obverse, mint-marks Arian letters *s*, *l*, *g*, and *sd*.

'Ariana Antiqua,' pl. vi., fig. 19.

11.—Drachma.

OBVERSE:—King, standing, to the left; right hand extended, and sloped spear on his left shoulder.

REVERSE:—Winged figure of Victory, to the right, holding out a chaplet.

Monogram, No. 64.

10.—□ Copper. Plate xvii., fig. 14.

OBVERSE:—Neptune, treading on a prostrate figure. Legend as above.

REVERSE:—Female figure, surrounded by branches. Legend as above.

Monogram, No. 64. 'Ariana Antiqua,' pl. vii., fig. 5.

Mr. Brereton has a superstruck piece of this class, offering the peculiarity in that the obverse legend exhibits portions of the epigraph of two distinct dies: it may be represented in its present state thus—ΣΩΤΗΡΟΣ βασιΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΟΥ.[1]

11.—□ Copper.
OBVERSE:—King, riding on a Bactrian camel.
REVERSE:—Thibetan yák (or long-haired bull).
'Ariana Antiqua,' pl. vii., fig. 6.

12.—□ Copper. Plate xvi., fig. 9.
OBVERSE:—King on horseback, with spear sloped.
REVERSE:—Indian bull, to the right.
Monograms, No. 85; 85 simple, with *t*, and the four variants classed under No. 143. Another: obverse, *san*; reverse, 134 with *si*.
'Ariana Antiqua,' pl. vii., fig. 12.

13.—□ Copper. Plate xv., fig. 8.
OBVERSE:—Hercules, to the front, with chaplet upraised in his right hand, and club in the left, after the manner of the reverse devices of Demetrius.
Monogram, 53*b*.
REVERSE:—Horse, free, to the right.
Monogram, *mi*. 'Ariana Antiqua,' pl. vii., fig. 7.

14.—○ Copper. Plate xvi., figs. 4, 5.
OBVERSE.—Elephant, to the right.
REVERSE:—Indian bull, to the right.
Monograms, Nos. 52 with Arian *a*; 85; 85 simple with 142*a*; 85 simple with 132.
'Ariana Antiqua,' pl. vii., fig. 10.

15.—○ Copper. Plate xvi., figs. 1, 2, 3.
OBVERSE.—Humped bull, to the right.
REVERSE:—Indian lion, to the right.
ARIAN LEGEND:—*Mahárajasa Rajadirajasa Mahatasa Ayasa.*
Monograms, 132 with 145*a*, 135*a* with 39*a*, 135*b* with 39*a*, 143*b* with 39*a*, 144 with 138, 145 with 138, 145 with 146, 135*b* with 142, 85*b* with 133, 134*b* with *si*.
'Ariana Antiqua,' pl. vii., fig. 8.

a)—Small coins. Similar types. 'Ariana Antiqua,' pl. vii., fig. 9.

b)—□ (?) 'Ariana Antiqua,' pl. vii., fig. 3. Monogram, *a*. Rev. monogram, *pr*.

16.—○ Copper. Plate xvi., fig. 10.
OBVERSE:—Demeter, seated on a throne.
REVERSE:—Hermes, standing.
Arian legend as in No. 1.
Most common monogram, No. 135*b* associated with 142.
'Ariana Antiqua,' pl. vii., fig. 12.

[1] [Some months ago (1857) Mr. Bayley read an interesting paper, on the subject of the superstruck coins of Azes, at one of the meetings of the Numismatic Society.]

17.—◯ Copper. Plate xvi., fig. 12.
OBVERSE:—Figure, seated cross-legged.
REVERSE:—Hermes, standing.
ARIAN LEGEND, as in No. 15.
Monograms, the combinations entered in plate xi.*c* from No. 147 to 153.
'Ariana Antiqua,' pl. vii., figs. 13, 14.

a)—Small coins, ditto. 'Ariana Antiqua,' pl. vii., fig. 15.

18.—◯ Copper.
OBVERSE:—Female figure, clothed in Indian garments, standing to the front; the right arm is raised towards the head, and the left hand rests upon the hip.
REVERSE:—Humped bull, to the right.
Mr. Brereton, monogram 154. Mr. Bayley, monograms indistinct.

19.—◯ Copper.
OBVERSE:—A lion, sejant.
LEGEND, blundered and unintelligible.
REVERSE:—Rude figure of Demeter, seated.
ARIAN LEGEND:—*Mâhârajasa . . . . . Ayasa.*
Monogram, No. 31*a*, with *ti*. Mr. Bayley.

20.—◯ Copper. Minute coin. Types similar to No. 7.
Monograms, Obv. No. 155, and *mi*. Rev. No. 38*a* and *san*. Mr. Bayley.

21.—◯ Copper. Types similar to □ Copper, No. 12.
Monogram 85. Mr. Brereton.

22.—□ Copper.
OBVERSE:—King on horseback, with the right hand extended.
Monogram 124*a*.
REVERSE:—Indian lion to the right.
ARIAN LEGEND, imperfect:—*Mâhârajasa Mahatasa . . . . Ayasa.*
Monogram indistinct. Col. T. Bush.

23.—◯ Copper.
OBVERSE:—Azas' horseman with whip and bow.
Monogram, 157.
REVERSE:—Minerva, to the right; with sloped spear and right hand extended.
ARIAN LEGEND, as in No. 15.
Monograms, group 158.

24.—◯ Copper. Plate xvii., fig. 22.
OBVERSE:—Horseman, with right hand raised.
Monogram 124*a*.
REVERSE:—Demeter, standing, to the front; right arm extended, the left supports the cornucopia.
ARIAN LEGEND:—*Mâhârajasa Mahatasa Dhramikasa Rajadirajasa Ayasa.*
Monograms, No. 156, 156 with *dh*, 156*a*, 156*b*, 156*c*, with variants of miscellaneous Bactrian letters on the field.

25.—Plate ii., figs. 11, 12.
OBVERSE:—Indian lion, to the right.
REVERSE:—Demeter, standing, to the left.
ARIAN LEGEND:—*Mâhârajasa Rajatirajasa Mahatasa Ayasa.*
'Jour. As. Soc. Beng.,' vol. ix., p. 876.

SUB-AZAS (ASPAVARMA).

1.—Ⓒ Copper.
OBVERSE:—Azas' horseman, with right hand holding a whip.
LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΟΥ.
Monogram, No. 157 (*Agaj?*).
REVERSE:—Minerva, helmeted, with spear and shield, to the right; the right hand supports a small figure of Victory.
ARIAN LEGEND:[1]—*Indra Varma Putrâsa Aspavarmasa Strategasa Jayatasa* (General Aspavarma, son of Indra Varma, the victorious).
Monograms, No. 159, with 132, and the several Arian letters entered in the plate under No. 160.

As this catalogue does not profess to follow any authoritative serial distribution of the monarchs comprehended in the general list, I insert in this place, as most suitable, in obedience to typical order, certain obvious derivatives from the standard devices of Azas' mintages, which bear exclusively the names and titles of Satraps who may be supposed to have succeeded to the possession of local divisions of his once extensive dominions, but who refrained from arrogating to themselves the style and dignity of absolute monarchy.

ZEIONISAS.

1.—Didrachma. Plate xxviii., fig. 5.
OBVERSE:—Azas' horseman, with right hand extended, and bow at the back of the saddle.
LEGEND illegible. Monogram 159.
REVERSE:—King, standing, to the front; supported by two figures in the act of placing a chaplet on his head.
ARIAN LEGEND, imperfect at the bottom:—*Jihaniasa.*
Monogram 161.
'Jour. des Sav.,' 1839, p. 102. 'Ariana Antiqua,' pl. viii., fig, 17. Cunningham, 'Jour As. Soc., Beng.,' 1854, pl. xxxv., fig. 1.

2.—Hemidrachma. Unique.
OBVERSE:—Horseman as above.
LEGEND, corrupt:—ΟΝΝΙΙΑΙΥ ΥΙΟΥ ϹΑΤΡΑΠ ΖΕΙϢΝΙϹΟΥ.
Monogram 159.
REVERSE:—Standing figure of the king receiving a chaplet from Demeter?
ARIAN LEGEND:—*Manigulasa Chatrapasa Putrasa, Chatrapasa Jihaniasa.*
Monogram, No. 162.
Mr. Bayley. See also Cunningham, *loc. cit.*, pl. xxxv., fig. 2.

[1] [Cunningham, 'Jour. As. Soc. Beng.,' 1854, p. 696. *Strategas* is identified with the Greek Στρατηγος.]

3.—◯ Copper.

OBVERSE:—Indian bull, to the right.

LEGEND, corrupt and imperfect:—ΤΙ:ΛΙΤ ΤΙΤ ⊏ΑΤΡΑΠ.

Monogram, No. 159, with *san*.

ARIAN LEGEND:— . . . *gula Putrasa Chatrapasa* JIHANAYASA.

Monogram 163.

British Museum, two coins, from Major Cunningham's collection.

4.—□ Copper. Unique. Plate xlii., fig. 8.

OBVERSE:—Elephant.

LEGEND, corrupt and imperfect:—ΛΗΙΖΙΟΛΔΙ . . . . . ΖΣΙШΝΙ⊏.

Monogram, ק.

REVERSE:—Bull, to the left.

ARIAN LEGEND:—*Mani* . . . . . (Ji)*huneasa*.

Monogram as in the plate. Col. T. Bush.

5.—□ Copper.

OBVERSE:—Azas' horseman.

LEGEND, imperfect. Combination obtained from six specimens gives no more satisfactory result than the following:—ΓΑΤΟΥ ΤΟΥ ΧΑΡΑΝШ⊏ Α - ΕΙ⊏Α. Monogram indeterminate.

REVERSE:—*Sinha*, or Indian lion, to the right.

ARIAN LEGEND, likewise imperfect and incomplete:—*Chatrapasa Bhrata Daophasa Akasa Putrasa*.

Monograms, *pra*, X, etc.

'Ariana Antiqua,' pl. viii., fig. 2; and Cunningham, 'Jour. As. Soc. Beng.,' 1854, p. 695.

XXXI. AZILISAS.

1.—Didrachma. Plate xvii., fig. 27.

OBVERSE:—Azas' horseman, with spear.

LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΙΛΙΣΟΥ.

Monogram, *ti*.

REVERSE:—Figure, to the left, holding the four-pointed object in the right, and palm-branch in the left hand.

ARIAN LEGEND:—*Mâhârajasa Rajarajasa Mahatasa Ayileshasa*.

Monograms, British Museum, 133 with *san* and *bh*; ditto, 134 with *si*.

British Museum monogram, Σ with *si* and *g*. Capt. Robinson, monogram 134 with *si* and *s*. B. I. Miscellaneous Arian letters, *san*, *si*, *bh*, *dh*, with *ti*, and A with *san*. 'Ariana Antiqua,' pl. viii., fig. 5.

a)—Hemidrachma. Similar types. British Museum monogram, 132*a*, with *i*. Capt. Robinson, monogram Σ, with an Arian *h*.

2.—Didrachma.

OBVERSE as above, with Arian letter *s* in the field.

REVERSE:—Female figure, to the left, with chaplet and palm-branch.

Monogram, No. 77. 'Ariana Antiqua,' pl. viii., fig. 6.

3.—Didrachma. (145 grs.)
OBVERSE:—Azas' horseman, to the right, with whip and the bow fixed behind the saddle.
Monogram, No. 137.
REVERSE:—Dioscuri, standing to the front, leaning on their spears.
ARIAN LEGEND:—*Mâhârajasa Rajadirajasa Mahatasa Ayilishasa.*
Mr. Bayley. Col. Nuthall, Obv. monogram, 137 with *b*, and Rev. 164.

4.—Didrachma. (142 grs.)
OBVERSE as No. 3.
Monogram, 137*a*.
REVERSE:—Single figure, bearded, clothed in skins, to the front; the right hand grasps a spear, the left rests upon the sword hilt.
Monogram, No. 165. Mr. Bayley. Mr. C. M'Leod.

5.—□ Copper.
OBVERSE:—Standing figure, to the front (indistinct), with right arm extended, and mantle on the left.
Monogram, 30*a*.
REVERSE:—Lion, as in Azas' coins.
Monogram, No. 166. A second coin has *mi* (?)
Mr. Bayley. Capt. Robinson.

6.—□ Copper.
OBVERSE:—Azas' horseman, with spear sloped downwards.
REVERSE:—Bull, to the left. Arian legend as in No. 1.
British Museum monogram, 132 with *mi*, and traces of monogram 125*a*.

a) —Plate xvii., fig. 28.
REVERSE:—Bull, to the right.

7.—□ Copper.
OBVERSE:—Azas' horseman.
REVERSE:—Elephant.
ARIAN LEGEND:—*Mâhârajasa Mahatasa Ayilishasa.*
Monogram, variety of No. 124, with *si*.
'Ariana Antiqua,' pl. viii., fig. 7.

8.—□ Copper.
OBVERSE:—Horseman.
REVERSE:—Hercules, seated, with club, and as in Spalyrios' coins. (C *a*.)
ARIAN LEGEND, as in No. 7.
Monogram, No. 134. Mr. Bayley.
And a second piece, 167. Ordinary monogram, No. 134, with Arian *s*, *si*, or *ti*.

9.—□ Copper.
OBVERSE:—Standing figure, to the right, with the right arm extended horizontally, and holding a chaplet.
REVERSE:—Figure in short tunic, with loose veil-like garments around the head, etc.
ARIAN LEGEND, imperfect:— . . . *jasa Mahatasa Ayilishasa.*
Mr. Bayley.

XXXII. Soter Megas.

1.—○ Copper.

Obverse:—Bust of king, with crested helmet, to the left; the right hand holds an arrow.

Monogram, No. 168, with the Arian letters *ti*, in front of the profile.

Reverse:—Azas' type of horseman, elevating a small object like a cross.

Legend:—BAϹIΛEV BAϹIΛEVωN ϹωTHP MEГAϹ.

Monogram, No. 168. Mr. Bayley.

'Ariana Antiqua,' pl. ix., figs. 8, 10.

2.—○ Copper. Plate xvii., fig. 26.

Obverse:—Bust of king, with rayed head; the right hand holds either a javelin with pennons, or a simple dart.

Monogram, No. 168.

Reverse:—As above.

Monogram, No. 168. 'Ariana Antiqua,' pl. ix., figs. 11 to 19.

There are numerous subordinate varieties of this type of coin, which it is needless to particularize in this place. But I may notice that the degraded Greek sigmas, which have heretofore usually been rendered by a square Ϲ, are, in these mintages, indifferently interchanged with the equally debased C on the different specimens.

3.—○ Copper. Plate xvii., fig. 23.

Obverse:—King on horseback, to the right.

Legend:—BACIAEV BACIΛEVωN CωTHP MEГAC.

Reverse:—A male figure, with flat helmet and fillet, casting incense upon a small altar.

Arian Legend:—*Máhárajasa Rajadirajasa Mahatasa Tradatasa.*

Monogram, *ti*. 'Ariana Antiqua,' pl. ix., figs. 20, 21, 22.

4.—○ Copper.

Obverse:—Head, with fillet, to the right.

Monogram, No. 168.

Reverse:—Standing figure, to the left, holding a staff or spear in the left hand, and what may possibly be intended for the thunderbolt in the right.

Greek Legend (imperfect). Mr. Bayley.

XXXIIa. Kadphises.

1.—Gold. Unique.

Obverse:—King, seated after the Oriental fashion (cross-legged) on clouds. He holds a club in his hand, and small flames ascend from his shoulders; he wears a Scythic cap surmounted by a single-centred trident.

Legend:—BACIAEVC ooHMo KADΦICHC.

Monogram, 169.

Reverse:—Siva and his bull (Nandi); flames rise from the divinity's head; he holds a trident in his right hand.

Arian Legend:—*Máhárajasa Rajadirajasa sarvaloga Imastasa Mahimastasa hapinasasa.*

Monogram, 159. Captain Robinson.

2.—Gold.

OBVERSE:—King, seated on an Eastern throne, with a flower in his right hand. Legend and monogram as above.

REVERSE:—Device as No. 1.

Monogram, ditto.

'Jour. des Sav.,' 1834, pl. fig. 7. 'Ariana Antiqua,' pl. x., fig. 5, and pl. xxi., fig. 17.

I do not propose to enter into any detail of the coins of Kadphises in this place, as they scarcely belong to the Bactrian series. It will be sufficient to refer to the types already figured and described by Prinsep,[1] and the additional specimens engraved in the 'Ariana Antiqua.'[2] It is to be noted that these and other Indo-Scythian coins are known only in gold and copper, the single supposed silver specimen in the E.I.H.[3] having proved to be of copper plated over!

XXXIII. GONDOPHARES.[4]

1.—○ Copper. Plate xliii., fig. 15.

OBVERSE:—Azas' horseman, to the right.

LEGEND:—BACIΛEωC BACIΛEωN ΓoNΔoΦAPoT.

Monogram, No. 170.

REVERSE:—Figure, with trident.

ARIAN LEGEND:—*Mdhdraja Rajaraja Mahatasa Gadapharasa.*[5]

British Museum coin. Monogram, No. 171.

'Ariana Antiqua' (billon coin), pl. v., fig. 16.

[1] [Pl. viii., fig. 4; pl. xxii., figs. 1, 2, 3.]

[2] ['Ariana Antiqua,' pl. x., figs. 7 to 21.]

[3] ['Ariana Antiqua,' pl. xi., fig. 9.]

[4] [An enquiry of considerable interest has been raised with reference to the name preserved on these coins, so long veiled from European intelligence, in virtue of the almost literal identity it bears to the designation of the king mentioned, in certain old church legends, as the ruling potentate of India at the period of the mission of St. Thomas the Apostle. The coincidence in the appellation is certainly remarkable, though there is a defect in the primary authority for the statement, a difficulty in regard to the correspondence of the site of the kingdom, and a doubt as to the needful accordance of the epochs of the legendary and the numismatically-certified monarchs, the latter of whom seems to belong to a date prior to our era; but, for the reconcilement of this last obstacle, there is a fairly open margin afforded by the successional coins, which in themselves suggest the question as to whether the name of Gondophares was not posthumously elevated into the rank of a dynastic title. The following heads of sentences will indicate the leading combinations deposed to by the 'Legenda Aurea,' p. 33:—'Thomas apostolus cum esset apud Cæsaream, apparuit ei dominus dicens: rex Indiæ Gundoferus, etc., p. 35. Post hæc autem apostolus et Abbanes ad regem Indiæ pervenerunt . . . Gad frater regis, etc., p. 37. Post hoc autem in superiorem Indiam abiit'.—'Jacobi a Voragine Legenda Aurea.' Dresden, 1846. *Cf.* also 'Lombardica Historia' (1490), Kercher; pp. 122 and 91 severally of the French and Latin editions of his 'China,' etc.; also Assemain's erudite rectifications, pp. 30 and 591, vol. iii. (2nd part).]

[5] [The Arian orthography of this name varies considerably, not only in the different mintages of diverse types, but even in pieces having similar standard devices: among the latter, belonging to class No. 1, I note *Gandaphrata*—*Gudupha*, etc.]

2.—○ Copper.
Obverse :—As above.
Legend :—BACIΛEωC BACIΛEωN MEΓAΛoΥ ΥNΔoΦєPPoΥ.
Reverse :—Minerva, armed, to the right.
Arian Legend :— *Máhárája Rajadiraja Tradata . . . . Gadapharasa.*
Monogram, No. 134*c* with 172.
Mr. Brereton. 'Ariana Antiqua,' pl. v., fig. 17.

3.—○ Copper.
Obverse :—As above.
Reverse :—Male figure, with spear, to the right.
Monograms, No. 134*c* with 173 (*t* and *phre*), No. 171 with 155*a*.
'Ariana Antiqua,' pl. v., fig. 18.

4.—□ Copper. (Type as in pl. xxviii., fig. 15; and pl. xxxii., fig. 14).
Obverse :—King, on horseback; to his front is seen Victory, presenting a chaplet.
Legend :—BACIΛEo . . . . . ΦAPoΥ (?). ['Ariana Antiqua' coin, ΦAPoΥ μєΓAΛoΥ ΓoNΔA.]
Reverse :—Centre device, the monogram figured under No. 170, pl. xi*d*.
Arian Legend :—*Máhá . . . . Dhaga . . . sa Apratihatasa Ja . . . . sa Gudapharasa.*
Monograms, Arian letters, No. 63 and *san.*
Mr. Bayley. 'Ariana Antiqua,' pl. xxi., fig. 16.

5.—○ Copper.[1]
Obverse :—Head of king, to the left; the contour similar to the Pakores' busts.
Legends imperfect. B. B., etc.
Reverse :—Victory, with chaplet.
Arian Legend :—*Máhárajasa Rajadirajasa Mahatasa Gudaphara . . . . .*
Monogram, *gu*, and an indistinct Arian letter. Mr. Bayley.

6.—○ Copper. Plate xviii., figs. 5–8.
Obverse :—Head of king, to the right, greatly barbarised. [THPoC ΥNΔOΦEPP.]
Reverse :—Victory, as in No. 5.
Arian Legend :—*Máhárajasa Godapha . sa Tradatasa.*
Mr. Brereton.

7.—○ Copper. Small barbaric coin.
Obverse :—Rude filleted head, to the right.
Abbreviated Greek legend, BACI BAC . . . Υ.
Reverse :—Rude figure of Thessalian Minerva, to the right.
Arian Legend :—*Rajadirajasa Mahatasa Godapharasa.*
Monogram, Arian *stri* and *hd* or *ho.*

XXXIV. Abdalgases.

1.—○ Copper.
Obverse :—King's bust to the right, as in the Pakores' type.
Legend :— . . . IΛEWC CWTHPoC A . . . .
Reverse .—Figure of Victory, to the right (of good execution).
Arian Legend :—*Tradatasa Máhárajasa Abdagaṣasa.* Mr. Brereton.

[1] [There is an interesting coin in the British Museum, brought from India by Captain Hollings, typically connected with the above, which deserves mention in this place.—○ Copper. *Obv.*—Bust of king to the left, wearing the Parthian tiara. Imperfect legend, in corrupt Greek, BACIΛEΥ. *Rev.*—Figure of Victory, as in No. 6. Greek

2.—◯ Copper.
OBVERSE:—Azas' horseman, to the right, with flat cap and flowing fillet; hand upraised.
LEGEND, corrupt:—ΒΑΣΙΛΕΥΟΝΤΟΙ ΒΑΣΙΛΕΩΝΥ ΑΒΔΑΓΑΣΟΥ.
Monogram, 170.
A coin in the B. I. gives the name ΑΒΑΛΓΑΣΟΥ. Rev. monogram, 39*b* with 174*b*, etc.
REVERSE:—Erect figure, to the right; head-dress as on the obverse, with spear, hand extended.
ARIAN LEGEND:—*Godophara Bhrada Putrasa Mâhârajasa Abdagaṣasa.*
[Coin] 'of Gondophara's brother's son, Mâhâraja Abdagases.'
Capt. Robinson, 39*b* with Arian monogram, No. 174 (*Sakre* or *Saphre*).

Some of the coins of this series modify the obverse legend. It is usually in corrupt and bungled Greek, and difficult to make sense of; but it clearly accords with the substance conveyed in the Arian legend above transcribed, in defining the nepotal relationship of Abdalgases. A collation of three specimens (B. I.) produces the following imperfect version—ΒΑ ΙΑΕΥΑ ΔΑΔΑ ΓΥΝΑΙΦΕΡΟ ΑΔΕΛΦΙΑΕΩC. The Reverse legend is also uncertain in the different specimens, adding, at times, the titles of *Tradatasa* and *Dhramiasa* after the Mâhâraja. Monogram, 176.

3.—◯ Copper. Similar types.
LEGENDS, imperfect [ΙΟΙΦΕΡΟ ΑΔΕΛΦΙ] with the addition of the title of *Tradatasa* before the name on the reverse. Mr. Brereton.

4.—◯ Copper.
OBVERSE:—Horseman, to the left.
REVERSE:—Figure as in No. 1, without the cap. Major Cunningham.

a)—Small coin. Mr. Bayley.

5.—◯ Copper.
OBVERSE:—As No. 2. Monogram, No. 145 with *t*.
REVERSE:—Erect figure, holding a small statue of Victory, to the left.
Monogram, No. 134*c*, with Greek ΔΡ and Bactrian *t*. Mr. Bayley.

SUB-ABDAGASES SASAN.

1.—◯ Copper.
OBVERSE:—Horseman, as in No. 2. Legend imperfect.
Monogram, No. 170, with *p*. My 'Cabinet,' 170, and *b*.
REVERSE:—Figure as above, No. 2.
ARIAN LEGEND:—*Mâhârajasa Mahatasa Tradatasa* . . . . .[1] *Godaphrasa Sasasa.*
Monogram, No. 159, with ך and small letters, *p*, *sh*, etc, in the field. Mr. Bayley, *p*, *pi*, etc. 'Ariana Antiqua,' pl. v., fig. 20.

legend imperfect, but the name or title reads clearly CANABAPOY. *Cf.* Ælii Spartiani—Lugduni Bat. MDCLXI, p. 23; and Kercher, pp. 80, French edit., 59, Latin edit. *Psammossires ?*

[1] [Major Cunningham renders the doubtful word here omitted as *Deva-hadasa* (Sanskrit, देव हृद *Deva-hridya*), God-hearted, Θεοτροπος. 'Jour. A. Soc. Beng.,' 1854, p. 713.]

2.—◯ Copper.

OBVERSE:—Azas' horseman.

REVERSE:—Jupiter, holding a figure of Victory, to the left.

ARIAN LEGEND:—*Mâhârajasa Saccha Dha(mapidasa) Sasasa* [Cunningham].

Monogram, No. 134*c*, with Greek ΔP and Arian *t*.

'Ariana Antiqua,' pl. v., figs. 19, 20.

XXXV. ARSACES.

I extract the following notice of the coins of Arsaces from Major Cunningham's paper in the 'Jour. As. Soc. Beng.,' vol. xi., 1842, p. 135.

1.—◯ Copper.

OBVERSE:—A horseman, to the right.

LEGEND:—ΒΑCΙΛΕVONTOC ΒΑCΙΛΕωN ΔΙΚΑΙοΥ ΑΡCΑΚοΥ.

REVERSE:—Type obliterated.

ARIAN LEGEND:—*Mâhârajasa Rajarajasa Mahatasa Ashshakasa Tradatasa.*

2.—◯ Copper.

OBVERSE:—A horseman, to the right.

LEGEND, imperfect;—ΒΑΣΙ . . ΟΥ ΑΡΣΑΚοΥ.

REVERSE:—Male figure, to the left, holding a small figure in his right hand.

ARIAN LEGEND:—*Mâhârajarajasa . . . A(shshakasa).*

XXXVI. PAKORES.

1.—◯ Copper.

OBVERSE:—Bearded head, to the left; the hair is elaborately curled and arranged after the Persian fashion.

LEGEND:—ΒΑCΙΛΕΥC ΒΑCΙΛεων ΠΑΚοΡΗC.

REVERSE:—Victory with chaplet, to the right.

ARIAN LEGEND:—*Mâhârajasa Rajadirajasa Mahatasa Pakurasa.*

Monograms, Nos. 177, 178, composed of Bactrian letters, with the additional foot-stroke peculiar to the style of writing in use on these coins.

'Jour. As. Soc. Beng.,' vol. xi., pl. fig. 11.

XXXVIII. ORTHAGNES.

1.—◯ Copper.

OBVERSE:—Head of king, to the left; the hair is arranged after the Persian fashion on the Pakores' device.

LEGEND (corrupt):—ΒΑCΙΛΕΥC ΒΑCΙΛΕωN ΜΕΓΑC οΡΘΑΓΝΗC.

REVERSE:—Victory, to the right, holding out a fillet.

LEGEND (imperfect):—(*Mâhârajasa ?*) *Mahatasa Gudupharasa* . . . .

British Museum. Bactrian monograms, *gu* and *go*.

COINS AND RELICS FROM BACTRIA.

[Article XXI. completes the series of James Prinsep's original essays. The subjoined paper by his brother, Mr. H. T. Prinsep, is reproduced from the 'Journal of the Asiatic Society of Bengal,' December, 1838, as introductory to, and partially illustrative of, my author's latest artistic contribution to Indian numismatics,—an engraving which he himself was not spared to comment on in the text of the Journal for whose pages it was designed.[1]]

[1] [The severance of this connexion, at the time deemed only temporary, is recorded in the subjoined proceeding of the 'Asiatic Society of Bengal,' which, however intentionally complimentary, does but scant justice to the position James Prinsep achieved for the Society itself, in association with the journal of which he is here recognised as the editor] :—

Extract from the proceedings of the 'Asiatic Society of Bengal,' Wednesday evening, the 14th November, 1838. The Hon. Sir Edward Ryan, President, in the chair.—Before proceeding to the general business of the meeting, the President rose and stated that he held in his hand a letter from the Secretary, Mr. James Prinsep, the substance of which must be a source of deep regret to every member of the Society, for every one must feel the loss the Society had suffered in the departure of its Secretary, Mr. James Prinsep. He assured the meeting, however, and he spoke on the authority of a conversation he had with Mr. Prinsep, before his departure, that this gentleman's absence from India would be but for a short period, and that on his return he would be ready to take the same interest, and to display the same zeal and anxiety, which had so honorably distinguished his discharge of the important duties he had undertaken in connexion with the Society. The President said that the objects of the Society had, under Mr. Prinsep's able superintendence, been prosecuted with a vigour which had added largely to its credit and reputation; and that the results produced in every department of science and literature, for which the Society was indebted chiefly to its Secretary's activity and varied powers, had sustained its character in a manner rivalling the periods when it derived renown from the labours of a Jones, a Colebrooke, and a Wilson. The President took occasion to add, that, in the time of Mr. James Prinsep, and on his proposition, the name of the Society had been associated with a monthly periodical, established by the late Captain Herbert, originally under the name of 'Gleanings in Science.' The work was afterwards extended and ably conducted by Mr. Prinsep himself; and at his suggestion it was resolved, in 1831, that so long as this periodical should be conducted by a Secretary of the Society, it should bear the title of 'Journal of the Asiatic Society;' under that name it had been since continued by Mr. Prinsep with very distinguished success to the present day. The Society had no property in the 'Journal,' and no right to prevent Mr. Prinsep from separating it again from the Society, and conducting it on his own account; but he had no such intention. He (Sir E. Ryan) had ascertained that Mr. James Prinsep had made arrangements for its being continued to the end of the present year from materials in hand; and after that he meant that *his* series should be closed; but he had no objection to the Society's continuing the periodical by the same name, under other management, as a concern quite inde-

IT has been already announced in the pages of this Journal, that the extensive collections of coins and other relics made by Mr. Masson, by Sir Alexander Burnes, and Dr. Lord, were on their way to Calcutta, and were likely to fall shortly under the examination of the Editor. He felt it as a great compliment that was paid to his efforts to restore the lost portions of Indian and Bactrian history by means of the coins and inscriptions still extant in the language and with the superscriptions and dates of the rájas of those times, that collectors in all parts of India were in the habit of submitting to his inspection whatever they lighted upon as unusual, and sought his reading and interpretation of the legends, emblems, and inscriptions, which baffled the learning and ingenuity of the pandits and antiquarians of the vicinity. As a consequence of the happy discoveries made by him in this line, coins and transcripts of inscriptions came in from all quarters, from Assam and Ava to Bokhára and Sindh, and from Ceylon northward to Nepal. The possession of the rich store of materials thus accumulated gave facilities

pendent. Now, he (the President) believed that all the members of the Society would regret exceedingly that a periodical so established, and which had acquired such credit and consideration, should be discontinued. He trusted that it would be resumed by Mr. J. Prinsep himself when he returned to India; but, in the meantime, he should submit to the meeting the propriety of taking into consideration the possibility of making some arrangement to carry it on during Mr. Prinsep's absence. Having premised thus much, the President stated that he should read to the meeting Mr. James Prinsep's letter, placing the situation of Secretary at their disposal: but, as he had no doubt it would be the unanimous feeling of the meeting to desire to retain Mr. Prinsep in official connection with the Society, he should not consider this letter as an absolute resignation, but should propose a resolution, and submit arrangements founded upon it, which would enable Mr. Prinsep to resume the office on his return to India. The President then read the following letter:—

To the Hon. Sir EDWARD RYAN, *Kt., President of the Asiatic Society.*

HON. SIR,

Being compelled by ill-health to proceed to sea and eventually to Europe, I have taken my passage on board the 'Herefordshire,' with the intention of being absent from the country for two or perhaps three years. I am thus under the necessity of placing at the disposal of the Society the situation of its Secretary, which I have filled for five years.

It is with great reluctance and regret that I thus separate myself from a body with whom I have been associated in labours of much interest and utility, whose favour has encouraged my zeal, and through whose credit and reputation in the world I have obtained the means of making generally known my own humble efforts in the cause of science, and my not unsuccessful endeavours to explore the antiquities of the country to whose service we are devoted.

But the disability of sickness is an accident to which we are all liable, and from which there is no resource, but in temporary departure to a better climate. I am thus compelled to leave my incomplete labours to be perfected by others, and to relinquish the place I have held in the Society, that provision may be made for its competent discharge under the failure of my own power of longer rendering useful service.

I have the honour to be, etc.

1st November, 1838. (Signed) JAMES PRINSEP.

Proposed by the President, seconded by Mr. Curnin, and unanimously resolved: That the resignation of Mr. James Prinsep be not accepted; but the Society hope that he will return to resume the situation of Secretary, which he had filled so much to the credit of the Society for a period of five years.—Resolved: That the President communicate to Mr. James Prinsep the desire of the Society, that he shall not consider himself as having vacated the situation of Secretary; and express the hope that, on his return to India, he will resume the situation of Secretary.

of comparison and collation which were doubtless a main cause of his success; but the study and exertions required for the satisfaction of these numerous references to his individual skill, although entered upon with a zeal participated only by those who have achieved much, and feel that there is yet more within their reach which ought to be the result of their own discoveries, were too severe for the climate of India, and the Editor's robust constitution sunk at last under the incessant labour and close attention given to these favorite studies at the very moment when the richest collection of inscriptions, coins, and relics, that had ever been got together in India, were actually on their way to Calcutta, as materials for maturing the results he had achieved. The collections of Mr. Masson were forwarded from Bombay in the John Adam, which reached Calcutta only in the course of the past December. There are of these coins from four to six thousand, besides the contents of several topes, and casts of figures of Budh, with various other remains of the period antecedent to the Muhammadan invasion of Bactria and Afghanistan. The whole of this collection was by order of Government laid upon the table of the Asiatic Society at the meeting of January, 1839; but the members present felt that, in the absence of their late Secretary, and likewise of Capt. Cunningham, Mr. V. Tregear, and Colonel Stacy, there were no persons in Calcutta to whom the examination, arrangement, and report upon the coins and relics could be committed with confidence. They came therefore to the unanimous resolution to recommend their being forwarded without delay to England, where the Honorable Court would have the opportunity of submitting them to the inspection of the late Secretary of the Asiatic Society, jointly with Dr. Wilson, the librarian at the East India House, and so the ends of science and of antiquarian research would be most effectually answered.

The care of this magnificent collection, which is large enough to supply all the museums in Europe, has been kindly undertaken by Mr. Cracroft, a very zealous member of the Asiatic Society, and there is ground for hoping that under his superintendence a catalogue may yet be made before he takes his final departure for England. The articles have come round in bags without any separate lists, and in one bag there are about two thousand copper coins.

But, independently of Mr. Masson's collection, another numbered by thousands has been brought to Calcutta by Dr. McLeod, the Inspector General of Hospitals to Her Majesty's forces in India. This consists partly of coins of all metals, but there are also several seals and gems of different stones cut with a great variety of emblems and devices. All these are the property of Sir A. Burnes, and have arrived

for deposit and custody as well as for inspection; they are therefore still available for the curious, and will continue so until Sir A. Burnes shall send instructions as to their disposal. We cannot ourselves undertake the particular examination of these relics so as to give the detailed description they deserve. A selection from the coins had, however, previously been made at Simla, and those deemed most curious being forwarded by the dawk arrived fortunately before the departure of our Editor. Amongst them is that most curious coin of Dr. Lord, with the head of Eucratides on one side, and of both his parents on the other, a drawing of which is exhibited in plate xlii. From the other selected coins thus transmitted, a plate was prepared by the Editor, which was intended to be illustrative of an article he designed giving in our last October number. The plate remains, and we attach it to this article, that the curious who have followed our Editor to the length of his past researches may see the objects which he deemed worthy of fresh illustration in the field of Indo-Bactrian numismatology. If the 'Herefordshire,' the ship in which he took passage, had touched at Madras, or had put into Mauritius, or had met a vessel at sea, we might have hoped for the comments promised on this, as on two other plates which we also intend to give, and shall separately refer to. But the time approaches when the issue of the last number of our series will be expected, and we can no longer defer the publication, under the doubtful expectation of receiving the desiderated paper from the Cape of Good Hope. Of the coins and gems therefore in Sir Alexander Burnes's collection we can at present make no use, but we hold them in deposit for the examination of others, and to await his further instructions. We must be content at present to give the plate referred to, which it will be seen is numbered xliii., together with such brief reading of the names, as a Tyro of Indian numismatics might be expected with the aid of the alphabets to supply. The plate is of Indo-Bactrian coins of date antecedent to the introduction of Grecian art, with the Grecian alphabet, into the mints of that country. The legends are in the ancient No. 1 character of the then universal Pálí language, with Bactrian characters in some instances on the obverse, or intermixed. The names and emblems on these coins are well worth the study of the learned.

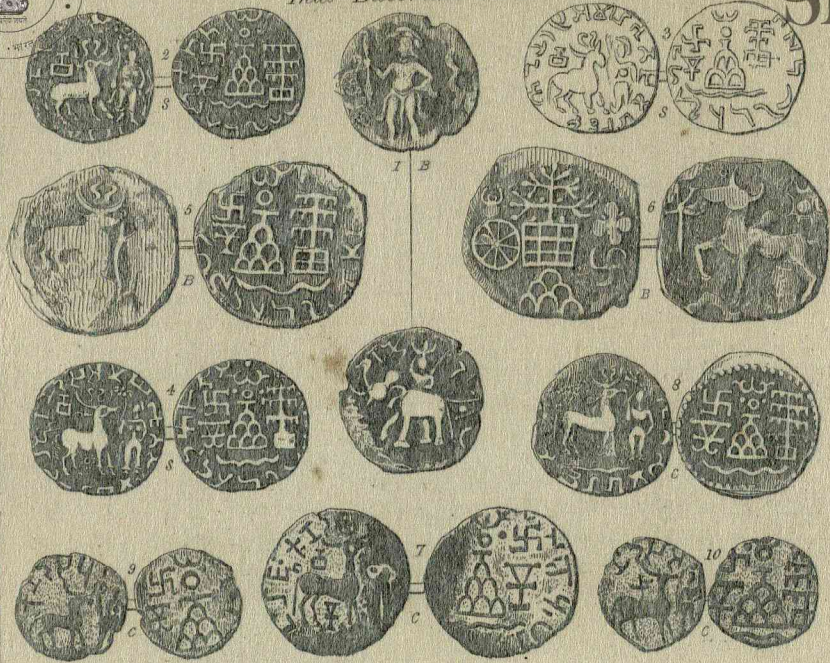
Along with Sir A. Burnes's coins, Dr. McLeod brought to Calcutta a very singular relic obtained by Dr. Lord at Badakhshán, and which is, we believe, destined for the British Museum. The relic in question is an ancient patera of silver, embossed in the interior in very high relief, and representing, with all the usual adjuncts of classic mythology, the procession of Bacchus. The god himself sits in a car drawn by two

harnessed females with a drinking cup in his hand. A fat infant, Silenus, stands in front, and there is a female figure sitting on the after corner of the car, which, from its disproportionate size, we imagine to be the carved elbow of the seat on which the god reclines. There are also two winged cupids in attendance, one flying with a wand in his hand, to which a fillet is attached, the other end of which is held by the infant Silenus; and the other on the foreground behind the wheel of the car, as if employed in pushing it on. The car is followed by a dancing Hercules, distinguishable by the club and lion skin. The heads of this figure and of the Bacchus are both wanting, owing probably to their having been of gold, or thought so, while the rest of the patera, being only of silver gilt, has escaped similar violation. The gilding, however, is mostly worn away from long use, and in one part the side of the cup is actually worn through. Independently of the circumstance of the main figure being represented with a cup in hand, its identity with the Grecian Bacchus is proved by the vines circumpendent, and by the figure of a tiger standing prominently out in the fore-ground and drinking out of a wine jar.

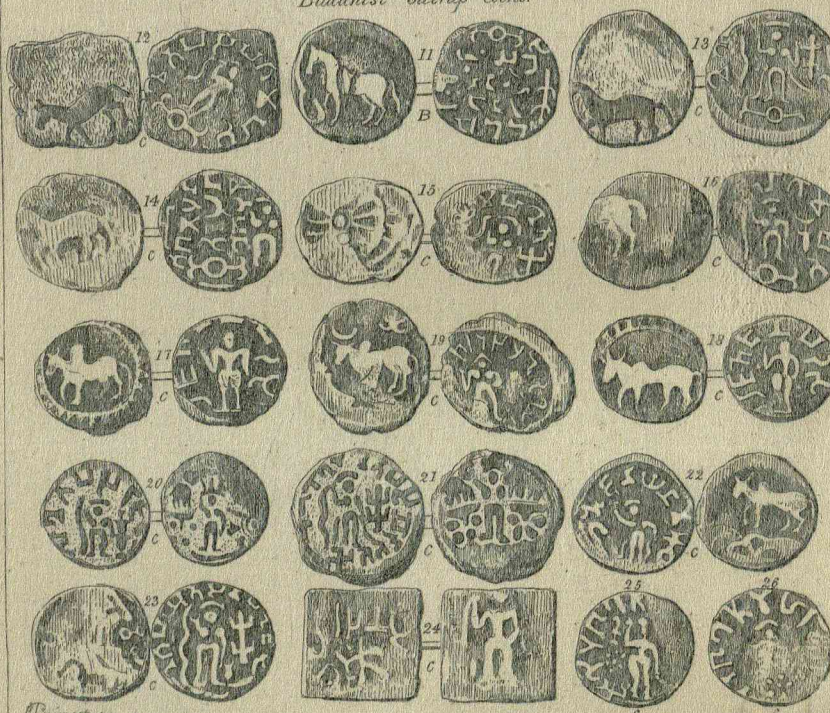
This patera is the property of Dr. Lord, who is also the fortunate owner of the double-headed coin of Eucratides, the original apparently from which the plate of a similar coin is given in Dr. Vincent's 'Periplus;' but the double head is there represented as being on both sides of the coin. With a liberality deserving of particular notice, both these unique relics have been gratuitously appropriated by the finder, or are intended to be so, in the manner deemed by him most conducive to the ends of science, Dr. Lord not desiring to retain them as isolated trophies of his own good fortune in the field of research and discovery.

I fear we must not look upon this piece of plate as affording evidence of the state of the arts in Badakhshán, where it was found, at any particular epoch. That it is of high antiquity is quite apparent from the condition of the metal, as well as from the design; but in the Periplus of the Erythrean sea, published amongst Arian's works, it is distinctly stated that *ἀργυρώματα, i.e.* articles of silver plate, were a staple import from the west, for exchange against the productions of India. At Minnagarh, upon the Indus, it is further stated by the author of that treatise that he himself presented to the rája *βαρύτιμα ἀργυρώματα*, valuable pieces of plate, in order to secure his favor, and the grant of certain privileges of trade. There is thus reason to believe that the patera must have been brought from Greece or Asia Minor, and either presented in like manner, or sold to some sovereign of Bactria, by a merchant desiring similar privileges of trade in that country. That it has been in use for centuries is evident from the

Indo-Bactrian Coins



Buddhist Satrap Coins.



Pub by Stephen Austin, Hertford.

worn condition it now presents; but for how many it was in use, and for how many it lay treasured in royal or other repositories, is more than may now be conjectured.

INDO-BACTRIAN COINS.

Specification of coins in plate xliv.

1. OBVERSE: Armed figure standing with a club or spear; no inscription.
   REVERSE: Elephant with rider. Bactrian inscription, *Rajasa*; rest not decipherable.
2. OBVERSE: Woman and deer, with inscription not legible: emblem, etc.
   REVERSE: Tree and mountain; with emblems. [See *ante*, vol. i., p. 201.]
3. OBVERSE: Man and bull; same emblem as No. 2; and *Mahárájasa Mahabhatasa* in old Pálí clearly legible, but the name to the left baffles us.
   REVERSE: Same device and emblems as No. 2, and *Mahárájasa* clearly legible in Bactrian at the bottom.
4. OBVERSE: Same device as No. 2, and same emblem; *Rajna Rajasa Maghadatasa* in old Pálí.
   REVERSE: Same device and emblems as No. 2; *Mahárájasa* in Bactrian; the rest not legible.
5. A larger coin; the same device on both sides as No. 3; obverse defaced.
   REVERSE: *Mahárájasa* in Bactrian characters.
6. OBVERSE: Bull and emblem; no letters.
   REVERSE: Same emblems as Nos. 2, 3, and 4, with addition of a wheel: very peculiar.
7. OBVERSE: Deer and man, with emblems; *Rajna Kunandasa* in old Pálí.
   REVERSE: Same as Nos. 2, 3, 4, etc.
8. OBVERSE: Deer and woman; *Mahárájasa* in Pálí.
   REVERSE: Same as No 2; no inscription.
9. OBVERSE: Deer and man; *Kunandasya* in Pálí.
   REVERSE: Same as No. 2.
10. Same precisely. Pálí inscription, *Nandasá*, the last letter being an initial ऽ *á*.

BUDDHIST SATRAP COINS.

11. OBVERSE: Horse caparisoned.
    REVERSE: *Rajasa*, in Bactrian, with various marks.
12. OBVERSE: Horse.
    REVERSE: Standing figure with bow. Inscription in Pálí, *Sarba tápasa patamapasa.* [*Khatrapasa P(H?)agámashasa.*]
13. The same indistinct.
14. OBVERSE: The same worn.
    REVERSE. Inscription in lines. *Tamapasa* legible in Pálí. [*Khatrapasa pagámasa P(H?)agámashasa.*]
15. Nothing distinct.
16. OBVERSE: Horse's tail and hind quarter.
    REVERSE: Figure standing. *Lagámapasa* in Pálí.
17, 18, 19. OBVERSE: Bull.
    REVERSE: Standing figure, with inscription *Rajnapadasa*. Centre one in Bactrian.

20. OBVERSE: Standing figure. Páli inscription, *Paghugapasa.* [*Khatapasa Raja . .*]
REVERSE: Figure. No inscription.
21. Nothing made out.
22. OBVERSE: Figure in speaking attitude. *Rajna Raghumám*
23, 24, 25. Not deciphered.

N.B.—These latter are classified as of the Satrap group—first, because of the title Rája or Mahárája not being found in any of them; secondly, because of the names having so evidently an ancient Persian aspect; and lastly, because of the horse emblem, which probably had its origin in the circumstances which attended the accession of Gushtasp, Darius Hystaspes.

END OF ESSAYS.

USEFUL TABLES,

ILLUSTRATIVE OF

THE COINS, WEIGHTS, AND MEASURES

OF

BRITISH INDIA;

TOGETHER WITH

CHRONOLOGICAL TABLES AND GENEALOGICAL LISTS,

HAVING REFERENCE TO

INDIA AND OTHER KINGDOMS OF ASIA.

BY THE LATE

JAMES PRINSEP, F.R.S.,

SECRETARY TO THE ASIATIC SOCIETY OF BENGAL.

EDITED,

WITH NOTES, AND ADDITIONAL MATTER,

BY

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JOHN MURRAY, ALBEMARLE STREET.
1858.

PREFACE.

In putting forth this New Edition of Prinsep's Useful Tables, I may confidently appeal to the sterling value of the work, and the appreciation with which it has previously been received by the public in India, as evinced in reprints, partial and entire, issued at Calcutta and elsewhere.

My task as Editor has been limited to bringing up the Monetary Tables to the latest possible date, the occasional insertion of Notes, and the incorporation of such additional Dynastic Lists as chanced to be accessible in this country. The orthography of the Oriental names has usually been reproduced literatim after the original printed text, wherein they are found to vary to the extent that might have been anticipated consequent on the assemblage of the component materials from the works of various European commentators, who each followed his own method of transliteration, and who, for the most part, wrote before we had arrived at even the present indeterminate stage in the system of the transcription of Eastern tongues which Sir William Jones so meritoriously inaugurated.

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USEFUL TABLES,

ETC.

BRITISH INDIAN MONETARY SYSTEM AS ESTABLISHED BY REGULATION VII. OF 1833 [OF THE BENGAL GOVERNMENT.]

Silver is the legally constituted medium of exchange in all money transactions throughout the British Indian possessions. Gold coin is a legal tender, at a fixed value of sixteen rupees[1] for the gold muhr[2] of Calcutta, and fifteen rupees for the gold muhr of Madras and Bombay; but it is not demandable in payment, and is left to find its current value in the market. Copper coin is only a legal tender at the established rate of sixty-four paisá[3] to the rupee, on payments falling short of one rupee.

The rupee is, then, the unit or standard measure of value throughout India, and by the Regulation lately passed, a perfect assimilation in weight and fineness has been effected in this unit of currency of the three Presidencies, so that the rupee of Upper India, of Madras, and of Bombay are now identical in value. From this uniformity are excepted the three provinces of Bengal Proper, Bahár, and Orissa; in which the Murshidábádí or sikká[4] rupee still continues to be the legal currency; but the relation of one coin to the other is now reduced to great simplicity, one Farrukhábád, Madras, or Bombay rupee being precisely equal to fifteen ánás[5] sikká.

[1] H روپیہ *rúpiya*. S रूप्य *rúpya*, 'silver.' [2] H مہر *muhr*, 'a seal.'
[3] H پیسا *paisá*. [4] P A سکّہ *sikka*, 'a coining die.' H סכה.
[5] S आना *ánd*. H آنا *ánd*.

The following table exhibits the scheme of the British Indian monetary system:

GOLD MUHR.	RUPEE.	ÁNÁ.	PAISÁ.	PÁ'Í.[1]
CALCUTTA 1	16	256	1024	3072
MADRAS AND BOMBAY.... 1	15	240	960	2880
	1	16	64	192
		1	4	12
			1	3

Small shells, called kaurís,[2] are also made use of for fractional payments, and are reckoned as follows: but their value is subject to considerable fluctuation, and they are now nearly superseded by the copper currency.

4 Kaurís make ..... 1 Gaṇḍa.[3]
20 Gaṇḍas ..... 1 Pan.[4]
5 Pans ..... 1 Áná.

DESCRIPTION OF THE CURRENT COINS.

GOLD AND SILVER.

The inscriptions upon the Company's gold and silver coins are in Persian, as follows:

OBVERSE of the sikká rupee struck at the Calcutta mint.

حامي دين محمد سايهٔ فضل اله سكه زد بر هفت كشور شاه عالم بادشاه

"Defender of the Muḥammadan faith, Reflection of Divine excellence, the Emperor Sháh 'Álam has struck this coin to be current throughout the seven climes."

REVERSE: ضرب مرشدآباد سنه ۱۹ جلوس ميمنت مانوس.

"Struck at Murshidábád in the year 19 of his fortunate reign."

The rupee of the Western provinces, coined at the late mints of Farrukhábád and Benáres, and now at the mint of Ságar, bears the same inscription on the obverse. On the reverse the date and place of coinage are different:—

ضرب فرخ آباد سنه ۴۵ جلوس ميمنت مانوس

"Struck at Farrukhábád in the year 45 of his prosperous reign."

The several varieties of coin, produced by modifications of weight, standard, or die, from time to time in the Calcutta and subordinate mints of the Bengal Presidency, from their all bearing the same legend and date, are not easily recognized but by an experienced money-changer. As, however, different regulations regarding deficiency of

[1] H پائي *pá'í.* S पाद *páda,* 'a quarter.' [2] H كوڑي *kauṛí.*
[3] H گنڈه *ganda.* गण्डक (Elliot.) [4] H پن *pan.* S पण *paṇa.*

weight, etc., apply to the coins of the old and new standard, it is convenient to point out a mode of discriminating them.

1. The old standard sikká rupee of 1793-1818 has an oblique milling.

2. The new standard sikká rupee of 1818-1832 has a straight milling.

3. The new sikká rupee, struck under the present regulation, has a plain edge, without milling, and a dotted rim on the face.

The distinctions of the oblique and straight milling apply also to the old and new gold muhr. Of the up-country or Farrukhábád coins:—

4. The old standard Farrukhábád rupee (or '45th Sun Lucknow rupee' of Reg. XLV. 1803) has an oblique milling.

5. The Benáres rupee, coined 1806-1819, has also an oblique milling.

6. The new standard Farrukhábád rupee, coined at the Farrukhábád mint, 1819-24, and at the Benares mint, 1819-30, and now at the Ságar mint, has an upright milling.

7. The Farrukhábád rupee, coined under the new regulation at the Calcutta mint, has a plain edge, and a plain rim on the face.

The coins struck before 1793, at the old mints of Patna, Murshidábád, and Dacca, the Benares rupee anterior to 1806, and the coins of all the Native independent states, are known by their having no milling. The Company's coin up the country is thus generally called *kaldár*[1] 'milled, or made by machinery', in contradistinction to the unmilled or native coins, which are fashioned and stamped with the hammer and anvil.

The Madras rupee has a dotted rim on the face, and an indented cord-milling: that coined in Calcutta has an upright milled edge: it has the symbol of a rose on the obverse. The inscriptions are as follows:—

سکهٔ مبارک بادشاه غازي عزیزالدین محمد عالمگیر

"The auspicious coin of the noble Monarch, Aziz-ud-dín Muḥammad 'Álamgír!" (the father of Sháh 'Álam.)

ضرب ارکات سنه ۲۰ جلوس میمنت مانوس

"Struck at Arkát in the 20th year of his propitious reign."

The Bombay coin has now a plain edge and the following legend:

سکهٔ مبارک شاه عالم بادشاه غازي ۱۲۱۵

"The auspicious coin of the great Emperor, Sháh 'Álam, 1215."

ضرب سورت سنه ۴۶ جلوس میمنت مانوس

"Struck at Súrat in the 46th year of his propitious reign."

[1] کلدار *kaldár*.

COPPER COINS.

The inscription on the Calcutta paisá is, on the OBVERSE :

سنه جلوس ۳۷ شاه عالم بادشاه

"In the 37th year of the reign of the Emperor, Sháh 'Álam."

On the REVERSE : एक् पाइ सिका یک پای سکه एक पाई सिका

"One pá'í sikká."

In Bengálí, Persian, and Nágarí characters. Serrated rim on the face and plain-edge milling.

The new double-paisá or half-áná piece has on one side merely the words 'half-áná,' in English and Bengálí : on the reverse, the same in Persian and Nágarí. The pá'í or third of a paisá has in the same manner merely the name 'one pá'í,' which makes it liable to be confounded with the 'one pá'í sikká,' and on this account, perhaps, it has not found ready currency. The natives reckon only sixty-four paisá to the rupee, while English accounts divide the áná into twelve pá'í ; to distinguish them, this latter (hitherto an imaginary coin), was called the pá'í of account.

At Madras and Bombay an English device has been introduced for the copper coinage ; on one side, the East India Company's arms ; on the other, in the Bombay coin, a pair of scales, surmounted with the name of the coin in English ; below, the word عدل *'adal*, 'justice,' in Arabic, and the Hijra date also in Arabic numerals. The Madras paisá coined in England in 1803, has, on the reverse, its value according to the old system 'XX. cash ;'[1] and in Persian, بیست کاس چهار فلوس است *bist kás chahár falús ast*, 'twenty *kás* make four *fals*.' It weighs 180 grains (one tolá[2]), and the half and quarter in proportion.

The principal object in this place being to shew the present state of the currency and the existing mint regulations, it is unnecessary to detail the various alterations which have been made from time to time in the monetary systems of the three Presidencies, of which a sketch will hereafter be given as an introduction to the General Table of Indian Coins.

The adoption of a general pictorial impression for all the coins of the British possessions in India, in lieu of the present anomalous system, has frequently engaged the attention of the Government here and at home ; and it is hoped, now that the new mints of Calcutta and Bombay are perfectly capable of executing such a design, and the prior measure of equalizing the standards of the three Presidencies has been carried into effect, that the unhappy tissue of mis-statements as to

[1] s कांस्य or कंस *kánsya* or *kans*. [2] s تولا *tolá*. (तोल)

names, places, and dates, exposed in the above list, will give place to a device at once worthy of the British name, and affording better security against fraudulent imitation.

WEIGHT AND ASSAY OF THE COINS.

GOLD COINS.

The privilege of coining gold in the Bengal Presidency is limited to the mint of Calcutta, where gold muhrs of two standards are now coined: the ashrafí[1] or Murshidábád gold muhr, which maintains a high degree of purity (99½ touch) has a weight of 190·895 grains troy. The new standard gold muhr of 1819 contains one-twelfth of alloy. The absolute quantity of pure metal was then reduced in a trifling degree to adjust the ratio of its value to that of silver as fifteen to one.[2] The new gold muhr therefore weighs sixteen-fifteenths of a rupee, and passes by authority for sixteen rupees, but the ratio of gold to silver has been of late years higher in the Calcutta market, especially for the purer coins, so that the new muhr generally passes for sixteen

[1] P اشرفي *ashrafi.*

[2] In the English coins the ratio is 14.287 to 1—in the French money as 15.5 to 1.

[In continuation of this subject, I extract from the 'Numismatic Chronicle' some remarks of my own, in regard to the relative value of gold and silver in India, at the commencement of the Moghul rule: 'The authoritative reform of the coinage, effected by Shír Sháh (A.H. 946—952=A.D 1539 to 1545), appears by internal evidence to have been accompanied by a revision and re-adjustment of the relative value of the lower metals, silver and copper. There are no positive data to show at what rate silver exchanged against gold in the time of Shír Sháh; but an examination of Abúl-fazl's description of the coin rates of the great Akbar, who succeeded to the throne in 1556, A.D., discloses the very unexpected proportion of gold to silver as 1 to 9.4! I obtain this result from a comparison of the intrinsic contents assigned to four several descriptions of gold coins in the 'Ayín-i Akbarí,' as contrasted with the corresponding total weight of the silver money defined by the same authority as their exchangeable value. I understand both gold and silver to have been pure. Actual assay shows Akbar's gold coins to have been totally unalloyed, and Abúl-fazl himself directly asserts that the silver used in his master's coinage was pure.

I append an outline of my data on this head:—

1st.—Chagal, weight in gold T. 3, M. 0, R. 5¼=30 Rs. of 11½ máshas each : 549.84 :: 172.5 × 30 (5175.0) : 1 :: 9.4118.

2nd.—Áftábí, gold, weight T. 1, M. 2, R. 4¾=12 Rs. : 218.90 :: 172.5 × 12 (2070·0) : 1 :: 9.4563.

3rd.—Iláhí, gold, weight M. 12, R. 1¾=10 Rs. : 183.28 :: 172·5 × 10 (1725·0) : 1 :: 9.4118.

4th.—'Adl Gutkah, gold, weight 11 máshas=9 Rs. : 165 :: 172.5 × 9 (1552·5) : 1 :: 9.40909.

(The common tolá of 180 gr., másha of 15 gr., and ratí of 1.875 gr. have been used in these calculations).

Annexed are the relative proportions of these several denominations of coins, as given by Abúl-fazl—extracted verbatim from an excellent MS. of his 'Ayín-i Akbarí.' And to complete the original details of the entire subject for those who may desire to

to seventeen, and the old gold muhr for seventeen to eighteen, sikká rupees. When originally coined, both of these moneys were at a discount.

The proportion of fifteen to one is also adopted in the gold rupees of Madras and Bombay, which are coined of the same weight as the silver money of those Presidencies, and pass current for fifteen silver rupees.

The weights and purity of the gold coins are as follows:—

DENOMINATION.	Pure gold.	Alloy.	Weight in gold.	Weight in tolás.	Legal value.
Old Calcutta muhr,[1] with an oblique milled edge	189.4037	1.4913	190.895	1.060	16 sikká rupees.
New standard gold muhr, with a straight milling	187.651	17.059	204.710	1.137	
Madras and Bombay new gold rupee	165	15	180	1.000	15 rupees.

examine them, I also subjoin the Rupee equivalents, further determining the actual value of the silver coins.

چگل بضم چیم وکاف فارسے وسکون لام چهار گوشه سه تولچه
وپنج سرخ وربع قیمت سے روپیه
آفتابے گرد - بوزن یکتولچه دو ماشه و پنج سرخ ربع کم * بها *
دوازده روپیه
الهي [لعل جلالي and] گرد * دوازده ماشه دو سرخ ربع کم
آفتابے منقوش ارج ده روپیه
عدل گتکه بفتح عین وسکون دال ولام وضم کاف فارسے وسکون
تاي فوقانے هندي وفتح کاف وهاء مکتوب یازده ماشکي قیمت نه روپیه
روپیه سیمین نقدیست گرد یازده و نیم ماشکي در زمان شیر
خان پدید آمد * * ازچهل دام اگرچه نرخ افزون وکم شود
لیکن در مواجب این قیمت اعتبار رود
جلاله چهارگوشه * * در وزن و نقش چون نخستین
روپیه سه گونه روایٔ داشت اول چهار گوشه پاک سیم بوزن
یازده و نیم ماشه جلاله نام ارزچهل دام . . . . . [E.T.

[1] This coin is inserted, contrary to rule, because its fabrication is still permitted at the Calcutta mint, for the convenience of the merchants; as it bears a higher value, proportionally, in the market than the new muhr.

Half and quarter gold muhrs are coined of proportionate weight to the above.

The pagoda of Madras and the old gold muhr of Bombay will find their place in the General Table of Coins.

SILVER COINS.

The weight, fineness, and relative value of the silver coins established by the new regulation are as follows:—

DENOMINATION.	Pure silver. Troy grains.	Alloy. Troy grains.	Weight in troy grains.	Weight in tolás.
Calcutta sikká rupee.....	176	16	192	1.0666
Farrukhábád, Sonat,[1] Ságar, Madras, or Bombay rupee	165	15	180	1.000

Eight-áná pieces (*áṭh-annî*[2]) and four-áná pieces (*súkî*[3] or *chau-annî*[4]) are struck of proportionate weight to each of the above coins.

The standard quality of the metal is eleven-twelfths of pure silver to one-twelfth of alloy.

The conversion of sikká into Farrukhábád rupees and *vice versâ* may be effected in the simplest manner by the following rules, which obviate the necessity of providing tables for the purpose.

Rule First.—To convert Farrukhábád rupees into sikká rupees:—Deduct one-sixteenth of the amount of the Farrukhábád rupees from that amount, and the result will be their equivalent in sikkás.

Rule Second.—To convert sikká rupees into Farrukhábád, Madras, or Bombay rupees:—Add one-fifteenth of the amount of the sikkás to that amount, and the result will be the equivalent in Farrukhábád, Madras, or Bombay rupees.

To avoid confusion here, the weights and values of the former currencies of the Company, which differ in a small degree from the foregoing scale, as well as those of the existing currencies of the Native States, will be inserted in the General Table before alluded to.

All silver money of the new standard (with a straight milling or a plain edge), is considered by law as of full weight until it has lost by wear or otherwise two pá'í in the rupee; or, in round terms, one per cent.

[1] سَنَوَات *sanawát*, pl. of سنة *sanat*, 'year.'

[2] آٹھ آنی *áṭh-annî*. [3] سوکی *súkî*, or سوکا *súkâ*. [4] چو آنی *chau-annî*.

Coins of the old standard (with the oblique milling) remain subject to the provision of Regulation LXI., 1795, which allows them to remain a legal tender until they have lost only six ánás per cent.

The limits of weight are, therefore, as follows :—

	Original weight.	Allowance for wear.	Minimum weight.	Min. weight of 100 rupees.
Old sikká or Murshidábád rupee	179.666 grs.	6 ánás per ct.	179 grs.	99.44 tolás
New sikká rupee...	192 grs.	2 pá'í p. rup.	190 grs.	105.55 tolás
Farrukhábád, old rupee	173 grs.	6 ánás p. ct.	172.352	95.75 tolás
„ new rupee	180 grs.	2 pá'í p. rup.	178.125	99. tolás

Light-weight rupees are received by Government officers as bullion, the deficiency from standard weight being made good by the payer.

COPPER COINS.

The copper coins of Bengal and Bombay are now equalized in weight, and are as follows :—

	Troy grains.	Value.
The half-ánás piece	200	6 pá'í of account
The paisá (marked one pá'í sikká).....	100	3 ditto
The pá'í of account	$33\frac{1}{3}$	1 ditto

By Regulation XXV. of 1817, Sect. 5, copper paisá, struck at the Benares mint, weighing $98\frac{1}{4}$ grains, which were intended at first (*vide* Reg. VII. 1814), for circulation in the province of Benares only, and were distinguished with a trident or *trisúl*,[1] the symbol of Siva, were made current throughout the Bengal provinces at par with the Calcutta and Farrukhábád paisá.

Coinage Duty or Seignorage.

All the Company's mints are open to the reception of gold[1] and silver bullion for coinage on private account. The following is the course of proceeding adopted in the Calcutta mint: –after examination by the processes of cutting and burning, to ascertain that there is no fraudulent admixture, the proprietor takes a receipt from the Mint-Master for the weight of his bullion.—A specimen is then taken for assay, and after that operation the mint receipt is exchanged, at the Assay Office, for a certificate of the standard value of the bullion in gold or silver money. This certificate is convertible into cash at the Treasury as soon as the new coin may be transmitted thither from the mint.

[1] ترسول (त्रिशूल) [2] Except the Ságar Mint, which coins silver only.

A deduction is made from the assay produce of bullion to cover the expenses of coinage, which vary at the different mints as follows:

	On Gold Bullion.	On Silver Bullion.
At the Calcutta mint.....	2 per cent.	2 per cent.
At the Ságar mint.....	2 ditto.	2 ditto.

[If required in halves and quarters, an additional duty of one per cent, is levied at these Mints.]

At the Madras mint[1]	3 per cent.	4 per cent.	now 2 per cent.
At the Bombay mint[1]	2½ ditto.	3 ditto.	

On the re-coinage of rupees struck at the Company's mints of the Bengal Presidency, a charge of one per cent. only is levied.

The rates of seignorage at Bombay and Madras include the charge for refinage; for which a separate charge is made in the Calcutta and Ságar mints, on under-standard bullion only, at the rate of 0.4 per cent. per pennyweight of worseness in the assay: (unless such inferior bullion is required for the purposes of alligation at the mint, when the charge may be remitted on the authority of the Mint Master).

The following is a table of refined charges:—

Assay.	Refining charge per cent.	Assay.	Refining charge per cent.	Assay.	Refining charge per cent.	Assay.	Refining charge per cent.
dwts.		*dwts.*		*dwts.*		*dwts.*	
0⅕ Wo.	0.02	6⅕ Wo.	0.26	12⅕ Wo.	0.50	18⅕ Wo.	0.74
1 Wo.	0.04	7 Wo.	0.28	13 Wo.	0.52	19 Wo.	0.76
1⅖ Wo.	0.06	7⅖ Wo.	0.30	13⅖ Wo.	0.54	19⅖ Wo.	0.78
2 Wo.	0.08	8 Wo.	0.32	14 Wo.	0.56	20 Wo.	0.80
2⅖ Wo.	0.10	8⅖ Wo.	0.34	14⅖ Wo.	0.58	20⅖ Wo.	0.82
3 Wo.	0.12	9 Wo.	0.36	15 Wo.	0.60	21 Wo.	0.84
3⅖ Wo.	0.14	9⅖ Wo.	0.38	15⅖ Wo.	0.62	21⅖ Wo.	0.86
4 Wo.	0.16	10 Wo.	0.40	16 Wo.	0.64	22 Wo.	0.88
4⅖ Wo.	0.18	10⅖ Wo.	0.42	16⅖ Wo.	0.66	22⅖ Wo.	0.90
5 Wo.	0.20	11 Wo.	0.44	17 Wo.	0.68	23 Wo.	0.92
5⅖ Wo.	0.22	11⅖ Wo.	0.46	17⅖ Wo.	0.70	23⅖ Wo.	0.94
6 Wo.	0.24	12 Wo.	0.48	18 Wo.	0.72	24 Wo.	0.96

And so on for silver of inferior quality. By the practice of the Calcutta mint, the charge for refinage is usually remitted up to 6 Wo.; at the Ságar mint, it is levied on all denominations of bullion inferior to standard.

The next two tables, for calculating the intrinsic or assay produce of bullion, are applicable to all the Company's mints, where the tolá weight has been adopted.

[1] These two are inserted on the authority of Kelly's 'Cambist;' it seems very advisable that the charges should be equalized at the three Presidency mints, as otherwise the desired uniformity of value cannot be maintained.

TABLE *of the Intrinsic or Assay Produce of Silver Bullion in Farrukhábád and Calcutta rupees, from the* 1*st of May*, 1833.

Weight of bullion in tolás or new weight.	Assay Report.	Touch, or fine silver, in 100 parts.	Produce in Farrukhábád, Madras, or Bombay Rs.	Produce in Calcutta or sikká rupees.	Weight of bullion in tolás or new weight.	Assay Report.	Touch, or fine silver, in 100 parts.	Produce in Farrukhábád, Madras, or Bombay rupees.	Produce in Calcutta or sikká rupees.
	dwts.					*dwts.*			
100	20 Br.	100.000	109.091	102.273	100	5 Wo.	89.583	97.727	91.689
,,	19½ Br.	99.792	108.864	102.060	,,	5½ Wo.	89.375	97.500	91.406
,,	18 Br.	99.583	108.636	101.846	,,	6 Wo.	89.167	97.273	91.193
,,	19½ Br.	99.375	108.409	101.633	,,	6½ Wo.	88.958	97.045	90.980
,,	18 Br.	99.167	108.182	101.421	,,	7 Wo.	88.750	96.818	90.767
,,	17½ Br.	98.958	107.955	101.208	,,	7½ Wo.	88.542	96.591	90.554
,,	17 Br.	98.750	107.727	100.994	,,	8 Wo.	88.333	96.364	90 341
,,	16½ Br.	98.542	107.500	100.781	,,	8½ Wo.	88.125	96.136	90.127
,,	16 Br.	98.333	107.273	100.568	,,	9 Wo.	87.917	95.909	89.915
,,	15½ Br.	98.125	107.045	100.355	,,	9½ Wo.	87.708	95.682	89.702
,,	15 Br.	97.917	106.818	100.142	,,	10 Wo.	87.500	95.455	89.489
,,	14½ Br.	97.708	106.591	99.929	,,	10½ Wo.	87.292	95.227	89.275
,,	14 Br.	97.500	106.364	99.716	,,	11 Wo.	87.084	95.000	89.062
,,	13½ Br.	97.292	106.136	99.502	,,	11½ Wo.	86.875	94 773	88.850
,,	13 Br.	97.083	105.909	99.290	,,	12 Wo.	86.667	94 545	88.636
,,	12½ Br.	96.875	105.682	99.077	,,	12½ Wo.	86.458	94 318	88.423
,,	12 Br.	96.667	105.455	98.864	,,	13 Wo.	86.250	94.091	88.210
,,	11½ Br.	96.458	105.227	98.690	,,	13½ Wo.	86.042	93.864	87.998
,,	11 Br.	96.250	105.000	98,437	,,	14 Wo.	85.834	93.636	87.784
,,	10½ Br.	96.042	104.773	98.225	,,	14½ Wo.	85.625	93.409	87.571
,,	10 Br.	95.833	104.545	98.011	,,	15 Wo.	85.417	93.182	87.358
,,	9½ Br.	95.625	104.318	97.798	,,	15½ Wo.	85.208	92.955	87.145
,,	9 Br.	95.417	104.091	97.585	,,	16 Wo.	85.000	92 727	86.932
,,	8½ Br.	95.208	103.864	97.372	,,	16½ Wo.	84.792	92.500	86.719
,,	8 Br.	95.000	103.636	97.159	,,	17 Wo.	84.583	92.273	86.506
,,	7½ Br.	94.792	103.409	96.946	,,	17½ Wo.	84.375	92.045	86.292
,,	7 Br.	94.583	103.182	96.733	,,	18 Wo.	84.167	91.818	86.079
,,	6½ Br.	94.375	102.955	96.520	,,	18½ Wo.	83.958	91.591	85.867
,,	6 Br.	94.167	102.727	96.306	,,	19 Wo.	83.750	91.364	85.654
,,	5½ Br.	93.958	102.500	96.094	,,	19½ Wo.	83.542	91.136	85.440
,,	5 Br.	93.750	102.273	95.881	,,	20 Wo.	83.333	90.900	85.227
,,	4½ Br.	93.542	102.045	95.667	,,	20½ Wo.	83.125	90.682	85.015
,,	4 Br.	93.333	101.818	95.454	,,	21 Wo.	82.917	90.454	84 801
,,	3½ Br.	93.125	101.591	95.241	,,	21½ Wo.	82.708	90.227	84.588
,,	3 Br.	92.917	101.364	95.029	,,	22 Wo.	82.500	90.000	84.375
,,	2½ Br.	92.708	101.136	94.815	,,	22½ Wo.	82.292	89.773	84.162
,,	2 Br.	92.500	100.909	94.602	,,	23 Wo	82.083	89.545	83.955
,,	1½ Br.	92.292	100.682	94.389	,,	23½ Wo.	81.875	89 318	83.736
,,	1 Br.	92.083	100.455	94.176	,,	24 Wo.	81.667	89.091	83.423
,,	½ Br.	91.875	100.227	93.963	,,	24½ Wo.	81.458	88.864	83.310
,,	Standard.	91.667	100.000	93.750	,,	25 Wo.	81.250	88.636	83.097
,,	½ Wo.	91.458	99.773	93.537	,,	25½ Wo.	81.042	88.409	82.884
,,	1 Wo.	91.250	99.545	93.323	,,	26 Wo.	80.833	88 182	82 671
,,	1½ Wo.	91.042	99.318	93.111	,,	26½ Wo.	80.625	87.955	82 463
,,	2 Wo.	90.833	99.091	92.898	,,	27 Wo.	80.417	87 727	82 244
,,	2½ Wo.	90.625	98.864	92.685	,,	27½ Wo.	80.208	87.500	82.032
,,	3 Wo.	90.417	98.636	92.471	,,	28 Wo.	80.000	87.273	81.819
,,	3½ Wo.	90.208	98.409	92.258	,,	28½ Wo.	79.792	87.045	81.605
,,	4 Wo.	90.000	98.182	92.046	,,	29 Wo.	79.583	86.818	81.392
,,	4½ Wo.	89.792	97.955	91.833	,,	29½ Wo.	79.375	86.591	81.179
						30 Wo.	79.167	86.364	80.972

And so on of bullion of inferior quality.

TABLE *of the Intrinsic or Assay Produce of Gold Bullion in Calcutta gold muhrs and Bombay gold rupees.*

Weight of bullion in tolas.	Assay in carats and grains.	Touch, or pure gold in 100 parts.	Intrinsic produce in tolas, or in Madras and Bombay gold muhrs.	Produce in new Calcutta gold muhrs of 204.710 grains.	Produce in old gold muhrs of 190.575 grains.	Weight of bullion in tolas.	Assay in carats and grains.	Touch, or pure gold in 100 parts.	Intrinsic produce in tolas, or in Madras and Bombay gold muhrs.	Produce in new Calcutta gold muhrs of 204.710 grains.
	c. g.						*c. g.*			
100	2 0 Br.	100.000	109.091	95.923	95.035	100	1 0 Wo.	87.500	95.454	83.831
„	1 3¾ Br.	99.740	108.861	95.674	94.787	„	1 0¼ Wo.	87.239	95.170	83.683
„	1 3½ Br.	99.479	108.523	95.423	94.540	„	1 0½ Wo.	86.979	94.886	83.433
„	1 3¼ Br.	99.219	108.239	95.173	94.293	„	1 0¾ Wo.	86.719	94.602	83.183
„	1 3 Br.	98.958	107.954	94.924	94.045	„	1 1 Wo.	86.458	94.318	82.933
„	1 2¾ Br.	98.698	107.670	94.674	93.798	„	1 1¼ Wo.	86.198	94.034	82.683
„	1 2½ Br.	98.437	107.386	94.424	93.550	„	1 1½ Wo.	85.937	93.750	82.434
„	1 2¼ Br.	98.177	107.102	94.174	93.303	„	1 1¾ Wo.	85.677	93.466	82.184
„	1 2 Br.	97.917	106.818	93.924	93.055	„	1 2 Wo.	85.416	93.182	81.934
„	1 1¾ Br.	97.656	106.534	93.675	93.808	„	1 2¼ Wo.	85.156	92.898	81.684
„	1 1½ Br.	97.396	106.250	93.425	92.560	„	1 2½ Wo.	84.896	92.614	81.434
„	1 1¼ Br.	97.135	105.966	93.175	92.313	„	1 2¾ Wo	84.635	92.329	81.185
„	1 1 Br.	96.875	105.682	92.925	92.065	„	1 3 Wo.	84.375	92.045	80.935
„	1 0¾ Br.	96.615	105.398	92.675	91.818	„	1 3¼ Wo.	84.115	91.761	80.685
„	1 0½ Br.	96.354	105.114	92.426	91.570	„	1 3½ Wo.	83.854	91.477	80.435
„	1 0¼ Br.	96.094	104.829	92.176	91.323	„	1 3¾ Wo.	83.594	91.193	80.185
„	1 0 Br.	95.833	104.545	91.926	91.075	„	2 0 Wo.	83.333	90.909	79.936
„	0 3¾ Br.	95.573	104.261	91.676		„	2 0¼ Wo.	83.073	90.625	79.686
„	0 3½ Br.	95.313	103.978	91.426		„	2 0½ Wo.	82.812	90.341	79.436
„	0 3¼ Br.	95.052	103.693	91.177		„	2 0¾ Wo.	82.552	90.057	79.186
„	0 3 Br.	94.792	103.409	90.927		„	2 1 Wo.	82.291	89.773	78.936
„	0 2¾ Br.	94.531	103.125	90.677		„	2 1¼ Wo.	82.031	89.489	78.687
„	0 2½ Br.	94.271	102.841	90.426		„	2 1½ Wo.	81.770	89.204	78.437
„	0 2¼ Br.	94.010	102.557	90.177		„	2 1¾ Wo.	81.510	88.920	78.187
„	0 2 Br.	93.750	102.273	89.928		„	2 2 Wo.	81.250	88.636	77.937
„	0 1¾ Br.	93.489	101.989	89.678		„	2 2¼ Wo.	80.990	88.352	77.687
„	0 1½ Br.	93.229	101.704	89.428		„	2 2½ Wo.	80.729	88.068	77.438
„	0 1¼ Br.	92.969	101.420	89.178		„	2 2¾ Wo.	80.469	87.784	77.188
„	0 1 Br.	92.708	101.136	88.928		„	2 3 Wo.	80.108	87.500	76.938
„	0 0¾ Br.	92.448	100.852	88.679		„	2 3¼ Wo.	79.948	87.216	76.688
„	0 0½ Br.	92.187	100.568	88.429		„	2 3½ Wo.	79.687	86.932	76.438
„	0 0¼ Br.	91.927	100.284	88.179		„	2 3¾ Wo.	79.427	86.648	76.189
„	Standard.	91.667	100.000	87.929		„	3 0 Wo.	79.166	86.364	75.939
„	0 0¼ Wo.	91.406	99.716	87.679		„	3 0¼ Wo.	78.906	86.079	75.689
„	0 0½ Wo.	91.156	99.432	87.430		„	3 0½ Wo.	78.646	85.795	75.439
„	0 0¾ Wo.	90.886	99.148	87.180		„	3 0¾ Wo.	78.385	85.511	75.189
„	0 1 Wo.	90.625	98.864	86.920		„	3 1 Wo.	78.125	85.227	74.940
„	0 1¼ Wo.	90.365	98.579	86.680		„	3 1¼ Wo.	77.864	84.943	74.694
„	0 1½ Wo.	90.104	98.295	86.430		„	3 1½ Wo.	77.604	84.659	74.440
„	0 1¾ Wo.	89.844	98.011	86.180		„	3 1¾ Wo.	77.344	84.375	74.190
„	0 2 Wo.	89.583	97.727	85.931		„	3 2 Wo.	77.083	84.091	73.940
„	0 2¼ Wo.	89.323	97.443	85.681		„	3 2¼ Wo.	76.823	83.807	73.691
„	0 2½ Wo.	89.062	97.159	85.431		„	3 2½ Wo.	76.562	83.523	73.441
„	0 2¾ Wo.	88.802	96.875	85.181		„	3 2¾ Wo.	76.302	83.239	73.191
„	0 3 Wo.	88.541	96.591	84.932		„	3 3 Wo.	76.042	82.954	72.941
„	0 3¼ Wo.	88.281	96.307	84.682		„	3 3¼ Wo.	75.781	82.670	72.691
„	0 3½ Wo.	88.021	96.023	84.432		„	3 3½ Wo.	75.521	82.386	72.442
„	0 3¾ Wo.	87.760	95.739	84.182		„	3 3¾ Wo.	75.260	82.102	72.192
							4 0 Wo.	75.000	81.818	71.942

Gold of inferior quality is not receivable for coinage in old standard muhrs.

And so on of bullion of inferior quality.

The refining charges on under-standard gold as applied at Calcutta are as follows:—

	car.	gr.			car.	gr.	
From	0	0¼	Wo.	to	1	1	Wo. ½ per cent.
From	1	1	Wo.	to	2	2	Wo. 1 per cent.
From	2	2¼	Wo.	to	3	3	Wo. 1½ per cent.
From	3	3¼	Wo.	to	5	0	Wo. 2 per cent.
From	5	0¼	Wo.	to	7	2	Wo. 2½ per cent., etc.

For old standard muhrs, merchants are obliged to bring their gold already refined to the requisite degree of purity.

The produce of any weight, in tolás, of assayed bullion is found by multiplying it by the number opposite to the assay in the proper column (of sikká or Farrukhábád rupees, or new or gold muhrs, as the case may be), and dividing by 100. To find the pure contents, the number in the third column 'or touch,' must be taken as the multiplier. For example:—

I. 5432 tolás of refined cake silver reported, on assay, to be 15½ dwts. Br. yield in sikká rupees, 5432 × 100.355 ÷ 100 = 5451.254, or sá. rupees 5451 4 1.

II. 1200 tolás of dollars at 5 Wo. contain of pure silver 1200 × 89.583 ÷ 100 = 1075 tolás pure.

III. 100 twenty franc-pieces, weighing 55.319 tolás, at 0 1½ c. grs. Wo. yield 55.319 × 86.430 ÷ 100 = 47.812 new gold muhrs.

These tables, and, indeed, all that are inserted in the present paper, express the fractions of the rupee, or of the tolá, in decimals. For converting this expression into the ordinary division of ánás and pá'ís, and *vice versá*, the following table will be found very convenient, and of constant application in monetary calculations.

TABLE *for reducing Ánás and Pá'ís into decimal parts of a Rupee.*
1 *aná* = 0.0625.

ÁNÁS.	0	1	2	3	4	5	6	7	8	9	10	11 pái
0	.0000	.0052	.0104	0156	.0208	.0260	.0312	.0365	.0417	0469	.0521	.0573
1	.0625	.0677	.0729	.0781	.0833	.0885	.0937	.0990	.1042	.1094	.1146	.1198
2	.1250	.1302	.1354	.1406	.1458	.1510	.1562	.1615	.1667	.1719	.1771	1823
3	.1875	.1927	.1979	.2031	.2083	.2135	.2187	.2240	.2292	.2344	.2396	.2448
4	.2500	.2552	.2604	.2656	.2708	.2760	.2812	.2864	.2917	.2969	.3021	.3073
5	.3125	.3177	.3229	.3281	.3333	.3385	.3437	.3489	.3542	.3594	.3646	.3698
6	.3750	.3802	.3854	.3906	.3958	.4010	.4062	.4115	.4167	.4219	.4271	.4323
7	.4375	.4427	.4479	.4531	.4583	.4635	.4687	.4740	.4792	.4844	.4896	.4948
8	.5000	.5052	.5104	.5156	.5208	.5260	.5312	.5365	.5417	.5469	.5521	.5573
9	.5625	.5677	.5729	.5781	.5833	.5885	.5937	.5990	.6042	.6094	.6146	.6198
10	.6250	.6302	.6354	.6406	.6458	.6510	.6562	.6615	.6667	.6719	.6771	.6823
11	.6875	.6927	.6979	.7031	.7083	.7135	.7187	.7240	.7292	.7344	.7396	.7448
12	.7500	.7552	.7004	.7656	.7708	.7760	.7812	7865	.7917	.7969	.8021	.8073
13	.8125	.8177	.8230	.8281	.8333	.8385	.8437	.8490	.8542	.8594	.8646	.8698
14	.8750	.8802	.8854	.8906	.8958	.9010	.9062	.9115	.9167	.9219	.9270	.9323
15	.9375	.9427	.9479	.9532	.9583	.9635	.9687	.9740	.9787	.9844	.9896	9948

EXCHANGES.

For the conversion of the rupee into the equivalent currency of other nations, it is necessary to take into consideration the fluctuating relative value of the precious metals *inter se*, from the circumstance of gold being in some, and silver in others, the legal medium of circulation.

It is also necessary to take account of the mint charge for coining at each place, which adds a fictitious value to the local coin. The 'par of exchange' is, for these reasons, a somewhat ambiguous term, requiring to be distinguished under two more definite denominations. 1st, the 'intrinsic par,' which represents that case in which the pure metal contained in the parallel denominations of coins is equal. 2nd, the 'commercial par,' or that case in which the current value of the coin at each place (after deducting the seignorage leviable for coinage) is equal: or in other words, 'two sums of money of different countries are commercially at par, while they can purchase an equal quantity of the same kind of pure metal.'[1]

Thus, if silver be taken from India to England, it must be sold to a bullion merchant at the market price, the proprietor receiving payment in gold (or notes convertible into it). The London mint is closed against the importer of silver; which metal has not, therefore, a minimum value in the English market fixed by the mint price: although it has so in Calcutta, where it may always be converted into coin at a charge of two per cent. On the other hand, if a remittance in gold be made from this country to England, its out-turn there is known and fixed: each new Calcutta gold muhr being convertible into 1.66 or $1\frac{2}{3}$ sovereigns nearly; but the price of the gold muhr fluctuates as considerably in India as that of silver does in England, the natural tendency of commerce being to bring to an equilibrium the operations of exchange in the two metals.

The exchange between England and India has, therefore, a two-fold expression; for silver, the price of the sikká rupee in shillings and pence:—for gold, the price of the sovereign in rupees. To calculate the out-turn of a bullion remittance in either metal, recourse may be had to the following

TABLES OF ENGLISH AND INDIAN EXCHANGES.

The data for the calculation of these tables are:—

1st. One *man*[2] (or 100lbs. troy) of silver (one-twelfth alloy) is coined into 3,200 Farrukhábád rupees, or into 3,000 sikká rupees, of which sixty-four and sixty respectively are taken as mint duty, being at the rate of two per cent.

[1] Kelly's 'Cambist,' iii., 13.

[2] A منّ *man* or *mann*. H מנה

2nd. 100lbs. troy of English standard silver (18-240ths alloy) are coined into 6,600 shillings, of which 400 are taken as seignorage or mint duty, being 4*s.* per lb., or nearly six per cent.; but the mint is not open to the holders of silver bullion, which is only purchased through the bank when required for coinage.

3rd. The sovereign (1-12th alloy) weighs 123.25 grains troy, and no duty is charged on its coinage. 100 lbs. of pure gold yields 5098.3 sovereigns, = 3069.5 new gold muhrs, = 3041.4 old gold muhrs, = 3490.9 Madras and Bombay muhrs.

TABLE *showing the produce of* 100 *sikká rupees and of* 1 *sikká rupee in shillings sterling at London, for different quotations of the price of silver in the London price current.*

At the London price of silver per troy ounce.		100 sikká rupees will produce	Exchange per sikká rupee.		Remarks.
s.	*d.*	*Shillings.*	*s.*	*d.*	
at 5	6	218.018	2	2.2	Intrinsic par of coins.
5	5	214.714	2	1.8	(2*s.* 1.64*d.*) Calcutta mint price of silver.
5	4	211.411	2	1.4	
5	3	208.108	2	1.0	(2*s.* 1.07*d.*) commercial par of exchange.
5	2	204.805	2	0.6	
5	1	201.501	2	0.2	(2*s.* 0.58*d.*) London mint price of silver.
5	0	198.198	1	11.8	
4	11	194.895	1	11.4	(5*s.* 2*d.*)
4	10	191.591	1	11.0	
4	9	188.288	1	10.6	
4	8	184.984	1	10.2	
4	7	181.681	1	9.8	
4	6	178.378	1	9.4	

TABLE *showing the produce of* 100 *Farrukhábád, Ságar, Sonat, Madras, or Bombay rupees* (*or* 100 *tolás*) *of Bengal standard silver* (*one-twelfth alloy*), *in shillings and the consequent rate of exchange.*

London price of silver per troy ounce.		100 Farrukhábád, Madras, or Bombay rupees will produce	Exchange per Farrukhábád rupee.		Remarks.
s.	*d.*	*Shillings.*	*s.*	*d.*	
5	6	204.390	2	0.5	Intrinsic par of coins.
5	5	201.293	2	0.15	(2*s.* 0.04*d.*) Calcutta mint price of silver.
5	4	198.196	1	11.8	
5	3	195.099	1	11.5	(1*s.* 11.51*d.*) commercial par of exchange.
5	2	192.002	1	11.1	
5	1	188.905	1	10.7	(1*s.* 11.04*d.*) London mint price of silver.
5	0	185.809	1	10.3	
4	11	182.712	1	10.0	(5*s.* 2*d.*)
4	10	179.615	1	9.6	
4	9	176.518	1	9.2	
4	8	173.421	1	8.8	
4	7	170.324	1	8.44	
4	6	167.228	1	8.06	

The exchange which a bullion remittance from England to India will yield at the London prices of the first column may be found by adding two per cent. to the columns of produce: thus, at 5*s.* an ounce, 185.8+3.7=189.5 shillings invested in silver bullion, will produce 100 Farrukhábád rupees, and give an exchange of 1*s.* 10$\frac{3}{4}$*d.* per Farrukhábád rupee. The same remark applies to the above table for sikká rupee exchanges.

TABLE *shewing the produce of a remittance to London in gold bullion or coin, and the corresponding exchange in Calcutta, Farrukhábád, Madras, and Bombay rupees.*

Calcutta price of Gold Muhr.		Calcutta price of English Sovereign.	Calcutta price of standard Gold Bullion per 100 tolás.	Intrinsic produce of 100 Ságar rupees thus invested in England.	Intrinsic produce of 100 Farrukhábád, Madras, or Bombay rupees ditto.	Exchange per sikká rupee.		Exchange per Farrukhábád, Madras, and Bombay rupee.	
Rs.	*Án.*	*Sá. Rs.*	*Sá. Rs.*	*Shillings.*	*Shillings.*	*s.*	*d.*	*s.*	*d.*
16	0	9.633	1406.868	207.616	194.640	2	0.91	1	11.35
16	2	9.708	1417.859	206.006	193.131	2	0.72	1	11.17
16	4	9.783	1428.850	204 422	191.646	2	0.52	1	10.99
16	6	9.858	1439.841	202.861	190.183	2	0.33	1	10.82
16	8	9.934	1450.832	201.325	188.743	2	0.15	1	10.64
16	10	10.009	1461.823	199.811	187.323	1	11.97	1	10.48
16	12	10 084	1472.814	198.329	185.924	1	11.79	1	10.31
16	14	10.160	1483.805	196.850	184.547	1	11.62	1	10.16
17	0	10.235	1494.797	195.403	183.190	1	11.44	1	9.98
17	2	10.310	1505.788	193.977	181.853	1	11.27	1	9.82
17	4	10.385	1516.779	192.571	180.535	1	11.10	1	9.66
17	6	10.462	1527.770	191.185	179.236	1	10.94	1	9.50
17	8	10.536	1538.761	189.820	177.956	1	10.77	1	9.35

[The old Calcutta gold muhr is omitted in this table, because it bears an artificial value, 14 or 15 ánás higher than the new standard muhr.]

The above tables give intrinsic results; that is, they exclude all calculation of charges, insurance, freight, commission, etc., which are of a variable nature. It may be generally assumed, however, that four per cent., or one penny in the rupee, will cover all expenses of remittance to England, from which may be deducted a saving of six months' interest, when comparing the transaction with mercantile bills of twelve months' date.

The par of exchange with other countries may be estimated from the intrinsic and mint produce of their coins, thus:—assuming the Spanish dollar to weigh 416 grains troy, and to be five dwts. worse in assay, we have for

SPAIN AND AMERICA.

100 DOLLARS { = 231.111 tolás in weight, = 225.858 Fd. rupees, = 211.742 sikká rupees, } or deducting duty of 2 per cent. { 221.341 Fd. rupees. 207.508 sikká Rs.

The Spanish dollar forms also the currency of the Straits of Malacca

and of Manilla; and it is extensively known in the colonies of England, Ceylon, the Cape, Australia, etc.

For the British colonial possessions, however, an Order of Council was promulgated on the 23rd March, 1825, extending to them the circulation of British silver and copper money, and directing all public accounts to be kept therein. Where the dollar was, either by law, fact, or practice, still a legal tender, it was to be accounted equivalent to 4*s.* 4*d.*, and *vice versâ*. For the Cape of Good Hope, where the circulation consisted of paper rix-dollars;—and Ceylon, where it consisted of silver and paper rix-dollars, as well as a variety of other coins;—it was provided that a tender and payment of 1*s.* 6*d.* in British silver money should be equivalent to the rix-dollar. The sikká rupee was to be allowed circulation at 2*s.* 1*d.* and that of Bombay at 1*s.* 11*d.*, and the five-franc piece at 4*s.* These regulations are still in force in Ceylon, Australia, Van Diemen's Land, the Cape, Mauritius, and St. Helena.

FRANCE.

The French kilogramme of standard silver (1-10th alloy) is coined into 200 francs, and the kilogramme weighs 85.744 tolás; therefore

100 FRANCS { = 42.872 tolás in weight, = 42.092 Fd. rupees, = 39.462 sikká rupees, } or deducting duty of 2 per cent. { 41.250 Fd. rupees. 38.673 sikká rupees.

The coinage duty on silver at Paris is $1\frac{1}{2}$ per cent., or $\frac{1}{2}$ per cent. less than in India; hence it will be found that,

100 sikká rupees realize almost precisely 250 francs at the Paris mint.

Minted gold in France is worth $15\frac{1}{2}$ its weight of minted silver, or the kilogramme is coined into 155 napoleons or twenty-franc pieces: the seignorage on gold is only $\frac{1}{3}$ per cent.

One kilogramme of pure gold yields 81.457 gold muhrs, or (deducting 2 per cent. mint duty) 79,828 ditto, therefore

100 NAPOLEONS { = 55.319 tolás in weight, = 47.315 old gold muhrs, = 47.757 new ditto, = 54.313 Madras and Bombay gold rupee, } or deducting duty of 2 per cent. { 46.369 old gold mrs. 46.802 new ditto. 53.227 Madras and Bombay gold rupee.

CHINA.

As the Chinese have no gold or silver coins, but make payments in those metals by weight, it is sufficient to state the value of the tael of the sycee and dollar silver usually current with them.

100 tael of Sycee silver av. 15 dwts. Br. { = 322.135 tolás in weight = (120 oz. 16 dwts. English). = 344.108 Fd. rupees, = 322.602 sikká rupees, } or deducting duty of 2 per cent. { 337.226 Fd. rupees. 316.150 sá. rupees.

100 tael of dollars 5 Wo. { = 314.811 Fd. rupees, = 295.135 sá. rupees, } or deducting duty of 2 per cent. { 308.515 Fd. rupees. 289.233 sá. rupees.

The par of exchange with other places may in a similar manner be found from the table of coins.

GENERAL TABLE OF INDIAN COINS.

When it was said, at the commencement of this paper, that the rupee was the universal unit of currency throughout India, a reservation should have been made for those parts of the Peninsula where the Pagoda and Fanam still circulate. There are, in fact, two distinct systems still prevalent, the Hindú and the Musalmán; and although the former has become extinct throughout the greater part of Hindústán by the predominance of the Muhammadan power, it is traceable in the old coins found at Kanauj, and other seats of ancient Hindú sovereignty, which agree nearly in weight with the coins still extant in the several petty Hindú States of Southern India.

HINDÚ SYSTEM.

The unit of this system was of gold, and the old specimens found are of sixty or one hundred and twenty grains in weight: showing an evident connection with the Grecian drachma and didrachma of gold (or χρυσος and διχρυσος) and confirming the testimony afforded by the device and symbols of old Hindú coins, of a direct descent from their Bactrian prototype.

As the Muhammadan power never gained an entire ascendancy in the Peninsula, the same system of currency continued to be issued from the mints of a number of petty Rájships in Malabar and the Carnatic. The principal of these were at Bangalor and Maisúr, under the Ikkerí Rájá, who coined the Sadasiva húns,[1] so called from a former Rájá. They bore the figures of Siva and Párvatí on one side, and a temple on the reverse. During the usurpation of Hyder 'Alí and Tipú, Bahádurí and Sultání húns were struck in Maisúr; the former are distinguished by a ح the initial of Hyder's name. At Travancore also a mint has existed for a very long period, coining Ánandrái húns, so called from a prince of that name. The Ikkerí and Travancore mints are the only two now in existence.

The name of this coin among Europeans is 'Pagoda,' a Portuguese appellation derived from the pyramidal temple depicted on one side of it. The proper Hindú name is Varáha,[2] 'wild boar,' and doubtless originated in a device of the Boar Incarnation, or Avatár, of Vishnu upon the ancient coinage of the Carnatic; for the same figure appears as the signet of the Rájás of that country, on some old copper grants of land in the Mackenzie collection.[3] The Hindú name probably

[1] هون [2] वराह

[3] The Varáha also appears on some ancient silver coins of Orissa. See Wilson's account of coins of this type, 'Asiatic Researches,' vol. xvii. p. 586.

varied according to the image on the coin; thus we find the Rámatanka having the device of Ráma and his attendants; and the Matsya[1] hún of Vijayanagar with four 'fish' on the obverse. Other pagodas have Vishnu, Jaganáth, Venkateswar, etc. on them; those with three Swámís, or figures, are of the best gold, and are valued ten per cent. higher than the common pagoda.

'Hún' is the common term used by the Muhammadan writers, and indeed generally by the natives, for the pagoda. It signifies 'gold' in the old Carnatic language.

The hún was subdivided into 'fanams' and 'kás.' Fanam, or more properly panam,[2] is identical with the word pan, known in this part of India as one of the divisions of the Hindú metrical system, now applied chiefly to a certain measure of kaurís and copper money. The old fanam was of gold only, and was one-sixteenth of a hún. In the 'Lilávatí' we find sixteen pana = one dharan,[3] sixteen dharan = one nishk;[4] where the dharan (or dharam) seems to accord with the hún, which, as before said, is identical in weight with the Greek drachma. The Ikkerí pagoda still contains sixteen fanams: that of Vírarái and Anandrái, fourteen; and the Kalyan pagoda, twenty-eight. The division adopted by the English was forty-two.

'Kás' may be a corruption of the Sanskrit word Karsha,[5] which is mentioned in Colebrooke's 'Essay on Indian Weights,' as the same with the pan: 'a Karsha, or eighty raktikás[6] (ratís) of copper is called a pana, or Karsha-pana.'[7] It is now the eightieth part of a pan, but similar discrepancies are common throughout, and the simple word is all that can be identified as having survived the changes of system.

As accounts were formerly kept at Madras in this currency, the following particulars extracted from Kelly's 'Cambist' will be found useful for reference:

'According to the old system, accounts are kept in star-pagodas, fanams, and kás.

8 kás = 1 fanam.

336 kás = 42 fanams = 1 pagoda.

The Company reckon twelve fanams to the Arcot rupee, and three and a half rupees to the pagoda. The bázár exchange fluctuates from thirty-five to forty-five fanams per pagoda, the latter being a gold coin, and the former of silver; but fanams were also coined of base gold. Copper i-, v-, x-, and xx-, kás pieces were coined in England, by contract, for Madras so early as 1797; the xx-kás is also called 'dodo' and 'falús.'[8]

The star-pagoda weighs 52·56 grains, and is nineteen one-fifth carats fine: it is, therefore, intrinsically worth 7*s.* 5¼*d.* sterling; but it is commonly valued at 8*s.* Many varieties of the pagoda circulate on the Coromandel coast, which will find their places in the General Table.

[1] मत्स्य [2] पण [3] धरन् [4] निष्क् [5] कर्ष

[6] रक्तिका [7] कर्षपण [8] فلوس plural of فلس

In 1811 a coinage from Spanish dollars took place, consisting of double rupees, rupees, halves, and quarters; and pieces one-, two-, three-, and five-, fanams; the rupee weighed 186·7 grains. A silver coinage of half- and quarter-pagodas of dollar fineness also then took place; the half-pagoda weighed 326·73 grains troy, and was equal to $1\frac{3}{4}$ Arcot rupees. By a proclamation of 7th January, 1818, the silver rupee of one hundred and eighty grains was constituted the standard coin, and all accounts and public engagements were ordered to be converted at the exchange of three hundred and fifty rupees per hundred pagodas.

The proportion between the old and new currency is therefore now $3\frac{1}{2}$ rupees per pagoda; and in copper seventy-five kás old currency = fourteen paisá new currency.'

MUSALMÁN SYSTEM.

The Musalmán system, of which the muhr and the rupee are the characteristic denominations of coin, assumes at the present day a multifarious appearance from the great variety in weight and value of the rupees current in different parts of India. That they have a common origin; and, in fact, that most of the rupees now issued from the Native mints of Central India are of modern date, is easily proved, since they almost all bear the impress of Sháh 'Alam, like our own coin.

The silver rupee was introduced, according to Abú'l-fazl, by Shír Sháh, who usurped the throne of Dihlí from Humáyun in the year 1542. Previous to his time, the Arabic dirham[1] (silver drachma), the gold dínár[2] (denarius auri), and the copper falús[3] (follis) formed the currency of the Moghul dominions. Shír Sháh's rupee had, on one side, the Muhammadan creed; on the other, the emperor's name and the date in Persian; both encircled in an annular Hindí inscription. Since 'the same coin was revived and made more pure' in Akbar's reign, we may assume the original weight of the rupee from Abú'l-fazl's statement, to have been eleven and a quarter máshas[4]; Akbar's square rupee, called from its inscription the Jalálí,[5] was of the same weight and value. This coin was also called the Chahár-yárí,[6] from the four friends of the prophet, Abu-bakr, Omar, Osman, 'Alí, whose names are inscribed on the margin. This rupee is supposed by the vulgar to have talismanic power.

Concerning the weight of the másha some difficulty prevails, as this unit now varies in different parts of India. Mr. Colebrooke makes it seventeen grains and three-eighths nearly; but the average of several gold and silver jalálís of Akbar's reign, found in good preservation, gives 15·5 grains, which also agrees better with the actual másha of

[1] درهم [2] دينار

[3] This name is still preserved on the Madras paisá or Kás pieces.

[4] मास, ماشه [5] جلالي [6] چهار ياري

many parts of Hindústán.[1] By this calculation the rupee originally weighed 174·4 grains troy, and was of pure silver (or such as was esteemed to be pure). The same standard was adopted by the Emperor Akbar, and accordingly we find coins of Akbar's reign dug up in

[1] The following are the másha weights sent home for examination in 1819, as published in that highly useful work, Kelly's 'Cambist':

Jálna másha	15.373 grs.	The Patna másha is called...	18.5 grs.
Bellary	14 687	The Benáres from several specimens	17.7
Málwá	15.833	The Calcutta másha, by Kelly	32.0
Súrat	15.600		
Ahmadnagar	15.700		
Puna	15.970		

But probably this was a double másha. The average of all these agrees nearly with the Akbarí másha.

A gold jaláli of Láhor, rather worn, weighs 186·6: this may be the 12½ másha coin mentioned by Abú'l-fazl, which would give fifteen grains for the másha.

[I annex some incidental information on the subject of Shír Sháh's coin-weights and values, which I had occasion to draw up some years ago. I insert the entire passage in this place as further illustrative of the true weight of the másha.

"I have previously ('Coins of Pathán Kings of Dehlí,' Preface, p. vii.) assumed, from existing specimens of the silver money of Shír Sháh, that the original mint standard of his rupees was calculated at an average weight of 178 grains, if not more. Abú'l-fazl's statement on the point, scrutinized more critically than it has heretofore been, affords a singularly close confirmation of this inference. I find it recorded in no less than four excellent copies of the original Persian 'Ayín-i Akbarí,' that the rupee of Akbar, which was based upon that of Shír Sháh, weighed eleven and a half máshas; the same weight is assigned in these copies of the MS. to Akbar's jaláli, which is avowedly identical in value with the former.[a] I mention this prominently, as Gladwin, in his translation (I. pp. 29, 35, etc.) has given eleven and a quarter máshas as the weight of each of these coins; and Prinsep, in accepting Gladwin's figures, was led to place the weight of the old rupee at nearly four grains below its true standard.

"There is some doubt as to the exact weight we are to allow to the másha, which varied considerably in different parts of India. Prinsep has determined the Dehlí másha to be 15.5 grains, and admitting this, the result shows Shír Sháh's rupee to have weighed 178.25 grains of what was esteemed pure silver.

"The assignment of 15.5 grains to the Shír Sháhí másha is equally well borne out in the test afforded by Akbar's own coins. In order to avoid the very probable error of mistaking the identical class, among three but little varying denominations of the gold coinage, to which any given specimen within our reach should belong, I confine my reference to the silver money of Akbar, which, though differing in its various mintages, in types and legends, was preserved, in effect, uniform in weight and value. Marsden has contributed an example (No. DCCCXXIV.) of a square jaláli of this Pádsháh, weighing 176.5 grains: had the tolá at this time been fixed at 180 grains, this coin would contain four grains more than the law required; as it is, even allowing for wear, it shows a return of 15.3 grains to each of the 11½ máshas of 15.5 grains, which should, under the higher scale of weights, originally have constituted its total on issue from the mint.

"The adoption of this 15.5 grain másha as a standard, necessitates a concurrent recognition of a proportionately increased weight in the tolá as then in use; we can scarcely suppose the twelve máshas composing the tolá to have aggregated 186 grains, while the tolá itself remained at the 180 grains modern usage has assigned it. We have fortunately at hand a second means of proving the question, in the due determination of the intrinsic contents of the pieces composing the lower currency of the period, and the result will be found to show sufficient confirmation of the theory which places the másha of Shír Sháh at 15.5, and the tolá at 186 grains troy.

[a] Gladwin, 'Ayín-i Akbarí,' I. 62, 59, 70. See also note [2], p. 5.

various places, and worn, weighing from one hundred and seventy to one hundred and seventy-five grains.

Cabinet specimens of the coins of Jahángír, Sháh Jahán, and Aurangzíb have also an average weight of one hundred and seventy-five

Forty dâms of copper, we are told, were in Akbar's time equivalent in account, and ordinarily in exchange, to one rupee, and the dâm of copper is itself defined at 5 tânks, or 1 tolá 8 máshas and 7 ratís in weight. The measure of value thus specified is likewise distinctly stated to be a continuation of a previously existing species of money, which at the moment when Abú'l-fazl wrote, went by the name of 'Dâm.' There can be but little hesitation in admitting, almost *primâ facie* on the evidence available, that the copper pieces classed under Nos. 185, 186, Vol. xv., 'Numismatic Chronicle,' were the identical coins of Shír Sháh, to which the succeeding dâms of Akbar were assimilated; or, in other words, that they were in weight and value (whatever their name) the dâms of the Afghán Sultán. It is a nicer point to determine the precise contents in grains attending the original mint issue of these coins; but first taking the figures now proposed for máshas and tolás, we obtain from 1 tolá 8 máshas and 7 ratís, at 186 per tolá, a sum of 323.5625 grains; and then testing this return of the actual present weight of extant coins, we obtain a very reasonably close approximation to our figured result. It is true that the general average of the various existing provincial coins of this class minted during the reigns of Shír Sháh and his Afghán successors, would necessarily run somewhat below the rate of 323.5 grains; but we have to allow a considerable per centage for loss by wear in such heavy coins, especially composed as they are of copper, which metal would always continue more freely current, and consequently suffer far more from the abrasion incident to frequent transfers, than the more carefully guarded and less readily exchanged silver and gold. However, we may, without claiming too much margin on these grounds, fairly consider ourselves within the mark in identifying the general series of coins under review as having originally an intentional standard of 323.5 grains, inasmuch as we can at this day produce several specimens of the coinage weighing 322 grains, and in one instance of a Hissár coin, we can reckon no less than 329 grains. Added to this, we have the evidence of Ferishta that in his day there was a paisá! (or fixed weight? پول[a]) which was rated at 1¾ tolás, which, at 186 grains the tolá, gives even a higher return of 324.5 grains.

"At the same time, on the other hand, it would be impossible to reduce the coins that furnish our means of trial, to anything like so low a general average as would admit of 314 grains (or the produce of the simple 180 grains total) being received as the correct issue weight.

"Adopting, then, the rate of 323.5 grains as the legitimate weight of these copper pieces, forty of which exchanged against a rupee, we have a total of 12,940 grains of copper as equal to 178 grains of silver, which determines the relative value of silver to copper as 1 to 72.7. If this be a correct estimate, there were in each dâm 9.29 chítals,[b] and in the Shír Sháhí rupee 371.8 chítals, instead of the old 320 divisional coins of that name and value, which went to the lighter silver piece of former days, when also the comparative value of silver and copper stood at a more favourable ratio for the latter."—E.T.]

[Colonel William Anderson, C.B., an officer who has had extensive experience in

[a] "پول (Pehlví, پهل Pársí, *puhal*); 2) Obolus et res quævis obolo similis, ut squama piscis, simil. (فلوس) Borhâní Kátiu. Inde پي پلي n.c. Pecuniæ defectus."—Vullers. See also 'Journal of the Asiatic Society of Bengal,' vii. 898, and Frœhn's 'Recensio,' p. 207, etc. Abú'l-fazl says the پل of olden days was equal to four tolás.—Gladwin's 'Ayín-i Akbarí, iii. 89. Ferishta again gives 1 or 1¼ tolás!

[b] چيتل

grains pure, and the same prevails with little variation, up to the time of Muhammad Sháh, in the coins of opposite extremities of the empire; or struck in the Súbahs of Súrat, Ahmadábád, Dihlí, and Bengal.

The following are a few examples of this agreement:

Akbarí, of Láhor.....	175·0 grains.	Sháh Jahání, of Agra	175 0 grains.
——— Agra	174·0 do.	——— Ahmadábád.	174·2 do.
Jahángírí, Agra	174·6 do.	——— Dihlí.....	174·6 do.
——— Alláhábád	173·6 do.	——— Súrat.....	175·0 do.
——— Kandahár.	173·9 do.	——— Láhor	174·0 do.

To which may be added from the Table of Coins assayed at the mint, reckoning pure contents only:

Dihlí Sonat	175·0 grains.	Dacca, old.....	173·3 grains.
———'Alamgír ...	175·5 do.	Muhammad Sháhí	170·0 do.
Old Súrat rupee	174·0 do.	Ahmad Sháh	172·8 do.
Murshidábád	175·9 do.	Sháh 'Alam (1772)	175·8 do.
Persian rupee of 1745	174·5 do.		

The above quotations are sufficient to show that the Moghul emperors maintained a great uniformity in the currency of their vast empire. They were also tenacious of their privilege of coining, and we find from Abú'l-fazl that gold was only allowed to be minted at Agra, Bengal, Ahmadábád (in Gujarát), and Kábul. Ten other cities were allowed to coin silver, namely, Allahábád, Súrat, Dihlí, Patna, Kashmír, Láhor, Multán, and Tánda: while, besides the former, twenty-eight towns of minor note were permitted to fabricate copper money, viz., Ajmír, Oudh, Attak, Alwar, Badáon, Benáres, Bhakar, Bhara, Patan, Jaunpúr, Jálandhar, Saháranpúr, Sárangpúr,

connexion with Indian weights and measures, has favoured me with the subjoined independent results of his calculations on the general question.

"I am inclined to consider that the weight of the ratí may be assumed, perhaps as an extreme proportion, as high as 1.93 grains, and the másha at 15.44 grains, which will give the following return for the gold, silver, and copper coins of Akbar's time:

Aftábí	225 grains.
Jaláli	187 do
Round muhr	169 do
Rupee (silver)	177 do
Dám (copper).....	307 do "

The result tabulated in correspondence with these data appears as follows:

1	Ratí	=			=	1.93 grains.
8	Ratís	=	1	Másha	=	15.44 „
4	Máshas	=	1	Tánk	=	61.76 „
3	Tánks[a]	=	1	Tolá	=	185.2 „
1.666	Tolás	=	1	Dám[b]	=	307.4 „
30	Dáms	=	1	Ser	=	9222.0 „
40	Sers[c]	=	1	Man	=	368,880.0 „

The relative values of the metals are estimated by Colonel Anderson—

Gold to silver	9.4 to 1
Silver to copper	70.0 to 1 —E.T.]

[a] S टङ्क ٹانک also P تنکہ 'gold, money, a particular species of coin.'

[b] H دام

[c] S سیر (सेटक)

Sambhal, Kanauj, Rantanbhor, Hardwár, Hissár, Kálpí, Gwáliár, Gorakhpúr, Kalánor, Lukhnow, Mandau, Nágor, Sirhind, Siálkot and Saronj.[1]

The whole of the discrepancies which we now find in the rupees of various places seem to have arisen out of the disturbances and breaking up of the empire in the reigns succeeding Muhammad Sháh, when numerous mints were established by ministers and by the viceroys of the principal Súbahs who were assuming independence; and the coin was gradually debased as the confusion and exigencies of the time increased. The Maráthí and other Hindú states also established mints of their own, retaining, for form's sake, however, the Emperor's name and superscription, as a titular avowal of Dihlí supremacy.

We may thus trace with tolerable accuracy the causes of the difference in the currencies of our own provinces, and the happy chance which brought those of Madras, Bombay, and Farrukhábád to such close approximation.

The extent to which the irregularities of the mints had proceeded in the turbulent reign of Sháh 'Alam is thus described in the preamble of Regulation XXXV., 1793, the first which treats of mint matters:— 'The principal districts in Bengal, Behar, and Orissa had each a distinct silver currency, consisting either of nineteenth sun Moorshedabadees, or old or counterfeit rupees of various years coined previous or subsequent to the Company's administration.' The circumstance of the date of coinage being inserted on the coin enabled the shroffs[2] to recog-

[1] [As likely to assist those who would desire to trace these names on the original coins, I subjoin an alphabetical list of Akbar's mints in the Persian character, extracted from MSS. of Abú'l-fazl's 'Ayín-i Akbarí.'

1 اتک	12 بهکر	23 سرونج	33 کلانور
2 اجمیر	13 بهره	24 سرهند	34 گوالیار
3 احمد آباد	14 پٹن	25 سنبهل	35 گورکهپور
4 آگره	15 پٹنه	26 سورت	36 لاهور
5 الور	16 ٹانڈه	27 سهارنپور	37 لکهنو
6 اله باس	17 جالندهر	28 سیالکوٹ	38 متهره
7 اوده	18 جونپور	29 قنوج	39 ملتان
8 اوجین	19 حصار (فیروزه)	30 کابل	40 منڈو
9 بداون	20 دهلي	31 کالپي	41 ناگور
10 بنارس	21 رنتنبهور	32 کشمیر	42 هردوار
11 بنگاله	22 سارنگپور		

[E.T.—

[2] صرّف *ṣarráf*, 'a money-changer.'

nize each, and so to apply the battá[1] to which the known debasement of each entitled it: it was rather a convenience therefore to restrict the circulation of one species to one district, although so much deprecated in the Regulation in question. In exchanges from one place to another, there however, might be, as stated, room for much abuse among the money-dealers. The Company resolved to remedy this evil in 1793, by declaring that all rupees coined for the future should bear the impression of the nineteenth year of Sháh 'Alam, and thus, by its adoption at that early period, it has happened that the sikká rupee is the only one of their coins which retains the full value of the original Dihlí rupee at the present day.

The Súrat rupee of the Moghul Emperor was in like manner about the same time adopted as the currency of the Bombay Presidency: it weighed 178.314 grains, and contained 172.4 pure, being thus nearly equal to the Dihlí rupee. By an agreement of the English government with the Nawáb of Súrat, the rupees coined by both were to circulate at par, and they were mutually pledged to preserve its standard. The Nawáb's rupees, however, were soon found to contain 10, 12, and even 15 per cent. of alloy; in consequence of which, the Bombay rupees were melted down and re-coined at Súrat; the coinage of silver in the Bombay mint was suspended for twenty years, and the Súratís alone were seen in circulation. At length, in 1800, the Company ordered the then Súrat rupee to be struck at Bombay, and thenceforth it became fixed at 179 grains weight, 164.74 pure. The muhr was also equalized in weight thereto.[2] Lastly, in 1829, under orders from the Home Government, the currency of the West was equalized with that of Madras, by the adoption of the one hundred and eighty grain rupee and muhr.

The Arcot rupee, according to our Assay Tables, in 1788, still retained one hundred and seventy grains of pure silver, and subsequently, when coined at the mint of Fort St. George, it had a weight of 176.4 grains, or 166.477 grains pure, until the new system was introduced in 1818, and the Madras one hundred and eighty grain rupee was established. From some reason or other, perhaps from commerce between the places, the Chittagong and Dacca currency formerly consisted of Arcot rupees; and they were for some time coined expressly for those districts at the Calcutta and Dacca mints; the average of many of various denominations still circulating in Chittagong agrees closely with the Farrukhábád rupee.

It would be a difficult task to unravel the progress of deterioration of the currency in the Upper Provinces, the more immediate seat of revolutions in the eighteenth century. But one instance may be given,

[1] बट्टा بٹّہ *battá*, 'difference or rate of exchange.'

[2] Kelly's 'Cambist,' vol. i. p. 94.

in the Najíbábád rupee, as an example of the conduct of all the other mints. One hundred specimens of this species of rupee, of different dates, now current in Murádábád, were selected by the Collector of Bijnor for examination, in 1832. It may be observed, *en passant*, that many of the discrepancies in our Tables between coins of one denomination are doubtless owing to the neglect of noting the dates of their fabrication when sent for assay; the knowledge of the variation in value of the coins of various years, as before stated, led to the system of battá early introduced and fostered by the money-changers, to the perplexity of accounts and money transactions, and the nullification of legislative enactments.

The Najíbábád mint was established by Najíb-ud-daula, the Rohilla chief who exercised so powerful a sway on the fortunes of the last monarchs of Dihlí. The Barellí and Chandausí mints were also under his control. The rupees struck by him and by Zábita Khán were originally of the Dihlí standard: few of these are now met with, as they are in demand for silver ornaments, etc. From the year 26 of Sháh 'Alam (1784-5) to 43 (1801-2) they evince a gradual deterioration, both in weight and fineness. The province of Rohilkhand was, during the whole of this time, annexed to the Súbah of Oudh, as shewn by the symbol of a rohu[1] fish on the field of the coin. The three first assays in the list are from single coins, the remainder are averages.

Weight, Assay, and Value of the Najíbábád rupee, from A.D. 1778 *to* 1801-2.

Inscription, the usual Sháh 'Alam distich, year of reign, and Hijra date. Symbols, a fish on the obverse, a crescent on the reverse.

By whom coined.	San or year of reign.	Weight Troy.	Assay.	Value of 100 in Fd. Rs.
Najíb-ud-daula	20	173.8	11½ Br.	101 9 8
	22	173.6	13 Br.	102 2 4
	23	172.2	15½ Br.	102 2 6
	24	173.3	12 Br.	101 8 6
Zábita Khán	25	172.4	10 Br.	100 2 0
	26	172.4	9 Br.	99 11 0
	29	171.1	10 Br.	99 6 0
Ghulám Kádir	30	171.0	5½ Br.	97 10 6
	32	169.5	8 Br.	97 9 6
	33	170.0	7 Br.	97 7 0
	34	170.2	5½ Br.	96 14 8
	36	170.0	7 Br.	97 10 0
	37 39 40	171.1	5 Br.	97 3 6
	41	169.5	3 Br.	95 7 2
	42	169.3	1 Br.	94 7 9
	43	169.0	Stand.	93 14 3

[1] s रोहित, روہت

Thus, in the course of twenty-three years, a deterioration of nine per cent. was effected. So gradual a change, however, should rather be ascribed to the malpractices of the mint officers, than to any fraudulent intention of the government.

The Nawáb-Vazír of Oudh had mints also at Lukhnow, Benáres, and Farrukhábád: in these the same process was going forward, until arrested by the successive acquisitions of the English.

The Benáres mint had been established by Rájá Balwant Singh, under a Sanad[1] from Muhammad Sháh, in 1730. It remained under Native management for twenty years after the province was ceded to the Company in 1775. The rupee had the full weight of one hundred and seventy-five grains, and was $2\frac{1}{4}$ per cent. better than the present rupee, or about equal to the Dihlí rupee of that date. It fell in value subsequently about four ánás per cent., and there, of course, remained under English management until it was abolished in 1819, and the Farrukhábád rupee substituted in its stead.

The Lukhnow rupee struck at the Fatehgarh mint had in like manner gradually diminished to 165.2 grains pure, when the Doáb was ceded to the British in 1802, and when it was assumed as the standard rupee of the new territory[2] under the designation of the Lukhnow forty-fifth san sikká, more commonly called the Farrukhábád rupee.

We have thus endeavoured to trace briefly the origin of the three, or rather four, coins chosen for the circulation of the Company's territories, and have explained how it happened fortuitously that the Bombay, the Madras, and the Farrukhábád (or Sonat) rupee are nearly of the same intrinsic value.

	Pure contents.
Arcot rupee	165 grains.
Bombay	164·7 „
Farrukhábád	165.2 „

The alteration of the standard of purity, in 1818, did not affect the proportion of pure metal, but the facility of equalizing the three coins had been observed both in England and in India; and had been the subject of frequent Minutes by the Court, by the Indian Government, by the Mint Committee, and the officers of the mint; and when Ságar mint was established in 1825, it was ordered to coin new Farrukhábád rupees of one hundred and eighty grains weight, the same as the standard of Madras, or containing one hundred and sixty-five grains pure.

The Benáres mint alone continued to coin Farrukhábádís of 180.234 grains until its abolition in 1829: and the Calcutta mint since coined

1 سند *sanad*, 'a grant, warrant, charter.'

2 Reg. XI. 1805.

them of the same weight, until the opportunity was taken finally of equalising the whole by Regulation VII. 1833.

A few words are now necessary to explain the progress of debasement in the coinage of Haidarábád, Nágpúr, Ságar, the Rajpút and other states of Central India, as far as the imperfect data at our command will permit: they are chiefly derived from the reports of the government officers in Ajmír, Málwá, and the Narbadda provinces, to queries circulated through the Mint Committee in 1818 and 1823, when the important question of equalising the coinage of Central India was under agitation.

We have before remarked, that none of the coins now forming the circulation of Hindústán bear any other name than that of Sháh 'Alam, and although we have no perfect information of the origin or date of the mints of Puna, Nágpúr, or of the principal states of Rájpútána, still we may safely assume that, until the authority of Dihlí was annihilated, the representative of the monarch in the various Súbahs, or provinces, alone exercised the privilege of coining: and that even when it was assumed by chieftains already in actual independence, the form of a sanad or permission from the Emperor was obtained by purchase or extortion. The petty Rájá of Dattiah, for instance, was indignant at the supposition that he had opened his mint without authority,[1] and of all the chiefs within Lieut. Moody's agency, Rájá Pratáp Singh of Chatrapúr was the only one who could not produce his authority. The chiefs of Jhánsí and Jálaon cited the sanction of the Peshwá: the Tahrí Rájá, the tacit permission of the English. No notice, however, of mints was found in any of the sanads or treaties to which that officer had access.

When first established, the mints were no doubt in most cases made the source of fraudulent profit to the government, by the issue of a debased coin, which was supported at an enhanced nominal value, through the interdiction of the purer standards of neighbouring districts. A Hindú prince, or the minister who rules for him, is in general a money-dealer; thus at Kotá the executive authority has a shroff in each town, and participates in all the benefits arising out of money operations in the market. In Jaipúr and Kotá there exists an usage that the currency should suffer a depreciation of one per cent. on the third year after its issue, and continue at that rate during the reign of the sovereign: on the accession of his successor, it suffers a further annual fractional depreciation, which operates to bring the whole of the circulating medium into the mint for re-coinage.[2] This rule does

[1] Report of Lieut. T. Moody, agent at Bangál and Kantál, 17th February, 1284.
[2] Major J. Caulfeild, Political Agent in Hárouti, 1st August, 1823.

not, however, extend to the other Rájpút states, nor does any debasement appear in the Kotá rupee to warrant a censure of the system there prevailing. It is such a measure as Tantia Sindia's, who abolished the standard Ajmír currency, and instituted the debased Srísáhí rupee in 1815, on a false supposition of increasing his revenue, that is so pernicious in its effects: or the more inexcusable conduct of the Gwálíár government, which, while maintaining the currency of the capital at a good standard, issues inferior coin at its provincial mints of Chándérí, and even coined debased Bálásáhí rupees at Garrah-Kotá, in imitation of the currency of Ságar.[1]

The list of mints which have sprung up in central India is so formidable that it is difficult to attempt any classification of them.

Mr. Wilder, in 1819, enumerates the following rupees current in Ajmír: old Ajmír, Srísáhí, Kishnagarh, Kochanam, Chittor, Jaipúr, Hálí, Jodhpúr, Oudipúr, Sháhpúrah, Pratápgarh, Kotá, Búndí, and Bhilwárá. Mr. Maddock furnishes an equally long list from the Narbadda: — Panná, Chatrapúr, Saronj, Jhánsí, Chanda, Srínagar, Nágpúr, Garrah-Kotá, Bálásáhí, Ráthgarh, Tahrí, Bhopál, Sohágpúr, Sudhaurah, Jálaon, Ujjain, Isagarh. The difficulty is also increased by the threefold appellations given to coins: first from the place of fabrication, as Indor, Ujjain, Ságar proper, etc.; second, from the person issuing them, as Sindiasáhí from Sindia; Bálásáhí, from Bálájí Pandit; Gaursáhí from 'Alí Gaur, afterwards Sháh 'Alam; Mutí-sáhí, a well-known Allahábád coin of Mr. Achmuty; third, from some distinguishing symbol impressed on the field, as Trisúlí, from the 'trident' of Siva; Shamshírí, from the figure of a 'sword' on the Haidarábád coin; the Machhlísáhí, and Shírsáhí, from the 'fish' and 'tiger' of the old and new Lukhnow rupee, etc. There are also other titles common to different localities, as Chalan, 'current'; Hálí 'of the present time'; and the distinction into Sans, or different years of Sháh 'Alam's reign. It should be remarked that Sháhí and Sáhí attached to the designation of a coin have totally different meanings; the former denoting 'king,' the latter merely 'impress or stamp.'[2]

The following notes concerning the origin of particular mints, and the amount of their issue, are derived, as before stated, from the reports of Messrs. Wellesley, Molony, Wilder, Maddock, Macdonald, Caulfeild, and Moody, between 1819 and 1823.

In Ajmír the Srísáhí rupee, coined by Tantia, formed in 1815 the principal currency; it has been partially supplanted by the Farrukh-

[1] Maddock, 12th June, 1819.

[2] It is, however, doubtful whether the terminal *sáhí* is not a mere vulgar application of *sháhí*, the original distinction of rupees being solely into those of different sovereigns.

ábád rupee since the province came into our possession. In Kotá there are three mints, at Kotá, Jantia Patan, and Gangroun, coining on an average thirty-six lákhs per annum: the currency is not debased.

The Holkar currency of Indor, Hardá, and Maheswar, and the Ujjain rupee, are nearly at par with the Farrukhábád, but they maintain an unequal contest with the Sálimsáhí rupee, coined by the Rájá of Pratápgarh, of which there are three kinds, the jurmurea, 150 grs. pure; the murmurea, 145 grs. pure, coined in 1810; and the melah of 1820, only 137 grs. pure.[1] The Rájá engaged in 1821 to reform his coinage, but it has never been done.

The Búndí debased rupee is also current about Ujjain. It seems by the Assay Table to have been reformed in 1825.

The northern parts of the Narbadda territories were supplied with a base currency struck at Jabalpúr, by Nána Ghatka, in 1800; this mint was suppressed on cession to the English. The southern part (Dakhantír) had a rupee of still lower value struck at Soházpúr, where a mint was established in 1810; it was abolished in 1818 by Mr. Molony.

These rupees passed at par with Chanda and Nágpúr rupees, the chief issue of Berár.

The Ságar mint was set up in 1779, by the Peshwá's officer at Garrah Mandlah, and coined about seventeen lákhs of Bálásáhí rupees per annum. Its operation continued under Mr. Maddock, who, to counteract the forgery going on at Garrah, inserted the word 'Sagar' in small English characters on the die. The new Ságar mint, erected in 1824, is now rapidly removing all the old coins from circulation.

The standard of the Maráthí Government of Nágpúr, to which all the neighbouring mints were, doubtless, intended to conform, presents, itself, one of the worst examples of irregularity and depreciation. Even after the establishment of a British Residency, having a nominal control over such matters, a further debasement to the extent of eight per cent. is proved to have been effected, owing to the vicious policy of farming the mint to a native contractor for an annual sum of 35,000 rupees.

In the Haidarábád country, the government of the Nizám, or of his Hindú minister, has not been behind hand with its Maráthí rivals in the adulteration of the local currency. The weight of the rupee (174 grains) shews its original agreement with the Dihlí standard, but the pure metal is gone down to 147 grains; and by way of introducing greater confusion and vexation, there is a superior currency for the Palace and the Residency, an inferior for the city, and a hukm chalaní,

[1] A. Macdonald, 13th August, 1823.

or forced token, the precise nature of which is dubious; the worst species are struck at Náráyanpat.

In Bandalkhand, the circulation consisted chiefly of Bálá Ráo's rupee, struck at Srínagar, near Panná. This mint issued at the time of its institution, in 1794, about eighteen lákhs per annum; but after 1819, the coinage fell to four lákhs. The same prince set up a mint at Jálaon, his capital, in 1809: its issue was, at first, six lákhs, and is now diminished to one-third of that amount.

The Hansí mint of Ráo Rám Chand dates from 1780: it issued three lákhs. Kuár Pratáp Singh's at Chatrapúr dates from 1816. It is said that Chatra Sál used formerly to coin there.

The mints of Panná (1780) and Samter (of 1808) were on a most insignificant scale, and have been put down. The Dattiah mint, already mentioned, dates from 1784.

With a view to the reform, in part, of this complicated system, of which a few points only have been brought to view, the Government resolved on the 10th September, 1824, to abolish the Panná, Hansí, Jálaon, Urcha, and Chatrapúr mints, and to effect a reform of that of Pratápgarh; the order was enforced in December, 1826. The Bhopál Nawáb also engaged to equalize his rupee with that of Indor and Ujjain, and to abolish the Bálásáhí mint. It was thought too great a step to attempt a restoration of the Nágpúr and Haidarábád currencies; and as the silver in them averaged 144 grains, while that of our rupee was 165, it was proposed to engage the Nágpúr Rájá to coin fourteen-áná pieces; and the Narbadda Commissioner was empowered to do the same for Jabalpúr and Ságar: but he had already made an arrangement,[1] which, while it relieved the ryots, served to introduce the new sixteen-áná rupee with facility: this was to receive, for all settlements made in the local currency, 100 Farrukhábád rupees for every 120 Nágpúrís[2]; their intrinsic equivalent being 118½. Were the same principle acted upon in the Nágpúr and Haidarábád states, there could be no difficulty in accomplishing the object so much desired. As for the numerous tributary and subsidiary states, there could be no injustice in refusing them the privilege, which is of little profit, and which is in general a modern usurpation on their parts: at any rate they might be obliged to conform to the universal standard. 'We are too apt,' says Mr. H. Mackenzie, 'to let the mere exemption from the printed code be taken as an exemption from all law, and to deny to a large portion of India the benefits it would derive from the just discharge of the duties belonging to the paramount power.'[3]

[1] Maddock, 3rd February, 1827.

[2] The same rate is used in paying the Bombay troops at Aurangábád, in the Govind Bakhsh, or Haidarábád currency.

[3] Mint Committee Records, September, 1824.

The standard of Panná, under the Peshwá, was called the Ankusí rupee, from ánkus,[1] the instrument used by the mahout to guide the elephant; probably a symbol marked on the coin. This rupee appears from Kelly's tables to have been extensively adopted as an unit in the estimation of value and weight, probably wherever the Maráthí ascendancy prevailed. It is current through the Dakhan and the Konkan. The Chanda rupee of Khándísh circulates at par with it. In Gujarát there are several denominations of rupees, but the principal is the Bálásáhí, coined at Baroda.

It is not necessary to allude to the Patiyálá, Bhartpúr, Díg, and many other rupees, the names of which denote their origin and their place in the General Table. Still less need we advert to the Korá, Allahábád, Agra, Saháranpúr, Barellí, Kálpí, Atáwi, Mathurá, Pánípat, and other rupees, which belong more immediately to the Dihlí group, coined only on particular occasions or for short periods, and the mints of which have long since disappeared from our list.

There are, however, to the eastward in Assam a distinct class of coins bearing, in a Bengalí inscription, the name of the Rájás of that province, since the time of Rájá Rudra Singh. They present an example of good faith in these rude people, being in weight and purity equal to the former Arcot rupee of Dacca, and some degree better than the present Farrukhábád rupee.

The circulating medium of Nepál is also essentially Hindú, and of such interest on that account, that we gladly avail ourselves of the permission to insert an account of the coinage of that state, drawn up by Doctor J. M. Bramley, in 1831.

COINAGE OF NEPÁL.

"The conquest of Nepál by the Goorkhas took place in the Newar year 888, corresponding with A.D. 1768. Prior to this epoch, the valley of Kathmandu was divided into three sovereignties, Patan, Bhatgaon, and Kathmandu, each governed by a Rájá: hence on the Newar coins the three series of Rájás' names are found. Those of Bhatgaon are generally (though not always) distinguished by a shell, those of Patan by a tirsool, and those of Kathmandu by a sword.

"It was formerly the custom for all money current north of the valley of Nepál, so far as the boundaries of Chinese Tartary, to be coined by one or more of the Nepál Rájás, which was a source of considerable profit to them: the Bhoteahs giving them weight for weight in silver and gold dust; but this was discontinued during the reign of

[1] S آنکس (अङ्कुश).

Ranjít Mal, the last reigning Rájá of Bhatgaon, who sent them such base coins as to occasion a decrease of nearly one-half of their intrinsic value, which was no sooner discovered by the Bhoteahs than a desertion of the mint took place, and there has been no more Bhote coinage made in Nepál.[1] The amount contracted for on this occasion was ten lákhs of silver mohurs, exactly similar to those current in Nepál. The Bhoteahs, who now visit Nepál for trade, profit by this spurious coin, which they take in exchange for their goods at five gandas per muhr, and they pass off in their own country as of full value, or ten gandas. As the Bhoteahs have no other currency, they are compelled to cut them into halves, quarters, and eighths. They are the only coin current in Lassa.

"The old coins of the 'Mals,' or Newar Rájás, are much valued for their purity, and are worn by the women, strung to necklaces or armlets, as tokens in memory of their ancestors.

"Since the Goorkha conquest, the Vikrama era has superseded that of Newar for ordinary purposes; and the Sáka, commonly used in Hindústán, has been introduced upon the coins. Rájá Pritinarain is the first Goorkha sovereign, from whose accession a regular series may easily be obtained. The inscriptions on the present prince's coins are *Srí Srí Srí Rájendra Vikrama Sah Deva*, 1738; and on the reverse, *Srí Srí Srí Gorakhnáth Srí Bhavani*.

"The gold and silver coins have the same names and divisions differing only slightly in weight.

Takka.		Mohur.		Sooka.		Annee.		Pysa.		Dam.
1	=	2	=	4	=	16	=	80	=	400
		1	=	2	=	8	=	40	=	200
				1	=	4	=	20	=	100
						1	=	5	=	25
								1	=	5

"The mohur or eight-anna piece is the principal coin in use: it weighs 87 grains, and is therefore evidently identical with the Muhammadan half-rupee, but the quality of the metal has been much adulterated.

"The Nepálese procure all their silver from China, in the form of stamped lumps, as they are current in Lassa: for the Tibetans generally follow the Chinese custom in their money transactions of paying and receiving by weight, and the merchants carry scales with them for the purpose."

There are a few specimens, however, among Dr. Bramley's collection

[1] Mr. Csoma de Körös states that the English rupee circulates freely through Western Tibet.

of a Tibetan silver coinage struck at Lassa, having an inscription in both Chinese and Tibetan characters. Mr. Csoma de Körös interprets the purport of the Tibetan legend on one of these to be *G'tsang pahu*, 'pure piece;' or, as 'G'tsang' is the name of a large province in Tibet, lying next to Nepál, it may mean 'Tsang money.' It likewise bears a name, variable on different specimens, of former Emperors of China, B'chah-H'chhin and Chhan-lung. Besides this, in letters also, the date (25, 59, 60, etc.) of the Tibetan or Chinese cycle of sixty years.

The common Chinese brass money, with a square hole in the centre, is likewise current in Lassa, as generally through the whole of the Chinese empire.

Although not quite relevant to the subject of Indian coin, still, as Chinese silver forms so considerable a portion of the bullion importation of Calcutta, we may be permitted to insert a brief account of the Chinese system, from that useful compendium, the 'Companion to the Anglo-Chinese Kalendar,' for 1832.

CHINESE CURRENCY.

Sycee silver, in Chinese 'Wan-yin,' is the only approach to a silver currency among the Chinese. In it the government taxes and duties, and the salaries of officers, are paid; and it is also current among merchants in general. The term Sycee is derived from two Chinese words, *Se-sze*, 'fine floss silk,' which expression is synonymous with the signification of the term 'Wan.' This silver is formed into ingots (by the Chinese called shoes[1]), which are stamped with the mark of the office that issues them, and the date of their issue. The ingots are of various weights, but most commonly of ten taels each.

Sycee silver is divided into several classes, according to its fineness and freedom from alloy: the kinds most current at Canton are the five following:—

1st. Kwan-heang, 'the Hoppo's duties,' or the silver which is forwarded to the imperial treasury at Peking. This is ninety-seven to ninety-nine touch. On all the imperial duties, a certain per-centage is levied for the purpose of turning them into Sycee of this high standard, and of conveying them to Peking without any loss in the full amount. The Hoppo, however, in all probability increases the per-centage far above what is requisite, that he may be enabled to retain the remainder for himself and his dependants.

2nd. Fan-koo or Fan-foo, 'the treasurer's receipts,' or that in which the land-tax is paid. This is also of a high standard, but inferior to that of the Hoppo's duties, and being intended for use in the

[1] By the natives of India खुर, خُرے *khurí*, or 'hoofs.'

province, not for conveyance to Peking, no per-centage is levied on the taxes for it.

3rd. Yuenpaou or Une-po, literally 'chief in value.' This kind is usually imported from Soochow, in large pieces of 50 taels each. It does not appear to belong to any particular government tax.

4th. Yen or Eem-heang, 'salt duties.' It is difficult to account for these being of so low a standard, the salt trade being entirely a government monopoly. This class is superior only to

5th. Mut-tae or Wuh-tae, the name of which, signifying 'uncleansed or unpurified,' designates it as the worst of all. It is seldom used, except for the purpose of plating, or rather washing, baser metals.

The tael of Sycee in the East India Company's accounts is reckoned at 6*s.* 8*d.* sterling. When assayed in London, this metal is frequently found to contain a small admixture of gold. Mercantile account sales give the following average out-turn of China bullion remittances to London, Calcutta, and Bombay; that

100 taels of Sycee yield { £316., at 5*s.* an oz. (including 1½ per cent. for gold.
3078 sikká. Rs., or with charges 3062 Rs., at Calcutta.
3335 Bombay Rs., or „ 3302 Rs., at Bombay.

AVA SPECIE.

The Burmese, it is well known, have no coined money, but, like the Chinese, make their payments in the precious metals by weight. Like the latter nation, also, they make use of decimal divisions in estimating the value or purity of gold and silver, and their systems of weights and measure follow the same convenient scale. We are indebted to Major Burney, Resident at Ava, for the following particulars:

Vis, Tikal, and Moo are the general terms used in the transactions of commerce and accounts: their subdivisions and multiples are—

1 pe or be.
2 = 1 moo.
2½ = 1 mat.
5 = 2 = 1 hkwe.
10 = 4 = 2 = 1 kyat or tikal.
1000 = 400 = 200 = 100 = 1 peiktha or vissom.
(100 tikals are precisely equal to 140 tolás).

The expressions employed by the goldsmiths in declaring the quality of bullion require a knowledge of the Burmese numerals, and a few other words:

NUMERALS.		METALS.	ASSAY TERMS.
1. Ta.	6. Khyouk.	Shwe, gold. (Shwence, red	Det, better or above.
2. Nheet.	7. Khwon.	or pure gold.)	Mee, differing × or —.
3. Thoun.	8. Sheet.	Ngwe, silver.	Meedet, better in assay.
4. Le.	9. Ko.	Ge or khe, lead or alloy.	Mee shyouk, worse ditto.
5. Nga.	10. Tshay.	Nee, copper. Byoo, tin.	Ma, adulterated.

The usual weight of the small lumps of silver current in the place of coin is from twenty to thirty tikals (thirty or forty tolás): they bear a variety of names from their quality and appearance, the figures given by the action of the fire upon a thick brown coating of glaze (of the oxydes of lead and antimony) answering, in some degree, the purpose of a die impression.

Ban[1] signifies 'pure' or 'touch,' and is the purest obtainable of the Burmese process of refinage.

Kharoobat, 'shelly' or 'spiral circled,' is applied to a silver cake, with marks upon its surface, produced by the crystallization of the lead scoria in the process of refinement: it is supposed to denote a particular fineness, which, by Burmese law, ought to be ten-ninths yowetnee in value, *i.e.*, nine tikals of kharoobat pass for ten of yowetnee silver; or it should contain nineteen and a quarter ban and three-quarters copper.

Yowetnee, 'red-leafed' flower or star, silver, is so named from the starry appearance of the melted litharge on its surface. Yowet is a corruption of *rowek*, 'leaf,' and the word is sometimes written by Europeans rowanee, rouni, roughanee, etc. Yowetnee is the government standard of Ava, and contains by law eighty-five ban and fifteen alloy per cent. Taking it at nine-tenths of purity of kharoobat, which last is 94.6 touch, its quality will be 85.2 fine; which closely accords with the legal value. The average of 60,000 tolás of yowetnee in the late Ava remittance turned out two dwts. worse (90.8), but there was a loss of more than one per cent. in melting, from the exterior scoria.

Dain, the most common form of bullion met with in circulation, is so called from an assessment, levied during the late king's reign, upon villages and houses: *dain* signifying 'a stage,' or distance of two miles. These cakes also weigh from twenty to thirty tikals each. Their prescribed legal quality is ten per cent. better than yowetnee, which puts this species of silver on a par with kharoobat. In practice, however, the quality varies from one to ten per cent. better (five Br. to thirteen and a half Wo.) than Calcutta standard. The average of fifty-two lákhs of dain turned out three pennyweights Br.

There is an adulterated dain silver, stated by Major Burney to be similar in quality to yowetnee, but in reality much worse (forty-two and a half pennyweights worse) lately introduced and extensively circulated: it is made by admixture of lead, and is called Ma-dain.

The following will serve as examples of the mode of evaluating bullion:

[1] This word is synonymous with the 'Bani' of the 'Ayín-i Akbarí:' Banwárí is the Indian name of the touch needles used in roughly valuing the precious metals.

Dain, ko-moo-det, is Dain nine per cent. better. (See previous explanation.)
„ nga-moo-det, „ five per cent. better.
Yowetnee, „ standard. (Eighty-five touch.)
„ Kyat-ge, or ta-tshay-ge, one tikal or tenth of alloy (meaning one-tenth weight of alloy added to standard).
„ Kyouk-tshay nga-kyat-ge, six tens five tikal alloy (meaning sixty-five per cent. of alloy added).
„ gyan, half yowetnee (and half alloy).

Gold. The purity of gold is expressed by moos or 'tenths' only: ten moos, 'tshay moo,' (one hundred touch) being esteemed pure gold.

'King's gold,' or standard, is called Ka-moo-ta pe-le-yowe (nine moos, one pe, four seeds), or nine and three-quarter moos fine.

'Merchants' gold' is Ko-moo-ta-be, nine and a half moos fine. Gold muhrs are called eight and a half moos fine by the Ava assayers.

The out-turn of the Ava specimens will be given as an Appendix to the General Table.

Having now adverted to most of the groups and denominations of money, which are comprised in the following tables, it remains merely to explain the sources whence the materials for them have been collected. For the coins of the West of India, Mr. Noton's table, published at Bombay, in 1821, has been consulted, and, for India generally, the table published in Kelly's 'Cambist,' from the assays of Mr. Bingley, at the Royal Mint; but the principal portion is derived from the table printed, but not published, by Mr. H. H. Wilson, Assay Master at Calcutta, in 1833, from his own assays: indeed, almost all the coins inserted in the table have been frequently assayed, and generally in large parcels, at the Calcutta, Benáres, and Ságar mints.

As Mr. Wilson's table gives the value in sikká rupees (of 191.916 grains troy), it has been necessary to recalculate the whole column of produce, which now, in the Silver Table, expresses the value of one hundred of each species of coin in the general standard British rupee of one hundred and eighty grains. To find their value in sikká rupees (of one hundred and ninety-two grains) it is only requisite to divide the Farrukhábád value by sixteen, and deduct the product, as explained in page 7.

The weight and pure contents are expressed in troy grains. The standard or assay is given both according to the decimal system and in the usual terms of assaying; viz., in carats, grains, and quarters, for gold,—and in pennyweights and halves for silver,—better or worse than the standard of the Company's coins, namely, eleven ounces fine and one ounce alloy.

The silver pound is divided into twelve ounces, or two hundred and forty pennyweights, or four hundred and eighty halves.

The gold pound into twenty-four carats, or ninety-six carat grains, or 384 quarters.

The 'intrinsic value' of the coins is the relative value of their pure metal, as compared with the pure contents of the gold muhr and the rupee. The mint price is two per cent. less, besides the charge for refinage, according to the quality of metal, as stated in pages 9 and 12.

To find the value of any number of rupees, follow the rule before laid down; namely, multiply by the figures in the column of produce and divide by one hundred. For gold coins, if required in rupees, multiply further by the Regulation value, sixteen for the Calcutta, or fifteen for the Madras muhr; or if the bazar price be wanted, by the bazar price of the gold muhr for the time being. The decimal parts of the muhr and rupee may be converted into ánás and pá'ís by the Table, page 12.

It should be remarked, that the following tables are not intended as an authoritative list of the rates at which the various coins are received by Government, but solely to shew their average intrinsic produce when brought to the mint as bullion to be converted into Farrukhábád rupees. Particular rules have been at different times promulgated, fixing the exchange at which military and other payments were to be made, and revenue to be received, in different currencies.

Such was the list published in Regulation III., 1806, which is now obsolete, being inconvenient in application, from its specifying the value by weight, and not by tale.

The following rules are still in force at the Government treasuries of the Bengal Presidency: the first has reference to the old current rupee of account, of which one hundred and sixteen were equal to one hundred sikkás: this imaginary money is now disused, except in the valuation of some few articles of the English market in the price current.

In the payment of troops and others connected with the Military Department,
111 sikká rupees, = 116 Sonát or Farrukhábád rupees.
325 „ = 350 Madras and Bombay rupees.

In payments to others not in the military service,
100 sikká rupees, = 104½ Farrukhábád or Sonát rupees.

The established rates of battá on local currencies, fixed for the guidance of revenue officers, are as follows:

Benáres and Gaurshábí rupees, at par with Farrukhábádís.

104	Barellí rupees,	= 100	Farrukh. Rs.	under	Gov. Orders,	1st July, 1833
103¼	Old Farrukhábád,	= 100	„	„	„	29th Jan. 1833
103¼	Dihlí, 38th san,	= 100	„	„	„	„
101	Muhammadsháhí,	= 100	„	„	„	„
101	Old Lukhnow,	= 100	„	„	„	„
106	Najíbábád,	= 100	„	„	„	1st July, 1833
106	Chandausí,	= 100	„	„	„	„

120	Chanda rupees,	= 100 Farrukh. Rs.	Under Government Orders, 19th August, 1833. The receipt of these coins at this rate, however, is limited to the public treasuries in the Baitúl, Seoní, and Hoshangábád districts.
120	Nágpúr Rs. viz. Mehrú, Nishandár, Dobúndyá, Jabrá, Manjhúlá, 7 san, Chhapá, Old Binâ-san,	= 100 do.	
120	Jabalpúr rupees,	= 100 Fd. rs.	
100	Arkát rupees,	= 88¾ sikká rupees, ...	For Chittagong and Ballúah, 22nd Jan., 1833.
120	Haidarábád rupees,	= 100 Bombay rupees, for payment of troops, etc.	
100	„	= 83 r. 14 a. 3 p. sikká, ...	For adjustment of accounts of Haidarábád Residency.

100 The Ikkerí, Bhol, Bholpádí, Bahâdurí, and Farrukhí pagodas are taken at 387.2 Ankusí rupees at the Púna treasury.[1]

100 Gaddopádí, Tadak, Kadvanajá, Hálí, Modápadí, and Bangalore pagodas, at 375 Ankusí rupees.

100 Muhammadsháhí and Venkatapatí, at 337.2 ditto.

100 Rájáram Ikkeri pagodas, = 381 „

100 Bhatorí ..... = 325 „

100 Tomancein..... = 203 „

100 Harpanhálí ..... = 343.3 „

NATIVE COPPER COINS.

Our information regarding the copper coin in circulation throughout Central India is very limited, but it is well known that as much perplexity exists in the varieties of paisá, and in the greater range of their value, as in the coins of the more precious metals; so that every town and village almost has its separate currency, and its established nirkh,[2] or, rate of exchange, with the rupee, to the great inconvenience of the traveller and of the poorer classes. In weight they vary from 280 grains (the Jaipúrí, etc.) to 34 grains (the Maiwárí): the former passing at about 35, the latter at 378, paisá for a rupee. From the small advantage of melting up copper money, it happens that much of the circulation in this metal is of very great antiquity; and not only many ancient Hindú coins are met with, but Bactrian and Roman copper coins are also frequently procurable at fairs and in the neighbourhood of old towns in Upper India.

The paisá was in some cases adopted as the unit for determining the larger weights of the bázárs, as the Gorakhpúr paisá, of which 530 were held equal to a passerí[3] (five sers) at Gházípúr, and generally through the Benáres province. 2881 'chalans'[4] of Fatehgarh in like

[1] Noton's table, 4th Aug., 1821. He states, however, that the rates may have varied since 1812, when they were established.

[2] P. نرخ [3] پانچ سیر [4] S. चलन چلن

manner were assumed as the weight of a *man* in that district. The Dihlí paisá, coined till 1818, was twelve máshas or one tolá in weight.

The Table at page 62 contains such a list of copper coins as the scanty materials at hand enables us to supply. Most of the native paisá contain more copper in proportion to their value than the present Company's coin, which was, however, originally one tolá in weight, and was gradually reduced to one hundred grains (as shown in the table); it is at present in fact a government token, worth, intrinsically, less than its nominal value.

Within the Ceded Territories the native coins still predominate, but the Company's paisá is now gradually spreading to westward, and the Ságar mint has for several years been employed in converting the native copper money into Benáres or trisúlí paisá of one hundred grains weight, and sixty-four to the rupee. At Bombay, the old paisá have been bought up by Government, for the purpose of removing them entirely from circulation, and substituting the new coin (described in page 4). The Bengal Government have also recently adopted a measure tending to withdraw the trisúlí paisá (see page 8) from circulation, in consequence of their becoming much depreciated in public estimation from a large admixture of spurious coin, and other causes; the Calcutta mint being ordered to grant sixty-four new paisá for seventy-two trisúlís, for an amount not under twenty rupees in value brought for exchange.

SYMBOLS ON SHÁH 'ÁLAM COINS.

It may naturally be asked, how the multitude of coins, gold, silver, and copper, included in the following lists, are to be recognised by any but a professed money-changer, since, as has been observed before (page 19), most of them bear the mere name and distich of Sháh 'Alam, and the place of coinage, being the lowermost word of the inscription (page 2), will seldom be found on the face of a coin showing, as is generally the case, only a small portion of the die. Many mistakes have doubtless been made in fixing the localities of coins, from this abundant source of error, and it is much to be regretted, that it has not on all occasions been made a primary point to ascertain the distinguishing mark of every specimen collected for examination.

Some rupees (as the Sálimsáhí, etc.) appear to be only distinguished by the peculiar imperfections of the Persian character they bear; others have but a few discriminating dots, like the private marks of our own mints; but the majority have a well distinguished symbol, the same on silver and on copper, by which they may be readily known on inspection. There is a further advantage in con-

sulting such marks, for they enable us at once to class together various coins as having been issued by the same authority. A list and plate of these symbols, confessedly imperfect, follows the catalogue of coins, but it may be convenient to assemble together here a few of the groups, whose connection is otherwise confirmed by the preceding remarks on the Bundelkhand and Rájputána mints.

The coins of Lukhnow, Fatehgarh, Azimgarh, Barellí, Najíbábád, Benáres, and other places under the súbah of Oudh, bore the symbol of a rohu fish. The Agra paisá has a pistol.

The coins of Rohilkhand, Bhartpúr, Narwar, etc., a dagger.

Those of Nágpúr, Chanda, Haidarábád, Aurangábád, etc., a sword, hence called 'shamshírí.'

Those of Ságar, Jálaon, Srínagar, Kálpí, Tahrí, (the Bálásáhí) have a trident or trisúl with a cross bar.

The coins of Bhopál, Bhilsá, and Ráthgarh are easily known by a rude figure resembling a coat of mail.

The Kotá, Búndí, and Pratápgarh coins have a triple bow or knot, sometimes varied: the inscription of the latter rupee is in Nágarí.

The Saronj, Vazírsáhí, Jhánsí, Gokul, Balúgarh, and Gwáliár moneys have a cinque-foil or star of five triple-pointed leaves, placed, as most of such devices are, in the loop of the letter س *s* in جلوس

The Ajmír, Oudipúr, Sálimsáhí, old Chitor, Bhilárá, and Krishnagar coins; and, with some modification, those of Jaipúr and Mattrá, have a جھاڑ *jhár*, 'sprig' or six-leafed branch.

Those of Madras, Arkát, Chandor, Sháhpúr, have a small lotus or trefoil.

The Jodhpúr, Kochámán, Bapúsáhí, and Pálí rupees have a kind of small sceptre following the *alif* of the word شاہ, *sháh*.

The Indor rupee is well characterised by the solar effigy of the Suraj-vansí princes; the Maheswarí of Holkar by the symbol of Mahádeva; while the Srísáhí of Ajmír has the word श्री *srí* on the field.

The Jabalpúr rupee is distinguished by bearing the san or year of reign in Nágarí characters. That of Ujjain has merely four squares, or a kind of chequer.

The crescent and star are common emblems on many coins.

Of the Nepálese, Assamese, and other peculiar types, a better idea will be formed from the outlines in the accompanying plate: but the following memoranda[1] of the symbols on the pagodas of Southern India will be useful, as we have no specimens whence to delineate them:

[1] Extracted from a note of Mr. Wilson's 'Cabinet Specimens.'

DEVICES ON COINS OF SOUTHERN INDIA.

Madras pagoda, Pulk Bunder do. Venkatapati do. } The figure of Venkateswara, and Alamelu and Mangamá his two wives.

Harpanhálí, Scott, Portonovo, Sravanorí, Sáhíbarí, Jamsherí, } A rude figure of Nrisinha, Lakhsmí Nrisinhá, and on some also Pratápa Krishna.

Ikkerí, Contarái, Maisúr, the figure of Umá Maheswara.

Haidarí, Sultání, Bangalore, etc.—the letter ح.

Dúrghí, Chítaldrúg, the lotus. The Shúlí pagoda;—the trisúl.

Tanjore, Gapállí, Gattí, the Kattár or dagger.

Vírarái, Panchakal, Giriye; a gun.

Chakrí, a Tripati coin; a diagram on one side and Tripundra on the other.

Gulgi fanam;—a plough.

TABLES OF BULLION IMPORTED, EXPORTED, AND MINTED.

As a matter of curiosity rather than with a view of furnishing data for calculating the numerical amount of the circulating medium of the provinces under the Bengal Presidency, a statement has been added in two tables[1] of the quantity of gold and silver bullion coined at the mints of Calcutta, Benáres, Farrukhábád, and Ságar respectively, from the year 1800, to the 30th of April, 1833, inclusive; and also a statement of the imports and exports of bullion at Calcutta, extracted from Wilson's report on the commerce of the port, printed in 1828, the years since expired being added from the same official records. It will be remarked that of the whole bullion minted, a large proportion has been 'on account of Government.' This has chiefly consisted of the re-coinage of worn-out rupees or the conversion of native coins, remitted from the different treasuries, into Government standard. The same process must be continually going forward, inversely, with the English coin in all the native states, so that it becomes impossible to estimate correctly the quantity in actual circulation.

The total value of the coinage at the four mints for the period of thirty-one years has been 53,322,600 rupees.

The bullion importation, *vid* Calcutta, from 1813-14 to 1831-32 is valued at ..... sikká Rs. 355,837,644

From which deducting the exports for the same period, 65,391,544

Leaves bullion disposed of in the country ..... sikká Rs. 290,446,100

[1] [These are omitted as the totals and results are incorporated in the succeeding observations.]

The coinage of the several mints for the same term of eighteen years was as follows:

Calcutta mint	203,615,962	4	5
Benáres mint	88,329,359	0	6
Farrukhábád mint	47,252,842	9	11
Ságar mint	4,324,775	9	9
Making altogether, fractions omitted			343,522,940

Being an excess of one-fifth above the import, or ..... Rs. 53,076,840

The coinage of the native mints may be jointly estimated at one-half of our own, which will give a rough total of 50 karors of rupees for 18 years, or three karors per annum for the coinage of the Bengal Presidency; being 150,000 per diem for 200 working days.

TABLE *of the Gold Coins of India.*

Denomination.	Weight in grains.	Assay in car. grs.	Touch or pure gold in 100 parts.	Pure contents in grains.	Intrinsic value of 100. In Calcutta Gold Muhrs.	Intrinsic value of 100. In Madras or Bombay gold rupees	Remarks.
MUHR.		car.grs.					[1750.
Ahmad Sháh	207.00	W.1 2¼	85.1	176.27	93.937	105.874	Coined at Dihlí,
Akbar	159.00	B. 2 0	100.0	159.00	84.732	96.361	ditto at Agra, 1560
Akbar, jaljalálí..	186.60	B. 2 0	100.0	186.60	99.430	113.089	ditto at Láhor.
Assam.....	173.50	W.5 0¾	70.0	121.54	64.769	73.662	
„ old.....	173.00	W.2 2¼	81.0	140.11	74.666	84.921	
Benáres	168.44	B. 1 1	96.9	163.17	86.956	98.896	
Batavian, 1783...	242.60	W.3 1½	77.9	188.90	100.665	114.479	Dutch E. I. Comp.
„ 1796...	243.60	W.4 0	75.0	182.70	97.361	110.725	
.....	244.25	W.5 0	70.8	173.01	92.198	104.857	
Bombay, old.....	177.00	B. 0 3½	95.4	168.70	89.903	102.243	
„ later.....	174.99	W.2 0	83.3	145.82	77.709	88.377	
„ newstd.1800	179.00	B. 0 0½	91.9	164.68	87.759	99.807	Legal exchange
„ do. 1830	180.00	standard	81.7	165.00	87.929	100.000	value, 15 Bom.Rs.
Calcutta, old std.	190.804	B. 1 3½	99.2	189.40	100.934	114.786	Still coined here.
, new std.	204.710	standard	91.7	187.65	100.000	113.727	Legal value, 16 Rs.
Dihlí	167.00	B. 1 2¼	98.2	163.96	87.373	99.364	Date not given.
Haidarábád.....	172.18	B. 1 0½	96.1	165.45	88.171	100.263	
Jainagar.....	174.99	B. 0 2	93.7	164.05	87.428	99.398	Struck at Jaipúr.
Lukhnow.....	166.00	B. 1 3¼	99.2	164.70	87.771	99.820	Pure contents as in silver coin.
Madrasgoldrupee	180.00	standard	91.7	165.00	87.929	100.000	Legal value, 15 Rs.
Puna muhr	159.55	B. 2 0	100.0	159.55	85.023	96.694	
Rásí.....	167.50	B. 0 3¼	95.1	159.21	84.845	96.486	
another	121.65	W.4 3¾	71.1	86.48	46.087	52.325	
Sháh'Alam,1770	190.25	B. 1 2¾	98.2	186.80	99.547	113.212	From Kelly.
another	191.00	B. 1 2¾	98.7	188.50	100.453	114.236	Current in Súrat
Sunamula.....	178.26	W.0 0½	91.1	162.47	86.582	98.465	[and Gujarát.
Súrat (average)..	178.00	standard	91.7	163.17	87.307	99.307	
Sháh Jahán.....	168.00	B. 1 3¾	99.8	167.60	89.315	101.575	Having signs of the zodiac—rare.
PAGODA, HÚN, OR VARÁHA.							[still coined.
Anandrái.....	52.46	W.4 3¾	71.1	37.30	19.876	21.708	Travancore Rájá,
Bangalor.....	52.87	W.2 2¼	81.0	42.82	22.818	25.952	Under Haidar.
Bahádurí (Haidar)	52.71	W.1 2¾	84.6	44.61	23.775	27.032	At Seringapatam,[1] 1760
Dharwár	50.52	W.3 3	76.0	38.42	20.473	23.280	In Karnátic, scarce
Darbárí.....	50.53	W.2 2¼	81.0	40.96	21.830	24.827	Maisúr.
Durgí pagoda ...	51.55	W.2 1	82.3	42.42	22.606	25.714	Coined at Chítal-
another	51.46	W.4 0¼	74.7	38.46	20.496	23.315	drúg.
Farrukhí (Calicut)	52.90	W.1 1¾	85.7	45.32	24.153	27.466	Coined by Tipú.
Harpanhálí, old.	50.76	W.3 2¼	76.8	39.00	20.783	23.633	Former Rájá.
„ new	51.10	W.3 0	79.2	40.45	21.558	24.520	Current at Bellary
Ikkerí, old.....	52.40	W.2 1¾	81.5	42.71	22.762	25.884	Coins of Maisúr and Bednor mints so called
„ new.....	52.50	W.1 3	84.4	44.30	23.606	26.851	Trichinopoly.
Jamsharí	52.00	W.1 3	84.4	43.87	23.380	26.589	Exchange at Ma-
Madras.....	45.83	standard	91.7	42.01	22.387	25.464	dras, 3½ rupees.
„ double..	91.64	standard	91.7	84.00	44.764	50.927	
„ star, average	52.40	W.2 2	81.2	42.55	22.780	25.907	
Muhammadsháhí old.....	50.53	W.2 3¾	79.4	40.14	21.388	24.327	Coined by Mah. 'Alí Khán, Na-
„ new	45.30	W.4 0	75.0	33.97	18.104	20.585	wáb of Karnátic.

[1] Srínagarpatam.

Denomination.	Weight in grains.	Assay in car. grs.	Touch or pure gold in 100 parts.	Pure contents in grains.	Intrinsic value of 100. In Calcutta Gold Muhrs.	Intrinsic value of 100. In Madras or Bombay gold rupees	Remarks.
		c. grs.					
Naidí	52.82	W .1 3	84.4	44.57	23.752	27.010	[Khán Chitor.
Pedatolá	52.50	W. 1 2 1/2	84 9	44.57	23.751	23.599	By Fateh Ulla
Paliampatpagoda	51.80	W. 8 3	55.2	28.60	15.240	17.332	Near Trichinopoly
Porto Novo	52.21	W. 7 3 1/2	58.8	30.73	16.390	18.640	A Portuguese coin
Pulkbunder	51.50	W. 1 2	85.4	43.99	23.442	26.655	Same as Madras.
Sadaki, double	105.75	W. 1 2	85.4	90.33	48.136	54.748	
Sáttárí	50.00	W. 3 3	76.0	38.02	20.262	23.042	Coined at Sáttára.
Shír Khání	49.50	W. 1 3	84.4	41.77	22.257	25.316	
Scott	52.23	W 6 3	63.5	33.19	17.686	20.119	Same as Porto Novo
Sravanur	50.46	W. 2 0 3/4	82.6	41.65	22.196	25.247	
another	51.50	W. 4 0	75.0	38.62	20.583	23.406	
Star (see Madras)							[Maliapur.
St. Thomé	75.33	B. 0 3 1/4	95.1	71.60	38.159	43.399	Double pagoda of
Súbárí, ½ pagoda	26.20	W. 1 1 3/4	86.2	22.58	12.030	13.692	
Sultání	52.40	W. 1 2 3/4	84.7	44.35	23.635	26.873	Coined by Tipú.
Travancore	51.00	W. 2 1 1/2	81.8	41.70	22.224	25.270	Anandrái, still coined
Venkatapati	51.47	W. 3 3	76.0	39.14	20.856	23.724	At Venkatagiri.
PANAM OR FANAM							[their purity.
Aparanj	2.68	W. 0 2	89.6	2.44	1.279	1.517	So called from
Arialur	5.34	W.11 2	43.7	2.33	1.244	1.415	Near Tanjore.
Chakrí	5.31	W.16 0	25 0	1.33	0.708	0.805	Tripati coin.
Contarái	5.85	W. 8 0	58.3	3.41	1.819	2.068	Ikkerí or Maisúr.
Gattí	5.39	W.11 1 1/2	44 3	2.38	1.271	1.445	Tripati—Chitavel.
Gulgí	5.62	W.10 1	48.9	2.15	1.465	1.666	Marked with a rose
Gopálí, old	5.15	W.16 2	22.9	1.18	0.629	0.715	At Madhyargun,
„ new	5.15	W.16 0	25.0	1.29	0.686	0.783	near Kudalur.
Kálíam, or Kálí	5.44	W.13 2	35.4	1.92	1.026	1.166	Anandrái fanam.
Panchkol	5.61	W.10 2 3/4	46.6	2.65	1.410	1.603	Coimbatore.
Salem	4.69	W.15 1 1/4	27.9	1.31	0.696	0.792	Coined at Salem.
Sulí	5.15	W.16 0	25.0	1.29	0.686	0.780	Tinivelly.
Tanjore	5.46	W.15 0	29.1	1.59	0.848	0.964	
Vírarâya	5.85	W.10 3 1/4	46.6	2.72	1.452	1.651	Malabar.
Wodiar	5.44	W.11 2	43.7	2.38	1.267	1.441	Ditto.
FOREIGN GOLD COINS.							Net produce of 100 at Calcutta in sikká rupees; at 17 Rs. per gold muhr (deducting coinage duty.
Doubloon Spanish	416.50	W. 0 2	89.6	373.11	198.834	226.125	3312.575
„ 1786 to 1826	417.00	W. 1 0 1/4	87.0	362.70	193.286	219.825	3220.145
„ Chili, 1823	417.00	W. 1 0 1/4	87.3	363.79	193.865	220.473	3229.791
„ Columbia 1826	417.00	W. 1 3	84.4	351.4	187.552	213.296	3124.646
„ Peru	417.00	W. 1 0 1/5	87.0	362.0	193.286	219.825	3220.145
Ducat, Dutch	53.50	B. 1 2 1/4	98.2	52.3	27.996	31.844	466 413
Guinea, English	129.50	standard	91.7	118.70	63.258	71.945	1053.879
Sovereign, ditto	123.25	standard	91.7	113.10	60.271	68.544	1004.115
20 franc, French	99.57	W. 0 1 2/5	90.0	89.62	47.757	54.313	795.632
Johannese, Portg.	222.50	W. 0 0 1/4	91.4	203.38	108.381	123.258	1805.628
Moidore, ditto	124.00	standard	91.7	113.67	60.573	68.885	1009.146
Sequin, Venetian	52.40	B. 1 3 3/4	99.7	52.27	27.853	31.673	464.031
Tomán, Persian	73.00	B. 1 0 1/4	96.1	70.15	37.382	42.511	622.785
Copang, Japanold	273.00	W. 1 2	85.5	233.20	124.806	135.272	2079.268
„ new	201.75	W. 6 0	66 7	134.50	71.676	81.555	1194.123

(To convert the decimals into ánás and pá'ís, see Table, page 12; for explanation of the present table, see page 36.)

SUPPLEMENTARY TABLE OF GOLD COINS.

Since the Table of Gold Coins, page 43, went to press,[1] an opportunity has been afforded of adding largely to its contents, from the examination of a remittance of 725 old gold muhrs sent from the general treasury to be melted and re-coined. On a laborious scrutiny of them, many pieces of all the emperors of Dihlí, since the time of Akbar, were discovered; and a few anterior to that monarch: besides a large store of Bhopál, Jaipúr, and Kotá or Búndí, muhrs, easily recognised by their respective symbols. The whole were weighed and assayed, and the results are given in the present supplement, arranged in two classes, the first, in the order of the emperors; and the second, alphabetically, in that of the localities. As there was considerable difficulty in recognizing many of them, in which part of the name was wanting, it may be convenient here to accompany the table with a catalogue of the inscriptions most commonly met with on the gold coins of each monarch, from Akbar downwards. Some of them, as will be seen, have two or three different forms, which is very perplexing to the examiner. The term Sáhib-kirán[2] (lord of the *kirán*, or 'fortunate conjunction of the planets') was first applied to Taimúr; afterwards to Sháh Jahán, as Sáhib-kirán Sání (the Second); and lastly to Muhammad Sháh.

It is worthy of remark, that most of the gold muhrs in the present table agree very nearly together in weight and value: and the average value of 100 may be taken as equal precisely to 100 Bombay and Madras new gold muhrs (or gold rupees as they are anomalously styled). The Calcutta gold muhr has no equivalent in the list: it would therefore be no innovation, but rather a restoration of the former system, which prevailed for three hundred years unremittedly, to abolish the Calcutta gold muhr of 204.71 grains, and adopt in its place the 180-grain muhr of Southern and Western India for the standard of the Bengal Presidency. Thus, were the sikká rupee abolished, there would remain but one gold and one silver coin throughout British India, both containing the same weight of precious metal, so that the relative value of gold and silver would be at once known; the present nominal rate of sixteen rupees[3] might still continue the legal equivalent of the muhr, since the value of gold is permanently risen nearly to that extent.

[1] [I have allowed this to stand as it appeared in the original, as it did not seem that any material object would be gained by an incorporation of the two Tables.]

[2] صاحب قران

[3] [The old muhr sells at 17.8, its legal rate being 16 rupees. The influx of Australian gold has of late considerably reduced the relative value of that metal in the bázárs of India.]

INSCRIPTIONS ON MUHRS OF THE MOGHUL EMPERORS.

AKBAR.

Obverse :

جلال الدين محمد اكبر بادشاه غازي

'The glory of the faith, Muhammad Akbar, the victorious emperor.'[1]

Reverse : The Kalimah.

This inscription, though apparently so common, is not mentioned in Abú'l Fazl's list of the royal coins; the specimens vary in date from 972 to 985 A.H.

JAHÁNGÍR.

جهانگير شاه ابن اكبر بادشاه ضرب برهانپور امان الله

'Jahángír Sháh, son of Akbar Bádsháh. Struck at Burhánpúr, May God preserve him.'

SHÁH JAHÁN.

(*a*) A plain disc—

Obverse: the Kalimah,

لا اله الا الله محمد الرسول الله ضرب برهانپور سنه الهي ٨٢

'There is no God but God, etc. Struck at Burhánpúr in Ilahí year 82.'

Reverse :

شهاب الدين محمد شاهجهان غازي صاحبقران ثاني

'The bright star of the faith, Muhammad Sháh Jahán, Ghází Sáhib-kirán the second.'

(*b*) The chaháryárí muhr—

Obverse : A square centre, containing the Kalimah; around which are the names of the four companions of the prophet, Abubakr, 'Omar, 'Osmán, and 'Alí.

لا اله الا الله محمد الرسول الله ابوبكر عمر عثمان علي

Reverse : Same as before : 'San jalús v.'

(*c*)

Obverse : A lozenge shield, containing the Kalimah, around which, 'Zarb Allahábád, san 1031.'

Reverse : As in the other specimens.

AURANGZÍB.

Obverse :

در جهان سكه زد چون مهر منير شاه اورنگ‌زيب عالمگير

'Sháh Aurangzíb 'Álamgír issued coin, brilliant as the sun.'

[1] [غازي is more properly 'a warrior of the faith,' and in this sense we must understand its application on these coins.]

Reverse :

ضرب مستقر الخلافة اکبرابادسنه جلوس میمنت مانوس

'Minted at the seat of the Khilafat, Akbarábád, the year of the reign of fortunate associations.'

BAHÁDUR SHÁH.

Obverse :

سکهٔ مبارک شاه عالم بهادر بادشاه غازي سنه ۱۱۲۳

'Auspicious coin of Shah 'Alam Bahádur, Bádshah Ghází. A.H. 1123.'

Reverse :

ضرب خجسته بنیاد سنه جلوس ٥

'Struck in the favored city, year of the reign 5.'

JAHÁNDÁR SHÁH.

Obverse :

سکه زد بر سیم و زر چون مهر و ماه
ابوالفتح جهان‌دار شاه‌غازي بادشاه ۱۱۲۴

'The father of victory, the Emperor, Jahándár Shah Ghází, struck coin in silver and gold, resembling the sun and moon. A.H. 1124.'

Reverse : As in Aurangzíb's coins.

FARRUKHSIR.

Obverse :

سکه زد از فضل حق بر سیم و زر فرخ‌سیر بادشاه بحر و بر

'By the grace of God, the monarch of sea and land, Farrukhsir, struck silver and gold coin.'

Reverse :

سنه ٦ جلوس میمنت مانوس ضرب دارالخلافة شاه‌جهان‌آباد

'The sixth year of his prosperous reign. Minted at the seat of the Khaláfat, Sháh Jahánábád (Dihlí).

MUHAMMAD SHÁH.

(*a*)

Obverse :

سکهٔ مبارک محمد شاه بهادر بادشاه غازي سنه ۱۷[1]

'Auspicious coin of Muhammad Sháh, the victorious emperor, 17th year.'

Reverse : As usual ; sans 2 to 17.

(*b*)

The same inscription with the addition of صاحب قران ثاني chiefly of the year 12 ; a debased coin.

[1] [This legend is ordinarily peculiar to Ahmad Sháh.]

(*c*)

Obverse:

سکه زد بر سیم و زر چون مهر و ماه
ابوالفتح غازي الدين محمد شاه

'The father of victory, defender of the Faith, Muhammad Shâh, struck silver and gold coin resembling the sun and moon.'

Reverse: As in (*a*); and of various years.

AHMAD SHÁH.

Obverse: Same as the coin of Farrukhsír, with exception of name:

سکه زد بر سیم و زر از فضل حق احمد شاه سنه ۱۱۴ [1]

Reverse: As usual.

'ÁLAMGÍR II.

There are also three varieties of inscriptions on his coins (the reverse of all being as usual).

(*a*)

Obverse:

سکهٔ مبارک بادشاه غازي عالمگير ثاني

'Fortunate coin of Bádsháh Ghází 'Álamgír the second.'

(*b*)

Obverse:

ابوالعدل عزيز الدين شاه عالمگير بادشاه غازي خلد الله ملكه
سنه ۳

'The father of justice, chosen of the faith, Shâh 'Álamgír II. Bádsháh Ghází. (May God perpetuate his kingdom!)' Sans 2 and 3.

(*c*)

Obverse:

سکه زد بر هفت کشور تابان همچون مهر و ماه
عزيز الدين عالمگير ثاني بادشاه

'Chosen of the faith, 'Álamgír the second, struck coin in the seven climes, shining like the sun and moon.' A.H. 1170 to 1173. Sans 3 and 6.

SHÁH 'ÁLAM.

Obverse:

سکه زد بر هفت کشور سايه فضل اله

Reverse:

حامي دين محمد شاه عالم بادشاه

The same as on the Company's coin, explained at page 2. All later than the 19th san, bear the symbol of a royal umbrella.

[1] [I distrust this reading; but not having the original coin to refer to, I do not venture to amend the attribution.—E. T.]

[I cannot well afford the space requisite to complete the list of the coinage of the Moghul Emperors of Hindústán; but I venture to insert the legend of perhaps the most interesting coin in the whole series; together with two novelties, hitherto, I believe, unpublished.

I. Silver coin of Núr Jahán Bígam. Struck by order of Jahángír, A.H. 1034.[1]

Obverse:

زنام نور جهان بادشاه بيگم زر سنه جلوس ۲۰

Reverse:

بحكم جهانگير شاه يافت صد زيور ضرب لاهور ۱۰۳۴

A second coin in the British Museum of the same date is seen to have been minted at Ahmadábád.

II. Silver. Murád Bakhsh. Three coins in the British Museum. No date.

Obverse: Square area—The Kalimah.

Margin—The names of the Four Companions of the Prophet.

Reverse: Square area,

محمد مراد بخش بادشاه غازي

Margin:

ابو المظفر تاج الدين ضرب سورت

III. Silver. Rafíʿud-darját. Five coins in the British Museum. A.H. 1131.

Obverse:

سكه زد باهزاران بركات شاهينشه بحر و بر رفيع الدرجات ۱۱۳۱

Reverse:

ضرب سنه احد جلوس ميمنت مانوس

Other specimens bear the names of Láhor with مستقر الخلافة; and Dihlí under the style of دار الخلافة شاه‌جهانابان.—E.T.]

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[1] [Marsden, p. 635; Anquetil du Perron, p. 221;—Láhor, A.H. 1035.]

Supplementary Table of Indian Gold Coins.

(The letters (*a*) (*b*) and (*c*) refer to the inscriptions in pages 46 to 48.)

Denomination.	Weight in grains.	Assay in car. grs.	Touch or pure gold in 100 parts.	Pure contents in grains.	Intrinsic value of 100.		Remarks.
					In Cal. gold muhrs.	In Mad. or Bom. gold rs.	
Jalál-ud-dín	163.80	B. 0 $2\frac{3}{4}$	94.5	154.84	82.516	93.843	A. D. 1288?
'Alá-ud-dín	166.50	B. 0 $2\frac{1}{2}$	94.2	156.96	83.645	95.128	Abú'l Muzaffiar.
Taimúr Sháh.....	167.40	B. 0 $3\frac{1}{4}$	95.1	159.12	84.795	96.435	A. D. 1396, Dihlí.
Akbar, average ...	162.44	B. 2 0	100.0	162.44	86.565	98.448	A. D. 1556, Dihlí.
single.....	165.60	B. 1 $1\frac{1}{2}$	97.4	161.29	85.951	97.750	Injured by solder of ring.
Jahángír	166.90	B. 2 0	100.0	166.90	88.942	101.152	At Barhánpúr.
Sháh Jahán (*a*)...	168.65	B. 1 $1\frac{1}{3}$	97.4	164.26	87.534	99.550	Plain field.
(*b*) chahár-yárí..	168.20	B. 1 $3\frac{1}{4}$	99.8	167.76	89.402	101.674	Square shield.
„	168.40	standard.	91.7	154.37	82.263	93.551	Vitiated by solder?
(*c*) lozenge shield	165.58	B. 1 $3\frac{1}{3}$	99.5	165.15	88.008	100.090	Struck at Allahábád.
Patna.....	170.70	B. 1 $3\frac{3}{4}$	99.7	169.37	90.256	102.647	Supposed from symbol 39.
doubtful *	164.70	W. 2 2	81.3	133.82	71.313	81.102	Probably forged.
Aurangzíb, plain..	168.68	B. 2 0	100.0	168.68	89.890	102.230	Several.
sans 5 to 51 ..	168.29	B. 1 2	98.0	164.78	87.812	99.867	Dihlí, A.H. 1076.
Agra	162.00	B. 2 0	100.0	162.00	86.330	98.182	1100, these vary
Etáwa	168.20	B. 2 0	100.0	168.20	89.634	101.939	only in the place
Dihlí	167.65	B. 2 0	100.0	167.65	89.371	101.606	of coinage.
Láhor	167.60	B. 0 $2\frac{3}{4}$	94.5	158.43	84.430	96.021	
Súrat	170.20	B. 2 0	100.0	170.20	90.700	103.152	
san 29 *	164.00	W. 2 $3\frac{1}{3}$	79.7	130.69	69.644	79.204	No place of coinage, others Dihlí.
Aurangábád..	164.67	B. 2 0	...	164.67	87.756	99.803	A.H. 1097, Láhor?
Khujistah buniád.....	165.60	B. 1 0	...	158.70	84.572	96.182	
Multán	168.55	B. 1 $3\frac{1}{4}$	...	167.23	89.119	101.353	
Bahádur Sháh ...	168.35	B. 1 $1\frac{1}{3}$	97.4	163.53	87.145	99.108	Sháh 'Alam I.; struck at 'Khujistah buniád,' (Dihlí), in 1123.
Jahándár Sháh ...	167.25	B. 2 0	100.0	167.25	89.128	101.364	Struck at Jonpúr, 1124.
Farrukhsír, san 6.	167.33	B. 1 $0\frac{1}{3}$	96.4	161.23	85.922	97.717	Dihlí, A.H. 1125.
Láhor	168.00	B. 1 $0\frac{1}{2}$	96.4	161.87	86.263	98.106	
Muham. Sháh (*a*)	167.12	B. 1 1	96.9	161.90	86.278	98.122	Struck at Dihlí.
(*b*) sans 2 to 17 ...	168.07	B. 1 1	97.4	163.69	87.235	99.200	(Average.)
Agra	164.79	B. 1 3	99.0	163.07	86.900	98.830	
Allahábád ...	166.70	B. 1 $3\frac{1}{4}$	99.2	165.40	88.141	100.241	
(*c*) Arkát	166.30	B. 1 $0\frac{1}{2}$	96.4	160.24	85.391	97.113	San 1.
Benáres	167.30	B. 2 0	100.0	167.30	89.155	101.394	San 20. See p. 21.
Islámábád ...	168.30	B. 1 $3\frac{1}{4}$	99.2	166.98	88.987	101.203	? Dacca or Dihlí.
Ujjain	166.90	B. 1 $2\frac{1}{3}$	98.5	164.29	87.551	99.571	
Etáwa	167.90	B. 1 $3\frac{3}{4}$	99.8	167.46	89.241	101.493	
(*c*) san 12	164.70	W. 1 0	87.5	144.12	76.800	87.344	Ill-executed, Dihlí[1] marked ||||.

The coins marked thus * appear to be forgeries; there are twenty-seven of them bearing the superscription of Aurangzíb, badly executed, and nine having that of Farrukhsír, and the date A.H. 1126, with the same san, jalús 29, although the latter emperor only reigned six years.

[1] This debased muhr is very peculiar:—it was probably coined under Maráthí influence—there were eighty-three of the sort, all of the same date.

Denomination.	Weight in grains.	Assay in car. grs.	Touch or pure gold in 100 parts.	Pure contents in grains.	Intrinsic value of 100.		Remarks.
					In Cal. gold muhrs.	In Mad. or Bom. gold rs.	
Ahmad Shâh	167.65	B. 1 3	99.0	165.90	88.410	100.547	
Barhánpúr ...	169.80	B. 2 0	100.0	169.80	90.487	102.909	
'Álamgír II. san 1	167.30	B. 1 3¼	99.2	165.99	88.458	100.602	Struck at Dihlí (*a*).
san 3	167.78	B. 1 3	99.0	166.03	88.478	100.624	Inscription (*b*).
A. H. 1170-1173.....	167.50	B. 1 2⅓	98.4	164.88	87.867	99.929	Inscription (*c*).
var. sans	168.00	B. 1 3	99.0	166.25	88.595	100.757	Struck at Siwái.
Sháh 'Alam, Dihlí sans 3 to 15¼	167.41	B. 1 1½	97.4	163,05	86.890	98.818	Present inscription. See page 2.
sans 19 to 34	166.31	B. 2 0	100.0	162.85	86.783	98.696	With the chhata.
Barhánpúr ...	169.50	B. 1 3½	99.5	168.62	89.857	102.192	Same as old Bom.
Farrukhábád.	165.75	standard.	91.7	151.94	80.968	92.084	? Average of 16.
Lukhnow.....	166.80	B. 1 3¼	99.2	164.07	87.435	99.438	Under the Nawáb.
Súrat, san 19.	170.15	B. 1 3¾	99.8	169.71	90.438	102.853	Same as old Bom.
Akbar II.	166.60	B. 2 0	100.0	166.60	88.782	100.970	With dagger.
Local Gold Coins.							
Agra	164.79	B. 1 3	99.0	163.07	86.900	98.830	Muhammadsháhí.
Allahábád[1]	162.00	W. 10 0	50.0	81.00	43.165	49.091	Debased ? false.
Arkát, M.S. san 1.	166.30	B. 1 0½	96.4	160.24	85.391	97.113	Muhammadsháhí.
Benáres, san 20...	167.30	B. 2 0	100.0	167.30	89.155	101.394	,,
Bhopál, san 27 ...	167.50	B. 1 0½	96.4	164.01	87.402	99.400	Average of 149.
Barhánpúr.....	169.50	B. 1 3½	99.5	168.62	89.857	102.192	Same as old Bom.
Etáwa.....	167.90	B. 1 3¼	99.8	167.46	89.241	101.493	Muhammad Sháh and Farrukhsír.
Farrukhábád.....	165.75	standard.	91.7	151.94	80.968	92.084	Company's new standard. ?
Islámábád, Dacca?	168.30	B. 1 3¼	99.2	166.98	88.987	101.203	Muhammadsháhí.
Jaipúr, san 8.....	166.60	W. 2 0	100.0	138.83	73.985	84.141	? False money.
san 22	168.11	B. 2 0	100.0	168.11	89.589	101.888	These are averages of many, all new coins of the Jaipúr mint.
san 23	167.94	B. 2 0	100.0	167.94	89.498	101.784	
san 24	168.12	B. 2 0	100.0	168.12	89.590	101.889	
var. sans	167.80	B. 2 0	100.0	167.80	89.421	101.697	
Siwái, san 18.	168.10	B. 1 3¼	99.2	166.79	88.881	101.083	Has the same symbol.
Kotá, sans 1 to 18.	167.08	B. 1 0	95.8	160.12	85.329	97.043	Known by the Kotá and Búndí symbol.
San 19.....	166.72	B. 1 2¼	98.2	163.68	87.225	99.199	
Lukhnow, old ...	165.80	B. 1 3¼	99.2	164.07	87.435	99.438	Machhlísáhí.
new.....	165.65	B. 1 2⅔	98.5	163.07	86.898	98.828	Shírsáhí.
Ujjain, san 2	166.90	B. 1 2¾	98.5	164.29	87.551	99.571	Muhammadsháhí.
Patna, Sháhjahán	170.70	B. 1 3¼	99.2	169.37	90.256	102.647	? (From symbol 39, p. 67.)
Ságar? marked सा	164.70	B. 0 0½	92.2	151.83	80.912	92.019	This monogram is unknown.
Ságar, Srínagar?.	166.25	B. 1 2	98.0	162.79	86.750	98.659	With the trisúl.
Súrat, san 19.....	170.15	B. 1 3¾	99.8	169.71	90.438	102.853	Old Bombay.
Pesháwar	164.00	W. 8 1½	56.7	93.10	49.615	56.424	Khurshíd Sháh.

(For explanation of the several columns of this table see page 36; and for converting decimals into ánás and pá'ís, see the Table at page 12.)

[1] The inscription on this coin, of which there are three specimens, is very badly executed; the pieces are most probably forged.

Table of the Silver Coins of India.

(To find the value in sikká rupees, deduct one-sixteenth from the value in Farrukhábád rupees: the latter are the same as Madras and Bombay rupees. For the value in £ sterling, divide by 10.)

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	Grains.	Dwts.		Grains.	Fd. Rs.	
Agra rupee	171.62	Br. 7	94.5	162.33	98.381	Struck at Agra by ?
Ahmadábád old ...	178.00	Wo. 4.5	89.8	159.83	96.864	Gujarát and Cutch.
old ...	179.92	Wo. 17.5	84.4	151.81	92.004	Formerly coined.
new ...	180.75	Wo. 15	85.4	154.39	93.568	Present currency.
hálí ...	174.77	Br. 12	96.7	168.94	102.390	Coined for city currency.
Ahmad Sháh	177.25	Br. 15	98.0	173.70	105.272	(Equal to Dihlí standard, 1750.)
Ahmadnagar, old...	174.50	Br. 14.5	97.7	170.57	103.376	Same as Dihlí rupee.
Ajmír, old ?	168.60	Wo. 11	87.1	146.82	88.982	Srí sáhí, cmn. currency introduced by Tantia.
Srí sáhí ...	168.17	Wo. 27.5	80.2	134.89	81.751	or Bápúsáhí ?
32nd san ..	168.00	Wo. 21	82.9	139.30	84.428	Coined in 1792.
Allahábád	172.03	Stand.	91.7	157.70	95.573	Sans 18, 21, and 26, (1778-86).
'Alamgír II. 1759 .	179.50	Br. 16	98.5	176.51	106.974	Equal to the Sá. rup.
Anásáhí	176.25	Wo. 7.5	88.5	156.05	94.578	Coined at Kaira, Gujarát.
,, ...	177.25	Wo. 14.5	85.6	151.77	91.982	Coined at Pitlad, do.
Ankusí, old	172.00	Br. 3.5	93.1	160.17	97.075	Standard of Puna,
new	173.50	Br. 2.5	92.7	160.85	97.484	also called Chinsurí.
Aracan, (Mug.) ...	162.38	Wo. 81.5	57.7	93.71	56.793	
Arkát, (Company's)	176.40	Br. 7.5	94.8	167.26	101.340	Coined in Calcutta
1759.....	177.25	Br. 10	95.8	169.86	102.948	for the Dacca and
1782.....	174.00	Br. 11	96.2	167.47	101.500	Katak districts,
1788.....	177.25	Br. 11	96.2	170.60	103.396	also the old currency of Madras.
old	172.39	Br. 4.5	93.5	161.25	97.729	The Súrat Arcot,
1766.....	171.47	Br. 3.5	93.1	159.68	96.775	mentioned in Reg. XXXV. 1793.
new	188.00	Wo. 4.0	93.3	169.20	102.545	The Madras dol. ru.
Katak	173.89	Br. 9.0	95.4	165.92	100.556	Formerly cur. here.
French	173.13	Br. 9.5	95.6	165.55	100.334	Coined at Pondicherry.
Garnáli	172.20	Br. 7	94.6	162.88	98.716	Uncertain (from Chitagong).
Phurshí.....	172.78	Br. 7.5	94.8	163.78	99.258	'Forshí' of Reg. XXXV. 1793.
uncertain	169.33	Wo. 17.5	80.2	142.88	86.592	Probably forged.
Jaházi	173.573	Br. 7.5	94.8	164.53	99.716	Brought to Chitagong by sea.
Assam, mixed	174.05	Br. 8	95.0	165.35	100.215	Current in the valley
Rudra Singh...	173.20	Br. 15	98.0	169.59	102.782	of Assam and the
Siva	173.40	Br. 13	97.1	168.34	102.025	neighbouring dis-
Pramatta	169.90	Br. 12	96.7	164.24	99.537	tricts; coined at
Rájendra	173.90	Br. 12.5	96.9	168.47	102.100	Rangpúr and Jorhat.
Lakhsmí	173.50	Br. 13	97.1	168.44	102.084	
Gaurínáth.....	174.20	Br. 10	95.8	166.94	101.177	Restored to throne
,, ...	174.00	Br. 6	94.1	163.83	99.303	in 1793.
Bharat	174.75	Br. 11.5	96.5	168.56	102.159	
Ashásáhí	176.50	Wo. 11	87.1	153.70	93.153	Anásáhí? Gujarát, Baroda, Kaira, etc.

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	Grains.	Dwts.		Grains.	Fd. Rs.	
Aurangábád	170.86	Wo. 23.5	81.9	139.89	84.787	Coined by Govind Bakhshí, (Haidarábád), see Govind Bakhshí.
Bábásáhí	177.00	Wo. 14.5	85.6	151.56	91.849	Coined at Baroda, from san 4 to 18.
Bagalkotá	172.30	Wo. 5	89.6	154.35	93.546	Mulharsáhí (Holkar).
Bálásáhí	169.21	Wo. 8.5	88.1	149.12	90.426	Old coinage of Ságar, current in Gurrah and Bundelkhand.
	162.14	Wo. 5.5	89.4	144.92	87.828	
	169.00	Wo. 6	89.2	150.69	91.328	
Barellí	171.90	Br. 4.5	93.5	160.80	97.453	Cur. in Rohilkhand.
	169.28	Br. 5.0	93.7	158.61	95.945	Average of 4 lákhs.
Baroach, old	177.06	Br. 7.5	94.7	167.84	101.720	Now disappearing.
new	177.50	Wo. 8.5	88.1	156.42	94.801	Present currency (1821).
Baroda						See Bábásáhí.
Batavia, 1763	199.00	Wo. 20.5	83.1	165.41	100.254	Coined by the Dutch East India Comp.
1803	204.00	Wo. 30.5	79.0	161.07	97.621	
Bhatúr	171.30	Wo. 10.0	87.5	149.89	90.841	Near Ahmadnagar.
Bilápúr	171.82	Wo. 14.5	85.6	147.12	89.165	Current at Púna, in Concan, etc.
Benáres, old	175.00	Br. 12	96.7	169.17	102.525	Under native daroga.
old stand	175.00	Br. 11.6	96.5	168.875	102.348	By Reg. II. 1812, oblique milling.
since 1800	174.76	Br. 9.5	95.6	167.00	101.285	Average of rupees brought for recoinage.
1819-1829	180.234	standard	91.7	165.21	100.134	The late Farrukhábád rupee: mint abolished in 1830.
Bhikanír	174.00	Br. 11	96.2	167.47	101.500	
Bhilára	168.90	Wo. 21.5	82.7	139.69	84.663	Current in Ajmír.
Bhilsa, old	169.62	Wo. 12.5	86.5	146.65	88.882	Mint under Bhopál Nawáb.
another	169.01	Wo. 16.5	84.8	143.31	86.901	
new	173.61	Br. 6.5	94.4	163.47	99.299	Reformed in 1827.
Bhopál	171.38	Wo. 6	89.2	152.82	92.616	Coined at Bhopál.
another	169.25	Wo. 6.5	89.0	150.56	91.249	(Reformed in 1827, see 'Bhilsa.')
Bhartpúr	171.86	Br. 10	95.8	164.70	99.819	Average of many lákhs.
Bindrában	156.67	Wo. 19.5	83.5	130.89	79.325	
Bombay, old	178.33	Br. 12	96.7	172.39	104.282	Old Súrat rupee.
	178.75	Wo. 2.5	90.7	161.99	98.176	Ditto debased.
1800	179.00	Br. 0.5	92.0	164.68	99.200	Coined at Bombay and at Calcutta.
1829	180.00	standard	91.7	165.00	100.000	Present standard.
Búndí, 1819	171.56	Wo. 7	88.8	152.26	92.273	Current in Ajmír and Bundelkhand.
1825	172.82	Br. 7	94.6	163.46	98.622	
Brazil, Pataka	407.99	Wo. 5	89.6	365.49	221.514	Brazilian dollar.
Brodera, old	178.50	Wo. 1.5	91.1	162.51	98.490	
new	178.50	Wo. 7	88.8	158.42	96.011	
Balabsáhí	175.56	Wo. 15	85.4	149.957	90.880	Coined at Baroda.
Bunder, tuksál	163.79	Br. 85	95.2	155.93	94.502	
Garnálí	174.66	Br. 9	95.4	166.66	101.005	
Barhánpúr	178.80	Br. 8.5	95.2	170.23	103.171	Also called 'Parkí,' coined by Sindia in Khándesh.
Basra	280.00	Wo. 11.7	42.9	120.17	72.828	Persian Gulf.
Calcutta, old	179.666	Br. 15	98.0	175.923	106.620	The old Murshidábád 19th san sikká rupee.

Name.	Weight.	Assay.	Touch.	Pure Contents.	Intrinsic value of 100.	Remarks.
	Grains.	dwts.		Grains.	Fd. Rs.	
Calcutta, new	191.916	Stand.	91.7	175.923	106.620	By Reg. XIV. 1818.[1]
present ..	192.00	Stand.	91.7	176.00	106.666	By Reg. VII. 1833, all receivable at par.
Cambay	178.00	Wo. 15	85.4	152.04	92.167	Current in Nawáb's district.
Calání	172.66	Wo. 24	81.7	141.01	85.460	
Ceylon	134.00	Wo. 24	81.7	109.43	66.323	The rix-dollar of 1*s.* 9*d.* ?
	138.32	Wo. 5	89.6	123.91	75,074	
Chambagondí	171.00	Wo. 15	85 4	146.06	87.917	Discount of 2 per cent. with Ankusí rupee.
Chanda	166.42	Wo. 13	86.3	143.54	86.991	Current in Nágpúr
1819-24 ...	169.70	Wo. 4	90.0	152.78	92.563	and the Narbaddá
1825.....	165.15	Wo. 16.5	84.8	152.72	92.559	
Chandérí	173.00	Br. 1.5	92.3	159.66	96.766	One of Sindia's mints
Chandolí	170.15	Wo. 14.5	85.6	145.69	88.299	Gwáliár rupee.
Chandúrí	172.00	Br. 1	92.1	158.38	95.989	Khándesh standard,
another ..	168.70	Wo. 2.5	90.7	152.88	92.656	current in N. Concan, at par with
another ..	169.70	Wo. 1	91.3	154.85	93.849	Ankusí rupee.
Chandrapúr	163.00	Wo. 19	83.8	136.51	82.735	Average.
	166.50	Wo. 5	89.6	149.16	90.397	
Chinsurí	172.50	Br. 3	92.9	160.28	97.140	Same as Ankusí of Puna.
Chitor	169.57	Wo. 28.5	79.8	135.31	82 004	Current in Ajmír.
Chaurásí	171.75	Wo. 3.5	90.3	154.94	93.901	Ikkerí.
Chaundá	164.85	Wo. 13	86.3	142.18	86.171	Same as Chanda ?
Chandausí, san 29.	171.10	Wo. 9.5	95.6	160.57	95.497	Coined by Zábita-khán in Rohilkhand.
Chalaní	160.71	Wo. 27	80.4	129.23	78.324	Haidarábád.
Sulukí.....	169.47	Wo. 28.5	79 8	135.22	81.954	
Chappá	172.50	Br. 6	94.1	162.44	98.447	
Katak	172.18	Br. 6.5	94.3	162.33	98.380	Arkát rupee coined at Calcutta.
Cálpí	169.07	Wo. 11.5	86.9	146.88	89.021	Bundelkhand.
Chatrapúr	169.00	Wo. 8.5	88.1	148.93	90.261	Rájá Pratáp Singh, Bundelkhand.
Dacca	179.30	Br. 12	96.7	173.32	105.044	Same as the sikká rupee.
Deíg.....	169.70	Wo. 7.5	88.5	150.25	91.064	Near Bhartpúr.
Dihlí	172.40	Br. 13	97.1	167,37	101.437	See Sonát, and the
Muhammad Sháh..	173.30	Br. 12.5	96.9	167.88	101.806	various súbahs ?
38th san	172.80	Br. 3	92.9	160.56	97.309	
	173.00	Br. 6.5	94.4	163.27	98,951	
Dollar,[2] Spanish ...	417.60	Wo. 4.6	89.7	374.87	227,194	Since 1772, by law.
	415.68	Wo. 4.5	89.8	374.27	226.830	Average in England.
	415,00	Wo. 5	89.6	372.21	225,584	Since 1812, average of Calcutta assays.
N. American	416,00	Wo. 6	89.2	371.25	225,000	By United States law.
Dutch guilder	161,00	Wo. 1.5	91.1	144.53	87,603	By law, 162 grs,
English shilling ...	87.25	Br. 2	92.5	80.70	48,909	(Previous to 1830
crown	436.36	Br, 2	92.5	403.63	244,624	nearly 3 dwts, Br.)
Etáwa	171.80	Br. 1.5	92.3	158.56	96.095	In the Doáb.
French 5-franc ...	385.85	Wo, 4	90.0	347.26	214.360	By French law,
	384.50	Wo. 4.5	89.8	345.25	209.242	By Calcutta assays.

[1] The standard of 1818-1830 was really a pennyweight too fine, in consequence of an error in the old standard plate of England, to which the assays of India were referred. The proper correction has now been introduced in both countries: and it has been to the assays in this table made prior to 1830.

[2] The dollars of the independent states of Mexico, Bolivia, Chili, and Peru, are of the same weight and value as the Spanish dollar; they varied during the revolutionary period.

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	Grains.	dwts.		Grains.	Fd. Rs.	
Fath 'Alí sháhí ...	157.71	Br. 7	94.5	149.17	90.406	Late king of Persia,
another ...	143.39	Br. 9.5	95.6	137.12	83.100	died in 1833.
A.H. 1244	105.50	Br. 4.5	93.5	98.64	59.810	Struck at Hamadán.[1]
1245-48...	105.12	standard	91.7	96.36	58.400	Struck at Shiráz.
Farrukhábád 39 san	169.40	Br. 6	94.1	153.23	97.073	Old native currency, average.
Company's.....	173.00	Br. 9.2	95.5	165.215	100.144	45th san Lukhnow Rs. of Reg. XLV. 1803
new standard...	180.234	standard	91.7	165.215	100.144	By Reg. XI. 1819.
present	180.00	standard	91.7	165.00	100.000	By Reg. VII. 1833.
Generally.....	167.20	Wo. 8	88.3	147.69	89.511	Gárnáli Arkát.
German crown.....	433.00	Wo. 20	83.3	360.84	218.691	Legal value by convention of 1763.
	430.45	Wo. 20.5	83.1	357.81	216.855	By Calcutta assays.
Ghatsan rupee.....	173.31	Br. 9	95.4	165.37	100.222	29th san Reg. III. 1806
Goa	168.50	Wo. 12	86.4	145.58	88.230	Imported at Bombay as bullion.
Gohursáhí						
1 to 15 san...	174.43	Br. 11.5	96.5	168.25	101.971	Sháh 'Alam? Benáres
chaurá						mint; *chaurd*, broad
thumká	174.18	Br. 7	94.5	164.74	99.833	*Thumká*, stumpy or broad; all current
16th san	174.52	Br. 8.5	95.2	166.16	100.702	in Gházipúr dis-
trisúlí	173.05	Br. 4.5	93.5	161.87	98.110	trict at par with
Gokul rupee.....	172 80	Br. 3	92.9	160.56	97.309	Benáres rupees.
Gomansáhí, 1819...	171.25	standard	91.7	156.98	95.139	See Bundí.
1825 ...	172.98	Br. 5	93.7	162.17	98.283	Equalized to the Indor standard.
Gopál sáhí	172.50	Br. 3	92.9	160.28	97.140	Madras.
Gurumatkal, 1.....	172.30	Wo. 24.5	81.5	140.35	85.063	Haidarábád Bágh chalaní.
2.....	172.00	Wo. 18.5	84.0	144.41	87.520	„ Shahr chalaní.
3.....	170.00	Wo. 39.5	75.2	127.85	77.487	„ Hukm chalaní.
Govindbakhshí, 1...	170.80	Wo. 20	83.3	142.33	86.262	Aurangábád Bágh chalaní.
2...	171.50	Wo. 25	81.2	139.3	84.451	Do. Shahr chalaní.
3...	170.50	Wo. 19	83.7	142.79	86.542	Do. Hukm chalaní.
1832...	169.38	Wo. 25	81.2	137.62	83.406	See Shamshírí, paid to troops at 120 per 100 Fd. or By. Rs.
Gwáliár	171.30	Br. 6	94.1	161.31	97.763	The best of Sindia's coins.
Gurrahkotá						Debased Bálásáhí.
Hálí						See Puna, Ujjáin, etc.
Hatras	171.60	Br. 9	95.4	163.73	99.27	
Holkar sáhí.....	168.60	Wo. 1	91.3	153.84	93.240	Coined by Holkar at Indor?
Hukarí.....	172.60	Wo. 22.5	82.3	152.03	86.082	Coined at Marech.
Hurda	172.59	standard	91.7	158.20	95.881	Called Háli, in Málwa
Haidarábád, 1.....	174.10	Wo. 17	84.6	147.03	89.106	Bágh chalaní, 'palace currency.'
2.....	173.50	Wo. 17	84.6	146.75	88.942	Shahr chalaní, 'city currency,' see p. 25.
3.....	170.50	Wo. 18.5	84.0	143.15	86.757	Hukm chalaní, 'ordered currency.'
1823.....	173.38	Wo. 18	84.2	145.93	88.440	Coined at Calcutta.
1832.....	172.66	Wo. 21	82.9	143.16	86.765	Bágh chalaní.
	170.20	Wo. 35	77.0	131.19	79.511	Shahr chalaní

[1] Average of one thousand six hundred and eighty, melted in 1833. The Persian coins are struck in many different towns, the principal mint being at Shiráz.

Name.	Weight	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	Grains.	dwts.		Grains.	Fd. Rs.	
Imámí	175.24	Br. 10.5	96.0	168.31	102.003	Struck by Tipú Sultán, rare.
Indor, 1819	172.00	Br. 7.5	94.8	163.04	98.813	Proper weight 174.5, current throughout Málwá at par with English rup. See Sálimsáhí.
1832	172.90	Br. 6	94.1	162.81	98.674	
Jalâon	168.80	Wo. 12	86.6	146.29	88.662	Rájá Pratáp Singh of Srínagar, established 1809, abolished in 1826.
Jhánsí	170.00	Wo. 15.5	85.2	144.85	87.790	Bundelkhand, abolished 1826.
Jhínd	168.50	Wo. 19	83.8	141.12	85.526	Doáb.
Jodhpúr	174.00	Br. 9.5	95.6	166.39	100.841	Current in Málwá.
	168.30	Wo. 26	80.8	136.04	82.450	Similar to Srísáhí.
Jamkandí	175.00	Br. 2	92.5	161.87	98.104	Exchange 2 pr. cent. under Ankúsi.
Jabalpúr	167.38	Wo. 6	89.2	149.25	90.455	In 1800, 11 máshas; 1803, 10 máshas; 1813, 9 máshas, 6 rupees: at par with Nágpúr.
Jagádharí	165.30	Wo. 12.5	86.4	142.92	86.615	Coined at Nasuk, Khándesh.
Jarípatká	171.60	Wo. 1	91.2	156.58	94.896	
Jaidur	173.50	Br. 6	94.1	163.38	99.017	Jaigarh ? Dihlí district.
	172.00	Br. 5.5	93.9	161.61	97.944	
Jainagarí	172.68	Wo. 3	90.4	156.10	94.608	Current in Ahmadnagar and Gujarát.
Jaipúr	174.00	Br. 12	96.7	168.20	101.939	Present currency.
Kachar	.....	.....	.....	.....	.....	See Náráyaní.
Kárhána	172.80	Wo. 18	84.2	145.44	88.145	
Keraulí	171.37	Br. 8.5	95.2	163.16	98.877	
Kittor-shápurí	174.00	Wo. 12.5	86.5	150.44	91.175	Original Shápúrí (q.v.)
Kochâman	.....	.....	.....	.....	.....	Jodhpúr, Bápúsáhí.
Korá, san 8	168.76	Wo. 5	89.6	151.18	91.623	1769, full wt. 170.5
san 12	168.73	Wo. 10.5	87.3	147.29	89.269	current in Allahábád: mostly melted up and recoined.
san 20	168.36	Wo. 14	85.8	144.51	87.581	
Kosí	167.05	Wo. 18	84.2	140.60	85.212	
Kosá	171.64	Wo. 32	78.3	134.45	81.485	Haidarábád (1832).
Kúmhír	171.00	Br. 8	95.0	162.45	98.454	Near Bhartpúr.
Kotá, old	172.65	Br. 13.5	97.3	167.97	101.803	Kotá Rájá has mints
1825	174.02	Br. 14	97.5	169.67	102.830	also at Jatrapatan and Gágraun.
Katch kaurí	72.15	Wo. 73.5	61.0	43.56	26.400	Coined at Anjar, Katch.
Lálágorá	171.50	Wo. 6.5	89.0	152.15	92.210	Coined by Gen. Lally?
Lárin	74.50	Br. 11.5	96.5	71.86	43.553	Of Persia and Arabia
Lassa	58.00	Wo. 30.5	79.2	45.91	27.827	Chah Chin coin or Tsang-pahu.
Lukhnow, old	172.33	Br. 12	96.7	166.58	100.957	Coined by the Nawáb Vazír.
(Fd. sd.) 45th san.	173.00	Br. 9.2	95.5	165.21	100.127	Called Machhlísáhí.
Srí sháhí	172.12	Br. 11	96.2	165.67	100.405	By King Asaf-ud-daulah.
1824	172.12	Br. 6	94.1	162.08	98.231	This year's coinage; inferior. (A.H. 1239-40.)
1831	172.10	Br. 11	96.2	165.69	100.413	
Mádipúr	173.75	Wo. 6	89.2	154.93	93.895	Or Nousee; (Kelly).

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	Grains.	dwts.		Grains.	Fd. Rs.	
Mádairí	174.28	Br. 5.5	94.0	163.75	99.240	
Madras, old	176.40	Br. 6 5	94.4	166.48	100.895	Old Arkát rup. by law
Rájápúrí	175.00	Br. 7	94.6	165.52	100.315	Coined at Rájápúr.
rupee of 1811...	186.70	Wo. 5.5	89.4	166.48	100.895	Coined from Spanish dollars.
half pagoda ...	326.73	Wo. 5.5	89.4	291.34	176.570	= 1¾ Arkát rupee.
5-fanam	71 51	Wo. 4	90.	64.36	39.008	By Calcutta assay.
2-fanam	28.75	Wo. 5	89.6	25.76	15.609	,,
1-fanam	14.31	Wo. 4.5	89.8	12.85	7.785	,,
double rupee ...	370.89	Wo. 4.5	89.8	333.03	201.834	,,
rupee	187.48	Wo. 4.5	89.8	168.34	102.024	,,
new standard...	180.00	Standard	91.7	165.00	100.000	1818; present currency.
Madhushâhí	174.05	Br. 12.5	96.9	168.61	102.188	New Holkar, Indor.
Maheswarí	173.25	Br. 7.5	94.8	164.23	99.530	Coined at Maheswar by Holkar; same as Ujjain and Indor.
Muhammadsháhí...	173.30	Br. 8.5	95.2	165.00	100.000	Dihlí Muhammadsháhí?
Mámúsáhí	177.75	Wo. 5.5	89.4	158.86	96.281	Baroda.
Malabar	172.84	Br. 3.5	93.1	160.96	97.549	
Mámásáhí	169.50	Wo. 2.5	90.7	153.61	93.096	Current in Ahmadnagar and Gujarát.
Máshirábád	171.40	Wo. 6.5	89.0	152.47	92.409	(Old) from Madras.
new ...	168.20	Wo. 2.5	90.6	152.43	92.382	
Marech hakárí.....	172.60	Wo. 17.5	84.4	145.67	88.287	Coined at Marech. Bijapúr.
Mullasahí	172.40	Br. 8	95.0	163.78	99.260	Súrat?
Malhásáhí	165.87	Wo. 6.5	89.0	147.55	89.425	Súrat (Noton).
	165.88	Wo. 6	89.2	147.91	89.642	Current in Málwá.
Mudhôl	173.00	Wo. 82	57.5	99.47	60.284	Coined by Málijí Ráo in 1790.
Murshidábád	179.666	Br. 15	98.0	175.923	106.620	Old sikká rupee (See Calcutta.)
Mag rupee	152.80	Wo. 14.9	29.6	49.31	29.886	Average of 1400, assayed in 1833.
Makansáhí	176.62	Wo. 10.5	87.3	154.17	93.439	Coined at Baroda.
Malhársáhí	172.30	Wo. 5	89.6	154.35	93.546	Coined at Bagalkotá (Holkar).
Mulkápúr	173.20	Wo. 46.5	72.3	125.21	75.884	Near Burhánpúr.
Mangalsáhi	178.50	Wo. 7	88.8	158.41	96.012	(Kelly.)
Mutysáhí	173.30	Br. 8	95.0	164.73	99.833	Achmuty, collector, Allahábád.
Mathurá	167.30	Wo. 13.5	86.0	143.95	87.241	
Mysore	174.28	Br. 7.5	94.8	165.20	100.125	Maheswar? Holkar's.
Nágpúr, old.....	168.65	Wo. 0.5	91.5	154.24	93.481	Nishándár, before 1817.
new	166.53	Wo. 13.5	86.0	143.28	86.838	Náldár, after 1817.
1824	166.53	Wo. 28.5	79.8	132.87	80.530	Debased until 1824.
present ...	166.20	Wo. 17.5	84.4	140.23	84.988	Reformed in 1824.
Náráyaní	142.23	Wo. 22	86.7	117.34	71.116	The Kachár rupee; current in Rangpúr, etc. assayed in 1832.
	143.17	Wo. 30	79.2	113.34	68.690	
	137.15	Wo. 25.5	81.0	111.15	67.364	
Náráyanpat	170.00	Wo. 32	78.3	133.17	80.707	Haidarábád rupee, coined at Náráyanpat
,, ...	172.50	Wo. 26	80.9	139.55	84.557	By Noton full weight
Narwár.....	170.00	Wo. 95	87.7	149.10	90.366	[Pádsháhpúr.
Nepání	173.00	Wo. 38.5	75.7	130.96	79.383	A Maráthí coin, 1803

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	Grains.	Dwts.		Grains.	Fd. Rs.	
Nepál						These are coins of the Gorkha dynasty of Nepál princes, Girván Yudh and the present Rájá Rájendra Vikrama Sáh. They are the average of a number assayed in 1832. The coins of the old or Newár dynasty are of the same standing. They are called muhrs, see p. 32.
A.D. Sáka.						
1808 1731	85.00	Wo. 21	82.9	70.48	42.714	
1810 1733	83.75	Wo. 32	78.3	65.60	39.760	
1811 1734	84.67	Wo. 28	80.0	67.73	41.050	
1813 1736	84.40	Wo. 37	75.1	64.35	39.003	
1815 1738	84.58	Wo. 50	70.9	59.92	36.316	
1817 1740	85.05	Wo. 43	73.7	62.72	38.014	
1818 1741	84.96	Wo. 43	73.7	62.65	37.973	
1819 1742	83.77	Wo. 55.5	68.5	57.42	34.799	
1820 1743	84.66	Wo. 33	77.9	65.96	39.977	
1822 1745	85.57	Wo. 26	80.8	69.17	41.922	
1823 1746	85.23	Wo. 24.5	81.5	69.43	42.078	
1824 1747	85.47	Wo. 31	78.7	67.30	40.790	
Average	84.76	Wo. 35.3	76.8	65.23	39.522	
Najíbábád						Current in Rohilkhand and Murádábád. Received at 106 per 100 Fd. Rs., see p. 32.
sun, 20 to 29	173.00	Br. 12	96.7	167.23	101.353	
30 to 40	171.00	Br. 6	94.1	161.02	97.591	
41 to 43	169.30	Br. 1	92.1	155.90	94.483	
Nasúrábád	170.20	Br. 6	94.1	160.27	97.134	
Udipúr.....	167.45	Wo. 32.5	78.1	130.82	79.285	
Ujjain, 1832	174.64	Br. 4	93.3	162.99	98.783	Sindiasáhí? Mewár. Average of 100. See Maheswar. Struck by Sindia.
Oukarí	175.00	Wo. 17	84.6	148.02	89.710	(Kelly's Cambist). Ikkerí.
Panálí, old	170.60	Wo. 68	63.4	108.16	65.552	1760. Struck by Rájá Kárwikar.
Pánipat	171.20	Br. 0.5	91.9	157.29	95.327	Dihlí district.
Patna	177.50	Br. 11.5	96.5	161.21	97.705	Company's mint, 1793.
Parkaní, Nepání ...	173.00	Wo. 38.5	75.7	130.96	79.384	By Sidhojiná'ik 1803
Sembho	172.75	Wo. 28.5	79.7	137.76	83.491	Current in S. Maráthí states.
Old ditto	174.00	Wo. 4.5	89.7	156.16	94.646	By Bhusla family, 200 years ago.
Mudhol	173.00	Wo. 8.2	57.5	99.47	60.284	By Málájí Ráo, 1790, rare.
newest	177.90	Wo. 7	88.7	157.88	95.684	Coined in the Sáwant state.
Persian rupee	177.25	Br. 16	98.4	174.30	105.634	See Fath 'Alí.
	178.00	Br. 19.5	98.2	174.66	105.856	[sáhí.
Pratápgarh	170.40	Wo. 9.5	87.6	149.27	90.466	Noton. See Sálim-
Phulcharí.....	174.81	Br. 9.5	95.6	167.58	101.565	Phulshahrí?
Púlshahrí.....	171.70	Br. 1.5	92.3	158.46	96.039	Ankusí rupee struck at Phúlshahr.
Pondicherry.....	175.35	Br. 9.5	95.6	167.68	101.625	French Arkát.
	173.98	Br. 10	95.8	166.73	101.048	
old	173.61	Br. 11	96.2	167.09	101.269	[under Purnyá.
Rájá	176.16	Br. 8	95.0	167.30	101.390	Struck at Maisúr,
Pultí fanam	5.60	Br. 5.5	94.0	5.26	3.190	
Puna, old.....	176.00	Br. 12.5	96.9	170.50	103.333	Old currency. See Ankusí.
srí sikká.....	172.50	Br. 1.5	92.3	159.20	96.486	For present standard
hálí	174.75	Br. 11.5	96.4	168.46	102.096	Coined for mercantile purposes.
Porebunder kaurí...	74.50	Wo. 52	70.0	52.15	31.606	Coined at Porebunder, Katch.
Rájgarh	173.75	Br. 11	96.2	167.23	101.353	

Name.	Weight.	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	Grains.	dwts.		Grains.	Fd. Rs.	
Ráj-muhrí	.....	.....	.....	.....	.....	See Assam rupee.
Rájsáhí	169.73	Wo. 14	85.8	145.69	88.295	
Ráichur 1	173.00	Wo. 4.5	89.8	155.34	94.144	(Madras table).
2	175.00	Wo. 5.5	89.4	156.41	94.792	
Ráthgarh.....	168.35	Wo. 11	87.1	146.60	88.851	One of Sindia's mints
Rikábí	172.00	Wo. 10	87.5	150.50	91.212	
	172.00	Wo. 12	86.6	149.07	90.343	
Ságar 1815	170.10	Wo. 8.5	88.1	149.90	90.849	See Bálásáhí; std. 80 rati silver 10 r. alloy; established in 1782; received at 120 per 100 Fd. Rs.
1819	170.48	Wo. 9.5	87.7	149.52	90.624	
new, 1824	180.00	standard	91.7	165.00	100.000	The Fd. rupee.
Saháranpúr	171.00	Br. 4.5	93.5	159.96	96.943	Mint abolished in 1806.
Sálimsáhí 29	168.11	Wo. 34.5	77.3	129.93	78.748	Struck at Pratápgarh, Ajmír, and current throughout Málwá.
san, 45	168.55	Wo. 27	80.4	135.54	82.148	
oldest, ...	168.50	Wo. 6.5	89.0	150.00	90.909	Jurmuria, (Macdonald's rept., 1823).
1810	168.50	Wo. 13.5	86.0	145.00	87.878	Murmuria, ditto.
1820	168.50	Wo. 25.0	81.3	137.00	83.030	Meláh, ditto.
Shámlí	170.10	Wo. 1.5	91.1	154.86	93.855	Dihlí district.
Sandoara	171.30	Br. 1	92.1	157.74	95.599	
Sarura	165.00	Wo. 22	82.5	136.12	82.500	Sárowí of Ajmír.
Sardhana	171.20	Br. 2	92.5	158.36	95.975	Bígam Samrú?
Saronj	168.35	Wo. 16.5	84.8	142.75	86.516	Málwa.
	170.91	Wo. 4	90.0	153.82	93.226	
Sháhpúrí	174.00	Wo. 10	87.4	151.98	92.118	Current in Belgaum, Ajmír, etc.
Shamshírí 15	172.37	Wo. 26.5	80.6	138.89	84.130	Current in Aurangábád.
san 21	171.51	Wo. 31.5	78.5	134.80	81.693	Assayed in 1833, see Govind bakshí and Haidarábád.
san 28	172.00	Wo. 28	80.0	137.60	83.395	
Sindiasáhí	.....	.....	.....	.....	.....	See Udipúr.
Sohágpúr.....	166.90	Wo. 24	81.7	136.30	82.607	Established in 1810, current in Nerbadda.
Sonát, Dihlí.....	178.77	Br. 15.5	98.1	175.41	106.313	The years 1 to 19 inclusive.
sábik	177.57	Br. 10.5	96.0	170.54	103.358	
san 1 to 19...	179.12	Br. 16	8.3	176.13	106.747	Same as sikká rupee.
Srí sikká	.....	.....	.....	.....	.....	See Puna.
Srísáhí	.....	.....	.....	.....	.....	See Ajmír, 1815.
Srínagar	170.06	Wo. 6.5	89.0	151.28	91.686	In Náná Govind's state. Est. 1794, principal currency of Bundelkhand. See Jáláon.
old.....	167.50	Wo. 16	85.0	142.37	86.289	
Sunámalla	173.54	Br. 0.5	91.9	159.44	96.632	Súrat.
Súrat	174.50	Br. 5.5	93.9	163.96	99.367	Under the Nawáb.
old.....	176.60	Br. 16	98.4	173.66	105.246	Old Dihlí standard.
	176.25	Br. 1	92.1	162.30	98.363	Depreciated, see p. 24.
1800.....	178.32	Br. 2	92.5	164.94	99.966	Chosen as Bombay rupees.
Támbasáhí	169.90	Wo. 8.5	88.1	149.72	90.742	Nickname from copper?
Thanna	170.80	Wo. 2	90.8	155.14	94.026	

Name.	Weight.	Assay.	Touch.	Pure contents	Intrinsic value of 100.	Remarks.
	Grains.	dwts.		Grains.	Fd. Rs.	
Ti-mâsha or (three mâshas)	34.30	Br. 3	92.9	31.87	19.315	Coined in Nepâl? current in Srinagar.
	28.10	Wo. 51	...	15.62	9.467	Ditto, debased.
of Ladakh	40.00	Br. 12.5	96.9	38.75	23.484	Coined at Lassa.
Topísáhí	165.12	Wo. 22.5	82.3	135.88	82.354	
Toragal Nilkant ...	170.00	Wo. 71	62.0	105.40	63.873	Struck by Bálá Sáhib, 1788 B.
Toka.....	172.24	Wo. 27	80.4	138.51	83 944	Aurangábád, (1832).
Tukásáhí	173.16	Br. 5.5	94.0	162.77	98.648	Current in Ahmadnagar. (Noton).
Trinámálí	176.50	Br. 8	95.0	167.67	101.618	Karnátic.
Venkatapatí	172.72	Br. 11	96.2	166.25	100.756	Ditto.
Vazírí	168.62	Wo. 11.5	86.9	146.49	88.783	Sohágpúr, in hilly tract E. of Jabalpúr.
Vazírsháhí	170.00	Wo. 13	86.3	146.62	88.864	
Wabgaum	172.55	Wo. 0.5	91.5	157.88	95.684	Current in the Dakhan. (Noton).
Yeswantí	174.95	Br. 7.5	94.8	165.84	100.500	Struck by Jeswant Ráo Holkar, 1806[1]
Zu'lfikr	174.10	Wo. 17.5	84.4	147.03	91.06	See Haidarábád.

(To convert the decimals of the last column into ánás and pá'ís, see the Table at page 12. For explanation of the present Table, see page 36.)

[1] This curious and handsome coin (for a specimen of which I am indebted to Major Stacy), might be mistaken for an antique from its bearing the following Sanskrit inscription in well-cut Nágarí characters, on the obverse and reverse respectively.

श्री इन्द्रप्रस्थस्थितो राजा चक्रवर्त्ती भूमण्डले ।
तत्प्रसादात् कृता मुद्रा लोकेस्मिन् वैविराजिते ।

श्री लक्ष्मीकान्तपदांभोजभ्रमराजितचेतसः ।
येशवन्तस्य विख्याता मुद्रैषा पृथिवीतले ॥
शके १७२८

Sri. Indraprasthasthito rájá chakravartti bhúmandale,
Tatprasádát kritá mudrá lokesmin vaivirájite,

Sri. Lakshmíkántapaddmbhojabhramarájitachetasah,
Yesawantasya vikhyátá mudraishá prithivitale.

"By the permission of the Rájá of Indraprastha (the king of Dihlí), the Emperor of the world, this coin has been struck by the renowned Yesawant (Jeswant Ráo Holkar), whose heart is as the black bee of the lotus foot of Lakshmíkánt,—to circulate throughout the earth. An. Sakæ 1728" (= A.D. 1806).

ASSAY *of Bullion generally, brought to the Calcutta Mint.*

Denomination.		Assay.	Intrinsic of 100 tolás in Fd. Rs.	Produce in sikká rupees.
South American bars marked	24 din.	Br. 20	109.091	102.273
	11 22	Br. 17.5	107.954	101.207
	11 17	Br. 14	106.364	99.716
	11 10	Br. 8	103.636	97.159
Plata pina recovered from amalgamation...	.....	Br. 17.5	107.954	101.207
China cakes, large: *háthi khurí* (elephant-hoof).....	.....	Br. 16	107.273	100.569
Ditto, small *ghorá khurí* (horse-hoof)	.....	Br. 14.5	106.591	99.929
Calcutta refined cakes, called Madrasí	.....	Br. 15.5	107.045	100.355
„ Murshidábádí	.....	Br. 15	106.818	100.142
„ Dacca	.....	Br. 12	105.454	98.863

ASSAY *of Ava Silver Cakes.*

Burmese denomination.*	Meaning of Ava Assay Report.	Touch.	Calcutta Assay Report.	Touch.	Value of 100 tikals in Fd. Rs.
Ban (supposed to be pure) ...	pure silver	100	Br. 16.5	98.6	151.57
Kharoobat (shell circled)	5 pr. ct. under do.	95	Br. 6.5	94.3	145.16
Dain, ta kyat det	10 pr. ct. above st.	93.5	Br. 2	92.5	142.28
„ ko moo det	9 pr. ct. „	92.6	standard	91.7	141.00
„ sheet moo det	8 pr. ct. „	91.8	Wo. 4	90.0	138.44
„ kwon, neet moo det ...	7 pr. ct. „	90.9	Wo. 3	90.4	139.08
„ nga moo det	5 pr. ct. „	89.7	Wo. 5	87.6	137.79
Madain (alloyed dain)	?	...	Wo.42	74.1	114.08
Yowetnee (red flowered or star)	Ava standard	85.0	Wo. 4	90.0	138.44
„ kyat gé	10 pr. ct. alloy	77.3	Wo.14	85.8	132.03
„ tshay nga kyat gé	15 pr. ct. „	73.9	Wo.38.5	75.6	116.32
„ nheet tshay gé	20 pr. ct. „	70.8	Wo.34	77.5	119.21?
„ thoun tshay gé	30 pr. ct. „	65.4	Wo.72	61.6	94.85
„ le tshay gé	40 pr. ct. „	60.7	Wo.77	59.6	91.65
„ nga tshay gé	50 pr. ct. „	56.7	Wo.88	55.0	84.60
„ kyouk tshay gé	60 pr. ct. „	53.1	Wo.109	50.4	71.14
„ khwon nheet tshay gé..	70 pr. ct. „	50.0	Wo.107	51.3	72.42
„ sheet tshay gé.....	80 pr. ct. „	47.2	Wo.112	49.3	69.22
„ ko tshay gé.....	90 pr. ct. „	44.7	Wo.116	43.5	66.65
Yowetnee gyan	½ yowetnee, ½ alloy	42.9	Wo.131	37.0	57.04
Rangoon yowetnee	5 per cent. better than Ava stand.	90.0	Wo. 4	90.0	138.44

(A deduction of 1 per cent. should be expected from the produce of Ava bullion, on account of the vitreous coat of litharge which adheres to the lumps).

This table is abstracted from the examination of thirty-five specimens of silver specially prepared in Ava, in presence of the Resident, for the comparison of the Burmese with the English assay.

* See page 34.

TABLE *of Copper Coins.*

(Where not otherwise mentioned, the name tells the place of coinage and circulation. Since 100 grains is the weight of the present paisá, the column of weight also expresses the intrinsic value of 100 of each sort in Company's paisá.)

Name.	Weight in troy grains.	Usual rate per rupee.	Where current. Remarks.
Agra paisá	148	60	Current in the Agra district.
Akbarí, old	300	30	Ditto, but scarce.
Allahábád	141	...	
Almorah	83	...	[208 grs.)
American cent	167	...	One cent, 1810 : (by law of 1790, should be
Azimgarh	170	...	Square, Hindí inscription.
Bálásáhí	255	...	Throughout Kalpí, Ságar, etc.
Barellí	149	40	
Bahár	101	64	See Patna.
Benáres	98¼	64	By Regulation X. of 1809, Trisulí paisá; also Reg. VII. 1814. (See page 8 and 39.
Bhilára	307	...	
Bhilsa, Bhopál, Bishennáth	225	...	
Bombay, 1797	212	48	Marked '48 to one rupee, 4 V. E.I.C.' and arms.
1804	200	50	Coined in England; device, arms, and scales, 'Ádl.'
1832	100	64	New coinage, with the same device.
Bhartpúr	275	32	
Bundí	274	32	
Calcutta, 1782	52?	192?	First pá'í struck by contract at Pulta.
1792	40	?	Marked 'o. V. c. 1792,' and on the reverse a shield and crest.
1795	180	64	Quarter-ánás, reduced on the 4th May, 1796,
1796 to 1809	135	64	to 12 ánás weight, and afterwards in 1809,
1809 to 1817	101	64	to 9 ánás, the weight of the Bahár paisá.
1817	100	64	Present standard weight by Reg. XXV. of 1817
half ánás	200	32	By Regulation III. of 1831. (See page 4.)
one pá'í	33⅓	192	
Ceylon	137	...	Coined in England, device an elephant, 'two stivers;' the one-, and the half-, stiver in proportion.
Chikna	240	30-32	The Madhusáhí worn smooth: throughout Banda.
Chinawa	190	...	Chinania? In Láhor, near Kangra.
China	660	...	Brass coin with square holes, various sizes.
Chalan	240	32	Same as Chikna, current in the Doáb.
Dihlí	172	44-60	Coined until 1818, weight one tolá, or 80 to the ser.
Dutch	230	...	Square lump, marked 'two strs.'
"	120	...	Tranquebar, rude coin marked 'one str.'
English penny	412	...	Old penny-piece.
new	290	...	New penny, legal weight 291.6 grains.
French sous	150	...	Brass, five centimes, legal weight 154 grains.
Farrukhábád	284½	26	Prescribed by Reg. III. 1806 (not coined).
1816	100	64	Established by Regulation XXI. of 1816.
Gokula or Gandasahí	110	70	Current from Mathurá to Mainpúrí.

Name.	Weight in troy grains.	Usual rate per rupee.	Where current. Remarks.
Gorakhpúr	186	26-36	Benáres district, former standard paisá.
Gwáliár, old	146	62	Marked Muhammad Akbar Sháh.
Hádewá	296	...	Near Nágpúr.
Hátras	280	34	Current in Nágpúr.
Indor	115	...	In Málwa generally.
Jaláon	252	40 ?	Bandalkhand, the Bálásáhí paisá.
Java, 1814	172	...	Marked '1st. B.V. E.I.C.'
Jhánsí	260	...	Current in Bandalkhand.
Jabalpúr	260	...	Narbaddá valley.
Jaipúr	280	32½	Agra and Jaipúr districts.
Kukureti	252	40-48	Near Panná in Bandalkhand: bears a device, resembling a Hanumán—3120 per man.
Khetrí	252	...	? Kukureli or Kukureti.
Karolí	281	36	Current at Dihlí and Karolí.
Madras, 1803	180	...	XX.-kás piece, coined in England.
1808	120	...	Three falús, or one falam khurd (little fanam).
1832	100	64	Equalised with Bengal and Madras paisá.
Kotá	275	34	In Kotá, Ajmír, etc.: a square coin.
Lukhnow, old	195	...	Machhlísáhí, } Current in Oudh and Kanouj
new	185	46	Shírsáhí, } to Mainpurí.
1806	284½	26½	See Farrukhábád.
Madhusáhí	270	35-40	Chief currency of Allahábád and the Doáb, formerly of Benáres and Mírzapúr.
Maiwár	34	378	A very small coin.
Marwar	330	...	
Muzaffarábád	190	...	
Mansúrí	169	58	In Agra, etc.
Mathurá, old	147	46½	} Agra, Mathurá, Bindrában, etc.
new	135	68	
double	270	34	
Nazir Sháh	131	...	Son of Ghias-ud-dín Sháh: ancient square paisá of Ságar district.
Nepál	207	...	Current in the Turái.
„ paisá	164	80	Bahádursáhí, coined and current in Nepál.
Najíbábád	243	40	In Barelli and Rohilkhand.
Nagar ?	176	...	Marked 'Nagar 5221,' device, a rude elephant; some have 'Pan, Patan,' or Zarb-i patan.'
Narwar	107	...	In the Narbaddá Territories.
Nawásáhí	197	47	Old Lukhnow, so called.
Patna, old	240	32 ?	Of native fabrication.
1817	101	64	Coined at Patna and Calcutta.
Penang	133	...	One hundred to the dollar: and halves. Coined in England. Current in Penang, Singapore, and the Malay peninsula.
Patiála (Rájásáhí)	170 ?	...	Current in Patiála, Dihlí, etc.
Rájgarh	274	36	
Rájmahal	109	...	Coined at Rájmahal.
Rewásáhí	220	46	In Rewá ? device, a kind of Nágarí figure one ९
Ságar ?	...	...	See Bálásáhí.
Supúr	173	...	The 'Nagar' paisá, so called by the natives.
Saháranpúr	255	35 ?	Also called Alamsáhí.
Tarí	254	42½	? Tehrí.
Tehrí	260	43	In Bandalkhand, equal to Jhánsí.
Tirlangá	150	...	Telinga, or Southern India.
Tranquebar	120	...	Dutch, marked 'I St.' (one stiver).
Udipúr	65	160	About double the Maiwárí.

The weights, unless otherwise stated, are taken from specimens collected chiefly at Benáres.

SYMBOLS, ETC. ON MODERN INDIAN COINS.

Before giving the Catalogue of Symbols figured in plate xlv., it will be convenient to direct the reader's attention to plate xlvi., which gives such samples of the modern coins of India as will enable him to recognise their principal varieties at sight. Those of Nepál, Assam, Kachar and Lassa, are sufficiently distinct from the Nágarí, Bengálí, and Tibetan characters on them; the pagodas, also, of South India cannot be mistaken. The Nágarí coin of Kotá may be classified from its Lotus symbol, although it is otherwise difficult to decypher the inscription. But the great majority of coins treated of in the foregoing remarks and Tables are similar to figures 2, 8, 9, 10, 11, and 12, which exhibit portions only of a Persian inscription, generally of very imperfect execution. These can only be known by the signs or symbols of the various States inserted in some conspicuous part of the impression: thus, No. 11 is known to be of Indor, from the Solar effigy. The following particulars of the coins in plate xlv. will save the necessity of any further general remarks, in addition to those already made at page 40.

1. THE 19TH SAN SIKKÁ RUPEE.

Now [and up to 1835] coined at the Calcutta mint; bearing the Sháh 'Alam distich, explained in page 2. All the Company's silver and gold money of Bengal, up to the present day, is of the same style, containing the whole inscription, of which parts only are visible on most of the native coins.

2. THE OLD SÁLIMSÁHÍ RUPEE.

Current in Málwá, and coined by the Rájá of Pratápgarh. The words visible on the

Obverse: شاه عال حامي

(intended for *Sháh 'Alam ḥámí ud-dín*, etc.) and the Hijra date, 1199, which, however, does not correspond with the year of reign on the

Reverse:

سنه جلوس ميمنت ٢٩ مانوس

'29th year of the prosperous reign.'

This is the earliest year of the coinage of these rupees; those of the 45th san were in course of coinage in 1823. They were issued to the troops at the exchange of 122.8 per 130 Farrukhábád rupees.

3. THE BAJRANGGARH RUPEE.

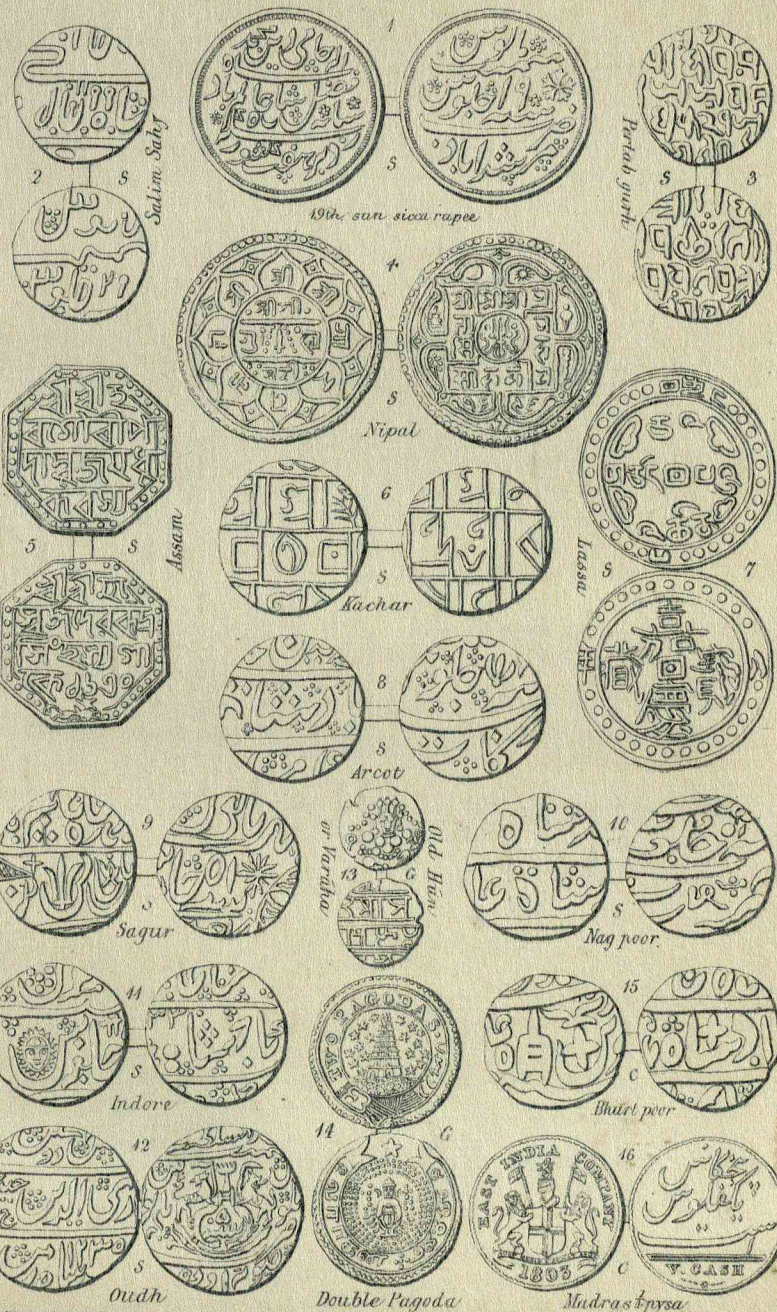
(Near Kotá Bundí) known by the Lotus symbol; coined by a petty zamíndár; much debased. In the Bhákhá dialect,

Obverse:

श्री रामचपरासी पवनपुच बलपायन

Srí ráma chaprási pavanputra balapáyan 'All-powerful son of the air (Hanumán) servant of Ráma.'

Existing Coins of India.



after J. Prinsep.

West & Co. Lith.ro

Published by Stephen Austin, Hertford.

Reverse :

चसपर छापा में राजा जयसिंघ के २१ जयनगर [1]

Is par chhápá men rájá Jay Singh ke 21 *Jayanagar.* 'On this coin is imprinted the 21st (year) of Rájá Jay Singh at Jaynagar.'

The initial and final letters are imperfectly visible on the coin; the purport shews it to be struck at Jaynagar, a village near Bajranggarh.

4. THE NEPÁL MUHR, OR HALF RUPEE.

Obverse :

श्रीश्रीश्री प्रताप सिंह साहदेव १६८६

SriSriSri Pratáp Sinh Sáh Deva (titles of the Rájá) 1686.

Reverse :

श्रीश्रीश्री गोरषनाथ

SriSriSri Gorakhnáth, (the principal god worshipped by the hill people, whence their name of 'Gorkhas' is derived.)

Centre :

श्रीश्रीश्री गुह्येश्वरी

SriSriSri Guhyeswari, 'the omniscient goddess Devi.'

5. AN ASSAMESE RUPEE.

Of an octagonal form. The inscription is in the Bengálí character, but in the Sanskrit language.

Obverse :

শ্রী শ্রী হর গৌরী পদাম্বুজ মধুকরস্য

SriSri Hara Gauri paddmbuja madhukarasya, 'The sipper of the honey of the foot of Srí Hara Gauri.'

Reverse :

শ্রী শ্রী মত্ স্বর্গ দেব রুদ্র সিংহস্য শাকে ১৬৩০

SriSri mat Swarga Deva Rudra Singhasya. Sáke 1630, 'The blessed and celestial Rudra Singh.' The Sáka date corresponds to A.D. 1708.

6. A KACHAR RUPEE.

In this the Bengálí letters are connected together by parallel lines.

Obverse : The inscription is not intelligible.

Reverse :

শ্রী গিরীশ চন্দ্র নারায়ণ।

Srí Giris Chandra Náráyana (the Rájá's name).

7. CHINESE-TIBET SILVER MONEY.

Coined at Lassa (*vide* page 33). On the obverse, in the Tibetan character, *gtsang pahu,* 'pure money,' *chah hchhin* (name of the Chinese Emperor). On the four corners of the margin of another coin similar to the one depicted, are the four letters *nyi hu rtsa lna* (25) meaning the twenty-fifth year of the cycle of sixty years (= A.D. 1831): the date on the coin in the plate is not decypherable. The Chinese

[1] The plate states it to be a Pratápgarh rupee, as it was labelled in the Assay-office cabinet; but on reference to Major Stacy, at Nasírábád, it turns out to be as above. The inscription was read by a pandit at that place, who makes the last words, '*Jayasingh ke ráj Jayapúr men*;' but I consider the above more consistent with the specimen in my possession.

inscription on the reverse consists of four words, *ka-hen poo-chung*, 'the Emperor Ka-hen's[1] precious money.'

8. THE ARKÁT RUPEE.

The full inscription of this (the Madras) coin is given in page 3. It is known by the part of ارکاٹ visible, and by the groups of four dots and the lotus or lily.

9. THE SÁGAR RUPEE.

In this the Sháh 'Alam distich can barely be traced. The trident, star, and flag of Siva are its distinguishing marks.

10. THE NÁGPÚR RUPEE.

This coin bears the inscription of Muhammad Sháh. *Sikka mubárik bád(-sháh Ghází Muhammad Sháh)* only recognizable by the two final letters of the Emperor's name. It is known to be of Nágpúr by the भ *bh* (or ध inverted ?) which may stand for Bhunsla, the name of the reigning Rájás of Nágpúr; the '*t*' (*zarb-i ...t*) may be the final letter of Hingan Ghát, the place of coinage.[2]

11. THE INDOR RUPEE.

Parts of the words *Sháh 'Alam bádsháh* are here visible, and the usual year of the reign: the solar disc distinguishes the coin.

12. THE SHÍRSÁHÍ, OR NEW LUKHNOW RUPEE.

Besides the absurd armorial bearings, constructed of two tigers, two fish and a dagger, surmounted by a royal umbrella; this rupee bears the following inscription:

Obverse:

سکه زد بر سیم و زر شاه زمن غازي الدين حيدر عالي از فضل رب ذوالمنن سنه ۱۲۳۸

'The king of the world, Ghází-ud-dín, Haidar 'Alí, by the grace of the Lord of Glory, has struck coin in silver and gold, A.H. 1238.'

Reverse:

ضرب سنه ۵ جلوس ميمنت مانوس دار السلطنة صوبه اوده

'In the 5th year of his illustrious reign, at the capital of the súbah of Oudh.'

13. AN ANCIENT GOLD HÚN,

with part of an inscription in the Sanskrit character on one side, and a single image on the other.

14. A MODERN DOUBLE PAGODA.

Struck at Madras, showing the character of the former English currency of that presidency.

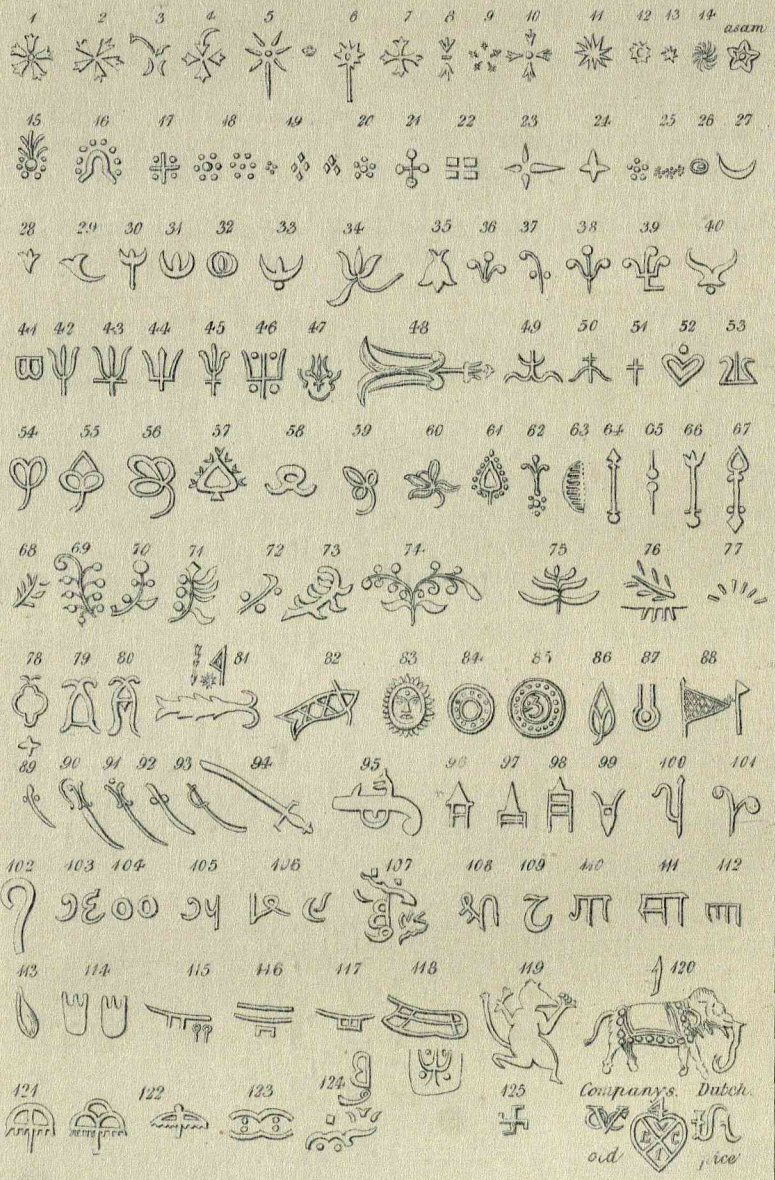
15. THE COMMON BHARTPÚR PAISÁ.

Shewing that the copper coins may be also recognised by their ap-

[1] The late Emperor of China, written 'Kea-king' in the Anglo-Chinese Kalendar, reigned from 1781 to 1821.

[2] I have since been informed that the symbol on the Nágpúr rupee is intended for ४ the Maráthí numeral equivalent to $4\frac{1}{4}$.

Symbols on Indian Coins.



after J. Prinsep.

West & Co. Lith.

Published by Stephen Austin, Hertford.

propriate emblems. The inscription will be seen to be part of the Muhammad Sháh legend.

16. MADRAS COPPER COIN.

Struck in England for circulation at Madras (see page 4). The same coat of arms will be found on the Bombay and Penang copper currency.

CATALOGUE OF SYMBOLS ON MODERN INDIAN COINS.

(PLATE XLVI.)

[Taken from specimens in the Assay Office or in the author's possession. In some cases (marked ?), it is probable that the specimens have been misnamed from their being found current in other districts with different names.]

VARIETIES OF THE PHÚL, ('FLOWER') STAR, AND DOT.

1 Company's rupee. Gokula rupee?
2 Saronj rupee.
3 Islámábád muhr of Aurangzíb.
4 Vazírsáhí rupee, san 9. Bálásáhí?
5 Súrat & old Bombay (with a crown).
6 Korah (in Allahábád) with 21.
7 Srínagar, with 45. Ságar with 45.
8 Jhánsí. Also 10.
9 Saháranpúr: common.
10 Jhánsí: with 5 leaves, Gwáliár.
11 Ságar with 45. (*vide* plate xlv.)
12 Murshidábád.
13 Barellí, with 30.
14 Saháranpúr, with 9.14⅔ Old Assam.
15 Old Súrat muhr.
16 Jalwan or Jáláon?
17 Siwái gold muhr, Aurangzíb. Nágpúr, with 94. Gokula, with 78.
18 Common: Ujjain, with 93 or 37. Udipúr.
19 Arkát. Chilkí Arkát, etc.
20 Private mark of Benáres mint (centre dot enlarged).
21 Kora or Corah, with 6.
22 Ujjain.
23 Old Farrukhábád rupee and muhr.
24 Bharatpúr. (see plate xlv.)
25 Chinawa rupee (Arkát).
26 Bhikanír, with 62, 63.
27 Maisúr, common; Chandausí.

VARIETIES OF THE PADAM, 'LOTUS' OR 'TREFOIL.'

28 Indor, old, with 29.
29 Ditto.
30 Barellí, with 13.
31 Madras, Sháhpúr, 'Alínagar.
32 New Madras.
33 Garnálí rupee (Arkát).
34 Chandur.
35 Gokula, or Gandasáhí paisá.
36 Kálpí.
37 Oujein new. Chanda: common.
38 Kálpí.
39 Patna? Muhr of Dihlí?
40 Bhartpúr paisá (see plate xlv.).
41 Old paisá found in Ságar.

VARIETIES OF THE TRISÚL, BALÁ, OR 'TRIDENT.'

42 Mathurá. Jáláon, Ságar.
43 Srínagar, with 7.
44 Old Ságar, Kálpí.
45 ,, Jáláon, etc.
46 Kálpí paisá, with 43, etc.
47 Nepál muhr. (see plate xlv.)
48 Bhopál, Bhilsá, Ráthgarh.
49 Telinga paisá?
50 Ganjam.
51 Old Dihlí and Farrukhábád: common. Nágpúr of Jeswant Ráo.
52 Nasír Sháhí, old Narbaddá paisá.
53 Sultán Muhammad, ,,

PHÚL, PADAM PHÚL, 'FLOWER, KNOT.'

54 Kotá rupee—and with 57.
55 Kotá rupee.
56 Bundí. Kotá.
57 New Kotá, with 56.
58 Hardá (Narbaddá).
59 Kotá variety. Bajranggarh.
60 Benares, old, small with 80.
61 Bhikanír, with 26, 62, 63.
62 ,, reverse.
63 ,, ,,

BARCHHÁ, 'SPEAR' OR 'SCEPTRE,' GUDÁ, OR 'MACE.'

64 Jodhpúr. Pálí.
65 Kochâman, with 92. Bopúsáhí.
66 Jodhpúr. Nágor.
67 Barellí? Urchá? Pálí.

JHÁR, THÚHAR; 'BRANCH OR SPRIG.'

68 Bhilárâ.
69 Jaipúr-Siwâí gold muhr.
70 Ajmír.
71 Chitor, Krishnâgarh.
72 Sálimsáhí? (Jaipúr).
73 Jaipúr rupee and muhr.
74 Bandarsela?
75 Mathurâ. Jaipúr.
76 Chinsúr, with 100. Udipúr, Chitor old?
77 Barhánpúr?

VARIETIES OF THE ROHÚ, OR 'FISH.'

78 Gokula paisâ.
79 Oudh, Lukhnow old rupee.
80 Ditto, Barellí. Old Benáres.
81 Machlísáhí of Lukhnow.
82 Benáres old.

SÚRAJ, 'THE SUN.'

83 New Indor rupee and muhr.
84 Indor.—Ujjain.
85 „ copper coin.
86 *Bel pattá*, Maheswar, with 87.
87 *Lingam*, Maheswarí rupee.
88 *Patáh*, 'flag or standard of Siva:' Ságar rupee (pl. xlv.). Nágpúr.

VARIETIES OF THE 'SWORD:' SHAMSHÍRÍ.

89 Chanda, Gwáliár,—common.
90 Haidarábád, of Kásim 'Alí.
91 „ Govind-bakhshí.
92 Common shamshírí.
93 Kochâman, with 64.
94 Nágpúr, with 17. Katmandu (see p. 31). Balkh.
95 (Pistol) Agra paisá.

VARIETIES OF THE KATÁR, OR 'DAGGER.'

96 Akbar II. of Dihlí—small.
97 Narwar.
98 Bhartpúr. (see plate xlv.)
99 Siwâí gold muhr of Muhammad Sháh, with 13: small.
100 The *Ankus* of Puna.—Chitor.

NUMERALS AND LETTERS.

101 (10) Hálí sikká of Puna, Nágpúr.
102 (9 or 1?) Rewâ paisâ. Bhilsá?
103 (76) Jabalpúr.
104 (55) Ságar.
105 (75) Indor old rupee.
106 *a* ($4\frac{1}{4}$) Old Nágpúr:
b (9) New do.[1]
107 Tehrí, Bandalkhand, illegible.
108 (श्री *srí*) Srísáhí rupee of Ajmír.
109 (ट *h*) Haidarí of Maisúr.
110 (गा *gá*, 'cow') Chitor; from the proverb regarding the slaughter by Akbar: "*gáo mare ke páp.*"
111 (सा *sá*) Gold muhr, unknown?
112 (णा *ná*) Debased Dihlí gold muhr, san 29.

MISCELLANEOUS.

113 (shell) Bhâtgáon in Nepál.
114 (*Panja*, 'fists') Almorah.
115 Sálimsáhí, date 1199. (see plate xlv.)
116 „ Varieties.
117 „
118 Mewárí paisá.
119 Kukuretí, near Pannáh in Bandalkhand (the god Hanumán?)
120 (elephant.) Nagar, Patan, Sopúr? Struck by Tipú?
121 (*Chhata*, 'the royal umbrella') on some of Muhammad Sháh and Sháh 'Alam's Dihlí coins.
122 Variety of „
123 Etáwa muhr.
124 Jhánsí.
125 The *swastika* emblem of the 7th Jina, found on some coins.

[1] The distinguishing symbol of the old Nágpúr rupee, struck at the Chanda and Hingan Ghát mints was as above, a Maráthí $4\frac{1}{4}$. When Bachâ Ráo and Dr. Gordon had charge of the mint, their mark was a flag (88). The new Nágpúrí since 1825 has the figure 9 above this flag. Other minor varieties are marked as follows:—the Yeswant Ráo Nágpúrí, by +; the Man-Bhat-Sáhí, by =; the Ugno-Sáhí, by a Maráthí 10 (fig. 101); the Rámjí Tantia has a half moon ⌣; the Narsingh Ráo the same with a dot in the centre ⌣; the Siva Ráo, the same with a dot on one side ⌣. There are many more, but they are not considered *chalan* or 'current.'

NOTE ON THE HISTORY OF THE GOLD AND SILVER CURRENCIES OF INDIA.

[As the general subject of metallic currencies is just now attracting the serious attention of the European public, it may be useful that I should recapitulate briefly the facts to be gathered from the detached notices of the coins of the various kingdoms and diverse epochs illustrated in the preceding pages, which throw light upon the little known history of Indian mintages; and further, that I should complete the review by exhibiting the action of our own civilization on the circulating media of these later days, especially in reference to the important question of the institution and organization of the gold coinage as a legal tender, and its eventual supersession as such in 1836.

I have elsewhere expressed an opinion that the people of Hindústán, in very early times, had independently achieved considerable progress in the art of coining; even before Greek civilization reached them through the influence of Alexander's expedition, and the subsequent settlement in India proper of the Bactrian-Hellenes. Indeed, we are able to trace by the produce itself, each phase of mint development and each successive effort of invention tending to the production of a perfect coin. The earliest movement is seen in the fabrication of irregularly outlined flat pieces of silver or copper, of fixed weights, whose currency is marked by the symbols of consecutive dynasties, punched at hazard on their surfaces. Next, we remark a more careful rounding off of the metal, and the application of a single die over the whole of one surface, the other being left blank. As we proceed, we meet with complete coins; but these are cast in moulds, and may possibly indicate separate and independent progress. Successive modifications and improvements are observable in either class, which it is not necessary to follow more at large in this place: and, finally, we arrive at excellent specimens of an issue of fairly coined money, seemingly local in Northern Hindústán,[1] which there is good reason to assign to a period prior to the advent of the Greeks. Coins of these epochs have been found in silver, copper, bronze, and lead; the non-discovery of any examples in gold does not necessarily lead to the inference that the metal was not used for coining purposes; but merely amounts to the fact that, if used, it was of rare occurrence.

[1] Coins of the Behat type. Article X.

The Bactrian-Greeks, as far as their Indian provinces tell the tale, would appear to have restricted themselves to a currency of the two metals, silver and copper. Their successors, the Indo-Scythians again, discontinued the issue of a silver currency, and supplied its place by a gold coinage; increasing, simultaneously, the weight of the copper pieces. There is some uncertainty as to the dates of succeeding dynasties; but we find the Guptas,—who imitated the devices of the Indo-Scythian money,—in possession of a copious gold currency in their eastern provinces on the Ganges, aided by a limited silver, but sufficient copper medium of exchange; while their dominions towards the Western coast were supplied almost exclusively with a silver coinage based upon the mintages of the Sáh kings of Saurashtra (Gujarát); who in their own case had previously copied the style of the Greek hemi-drachmas of Apollodotus and other sovereigns. Here we must pass over centuries, and present our next tableau in the time of the Bráhman kings of Kábul and the Panjáb (about the 10th century A.D.). In this instance also the currency is confined to silver and copper. Mahmúd, and his successors of the Ghazní dynasty, employed gold in addition to the lower metals. At the period immediately preceding the Muhammadan occupation of India (A.H. 587, A.D. 1191) the northern provinces of Hindústán were furnished with a currency composed of a combination of silver and copper mixed in uncertain proportions: while the Rahtor monarchs of Kanauj still continued to issue gold. The former coins, which were entitled after the capital, Dilliwáls (دِلّیوال),[1] were adopted by the Pathán Sultáns of India, and a middle currency of such incorporated metals remained in use up to the time of Báber (A.H. 930, A.D. 1523-24). Simultaneously with the retention of this type of the local money, the Muhammadans introduced modified forms of dirhams and dínárs, of equal weights (174 grains). At what relative proportion these stood to each other we are left to conjecture, as history is silent on the subject, and the coins themselves afford us no means of instituting a comparison. The lower currency was completed by a copper coinage, which in some cases extended to so minute a division as 17.4 grains.

The celebrated Muhammad bin Tughlak (A.H. 725, A.D. 1324-5) introduced an infinite variety of new coins of all descriptions, and evidently remodelled the rates, together with the weights of his currency. The gold coinage was raised from 174 to 200 grains, and the silver reduced from the former amount to 140 grains. But his grand effort at finance seems to have been reserved for the production

[1] Inscription of A.H. 587 (A.D. 1191) on the Mosque of the Kutb at Dihlí; the original reads preferably Dilliál, but the Táj ul Máasir determines the word as دهلیوال.

of a scheme of a representative currency (founded on the Chinese paper credit system) in which copper and brass tokens were stamped with an authoritative impress of value, whether as the equivalent of gold or silver; and in addition, parallel representatives of the ordinary subdivisions of each, were issued to complete the currency. This attempt, after producing countless troubles, and resulting in utter failure—even under the guidance of an absolute and unscrupulous tyrant—was abandoned definitively before the expiration of three years from the first promulgation of the ordinance. I need not notice the minor incidents of Muhammad bin Tughlak's mint administration, further than to note a seeming reversion to the previous system of weights in the latter part of his reign. Nor need I more fully advert to the state of the currency under his successors, beyond remarking that Báber seems to have designed to substitute his Central Asian scheme of coinage in place of the then existing local distribution of the currency. However, when Shír Sháh had driven Humáyún out of India (A.H. 949, A.D. 1541) he entered upon a general reform of the coinage, which had the effect of introducing the now universal rupee, and abolishing the unsatisfactory compound of mixed metals; in addition to simplifying the lower coinage, by its reduction to a fixed and determined standard of pure copper,[1] representing the dám, which we must suppose had previously been minted in billon.[2]

At length we reach an epoch when we have no longer to depend upon the coins as our only data, but are able to cite written and contemporary authority for the illustration of our subject. Akbar's minister, Abú'lfazl, has preserved to us a full and complete record of his master's mint arrangements; from this we discover that the authoritative standard of the day was copper, based upon the dám, which is defined as "a copper coin, in weight 5 tanks, or 1 tolá, 8 máshas, and 7 ratís, in value the 40th part of a rupee." The text of the 'Ayín-i Akberí' goes on to declare the weight and value of the gold and silver coins, the equivalents of each being expressed in dáms, and their relative exchangeable value *inter se* being for the moment altogether ignored.[3] In this same measure of value all the revenues of the empire are estimated, indeed, it would appear from an incidental notice in connexion with the subject of relative values, that the definition of the worth of

[1] I have estimated this coin at 323.5 grains; pieces now in existence weigh as high as 322 grs. (See 'Numismatic Chronicle,' xv. 1852.)

[2] "The dám," says Abú'lfazl, "was formerly called pysah and also Bahloli."—Bahlol Lodi's mixed coinage contributes isolated specimens that might well represent the requisite value, as tested by present assays; but there is an absence of uniformity in the general results that forbids our recognising any specific class of higher or lower equivalents.

[3] Gladwin's 'Ayín-i Akberí,' i. p. 37.

gold by any silver estimate, was—like the rupee itself—a novelty.[1] The materials afforded by the text of the 'Ayín-i Akberí,' whether tested by the valuation in dáms, or by the equivalents subsequently given of the rupee correspondents of the several descriptions of muhrs, equally establish the result that gold stood to silver as 1 to 9.4. The rupees, it will be seen, were themselves of various standards, ranging from the 39 dáms of the old round rupee, to the 40 dáms of the square jaláli; and, in fact, it is acknowledged in one place that even the estimated rates were uncertain in their application, and that the silver coin was left to find its own level in the market.[2]

I now arrive at the period when British influence is felt upon the the currencies of India, and as this is a subject connected with which much misunderstanding and some misrepresentation have taken place, I secure myself from any possible prejudice or favor by permitting the Government to state its own case, in extracts from the legislative enactments promulgated from time to time. The history is unsatisfactory in its earlier portions, and incomplete towards its end, where, it is clear, much remains intentionally untold.

Regulation XXXV. of 1793.—Preamble.—"A Regulation for re-enacting, with amendments, the Rules passed on the 20th June, 24th October, and 31st November, 1792, and subsequent dates, for the reform of the Gold and Silver Coin in Bengal, Behar, and Orissa; and for prohibiting the currency of any Gold or Silver Coin in those provinces, but the 19th Sun Sicca Rupees and the 19th Sun Gold Mohurs."

"Sec. 1. . . . The sicca rupee of the 19th sun is the established silver coin of the country, and the rupee in which the public revenues are payable. It was with a view to render it the general measure of value, that Government determined in the year 1773, that all rupees coined in future should bear the impression of the 19th sun or year of the reign ofShah Alum. . . . "The rules by which the gold coin has been regulated have been productive of evils, similar to those which have prevailed with regard to the silver coin. Under the native administrations, and until the year 1766, the gold mohur was not considered as a legal tender of payment in any public or private transaction, nor was the number of rupees for which it was to pass

[1] When Azad-al-daulah "was sent to Kandes, Rájá Tudermull made the price of gold mohurs to be estimated in rupees:" i. p. 39. The original Persian text is somewhat obscure in this passage; and the MS. copies vary in the wording of the sentence; but Gladwin seems to have fathomed the real meaning.

[2] "Although the market price is sometimes more or less than 40 dáms, yet this value is always set upon it in comparative calculations."—Ayín-i Akberí, i. 35. The original passage is quoted in the body of note [2] p. 5, *suprâ*.

current ever fixed by the Government. It was struck for the convenience of individuals, and the value of it, in the markets, fluctuated like other commodities: silver being the metal which was the general measure of value throughout the country. In the year 1766, the value of the gold coin, with respect to the silver, was first fixed, and the former coin declared a legal tender of payment. A gold mohur was struck, and ordered to pass for fourteen sicca rupees. But as this coin (calculating according to the relative value of the two metals) was much below the worth of the silver, in the number of rupees for which it was ordered to pass, it was found impossible to render it current, and it was accordingly called in; and a new gold mohur, being that now current, was issued in 1769, which was directed to pass as a legal tender of payment for sixteen sicca rupees. The intrinsic worth of this coin was estimated to be equal to the nominal value of it, or as nearly so as was deemed necessary to render it current at the prescribed rate." [The Regulation then goes on to enumerate the difficulties attendant upon giving free currency to these coins,[1] and proceeds to say:] "The means which appear best calculated

[1] Sir James Steuart, in his work, entitled 'The Principles of Money applied to the present state of the Coin of Bengal' (A.D. 1772), gives us some interesting details as to the aim and object of the original establishment of the gold currency of Bengal, and the want of success that attended the measures of Government, confessed to in the above Regulation. He says: "It has been observed, that this coin, called gold mohurs, had been formerly coined at Dehli, of the same weight and fineness with the sicca rupee of Bengal and other countries of Hindostan; but that they passed conventionally, having no legal *denomination* . . In 1766, . . it was proposed, as an expedient for augmenting the currency of specie to make a coinage of gold, . . and the directors of this operation, pitching upon fifteen Arcot rupees as the value of one gold mohur, instead of estimating the value of these fifteen Arcot rupees by the fine metal contained in them, estimated them by their current value, which was above the proportion of their intrinsic worth. Not satisfied with this first deviation from principles, they added to the mohur (already over-rated in its proportion to the fifteen silver Arcot rupees) no less than 8 per cent. extra-denomination, entirely arbitrary. So when this gold currrncy came abroad, it proved to be no less than $17\frac{1}{2}$ per cent. worse in payments than silver rupees of Bengal, Madras, Bombay, and Surat," pp. 26, 27.

"The people of that country (Bengal) had been so long accustomed to silver coin, that they never would, except when forced to it, receive the mohurs in payment. So the Company was obliged to make a new regulatiou in 1769, little better than the former. At last the gold currency fell all together to many per cent. below its intrinsic value, according to the saying, *Dum vitant stulti, vitia in contraria currunt.*"

Sir J. Steuart, at p. 30 *et seq.*, gives us the weight and standard of these coins:—

The 1766 mohur was 20 carats fine, or 20-24ths: full weight, 179·66 grs., proportion of fine gold, 149·72 grains: issued as the equivalent of 14 rupees.

The rupee being 179·66 grs. in full weight, and containing 175·92 grs. of fine silver.

The mohur of 1769, full weight 190·773 grs., contained 190·086 grs. of fine gold: the value being fixed at 16 rupees: the silver currency remaining as before.

Our author continues: "Now if we go upon the supposition we have hitherto adopted, viz., that the proportion of the metals in India was supposed to be at 14 to 1; then in this coinage of 1769, the gold was over-rated nearly $5\frac{3}{4}$ per cent."

to render the gold mohur generally current, are to declare it receivable at all the public treasuries, and in all public payments throughout the provinces, at the rate of sixteen sicca rupees."

SEC. 2. defines weight and standards, or—

"Gold mohurs, 190·894 troy grs.: Assay, compared with English standard gold, better, 1 car. $3\frac{1}{4}$ grs.

"Sicca rupees, $179\frac{2}{3}$ grs.: Assay, compared with English standard silver, better, 13 dwts."

SEC. 3. specifies that these gold mohurs "are to be considered a legal tender of payment in all public and private transactions . . at the rate of sixteen sicca rupees;" and further defines penalties for their refusal by the native Treasurers; and to complete the authoritative currency, it is even declared in Sec. 20, that "no person shall recover in any court of judicature . . any sum of money, under a bond or other writing, or any agreement, written or verbal, entered into after the above-mentioned date, by which any sum of money shall be stipulated to be paid in any species of rupees, excepting sicca rupees or gold mohurs of the 19th sun, or the halves and quarters of each."

REG. VI. of 1794 postpones to 10th April, 1794, the operations of Secs. 18, 19, 20, and 23 "as regards the silver coin."

REG. LIX. of 1795 further postpones the operation of these Rules to 20th April, 1796.

REG. LXI. of 1795 refers merely to the amount of loss which is to be held to reduce these rupees below the standard.

REGS. I. of 1797, V. of 1801, and XXXVIII. of 1803 relate to exemption from duties of gold and silver coins.

REG. XLV. of 1803 gives effect to the arrangement for the mintage of Lucknow or Furrukkábád rupees, of the "same size and form as the 19th sun sicca rupees"; weight and standard to be hereafter determined.

SEC. 25 is, in effect, to the same tenor as Sec. 20 of Reg. XXXV. of 1793, except that gold mohurs are not alluded to; but Sec. 42 explains, that "whereas the gold coin, denominated gold mohurs, has never obtained an extensive circulation in the ceded provinces, in consequence of silver having been the general measure of value in those provinces, from time immemorial; and whereas, during the government of the Nawab Vizir, the value of the gold mohurs in circulation, with relation to the silver coin, was never fixed; and, whereas the coinage of gold mohurs has been long discontinued by the Native Government of the said provinces, as well as the adjacent foreign states; it is not, therefore, judged necessary, at present, to establish a gold coinage in the provinces in question. The gold

mohurs shall be permitted to be circulated in the ceded provinces as heretofore, according to the value which individuals receiving and paying the same shall determine; but, gold mohurs shall not be considered to be a legal tender of payment in any public or private transaction, nor shall they bear any fixed rate of value, compared with reference to the silver coin . . established by this Regulation."

SEC. 43 *et seq.* provides for the copper coinage.

REG. LIV. of 1803 postpones the operation of Sec. 20, Reg. XXXV. of 1793, to 16th August for the province of Chittagong.

REG. XII. of 1805, Sec. 13, declares that after a fixed date, "no money will be received in payment of the public revenue (in Cuttack), excepting Calcutta sicca rupees or gold mohurs of the 19th sun."

SEC. 15 extends the penal provisions of Sec. 20, Reg. XXXV. of 1793 to the same province.

REG. III. of 1806 specifies the weight and standard of the Lucknow sicca rupee, introduced by Reg. XLV. of 1803, viz.: 173 grs. troy. Touch, or parts of fine silver, in 100, 95·5; alloy, 4·5.

REG. IV. of 1807 refers to rupees alone, and determines the rates at which rupees of sorts shall be received and issued in the ceded provinces. Sec. 8 makes the same applicable to Cuttack.

REG. XIII. of 1807 rescinds the penalties named in Secs. 20 and 21, Reg. XXXV. of 1793, and in parallel sections applicable to local divisions of the country; it being admitted that in many cases, "the penalty of non-recovery by judicial process is not only a hardship to the individual, but is repugnant to the ends of justice."

REG. II. of 1812 defines duties on the coinage of bullion.

SECS. 10 and 11 specify the weight and value of the Benares rupee as 175 grs. troy. Touch, or pure silver, 168·875; alloy. 6·125.

REG. XVII. of 1817, Secs. 9, 10, and 11 prescribe punishments for counterfeiting, debasing, etc.

REG. XIV. of 1818.—The preamble states, "The high standards established for the gold mohur and sicca rupee, having been found productive of many inconveniences, both to individuals and the public, . . [but] as a reduction in the value of the sicca rupee, from its being in a great measure the money of account, both in private and public transactions, would necessarily change the terms of all existing contracts, and might be productive of embarrassment and trouble, it has been determined to leave the rupee unaltered in this respect; and the new Calcutta sicca rupee will consequently contain the same quantity of fine silver as that heretofore struck, and, being of the same intrinsic value, will circulate on the same terms. The mint proportions of silver and gold, being, it is believed, inaccurately estimated at present, and it being also desirable that an uniformity in this

respect should be introduced at the three Presidencies of Calcutta, Madras, and Bombay, it has been thought advisable to make a slight deduction in the intrinsic value of the gold mohur to be coined at this Presidency, in order to raise the value of fine gold to fine silver, from the present rates of 1 to 14·861 to that of 1 to 15. The gold mohur will still continue to pass current at the rate of sixteen rupees. For the purposes and objects above enumerated" it is enacted, etc.

SEC. 1, par. 2nd.—"The weight and standard of the Calcutta sicca rupee and gold mohur . . shall be as follows[1]":—

Gold mohur ... weight 204·710 grs. ... fine gold 187·651 ... alloy 17·059
Sicca rupee ... weight 191·916 grs. ... fine silver 175·923 ... alloy 15·993

REG. V. of 1819 refers to mint and bullion details.

REG. XI. of 1819 discontinues the coinage of the Benares rupee, and limits "the legal currencies in the territories subordinate" to Bengal "to two, namely the Calcutta and Furruckabad rupee." The latter is specified at—Weight, 180·234 grs.,; pure silver, 165·215; alloy, 15·019 = 11-12ths pure and 1-12th alloy.

SEC. 10 secures an equitable arrangement for bonds, etc., "not expressed in Furruckabad rupees."

REG. V. of 1821 regulates the rates at which Benares and Furruckabad rupees shall be received in payment of revenue.

[1] To exemplify how Governments keep their own laws, I extract from 'Allen's Indian Mail' of 1854, a statement of manifest authenticity regarding certain mint operations sanctioned during the continued currency of this Regulation:—"The market of Calcutta has invariably exhibited a great difference of price between the pure gold mohurs of old standard and those of the new one-twelfth alloy standard. For seven years—that is, from 1818 to 1825—the Calcutta mint coined nothing but new-standard gold mohurs; but in 1825-26, the Government having had a large receipt of gold from the Burmese, and having obtained also a considerable remittance of gold from Madras, consequent upon the substitution of rupees for pagodas in the currency of that presidency, this *Government gold was, for the sake of the profit, coined* into gold mohurs of the old standard,—Regulation XIV. of 1818 prescribing one-twelfth alloy for the Calcutta gold, notwithstanding. There were above four lacs of old gold pieces struck in the Mint, and sold at the general Treasury at the price of the day. But it was only in 1829 that a similar privilege was conceded to private bullion-merchants. The consequence, however, of conceding to them the privilege of obtaining coin of the old standard was, that in the six years from the date when it commenced to 1835, when the new Act took the privilege away, nearly as much private gold bullion was brought to be coined as in the eleven preceding years: and when the privilege was taken away, there was a very limited coinage of the new gold coin, and that coinage was principally of Government gold."—After the passing of the Act of 1835, the mint speculations would seem to have been less successful; at least, if we are to credit the following, which is affirmed under similar authority with the passages just quoted:—"The difference of price even of unstamped pure gold, as compared with stamped one-twelfth alloy coin was such, that the Mint Committee of Calcutta, in the year 1836, applied to Government, and obtained leave to sell the Government bullion in its possession instead of coining it. The calculation of profit was based on a comparison, not with the par fixed for receipts into the Government treasury (viz. fifteen of silver for one of gold), but with the price at which the same gold would sell as a coin; showing evidently that our stamp gave no additional value, but the contrary,"

REG. II. of 1824 abolishes the mint at Furruckabad.

REG. VII. of 1833 alters the weight of the new Furruckabad rupee, and assimilates it to the legal currency of the Madras and Bombay Presidencies, and adjusts the weight of Calcutta sicca rupees thus:—

Calcutta sicca rupee	... weight 192 grs.	... fine 176	... alloy 16
Furruckabad rupee	... weight 180 grs.	... fine 165	... alloy 15

The tola or sicca weight 180 grs., introduced (as stated in detail at p. 7, *suprâ*).

ACT XVII of 1835, Sec. 7 declares, "and be it enacted, that the under-mentioned gold coins only shall henceforth be coined at the mints within the territories of the East India Company:—

1st.—A gold mohur or fifteen rupee piece of the weight of 180 grs. troy, and of the following standard, viz.: 11-12ths, or 165 grs., of pure gold; 1-12th, or 15 grs. of alloy": with proportionate sub-divisions.

SEC. 8 defines the devices these coins are to bear.

SEC. 9. "And be it enacted, that no gold coin shall henceforward be a legal tender of payment in any of the territories of the East India Company."[1] (Passed 17th August, 1835).

ACT XXI. of 1835 defines the weight and value of the copper currency, in the Presidency of Bengal, as follows:—

"1.—Pice, weighing 100 grs. troy.

"2.—A double-pice, 200 grs. troy.

"3.—A pie, or 1-12th of an anna piece, $33\frac{1}{3}$ grs."

SEC. 2 enacts that "the said pice shall be a legal tender for 1-64th of the Company's rupee, and the said double-pice for 1-32d of the Company's rupee, and the said pie for 1-192d of the Company's rupee." (Passed 7th December, 1835).

ACT XIII. of 1836 directs that the Calcutta sicca rupee shall cease to be a legal tender from the 1st January, 1838; but shall be received at public Treasuries by weight, subject to one pie for re-coinage: and further limits the circulation of certain local copper coins.

ACT XXXI. of 1837 merely refers to devices.

ACT XXI. of 1838 authorises the "coinage and issuing of any silver coins of a value represented in even annas, or sixteenths of the

[1] As there are no Preambles to the Acts, we are left to discover the reasons which led to this abrupt announcement. 'The Minutes of Consultation in Council' might perhaps disclose the guiding motive. In this instance, however, silence need not be taken for discreet reticence, for many good and valid reasons suggest themselves as warranting the course pursued. And in regard to the new aspect that the gold discoveries have since given to the comparative values of the precious metals, it is to be remembered that at the moment of the passing of this Act, gold stood relatively to silver at *over* 15 to 1 in the local markets.

Company's rupee," of the same standard as the higher denominations.

Act XXXI. of 1839 prescribes punishment "for drilling, defacing, or debasing current coin," etc.

Act XIII. of 1844 is an Act for the withdrawal from circulation of the Trisoolee pyce in the province of Benares.

Act XXII. of 1844 merely extends Act XXI. of 1835 to all "the territories of the East India Company."

Act VI. of 1847 refers to the copper currency of the Straits' Settlements.

To complete the series of Government documents, I append to the more formal legislative enactments, the substance of the notification of the 22nd of December, 1852; which, in its opening paragraph, likewise sufficiently explains the nature of the intermediate order of 1841.[1]

"No. 26. Fort William, Financial Department, 22nd December, 1852.—Notification.—By Sec. 9, Act XVII. of 1835 of the Government of India, it was enacted, that thenceforward no gold coin should be a legal tender of payment in any of the Territories of the East India Company; and, accordingly, gold ceased from the date of the passing of the Act to be a legal tender of payment in the Company's Territories in India."

"But, by a Proclamation issued on the 13th January, 1841, officers in charge of public treasuries were authorized freely to receive gold coins, struck in conformity with the provisions of the same Act XVII. of 1835, at the rates indicated by the denomination of the pieces, until they should have passed certain limits of lightness, set forth in a table published with the Proclamation, or until further orders; and gold coins have been thus received in liquidation of public demands up to the present date."

"Notice is now given . . that on and after that date [1st January, 1853,] no gold coin will be received on account of payments due, or in any way to be made to the Government[2] . .

[1] I have not failed to examine this Proclamation. It specifies the devices (*Reverse:* "A lion and a palm-tree") for the *new* gold coinage, "in conformity with Act XVII. of 1835"; and proceeds: "officers in charge of public treasuries are hereby authorized freely to receive these gold coins at the rates, until further orders, respectively denoted by the denomination of the pieces, until they shall have passed the limits of lightness allowed for wear, laid down in the annexed table, when they will only be receivable as bullion, and be subject to a deduction of one per cent. for seignorage."

[2] I do not ordinarily permit myself to criticise the acts of the Government of India; but these orders seem fairly to demand a passing notice. Viewing the peculiar element of suspicion of motives so strong in Asiatic minds, and the importance the natives of India attach to every varying phase of the dealings of their rulers, it is clear that the "Resolution" of 1852 was neither wise nor politic; it is doubtful whether, under the circumstances, it was just. The reservation of "until further orders," so clumsily inserted in the Proclamation of 1841, might convey its special meaning to the ear of an English lawyer, but it is not likely to

Gold will continue as heretofore, to be received into any of the mints . . for coinage, under the Act and Rules at present in force for the coinage of gold, but Mint certificates for gold coins will be discharged in gold only, and no such certificate for gold will be accepted in any public treasury in liquidation of public demands, or on account of any payment to the Government whatever."[1]

The Madras and Bombay Governments seem to have pertinaciously abstained from legislating on coinages and currencies, and their Statute Books are altogether silent on these subjects, until the action of the Supreme Government is brought to bear on them in 1835. Such being the case, I am unable to elucidate the measures of Mint progress in the minor Presidencies.

have borne its full significance to the intelligence of the Native banker: apart from this, it is clearly a question whether the tenor of the Proclamation itself did not imply an understood obligation on the part of Government, to receive back the gold coined and issued under its provisions, coupled as those provisions were with the inducements held out to aid the circulation, that the officers of Government were enjoined "freely to receive these gold coins at the rates" etc.; the only obvious restriction, beyond the formal "until further orders," being that the pieces should not have "passed the limits of lightness allowed for wear" etc.

[1] The same writer in 'Allen's Indian Mail,' 1854, who clearly has had access to official documents, thus elucidates the motive and object of the Order of 1852:—"We have explained the condition of the gold coin of India, and the erroneous principles adopted for its manufacture. Things continued in this state when the gold of California and Australia began to affect the market, and to change the relative value of that metal to silver. The first considerable increase in the import of gold at Calcutta was in the year 1848-49, and a large portion of it was sent to the mint, in that and the following years, for conversion into low-standard lion-device pieces, [XVII. of 1835]. The sending of gold to the mint at this period was in reality a mere sale of the metal to Government for silver, at the par rate of 15 to 1, which then began to prevail as the market rate. The Mint certificates, obtained for gold delivered, were immediately paid in at that par, in satisfaction of Government dues, or were negotiated at the banks, where silver was always claimed upon them under the option then given of receiving the amount in rupees at the par in question. The gold thus, when coined by the Mint, remained as a dead balance in the Government treasury, not being issuable at the par of 15 to 1, in the condition of base standard coin, to which it had been manufactured. Besides this process of gold accumulation through deliveries at the Calcutta Mint, low standard coin, previously issued, began also to be paid into the treasury, at the established par rate in ordinary transactions [under the Proclamation of 1841]; so that out of a total amount of lion-device gold mohurs, not exceeding in value seventy lacs of rupees, which was the value of the coinage up to that date, as before shown, more than fifty lacs were, in 1852, in deposit in the Government treasury as a dead unserviceable balance. It was at this time that the Government of India began to contemplate measures for converting its entire 5 per cent. Debt into Stocks at 4 per cent. The prospect, therefore, of having the balance to which the Government looked for the means of completing this operation rendered unserviceable for the purpose by the substitution of gold coin, not a legal tender, for the rupees claimable by the public creditors who might elect to receive payment in cash, was by no means agreeable. A prompt remedy was necessary, and the question being referred to the Court of Directors, the desire to adhere still to their old principles suggested that the low standard gold coin, not being a legal tender, the receipt of it by Government should be altogether stopped; and this was accordingly done in 1853, by public notice in the *Gazette* of Calcutta."

Having completed this summary review of the gold and silver coinages, I now revert to Prinsep's Tables.[1]—E.T.]

TABLE *of the Coinages issued from the Calcutta Mint from* 1801-2 *to* 1832-33.

Official Year.	Government and Individuals. Gold.				Government and Individuals. Silver.				Total sikká rupees.		
	SA. R.	A.	P.		SA. R.	A.	P.		R.	A.	P.
1801–2	83,139	12	0		30,73,226	12	0		31,56,366	8	0
1802–3	1,27,848	0	0		46,64,736	8	0		47,92,584	8	0
1803–4	89,496	8	0		77,41,674	4	0		78,31,170	12	0
1804–5	1,26,940	0	0		1,00,78,060	12	0		1,02,05,000	12	0
1805–6	1,30,454	0	0		71,20,322	12	0		72,50,776	12	0
1806–7	91,773	8	0		1,63,14,198	12	0		1,64,05,972	4	0
1807–8	2,31,752	4	0		1,45,80,126	0	0		1,48,11,878	4	0
1808–9	50,800	12	0		1,11,30,380	4	0		1,11,81,181	0	0
1809–10	31,885	8	0		82,76,886	0	0		83,08,771	8	0
1810–11	10,29,656	0	0		1,65,81,865	0	2		1,76,11,521	0	2
1811–12	18,54,703	9	4		83,83,885	12	1		1,02,38,589	5	5
1812–13	12,56,319	0	0		78,51,046	10	0		91,07,365	10	0
1813–14	10,91,853	12	8		28,31,166	11	11		39,23,020	8	7
1814–15	15,01,964	14	8		71,29,817	15	1		86,31,782	13	9
1815–16	9,35,987	4	0		1,39,76,463	5	5		1,49,12,450	9	5
1816–17	13,63,200	14	8		2,21,48,114	5	6		2,35,11,315	4	2
1817–18	15,67,279	9	4		55,15,411	7	8		70,82,691	1	0
1818–19	3,63,105	6	8		1,66,40,247	2	7		1,70,03,352	9	3
1819–20	5,37,670	9	4		2,63,46,438	13	3		2,68,84,109	6	7
1820–21	8,26,046	0	0		1,08,36,215	6	11		1,16,62,261	6	11
1821–22	4,26,331	13	4		74,58,694	4	5		78,85,026	1	9
1822–23	2,79,211	6	8		68,52,391	7	8		71,31,602	14	4
1823–24	1,26,509	0	0		49,48,564	6	5		50,75,073	6	5
1824–25	29,72,948	6	8		69,66,557	2	3		99,39,505	8	11
1825–26	33,65,020	5	4		97,19,093	15	1		1,30,44,114	4	5
1826–27	34,26,832	0	0		80,97,615	0	0		1,15,24,447	0	0
1827–28	4,79,616	0	0		66,69,149	15	0		71,48,765	15	0
1828–29	5,01,296	0	0		57,00,840	2	11		62,02,136	2	11
1829–30	10,24,032	0	0		83,95,484	11	5		94,19,516	11	5
1830–31	17,58,896	0	0		38,13,496	7	8		55,72,392	7	8
1831–32	18,39,392	0	0		44,77,722	14	4		63,17,114	14	4
1832–33	23,71,024	0	0		76,90,479	15	8		1,00,61,503	15	8
	3,18,62,986	4	8		30,19,70,375	1	5		33,38,33,361	6	1
COPPER COINAGE.											
From 1801 to 1813					10,99,170	5	6				
1813 to 1825–26 ...					5,87,785	6	6				
1826–27 to 1832–33 ...					16,11,461	1	5				
									32,98,416	13	5
Total sikká rupees.....									33,71,31,778	3	6

[1] [I had designed, as I intimated in a note p. 41, to have omitted all the details of the working of the Indian Mints. However, as I have since found reason to believe that a general return of the currencies issued by the East India Company would possess an interest with European readers, I have determined to abbreviate the redundances of Prinsep's forms, and endeavoured to complete the several statements, as far as possible, from documents in the East India House, which have been most liberally placed at my disposition by Col. Sykes.]

TABLE *of Silver Coinage in the Provincial Mints.*

	Benáres.	Farrukhábád.	Ságar.
From 1804-5 to 1832-3, incl.	11,14,79,898 6 6	7,74,66,519 3 11	53,99,282 8 6
Of which sum private bullion ...	6,67,85,549 13 8	3,10,18,509 10 5	7,89,496 2 4
Government ditto	4,46,94,348 8 10	4,64,48,009 9 6	46,09,786 6 2
Value of copper coinage up to the same period.	13,90,140 0 0	75,594 12 3	2,83,388 0 0
Total	11,28,70,038 6 6	7,75,42,114 0 2	56,82,670 8 6

Coinage at the Calcutta Mint	Sikká Rs.	33,71,31,778
Coinage at Benáres.....	,,	10,58,15,663
Coinage at Farrukhábád	,,	7,26,95,732
Coinage at Ságar	,,	53,27,503
Total Coinage of the Bengal Presidency from 1801-33 :	Sikká Rs.	52,09,70,676

[It will be seen that the totals in the preceding Tables are given in sikká and in Farrukhábád rupees. Act XVII. of 1835 introduced the Company's rupee as the one uniform currency of all India; this coin is composed of 165 grains of silver and 15 of alloy, and stands the declared equivalent of the old Bombay, Madras, Farrukhábád, and Sonát rupees—being defined as corresponding in value to $\frac{2}{1\,6}$ths of the superseded Calcutta sikká rupee. All Government accounts, subsequent to the date of the passing of this Act, are therefore made up in the new or standard Company's rupee.

TABLE *of the value of Gold and Silver Coined in the Mints of Calcutta, Madras, and Bombay in each year from* 1833-34 *to* 1854-55.

(From Official Returns at the India House.)

	CALCUTTA.		MADRAS.		BOMBAY.		TOTAL.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.
1833-34	26,48,593	1,23,47,561	39,58,800	43,11,500	...	10,83,156	66,07,393	1,77,42,217
1834-35	16,84,838	1,33,10,055	28,75,200	35,21,000	...	59,75,286	45,60,038	2,19,06,341
1835-36	11,97,344	1,62,49,960			...	64,34,764	11,97,344	2,26,84,724
1836-37	68,145	2,98,14,302	The operations of the Mint were suspended from 1835 to 1841.		...	82,71,877	68,145	3,80,86,179
1837-38	2,54,265	2,09,34,103			...	1,09,48,636	2,54,265	3,18,82,739
1838-39	3,44,706	2,67,63,743			...	1,17,72,822	3,44,706	3,85,36,565
1839-40	7,91,557	2,15,77,576			...	98,28,901	7,91,557	3,14,06,477
1840-41	5,67,720	1,64,10,686			...	1,20,38,236	5,67,720	2,84,48,922
1841-42	2,31,015	2,51,26,312	.....	25,85,978	...	51,75,329	2,31,015	3,28,87,619
1842-43	.....	2,06,11,864	.....	16,40,203	...	1,07,95,668	.....	3,30,47,735
1843-44	1,66,335	2,17,66,075	.....	42,28,459	...	2,07,32,497	1,66,335	4,67,27,031
1844-45	1,79,760	2,83,35,602	83,595	31,72,430	...	1,54,60,180	2,63,355	4,69,68,212
1845-46	1,54,535	2,25,32,332	1,00,545	22,32,281	36,390	1,36,60,807	2,91,470	3,84,25,420
1846-47	4,27,335	1,64,78,122	.....	60,84,016	...	66,46,956	4,27,335	2,92,09,094
1847-48	1,62,930	1,01,19,938	3,00,000	34,95,301	...	42,07,359	4,62,930	1,78,22,598
1848 49	7,04,700	1,33,03,269	.....	12,96,676	...	1,11,92,701	7,04,700	2,57,92,646
1849-50	3,24,525	1,35,97,117	.....	8,64,372	15,300	96,50,554	3,39,825	2,41,12,043
1850-51	12,17,820	1,21,31,097	.....	19,54,271	19,350	1,20,78,906	12,37,170	2,61,64,274
1851-52	6,25,500	1,78,80,191	.....	36,27,082	...	2,08,97,949	6,25,500	4,24,05,222
1852-53	.....	2,73,66,206	.....	32,35,171	...	2,37,98,471	.....	5,50,99,848
1853-54	14,56,785	2,31,82,702	.....	67,50,846	...	2,26,00,817	14,56,785	5,25,34,365
1854-55	26,760	70,43,170	.....	28,68,429	...	37,47,416	26,760	1,36,59,015
	1,32,35,168	41,68,81,983	73,18,140	5,25,68,015	71,040	24,60,99,288	2,06,24,348	71,55,49,286

TABLE *of Imports and Exports of Treasure (Gold and Silver) in each of the Presidencies of India, from* 1813-14 *to* 1853-54, *at* 2*s. the Rupee.*

YEAR.	BENGAL.				MADRAS.				BOMBAY.			TOTAL.			
	Imports.	Exports.	Net Imports.	Net Exp.	Imports.	Exports.	Net Imp.	Net Exp.	Imports.	Exports.	Net Imports.	Imports.	Exports.	Net Imports.	Net Exp.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
1813-14	584,403	4,275	580,128	.....	142,143	30,756	111,387	.....	207,822	181,043	26,779	934,368	216,074	718,294	.....
1814-15	1,068,644	15,462	1,053,182	.....	100,897	10,064	90,833	.....	297,170	65,168	232,002	1,466,711	90,694	1,376,017	.....
1815-16	1,803,407	1,575	1,801,832	.....	111,701	10,755	100,946	.....	604,788	7,743	597,045	2,519,896	20,073	2,499,823	.....
1816-17	3,185,198	16,900	3,168,298	.....	174,227	24,416	149,811	.....	801,274	4,216	597,058	4,160,699	45,532	4,115,167	.....
1817-18	3,202,702	31,725	3,170,977	.....	172,842	4,577	168,265	.....	1,166,685	26,417	1,140,268	4,542,229	62,719	4,479,510	.....
1818-19	4,719,249	27,953	4,691,296	.....	237,966	9,808	228,158	.....	1,831,409	5,763	1,825,646	6,788,627	53,524	6,755,103	.....
1819-20	4,064,602	309,892	3,754,710	.....	180,595	18,928	168,667	.....	705,903	61,639	644,264	4,951,100	390,459	4,560,641	.....
1820-21	2,361,724	113,936	2,247,788	.....	239,246	1,425	237,821	.....	670,231	46,624	623,607	3,271,201	161,985	3,109,216	.....
1821-22	2,145,453	1,239,639	905,814	.....	253,499	16,989	236,510	.....	520,276	46,799	473,477	2,919,228	1,303,427	1,615,801	.....
1822-23	1,706,845	1,594	1,705,251	.....	312,173	15,286	296,887	.....	560,593	39,014	521,579	2,579,611	55,894	2,523,717	.....
1823-24	1,299,542	756,582	542,960	.....	123,989	70,229	53,760	.....	697,940	156,652	541,288	2,121,471	983,465	1,138,006	.....
1824-25	940,224	160,949	779,275	.....	430,155	217,681	212,474	.....	715,703	65,235	650,468	2,086,082	443,865	1,642,217	.....
1825-26	1,040,997	13,870	1,027,127	.....	224,735	505,000	.....	280,265	1,132,878	13,597	1,119,281	2,398,610	542,467	1,856,143	.....
1826-27	1,228,832	111,503	1,117,329	.....	283,162	70,223	212,939	.....	964,594	26,619	937,975	2,476,588	208,345	2,268,243	.....
1827-28	1,413,958	448,098	965,860	.....	251,868	391,381	.....	139,513	1,250,190	70,327	1,179,863	2,916,016	909,806	2,006,210	.....
1828-29	655,852	176,319	479,533	.....	147,889	110,308	37,581	.....	1,270,492	200,094	1,070,398	2,074,233	486,721	1,587,512	.....
1829-30	981,025	164,032	816,993	.....	109,305	540,123	.....	430,818	1,102,200	229,746	872,454	2,192,530	933,901	1,258,629	.....
1830-31	601,214	330,503	270,711	.....	113,755	113,776	979	.....	1,015,312	161,938	853,374	1,730,281	605,217	1,125,064	.....
1831-32	354,483	1,144,547	.....	790,064	92,185	389,986	.....	297,801	735,586	203,514	532,072	1,182,254	1,738,047	.....	555,793
1832-33	517,108	783,353	.....	266,245	134,637	301,468	.....	166,831	494,961	185,827	309,134	1,146,706	1,270,648	.....	123,942
1833-34	568,476	247,552	320,924	.....	114,527	201,385	.....	86,858	1,193,438	115,348	1,078,090	1,876,441	564,285	1,312,156	.....
1834-35	646,224	66,554	579,670	.....	153,115	106,377	46,738	.....	1,093,683	21,808	1,071,875	1,893,022	194,739	1,698,283	.....
1835-36	687,168	56,599	630,569	.....	112,760	31,528	81,232	.....	1,346,536	19,981	1,326,555	2,146,464	108,108	2,038,356	.....
1836-37	612,527	161,316	451,211	.....	75,958	72,615	3,343	.....	1,347,681	30,001	1,317,680	2,036,166	263,933	1,772,233	.....
1837-38	1,048,883	140,433	908,450	.....	128,542	106,431	22,111	.....	1,462,675	93,790	1,368,885	2,640,100	340,654	2,299,446	.....
1838-39	1,219,031	162,760	1,056,271	.....	131,134	91,237	39,897	.....	1,660,754	93,908	1,566,846	3,010,919	347,906	2,663,013	.....
1839-40	1,226,786	200,017	1,026,769	.....	112,406	127,446	.....	15,040	606,071	143,059	463,012	1,945,263	470,522	1,474,741	.....
1840-41	918,807	146,206	772,601	.....	68,146	89,300	.....	21,154	799,298	130,979	668,319	1,786,251	366,485	1,419,766	.....
1841-42	989,617	159,155	830,462	.....	67,560	180,481	.....	112,921	784,156	175,438	608,718	1,841,333	515,074	1,326,259	.....
1842-43	1,648,711	72,934	1,575,777	.....	79,413	25,317	54,096	.....	1,715,166	117,545	1,597,621	3,443,290	215,796	3,227,494	.....
1843-44	1,752,376	185,794	1,566,582	.....	115,240	21,600	93,640	.....	2,927,060	538,681	2,388,379	4,794,676	746,075	4,048,601	.....
1844-45	1,581,365	396,543	1,184,822	.....	188,561	65,053	123,508	.....	1,982,545	645,243	1,337,302	3,752,471	1,106,839	2,645,632	.....
1845-46	991,005	287,079	703,926	.....	172,297	65,764	106,533	.....	1,332,655	463,184	869,471	2,495,957	816,027	1,679,930	.....
1846-47	1,336,228	285,404	1,050,824	.....	147,199	68,169	79,030	.....	1,456,494	360,295	1,096,199	2,939,921	713,868	2,226,053	.....
1847-48	747,223	905,071	.....	157,848	132,153	214,262	.....	82,109	1,094,014	396,704	787,310	1,973,390	1,426,037	547,353	.....
1848-49	1,414,609	780,878	633,731	.....	117,199	733,848	.....	616,649	2,672,695	1,025,015	1,647,680	4,204,503	2,539,741	1,664,762	.....
1849-50	1,214,865	354,205	860,660	.....	121,437	72,637	48,800	.....	2,060,505	544,400	1,516,105	3,396,807	971,242	2,425,565	.....
1850-51	1,189,484	276,329	913,155	.....	260,110	104,140	155,970	.....	2,362,214	160,818	2,201,396	3,811,808	541,287	3,270,521	.....
1851-52	2,306,470	250,588	2,055,882	.....	297,398	215,768	81,630	.....	2,448,190	452,732	1,995,458	5,052,058	919,088	4,132,970	.....
1852-53	3,393,987	476,375	2,917,612	.....	576,854	36,382	540,472	.....	2,860,536	542,472	2,318,064	6,831,377	1,055,229	5,776,148	.....
1853 54	2,085,985	437,912	1,648,073	.....	577,490	115,657	461,833	.....	2,208,479	929,726	1,278,753	4,871,954	1,483,295	3,388,659	.....

The figures entered in the preceding Official Return, so far as they relate to the commerce of Bengal from 1813-14 to 1832-33, will be found to differ from those originally published by Prinsep. It may be necessary to explain, that his Tables exhibited the imports and exports of the isolated Presidency of Bengal, and, as such, comprehended not only the trade with the United Kingdom and foreign countries, but likewise the traffic of the Port of Calcutta, etc., with the coast and the other Presidencies. In the present return, the local port to port trade is properly excluded.[1]

It will be seen that the foregoing Table does not discriminate the relative amount of gold and silver imported or exported in each year, nor do the official documents at command admit of the separation of the two items earlier than 1846-47; subsequent to which, the proportion runs as follows, for the three Presidencies:—

	GOLD.			SILVER.		
	Imports.	Exports.	Remains.	Imports.	Exports.	Remains.
	£	£	£	£	£	£
1846–47	851,738	2,890	+ 848,848	2,088,183	710,978	+1,377,205
1847–48	1,048,778	9,661	+ 1,039,117	924,612	1,416,376	− 491,764
1848–49	1,401,748	52,829	+ 1,348,919	2,802,755	2,486,913	+ 315,842[2]
1849–50	1,160,661	64,868	+ 1,095,793	2,236,146	906,374	+1,329,772
1850–51	1,155,310	2,016	+ 1,153,294	2,656,498	539,273	+2,117,225
1851–52	1,338,778	71,165	+ 1,267,613	3,713,280	847,923	+2,865,357
1852–53	1,335,164	168,805	+ 1,166,359	5,496,214	886,424	+4,609,790
1853–54	1,101,136	17,265	+ 1,083,871	3,770,821	1,466,030	+2,304,791
	9,393,313	389,499	9,003,814	23,688,509	9,260,291	14,428,218

The proportions of each metal absorbed by the several divisions of

[1] [The delay that has occurred in the printing of this sheet enables me to add parallel returns for the year 1854-55. The Madras and Bombay totals hereunto subjoined are derived from official sources; the Bengal return is taken from Bonnaud's 'Commercial Annual,' as the formal statements relating to that Presidency have not yet been received at the India House:—

	IMPORTS.	EXPORTS.	NET IMPORTS AND EXPORTS.	
			Net Imports.	Net Exports.
	£	£	£	£
Bengal.....	603,154	1,072,194	.....	469,040
Madras	194,221	521,814	.....	327,593
Bombay	1,188,913	353,654	835,259	.....
Total	1,986,288	1,947,662	38,626	.....

[2] [The unimportant discrepancies that may be detected between the lower figures of these totals and those entered at the end of the Table in page 82 and elsewhere, are explained to have arisen from the varying results of working in gross and in detail, and the exclusion of fractions of rupees and the rejection of unit figures, to convert the rupee into sterling money at different stages of the arithmetical process.]

the Indian empire, during the eight years in question, are embodied in the annexed table:—

Remains.	Calcutta.		Madras.		Bombay.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
	£	£	£	£	£	£
1846-47	215,530	+ 835,294	27,561	+ 51,469	605,757	490,442
1847-48	362,554	— 520,402	48,558	— 130,667	628,005	159,305
1848-49	415,947	+ 216,097	33,173	— 649,826	899,799	749,571
1849-50	275,543	+ 585,117	55,091	— 6,291	765,159	750,946
1850-51	317,998	+ 595,154	32,868	+ 123,097	802,428	1,398,974
1851-52	401,243	+ 1,654,639	76,069	+ 5,561	790,301	1,205,157
1852-53	575,351	+ 2,342,261	49,121	+ 491,353	541,887	1,776,176
1853-54	481,756	+ 1,166,317	86,719	+ 375,115	515,396	763,359
£	3,045,922	+ 6,874,477	409,160	+ 259,811	5,548,732	7,293,930

In appropriate supplement to these Tables, and to enable my readers to judge of the comparative importance of the bullion traffic with India, I annex a statement from Col. Sykes' paper 'On the External Commerce of British India,' published in the 'Journal of the Statistical Society,' for June, 1856, and further brought up to the present date, which exhibits the relative values of goods and bullion imported and exported during the six years from 1849-50 to 1854-55.

Abstract of Imports and Exports of Goods and Bullion from 1849-50 *to* 1854-55.[1]

Years ended 30th April.	Total amount of Goods imported into the three Presidencies.	Total amount of Goods imported into the three Presidencies.	Excess of Goods exported.	Net import of Bullion.	Excess of Exports of Goods, deducting Net Import of Bullion.	Bills drawn upon India by the Directors.	Final Balances of Trade in favor of India adjusted by other means.
	£	£	£	£	£	£	£
1849-50	10,300,000	17,312,000	7,012,000	2,425,000	4,587,000	2,936,000	1,651,000
1850-51	11,559,000	18,164,000	6,605,000	3,270,000	3,335,000	3,236,000	99,000
1851-52	12,240,000	19,879,000	7,639,000	4,133,000	3,506,000	2,777,000	729,000
1852-53	10,071,000	20,465,000	10,394,000	5,776,000	4,618,000	3,317,000	1,301,000
1853-54	11,122,000	19,295,000	8,173,000	3,389,000	4,748,000	3,850,000	934,000
1854-55	12,442,000	18,298,000	5,856,000	38,000	5,818,000	3,669,000	2,149,000
Total...	67,734,000	113,413,000	45,679,000	19,031,000	26,648,000	19,785,000	6,863,000
Average	11,289,000	18,902,000	7,613,000	3,171,000	4,441,000	3,297,000	1,143,000

The Bengal return for the year 1854-55 is taken from Bonnaud's 'Commercial Annual,' as the official papers have not yet been received from that Presidency.

As the statements in the above Table are understood to have been

[1] [Mr. Low's Circulars furnish us with the actual shipments of treasure for India

prepared from official Custom-House returns, they may be accepted as *pro-tanto* authentic; and as the Government of the East India Company adhere to the highly primitive system of levying duties upon exports, the totals thus obtained are probably as trustworthy as the corresponding entries of imports.

As intimately connected with the subject of the demand for silver bullion in India, I also append a full return of the responsibilities undertaken by the East India Company on account of railways in course of construction. I have not been able to obtain exact statements of the several amounts actually expended in India—comprising the sums repaid by the Government in silver coin in return for the gold deposited in the treasury in Leadenhall Street—but the difference between the totals "paid in" and "re-issued in England" will furnish an approximate estimate of what the liability amounts to.

by the Peninsular and Oriental Company's vessels, during the years 1855, 1856, and 1857, amounting to the subjoined totals:—

1855.

	United Kingdom,[a] (January to December).			Other Ports (11 months).	
Calcutta	Gold	£ 350	Silver	£ 2,299,235	Silver £ 603,141
Madras	,,	17,789	,,	177,173	,, 289,014
Bombay	,,	1,232	,,	2,267,400	,, 51,344
		£ 19,371		£ 4,743,808	£ 943,499

The grand total shipped for the East in 1855 was—From the United Kingdom: Gold, £948,272; Silver, £6,409,389. Other Ports: Gold, £243,239; Silver, £1,524,240.

1856.

	United Kingdom.			Other Ports. (including Dec., 1855).	
Calcutta	Gold	£ 719	Silver	£ 3,417,091	Silver £ 433,303
Madras	,,	28,523	,,	213,781	,, 327,494
Bombay	,,	7,906	,,	4,748,631	,, 163,216
		£ 37,148		£ 8,379,503	£ 924,013

Total exports for the East from the United Kingdom for 1856: Gold, £404,749; Silver, £12,118,985. Other Ports: Gold, £74,039; Silver, £1,989,916.

1857.

	United Kingdom.			Other Ports.	
Calcutta	Gold, £ 36,040	Silver,	£ 5,689,015	Gold, £30,896	Silver, £ 893,407
Madras	,, 97,788	,,	403,646	,, 15,300	,, 460,710
Bombay	,, 30,565	,,	5,275,950	,, 16,161	,, 523,956
	£ 164,393		£ 11,368,611	£ 62,357	£ 1,888,073

Total exports for the East from the United Kingdom: Gold, £269,275; Silver, £16,795,232. Other Ports: Gold, £259,986; Silver, £3,350, 689.

[a] [There were no shipments for either of the three Presidencies in January, and only £68,871 for Bombay in February, 1855.]

It may be necessary to add that the payments into the Company's Treasury on account of Railways commenced in 1848-49, and that the rate of exchange for Indian subscribers was permanently fixed at 1*s.* 10*d.* per Company's rupee.[1]

TABLE *exhibiting the sums paid into the East India Company's Treasury, in London, on account of Railways in India, up to 30th Sept.*, 1856.

Names of Companies.	Capital sanctioned.	Total paid in.	Re-issued in England.
	£	£	£
East Indian	10,731,000	6,219,733	3,094,126
Great Indian Peninsula	4,000,000	2,525,113	866,263
Madras	4,000,000	1,926,354	1,027,805
Sind	500,000	265,614	92,480
Bombay and Baroda	500,000	334,511	58,891
	19,731,000	11,271,325	5,139,565 [a]

[a] Of this total the sum of £869,301 has been disbursed as Interest on Capital.

Another important item bearing upon these details still remains to be noticed—that of the comparative value of the uncurrent silver coin received into the mint, as contrasted with the amount of bullion

[1] [The rate of exchange thus permanently established, irrespective of intrinsic value or any possible scheme of commercial par, has necessarily had the effect of insuring that nearly all the funds required for railways should be raised in England to the exclusion of Indian subscribers. The second Table at page 14 will indicate the intrinsic value of the Company's rupee, and its details will exemplify how the exchangeable value of that coin is liable to be affected by external influences; but, under ordinary circumstances, the par value may be fairly taken at 2*s.*; now, under this permanent and immutable arrangement, whatever the commercial rate of exchange might chance to rule at, Indian contributors to their own local railways had to pay 218 Company's rupees for every £20 share, or about 9 per cent. more than the nominal value of the stock, while under favorable rates of exchange, such as we have experienced of late, by remitting the money to England, the £20 share could be purchased for about 184 Company's rupees, making a total difference of no less than 17 per cent! In a similar degree have our Eastern speculators reason to complain of the comparative rates of interest; for while the Home Government was undertaking these millions of railway debts, and guaranteeing a *minimum* rate of profit at 5, and never less than 4½ per cent., the Government of India was endeavouring to persuade its obedient subjects that 4, and even 3½ per cent. (28th October, 1853) was quite as much as their money was worth; and the latter rate was not to form an ascending minimum like the railway guarantee, but a maximum, liable, on the contrary, to reduction at any favorable moment, after the manner of the extinguishment of the 5 per cents. in 1853 and their conversion into *fours*, the consentient holders of which were startled by the opening of a new loan at the former rate, in less than fourteen months after the completion of this—to use the words of the Governor-General—"not the less successful" operation. To sum up these contrasts, it is necessary to bear in mind the relative value of money in the two countries; which may be justly tested by the index until lately afforded by the legal rate of interest in each—that of India being 12, while that of England was 5 per cent.]

brought for coinage by individuals unconnected with the State : [1] the one indicating the amount of the old currency replaced by new coin, the other disclosing the increase made to the circulating medium; though this latter is liable to be affected by too many varying influences to be received as any criterion of the total permanently available to meet the monetary wants of the country.

I limit the present returns to the rupee or standard currency;[2] commencing with those of the year 1833-34, in order to embrace the entire period comprised in the parallel Table at page 81.

[1] [Notwithstanding his remark on the subject at page 41, Prinsep omitted to discriminate in his Table of the Coinages of the Calcutta Mint the separate amounts derived from each source. In the returns of the Provincial Mints (page 81) the difference is duly marked.]

[2] [The coinage of gold may be gathered, from the previous Tables, to have been in proportion to that of silver:

In the Calcutta Mint,	from 1801-2	to 1832-33	as 3.18	to 30.19
,,	from 1833-34	to 1854-55	as 1.32	to 41.68
Madras	from 1833-34	to 1854-55	as .73	to 5.25
Bombay	from 1833-34	to 1854-55	as .007	to 24.

No gold was coined in the European mints of the North-Western Provinces.]

Assay produce of Silver Bullion received into the Mints of Calcutta, Madras, and Bombay, in each year from 1833-34 *to* 1854-55 *; and of the value of the Silver Coinages for the same period.*

	Calcutta Mint.			Madras Mint.			Bombay Mint.		
	Assay produce of Silver received from individuals.	Value of uncurrent coins received from Treasury officers.	Silver Coinage.	Assay produce of Silver received from individuals.	Value of uncurrent coins received from Treasury officers.	Silver Coinage.	Assay produce of Silver received from individuals.	Value of uncurrent coins received from Treasury officers.	Silver Coinage.
	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.
1833–34	1,14,14,455	64,08,247	1,23,47,561	19,66,073	20,15,465	43,11,500	10,03,869	79,287	10,83,156
1834–35	83,08,557	36,99,588	1,33,10,055	16,95,848	17,57,313	35,21,000	47,55,828	3,19,458	50,75,286
1835–36	80,88,265	1,36,85,562	1,62,49,960				54,88,186	9,46,578	64,34,764
1836–37	66,55,749	2,01,44,738	2,98,14,302				59,36,244	23,35,633	82,71,877
1837–38	1,30,96,273	1,17,80,627	2,09,34,103	The operations of this Mint were suspended from 1835 to 1841.			50,44,627	59,04,008	1,09,48,636
1838–39	1,41,26,786	99,74,839	2,67,63,743				58,21,565	59,51,257	1,17,72,822
1839–40	1,25,58,782	90,22,939	2,15,77,576				66,53,727	31,75,174	98,28,901
1840–41	1,04,76,052	56,52,719	1,64,10,686				61,68,870	58,69,366	1,20,38,236
1841–42	97,71,487	84,49,146	2,51,26,312	4,77,640	25,72,885	25,85,978	43,74,350	77,02,971	51,75,329
From China	64,66,215								
1842–43	1,76,80,544	19,75,137	2,06,11,864	9,11,236	8,07,271	16,40,203	39,51,850	20,98,840	1,07,95,668
1843–44	1,93,12,790	39,23,306	2,17,66,075	11,93,613	36,17,818	42,28,459	1,48,90,842	19,65,848	2,07,32,497
1844–45	1,86,68,022	92,63,533	2,83,35,602	3,96,322	20,31,130	31,72,430	1,65,67,857	8,19,571	1,54,60,180
1845–46	94,00,729	70,18,940	2,25,32,332	5,31,824	25,51,079	22,32,281	1,26,71,208	47,71,270	1,36,60,807
1846–47	95,64,692	68,33,535	1,64,78,122	2,01,602	52,38,762	60,84,016	56,45,965	19,98,206	66,46,956
From China	24,17,314								
1847–48	44,90,831	34,44,763	1,01,19,938	1,03,186	28,95,526	34,95,301	16,21,861	24,76,891	42,07,359
1848–49	92,10,387	52,59,827	1,33,03,269	1,76,611	12,11,847	12,96,676	Returns not obtainable.		1,11,92,701
1849–50	1,03,14,857	34,11,031	1,35,97,117	2,39,889	9,48,888	8,64,372	88,24,597	13,26,050	96,50,554
1850–51	95,77,598	33,33,354	1,21,31,097	11,96,864	19,15,784	19,54,271	1,19,45,874	47,13,940	1,20,78,906
1851–52	1,97,62,183	19,56,609	1,78,80,191	15,16,247	13,53,124	36,27,082	1.60,77,378	62,78,538	2,08,97,949
1852–53	2,71,48,980	27,57,583	2,73,66,206	53,20,920	7,78,360	39,35,171	2,20,43,730	13,51,825	2,37,98,471
1853–54	1,43,66,179	30,60,547	2,31,82,702	49,23,033	6,80,475	67,50,846	1,35,36,875	42,83,536	2,26,00,817
1854–55[1]	12,79,622	43,95,048	70,43,170	9,10,176	4,00,710	28,68,429	25,75,235	13,15,423	37,47,416
	27,41,57,349	14,54,51,618	41,68,81,983	2,17,61,784	3,07,76,437	5,25,68,015	17,56,00,538	6,56,83,863	24,60,99,288
	41,96,08,967			5,25,38,221			24,12,84,208		

[1] The diminished coinage in 1854-55 is attributed (authoritatively) to the decrease in the imports of silver bullion in that year.

It will be seen from the above figured details, that, during the last twenty-two years, the grand total of the coinage of silver in the East India Company's mints has reached no less a sum than 71,55,49,286 rupees, or £71,554,928: towards this amount 24,19,11,918 rupees were contributed by the old metal of the worn or recalled currencies; and 47,15,19,671 rupees constituted the proportion of bullion brought for coinage by individuals. It may be instructive to test a section of these returns in connexion with the statistics furnished by the bullion trade of India, illustrated at page 83. To select the same eight years for which the figures have been tabulated in that statement (*i.e.* 1846-7 to 1853-4), it is to be observed, that the total amount of silver bullion—in excess of the returned coin—minted at the three Presidencies, during the period, was over 20 crore of rupees, or twenty millions sterling;[1] while the balance of silver bullion remaining in India, on the traffic of the same interval, is seen to amount to 14,42,82,180 rupees, or less than fourteen and a half millions sterling. The results of the two returns are not so directly dependent on each other, that their non-accordance need cause surprise, nor is there any reason why the five and a half millions of surplus coin may not have been re-exported in that shape, in the ordinary course, even if we did not know that the Company's rupee has hitherto supplied much of the circulating medium of Ceylon, the Mauritius, and the Straits settlements. There is no ground for supposing that any quantity of the silver bullion, used for Mint purposes, is at this time supplied by India itself—though it contributed not unimportantly to the local mints up to 1832-33.[2] We may fairly, therefore, take the ebb and flow of bullion, in the every-day transactions of commerce, as a momentary

[1] [*Detail of Silver Bullion, over and above the recalled coin, minted at the three Presidencies.*

For the years	Company's Rupees.	
1846-47	1,78,29,573	5,28,11,792, excluding Bombay for 1848-49.
1847-48	62,15,878	
1848-49	93,86,998	
1849-50	1,93,79,343	
1850-51	2,27,20,336	14,74,15,861
1851-52	3,73,55,808	
1852-53	5,45,13,630	
1853-54	3,28,26,087	
Co's Rs.	20,02,27,653	
Bengal total	10,68,53,021	
Madras total	1,36,78,352	
Bombay total	7,96,96,280	
Co's Rs.	20,02,27,653 —]	

[2] [See Table, page 81.]

index of the amount of coin removed by sea-transport; though such a test would by no means demonstrate either the maximum or minimum of that drain in exceptional instances. The inland or conterminous absorption of coined money, on the other hand, is far beyond the reach of the boldest speculation; but, with an existing frontier line extending from Mekrán to the Straits of Malacca, and with the various imperfectly civilized races on our borders all seeking eagerly for the precious metals, we may imagine that the outgoing in these directions can scarcely be inconsiderable. However, even admitting that India temporarily retains the full 14.4 millions of the 20 coined for her in eight years, the amount can by no means be said to be excessive,[1] nor is it to be expected—while the monetary laws remain as at present constituted—that the demand should be proportionately lessened; and, as much has been written regarding the undue absorption of bullion by India at large, it may be fitting that I should observe that, whatever may have constituted the attracting magnet, or wherever the ultimate resting-place of the precious metals may have been, in olden times; there is now good and sufficient reason why silver should continue to flow towards our Eastern dominions. Not to touch upon the obvious commercial necessities of our trade as of late balanced, it is to be remembered that India has advanced considerably in material prosperity: not only is there enhanced security of life and property, together with a manifest and natural increase of the population, but the facilities of traffic and real wealth have progressed with equal strides under our rule. There is now but little object in hoarding, less in secreting; the palpable value of money is better understood; and even its conversion into ornaments has comparatively ceased since the introduction of the more extensively alloyed rupee, the hardness of the metal of which neither workers

[1] [The population returns, though most minutely accurate for some portions of India, are but mere guess-work for others. The following is the latest return I have been able to obtain at the East India House. This will give for British India a return of 1.1 rupee per head of increase to the currency in eight years:

POPULATION OF INDIA.

Under direct administration of the Governor-General (including the Panjáb, Nagpore, and Oude)	23,055,972
Under Lieut.-Governor of Bengal	41,212,562
Under Lieut.-Governor of North-West Provinces	33,216,365
Under Governor of Madras	22,437,297
Under Governor of Bombay	11,109,067
Total British Possessions	131,031,263
Total Independent and protected Native States	48,423,630
Total Foreign States (French and Portuguese)	517,149
Total	179,972,042 —]

nor wearers approve. Equally have the advantages of direct money payments reached the comprehension of the masses, for not only, as has been remarked,[1] do the landholders no longer pay the Government demand in kind, but, more important still, the adherence to that primitive mode of liquidation has been generally discontinued among the village communities in their internal apportionment of responsibilities.

I may be permitted, in conclusion, to remark, in regard to the proposed re-introduction of a gold coinage, that I am altogether opposed to such a measure. A metal that must be expected progressively to fall in value—whatever the immediate needs of Europe may seem to evidence to the contrary—is not calculated to be favorably received by the people of India, especially as its market rate has already been sensibly affected in that country by the gold discoveries of Australia.

However, on the other hand, I am confident that much of the threatened difficulty might be met by a well-devised scheme for a paper currency, to consist of Government Notes duly notified as legal tenders, and definitively recognised as receivable in payment of the State revenue; but, in such a case, there must be no reservation of "until further orders," as in the Gold Proclamation of 1841; nor must there be permitted to exist a possibility of any future Administration reducing the One Hundred Rupee Note into one of the current value of eighty,[2] as was effected, in regard to all the securities involved, by the conversion of the old five per cent. stock. Possibly few nations could be met with, better prepared than the people of India, to accept a sound and carefully elaborated plan for a representative currency. As contrasted with their conventional morality, whether religious or social, their commercial faith and probity stand out in prominent relief. What they respect among themselves, they revere in their rulers; and, in spite of some awkward incidents in the history of British India, the English name still stands exalted with the mass of the population, who have concerned themselves less about

[1] [Col. Sykes, *supra cit.*, p. 84.]

[2] [The Government orders of 1853–54 directly affected the interest alone of the funds assailed—reducing it from 5 to 4 per cent.—the selling price of the securities remaining little below par; but the opening of the 5 per cent. loan of 1855 depreciated the market value of the principal of the converted stock, in proportion to the relatively enhanced rate of interest offered under the new loan. In the one case, the public naturally inferred that the Government was acting in good faith, and justified—by knowledge inaccessible to the non-official world—in the reduction enforced; a feeling that was still further confirmed by the distinctive proclamation of the closing of all open 4 per cent. loans, and the invitation of subscriptions at 3½ per cent. In the second instance, those who had relied upon the equity, superior information, or prescience of the Government, discovered their error.]

the acts and policy of the Central Government, than the immediate rule of the high-principled gentlemen whom this country has ordinarily sent to administer in detail the local sections of our Eastern empire. In similar relative degree to their advancement and civilization, does their knowledge of the intricacies of banking and exchange strike our European perceptions; so that, whether under the aspect of confidence in our probity, or comprehension of our measures, the Indian public may be said to be fully prepared to welcome an improved and enlarged system of state finance. But, as I desire to confine myself to the record of facts, and ordinarily abstain from speculation or argument, I bring these observations to a somewhat abrupt close.—E. T.]

[As Prinsep's Useful Tables are now definitively associated with his Numismatic Essays, it will be expedient to amplify the former by any information regarding Indian coinage equivalents or monetary values that may chance to be readily accessible; I therefore append a few notes on these subjects, extracted from that admirable work, Sir H. M. Elliot's 'Glossary of Terms used in the North-Western Provinces of India.'[1]

"Dumree, دمڑی दमड़ी damrí. . . . . Dumree is commonly known as a nominal coin, equal to $3\frac{1}{8}$ or $3\frac{1}{4}$ Dams; or between 2 and 3 Gundas—so that a Dumree varies from 8 to 12 Cowrees, according to the good will and pleasure of the money-changers. It may be useful to subjoin from the 'Dewan Pusund' a table showing the value of Dumrees and Dams:—

1 Dumree,	... ...	$3\frac{1}{4}$	dams.
2 Dumrees,	... ...	$6\frac{1}{4}$	dams, ... 1 chhudam.
3 Dumrees,	... ...	$9\frac{1}{4}$	dams.
4 Dumrees,	... ...	$12\frac{1}{2}$	dams, ... 1 adhela.
5 Dumrees,	... ...	15	dams.
6 Dumrees,	... ...	$18\frac{3}{4}$	dams, ... $\frac{3}{4}$ puesa.
7 Dumrees,	... ...	22	dams.
8 Dumrees,	... ...	25	dams, ... 1 puesa.
9 Dumrees,	... ...	28	dams.
10 Dumrees,	... ...	$31\frac{1}{4}$	dams, ... $1\frac{1}{4}$ puesa.
11 Dumrees,	... ...	$34\frac{1}{4}$	dams.
12 Dumrees,	... ...	$37\frac{1}{2}$	dams, ... $1\frac{1}{2}$ puesa.
13 Dumrees,	... ...	40	dams.
14 Dumrees,	... ...	44	dams, ... $1\frac{3}{4}$ puesa.

[1] [To those who are curious in the science of numbers and would study the progressive arrangement of popular totals, I would recommend the perusal of the elaborate article, 'Chaurási,' p. 151.]

15 Dumrees, ... 47 dams.
16 Dumrees, ... 50 dams, ... 1 tuka.

The table is given with some slight variations in the 'Zoobdutu-l-Quwaneen,' but in neither are the smaller fractional amounts given with correctness.

"DAM, دام दाम dâm. . . . . The Dam in the Ayeen-i-Akberee, and in most Revenue accounts, is considered to be the 40th part of a rupee; but to the common people it is known as the 50th part of a Tuka: 25 therefore go to a Pysa, and 12½ to an Adhela.

"CHHUDAM, چھدام छदाम chhadâm. . . . . Literally, six dams; equal to two dumrees. The proper amount is six and a quarter dams, but by abbreviation it is called Chhudam.

"GUNDA, گنڈہ गंडा gandâ. . . . . Like the Dam, the Gunda of account and the Gunda of practice do not coincide. Gundas of account are but little used in the North-Western Provinces, except in Benâres and the Dehra Doon, and, in consequence of its former subjection to Oudh, the Nuzurâna accounts of Rohilcund are frequently drawn out in Gundas. This Gunda is the 20th part of an Anna. The Gunda known to the common people is not of stable amount; sometimes four, and sometimes five, and sometimes even six, go to a pucka Dumree, or Chhudam, according to the pleasure of the money dealers, or the state of the market. Notwithstanding this variable amount, as a Gunda is equivalent to four Cowrees, 'to count by Gundas,' signifies to count by fours, or by the quarternary scale, to which the natives are very partial;—in the same way as to count by gahees, or punjas, is to count by fives, or by the quinary scale. As four Cowrees make one Gunda, so do twenty Gundas make one Pun, and sixteen Puns make one Kuhâwun. But there are grades of monetary value even below that of Cowree; for the Hindûs seem as fond of dealing with these infinitesimal quantities, as they are with the higher numbers, as exemplified in the article Crore. Thus 3 Crant, or 4 Kak, or 5 But, or 9 Dunt, or 27 Jou, or 32 Dar, or 80 Til, or 800 Suno are each equivalent to one Cowree. These are not in practical use in the North-Western Provinces, but are entered in several account books, and many of them appear to be employed in the Bazar translations of Cuttack and parts of Bengal. See Rushton's 'Gazetteer,' vol. i., p. 182, 1841. The Cowree shell, the Cypræa Moneta, has been subject to strange diminution of value, in consequence of the facilities of commerce, by which their worth has been depressed below that of the precious metals. In 1740, a rupee exchanged for 2,400 Cowrees; in 1756, for 2,560 Cowrees; and at this time as many as 6,500 Cowrees may be obtained for the rupee. Cowree in Persian is translated by Khur-mohra, literally, a 'jackass's' or 'mule's' shell; because mules are ornamented in that country with trappings of shells, as a Gosain's bullock is in this country. In Arabic it is known by Wuda, which Ibn Batuta says is carried in large quantities from the Maldive Islands to Bengal, where it is used as coin; and therefore there can be no doubt that the Cypræa Moneta is meant. The Kamoos adds تعلق الدفع العين that it is suspended from the neck to avert the evil eye, as it is in India to this day,[1] provided the neck shell is split or broken. Among European nations, excepting the English, these shells are known by the name of Porceli,

[1] ["Gunda is also the name applied to the knotted string which is suspended round a child's neck for the same purpose; but not, apparently, because it has any connection with the Cowree Amulet."]

Porcellain, Porcellanen, and Porcelaine, on account of the fancied resemblance of their shape to that of the back of a little pig, whence we have the Chinese porcelain, of which the glaze, or varnish, is similar to that of the Cowree.

"CRORE, كروڑ करोड़ karor . . . . Ten millions. The names of the higher numbers are thus given in the 'Zoobdut-ool-Quwaneen.' 100 Crore = 1 Urub; 100 Urub = 1 K,hurub; 100 K,hurub = 1 Neel; 100 Neel = 1 Pudum; 100 Pudum = 1 Sunk,h; 100 Sunk,h = 1 Uld; 100 Uld = 1 Unk; 100 Unk = 1 Pudha."]

BRITISH INDIAN

WEIGHTS AND MEASURES.

The system of Weights established by Regulation VII. of 1833, is founded on the same unit as the rupee of the equalized monetary system of British India, it having been found that the weight of the Madras, Bombay, and Farrukhábád rupee, already very generally used throughout Upper and Western India, as the foundation of the Ser and Man, could be substituted for the sikká weight of Bengal by a very slight modification of the latter, which would be hardly perceptible in commercial dealings. Other palpable advantages of the introduction of the new weight were pointed out,[1] of which it is only necessary here to allude to the three following:—

1. That the *man* formed from the modified weight would be precisely equal to one hundred English troy pounds; and

2. That thirty-five *sers* would also be precisely equal to seventy-two pounds avoirdupois:—thus establishing a simple connection void of fractions, between the two English metrical scales and that of India.

3. The weight of the new unit nearly accorded with the average weight of many of the native tolás sent home for examination at the London mint, by order of the Honourable Court of Directors; as well as with that of Akbar, deduced from the weight of many coins of that emperor.

We shall begin the present division of our subject, as in the case of the Indian coins, by setting forth in the first instance the present legal system, and afterwards providing a brief descriptive catalogue of the many other weights prevailing throughout the Company's provinces, with comparative tables for the conversion of one denomination into the other.

The unit of the British Indian ponderary system is called the tolá. It weighs 180 grains English troy weight. From it upwards

[1] *Vide* a paper on the subject in the 'Journal of the Asiatic Society of Bengal' for October, 1832, vol. i., p. 445.

are derived the heavy weights, viz.:—Chhaták, Ser, and Man (or Maund); and, by its subdivisions, the small or jeweller's weights, called Máshas, Ratís, and Dháns.

The following scheme comprehends both of these in one series:—

Man.	Panserí.[1]	Ser.[2]	Chhaták.[3]	Tolá.[4]	Másha.[5]	Rati.[6]	Dhán.[7]
1	8	40	640	3200	38400	307200	1228800
	1	5	80	400	4800	38400	153600
		1	16	80	960	7680	30720
			1	5	60	480	1920
				1	12	96	384
					1	8	32
						1	4

The *man* (or that weight to which it closely accords in value, and to which it is legally equivalent in the new scale) has been hitherto better known among Europeans by the name of 'bázár maund,' but upon its general adoption, under Regulation VII. of 1833, for all transactions of the British Government, it should be denominated the British Maund (in Hindí, *Angrezí Man*), to distinguish it at once from all other weights in use throughout the country.[8]

The Panserí is, as its name denotes, a five-ser weight, and therefore should not form an integrant point of the scale; but, as its use is very general, it has been introduced for the convenience of reference.

The Ser being the commonest weight in use in the retail business of the bázárs in India, and being liable, according to the pernicious system hitherto prevalent, to vary in weight for every article sold as well as for every market, is generally referred to the common unit in native mercantile dealings, as, "the ser of so many tolás," (or sikkás, barís, takás, etc.). The standard or bázár ser being always 80 tolás.

The chhaták is the lowest denomination of the gross weights, and is commonly divided into halves and quarters (called in Bengálí, *kachcha*) thus marking the line between the two series, which are otherwise connected by the relation of the ser, etc. to the tolá.

The tolá is chiefly used in the weighing of the precious metals and

[1] *Panserí*, پنسيري from پانچ or پنج, पञ्च "five," and سير "a *ser*."

[2] *Ser*, शेर शेटक (Shakespear सेटक), سير.

[3] *Chhaták*, छटांक from s. षट्, "six," and अंक "a mark."

[4] *Tolá*, तोला تولا.

[5] *Másha*, माष माषा, ماشه.

[6] *Rati*, s. रति, रती, رتي, रत्तिका.

[7] *Dhán*, धान्य 'grain, rice.'

[8] In the same way the Madras, Bombay, Farrukhábad rupee (when the sikká rupee is abolished, and an English device adopted), may be called "the British rupee," and in the native languages *Rúpya Angrezí*.

coin; all bullion at the mints is received in this denomination, and the tables of bullion produce (as seen in the foregoing pages) are calculated per 100 tolás. It is also usual at the mints to make the subdivisions of the tolá into ánás (sixteenths) and pá'ís, in lieu of máshas and ratís.

Máshas, ratís, and dháns, are used chiefly by native goldsmiths and jewellers. They are also employed in the native evaluation by assay of the precious metals; thus, '10 máshas fine' signifies 10-12ths pure, and corresponds to '10oz. touch' of the English assay report of silver. There is a closer accordance with the English gold assay scale, inasmuch as the 96 ratís in a tolá exactly represent the 96 carat grains in the gold assay pound, and the dhán, the quarter-grain. As it is sometimes necessary to convert the assay report from one denomination into the other,[1] the following comparative table is here inserted.

TABLE *of the Correspondence of English and Indian Assay Weights.*

ENGLISH ASSAY.				HINDU ASSAY FOR BOTH METALS.	ENGLISH ASSAY.				HINDU ASSAY.	ENGLISH ASSAY.				HINDU ASSAY.
Silver.		Gold.			Silver.		Gold.			Silver.		Gold.		
Touch.		Touch.		Fine.	Touch.		Touch.		Fine.	Touch.		Touch.		Fine.
oz.	dwts.	ct.	grs.	msh. rat.	oz.	dwts.	ct.	grs.	msh. rat.	oz.	dwts.	ct.	grs.	msh. rat.
12	0	24	0	12 0	11	0	22	0	11 0	10	0	20	0	10 0
11	17½	23	3	11 7	10	17½	21	3	10 7	9	17½	19	3	9 7
11	15	23	2	11 6	10	15	21	2	10 6	9	15	19	2	9 6
11	12½	23	1	11 5	10	12½	21	1	10 5	9	12½	19	1	9 5
11	10	23	0	11 4	10	10	21	0	10 4	9	10	19	0	9 4
11	7½	22	3	11 3	10	7½	20	3	10 3	9	7½	18	3	9 3
11	5	22	2	11 2	10	5	20	2	10 2	9	5	18	2	9 2
11	2½	22	1	11 1	10	2½	20	1	10 1	9	2½	18	1	9 1

(To find the corresponding decimal assay, see the tables in pages 10, 11. The English assay report is generally 'so much worse (or better)' than standard, but the *touch* is easily known therefrom, the standard being 11 oz. for silver and 22 carats for gold; or 11 máshas, Hindú reckoning.)

The correspondence of the Indian system of weights with the troy weight of England, and with the 'système métricale' of France, may be best shown by a table. The coincidence of the former is perfect: in the latter, the másha nearly accords with the gramme, and the ser with the kilogramme.

BRITISH INDIAN WEIGHTS.	ENGLISH TROY WEIGHTS.				FRENCH WEIGHTS.
	lbs.	oz.	dwts.	grs.	grammes.
One Man	= 100	0	0	0	= 37320.182
One Ser	= 2	6	0	0	= 933.005
One Chhatâk	= 0	1	17	12	= 58.310
One Tolá	= 0	0	7	12	= 11.662
One Másha	= 0	0	0	15	= 0.972
One Ratí	= 0	0	0	1.875	= 0.122

[1] Especially in the translation of Regulations concerning the mints, the English expressions being unintelligible without explanation.

For the conversion of English troy weights into those of India, the following scale will suffice, since the simplicity of their relation renders a more detailed table unnecessary.

Lb. Troy.	Oz.	Dwt.	Grain.		Tolás and Decimals.
1	12	240	5760	=	32.000
	1	20	480	=	2.6666 etc.
		1	24	=	0.1333 etc.
			1	=	0.0055 etc.

The accordance of the *man* weight with the 100lbs. troy of England affords a ready means of ascertaining its relative value in the standards of other countries employed in weighing the precious metals, since tables of the latter are generally expressed in lbs. troy. The following are a few of the valuations for the principal weights of Europe, etc. extracted from Kelly's 'Cambist,' p. 222. The weights in troy grains have been converted into tolás by dividing them by 180.

TABLE *of Comparison of the Tolá and Man with the Gold and Silver, or Troy, weights of other countries.*

PLACE AND DENOMINATION.		Weight of a single lb, mark, etc. in tolás.	Number equal to 1 man, or 100 lbs. roy.
ALEPPO	Metical	0.405	7890.410
BASRA	Miscal	0.450	8000.000
CAIRO	Rottolo	36.965	86.564
CALICUT	Miscal	0.383	8347.826
CHINA	Tael	3.221	993.446
CONSTANTINOPLE	Chequee	27.538	116.199
DAMASCUS	Ounce	2.600	1252.173
DENMARK	Mark	20.183	158.546
ENGLAND	Pound	32.000	100.000
FRANCE	Kilogramme	85.745	37.320
GERMANY	Cologne mark	20.044	159.645
HOLLAND	Mark	21.100	151.658
ITALY	Florence and Leghorn libra	29.111	109.923
MOCHA	Vakia	2.655	1205.020
PEGU	Tical	1.138	2427.307
PERSIA	Dirham	0.839	3812.297
PORTUGAL	Mark	19.675	162.642
PRUSSIA	Mark	20.050	159.600
ROME	Libbra	29.077	110.049
RUSSIA	Pound	35.102	91.161
SPAIN	Mark	19.725	162.230
VENICE	Mark	20.452	156.457
VIENNA	Mark	24.072	132.933

The principal dealings in bullion being with England, where it is weighed by the pound troy, while in India it is received by the tolá, a simple table for the mutual conversion of these two weights (without regard to mans and sers) may be useful: it needs no explanation.

TABLE *for the mutual conversion of Tolás and Pounds Troy.*

TOLÁS into POUNDS TROY and DECIMALS.				TROY POUNDS into TOLÁS.			
Tolás.	Pounds.	Tolás.	Pounds.	Pounds.	Tolás.	Pounds.	Tolás.
1000	31.2500	550	17.1875	100	3200	55	1760
990	30.9375	540	16.8750	99	3168	54	1728
980	30.6250	530	16.5625	98	3136	53	1696
970	30.3125	520	16.2500	97	3104	52	1664
960	30.0000	510	15.9375	96	3072	51	1632
950	29.6875	500	15.6250	95	3040	50	1600
940	29.3750	490	15.3125	94	3008	49	1568
930	29.0625	480	15.0000	93	2976	48	1536
920	28.7500	470	14.6875	92	2944	47	1504
910	28.4375	460	14.3750	91	2912	46	1472
900	28.1250	450	14.0625	90	2880	45	1440
890	27.8125	440	13.7500	89	2848	44	1408
880	27.5000	430	13.4375	88	2816	43	1376
870	27.1875	420	13.1250	87	2784	42	1344
860	26.8750	410	12.8125	86	2752	41	1312
850	26.5625	400	12.5000	85	2720	40	1280
840	26.2500	390	12.1875	84	2688	39	1248
830	25.9375	380	11.8750	83	2656	38	1216
820	25.6250	370	11.5625	82	2624	37	1184
810	25.3125	360	11.2500	81	2592	36	1152
800	25.0000	350	10.9375	80	2560	35	1120
790	24.6875	340	10.6250	79	2528	34	1088
780	24.3750	330	10.3125	78	2496	33	1056
770	24.0625	320	10.0000	77	2464	32	1024
760	23.7500	310	9.6875	76	2432	31	992
750	23.4375	300	9.3750	75	2400	30	960
740	23.1250	290	9.0625	74	2368	29	928
730	22.8125	280	8.7500	73	2336	28	896
720	22.5000	270	8.4375	72	2304	27	864
710	22.1875	260	8.1250	71	2272	26	832
700	21.8750	250	7.8125	70	2240	25	800
690	21.5625	240	7.5000	69	2208	24	768
680	21.4500	230	7.1875	68	2176	23	736
670	20.9375	220	6.8750	67	2144	22	704
660	20.6250	210	6.5625	66	2112	21	672
650	20.3125	200	6.2500	65	2080	20	640
640	20.0000	190	5.9375	64	2048	19	608
630	19.6875	180	5.6250	63	2016	18	576
620	19.3750	170	5.3125	62	1984	17	544
610	19.0625	160	5.0000	61	1952	16	512
600	18.7500	150	4.6875	60	1920	15	480
590	18.4375	140	4.3750	59	1888	14	448
580	18.1250	130	4.0625	58	1856	13	416
570	17.8125	120	3.7500	57	1824	12	384
560	17.5000	100	3.4375	56	1792	11	352

To convert the decimals of a lb. into ounces and dwts., and vice versâ.

12 oz.	= 1.000	6 oz.	= 0.500	20 dwt.	= 0.083	9 dwt.	= 0.037
11	.916	5	.416	18	.075	7	.029
10	.833	4	.333	16	.066	5	.020
9	.750	3	.250	14	.058	3	.012
8	.666	2	.166	12	.051	2	.008
7	.583	1	.083	10	.041	1	.004

1 ounce troy = 2.667 tolás, or 2 tolás 8 máshas.
$7\frac{1}{2}$ dwts. „ = 1 tolá, and 1 dwt. = 1.33 tolá.

The same degree of correspondence cannot be expected between the Indian weights and the avoirdupois weights of England; but, as the latter are employed in all the transactions of commerce, excepting those of bullion and some other trifling articles, it becomes necessary to give tables for their conversion at greater length. In these, as on former occasions, the system of expressing fractions in decimals has been preferred, from the very great facility it affords in taking out the equivalents of quantities to which the tables do not extend. Decimal numeration is too well understood in the present day to require explanation, but one example may be advantageously given as applying to all the tables hereafter constructed on the same principle:

Required the equivalent of 57,353 *mans,* 35 *sers,* 6 *chhatáks, in avoirdupois pounds.*

Taking the numbers opposite to 57, 35, and 30 respectively, and removing the decimal point,—in the first three places, to the right hand;—in the second, one place to the right;—and in the third, one place to the left, we have

57,000 mans	=	4690286.
350	=	38800.
3	=	246.857
37 sers	=	76.114
6 chhats.	=	.771

lbs. 4719409.742 = 12 ounces nearly.

Since 35 sers are exactly equal to 72 pounds avoirdupois, the following simple and accurate rules for their mutual conversion, will be found equally convenient with the table.

RULE I.—*To convert Indian weight into avoirdupois weight.*

1. Multiply the weight in sers by 72, and divide by 35: the result will be the weight in lbs. av.

2. Or, multiply the weight in mans by 36, and divide by 49: the result will be the weight in cwt. av.

RULE II.—*To convert avoirdupois weight into Indian weight.*

1. Multiply the weight in lbs. av. by 35, and divide by 72; the result will be the weight in sers.

2. Or, multiply the weight in cwts. by 49, and divide by 36: the result will be the weight in mans, or maunds.[1]

One ton = 27.222 mans, or $27\frac{1}{4}$ mans nearly.

One man = $82\frac{2}{7}$lbs. av. exactly.

[1] For facility of recollection this rule may be expressed in *arithmetical* poetry thus:

Of one hundred weight should you incline
A sum in Indian *mans* to fix;—
First multiply by forty-nine,
And then divide by thirty-six.

TABLE *for converting New Bazar Mans (or Maunds), Sers, and Chhatáks, into Avoirdupois Pounds, and Decimals.*

Mans.	Pounds, Avoir.	Mans.	Pounds, Avoir.	Sers.	Pounds, Av.	Value of oz. and dram in decimals of lb.
						oz. dec.
100	8228.571	55	4525.714	sers 40	82.286	16 = 1.0000
99	8146.285	54	4443.429	39	80.228	15½ .9687
98	8064.000	53	4361.143	38	78.171	15 .9375
97	7981.714	52	4278.857	37	76.114	14½ .9063
96	7899.428	51	4196.572	36	74.057	14 .8750
95	7817.142	50	4114.286	35	72.000	13½ .8438
94	7734.857	49	4032.000	34	69.943	13 .8125
93	7652.571	48	3949.715	33	67.886	12½ .7813
92	7570.285	47	3867 429	32	65.829	12 .7500
91	7488.000	46	3785.143	31	63.771	11½ .7188
90	7405.714	45	3702.857	30	61.714	11 .6875
89	7323.428	44	3620.572	29	59.657	10½ .6563
88	7241.143	43	3538.286	28	57.600	10 .6250
87	7158.857	42	3456.000	27	55.543	9½ .5938
86	7076.571	41	3373.715	26	53.486	9 .5625
85	6994.285	40	3291.429	25	51.429	8½ .5313
84	6912.000	39	3209.143	24	49.371	8 .5000
83	6829.714	38	3126.858	23	47.314	7½ .4688
82	6747.428	37	3044.572	22	45.257	7 .4375
81	6665.143	36	2962.286	21	43.200	6½ .4063
80	6582.857	35	2880.000	20	41.143	6 .3750
79	6500.571	34	2797.715	19	39.086	5½ .3438
78	6418.286	33	2715.429	18	37.029	5 .3125
77	6336.000	32	2633.143	17	34.971	4½ .2813
76	6253.714	31	2550.858	16	32.914	4 .2500
75	6171.428	30	2468.572	15	30.857	3½ .2188
74	6089.143	29	2386.286	14	28.800	3 .1875
73	6066.857	28	2304.000	13	26.743	2½ .1563
72	5924.571	27	2221.715	12	24.686	2 .1250
71	5842.286	26	2139.429	11	22.628	1½ .0938
70	5760.000	25	2057.143	10	20.571	1 .0625
69	5677.714	24	1974.858	9	18.514	15 drs. = .0586
68	5595.429	23	1892.572	8	16.457	14 .0547
67	5513.143	22	1810.286	7	14.400	13 .0508
66	5430.857	21	1728.000	6	12.343	12 .0469
65	5348.571	20	1645.715	5	10.286	11 .0430
64	5266.286	19	1563.430	4	8.229	10 .0391
63	5184.000	18	1481.144	3	6.171	9 .0351
62	5101.714	17	1398.858	2	4.114	8 .0312
61	5019.429	16	1316.573	1	2.057	7 .0274
60	4937.143	15	1234.287	Chhat. 8	1.028	6 .0234
59	4854 857	14	1152.000	4	0.514	5 .0194
58	4772.572	13	1069.715	3	0.386	4 .0156
57	4690.286	12	987.430	2	0.257	3 .0117
56	4608.000	11	905.144	1	0.129	2 .0078

(The last column serves for the conversion of the decimals of a pound avoirdupois into ounces and drams. It will be found useful also with the two following Tables.)

TABLE *for the conversion of Mans (or Maunds) into Tons, Hundredweights, and Pounds.*

Mans.	Tons.	cwts.	lbs.	Mans.	Tons.	cwts.	lbs.
100000	3673	9	43.00	100	3	13	52.57
10000	367	6	105.10	90	3	6	13.72
9000	330	12	27.39	80	2	18	86.86
8000	293	17	61.68	70	2	11	48.00
7000	257	2	95.97	60	2	4	9.14
6000	220	8	18.26	50	1	16	82.29
5000	183	13	52.55	40	1	9	43.43
4000	146	18	86.84	30	1	2	4.57
3000	110	4	9.13	20	0	14	77.71
2000	73	9	43.42	10	0	7	38.85
1000	36	14	77.71	9	0	6	68.57
900	33	1	25.13	8	0	5	98.28
800	29	7	84.56	7	0	5	16.00
700	25	14	31.99	6	0	4	42.11
600	22	0	91.42	5	0	3	75.42
500	18	7	38.85	4	0	2	105.14
400	14	13	98.28	3	0	2	21.65
300	11	0	45.71	2	0	1	52.57
200	7	6	105.14	1	0	0	82.28

TABLE *for converting Avoirdupois weights into British Indian weights.*

Tons.	Mans or Bázár Maunds.			Cwts.	Mans or Bázár Maunds.			Lbs.	Mans or Bázár Maunds.		
	mns.	sr.	chhat.		mns.	sr.	chhat.		mns.	sr.	chhat.
100	2722	10	10	19	25	34	$7\frac{3}{5}$	100	1	8	$9\frac{3}{4}$
90	2450	1	9	18	24	20	$0\frac{1}{5}$	90	1	3	$12\frac{1}{4}$
80	2177	32	8	17	23	5	$9\frac{1}{5}$	80	0	38	$14\frac{1}{4}$
70	1905	23	7	16	21	31	2	70	0	34	0
60	1633	14	6	15	20	16	$10\frac{2}{5}$	60	0	29	$2\frac{1}{2}$
50	1361	5	5	14	19	2	$3\frac{3}{5}$	50	0	24	$4\frac{3}{4}$
40	1088	36	4	13	17	27	$12\frac{2}{5}$	40	0	19	7
30	816	27	3	12	16	13	$5\frac{3}{5}$	30	0	14	$9\frac{1}{4}$
20	544	18	2	11	14	38	$14\frac{4}{5}$	20	0	9	$11\frac{1}{2}$
10	272	9	1	10	13	24	$7\frac{1}{5}$	10	0	4	$13\frac{3}{4}$
9	245	0	$2\frac{1}{2}$	9	12	10	$0\frac{1}{5}$	9	0	4	6
8	217	31	4	8	10	35	9	8	0	3	$14\frac{1}{4}$
7	190	22	$5\frac{1}{2}$	7	9	21	$17\frac{2}{5}$	7	0	3	$6\frac{1}{2}$
6	163	13	7	6	8	6	$10\frac{3}{5}$	6	0	2	$14\frac{1}{2}$
5	136	4	$8\frac{1}{2}$	5	6	32	$3\frac{4}{5}$	5	0	2	7
4	108	35	10	4	5	17	$12\frac{1}{5}$	4	0	1	$15\frac{1}{4}$
3	81	26	$11\frac{1}{2}$	3	4	3	$5\frac{3}{5}$	3	0	1	$7\frac{1}{4}$
2	54	17	13	2	2	28	$14\frac{1}{5}$	2	0	0	$15\frac{1}{2}$
1	27	8	$14\frac{1}{2}$	1	1	14	$7\frac{2}{5}$	1	0	0	$7\frac{3}{4}$

The British Indian system of weights having been ordered by Regulation VII. of 1833, to supersede the bázár weights previously used, (of which the unit was the old Murshidábád rupee weight of 179.666 troy grains, called the sikká weight), in all Government transactions, a corresponding adjustment was made of all the weights in use at the several Government offices of the metropolis—the custom-house, the mint, the treasury, the bank, and the police; and sets of standard ser and tolá weights of brass were ordered to be prepared at the mint for distribution to all the collectors' offices of the Bengal presidency.

The Regulation in question expressly avoided enforcing the change by any penal enactment, trusting that the sense of public convenience would quickly ensure its substitution for the irregular system now prevalent; and directing only that the verification and adjustment of all weights at the Calcutta and Ságar assay offices, should be made for the future in accordance with the new scale.

In the ordinary dealings of commerce, the difference between the bázár weights and the new weights is not recognizable: indeed the error of single large weights is generally found to exceed the amount of modification now introduced: no inconvenience therefore remains from the still general use of the old bázár weights, while the principal European mercantile establishments of the town, as well as all the native bullion merchants, have already had their weights adjusted to the new system.

Where it may be required, however, to know the precise difference between the old and new system, recourse may be had to the following table. The new *man* will be seen to be one chhaták and a quarter, nearly, heavier than the old bázár man: which would induce an increase in the price of articles to the trifling extent of one-fifth per cent. or three ánás in a hundred rupees.

TABLE *for the mutual conversion of Tolás and old Sikká Weight of Bengal.*

Old Sikká Weight into Tolás.				Tolás into Sikká Weight.			
Old Sikká Weight.	Tolás.	Old Sikká Weight.	Tolás.	Tolás.	Old Sikká Weight.	Tolás.	Old Sikká Weight.
3200	3194.060	800	798.515	3200	3205.948	800	801.487
1600	1597.030	700	698.700	1600	1602.974	700	701.301
1500	1497.216	600	598.886	1500	1502.789	600	601.115
1400	1397.401	500	499.072	1400	1402.604	500	500.929
1300	1297.587	400	399.257	1300	1302.419	400	400.734
1200	1197.772	300	299.443	1200	1202.220	300	300.557
1100	1097.958	200	199.628	1100	1102.044	200	200.371
1000	998.144	100	99.814	1000	1001.859	100	100.185
900	898.329	1 ánā	0.062	900	901.673	1 másha.	0.084

This table will answer equally well for the conversion of old bázár mans or sers into new mans and sers, the ratio being the same, namely, as 180: 179.666.

FACTORY WEIGHTS.

There is another species of weight employed in some branches of the commerce of Calcutta which it will be necessary to expel before uniformity can be established. This is the system of factory weights originally used by 'the English factory at Bengal,' and now generally retained in the commercial transactions of the Government, although long since superseded in their customs and revenue business by the bázár weights.

It would appear to have been adopted in 1787 to save calculation in the home remittances of produce, three factory mans being almost exactly equal to two hundred-weight avoirdupois.

A moment's inspection of the Calcutta price-current will be sufficient to prove the great inconvenience which the retention of the two-fold system must cause. Some articles are quoted at 'sikká rupees per bázár man,' others at 'sikká rupees per factory man,' and others again at 'current rupees per factory man,' the current rupee being an imaginary money, of which 116 are assumed as equal to 100 sikkás?

To increase the perplexity, the same article is often estimated in a different scale as it comes from different places; thus, Radnagor and Bauleah silk are sold per bázár ser: while Kasimbázár and Gonatea silk are sold per factory ser. Tin, iron, verdigris, Japan and English copper, per 'sikká rupees and factory man:'—steel, zinc, lead, mercury, and South American copper, per current rupees and factory man!—Gum-Benjamin is sold by factory, all other gums by bázár, weight:—stick-lac by the former, but shell-lac and lac dye by the latter!

Many more examples might be furnished of similar inconsistency. Saltpetre, indigo, silk the produce of the Straits, and metals, are the principal articles sold by the factory maund; while grain, sugar, cotton, most articles of food, and all of retail bázár consumption, are sold by the bázár weight.

The old bázár maund was defined to be ten per cent. heavier than the factory maund; therefore the latter will be equal to 74 lbs. 10 oz. 10.666 dr. avoirdupois; the ser to 1 lb. 33 oz. 13.866 dr.; and the chhaták to 1 oz. 13.366 dr.

From the simple relation of the factory to the bázár weight, there can be no difficulty whatever in substituting the latter in its place, in the valuation of such articles of commerce as are still estimated by the former:—nothing more being necessary than to add ten per cent. to the prices formerly quoted per factory maund. Thus, indigo sold at 100

or 200 rupees per factory maund, will now be 110 or 220 rupees per man, and so of other goods. As such goods are invariably weighed at the custom-house on the new system, and the duty or drawback calculated accordingly, it is only a source of perplexity to buy and sell by the obsolete weight; and to retain two species of weights in a warehouse, must obviously open the door to continual mistakes, if not occasionally even to fraudulent interchange.

The following Table gives the conversion of factory weights into new mans accurately, but in ordinary practice the following simple rules will suffice.

I. Deduct one-eleventh from the weight in factory maunds, sers, or chhatáks; the result will be the weight in British Indian (or bázár) mans, sers, and chhatáks.

II. Add ten per cent. to the price per factory maund, etc., the result will be the price per British Indian (or bázár) man, etc.

The reverse table has not been calculated, because, it is to be hoped, it will never be required.

TABLE *for the conversion of Bengal Factory weights into new standard mans and decimals.*

Factory weights, mans.	New man.	Factory weights.		New man.
10000	9074.400	mans.	5	4.537
1000	907.440		4	3.630
100	90.744		3	2.722
90	81.669		2	1.815
80	72.595		1	0.907
70	63.520	sers.	20	0.453
60	54.446		10	0.227
50	45.372		5	0.113
40	36.297		4	0.091
30	27.223		3	0.068
20	18.149		2	0.045
10	9.074		1	0.023
9	8.167	chhatáks.	8	0.011
8	7.259		4	0.005
7	6.352		2	0.003
6	5.444		1	0.001

(To reduce the decimals into sers and hundredths, multiply by 4, and move the decimal point one place to the right: to convert the hundredths into chhatáks, multiply by 16 and divide by 100.)

CURRENT RUPEE PRICES.

By a fortunate chance we are able to meet the apparently perplexing practice of estimating the values of some articles in 'current rupees per factory weight,' with a very simple method of expressing their equivalents according to the new system, so as to obviate any supposed

difficulty in eradicating long established habits: for 100 current rupees being equal to $\frac{10000}{116}$ or 86.207 sikká rupees, and one factory man being equal to .90744 man, as above stated; the ratio of the two modes of valuation will be as 100 to 86.207 ÷ .90744, or 95 exactly. Hence may be deduced the following simple rules:—

I. Deduct five per cent. from the price or value quoted in 'current rupees per factory weight,' and the result will be its equivalent in sikká rupees per bázár (or new) weight.'

II. Add one and a third per cent. to the price or value quoted in 'current rupees per factory weight,' and the result will be its equivalent in Farrukhábád, Madras, or Bombay rupees, per bázár (or new) weight.

The following table is constructed on this principle, and is applicable to mans, sers, and chhatáks, as the case may be:

TABLE *for the conversion of values quoted in current rupees per factory maund, ser, or chhaták into their equivalents in sikká or Farrukhábád rupees per new standard (or bázár) weights.*

Current rupees per factory man, etc.	Sikká rupees per new man, etc.	Fd. Mad. Bom. Rs. per new man, etc.	Current ánás per factory man, ser, etc.	Decimals of sikká rs. per new man, etc.	Decimals of Fd. Mad. Bom. rs. per new man, ser, etc.
1000	950.	1013.333	15	0.891	0.950
100	95.	101.333	14	.831	.886
90	85.5	91.200	13	.772	.823
80	76.	81.066	12	.7125	.760
70	66.5	70.933	11	.653	.696
60	57.	60.800	10	.594	.633
50	47.5	50.666	9	.534	.570
40	38.	40.533	8	.475	.506
30	28.5	30.400	7	.416	.443
20	19.	20.266	6	.356	.380
10	9.5	10.133	5	.297	.316
5	4.75	5.066	4	.2375	.253
3	2.85	3.040	3	.178	.190
2	1.90	2.026	2	.119	.126
1	0.95	1.013	1	.059	.063

(To reduce the decimals into ánás and pá'is, see Table p. 12.)

The only other denomination used extensively at the Presidency is the salt man, which is 2½ per cent. heavier than the bázár man, having 82 tolás to the ser. It is much to be regretted that this absurd weight should not only have been retained, but that after the promulgation of the new regulation, the Government ordered a completely new and expensive series of brass weights to be made up for the Salt Board, at considerable cost, on the old system! It would of course have been just as simple to order the weighments of salt to be made

with the new *man*, and 2½ per cent. surplus to be levied on the gross amount to cover wastage; the weights would then have been convertible to general use, whereas now they are confined to one specific purpose.

In the Madras and Bombay Presidencies, the weights of commerce have been long since made to conform with the avoirdupois system, by assuming the nearest approximation in pounds to the local *man*, and adjusting the latter to it. Thus at Madras the 'man' is assumed as equal to 25 lbs. avoirdupois: and at Bombay the more convenient equivalent of 28 lbs., or one quarter cwt., has been adopted for the standard man. As these weights (especially the latter) are convenient by their direct relation to the commercial unit of England, it is neither to be expected nor to be wished that they should be exchanged for the weights of Bengal. Indeed, it should be remembered, that the use of purely English weights, even in Calcutta counting-houses, can lead to no confusion:—it is the introduction of a fictitious native weight, like the factory man, that is objectionable, as being neither Indian nor English.

The ser at Madras contains 8 paláms[1] of 10 pagodas each, so that, like that of Bengal, it has the the sub-division into 80 parts. In the Malabar system, also used at Madras, 2½ paláms (fanams) make a ser, and the tolá occupies the place of the man; it is equal to 23.192 lbs.

The ser at Bombay is divided into 30 pá'ís, or 72 tánks,[2] or 72 troy grains each.

The conversion of the Madras and Bombay mans into the bázár man of Bengal requires another table. A practical estimate of their relative values may, however, be held in the memory by means of the following simple ratios:—

Ten Madras mans = 3 mans, 1½ sers, Bengal, nearly.
Three Bombay mans = 1 man, 1 ser, nearly.

The exact ratios between the cwt. and the man given in page 100, are of course applicable to the derivatives of the avoirdupois pound in the other Presidencies.[3]

[1] [Generally, though corruptly, written 'pollam *or* pullam.' TAM. from S. पल.]

[2] [S. टंक *ṭank*, MAR. टंक, टांक *ṭank* or *ṭánk*.]

[3] The readiest practical method of reducing the Indian to the English system, where the utmost accuracy is not required, is derived from the equation, 300 mans = 11 tons. Hence we have the following rules in addition to those given in page 100:—

III. Add a tenth to a sum of mans, and divide by 30 results—the weight in tons.

IV. Multiply a sum in tons by 30, and deduct an eleventh from the product: results—its value in mans.

V. Deduct one-third from a weight in mans, and increase the remainder by one-tenth: results—the weight in cwts. nearly.

VI. Add one-half to a given weight in cwts., and diminish the sum by one eleventh: results—the equivalent in mans, nearly.

For the more exact conversion of one denomination into the other, the following table may be consulted:

TABLE *for the mutual Conversion of Bengal, Madras, and Bombay mans.*

Bengal mans.	Madras mans.	Bombay mans.	Madras mans.	Bengal mans.	Bombay mans.	Bengal mans.
1000	3291.428	2938.775	1000	303.820	1000	340.278
100	329.143	293.877	100	30.382	100	34.028
90	296.229	264.492	90	27.344	90	30.625
80	263.315	235.104	80	24.306	80	27.222
70	230.401	205.716	70	21.268	70	23.819
60	197.487	176.328	60	18.230	60	20.416
50	164.571	146.938	50	15.191	50	17.014
40	131.656	117.552	40	12.152	40	13.612
30	98.742	88.164	30	9.114	30	10.209
20	65.828	58.775	20	6.076	20	6.806
10	32.914	29.388	10	3.038	10	3.403
1	3.291	2.939	1	0.304	1	0.340
sers, 30	2.469	2.203	sers, 30	0.228	sers, 30	0.255
20	1.646	1.469	20	0.152	20	0.170
10	0.823	0.734	10	0.076	10	0.085
5	0.411	0.367	5	0.038	5	0.042
4	0.329	0.294	4	0.030	4	0.034
3	0.240	0.220	3	0.022	3	0.025
2	0.164	0.147	2	0.015	2	0.017
1	0.082	0.073	1	0.008	1	0.008

The next table will be found very convenient for reducing the decimals of mans in the foregoing, and upon all other occasions, into the ordinary divisions of the native weights, viz., sers and chhatáks.

TABLE *for converting sers and chhatáks into decimals of a* man, *and* vice versâ.

Chhtk.	Decimals for				Sers.	Decimals.
	0 ser.	1 ser.	2 sers.	3 sers.		
0	.0000	.0250	.0500	.0750	4	.0000
1	.0016	.0266	.0516	.0766	8	.2000
2	.0031	.0281	.0531	.0781	12	.3000
3	.0047	.0297	.0547	.0797	16	.4000
4	.0062	.0312	.0562	.0812	20	.5000
5	.0078	.0328	.0578	.0828	24	.6000
6	.0094	.0344	.0594	.0844	28	.7000
7	.0109	.0359	.0607	.0829	32	.8000
8	.0125	.0375	.0625	.0875	36	.9000
9	.0141	.0391	.0641	.0891	40	.10000
10	.0156	.0406	.0656	.0906		
11	.0172	.0422	.0672	.0922		
12	.0187	.0437	.0687	.0937		
13	.0203	.0453	.0703	.0953		
14	.0219	.0469	.0719	.0969		
15	.0234	.0484	.0734	.0984		

The three last figures of decimals recurring in the same order after every four sers, it is unnecessary to insert them at length.

GENERAL TABLE OF INDIAN WEIGHTS.

However desirable it may be, in theory, to reduce the system of weights throughout the vast continent of India to order and uniformity; in practice, it is well known that insuperable difficulties oppose the execution of such a project: if ever effected, it can only be done in the gradual progress of time, by the spread of knowledge, and by the growing inter-communion of the multitudes engaged in the internal traffic of the country, who would by degrees feel the advantage of uniformity in their dealings.

It is a comparatively easy thing for a government, having the sole issue of coin within its own territories, to fix upon a convenient unit of value, and establish it to the supersession of former currencies; but the weights of a country do not so immediately come in contact with the ruling power (even though it have a commercial character itself:) not at least as regards the domestic or market weights, which are localised in a thousand distinct foci under as many modifications of prices, customs, and modes of calculation and sub-division.

It is but lately that the Legislature has attempted to equalise the weights of England, and then only by the retention of a double system. India does, however, in some respects, offer a better chance of success than the countries of Europe, where each locality has, by municipal laws, rendered permanent and cognate its own system, however differing from that of its neighbour. Here, all is vague—the standards of reference being in most cases the local rupee or copper coin, themselves subject to variation; or of modern introduction, and capable of equalisation.

Thus, throughout the Maráthí states, the ser is referred to the Puna or Ankusí rupee: in Gujarát, to the Baroch rupee: in Ajmír, to the Sálimsáhí; in Bengal, to the old Murshidábád rupee; all comparatively modern. In Madras, the coin of that presidency, or of Mysore, or Pondicherry, are appealed to; but more generally the English avoirdupois unit has become familiarised, as has been already stated, by the adoption of 25 lbs., to represent the commercial 'man.'

By perseverance, therefore, in upholding one common system for the whole of British India, or at least for the Bengal presidency, a system founded on the previous habits and institutions of the country; by connecting it (as has been done) with a rupee of general, and to be hereafter exclusive, circulation; by restricting Government transactions to this system, and affording facilities of adjustment by depositing standard weights in public offices all over the country;—there is some reason to hope that, eventually, the incongruous mass now prevalent

will gradually give place to the convenience of an universal and single species of weight.

There is another argument in favour of its feasibility, namely, that India does not, properly speaking, possess dry or liquid measures. Where these are employed, they depend upon, and in fact represent the ser or the man weight; the mention of measures has been accordingly omitted in the foregoing scheme for Bengal, leaving the value of any vessel of capacity to rest solely on the weight contained in it.

The mode in which this is effected for the 'dry measures' of South and West India is, by taking an equal mixture of the principal grains, and forming a vessel to hold a given weight thereof, so as to obtain an average measure. Sometimes salt is included among the ingredients.[1] Trichinopoly is the only place where grain is said never to be sold by weight. The markál[2] and para[3] are the commonest measures; the latter is known throughout India; in Calcutta it is called 'ferrah,' and is used in measuring lime, etc. which is still recorded however in mans weight.

Of the origin or antiquity of the Indian weights it would be out of place here to institute an inquiry; the ancient metrology of the Hindús has been fully described by Mr. Colebrooke, in the 'Asiatic Researches,' v. As with the coins, so with the weights, Southern India retained most of the names and terms properly Hindú, *pala*,[4] *tulá*, *visa*,[5] *bhárá*,[6] *khárí*[7] (? *khandí*), *báha*. Throughout the Moghul empire, on the contrary, the ser and man were predominant. The word 'man,' of Arabic or Hebrew origin,[8] is used throughout Persia and Northern India; but, as might be expected, it represents very different values in different places: thus the *man* of Tabríz is only $6\frac{1}{3}$ lbs. avoir., while that of Palloda, in Ahmadnagar, is $163\frac{1}{4}$ lbs.

It is probable that the ser, a Hindú weight (seṭak), was more uniform than the man, since it was founded upon the tolá (tolaká), which, with its subdivision, the *wasa*, must in very ancient times have been extensively known throughout commercial Asia. There can be little doubt that the 'tale *or* tael' and 'mace' of the Chinese are identical in origin. The variations of these weights may have been smaller, because their use was nearly confined to the precious metals and other

1 "In Belary this is called the *nou-danium* measurement; from the 'nine' sorts of grain used: rice, wheat, coolty, pasaloo, mernoomooloo, oil seeds, Bengal grain, aunnomooloo, and nooloo. In Darwar, they take, wheat, toor, hurburr, roolthee, moony, eored, juwaree, paddy, and mudkee."—Kelly's 'Metrology.'

2 [Properly *Marakkál*, from the Tamil.]

3 [MAL. *Para*.]

4 [S. पल H. پل. 5 H. تلا. S. तुला. 6 H. بهار, بهارا S. भार. 7 S. खारी.]

8 The Hebrew maneh was equal to 13110 grs. tr. or 72.83 tolás. The Greek mina to 6244 grs. or 33.57 tolás.

articles of value; the ser is quoted at the highest denomination of this class of weights in one Sanskrit work. For gross produce a greater latitude was required, and larger sers were introduced to suit the value of each article; the weight apparently, rather than the price, being made variable: while to prevent the ambiguity which might follow, it became necessary to define the ser employed as of 30, 40, 60, 72, 80, 90, or even as far as 120 tolás; and probably when the current coin began to vary from the original tolá, the mention of this weight became obsolete, and reference was made direct to the rupees of the local currency. It is to meet this mode of expression that, in the following table, the value of every ser has been given in the standard tolá of 180 grains.

The *man* of India may, as a genus, be divided into four different species: 1. That of Bengal, containing 40 sers, and averaging about 80 lbs. avoir. 2. That of Central India (Málwá, Ajmír, etc.,) generally equal to 40 lbs. avoir. and containing 20 sers, so that the ser of this large portion of the continent assimilates to that of Bengal. 3. The *man* of Gujarát and Bombay, equal to $\frac{1}{4}$ cwt. or 28 lbs. and divided into 40 sers of a smaller grade. 4. The *man* of Southern India, fixed by the Madras Government at 25 lbs. avoir. There are however many other varieties of mans, from 15 to 64 sers in weight, which it is unnecessary to particularise.

Abú'l-Fazl defines the man of Akbar's reign to be 40 sers of 30 dáms; each dám being five tánks. The tánk is in another place described as 24 ratís: the másha of eight ratís has been assumed, from the weight of Akbar's coins, to be 15.5 grs. troy. This would make the emperor's man=34 $\frac{3}{4}$ lbs. av., agreeing pretty well with that of Central and Western India. The tánk, as now existing in Bombay, is 72 grains; in Dharwár it is 50 grains; in Ahmadnagar, 268 grains. Its present weight consequently affords no clue for the verification of the above estimate, however desirable it may be to determine the point. In one part of the 'Ayín-i Akbarí,' the dám is called 20 máshas, 7 ratís, which would increase the man to about 47 lbs. In the absence of better evidence, it may be safe to reckon it in round terms at one-half of our present standard man.

ORIGIN OF THE PRESENT TABLE OF INDIAN WEIGHTS.

In 1821, the Court of Directors called upon their commercial agents, collectors of customs, and other public officers of the three Presidencies, to procure and forward to England accurate counterparts of the standard weights and measures in use throughout their territories in the East. The order was promptly obeyed, and the

required models sent home, with certificates and explanations. The packages as they arrived were placed under charge of Dr. Kelly, who was assisted in his examination and comparison of the weights by Mr. Bingley, Assaymaster, and of the measures by Mr. Troughton, both of whom had zealously co-operated in comparing the standards sent to the English Government from other parts of the world.

The dispatches accompanying the standards from India contained full information on the money and trade, as well as on the metrology of most places: this is embodied at length in the supplement to Kelly's 'Cambist,' whence it was subsequently collected in an octavo volume, entitled Kelly's 'Oriental Metrology.'

It is from these sources that the accompanying table has been drawn up, exhibiting in an abridged form the principal commercial weights of India and Asia. Most of the subdivisions peculiar to each place have been necessarily omitted for want of space, but, where possible, the formation of the ser, etc., from the local unit is mentioned. It may be generally assumed that the *man* system follows the common scale, viz.:

16 chhatáks = 1 ser.
40 sers = 1 man.
20 mans = 1 khandí[1] or máni.

The use of a five ser weight also universally prevails under the name of Panserí,[2] dharí,[3] or vísa.[4] The *dharí* from its name, however, seems to be properly a measure, and accordingly, while in Málwá it is equal to 5 sers, in other places it is found of 4, 4½, 5¾, 10, 11, and 12 sers. The terms adholá, adheli,[5] 'half,' páo,[6] powah, 'quarter,' adhpáo 'half-quarter,' frequently occur: they explain themselves.

The only novelty in the present table is the insertion of the two last columns, expressing the equivalents of the local weights in the standard man and tolá of the British Indian system. The column containing their values in avoirdupois pounds, ounces, and drams is according to the London determinations of Kelly.

Where the ser only of any place is mentioned in the first columns, the value of the man of the same place, expressed in parts of the standard man, is inclosed in parentheses to prevent mistakes: it may be remarked that the ratio of the man will answer equally well for the

[1] [From s. खण्ड *khaṇḍa*: it is commonly written 'candy.']
[2] Written *punchserree*, *punchser*, and *punchaseer in* Kelly.
[3] [H. دهڑي *dharí*.] Written *dhuree*, *dhurra*, *dhuddee*, *dudda*, *dhadium*, in Kelly.
[4] Written *vis*, *viss*, *visay*, *vesey*, *biss*, in Kelly.
[5] H. ادهيلي
[6] H. پاو

ser, it being understood that the subdivision into 40 sers holds for the mans of the two places compared. To reduce any local weight into the standard denomination, or into the bazár man of Calcutta, nothing more is necessary than to multiply by the number in the last column, and convert the decimals into sers, if so required, by means of the second table in page 108.

The column of 'tolás per ser' will best express to a native the value of the weights of any particular locality; being the customary mode of estimation throughout the country.

In expressing the dimensions of the markál, the parra, and a few other dry or liquid measures; sometimes gallons and sometimes cubic inches have been introduced by Kelly. It may be convenient, therefore, to explain that, by the enactment of the 1st January, 1826, one imperial measure was established as a substitute for the variable wine, ale, and corn gallons of England, with their multiples and divisions.

This imperial gallon was made to contain 10 lbs. avoirdupois weight of distilled water, weighed in air at the temperature of 62° Far., the barometer standing at 30 inches. It has a capacity, therefore, of 277.274 cubic inches. Some of the most useful derivatives of this unit are here subjoined for the sake of reference.

Imperial dry and liquid measures.	Cubic contents.	Avoirdupois weight.	Indian weights.
1 pint, ...	34.659 c. i.	1 lb. 4 oz.	48.611 tolás.
2 = 1 quart, ...	69.318 „	2 lbs.8 „	97.222 „
8 = 4 = 1 gallon, ...	277.274 „	10 lbs.	4.861 ser.
64 = 32 = 8 = 1 = 1 bushel, ...	1.284 c. f.	80 „	38.888 „
512 = 256 = 64 = 8 = 1 quarter, ...	10,269 „	640 „	7.777 man.
2048 = 1024 = 256 = 32 = 1 chaldron	41,075 „	2560 „	31.111 „

The old wine gallon contained 231 cub. inches; the ale gallon 282 c. i., and the corn gallon 268.8 c. i.; whence are obtained the following multipliers to convert them into imperial measure, viz., .833, 1.017 and .969 respectively.

It will be remarked that the gallon nearly corresponds with the panserí or dharí of the Indian corn measures, while the bushel bears the same proximity to the man weight. Standards of the bushel, gallon, quart, and pint, are deposited in the Assay-offices of the three Presidencies.

The following is the scale of measures in use at Madras:—

			cub. inches.	
	1 walak,[1]	=	11.719.	
8 walaks,	= 1 paḍi,	=	93.752.	
8 paḍis[2]	= 1 markál,[3]	=	.750	= 27 lbs. 2 oz. 2 dr. water.
5 markáls,	= 1 parra,	=	3,750.	
400 parras[4]	= 1 garce[5]	=	300,000.	

The particulars of the Dry Measure of Ceylon are thus given in the 'Oriental Metrology.'

			gallons.	inch.	inch.
4 cutchundoos,	= 1 ser,	=	0.24	= 4.35 diam.	+ 4.35.
4.8 sers,	= 1 coornly,	=	1.15		
2.5 goornies,	= 1 markál,	=	2.88		
2 markáls,	= 1 parra	=	5.76	= cube of 11.56 inches.	
8 parras,	= 1 amonam,	=	46.08	= $5\frac{3}{4}$ bushels.	
$9\frac{3}{8}$ amonams,	= 1 last,	=	432	= $6\frac{3}{4}$ quarters.	

Thus it will be seen that there is no fixed rule as to the subdivisions and multiples of the parra or markál.

[1] [ولک, vulgarly, Olluck.]

[2] [TAM. *Paḍi*.]

[3] [TAM. *Marakkál*. H. مرکال *markál*.]

[4] [TEL. *Parra*: in page 110, note 3, incorrectly given as 'MAL. *Paṛa*.']

[5] [Properly, TEL. *Gariṣa*.]

TABLE *of the Commercial weights of India, and of other trading places in Asia, compared with the British-Indian Unit of weight, and with the Avoirdupois system of England.*

Place.	Denomination of Weight.	Value in English avoirdupois weight. lb. oz. dr.	No. of standard Tolás per ser, etc. Tolás.	Value of mans, etc., in Mans and decimals. Mans.
Acheen in Sumatra.	Tale, of 16 mace or 64 copangs.	grs. 148.2	0.790	...
	Catty = 100 tales or 20 buncals.	2 1 14½	82.370	...
	Bahar, of 200 catties.	423 8 0	...	5.1466
	Bamboo, liquid measure	3 10 10	130.890	...
Ahmadábád in Gujarát.	Tolá = 32 válas, or 96 ratís.	grs. 193.440	1.075	...
	Ser (divided into ½ and ¼ s).....	1 0 14½	41.091	...
	Man, of 40 sers.....	42 4 13	...	0.5140
Ahmadnagar, in Aurangábád.	Tolá = 12 máshas or 96 gunjás	grs. 188.4	1.047	...
	Ser, com. wt. (of 80 Ankusí rs.)	1 15 8	76.562	...
	Man, of 40 sers.....	78 15 12	...	0.9599
	Ser, of capacity (110 Ankusí rs.)	2 11 6	105.425	...
	Man, do. = 12 pailís = 48 sers.	130 2 0	...	1.5814
Amboyna, in the Moluccas.	Tale, of 16 mace.	grs. 455.35	2.529	...
	Bahar, of cloves.....	596 12 0	...	7.2521
	Coyang, of rice (2,500 catties)...	3255 8 0	...	39.5632
Ahmode, Gujarát.	Man = 40 sers of 40 Baroch rs.	40 8 12	39.424	0.4928
	,, for grain = 40 sers of 41 do.	41 9 5	40.416	0.5052
	,, for cotton = 42 sers ,, ,,	43 10 10	...	0.5306
Anjar, Bhuj.	,, of 40 sers (of 36 dokarás)...	27 3 8	26.464	0.3308
	Kalsí, measure = 64 máps.	3036l.(6c.in.)	...	...
Anjengo, Travancore, M.	Khandí (= 35 telong[1] of 16lbs.)	560 0 0	...	6.8056
	Man (20 to the khandí).	28 0 0	...	0.3402
Arkát, Madras.	Pakká ser,[2] of 24 paláms.....	1 13 0	70.486	(0.8811)
	Padí, for grain = 47 paláms. ...	3 8 12	137.930	...
Aumodh, Kalpí.	Ser, for cotton (see Kalpí).	1 8 0	58.336	(0.7292)
	,, ,, grain, etc.....	2 0 8	78.993	(0.9872)
Aurangabander in Sindh.	Tolá = 12 máshas, or 72 ratís...	grs. 187.5	1.041	...
	Ser, of 64 pice.	1 13 13	72.461	...
	Man, of 40 sers.....	74 10 10	...	(0.9074)
Bagulkotá, M.	Kachchá ser,[3] for groceries, oil, etc.	0 8 3½	20.	(0.2488)
	Pakká ser, for grain (116⅔ c. i.)	3 6 11½	133.	(1.6616)
Bairseah, Málwá.	Ser, of 80 Bhopál rupees.....	1 14 13	73.892	(0.9362)
	Man, of 40 sers.	77 1 12	...	0.9371
Banda, Moluccas.	Catty, of 5⅔ lbs. Dutch.	6 1 10	...	0.0740
	Bahar, of 100 catties.	610 0 0	...	7.4132
	Soekal, of nutmegs, 28 catties...	170 12 13	...	2.0757
Bangalore, in Maisúr.	Kachchá ser, of 24 rupees.	0 10 0	24.304	(0.3038)
	,, man, of 40 sers.....	25 0 0	..	0.3038
	Khandí, of 20 mans.....	500 0 0	...	6.0764
	Pakká ser, for grain, 84 rupees.	2 1 10¾	81.840	(1.0230)
	Khandí, of 20 kolagas, or 160 sers.	336 12 4½	...	4.0926
	Markál, of 9, 10, 12, etc., to 96 srs.			
Banjar Massin, in Borneo I.	Tale, of 16 mace.	grs. 614.4	3.413	...
	Pecul and catty (see China)			
	Last, grain measure = 230 ganton	3066 10 10	...	37.2685
Bantam, Java.	Tale, for gold, musk, etc.....	grs. 1055	5.860	...
	Bahar = 3 peculs of 100 catties.	396 0 0	...	4.8124
	Coyang, of rice = 200 gantams.	8681 0 0	...	105.4982
Banswarra.	See Malwa.			
Bardoler, Súrat.	Man, of 39¾ sers, 2 pice.	37 4 4¾	...	0.4529

[1] Properly, TAM. *Tulám.* [2] پکّا سیر *pakká ser*, 'a full, complete, or correct *ser*.'

[3] کچّا *kachchá*, the converse of *pakká*.

Place.	Denomination of Weights.	Value in English avoirdupois weight. lb. oz. dr.	No. of standard Tolás per ser, etc. Tolás.	Value of mans, etc. in Mans, and decimals. Mans.
Baroda, Baroch.	Ser, (pergunna,) 42 Bábásáhí rs.	1 0 13.8	41.186	...
	Man, of 42 sers.	44 9 10	...	0.5420
	Khandí, of 20 mans.	892 1 4	...	10.8411
	The town ser has 41 Bábás. rs.	1 0 9.5	40.286	(0.5036)
	The Sesamum man is of 40 sers.	42 7 10.8	...	0.5162
Batavia, Java.	Mark, of 9 reals.	grs. 422	2.344	...
	Bahar=3 peculs, of 100 catties.	406 14 0	...	4.9446
	Coyang, of rice=3,300 lbs. Dutch	3581 0 0	...	43.5190
	Timbang, of 5 peculs.	678 2 0	...	61.7133
	Kanne, liquid measure.	91 c. i.	...	...
Bauleah, Bengal.	Ser, of 80 sá. wt. or tolás.	.....	80.	1.0000
	Ser, of 60 sá. wt. for liquids, etc.	.....	60.	0.7500
Belgaum, Maráthí country.	Ser, of 24 Shápúrí rs. (174 grs.)	0 9 8	23.091	...
	Man, of 44 sers.	26 3 15	...	0.3189
	Tolá, of 30 Kántaráí fanams.	grs. 176.25	0.979	...
Bellary, Mad. Ceded Distr.	Ser, of 21 Mysore rs. or tulâms	0 8 7¾	20.621	(0.2578)
	Man, of 48 sers.	25 6 0	...	0.3083
	Man, for cotton (=1½ naga.)	26 5 4	...	0.3199
	Thimapoo, grain measure, 112 rs.	.....	112.	...
	Markál chunám do.=12 sers.	.....	1008.	0.3150
Benáres.	Tolá, of 215 grains troy.	.....	1.194	...
	Ser, of 105 sá. wt.	2 10 0	105.	1.3125
	Ser, of 103 sá. wt.	2 9 2	103.	1.2875
	Ser, of 96 sá. wt.	2 6 7	96.	1.2000
Bencoolen, Sum.	Tale, for gold, etc.=638 grains.	.....	3.940	...
	Catty, of 16 tales.	1 7 5	56.666	..
Betelfaki, Arab.	Frazil, of 10 mans.	20 6 4	...	0.2477
	Bahar, of 40 frazils.	815 10 0	...	9.9121
Bhopál, Bhilsa.	Same as Málwá.			
Birman Empire.	See Rangoon.			
Bombay, Money weight.	Tank, of 24 ratís, (for pearls.)	grs. 72	0.400	...
	Tolá, (formerly 179 grs.)	grs. 180	1.000	...
Commercial weight.	Ser, of 30 pice or 72 tanks.	0 11 3⅓	27.222	...
	Man, of 40 sers.	28 0 0	...	0.3402
	Khandí, of 20 mans.	560 0 0	...	6.8056
Grain measure	Ser, of 2 tipprees.	0 11 3.2	24.836	(0.3104)
	Para, of 16 pailís or adholis.	44 12 12.8	...	0.5444
	Khandí, of 8 paras.	358 6 4	...	4.3553
	Parra, salt measure, 6 gallons	1607.6 c. i.	...	...
	Ser, for liquids, 60 Bom. rs.	1 8 8¼	60.	(0.7448)
Borneo.	See Banjar Massin.			
Baroch, Gujarát.	Man,=40 sers, of 40 rs.	40 8 12	39.408	0.4928
	Man, for grain, 41 do.	41 9 5	...	0.5052
	Man, for cotton, 42 sers.	43 9 9½	...	0.5397
Bushire, Persia.	Man, Tabrízí=720 miskáls.	7 10 15	29.888	0.0934
Baṣra, Arab.	Man, of 24 vakias Sophi.	116 0 0	...	1.4097
Baghdád, „	Man=6 okas of 400 dirhams.	16 8 0	641.600	0.2005
Cachar, Tonquin.	Tale, of 10 mace, or 1000 kás.	grs. 590.75	3.282	...
Calcutta.	(See the foregoing pages.)	lbs. 82⅔	80.	1.0000
	Grain weights or measures are derived from the others, thus.—			
	1 kunkí=5 chhatáks	.....	25.	...
	1 raik=4 kunkís=1¼ ser.	.....	90.	...
	1 pallí=4 raiks=5 sers.	.....	400.	...
	1 soallí=20 pallís=2½ mans.	lbs. 205⅔	5400.	2.500
Calicut, Malabar.	Ser, of 20 Súrat rs.	0 8 2⅔	19.849	(0.2481)
	Man, of 68 sers.	34 11 11	...	0.4220

Place.	Denomination of Weights.	Value in English avoirdupois weight. lb.	oz.	dr.	No. of standard Tolás per ser, etc.	Value of mans, etc. in Mans and decimals.
Cambay, Malabar.	Same as Súrat.					
Canton.	See China.					
Cape Town.	91⅘ Dutch=100 English weight					
Carwar, Kanára.	Man, of 42 sers.	26	0	0	...	0.3159
Ceylon.	See Colombo.					
Chanador, in Ahmadnagar.	Ser, of 74 Ankusí rs. 10 más.	1	13	8	71.702	(0.8963)
	Ser of capacity=72 tanks.	2	5	7	90.995	...
	Man,=64 sers.	149	12	0	...	1.8200
China.	Tale, see page 16 (=579,84 grs.)	0	1	5½	3.221	...
	Catty, of 16 tale.	1	5	5½	51.586	...
	Pecul, of 100 catties.	133	5	5⅓	...	1.4987
Cochin, Malabar.	Man, of 25 lbs. of 42½ sers.	27	2	11	...	0.3301
Coimbator, Mysore	Man, of 40 sers.	24	1	0	...	0.2923
	Palám, (of 10 pagodas.)	grs. 528½			2.936	...
	Tolá, for cotton.	7	8	0	291.666	...
Colachy, Travancore.	Man=125 paláms, of 105 grs.	18	12	13	...	0.2284
	Khandí, of 20 mans.	376	1	2	...	4.5702
Colombo, Ceylon.	Khandí or Bahar.	500	0	0	...	6.0764
	Garce, (82 cwt. 2 qrs. 16½ lbs.)	9256	8	0	...	112.4921
	Markál, dry meas.=10 sers.	galls. 2.88			...	...
	Parra, do.	„ 5.76			...	...
Comercolly, Bn.	Ser, for metals, 58 sa. wt. (other sers of 60 and 78 do.)	1	7	9	58.	(0.7160)
Coolpahar, Calp.	Ser.	3	1	6¼	120.000	(1.5000)
Cossimbázár, Bn.	Sers, of 76, 78, 80, and 82.10 tol.					
Calpí, Agra.	Ser, for sugar, metals, grain	2	1	15	82.487	(1.0310)
	Ser, for ghí.	2	6	3	92.816	(1.1602)
	Ser, for cotton.	2	6	12	94.184	(1.1773)
	Ser, for grain, wholesale.	2	7	5	95.552	(1.1944)
Dharwár, Bom.	Kachchá ser, of 72 tanks.	0	8	3⅕	20.0	(0.2488)
	Pakká ser=116 Mad. rs.	2	15	11½	116.0	(1.4488)
	Dhará, liquid measure, 12 sers.					
Dewas, Malwa.	Ser, of 80 Ujjain rupees.	1	15	10	76.866	...
	Man, of 64 sers.	137	8	2	...	1.6712
Dindor, Ahmad.	Ser, of 76 Ankusí rs.	1	13	15	72.765	(0.9096)
	Ser, of capacity, 72 tanks	2	7	6½	95.778	...
	Man, of 64 sers.	157	10	0	...	1.9136
Dungurpur.	Ser, of 52 Sálimaní rs.	1	4	0¾	48.725	(0.6090)
	Man, of 40 sers.	50	1	14	...	0.6090
Dakhan, Puna.	Ser, 72 tanks or tolás (80 Ank. rs.)	1	15	8½	76.638	...
	Man, of 12½ sers, for ghí, etc.	24	10	4⅘	...	0.2994
	Man, of 14 „ for metals.	27	9	9⅗	...	0.3353
	Pala of 12½ „ for iron, etc.	236	9	2	...	2.8749
	Man, of 48 „ for grain.	94	9	8	...	1.1494
Faifoe, Coc. Chi.	Same as in China.					
Farrukhábád, Agra.	Ser, wholesale 110 sá. wt. ? [1]	.....			110.	(1.3625)
	„ retail 94 „ ?	.....			94.	(1.1750)
	„ for spice, 82.	.....			82.	(1.0250)
Geroulí, Kalpí.	Ser, for all purposes	1	15	0¾	75.460	(0.9431)
Ghouhon, „	Ser, for wholesale	2	2	0	82.638	(1.0330)
Goa, Malabar.	Quintal, of 4 arobas.	129	5	5	...	(1.5717)
	Khandí, of 20 mans.	495	0	0	...	6.0156
Gamron, Persia.	Man, Tabrí. (Tabrízí?)	6	12	0	262.400	0.0820
	Man, Shábí (=2 Tabrízí)	13	8	0	524.800	0.1640

[1] These are marked in Kelly 11 and 14 Farrukhábád sikká weight, which must be a mistake for 110, and, probably, 94.

Place.	Denomination of Weights.	Value in English avoirdupois weight. lb.	oz.	dr.	No. of standard Tolás per ser, etc.	Value of mans, etc., in Mans and decimals.
Gamron, Persia.	Man, Copra, for provisions	7	12	0	301.440	0.0942
Hansut, Barôch.	Market ser, of 38 Baroach rs....	0	15	7	37.521	(0.4690)
	,, man, of 40 sers.....	38	9	9	...	0.4690
	Oil man, of 42 sers.....	40	8	6	...	0.4925
	Pergunna ser, of 38½ Baroach rs.	0	15	11	38.129	(0.4766)
	,, man, of 40 sers.....	39	3	10	...	(0.4768)
Haverí, Mad. Doáb.	Kachchá ser, for groceries, 23¼ rs.	0	9	9	23.242	(0.2905)
	Dhará (for selling) = 12 sers ...					
	Pakká ser, for grain (82 cub. in.)	2	6	13	94.336	(1.1792)
Haidarábád, Mad.	Ser, of 80 Haidarábád rupees.	1	15	12	77.170	(0.9646)
	Kachchá man, of 12 sers.....	23	13	0	...	0.2893
	Pakká ,, of 40 ,, ...	79	6	0	...	0.9646
	Pala, of 120 sers for selling.....	238	2	0	...	2.8938
Indor, Málwá.	Ser, of 82 Ujjain rupees.....	2	0	6¾	78.803	(1.9850)
	Man, of 20 sers (for grain).....	40	8	6	...	0.4925
	Mauní, of 12 mans	486	4	8	...	5.9096
	Man, of 40 sers, for opium, etc.	81	0	12	...	0.9849
Islámpur, Calp.	Ser (see Calpí).	2	0	12	79.600	(0.9950)
	Pakká ser.	2	0	15	80.056	(1.0007)
Jámkhair, Ahmadnagar.	Ser, commercial, of 80 Ankusí rs.	1	15	8½	76.638	(0.9580)
	,, of capacity = 72 tanks.....	2	4	14½	89.702	(1.1213)
	Man, of 64 sers ?.....	147	10	0	...	1.7941
Japan.	Pecul (same as China).....	lbs. 133⅓			...	1.6254
Jaulnah, Hyder.	Tolá, of 12 máshas.....	grs. 184.5			1.025	...
	Pakká ser, of 80 rs. for grain...	2	0	1	77.926	...
	,, man, of 40 sers.....	80	2	8	...	0.9471
	Kachchá man, of 12 sers (for ghí, liquids, etc.), measure....	24	0	12	...	0.2922
Java.	See Batavia.					
Judda, Arab.	Man, of 30 vakias.	2	3	9⅗	86.400	0.0270
	Bahar = 100 mans, or 10 frazils.	222	8	0	...	2.7039
Jumbusur, Guj.	Market ser, of 40 Baroach rs....	1	0	2½	39.270	...
	,, man, of 40 sers.	40	6	4	...	0.4908
	Cotton ,, of 42 ,, ...	1	0	9	40.256	0.5153
	Pergunna ser, of 40¾ Bar. rs....	.....			40.000	(0.5000)
Jungypur, Ben.	Ser, of 16 chhatáks.....	1	8	0½	58.408	(0.7301)
	,, liquid measure.....	c. i. 50½			...	...
Junkceylon, Is.	Bahar = 6½ Ben. fac. mans.....	485	5	5⅓	...	5.8981
Katí, Abed.	Ser of 80 Ankusí rs.....	1	15	8½	76.638	(0.9580)
	,, of capacity = 95 do.....	2	5	8	91.146	(1.1393)
Kutul, ,,	,, = 100 do.....	2	7	6½	95.778	(1.1972)
Kotá, Ajmír.	,, of 30 Kotá rs.	0	12	0	29.166	(0.3646)
	Man, of 40 sers.	30	0	0	...	0.3646
	Seyn (measure), of 864 Kotá pice.	34	2	3	...	0.4148
Kurda, Gujarát.	Ser, of 80 Ankusí rs.	1	15	8½	76.638	(0.9580)
	,, of capacity, 90 do.....	2	3	7½	86.208	(1.0776)
Kumbharia, Sur.	Man, of 40 sers, 8 pice.	37	13	10	...	0.4601
Kurod, ,,	,, ,, ,, ,, 15 ,, ...	37	15	8½	...	0.4615
Loheia, Arab.	Quintal, of 100 rottolos.	62	8	0	...	0.7596
Luckipur, Ben.	Fact. and Bz. weights of Calcutta.					
Lukhnow, Oudh.	Ser, of 100 Lukhnow rs.....	2	7	6¾	95.817	(1.1977)
Macassar, Celebes Is.	Tale, of 16 mace = 614 grains...	.....			34.111	...
	Pecul, of 100 catties	135	10	0	...	1.6483
Madras.	Pagoda weight = 52.56 grs. ...	.....			0.292	...
	Man, of 40 sers, or 8 vis.....	25	0	0	24.304	0.3038
	Khandí, of 20 mns.	500	0	0	...	6.0764
	Garce, for grain = 12.8 mns. ...	320	0	0	...	3.8888

Place.	Denomination of Weights.	Value of English avoirdupois weight. lb. oz. dr.	No. of standard Tolás per ser, etc.	Value of mans, etc. in Mans and decimals.
			Tolás.	Mans.
Madras.	Padí, oil measure = 8 olluks, or	cub. in. 9375		
	Parra, for chunám = 5 markáls..	cub. in. 3750		
	Mangelin, for pearls = 6 grains.			
	18 Mad. chows = 55 Bom. chows.			
Madurá, Carn.	Ser, of 80 Madurá pagodas	0 10 4	24.913	...
	Man, of 39.244 sers.....	25 0 0	...	0.3038
Malabar.	Palám, of 9 Pondich. rs. 1 kás...	grs. 1624	9.022	...
	Tulám, of 40 sers.....	23 3 1	...	0.2817
Malacca, Malay.	Catty, of 20 buncals, for gold....	2 0 12	79.600	...
	Pecul=100 com. catties of 16 tales	135 0 0	...	1.6407
	Bahar, of 3 peculs.....	405 0 0	...	4.9219
	Ganton, measure.	6 8 0	252.775	...
	Kip, of tin = 30 tampang.	40 11 0	...	0.4945
Malda, Ben.	Ser, of 100 sa. wt. (72 c. i.).....	2 9 0	100.	(1.2456)
	,, 96 (at Mogulbarí).....	2 7 5¾	95.665	(1.1958)
	,, 82.10 (at Jelapír).....	2 1 14	82.336	(1.0292)
	,, 80 (English bázár)	2 0 14¼	79.942	(0.9993)
Málwá, Central India.	Tolá, of 12 máshas	grs. 190	1.055	...
	Ser, of 84 Sálimsáhí rs.....	2 0 6	78.689	...
	Man, of 20 sers.....	40 7 8	...	(0.4918)
Mangalor, Mal.	Ser, of 24 Bombay rs, (42.79 grs.)	0 9 13	23.850	...
	Man, market, of 46 sers.	28 2 4	...	0.3419
	,, Company's (16 rs. heavier).	28 8 13	...	0.3469
	,, for sugar = 40 sers.	24 7 8	...	0.2973
	Ser, of capacity = 84 Bomb rs...	.....	84.000	...
Manilla, Phil. Is.	Spanish weights and Chin. pecul.			
Massuah, Red Sea.	Rottolo, of 12 vakias (4800 grs.)	0 10 15⅓	26.635	...
Masulipatam, M.	Tulám = 30 chunáms.	grs. 179.04	0.995	...
	Kachchá ser and man, as Madras.	0 11 4	27.342	(0.3418)
	Pakká man = 40 sers of 2lbs.	80 0 0	...	0.9722
	Ser, of 90 Madras pagodas.	0 9 0	21.875	(0.2734)
	,, ,, 72 ,, ,, (for metals)	0 12 0	29.165	(0.3646)
	,, ,, 96 ,, ,, (for cotton)	8 5.6	20.210	...
	Markál, grain measure, 12 sers.	galls. 3⅓		
	Garce, ,, ,, 4800 ,,	,, 1250		
Mauritius.	Ton, of sugar = 2000 French, etc.	lbs. 2160	...	26.2500
	,, ,, grain and coffee = 1400 ,,	1512 0 0	...	18.3750
	,, ,, cloves = 1000 ,,	1080 0 0	...	13.1250
	,, ,, cotton = 750 ,,	810 0 0	...	9.8437
Mocha, Arab.	Man, of 40 vakias.....	3 5 0	128.640	0.0402
	Bahar = 15 frazils, of 10 mans...	450 0 0	...	5.4687
	Teman, measure of rice.	168 0 0	...	2.0417
	Gudda, liquid measure = 2 gall.	18 0 0	...	0.2187
Moluccas.	See Amboyna and Banda.			
Mundissor, Mal.	Ser, of 92 Sálimsáhí rs.	2 3 7⅜	86.246	(1.0781)
	Man, of 15 sers (?).	34 4 4½	...	0.4042
Maiṣúr, Province.	Ser = 24 Maiṣúr rs. of 179 grs.	0 9 13	23.850	(0.2981)
Nassuk, Ahmad.	,, of 79 Ank. rs. 4 máshas ...	1 15 4½	37.030	(0.9504)
	,, ,, capacity, 99 Ank. rs. 2m.	2 7 2⅖	95.018	(1.1877)
Natal, Sumatra.	Tompong, (Benj. wt.) 20 catties	80 0 0	...	0.9722
	Catty ootan (for do. and camphor)	4 0 0	155.555	...
	Tale, for precious metals	grs. 584	3.244	...
	Sukat, grain measure=12 pakkás	cub. in. 4029	...	...
Negapatam, Car.	Ser, of 8 palams	0 9 10½	23.470	...
	Man, of 41,558 sers.	25 0 0	...	0.3038
New Hoobly, M. Doáb.	Kachchá ser = 20⅗ Mad. rs. ...	0 8 6	20.352	(0.2594)
	Pakká ser = 106½ do.	2 11 13	106.488	(1.3311)

Place.	Denomination of Weights.	Value in English avoirdupois weight.	No. of standard Tolás per ser, etc.	Value of Mans, etc., in Mans and decimals.
		lb. oz. dr.	Tolas.	Mans.
New Hoobly, Doáb	Dharà contains 13 sers.	cub. in. 1170	...	...
Nolye, Málwa.	Ser, of 80 Ujjain rs.	1 15 10	76.864	...
	Man, of 20 sers.	39 8 8	...	0.4805
Nolgund, Mad. Doáb.	Kachchá ser = 20¾ Mad. rs. ...	0 8 8½	20.736	(0.2592)
	Pakká ser = 110¼ M. rs. 96.6 c.i.	2 13 5½	110.210	(1.3776)
Okalesur, in Baroch.	Ser, of 38 Baroch rs.	0 15 6⅝	37.483	...
	Man, of 40 sers	38 8 13	...	0.4685
	Pergunna ser, 39¾ Br. rs.	1 0 2¾	39.306	(0.3913)
	Man, 40 sers.	40 6 13	...	0.3912
Omutwara, Mál.	Ser, of 81 Salimsáhí rs.	1 15 3¾	75.916	(0.9489)
	Man, of 28 sers.	54 10 8	...	0.6642
Onor, in Canára.	Man, of 40 to 44 sers.	25 0 0	...	0.3038
	Háne, grain measure.	cub. in. 87¾	...	...
Ujjain, Málwa.	Ser, of 80 Ujjain rs.	1 15 10	16.866	(0.9608)
	Man, of 16⅝ sers.	33 5 13	...	0.4054
	Mání, of 12 mans	400 5 12	...	4.8655
Paichal, Súrat.	Man, of 48 sers, 8 pice Súrat. ...	45 4 0	...	0.5469
Palamkota, Carnátic.	Tulám, of 100 paláms, (½ a mn.)	12 8 0	...	0.1519
	Paḍi, for metals.	4 15 0	192.014	0.0600
	Marakkál, retail = 1 1/6 gall. reven.	galls. 5/32	...	...
Palimbang, Sum.	Catty, of 10 tales	grs. 9494	52.744	...
	Bally, of 10 gantangs	81 6 0	..	0.9888
Palloda, Ahmad.	Ser, of 78 Ank. rs. 10½ máshas.	1 15 2	75.651	(0.9456)
	„ of capacity, 103½ Ank. rs.	2 8 13	99.195	...
	Man, „ of 64 sers	163 4 0	...	1.9839
Pandrí, Kalpí.	Ser.	2 11 12	106.340	(1.3292)
Panwarí, „	„	2 2 2	82.943	(1.0368)
Parnair, Ahmad.	„ of 76½ Ankusí rs.	1 14 2½	73.296	(0.9162)
	„ of capacity, 95 rs. 7 m. ...	2 5 2	90.233	(1.1279)
Patna, Bihár.	Tolá, of 12 máshas.	grs. 209	1.161	...
	Ser, from 45 to 81 sá. wt.	.....	80.	1.000
Pegu, Birma.	Tical, 100 to the vis.	grs. 237½	1.368	...
	Khandí, 150 vis, reckoned at ...	600 0 0	...	6.0764
	Basket, rice measure, 16 vis. ...	58 0 0	...	0.7048
Persia.	Man of Shíráz = 600 miscals....	12 10 14.4	493.172	0.1541
	Man of Tabríz, 300 do. 150 dirhs.	6 5 7.2	246.530	0.0770
	Artaba, corn measure, 2 bushels			
Pratápgarh, Ajmír.	Ser, of 80 Sálimsáhí rs.	1 14 13½	74.967	...
	Man, of 20 sers.	38 8 14	...	0.4686
Pondicherry, Car.	Ser, of 24 3/4 Pon. rs = 731¼ fan.	0 9 11½	23.622	...
	Man, of 8 vis.	25 14 5½	...	0.3146
	Garce of grain, = 100 markáls.	qurs. 13½		
Penang.	Malay pecul, of 100 catties. ...	142 10 10 2/3	...	1.7338
	Bahar, of 3 peculs. ..	428 0 0	...	5.2013
	Gantang measure, = 4 chupahs	cub. in 27.165	...	...
Puna.	See Dakhan.			
Quilon, Trav.	Olunda, or old Dutch pound ...	1 1 8	42.535	...
	Man, of 25 old Dutch pound.	27 5 8	...	0.3225
	Tulám, of 100 pal. for cotton.	16 11 5.6	...	0.2029
	„ for spices.	15 9 7.3	...	0.1894
Radnagor, Ben.	Sers of 62, 64, and 80 sá. wt.	.....	80.	1.000
	Bágí, for paḍí = 5 sers of 62 ...	.....	310.	(0.7750)
Rahorí, Ahmad.	Ser, of weight = 77 Ank. rs....	1 14 5 3/4	73.790	(0.9223)
	„ of capacity = 115½ do. ...	2 13 8 1/3	110.666	(1.3833)
Rangoon.	Vis of 100 tikals.	3 5 5 1/5	140.	...
	Khandí, of 150 vis, reckoned....	550 0 0	...	6.0764
	Ten, or basket of rice = 16 vis.	58 4 0	...	0.7078

Places.	Denomination of Weights.	Value of English avoirdupois weight. lb.	oz.	dr.	No. of standard Tolás, per ser, etc.	Value of Mans, etc., in Mans and decimals.
					Tolás.	Mans.
Rámbharí, Ahmadnagar.	Ser, of 74 Ankusí rs.	1	13	$2\frac{3}{4}$	70.901	(0.8863)
	,, of capacity, 102 do.	2	8	$3\frac{1}{64}$	97.750	...
	Man, of 64 sers	160	13	8	...	1.9548
Rungypur, Ben.	Sers, of 60, 65, 73, 80, 90, and 460 tolás; the standard ser ...	.....			80.	1.000
Rutlam, Málwa.	,, of 84 Sálimsáhí rs.	2	0	6	78.689	...
	Man, of 20 sers.	40	7	8	...	0.4918
Salangor, Maly.	Bahar, of 240 catties	324	0	0	...	3.9374
Sankarídrúg, Carnatic.	Ser, of 8 paláms for provisions.	0	9	12	23.698	...
	Man, of 41.256 sers.	25	0	0	...	0.3038
Santipur, Ben.	Sers, of 60, 80, 84, and 96 tolás; also factory weights. ...	.....			80.	1.000
Seringapatam.	Kachchá ser, of 24 sultání rs.	0	9	$11\frac{1}{3}$	23.596	...
	,, man, of 40 sers.	24	4	8	...	0.2950
	Pakká ser, of grain; 84 Sul. rs.	2	1	$15\frac{3}{4}$	82.601	...
	,, kolaga = 16 sers	33	15	12	...	0.4130
Siam.	Pecul = 50 catties of 20 tales...	129	0	0	...	1.5677
Singapore, Malay.	Buncal, for gold	grs. 832			4.622	...
	Pecul, of 100 catties, (see China)					
Sinkell, Sumatra.	Tompong, of 20 cats. for Benzoin	3	8	0	36.110	...
	Pecul, etc. as in China.					
Súlú, Sunda.	,, as in China.					
Sunamukí, Bl.	Sers, of 58, 10, 60, 72, $73\frac{1}{4}$, 75, and 82.10 tolás; stand. ser.	.....			80.	1.0000
Suez, Red Sea.	Rottolo, of 144 drams.	1	4	0	48.610	...
	Quintal varies from 110 to 150 rot					
Súrat, Gujarát.	Tolá, of 12 máshas	grs. 187.2			1.040	...
	Ser, of 35 tolás	0	15	0	36.458	(0.4557)
	Man, of 40 sers.	37	8	0	...	0.4558
Tellicherry, in Malabar.	Ser, of 20 Súrat rupees.	0	8	$2\frac{2}{25}$	19.849	(0.2481)
	Man, of 64 sers.	32	11	0	...	0.3972
Ternate, Molucc.	Pecul, of 100 catties.	130	3	8.3	...	1.5826
Tranquebar, Cor.	Man, = 68 lbs Danish.....	74	12	9.6	...	0.9088
Travancor, M.	Tulám, of 20 pounds	19	14	11	...	0.2420
	Khandí (30 tuláms), for purchase	597	8	10	...	7.2618
	,, (20 mans), for sale.....	500	8	2	...	6.0826
	Parra, grain measure	qrts. 2			...	...
Trichinopoly, Carnatic.	Pakká ser, = 27 tuláms.....	1	14	8	74.132	...
	Man, = 13.114 sers.....	25	0	0	...	0.3038
	Ser, for metals = 4167.7 grs. ...	0	9	$8\frac{1}{2}$	23.167	(0.2896)
	Marakkál, gr. measure, $1\frac{1}{8}$ gall.					
Trincomalí.	See Colombo.					
Vellor.	See Arcot.					
Vizagapatam.	See Masulipatam.					
Wallahjábád.	See Arcot.					

LINEAR MEASURES.

Notwithstanding the boast of Abú-'l-Fazl, that, among other beneficial effects of Akbar's administration, he had fixed one standard of linear measure for the whole of India, we find at the present day as great irregularity in this branch of our subject, as could have prevailed in his day, or rather much greater; on account of the semi-introduction of European measures in the British Indian territories, and in the Dutch and Portuguese settlements before them.

There is this peculiarity in the linear systems—that the basis of all is the same, the cubit or human fore-arm: and this unit is found in Oriental countries, as in those of the West, divided into two spans, and 24 finger's-breadths. Thus, under the Hindú princes, the *háth* (in Sanskrit *hasta*) was equal to two *vitesti* or 'spans,' and to 24 *anguls* (*angula*). The *angul* 'finger' is divided into 8 *jau* (s. *yava*) or 'barley-corns.'

The subdivisions of the *yava*—proceeding downwards to the *paramánus*, or 'most minute atom,' according to the arithmetical works of the Hindús—are, of course, theoretical refinements which it is unnecessary to notice: a full account will be found in Colebrooke's treatise in the 'Asiatic Researches:' [epitomised above, vol. i. page 211]. Proceeding upwards, four *háths* or 'cubits' are equal to a *danda*, or 'staff:' and 2000 *dandas* make a *krosa*, or *kos*, which should be, by this estimation, 4000 yards English, or nearly $2\frac{1}{4}$ miles. The kos is generally for convenience now called equal to two English miles. Four *krosa* = one *yojana*, nearly ten miles. The 'Lílávatí' also states that 10 *háths* make one *bans* or 'bamboo,' and 20 *bans* in length and breadth = 1 *niranga* of arable land.

That the cubit was of the natural dimensions (of 18 inches, more or less) can hardly be doubted; indeed, where the *háth* is talked of, to this day, among the natives, the natural human measure is both understood and practically used, as in taking the draft of water of a boat, etc. In many places also, both in Bengal and in South India, the English cubit has been adopted as of the same value as the native measure.

The *gaz*, or yard, now in more general use throughout India, is of Muhammadan introduction: whether this is derived also from the cubit (for the Jewish cubit is of the same length) is doubtful; but, like the *hasta*, it was divided into 24 *tasús*, or 'digits,' corresponding more properly to inches.

Abú-'l-Fazl, in the 'Ayín-i Akbarí,' gives a very full description of the various gaz in use under the emperors, as compared with the earlier

standards of the Khalífs. He expresses their correct length in finger's-breadths, which may be safely taken as three-quarters of an inch each.

For facility of reference, his list is here subjoined, with the equivalents in English measure at this rate :—

ANCIENT GAZ MEASURES ENUMERATED IN THE 'AYÍN-I AKBARÍ.'

		English.
The Gaz-saudá of Hárún-al-Rashíd = 24⅔ (some MSS. have 25⅔) fingers of an Abyssinian slave, the same used in the Nilometer of Egypt[1]	=	18½ in.
The Ḳasbah gaz, of Ibn Abílílah = 24 fingers	=	18 ,,
The Yúsufí gaz, of Baghdád = 25 ,,	=	18¾ ,,
The small Hashamah gaz[2] of Abú Músa Asharí = 28½ fingers	=	21¼ ,,
The long ,, ,, ,, Mansúr 'Abbás = 29⅔ ,,	=	22¼ ,,
The Umríah gaz of the Khalif Umr = 31 ,,	=	23¼ ,,
The Mámúníah gaz of Mámún 'Abbásí = 69½ ,,	=	52⅛ ,,
The gaz Masáhat = 28 ,,	=	21 ,,
Sikandar Lodí's gaz of 41½ silver Sikandarís'[3] diameter, modified by Humáyún to 43 ,, = 32 ,,	=	26 ,,

This was used in land measurements till the 31st year of Akbar.

[1] The cubit of the Nilometer is supposed to be the same as that of the Jews, which is exactly two feet English :—if so, the 24 digits will be, precisely, inches. Volney, however, makes it 20½ French, or 22 English inches. Some allowance must probably be made for the broad hand of a negro, but the other measures will not be affected by the same error, as they must be referred to the ordinary delicate hand of a native of Asia.

[2] These two are also called the Gaz Mullik and Gaz Ziádiah, because Ziád, the adopted son of Abú Sofián, made use of them for measuring the Arabian Irak.

[3] [Abú-'l-Fazl, in noticing the various descriptions of yard-measures introduced at different times into Hindústán, makes incidental mention of certain coins designated Sikandarís—upon the basis of a given number of the diameters of which the Gaz of Sikandar Lodí was formed. The class of money described ('Num. Chron.'), evidently furnished, among their other uses, the data for this singularly-defined measure. Any tyro in Indian numismatology, under whose eye many specimens of this mintage may chance to pass, cannot fail to remark that, imperfect as their configuration undoubtedly is, as compared with our modern machine-struck money, yet that they hold a high place among their fellows in respect to their improved circularity of form, and general uniformity of diameter—points which had certainly been less regarded in the earlier produce of the Dihlí mints.

The passage alluded to is to the following effect :—

سلطان سکندر لودي در هندوستان نيز کزي در ميان آورد و آنرا چهل و يک‌ونيم اسکندري اندازه کرفت و آن مسين نقديست کرد نقره‌اميز جنت اشيانے نيم ديکر افزود بچهل و دو قرار کرفت [a]

With a view to make these coins, even at the present day, contribute towards our knowledge of the true length of this Gaz—which is still a *vexata quæstio*, I have carefully measured a set of 42 of these pieces, arranged in one continuous line : the result arrived at is, that the completion of the 30th inch of our measure falls exactly opposite the centre of the 42nd coin.

The specimens selected for trial have not been picked, beyond the rejection of five

[a] [Page ۱۷۲ Sir H. M. Elliot's MS. copy of the 'Ayín-i Akbarí.' See also p. 355, vol. i., Gladwin's translation.]

		English.
The Akbarí gaz, for cloth measure	= 46 fingers	= 34½ in.
The Iláhí gaz, established by Akbar, as the sole standard measure of the empire	= 40 „	= 30¾ „ [1]

The Akbarí bíghá, of 3600 square gaz = 2600 square yards = 0.538, or somewhat more than half an acre, on the above estimation.

The Iláhí gaz of Akbar was intended to supersede the multiplicity of measures in use in the 16th century; and, in a great degree, it still maintains its position as the standard of the Upper Provinces. In general, however, different measures are employed in each trade, and the cloth-merchant, in particular, has a distinct gaz of his own. Thus the cloth gaz has assimilated in many places to two háths, or one yard; and the frequent employment of English tape-measures, as well as carpenter's two-feet rules, will ere long confirm the adoption of the British standard to the exclusion of the native system, for the linear measure of articles in the bázár.

The true length of the Iláhí gaz became a subject of zealous investigation by Mr. Newnham, Collector of Farrukhábád, and Major Hodgson, Surveyor-General, in the year 1824, during the progress of the great revenue survey of the Western Provinces, when it was found to be the basis of all the records of land measurements and rents of Upper India. As might have been expected, no data could be found for fixing the standard of Akbar with perfect accuracy; but every comparison concurred in placing it between the limits of 30 and 35 English inches; and the great majority of actual measures of land in Rohilkhand, Dihlí, A'gra, etc., brought it nearly to an average of 33 inches. Mr. Duncan, in the settlement of the Benáres province in 1795, has assumed 33.6 inches to the Iláhí gaz, on the authority, it may be presumed, of standards in existence in the city, making the bíghá = 3136 square yards.

The results of the different modes of determination resorted to in 1824-5, so characteristic of the rude but ingenious contrivances of the natives, are curious and worthy of being recorded. Maj. Hodgson made the length of the Iláhí gaz—

very palpably worn pieces out of the total 48 of Mr. Bayley's coins, which were placed at my disposal.

The return now obtained I should be disposed to look upon as a little below the original standard, notwithstanding that it slightly differs from the determination of the measure put forth by Prinsep; but I must add that Prinsep himself distrusted his own materials, and was evidently prepared to admit a higher rate than he entered in his leading table.—E. T.]

[1] Should the length of this gaz be taken at 32 or 33 inches, proportionate corrections must be made in the other measures.

From the average measurement of 76 man's finger's-breadths..... = 31.55 in.
From the average size of the marble slabs in the pavement of the Táj at Agra (said to be each a Sháh-jahání gaz of 42 fingers ?)..... = 33.58 „
From the side of the reservoir at the same place, called 24 gaz ..... = 32.54 „
From the circuit of the whole terrace, 532 gaz (?) ..... = 35.80 „

Mr. Newnham, from the average size of 14 Chár-yárí rupees, supposed to be each one finger's-breadth, makes it ..... = 29.20 „
From the testimony of inhabitants of Farrukhábád..... = 31.50 „
From statement in the 'Ayín-i Akbarí,' of the weight of the cubic gaz of 72 kinds of timber (this would require a knowledge of the weights)

Halhed, from average measurement of 246 barley-corns ..... = 31.84 „
From ½ sum of diameters of 40 Mansúrí pice ..... = 32.02 „
From ⅓ of 4 human cubits measured on a string ..... = 33.70 „
From average of copper wires returned by Tahsíldárs of Murádábád as counterparts of the actual measures from which their bíghás were formed .... = 33.50 „

Mr. Duncan, as above noticed, assumed the Iláhí gaz at Benáres ..... = 33.60 „
In Bareli, Bulandshahr, Agra, as in the following table, it is ..... = 32.5 „

It is natural to suppose that the gaz adopted for measuring the land should vary on the side of excess, and probably all the above, thus derived, are too long. The Western Revenue Board, thinking so many discrepancies irreconcilable, suggested that the settlements should everywhere be made in the local bíghá, the surveyors merely noting the actual value of the Iláhí gaz in each village, and entering the measurement also in acres; but the Government wisely determined rather to select a general standard, which should meet as far as possible the existing circumstances of the country. Thus the further prosecution of the theoretical question was abandoned, and an arbitrary value of the Iláhí gaz was assumed at 33 inches, which was in 1825-6 ordered to be introduced in all the revenue-survey records, with a note of the local variation therefrom on the village maps, as well as a memorandum of the measure, in English acres. Mr. Holt Mackenzie thus describes the convenience which the adoption of this standard (sanctioned at first only as an experiment and liable to reconsideration) would afford in comparisons with English measures:—

'Taking the jureeb (side of the square beegh,a) at 60 guntehs, or 60 guz, the beeg,ha will be 3600 square guz, or 3025 square yards, or five-eighths of an English acre (3 roods, 5 perches). The jureeb will be equal to 5 chains of 11 yards, each chain being 4 guntehs. In those places where the jureeb is assumed at 54 gaz square, it would equal 4½ chains, giving 2450¼ square yards (or 2 roods, 10 perches). In either case the conversion from one to another would be simple, and the connection between the operations of the surveyors and the measurements of the revenue officers would be easily perceived.'

This convenient bíghá of 3600 square Iláhí gaz, or 3025 square yards, or five-eighths of an acre, may be now called the standard of the Upper Provinces. It is established also at Patna, and has been introduced in the settlements of the Ságar and Narbadda territories.

The notice of land measurement seems altogether to have been overlooked in the returns from the Bengal revenue officers, to the Hon. Court's circular; so that, with the exception of the facts gleaned from the official correspondence above alluded to, and other information hastily acquired from private sources, the present table exhibits nearly a blank in regard to the bíghás of Bengal Proper, Bihár, Cuttack, and Central India. Rennell's general estimate of the area of Bengal in bíghás of 1600 square yards merely followed the measure in use at Calcutta. The permanent settlement in these provinces left the land unmeasured, and obviated the necessity of an actual survey. In general terms, however, the bíghá of the Bengal provinces may be assumed at 1600 square yards, or about one-third of the English acre, and a little more than half of the up-country bíghá.

In Madras, Sir T. Munro established a measure (called ground or *máni*) of 60 × 40, or 2400 square feet, of which 24 make a *káni* = 57600 square feet, = 6400 square yards, or exactly four Bengal bíghás. The Madras *káni* is to the English acre as 1 to 1.3223, or as 121 to 160 nearly. In the jágír, the *adi* or Malabar foot is used, which is 10.46 inches; 24 *adis* = 1 *káli*, and 100 square *kális* = 1 *káni*, or nearly an English acre. The common *káli*, however, is 26 adies, or $22\frac{2}{3}$ feet, which makes the *káni* = 1 acre, $28\frac{3}{4}$ perches.

Of the land measures of the Bombay Presidency, Kelly's tables are altogether silent; but as the cubit and gaz are stated to correspond with 18 and 27 inches respectively, doubtless the square measure has also been brought to agree with some aliquot or multiple of the English acre.

It is much to be regretted that the information on this most important point should have proved so defective; but in justification of the officers to whom the Court's circular was addressed, it should be stated that the draft of instructions did not specifically allude to square measures, merely directing that 'for measures of length, one that is nearest to the cubit or ell, should be selected as the model to be sent home.'

TABLE *of Linear and Square Measures of India.*

Place.	Denomination.	Value in English meas.
Agra, Presidency	Standard Ilâhí gaz, assumed at	33 inches.
	Standard bíghá of Western Provinces = 60 × 60 gaz = 3600 gaz	3025 sq. yds. ($\frac{5}{8}$ acres).
	Local gaz varies from 32.8 to 33.25 av.	32.625 inches.
Ahmadábád	Gaz, for cloth	27.75 ,,
	,, ,, velvet	34.25 ,,
	,, ,, artificers	23.33 ,,
Ahmadnagar	Háth of 14 tasús	14.00 ,,
	Gaz, of 1¾ háth	24.50 ,,
Alligarh	,, from 30.5 to 33.4	33.00 ,,
Molucca	Covid, or cubit	18.13 ,,
Ahmod	Gaz	27.12 ,,
Anjar	,, of 34 tasús	26.40 ,,
Aurungabander	,, ,, 16 garce	32.00 ,,
Bagulkota	,, ,, 24 tasús	32.87 ,,
Bangalor	Háth = 19.1 inches	38.90 ,,
Bantam	Hasta	18.00 ,,
Bareli	Gaz, from 32.0 to 33.4	32.90 ,,
Baroda	,, of 24 tasús	27.12 ,,
Batavia	Ell = 27¾ inches, Foot =	12.36 ,,
Bauleah	Cubit (or háth)	18. ,,
Benáres	Gaz, tailor's	33. ,,
	,, weaver's	42.5 ,,
	,, cloth-merchant's	37.5 ,,
	,, architect's (maimárí)	25.33 ,,
	Bíghá, by Reg. II., 1795	3136 square yards.
Bencoolen	Hailoh, or two cubits	36 inches.
Betelfakí	Gaz	27 ,,
Bombay	Háth = 18 inches; the gaz =	27 ,,
Bulandshahr	Gaz (originally 33)	31.75 ,,
Baroch	Zil'a gaz	27.25 ,,
	Wusa	89.6 square inches.
	Bighá = 20 wusa	2 roods, 20 perches.
Bushire	Half gaz, Sháhí	20 inches.
	,, ,, Bushírí	18.4 ,,
Basrah	Aleppo yard	26.4 ,,
	Baghdád	31.6 ,,
Calcutta	Bighá = 20 kaṭṭhá of 16 chhaṭáks	1600 square yards.
	Kaṭṭhá	720 sq. feet = 80 sq. yds.
	Chhaṭák	45 ,, ,, = 5 ,, ,,
Calicut	Gaz	28.6 inches.
Kalpí	,, = 16 girás	40 ,,
Cambay	,,	28 ,,
	Morgen of 600 square roods	2 English acres.
China	Mathematical foot	13.12 inches.
	Builder's ,,	12.7 ,,
	Tailor's ,,	13.33 ,,
	200 lís = 1 degree	69.166 miles.
Chittagong	Nal, or bamboo, of 8 háths =	12 feet.
(Mug land measures)	Ganda, of 4 kaurís = 2 × 3 nals =	96 sq. yds.
	Kání = 20 gandas = 12 × 10 nals =	1920 sq. yds.
	Dun = 16 kánís	30720 sq. yds. or 6.35 acres.
	Sháhí measures, 4 times greater	Seldom used now.
Kásimbazar	Háth	19.12 inches.
Dharwár	Háth, for cotton cloths	19.36 ,,
	Gaz	32.75 ,,
Dihlí	Average bíghá	2500 sq. yds.
Etáwa	Gaz from 32 to 33	32.50 inches.
Farrukhábád	Cloth gaz = 12 muts (palms) = 48 angul	36 ,,
	Háth, or cubit = 24 angul or fingers	18 ,,
	Land gaz 10½ muts or 42 fingers = 14 girás on cloth, g. of 16	31½ ,,

Place.	Denomination.	Value in English meas.
Farrukhábád ...	Bighá, of 20 bíswa = 36.00 Iláhí gaz...	2756¼ square yards.
Goa	Portuguese Covado	26.66 inches.
Gamron	Gaz, 93 = 100 English yards	38.7 ,,
Hansut	,, of 24 tasús	27.12 ,,
Hávarí.....	,, ,, ,, ,, ...	34.75 ,,
Haidarábád.....	Cloth measure	35.33 ,,
Japan	Inc.....	75.00 ,,
Jaulná	Gaz	33.6 ,,
Jambusur.....	,, ...	27.12 ,,
Jungle Mahals	Bighá, 80 × 80 háths	1600 square yards nearly.
Bancura	Gaz, of two háths = ...	36 inches nearly.
Loheia	Peek.....	27.0 inches.
Madras	Máni, 60 × 40 feet	2400 square feet.
	Káni = 24 máni	1.3223 acres.
Malabar	Foot	10.46 inches.
Malacca	Kovid.....	18.12 ,,
Málwa	Gaz (from 28 to 32).....	30.00 ,,
	Bighá, of 20 wusas	2 roods nearly.
Massuah	Peek	27.0 inches.
Masulipatam ...	Yard	38.25 ,,
Meerut.....	Land gaz	33.00 ,,
Mocha	Kobid = 19 inches. Gaz	25. ,,
Murádábád.....	Gaz, from 31.6 to 35.8.....	33.50 ,,
	Jaríb = 20 gaṭhás of 3 gaz	167.5 feet.
	Bighá = 18 × 18 = 324 square gaṭhás ...	2304 square yards.
New Hoobly ...	Gaz	31.75 inches.
Noulgund	Gaz	33. ,,
Palamkota	Gajum, for cloth	36.45 ,,
Pandrí	Gaz	40.75 ,,
Panwarí	,, ...	36.37 ,,
Patna	,, for carpets, etc. (iláhí) of 44 fingers	33. ,,
	,, for broad cloth	42.5 ,,
	Jaríb, 20 bamboos of 3 gaz.....	55 yards.
	Bighá, 20 × kaṭṭhás or bamboos	3025 square yards.
Persia	Guerze, royal	37.5 inches.
	Common measure.....	25.0 ,,
	Parasang, 20th of a degree at the equator	
Rangoon	Taong, or cubit	19.1 ,,
	Taing, or 1000 dhas.....	2 miles, 293⅔ yards.
Rangípur.....	Gaz, for báfta cloths.....	63 inches.
Seringapatam ...	Gajah	38.5 ,,
Siam	Vouah (2000 = 1 league).....	75.75 ,,
Sunamuky	Corah, used at the factory	52.4 ,,
Súrat	Gaz, builder's	27.6 ,,
Saidábád.....	Gaz, land, 31.3 to 32.7	32.0 ,,
Tellicherry	Gaz	28.4 ,,
Tirhút.....	Revenue lagí, of 6½ háths = ...	9 feet 9 inches.
	Bighás, 20 × 20 lagís = ...	4900 square yards.
	Small lagí, or rod, 6¼ háths = ...	9 feet 4½ inches.
	Bighá, 20 × 20 ditto = ...	3906¼ square yards.
	(In Champaran and Chaprá, the lagí or rod is of 7 háths).	
Travancor	Tuda, for timber	20.46 cubic inches.
	Mura, of stone-cutters.....	33.02 inches.
	Kolu, in agriculture.....	21.16 feet.
Ságar	Standard bighá introduced	(See A'gra).

At most of the places omitted in the above table, such as Acheen, Arcot, Belárí, Carwar, Ceylon, Cochin, Comercolly, Jangípur, Bengal generally, Penang, Radnagor, Santipur, etc.; English measures alone are used, or at least a cubit founded on the English measure of 18 inches.

[The following notes are extracted from Elliot's 'Glossary,' already put under contribution (page 92):—

"The Biswa, from بیس 'twenty,' is the twentieth part of a 'Beeg,ha;' and besides being a measure of land, is also used to signify the extent of proprietary right in an estate. Each estate or village is considered an integer of one 'Beeg,ha,' which is subdivided into imaginary Biswas and Biswansees, to show the right of any particular party. Thus, the holder of 5 Biswas is a holder to the extent of one-fourth of the entire village; precisely in the same way as the *As* was used amongst the Romans. Thus, *heres ex sumuncia*, 'heir to one twenty-fourth'—*heres ex dodrante*, 'heir to three-fourths'—*heres ex asse*, 'sole proprietor.' (Cic. Att. iv. 15, vii. 8.—Cic. pro Cæcina, c. 6.—Plin. l. v. Ep. 5.) In the same manner *bes*, *bessis*, was used to express a *biswa burar*—'socius ex besse'—and thus in sound and meaning (of course there is no real connection) there is a close resemblance between the words. *Bes*, when it was thus applied as a sub-division of the *As*, was the eighth part of a *Jugerum* or acre; not, as is usually supposed, two-thirds.—'Partes duæ tertiæ pedes decem novem millia et ducentos hoc est *bes*, in quo scripula excii.' (Colum. lib. v. cap. 2).

"Coss, کوس कोस kos. The itinerary measure of India, of which the precise value has been much disputed, chiefly on account of the difficulties which attend the determination of the exact length of the Guz, or yard. The 'Ayeen-i-Akberee' lays down distinctly that the Coss consists of 100 cords (*tunab*), each cord of 50 Guz; also of 400 poles (*ban*), each of 12½ Guz: either of which will give to the Coss the length of 5,000 Guz. The following particulars relative to the distances between the old Minars, or Coss pillars, may be interesting, and may be considered to afford the correctest means we have of ascertaining the true standard.

	Road distance in English yards.	Direct distance in ditto.
Octagonal Minar to Nurelah in Delhi	4,513	4,489
Minar between Nurelah and Shapoorgurhee	4,554	4,401
Minar opposite Aleepoor	4,532	4,379
Minar opposite Siruspoor	4,579	4,573
Ruins of Minar opposite to Shalimar	4,610	4,591
Average...	4,558	4,487

Length of the Coss = 2 miles, 4 furlongs, 158 yards.

It is important to observe that the length of the Ilahee Guz deduced from these measurements is 32 $\frac{818}{1000}$ inches, showing how very nearly correct is the length of 33 inches assumed by the British Government. The measurements taken to the south of Delhi, between the Minars in the Muttra district, closely correspond. Out of twelve distances it is found that eight give 2 m. 4 f. 19 p. 1 y., three give 2 m. 4 f. 25 p. 3 y., and one gives 2 m. 4 f. 38 p. 2 y. It may be proper to remark that it is frequently supposed that the Minars are set up every two Coss, and that the Coss contained 2,500 yards; but the 'Ayeen-i-Akberee' appears sufficiently explicit on the point. The same work gives the values of the local Coss. It says, 'the Guzerat Coss is the greatest distance at which the ordinary lowing of a cow can be heard, which is determined to be 50 Jureebs, or 15,000 Guz.' This Coss resembles the Chinese *lih*, *i. e.* the distance which can be attained by a man's voice exerted in a plain surface, and in calm weather. Another in Bengal is estimated by plucking a green leaf, and walking with it till it is dry. Another is measured by a hundred steps made by a woman carrying a jar of water on her head, and a child in her arms. All these are very indefinite standards. The same may be remarked of the oriental Meel, as well as the European mile, and league. The two former evidently derive their name from the Roman *Milliare*, and the difference of their value in different places proves that the mere name was borrowed, without any reference to its etymological signification. According to the 'Kamoos,' the oriental Meel is a lax and vague measure, but it has been considered by Dr. Lee to be to the English one, as 139 to 112. The league also, from the German *lugen*, 'to see,' (signifying the distance that can be readily seen by the eye on a plain surface) is as indefinite as a Guzerat, or Gao, and a Bengal, or Dhuppea, Coss, and sufficiently accounts for its varying

standard in Europe. Coss is an Indian word: the equivalent word in Persian is Kuroh, the same as the Sanscrit Krosa, of which four go to the Yojan; about the precise value of which different opinions are held. Bopp ('Nalus,' p. 213) says it is equal to eight English miles. Professor Wilson ('Sanscrit Dictionary,' p. 689) estimates it at nine miles, and says other computations make it about five miles, or even no more than four miles and a half, and, in his commentary on the Chinese travels, estimates it at no higher than four. But these travels enable us to fix the distance with tolerable precision. By following Fa-Hian's route between places of which the identity is beyond question, as between Muttra and Canouje, and between Patna and Benares, we find the Yojan in his time to be as nearly as possible seven English miles; and this agrees much better with what we find the Yojan to be, if we resolve it into its component parts. Eight barley-corns equal a finger, twenty-four fingers equal a Dund, one thousand Dunds equal one Krosa, and four Krosa, one Yojan. Now, estimating the finger's breadth at eight barley-corns, this makes the Yojan equal to six miles, one hundred and six yards, and two feet. It is the generally received opinion that from Coss is derived the word 'course,' used by the European residents of India to represent a promenade, but the 'Corso' of Southern Europe gives a much more probable origin.

"JUREEB' جريب जरीब jarîb. A measuring chain, or rope. Before Akber's time it was a rope. He directed it should be made of bamboo with iron joints, as the rope was subject to the influence of the weather. In our survey measurements we use a chain. A Jureeb contains 60 Guz, or 20 Gut,has, and, in the standard measurement of the Upper Provinces, is equal to five chains of 11 yards, each chain being equal to 4 Gut,has. A square of one Jureeb is a Beeg,ha. Till the new system of survey was established, it was usual to measure lands paying revenue to Government with only 18 knots of the Jureeb, which was effected by bringing two knots over the shoulder of the measurer to his waist. Rent-free land was measured with the entire Jureeb of 20 knots. A Jureeb, in Hebrew and Arabic, signified originally only a measure of capacity, equal to 4 Qufeez, or 384 Mud[1] (Latin, *modius*), and in course of time came to signify the portion of land which required as much to sow it as a Jureeb would contain.—(Asasu-l-Loghat). The Pat,ha and Nalee of Gurhwal and Kumaon have a similar origin.

"DHONCHA, دهونچا धौंचा dhonchâ. Four and a half. The word is found in Arithmetical Tables of the Multiplication of Fractions, which are in constant use with our Surveying Ameens, when reducing their linear measurements to Beeg,has. The words used by them in Fractional Multiplication are

Deorha,	डेवढा	ڈیوڑھا	1½
Dhuma,	धमा	دھما	2½
Honta,	होंटा	ہونٹا	3½
Dhoncha,	धौंचा	دھونچا	4½
Poncha,	पौंचा	پونچا	5½
K,honcha,	खौंचा	کھونچا	6½
Sutoncha,	सतौंचा	ستونچا	7½

The size of the fields rarely requires Ameens to go beyond this."]

[1] [These words are both retained in the Spanish *cafiz* and *almud*. Indeed, nearly all the Spanish weights and measures are, like very many administrative words, derived from the Arabic:—As the *quintal* of one hundred pounds, from *kintur*: of which the fourth (*rôôba*) is the *arroba*; *arralde*, a pound, from *arrattl*; *xeme*, a span, from *shamah*; and so on.—'Al Makkari,' i., p. 500.]

INDIAN

CHRONOLOGICAL TABLES.

The object of the present division of our work is to furnish—first, convenient Tables for the Reduction or Comparison of the various Eras in use throughout India; secondly, Tables of Ancient and Modern Dynasties, extracted from such sources as are available for India and the neighbouring countries. There are so many excellent works on these subjects as to leave us nothing more than the task of compilation or rather selection. For information regarding the astronomical and chronological computations of the Hindús, Colebrooke, Bentley, and Warren are the principal authorites. The 'Kála-Sankalita' of the latter author contains the fullest particulars of all the Eras in use. It is from this work that the present tables have been principally taken, with such abridgment as was necessary to bring them within the compass of an octavo volume. Col. Warren's tables of the Hijra being in a less convenient form, we had remodelled them before it came to our knowledge that a complete series for every month of the Muhammadan era, down to A.D. 1900, had been published in Calcutta, forty-four years ago, in 1790. These tables have, however, been long out of print. Playfair's Chronology, in folio, contains also a supplemental table of the Hijra calendar, copied from the celebrated French work, 'L'Art de vérifier les Dates.' There are occasional differences of a day in all tables of the Hijra.

A compendious account of some of the Indian eras was printed as a part of the 'Companion to the Almanac' published by the Society for the Diffusion of Useful Knowledge, for the year 1830. The whole article, however, on the eras of ancient and modern times, is calculated to be of such great utility in this country, both to Europeans who are out of the reach of works of reference or chronology, and to native

students of European literature and history, who have no prior acquaintance with the subject, that we make no apology for reprinting the paper entire, as an introduction to the tables which follow.

THE ERAS OF ANCIENT AND MODERN TIMES, AND OF VARIOUS COUNTRIES, EXPLAINED; WITH A VIEW TO THE COMPARISON OF THEIR RESPECTIVE DATES.

In the earliest stages of society, some division of time must have been necessary, and some means devised by men in the most savage state, to communicate to each other the period of undertaking, in concert, a hunt or a predatory excursion. But in such a condition the views of men do not extend far, and very limited periods would therefore suffice. The division of day and night, and the scarcely less obvious distinction of new and full moon, might have served to mark the lapse of time for ages; and, although in all climates the alternations of summer and winter, and of wet and dry periods, must have obtruded themselves on the feelings of the most unobserving, it was probably not until the practice of agriculture had afforded men leisure for reflection, that any accurate observations were made on the duration of the seasons, or means used to ascertain the periods of their return. We see, at the present time, that many societies of men, who live only by hunting and fishing, have no exact knowledge of duration of time beyond that of a moon or season, and designate a term of five or of fifty years, equally as a long time. All agricultural nations are aware of the return of the same seasons after a lapse of twelve or thirteen moons; but many years must have elapsed before the length of a solar year was accurately determined. Less civilized nations still continue to compute their time in part by the motions of the moon; and this was the mode of the Greeks, and of the Romans until the correction of Julius Cæsar, but the subject was so little understood even in his time, that an error of several days crept into the Roman calendar soon afterwards, requiring another reformation.

It will render the comparison of eras much easier, if we give some account of what is meant by a solar and a lunar year. A solar year is that space of time during which all the seasons have their course. This takes place in 365 days, 5 hours, 48 minutes, and 49 seconds; and an approximation to that time has been adopted by those nations which have had sufficient astronomical science to determine it. But as it would be impracticable to begin every new year at a different hour of the day, which would be necessary if the perfect year should always be completed before the commencement of a new one, 365 days have been taken as the length of a year, leaving the odd hours and minutes to accumulate until they amount to a whole day, when they are added to the year, making what is called a leap year, or intercalary year, of 366 days. The various ways of doing this will be detailed when we speak of the different eras. Some nations still use a year of 365 days without any intercalation; and this is called a *vague*, or erratic year, because its commencement varies through all the different seasons.

A lunar year consists of 12 moons, or 354 days. This may be convenient enough for short periods, but is so ill adapted for the computation of a civilized nation, that none but Mahometans have continued in the use of it even for a little time. It suits the course of time so ill, that its commencement varies, in a few years, through all the seasons; and many men, amongst the nations which use it, can remember the fasts and festivals altering from summer to winter, and again from winter to summer, and their seed-time and harvest alternately wandering from the beginning of the year to the end.

The luni-solar year is that in which the months are regulated according to the course of the moon, but to which from time to time a month is added, whenever the year would range too widely from its original situation. This year is inconvenient from its varying duration; but as, in a long course of years, the months remain nearly at the same situation, it is less objectionable than the pure lunar year. It was the mode of computation of the Greeks and Romans, and is even now that of the Chinese, Tartars, Japanese, and Jews.

All these varying modes render the comparison of dates much more difficult than it appears to be at the first view. We shall endeavour so far to simplify the calculation as to enable any arithmetician to compute, within a day or two, the eras of every nation, and to reduce them to the Christian era.

THE ROMAN YEAR.

The Roman year, in its arrangement and division, is that on which our year is entirely founded. The Romans reckoned their time from the date which some of their antiquaries chose to assign for the founding of Rome, viz., the 21st of April, in the 2nd year of the 6th Olympiad, or 754 B.C. This era is designated by the letters A.U.C., or *ab urbe condita*, "from the building of the city." The first year used by them, and attributed to Romulus, consisted of ten months, from March to December, or 304 days. A year exhibiting such a discrepancy from the real course of the seasons could not have remained long in use, and it is supposed that extraordinary months were added as often as it was found necessary. A correction is attributed to his successor Numa, who is said to have added two months to the year, January at the beginning, and February at the end. All these months consisted of 29 or 31 days. The year was lunar, and consequently shorter than the true year; several additions were therefore made, which brought the beginning of the year nearly to the same season, *viz.*, the middle of winter. February subsequently became the second month, which change is alluded to by Ovid.

This computation was followed, with some variation, arising partly from ignorance, and partly from the intrigues of the priests, who had the direction of the calendar, until the time of Julius Cæsar, who, observing that the beginning of the year, instead of occurring in winter, as at first, had now receded to the autumn, ordered that the year A.U.C. 707, or 47 B.C., should consist of 445 days, whereby the following year might begin at the proper time. In order to avoid, in future, the confusion naturally attendant on years of such varied length as those hitherto in use, he determined that the year should be solar, without any reference to the lunar motions. Supposing the natural year to consist of 365 days and 6 hours, he ordered that three years in succession should each consist of 365 days, and the fourth should contain 366 days. He also allotted the respective number of days to each month, precisely as we use to this day. With the exception of July and August, (then called Quintilis and Sextilis, but altered to their present names in honour of Julius and Augustus Cæsar), the names also of the Roman months were similar to ours. The only difference between their calendar and ours was in their mode of counting days, which was backwards instead of forwards. To spare a long explanation, which perhaps might not be sufficiently intelligible to all readers, we shall set down a Roman month, with the days, according to our mode, opposite to each Roman day.

English.		*Roman.*
Jan.	1	Calends.
	2	4th before nones.
	3	3d before nones.
	4	day before nones.
	5	Nones.
	6	8th before Ides.
	7	7th ditto.
	8	6th ditto.
	9	5th ditto.
	10	4th ditto.

English.	*Roman.*
Jan. 11	3d before Ides.
12	day ditto.
13	Ides.
14	19th before Cal. of Feb.
15	18th ditto.
16	17th ditto.
17	16th ditto.
18	15th ditto.
19	14th ditto.
20	13th ditto.
21	12th ditto.

English.	*Roman.*
Jan. 22	11th bef. Cal. of Feb.
23	10th ditto.
24	9th ditto.
25	8th ditto.
26	7th ditto.
27	6th ditto.
28	5th ditto.
29	4th ditto.
30	3d ditto.
31	day before Cal. Feb.

The nones and ides of March, May, July, and October, are two days later than in January, the nones falling on the 7th, and the ides on the 15th of those months; the 2nd of March will be therefore the 6th before the nones, and so on. In all the other months, the calends, nones, and ides hold the same places as in the month of January. In the months which have but 30 days, the number of days before the calends will, of course, be one less, and in February, three less. In leap years, the additional day was inserted in February, as in our calendar; but instead of making a 29th day, the 24th was reckoned twice, and being called in Latin *sexto Cal. Mart.*, (or sixth day before the calends of March,) this, with the addition of bis (twice), gave the name of *bissextile* to the leap year, which it still retains. The first year reckoned on this principle was a leap year. (A.U.C. 708, or 46 B.C.)

Julius Cæsar was killed soon after the reformation of the calendar, and his plan was so little understood, that, instead of making the fourth year a bissextile, a leap year was reckoned every third year, as though the length of the true year had been 365 days 8 hours. This error was discovered 37 years after, at which time thirteen intercalations had taken place instead of ten, and the year began three days too late. The calendar was accordingly again corrected, not by throwing out the three superfluous days at once, but by an order that the twelve following years should be all of 365 days each, and that there should be no leap year until A.U.C. 760, or A.D. 7. From that time the account has been kept without error, and the Roman year has been adopted by almost all Christian nations, with no other variation than taking the birth of Christ as the commencement, instead of the building of Rome.

If the given Roman year be less than 754, deduct it from 754; if the given Roman year be not less than 754, deduct 753 from it; the remainder gives the year (B.C. and A.D., in the first and second cases respectively) in which the Roman year commences.

Ex.—Required the year 780 A.U.C. Required the year 701 A.U.C.

deduct	753		754
			701
	27 A.D.		53 B.C.

THE OLYMPIADS.

The Greeks computed their time by the celebrated era of the Olympiads, which date from the year 776 B.C., being the year in which Coræbus was successful at the Olympic games. This era differed from all others in being reckoned by periods of four years instead of single years. Each period of four years was called an Olympiad, and in marking a date, the year and Olympiad were both mentioned. The year was luni-solar, of 12 or 13 months. The names of the months varied in the different states of Greece, but the Attic months are most usual. They are as follows:—

Hecatombeon,	Gamelion,
Metageitnion,	Anthesterion,
Boedromion,	Elaphebolion,
Pyanepsion,	Munychion,
Mœmacterion,	Thargelion,
Poseideon,	Scirophorion.

In the year of 13 months, the additional month was inserted after Poseideon, and called the second Poseideon.

The months consisted of 30 and 29 days alternately, and the short year in consequence contained 354 days, while the intercalary year had 384. The third year of the first Olympiad consisted of 13 months, and the first and fourth years of the second Olympiad were also intercalary; consequently in the first Olympiad there were 1,446 days, and in the second 1,476, making together 2,922, exactly equal to eight Julian years: this mode of intercalation would therefore precisely bring about the commencement of the ninth year to the same season, as that of the first year. But as the Olympic months followed the course of the moon, and 99 such months contained 2,923$\frac{1}{2}$ days, the moon was in consequence a day and a half in advance of the reckoning. The error was, however, allowed to accumulate until it reached three days, which was in four Olympiads, or sixteen years, to the last of which three days were added. This corrected the errors with respect to the moon, but it threw out the commencement of the year, as regarded the seasons, making it three days too late. No means were adopted to remedy this until the fortieth Olympiad, the last year of which was made to consist of 12 months only, instead of 13 as usual, and the forty-first Olympiad began with the same days of the moon and sun as the first had done 160 years before. By this reckoning, the year always began between the new and full moon before or after the summer solstice, though more commonly after; and it continued in use until 432 B.C. or fourth year of the eighty-sixth Olympiad, when the cycle of 19 years was invented by Meton. This astronomer found that the Attic months no longer followed the course of the moon, but that the new moon nearest the summer solstice, which should have been the first day of the 87th Olympiad, would actually take place on the 13th day of Scirophorion, in the 4th year of the 86th Olympiad. He therefore proposed to commence the 87th Olympiad from that day, and to adopt a new system of intercalation. He supposed 235 moons to be exactly equal to 19 solar years, and that in every period of 19 years, the new and full moons would recur regularly at the same seasons. Nineteen years of 12 moons each would contain 228 moons, and consequently 7 moons were to be added. These were inserted in the 3d, 5th, 8th, 11th, 13th, 16th, and 19 years. Instead also of making the months of 30 and 29 days alternately, he determined that each month should consist nominally of 30 days, but that every 63d day should be omitted in numbering. The third day of Boedromion, for example, was omitted in the first year, the 6th of Poseideon, and so on to the end of the nineteenth year, when the last exemptile day (the 3d of Thargelion) was retained, making that year to consist of 385 days. This cycle was in use above a century, but was not quite accurate; 19 solar years are equal to about 6,939 days, 14 hours and a half, and 235 lunations to 6,939 days, 16 hours and a half, or 2 hours more. In the year 330 B.C. this excess amounted to only 11 hours; but by the cycle of Meton, to above 52 hours, he having made 19 years equal to 6,940 days; when another astronomer, Calippus, having made several observations on the solstice, calculated that the excess made 1 day in 76 years. He, therefore, invented the cycle of 76 years, called from him the Calippian, which consisted of 27,759 days, exactly equal to 76 Julian years, but above 14 hours in excess of the true solar year. In this period were included 940 lunations, equal to 27,758$\frac{3}{4}$ days.