

4. LIST OF MALAYAN BIRDS COLLECTED BY THEODORE CANTOR, ESQ., M.D., WITH DESCRIPTIONS OF IMPERFECTLY-KNOWN SPECIES. BY FREDERIC MOORE.

Part II.*

113. PASSER MONTANUS.

Fringilla montana, Linn. S. N. i. p. 324.

Passer montanus, Stephens, Shaw's Zool. xiv. p. 40 ; G. R. Gray, Gen. of B. ii. p. 372 ; Blyth, J. A. S. Beng. xiii. p. 947 ; xiv. p. 553 ; Catal. B. Mus. A. S. Beng. p. 120 ; Moore, Catal. B. Mus. E. I. C. ii. p. 500.

Specimens obtained at Singapore.

"This is the common sparrow of Java, and is the more common species in Arracan generally ; about sixty of this species occurring to one of *Passer indicus*. It is also common in China and Japan, also in the Himalaya, and in Afghanistan, extending westward to the British Islands."—*Blyth*.

114. PADDA ORIZIVORA.

Loxia orizivora, Linn. S. N. i. p. 302 (Vieillot, Ois. Chant. t. 61).

Fringilla orizivora, Horsfield, Trans. Linn. Soc. xiii. p. 161 ; Swainson, Zool. Ill. 1st ser. t. 156.

Munia orizivora, Bonap. C. G. Av. p. 451.

Padda orizivora, Reichenbach (1854) ; Moore, Catal. Birds Mus. East Ind. Comp. ii. p. 504.

Oryzornis orizivora, Cabanis, Catal. Birds Mus. Heine, p. 174.

Loxia javensis, Sparrman, Mus. Carls. t. 89.

Orizivora leucotis, Blyth, Indian Ornithology, MSS.

GLATE, Java (Horsfield).

GELATIK, Sumatra (Raffles).

115. MUNIA PUNCTULARIA.

Loxia punctularia, Linn. S. N. i. p. 302.

Munia punctularia, Blyth, Catal. B. Mus. A. S. Beng. p. 117 ; Bonap. C. G. Av. p. 452 ; Moore, Catal. Birds Mus. E. I. C. ii. p. 505.

Fringilla punctularia, Horsfield, Trans. Linn. Soc. xiii. p. 161.

Amadina punctularia, Hay, J. A. S. Beng. xiv. p. 554.

Uroloncha punctularia, Cabanis, Catal. Birds Mus. Heine, p. 174.

Fringilla nisoria, Temm. Pl. Col. 500. f. 2.

Coccothraustes javensis nævia, Briss. Orn. iii. p. 239. t. 39. f. 2.

The Cowry Grosbeak, Latham.

PEKKING, Javanese (Horsfield).

From Pinang.

Distinguished from *M. undulatus*, Lath., by the whitish-grey on the rump, upper tail-coverts and tail, which is represented by glistering fulvous in *M. undulatus*.

* Continued from Proc. Zool. Soc. 1854, p. 285.

116. MUNIA MAJA.

Loxia maja, Linn. S. N. i. p. 301 (Vieill. Ois. Chant. t. 56).

Munia maja, Blyth, Catal. B. Mus. A. S. Beng. p. 116; Moore, Catal. B. Mus. E. I. C. ii. p. 505.

Fringilla maja, Horsfield, Trans. Linn. Soc. xiii. p. 162.

Dermophrys maja, Cabanis, Catal. B. Mus. Heine, p. 174.

Loxia leucocephala, Raffles, Trans. Linn. Soc. xiii. p. 314.

BONDOL, Java (Horsfield).

PIPIT, Sumatra (Raffles).

PETAP WHOBUN, Malays (Blyth).

From Pinang.

117. MUNIA SINENSIS.

Coccothraustes sinensis, Brisson, Orn. iii. p. 238.

Munia sinensis, Blyth, Catal. Birds, Mus. A. S. Beng. App. p. 337; Moore, Catal. Birds Mus. East Ind. Comp. ii. p. 508.

Loxia malacca, var. β , Linn. S. N. i. p. 302.

Munia malacca (part.), Bonap. C. G. Av. p. 432.

Loxia atricapilla, Vieillot, Ois. Chant. t. 53.

Chinese Sparrow, Edwards, Birds, t. 43.

Malacca Grosbeak, var. A, Lath. Hist. of B. v. p. 244.

Obtained at Pinang.

118. MUNIA ACUTICAUDA.

Munia acuticauda, Hodgson, As. Res. 1836, p. 153; Moore, Catal. Birds Mus. East Ind. Comp. ii. p. 510.

Amadina acuticauda, Blyth, J. A. S. Beng. xiii. p. 949; Strickland, P. Z. S. 1846, p. 103.

Amadina molucca, apud G. R. Gray, Gen. of B. ii. p. 370.

Uroloncha molucca, apud Cabanis, Catal. B. Mus. Heine, p. 173.

? *Loxia molucca*, Linn. S. N. i. p. 302; Lath. Hist. v. p. 246.

Sparp-tailed Munia, Hodgson.

PETAP, Pinang (Blyth).

From Malacca and Pinang.

This bird has the chin and throat *only* blackish, the breast being dark brown, with whitish shafts and borders to the feathers, and the belly dull white, with dusky pencillings; whereas in *M. striata* (Linn.) the throat, to breast inclusive, is uniform blackish, and the belly, vent, and flanks, white. The upper parts of both are nearly similar, but in *M. acuticauda* the brown colour is paler, and the upper tail-coverts are brown; in *M. striata* these being black.

Also inhabits Nepal, Assam, and Tenasserim.

119. PLOCEUS BAYA.

Ploceus baya, Blyth, J. A. S. Beng. xiii. p. 945 (1844).

Pinang and Malacca.

120. EULABES JAVANENSIS.

Corvus javanensis, Osbeck, It. p. 102 (1757); Edw. B. t. 17, lower fig.

Eulabes javanus, Cuvier, Règ. Anim.

Pastor musicus, Wagler, Syst. Av. Past. sp. 2.

Gracula religiosa, apud Horsfield et Raffles, Trans. Linn. Soc. xiii. pp. 162, 303.

The Malayan Grackle.

BEO seu MENCHO, Java (Horsf.).

TIONG, Sumatra (Raffles).

Malacca.

Inhabits the Malayan peninsula and archipelago; also the Nicobar Islands.

121. ACRIDOTHERES FUSCUS.

Pastor fuscus, Wagler, Syst. Av. Past. sp. 6 (1827).

Acridotheres fuscus, Bonap. C. G. Av. p. 420; Moore, Catal. Birds Mus. E. I. C. ii. p. 537.

Pastor mahrattensis, Sykes, P. Z. S. 1832, p. 95.

Maina cristatelloides, Hodgs. J. A. S. Beng. v. p. 771 (1836).

Acridotheres griseus, apud Blyth, J. A. S. Beng. xv. p. 33; id. Catal. B. Mus. A. S. Beng. p. 108.

From Pinang and Malacca.

Identical with specimens from Tenasserim, China, and Nepal; and differs from South Indian examples only in being greyer.

122. CALORNIS DAURICUS.

Sturnus dauricus, Pallas, Acta Stockh. iii. p. 198. pl. 7. f. 1 (1778).

Turdus striga, Raffles.

Pastor malayensis, Eyton, P. Z. S. 1839, p. 103.

BRASS-BRASS, Malays.

Malacca.

"Eyes black; legs greenish-brown. Sleeps with the body downwards, suspended by the claws. Common at Malacca."—*Dr. Cantor's MS.*

123. CALORNIS CHALYBEUS.

Turdus chalybeus ♂ et *T. strigatus* ♀, Horsfield, Trans. Linn. Soc. xiii. p. 148 (1820).

Lanius insidiator, Raffles, id. p. 307 ♂.

Lamprotornis cantor, apud Temm. Pl. Col. 149.

TERLING seu PARLIONG, Malays.

From Malacca.

124. CORVUS CULMINATUS,

Corvus culminatus, Sykes, P. Z. S. 1832, p. 96; Blyth, J. A. S. Beng. xv. p. 24, xvi. p. 727; Moore, Catal. Birds Mus. E. I. C. ii. p. 553.

Corvus corax, apud Raffles, Trans. Linn. Soc. xiii. p. 300?

BURONG GAGA-GAGA, Malays.

An adult and young specimen from Pinang, agreeing with Tenasserim and Indian examples.

Remark.—*C. macrorhynchus* is distinct from this, and occurs also at Malacca, and, according to Mr. Blyth (J. A. S. xv. p. 24), "is a much slyer bird, with a different caw, and a longer beak."

125. *PLATYSMURUS LEUCOPTERUS.*

Glaucopis leucopterus, Temm. Pl. Col. 265.

Glenargus leucopterus, Cabanis, Catal. B. Mus. Heine, p. 216.

TALONG-GAGA OR KOLONG-GAGA, Malays.

Inhabits Malacca.

126. *PLATYLOPHUS GALERICULATUS.*

Corvus galericulatus, Cuvier, Règ. Anim. i. p. 399 (1817); Levaill. Ois. de Parad. t. 42.

Platylophus galericulatus, Swainson, Classif. of B. p. 263; Moore, Catal. Birds Mus. E. I. C. ii. p. 574.

Lophocitta galericulata, G. R. Gray, Gen. of B. ii. p. 305; Blyth, Catal. B. Mus. A. S. Beng. p. 94; Bonap. C. G. Av. p. 374; P. Z. S. 1850, p. 79; Cabanis, Cat. B. Mus. Heine, p. 218.

Lanius scapulatus, Lichtenstein, Doubl. p. 49.

Lanius coronatus, Raffles, Trans. Linn. Soc. 1822, p. 306 (female).

Vauga cristata, Griffith's An. Kingd. p. 486 (male).

Lophocitta histrionica, Müller, Bonap. C. G. Av. p. 374; P. Z. S. 1850, p. 79 (female).

Garrula rufula, Temminck, Mus. Lugdens. (female).

Lophocitta ardesiaca, Cabanis, Catal. B. Mus. Heine, p. 219; Bonap. C. G. Av. p. 374 (young male).

BURONG JERI, Sumatra (Raffles).

"Common at Malacca."—*Dr. Cantor's MS.*

127. *RHINOPLAX SCUTATUS.*

Buceros scutatus, Boddart, Tabl. des Pl. Enl. d'Aubent. (1783).

Buceros galeatus, Gmel.

TIBBANG MUNTOVAH, Malays (Farquhar).

From Keddah, Malay Peninsula.

"Iris, eyelids, pouch, legs, and feet, Indian red."—*Dr. Cantor's MS.*

128. *BUCEROS RHINOCEROS.*

Buceros rhinoceros, Linn. (Pl. Enl. 934; Levaill. Ois. d'Amer. et Ind. t. 1, 2; Edw. B. t. 281. f. B); Bontius, Java, t. 64; Raffles, Trans. Linn. xiii. p. 291; Blyth, J. A. S. Beng. xii. p. 993; xiv. p. 188; xvi. p. 993; Moore, Catal. Birds Mus. E. I. C. ii. p. 582.

Buceros africanus, Gmelin, S. N. i. p. 359.

Buceros niger, Shaw, Zool. viii. p. 7 (Levaill. t. 13).

Buceros lunatus, Temm. Pl. Col. 546.

Buceros sylvestris, Vieillot.

Buceros diadematus, Dumont.

INGGANG DANTO, Malays (Raffles).

BURONG TAUN, Sumatra (Marsden).

RANGKOK or YONGRANG, Java (Horsfield).

Male and female obtained at Malacca.

"The sexes of this Hornbill are distinguished by the *posterior* surface of the horn, above the forehead, being black in the male, and concolorous with the rest of the horn in the female; besides which the male has a black line dividing the bill and casque, and continued forward and upward upon the latter, parallel with its anterior margin. It may be remarked further, that this species seems to wear away the cutting edges of its mandibles more than any other; so that, when the tips meet, a wide hollow occurs along the medial portion of its bill."—*Blyth*.

129. HOMRAIUS BICORNIS.

Buceros bicornis, Linn. (Levaill. Ois. d'Am. et Ind. t. 7, 8).

Homraius bicornis, Bonap. Ateneo Ital. (1854); Moore, Catal. Birds Mus. E. I. C. ii. p. 583.

Buceros cavatus, Shaw (Levaill. t. 3, 4, 5); Raffles, Trans. Linn. Soc. xiii. p. 291; Gould, Cent. of B. tab. 44; Jerdon, Madras Journ. xi. p. 37; Blyth, J. A. S. Beng. xii. p. 986; xiv. p. 187; xvi. p. 993; Tickell, J. A. S. Beng. xxiv. p. 279.

Buceros homrai, Hodgson, J. A. S. Beng. i. p. 251 (1832); Asiatic Res. 1833, p. 169, tab.

Bifid-casqued Hornbill, Shaw.

Concave-casqued Hornbill, Shaw.

BAN RAO (*i. e.* Jungle King), Masuri (Hutton).

HOMRAI, Nepal (Hodgson).

GARUDA, natives of Forests of S. India (Jerdon).

MALAH-MORAYKEY, Malyalum (Elliot).

YOUNY-YENG, Arracan (Phayre).

BURONG-OONDAN, Malays (Raffles).

INGGANG PAPAN, Sumatra (Raffles).

Adult male from Malacca, and adult and young female from Penang.

"This bird inhabits the extensive hill forests of all India, Assam, Arracan, Tenasserim, Malayan Peninsula, and Sumatra. It does not appear to be subject to any variation of plumage, either sexual or according to age; but there are some differences in the colouring of the bill and casque of the sexes, and also of the irides."—*Blyth*.

Mr. Hodgson in his description states that "the casque and upper mandible are deep waxen-yellow, passing to rich red on the top of the casque, and towards the tip of upper mandible; the tip itself and the lower mandible ivory white; base of both mandibles, anterior and posterior surface of the casque, a line along the ridge of the bill, its cutting edges, and the whole inner surface of the bill, and naked skin round the eyes, black; iris intense crimson. The female, and young of a year old, has the iris pure hoary, the naked skin of the ophthalmic region pale purpurescent dusky; and the black colour which distinguishes the casque, and ridge, cutting edges, and interior surface of the bill in the male, being red.

"From a comparison of many specimens, showing both sexes in maturity, and the young in various stages of progression towards it, I am led to conclude that the body does not reach its full size under two or three years, and that the bill and casque, especially the latter, are not perfectly developed in less than four or five years."

Mr. Hodgson also gives an elaborate description of the growth of the young, and also a description of the skeleton by Dr. M. J. Bramley. An account of its anatomy is given by Prof. Owen in the Proc. Zool. Soc. 1833, p. 102.

The Rev. J. Mason, in his work on Burmah, states of the Concave Hornbill, "Their nests are constructed in a superior manner of clay in the stumps or hollows of old trees. After the female has laid five or six eggs, the male bird shuts her entirely in with mud, except a small hole where she can only peep out her head. Here she must sit during her incubation, for if she breaks through the enclosure, her life pays the forfeit; but, to compensate for the loss of freedom, her spirited mate is ever on the alert to gratify his dainty mistress, who compels him to bring all her viands unbroken, for if a fig or any fruit be injured, she will not touch it."

Capt. Tickell, writing from the Tenasserim provinces, remarks: "I obtained the egg of *B. cavatus*, and have seen with my own eyes that the male builds the female in, by covering the hole in the tree where she incubates with mud, leaving only room for her bill to protrude and receive food from his! I thought that this was a fable."—J. A. S. Beng. 1855, p. 279.

130. HYDROCISSA CONVEXA.

Buceros convexus, Temm. Pl. Col. 530 (♀).

Hydrocissa convexa, Moore, Catal. Birds Mus. E. I. C. ii. p. 591.

Buceros intermedius, Blyth, J. A. S. Beng. 1847, p. 994; xviii. p. 803; Catal. Birds Mus. A. S. Beng. p. 43.

Buceros albirostris, apud Horsfield, Trans. Linn. Soc. xiii. p. 175.

Buceros malabaricus, apud Raffles, id. p. 291; Vigors, App. Mem. Raffles, p. 666.

Buceros violaceus, apud Hay, Madras Journ. xiii. pt. 2. p. 148.

KLINGLINGAN, Java (Horsfield).

ANGKA ANGKA, Sumatra (Raffles).

MATTEE SEE-CAWAN, Malays (Cantor).

Adult males from Malacca, and adult and young of both sexes from Pinang.

In plumage this species is like *H. albirostris* (Shaw), but with the four lateral pairs of tail feathers wholly white in adults (in the young these are black at base), and the middle pair tipped with white.

Bill and casque yellowish-white, the latter with a black patch, as in *H. albirostris*. "Naked space round the eyes and sides of throat bluish-white."—Dr. Cantor.

131. HYDROCISSA MALAYANA.

Buceros malayanus, Raffles, Trans. Linn. Soc. xiii. p. 292 (1822);

Temminck, Text de Pl. Col. ; Blyth, J. A. S. Beng. xvi. p. 995 ; xviii. p. 803 ; Catal. B. Mus. A. S. Beng. p. 43.

Hydrocissa malayana, Bonap. C. G. Av. p. 90 ; Moore, Catal. Birds Mus. E. I. C. ii. p. 592.

Buceros anthracinus, Temm. Text. de Pl. Col. 529.

Buceros bicolor, Eyton, P. Z. S. 1839, p. 104 ; Blyth, J. A. S. Beng. xii. p. 995.

Buceros elliotti, Hay, Madras Journ. xiii. pt. 2. p. 152.

QUAY QUAY, Malays (Eyton).

MATTEE SEE-CAWAN, Malays (Cantor).

Two female specimens from Province Wellesley, Malacca.

In the presumed *immature* male the plumage is wholly glossy-black, excepting a superciliary coronal circle and tips of the four outer tail-feathers, which are white ; the bill and casque are spotless yellowish-white, excepting the base of the former and hindmost part of the latter, which are black ; the casque sloping gradually in front to the curvature of the bill. Length of wing $10\frac{1}{2}$ inches ; of tail $12\frac{1}{2}$ inches, its outer feather 3 inches less ; bill from gape $4\frac{3}{4}$ inches, from hindmost part of casque to point of bill, in a straight line, 6 inches, height from chin to top of casque 3 inches.

Presumed *adult* female has the superciliary coronal circle represented by obscure silvery-greyish. Length of wing $13\frac{1}{2}$ inches ; of tail 16 inches ; outermost feather 4 inches less ; bill from gape $5\frac{1}{4}$ to 6 inches ; length of casque 5 to $5\frac{3}{4}$ inches ; height from chin to top of casque 3 to $3\frac{1}{2}$ inches.

The casque in this species is allied in shape to that of *H. albirostris* and *H. convexa*, and is of a totally different form to that of *H. nigrirostris*.

The female, according to Dr. Cantor's notes, has the " Iris greyish-brown. Bill yellowish-white or buff. Naked space round the eyes livid. Feet black."

132. HYDROCISSA NIGRIROSTRIS.

Buceros nigrirostris, Blyth, J. A. S. Beng. xvi. p. 995 (1847) ; xviii. p. 803 ; Catal. B. Mus. A. S. Beng. p. 44.

Hydrocissa nigrirostris, Moore, Catal. Birds Mus. E. I. C. ii. p. 593.

Buceros malayanus, apud Lord A. Hay, Madras Journ. xiii. pt. 2. p. 151.

QUAY QUAY, Malays (Cantor).

Male and female obtained at Malacca.

Plumage in the presumed *male* glossy-greenish black, including the chin and throat, which, and the underparts, are less glossy ; head adorned with a broad yellowish-white superciliary coronal circle ; tips of the four outer tail-feathers yellowish-white ; space round the eyes and basal angle of lower mandible naked, and in the dry specimen yellowish. Presumed *female* as in male, excepting that the superciliary circle is represented by obscure silvery-greyish. Bill and casque blackish, "and in the young," says Mr. Blyth, "white,

the form of the casque is low, thinly compressed towards the front, and abruptly truncate anteriorly, with a longitudinal ridge on each side in old birds, occasioning a broad shallow groove above and another below it. Length about 29 inches; of wing $11\frac{3}{4}$ inches; tail to tip of middle feathers 13 inches; to tip of outer feather $10\frac{1}{2}$ inches; bill from gape $4\frac{3}{4}$ inches; length of casque 3 inches; height from chin to top of casque $2\frac{1}{2}$ inches.

Mr. A. R. Wallace states, in a letter from Singapore (Ann. Nat. Hist. Feb. 1855), that "*B. nigrirostris* is the female of *B. malayanus*, Raffles; I satisfied myself of this fact from the dissection of about a dozen specimens shot off the same tree."

The bill and casque of *B. malayanus* are allied in form to the corresponding parts of *H. albirostris* and *H. convexus*, Temm; and that of *H. nigrirostris* to that of the next species.

We have described these birds as *male* and *female* on the authority of Dr. Cantor.

133. ANORRHINUS GALERITUS.

Buceros galeritus, Temm. Pl. Col. 520.

Hydrocissa galerita, Bonap. Consp. Gen. Av. p. 90.

Anorrhinus galeritus, Reichenbach, Syst. Av. (1849); Moore, Catal. Birds Mus. E. I. C. ii. p. 594.

Buceros carinatus, Blyth, J. A. S. Beng. xiv. p. 187 (1845), xvi. p. 996.

QUAY QUAY, Malays (Cantor).

Colour green-glossed black, with the basal two-thirds of the tail drab-coloured, the wing-feathers slightly margined paler: head fully crested, composed of broad longish feathers. Throat naked, or merely showing two single rows of ill-developed feathers along the middle. Bill and casque black in the one sex, which seems always to have the abdominal region pale; in the other yellowish-white, with black along the summit of the casque nearly to the end, and also occupying the basal two-thirds of the lower mandible, and the tomia of the upper one, and, according to Dr. Cantor's MS. notes, the "iris vandyke-brown; naked space round the eyes, and pouch black. Feet greenish-grey." The casque is low, and with a keel-shaped ridge, sloping off to the front.

"In a young specimen," remarks Mr. Blyth, "the plumage is quite similar to that of the adult, but has no trace of casque, and the bill is nigrescent with a whitish ridge and tip."

Several specimens obtained at Malacca.

134. BERENICORNIS COMATUS.

Buceros comatus, Raffles, Trans. Linn. Soc. xiii. p. 339 (1822); Schlegel et Müller, Verh. Naturl. Gesch. Aves, p. 29. t. 4; Temm. Text. de Pl. Col.; Hay, Madras Journ. xiii. pt. 2. p. 149; Blyth, J. A. S. Beng. xvi. p. 996. t. 44. f. 2 ♀.

Berenicornis comatus, Bonap. C. G. Av. p. 91; Moore, Catal. Birds Mus. E. I. C. ii. p. 594.

Buceros lugubris, Begbie, Ann. Nat. Hist. xvii. p. 405.

A single specimen of the female obtained at Malacca.

In this species the adult males have the finely plumed head, neck, breast, abdomen, tail, and tips of the wings pure white; the remainder being black, a little tinged with brown upon the back: whereas the females have the neck, breast, and abdomen, also black. Raffles described the young male only with "back, wings, and tail, of a dark brown; the belly of the same colour, mixed with white; and the wing- and tail-feathers all tipped with white at their points." Colour of the beak and casque dusky, the former laterally whitish towards its base. Throat moderately well feathered.

Size rather large, intermediate to *B. pica* and *B. rhinoceros*, with proportionally long and broad cuneated tail.

Inhabits the Malayan Peninsula and Sumatra.

135. RHYTICEROS PLICATUS.

Buceros plicatus, Lath. Ind. Orn. i. p. 146 (Levaillant, Ois. d'Afr. t. 239 ♂).

Rhyticeros plicatus, Reichenbach, Syst. Av. (1849); Moore, Catal. Birds Mus. E. I. C. ii. p. 598.

Calao plicatus, Bonap. C. G. Av. p. 90.

Buceros obscurus, Gmelin.

Buceros undulatus, Shaw (Levaill. Ois. d'Am. et Ind. t. 20, 21 ♀); Horsfield, Trans. Linn. Soc. xiii. p. 175.

Buceros javanicus, Shaw (Levaill. Ois. d'Am. et Ind. t. 22, jun.).

Buceros javanus et niger, Vieillot.

Buceros annulatus, Drapiez.

Buceros pusaran, Raffles, Trans. Linn. Soc. xiii. p. 293; Blyth, J. A. S. Beng. xii. p. 990; xvi. p. 998.

Wreathed Hornbill, Lath. Syn. i. p. 358.

Adult and young male and female obtained at Pinang.

"Male with the medial part of the crown and the whole occiput and nape dark rufous bay, or deep marronne, and the sides of the head and neck, with the front of the latter glistening yellowish-white; all the other parts are greenish-glossed black, except the tail, which is buffy-white. Bill yellowish-white, the basal portion of both mandibles dark reddish-brown laterally, with a series of narrow transverse, whitish ridges, nearly similar to those of *Rhyticeros cassidix*; the casque is scarcely elevated above the outline of the rest of the upper mandible, but is broad and flat above, having a series of narrow transverse plaits, the intervals between which are nearly filled up with a brownish substance, so that the profile is almost even, and towards the front is quite so. Length above 3 feet; of wing 19 inches; tail $10\frac{1}{2}$ inches; bill to gape $7\frac{1}{2}$ inches, and with casque 3 inches high, the latter nearly 2 inches broad."

"The female has the head and neck also black, and is smaller in size. In the full-grown young, the lateral ridges of the bill do not appear," remarks Mr. Blyth, "till after three or four corrugations are exhibited on the casque, prior to which the bill much resembles that of *B. nipalensis* Hodgs., of corresponding age, except that the bulge in place of the casque is more decided."

Dr. Cantor states that "the male has the bill [yellowish] white. Iris pale crimson. Gular pouch rich gamboge yellow. Feet blackish, and the female has the iris narrow, golden round the pupil, the rest golden vandyke. Eyelids brick-colour. Pouch dirty azure, with two transverse black lines. Feet blackish-grey. The young male has the iris mother o'pearl colour. Bill yellow at the point, and bluish-green at the base. Space round the eyes and pouch yellow, with the transverse black bars indistinct. Feet bluish-black."

Inhabits Sylhet, Arracan, Tenasserim Provinces, Malayan Peninsula, and Sumatra. The Rev. J. Barbe states (J. A. S. Beng. x. p. 922) that "both this species and *R. subruficollis*, Blyth, are very common in the Tenasserim provinces, associating in flocks of a dozen or twenty birds, but the two species do not mingle in the same flock."

R. subruficollis Blyth, J. A. S. Beng. 1843, p. 177, may be distinguished from *R. plicatus* by its much inferior size, though, the wings and tail being proportionally longer, the difference in actual admeasurements is not great, though that of the weight would be considerable; the casque is also much more elevate and highly convex, instead of being flattened above; there are also no lateral transverse ridges at the basal part of the mandibles. "In the living bird," says the Rev. J. Barbe, "the naked skin of the throat and around the eyes is of a beautiful blue, instead of yellow, as in *R. plicatus*." Length about 32 inches; of wing $16\frac{1}{2}$ inches; tail $9\frac{1}{2}$ inches; bill to gape $6\frac{1}{2}$ inches, and with its casque nearly 3 inches high, of which the latter occupies a full inch; it is also broad behind, becoming gradually narrower to the point, whereas that of *R. plicatus* is much more uniform in its breadth throughout.

136. PSITTINUS MALACCENSIS.

Psittacus malaccensis, Lath.* Ind. Orn. i. p. 130 (1790); Swains. Zool. Ill. t. 154.

Psittinus malaccensis, Blyth, J. A. S. Beng. xi. p. 789 (1842); Moore, Catal. Birds Mus. E. I. C. ii. p. 608.

Psittacus incertus, Shaw, Nat. Misc. t. 769.

Agapornis azureus (Temm.), Bonap. C. G. Av. p. 6.

Psittacula reticulata, Lesson.

TANA, Malays.

Male: crown, rump, and upper tail-coverts bright purplish smalt-blue, passing into greyish on the nape, and then to greyish-dusky on the back; under-parts yellowish-olivaceous, the medial portion being tinged with brownish-ruddy, and edged with bluish; lower tail-coverts yellowish-green, tipped with blue; tibial plumes mingled blue and green; uropygials deep green; and the rest of the tail-feathers yellow, more or less green-edged; wing-feathers deep green, margined with yellowish on the coverts, except those of the primaries, secondaries, tertiaries, speculars, and shoulder, which are bluish or

* But not of Gmelin.

purple; extreme edge of shoulder yellowish-green; wing-spot marrone, and the coverts underneath the wing and axillaries crimson.

Female: crown greenish-marrone, on the forehead lighter and bluish, passing on the nape to the deep green of the back; the blue of the rump and upper tail-coverts is tinged with bright green; sides of face intermixed yellowish-marrone; throat greenish-yellow; underparts light-green; wing, wing-spot, under wing-coverts, and axillaries as in male.

Young: lighter green, yellowish beneath, and more broadly margined with yellow on the wings; forehead and rump bluish; upper tail-coverts bright green; wing-spot, under wing-coverts, and axillaries as in adults.

The upper mandible in the male is bright coral-red, paler at the tip; the under mandible dusky, in female lighter; in the young yellowish-white; and, according to Dr. Cantor's notes, "has the inner ring of the iris greenish, outer ring pale yellow; feet dark green."

From Pinang.

137. *PALÆORNIS TORQUATUS*.

Psittaca torquata, Brisson (Lear, *Psitt.* t. 33).

From Pinang.

138. *PALÆORNIS LONGICAUDA*.

Psittacus longicaudus, Boddært, *Tabl. des Pl. Enl. d'Aub.* p. 53 (1783); Gould, *Birds of Asia*, 1858, plate.

Psittacus malaccensis, Gmelin.

Pal. erythrogenys, Lesson (nec Blyth, nec Fraser).

Adult and young from Pinang and Malacca.

The young has the plumage yellowish-green, darkest on the crown, and palest beneath; a still darker green moustachial streak; space before the eye, slightly above, broadly beneath, and on lower part of ear-covert ferruginous, intermixed with greenish-yellow; upper part of ear-covert green, slightly tinged with verditer; wings above yellowish-green, and having the primaries, secondaries, portion of tertiaries, and speculars indigo-blue on their outer webs, and the three former narrowly edged with yellow; under wing-coverts and axillaries green; rump bluish-green, upper tail-coverts yellowish-green; tail above green, tinged with indigo-blue, and edged with yellowish-green, beneath dusky golden-yellowish; upper mandible red, pale at tip; under mandible also pale.

Length 8 inches, of wing $5\frac{3}{8}$ inches; tail 3 inches, its outermost feather 1 inch less; tarsus $\frac{7}{10}$ inch; outer fore-toe $\frac{8}{10}$ inch; ditto with claw $1\frac{1}{8}$ inch.

139. *PALÆORNIS CANICEPS*.

Palæornis caniceps, Blyth, *J. A. S. Beng.* pp. 23, 51, 368 (1846); *id.* xix. p. 233; Moore, *Catal. Birds Mus. E. I. C.* ii. p. 621; Gould, *Birds of Asia*, 1857, plate.

Male : general colour vivid yellowish-green, with the winglet and base of the secondaries indigo-blue, and the medial portion of the secondaries inclining to emerald-green ; primaries black, the longest tinged with indigo towards the base ; cap grey ; a broad black frontal band, continued to the eyes, and a broad black moustache, with some black feathers also on the throat ; above the moustache, between it and the frontal band, the feathers are of the same grey colour as those of the crown ; tail green above, with some blue on its middle feathers, and dull golden-yellowish below ; upper mandible coral-red, tip white ; lower mandible black. The *female* differs in having the head less pure grey, and the bill is wholly black, and the primaries dull black, margined with dark grass-green. Length of female about 20 inches, of which the middle tail-feathers occupy $9\frac{1}{2}$; of wing 7 inches.

The female has the "iris golden-yellow ; bill black ; feet blackish-grey."—*Cantor's Notes*.

A single female from Pinang, being the only example that has as yet been brought to Europe. Inhabits also the Nicobar Islands.

140. LORICULUS GALGULUS.

Psittacus galgulus, Linn. (Pl. Enl. 190 ; Edw. B. t. 293. f. 2).

SEREN-DAK, Sindada, Malacca.

From Malacca.

141. EOS RUBRA.

Psittacus rubra, Gmel. S. N. i. p. 335 (Pl. Enl. 519 ; Edw. B. t. 173 ; Le Vaill. Perr. t. 93, 94).

Locality not stated.

142. MEGALAIMA CHRYSOPOGON.

Bucco chrysopogon, Temm. Pl. Col. 285.

Malacca.

143. MEGALAIMA VERSICOLOR.

Bucco versicolor, Raffles, Trans. Linn. Soc. xiii. p. 284 (1822).

Bucco rafflesi, Lesson, Rev. Zool. (1839) p. 137.

TAKOOR, Malays.

From Pinang and Malacca.

144. MEGALAIMA MYSTACOPHANOS.

Bucco mystacophanos, Temm. Pl. Col. 315.

Bucco quadricolor, Eyton, P. Z. S. 1839, p. 105.

TAKOOR CAPATA CUNING, Malays.

From Malacca.

145. MEGALAIMA INDICA.

Bucco indicus, Lath. Ind. Orn. i. p. 205 (1790).

Megalaima philippensis auctorum.

Bucco rafflesius, Boie (nec Lesson).

CHANDA, Malays of Sumatra (Raffles).

From Keddah and Province Wellesley, Malacca.

146. MEGALAIMA DUVAUCELLI.

Bucco duvaucelli, Lesson, Tr. d'Orn. p. 164 (1831).

Bucco trimaculatus, Gray, Zool. Misc. (1832) p. 3. t. 3.

Bucco frontalis, Temm. Pl. Col. 536. f. 1; Guérin, Icon. Règ. Anim. Aves, t. 34.

Bucco australis apud Raffles.

Bucco cyanotis, Blyth, J. A. S. Beng. (1847) p. 465, variety.

TANDA or TANHAK, Malays.

Adult and young from Malacca.

Inhabits the Malayan peninsula, Sumatra, with a variety in Arracan, and Tenasserim, having the ear-coverts of the same verditer-blue as the throat, and the crimson spots much weaker.

147. MEGALORHYNCHUS HAYI.

Bucco hayii, J. E. Gray, Zool. Misc. p. 33 (1832).

Micropogon fuliginosus, Temm. Text. de Pl. Col.

Megalorhynchus spinosus, Eyton, P. Z. S. 1839, p. 106.

Bucco lathamii apud Raffles.

ARIKO BERINE, Malays (Eyton).

UNKOT BESEA, Pinang (Dr. Cantor).

Malacca.

148. HEMICERCUS CONCRETUS.

Picus concretus, Reinwardt, Temm. Pl. Col. 90. f. 1, 2.

Dendrocopus sordidus, Eyton, Ann. Nat. Hist. xvi. p. 229.

Picus hartlaubii, Malherbe, MS. Mus. Ind. House.

Malacca.

149. REINWARDTIPICUS VALIDUS.

Picus validus, (Reinwardt) Wagler, Syst. Av. Pic. sp. 13 (1827); Temm. Pl. Col. 378 ♂, 402 ♀.

Adult and young from Malacca.

150. MULLERIPICUS PULVERULENTUS.

♂ *Picus pulverulentus*, Temm. Pl. Col. 389; Less. Tr. d'Orn. p. 222.

♀ *Picus mackloti*, Wagler, Syst. Av. Pict. sp. 4 (1827).

♂ *Picus javensis* (♀, nec ♂), Horsfield, Trans. Linn. Soc. xiii. p. 176.

♂ *Picus horsfieldii* (♀, nec ♂), Wagler, Syst. Av. Pic. sp. 5. Pinang.

"Bill, iris, and feet blackish."—Cantor's Notes.

151. MULLERIPICUS JAVENSIS.

Picus javensis (♂, nec ♀), Horsfield, Trans. Linn. Soc. xiii. p. 175 (1821).

Picus leucogaster, Reinwardt, Temm. Pl. Col. 501.

Picus horsfieldii (♂, nec ♀), Wagler.

Picus crawfordii, J. E. Gray, Griff. An. Kingd. Aves, ii. p. 513, fig.
GULATOH, Malays.
Malacca.

152. *CHRYSOCOLAPTES SULTANEUS*.

Picus sultaneus, Hodgson, J. A. S. Beng. vi. p. 105 (1837).

Picus strenuus (Gould), McClelland, P. Z. S. 1839, p. 165.

Picus strictus apud Jerdon et Blyth.

From Pinang.

Also inhabits India generally, chiefly the hill-forests, being rare in the plains; also Assam, Bootan, Sylhet, Arracan, Tenasserim, and Malayan peninsula southward as far as Malacca.

153. *CHRYSONOTUS INTERMEDIUS*.

Tiga intermedia, Blyth, J. A. S. Beng. xiv. p. 193 (1845).

Picus Tiga apud J. E. Gray, Ill. Ind. Zool. i. t. 30. f. 2.

From Pinang.

Intermediate in size between *C. shorei*, Vig., and *C. tiga*, Horsf. Common also in Nepal, Assam, Sylhet, Tipperah, Arracan, Tenasserim, and Southern India.

154. *CHRYSONOTUS (?) RAFFLESII*.

Picus rafflesii, Vigors, App. Memoir, Raffles, p. 669 (1829); Strickl. P. Z. S. 1846, p. 103.

Picus labarum, Lesson.

Tiga amictus, G. R. Gray, Gen. of B. ii. p. 441.

Malacca. Also inhabits Sumatra.

155. *VENILIA PUNICEA*.

Picus puniceus, Horsf. Trans. Linn. Soc. xiii. p. 170 (1827); Temm. Pl. Col. 423.

Malacca.

The figure in Temminck's Pl. Col. is that of the male bird, the female differing only in the absence of the crimson whiskers. Inhabits the Tenasserim provinces, Malayan peninsula, Sumatra, and Java.

156. *VENILIA MINIATA*.

Picus miniatus, Forster, Ind. Zool. p. 14. t. 4; J. E. Gray, Ill. Ind. Zool. i. t. 30. f. 1.

Picus malaccensis, Lath. Ind. Orn. i. p. 241.

GLATO MERRA, Malays.

Malacca.

157. *VENILIA MENTALIS*.

Picus mentalis, Temm. Pl. Col. 384.

Picus gularis, Wagler, Syst. Av. Pict. sp. 89 (1827).

Malacca.

158. *VENILIA MELANOASTRA*.

Picus melanogaster, Hay, Madras Journ. Lit. & Sci. xiii. pt. 2. p. 153 (1844).

Picus rubiginosus, Eyton, Ann. N. H. 1845, p. 229.

GLATO GADING, Malays (Cantor).
Malacca.

159. *MICROPTERNUS BADIUS*.

Picus badius, Raffles, Trans. Linn. Soc. xiii. p. 289 (1821).

Picus brachyurus, Vieill. Nat. Dict. xxvi. p. 103.

Picus phæopus, Malherbe, MS. Mus. Ind. House.

GLATO AHBOS, Malays.

Malacca.

"Iris, bill, and feet black."—*Cantor's Notes*.

160. *MEIGLYPTES TRISTIS*.

Picus tristis, Horsf. Trans. Linn. Soc. xiii. p. 177 (1821).

Picus poecilophus, Temm. Pl. Col. 197. f. 1.

GLATO BAWAN, Malays.

Pinang and Malacca.

161. *MEIGLYPTES BRUNNEUS*.

Hemicercus brunneus, Eyton, P. Z. S. 1839, p. 106.

GLATO ETAM, Malays.

Malacca.

162. *PICUS MOLUCCENSIS*.

Picus moluccensis, Gmel. S. N. i. p. 439 (Pl. Enl. 748. f. 2).

Tripsurus auritus, Eyton, Ann. N. H. 1845, p. 229.

Malacca. Inhabits the Malayan peninsula, Sumatra, and Java.

As compared with the Indian species (*P. variegatus*, Wagl. figured in Gray's Ill. Ind. Zool.), this has rather larger bill and feet; the crown is darker coloured, passing to blackish, or deeply infuscated, on the occiput and median line of nape; the wings are shorter, and there is a difference in the barring of the tail-feathers, and in the form of the tips of the more outer ones, which in the Indian bird are more rounded, or somewhat truncated, with a slight emargination at the tip of the shaft; while in the Malayan bird they attenuate, and are obtusely pointed; the white bars also assume more the appearance of transverse bands in the Malayan species, and of separated round spots in the Indian, while the outermost feather is in the former tipped with white, and the penultimate has an all but terminal white bar, both these feathers in the Indian bird being broadly black-tipped, with a more interrupted white bar above.

163. *CENTROPUS VIRIDIS*.

Cuculus viridis, Scopoli, Del. Flor. et Faun. Insub. (1786).

Cuculus bengalensis, Gmel. S. N. i. p. 412 (1788).

Centropus affinis ♂ et *C. lepidus* ♀, Horsf. Trans. Linn. Soc. xiii. p. 180.

Pinang and Malacca.

164. PHÆNICOPHAUS CURVIROSTRIS.

Cuculus curvirostris, Shaw, Nat. Misc. t. 905.

KADO BESAR, Malays.

Malacca. A common species at Malacca.

165. ZANCLOSTOMUS JAVANICUS.

Phœnicophaus javanicus, Horsf. Trans. Linn. Soc. xiii. p. 178 ;
id. Zool. Res. in Java, t. 57.

KAKA APIE, Malays.

Malacca.

166. ZANCLOSTOMUS SUMATRANUS.

Cuculus sumatranus, Raffles, Trans. Linn. Soc. xiii. p. 287 (1821).

Phœnicophaus crawfurdii, J. E. Gray, Zool. Misc. p. 3. t. 2 (1832).

Malacca.

167. ZANCLOSTOMUS DIARDI.

Melias diardi, Lesson, Tr. d'Orn. (1831) p. 132.

CADOW KACHIE, Malays.

Malacca.

168. RHINORTHA CHLOROPHÆA.

♀ *Cuculus chlorophæus*, Raffles, Trans. Linn. Soc. xiii. p. 288 (1821).

♂ *Rhinortha caniceps*, Vigors.

♀ *Coccyzus badius*, J. E. Gray, Zool. Misc. p. 3. t. 1 (1832).

♀ *Phœnicophaus viridirostris*, Eyton, P. Z. S. 1839, p. 105.

SLAYA, SEE-SAYA, Malays.

Pinang and Malacca.

169. POLYPHASIA MERULINA.

Cuculus merulinus, Scopoli, Del. Flor. et Faun. Insub. (1786) ;
Sonnerat's Voy. t. 81.

Cuculus flavus, Gmel. (Pl. Enl. 814).

Pinang.

"Iris pale lake-colour ; legs pale orange."—*Cantor's Notes*.

170. POLYPHASIA TENUIROSTRIS.

Cuculus tenuirostris, J. E. Gray, Ill. Ind. Zool. ii. t. 34. f. 1 (1833).

Pinang.

171. POLYPHASIA SONNERATI.

Cuculus sonneratii, Lath. Ind. Orn. i. p. 215 (1790).

Cuculus pravata, Horsf. Trans. Linn. Soc. xiii. p. 179.

Cuculus venustus, Jerdon, Madras Journ. Lit. et Sc. xiii. pt. 2.
p. 140.

Malacca.

172. COCCYSTES COROMANDUS.

Cuculus coromandus, Linn. S. N. i. p. 171 (Pl. Enl. 274. f. 1).

Cuculus collaris, Vieillot (Le Vaill. Ois. d'Afr. t. 213).

Red-winged Crested Cuckoo.

Pinang.

173. SURNICULUS LUGUBRIS.

Cuculus lugubris, Horsfield (Zool. Res. in Java, t. 58).

Cuculus albopunctatus, Drapiez.

Malayan Drongo-Cuckoo.

Malacca.

174. HIEROCOCCYX VARIUS.

Cuculus varius, Vahl (Strickland, Ann. N. H. xviii. p. 399).

Cuculus fugax, Horsfield, Trans. Linn. Soc. xiii. p. 178 (1821).

Cuculus lathamii, J. E. Gray, Ill. Ind. Zool. ii. t. 34. f. 2.

C. nasicolor, Hodgs. J. A. S. Beng. xii. p. 943.

Malacca.

175. ? CUCULUS STRIATUS.

Cuculus striatus, Drapiez, Dict. Class. d'Hist. Nat.

Cuculus micropterus, Gould, P. Z. S. 1837, p. 137.

Young specimens, Malacca.

176. CHRYSOCOCCYX MALAYANUS.

Cuculus malayanus, Raffles, Trans. Linn. Soc. xiii. p. 286 (1821).

Cuculus lucidus apud Temm. Pl. Col. t. 102. f. 1.

Malacca.

177. EUDYNAMYS ORIENTALIS (Linn.).

Adult and young, Malacca.

178. HARPACTES DUVAUCELI.

Trogon duvaucelii, Temm. Pl. Col. 291 ; Gould, Monogr. Trog. pl. 32.

Trogon rutilus, Vieill. Nouv. Dict. d'Hist. Nat. 2nd ed. viii. p. 313 ;
Le Vaill. Hist. Nat. des Cour. t. 14.

Harpactes duvauceli, Gould, Birds of Asia, 1859.

Trogon kasumba (jun.), Raffles.

RAMGUBA, Malays.

Malacca (Cantor).

Male : head and throat jet black ; breast, under-surface, rump, and upper tail-coverts fine scarlet ; back reddish cinnamon brown ; wings black, coverts and secondaries crossed by numerous white lines ; primaries margined basally externally with white ; two medial rectrices dark cinnamon brown, tip with black ; the two next blackish-brown ; the three outer being blackish-brown at the base, and largely tip with white. Female differs in having the head dark-brown ; back dark cinnamon-brown, lighter and suffused with scarlet on the

rump and upper tail-coverts ; wing-coverts crossed with ochreous lines ; under surface orange-brown, washed with scarlet on the abdomen and under tail-coverts.

179. *HARPACTES KASUMBA*.

Trogon kasumba (adult), Raffles, Trans. Linn. Soc. xiii. p. 282 (1821).

Trogon fasciatus, Temm. Pl. Col. 321.

Trogon temminckii, Gould, Monogr. Trog. t. 29.

Harpactes kasumba, Gould, Birds of Asia, 1856.

BURONG KASUMBA, Malays.

Malacca.

180. *HARPACTES DIARDI*.

Trogon diardi. Temm. Pl. Col. 541.

Harpactes diardi, Gould, Monogr. Trog. t. 30.

Malacca.

181. *ARACHNOTHERA FLAVIGASTRA*.

Anthreptes flavigaster, Eyton, P. Z. S. 1839, p. 105.

Arachnothera flavigaster, Blyth, J. A. S. Beng. xii. p. 981 ; xiv. p. 557 ; xv. p. 43.

Arachnoraphis flavigaster, Reichenbach (1854).

CHICHAP RIMBA, Malays (Eyton).

COLEECHAP PANGONE, Malays (Blyth).

CHRECHUP BASAR, Malacca.

From Malacca.

Length about 8 inches ; of wing 4 ; tail 2 ; bill to forehead $1\frac{3}{4}$; and tarse $\frac{7}{8}$ ths.

182. *ARACHNOTHERA CHRYSOGENYS*.

Arachnothera chrysogenys, Temm. Pl. Col. 388. f. 1 (1826).

Arachnothera flavigenis, Swains. Classif. of B. ii. p. 329 (1837).

Certhia longirostra, apud Horsfield, Trans. Linn. Soc. xiii. p. 167.

PRIT-ANDUN, Java (Horsf.).

SIAP JANTUNG, Sumatra (Raffles).

Remark.—*A. chrysogenys* and *A. flavigaster* are allied, but the former is much less in size, and the latter has a broad circle of yellow feathers surrounding the eye, in addition to the ear-tuft ; whereas *A. chrysogenys* is naked under the eye, and has a semicircle of yellow feathers above it.

183. *ARACHNOTHERA MODESTA*.

Anthreptes modesta, Eyton, P. Z. S. 1839, p. 105.

Arachnothera modesta, Blyth, J. A. S. Beng. xii. p. 981.

Arachnothera latirostris, Blyth, J. A. S. Beng. xii. p. 982 (1843).

CHICHAP NIO, Malays (Eyton).

Upper-parts bright yellowish olive-green, the lower pale ashy-green, and obscurely striated ; lower tail-coverts tipped with whitish ;

tail with a subterminal dusky band, all but the medial two pairs having a well-defined pure white spot near the extremity of the outer web, successively larger to the outermost. Bill dusky-brown, pale below. Feet yellowish. Length 6 inches; of wing $2\frac{7}{8}$; middle rectrices $1\frac{3}{4}$ inch, the outermost above $\frac{3}{8}$ less; bill to forehead $1\frac{1}{4}$ inch; tarse $\frac{5}{8}$ inch.

Malacca.

184. *ÆTHOPYGA SIPARAJA*.

♂ *Certhia siparaja*, Raffles, Trans. Linn. Soc. xiii. p. 299 (1822); Vigors, Mem. Raffles, p. 673.

Nectarinia siparaja, Jardine, Nat. Libr. Nect. pp. 235, 273.

Nectarinia mystacalis, Temm. Pl. Col. 126. f. 3 ♂; Müller, Verh. Naturl. Gesch. Ned. Ind. Zool. Aves, p. 54. pl. 9. f. 1 ♀.

♂ *Nectarinia lathami*, Jardine, Nat. Libr. Nect. pp. 233, 268 (1842).

SIPA-RAJA, Sumatra (Raffles).

Sir Stamford Raffles in his description of this species evidently omitted describing the rump as *yellow*. This I find is the case upon examining a typical drawing from his collection, and also specimens before me from Pinang.

Jardine's description of *N. lathami* certainly agrees with this species, both in the colour of the crown, and deep yellow of the rump, and in the gradation of the tail-feathers; but I have still some doubt about Temminck's *N. mystacalis*.

Pinang.

185. *ANTHREPTES MALACCENSIS*.

Certhia malaccensis, Scopoli, Del. Floræ et Faunæ Insub. (1786); Sonn. Voy. pl. 116. f. 1.

Anthothreptes malaccensis, Cabanis, Catal. B. Mus. Heine, p. 104.

Certhia lepida, Sparrman, Mus. Carls. pl. 35 (1787).

Nectarinia lepida, Temm. Pl. Col. 126. f. 1, 2.

Nectarinia javanica, Horsf. Trans. Linn. Soc. xiii. p. 167 (1820).

Cinnyricinclá javanica, Reichenbach (1854).

PRIT-GANTIL, Java (Horsf.).

From Malacca and Pinang.

Inhabits the Burmese and Malay countries, Java, Sumatra, Borneo, and Macassar (Wallace).

186. *ANTHREPTES HYPOGRAMMICA*.

♂ *Nectarinia hypogrammica*, Müller, Verh. Nat. Gesch. Ned. Ind. Zool. Aves, p. 63. pl. 8. f. 3 (1839-44).

♀ *Anthreptes macularia*, Blyth, J. A. S. Beng. xi. p. 107 (1842).

♂ *Anthreptes nuchalis*, Blyth, J. A. S. Beng. xii. p. 980 (1843).

Hypogramma nuchalis, Reichenbach (1854).

Upper parts rich dark olive-green; the tail dusky, its outer feathers successively more broadly margined with whitish, chiefly on their inner webs; base of hind-neck and the upper tail-coverts (of the male only) brilliant steel-blue; under-parts streaky, each

feather being broadly marked with dark olive-green along the middle, and laterally margined with pale sulphur-yellow, brightest on the belly. Bill dusky-brown. Legs leaden-colour. Length about $5\frac{1}{2}$ inches; of wing $2\frac{5}{8}$; tail $1\frac{7}{8}$; bill to forehead above $\frac{3}{4}$; and but little curved; and tarse $\frac{5}{8}$ inch.

From Pinang.

Inhabits the Malayan Peninsula, Sumatra, Borneo.

187. CYRTOSTOMUS FLAMMAXILLARIS.

Nectarinia flammaxillaris, Blyth, J. A. S. Beng. xiv. p. 557 (1845); xv. p. 370.

Nectarinia jugularis apud Blyth, J. A. S. Beng. xii. p. 979.

Male. Colour of the upper-parts dull olive-green, brightening a little on the rump; beneath moderately bright chrome-yellow; and the axillary tuft intense yellow, with flame-colour anteriorly; throat and front of neck very dark glossy purple, margined laterally and at the gorget with bright steel-purple, below which is a narrow cross-band of dark red.

Female. Colours similar, except in wanting the axillary tuft, and having the throat and fore-neck yellow, like the rest of the lower-parts. Tail blackish, its outermost feathers tipped with pure white, this successively decreasing in quantity on the two or three next.

Length $4\frac{1}{8}$; wing $2\frac{1}{8}$; tail $1\frac{5}{8}$; bill to forehead $\frac{5}{8}$; tarse $\frac{1}{2}$ inch.

A presumed young male has the chin and middle of neck to breast dark glossy purple, with a few steel-blue feathers laterally from the chin, the sides of the neck from base of bill being yellow; no flame-coloured axillary tuft.

From Pinang. Also inhabits Arracan and Tenasserim.

188. LEPTOCOMA HASSELTII.

Nectarinia hasseltii, Temminck, Pl. Col. 376. f. 3; Jardine, Nat. Libr. Nect. pp. 218, 262. pl. 22; Müller et Schlegel, Verh. Nat. Gesch. Zool. Aves, p. 59. pl. 10. f. 5 ♀.

Leptocoma hasseltii, Cabanis, Catal. B. Mus. Heine, p. 104.

Certhia brasiliiana, Shaw, Zool. viii. p. 257.

Certhia sperata apud Raffles, Trans. Linn. Soc. xiii. p. 298.

Nectarinia phayrei, Blyth, J. A. S. Beng. xii. p. 1008 (1843).

CHIRICHIT, CHECHAP seu SIAP, Sumatra (Raffles).

Male. Crown brilliant golden-green; cheeks, sides and back of neck, interscapularies, and wings, deep black; tail also black, but richly glossed with purple; scapularies, rump, and upper tail-coverts brilliant steel-blue; throat and fore-neck splendid amethystine-purple; breast and flanks anteriorly rich dark red, posteriorly with the vent and under tail-coverts dull greyish-black.

Female. Upper-parts including the shoulder and upper tail-coverts dull olive-green; crown tinged with grey; wings dusky-black, the larger range of wing-coverts margined with grey, the primaries with cinnamon-yellow; tail blue-black; cheeks, throat,

and breast, dull greenish-yellow ; abdomen and under tail-coverts pale yellow, the abdomen more or less tinged with dark chrome-yellow. Length $3\frac{3}{4}$ inches ; wing $1\frac{7}{8}$ inch ; tail $1\frac{1}{4}$ inch ; bill to forehead $\frac{1}{2}$ inch.

Obtained plentifully at Pinang and Malacca. Also inhabits Borneo, Sumatra, Tenasserim, and Arracan.

189. CHALCOPARIA PHÆNICOTIS.

Nectarinia phænicotis, Temm. Pl. Col. 108. f. 1 ♂ . 388 ; f. 2 ♀ (182).

Anthreptes phænicotis, Blyth, J. A. S. Beng. xii. p. 979 (1843) ; xiv. p. 557.

Nectarinia cingalensis, Gray, Gen. of B. i. p. 99.

Chalcoparia cingalensis, Cabanis, Catal. B. Mus. Heine, p. 103.

? *Motacilla cingalensis*, Gmel. S. N. i. p. 964 (Brown's Ill. pl. 32).

Male. Upper-parts glossy bronzed-green, including the crown and wing-coverts ; upper tail coverts glossy-green, without the bronzing ; rest of the wings and tail dusky, the latter margined exteriorly with shining-green, and the secondaries and tertiaries with faint purple ; throat, fore-neck, and breast, light-ferruginous ; the rest of the under-parts bright yellow ; ear-coverts amethystine, passing into ruby-red on the sides of the neck, and separated from the hue of the throat by a stripe of glossy purple ; bill dull black ; legs greenish.

Female. Upper-parts glossless olive-green, tinged with grey ; throat and breast as in male, but paler ; under-parts dull greenish-yellow ; wings and tail margined with aureous-green. The young resemble the female, except in the more downy texture of their feathers, and the chestnut colour of the throat and breast is reduced to a slight tinge.

Male, female, and young from Malacca.

Inhabits the Burmese and Malay countries.

190. PRIONOCHILUS PERCUSSUS.

Pipra percussa, Temminck, Pl. Col. 394. f. 2.

Prionochilus percussus, Strickl. P. Z. S. 1841, p. 29.

Dicaeum ignicapillum, Eyton, P. Z. S. 1839, p. 105.

NALOW, Malays (Eyton).

Adult male. Upper parts dull lavender-blue, the lower parts bright yellow, passing to whitish on the lower tail-coverts ; a large igneous-red spot on the vertex, and another along the centre of the breast ; a white streak from the side of lower mandible, divided from the yellow of the throat by another of lavender-blue. Primaries narrowly margined with pale lavender-blue, secondaries with olive-green, and the tertiaries with dull lavender-blue. Bill black above, more or less whitish beneath, legs lead-coloured.

Young male. Upper-parts as in adult, but intermixed throughout with olive-green, igneous spot on vertex smaller and less bright ;

wings margined with olive-green; white streak from lower mandible and under-parts paler and duller coloured, the igneous spot smaller.

Female. Olive-green above, paler and more yellowish below, with pale yellow along the throat, and darker yellow along the breast; streak from bill whitish. Coronal spot igneous-yellow. In both sexes the axillaries and under wing-coverts are pure white.

Length about $3\frac{1}{2}$ inches; wing 2 to $2\frac{1}{4}$ inches; tail $1\frac{1}{4}$ inch; bill to gape $\frac{5}{12}$; and tarse $\frac{1}{2}$ inch.

Pinang and Malacca. Common.

191. PRIONOCHILUS MACULATUS.

Pardalotus maculatus, Temm. Pl. Col. 600. f. 3.

Prionochilus maculatus, Strickl. P. Z. S. 1841, p. 29.

Adult. Upper-parts olive-green, the igneous coronal spot pale; lores dull whitish; a whitish streak from base of lower mandible separating another of olive-green from the yellowish-white of the middle of the throat; under-parts yellow, brightest along the middle, and streaked laterally with olive-green. Axillaries and under wing-coverts pure white. Size of *P. percussus*.

From Pinang and Malacca. Also inhabits Borneo.

192. BUTRERON CAPELLII.

Columba capellei, Temm. Pl. Col. 143; Knip. et Prev. Fig. t. 38.

Vinago capellei, Cuv. Règ. Anim. i. p. 492 (1829).

Toria capellei, Blyth, J. A. S. Beng. xiv. p. 848.

Vinago giganteus, Vigors, Zool. App. Mem. Raffles, p. 674.

Treron magnirostris, Strickland, Ann. Nat. Hist. 1844, p. 115.

Butreron capellii, Bonap. C. G. Av. ii. p. 9.

From Pinang.

In this species the beak is lengthened by the prolongation of its soft and tumid basal portion, becoming, as remarked by Mr. Strickland, "almost vulturine in form."

Iris blackish-brown; bill pale yellow; feet pale orange.—Cantor, MS. Note.

193. TRERON NIPALENSIS.

Toria nipalensis, Hodgson, Asiat. Res. xix. p. 164. t. 9, fig. (1836); Blyth, J. A. S. Beng. xiv. p. 847.

THORIA (*i. e.* beaked), Nepal (Hodgson).

KROCHA, Malays (Blyth).

POONAI CAHIO-ARA, Malacca (Cantor).

Green, yellowish beneath and towards the tail; crown ash-coloured; mantle of the male, deep marrone-red, and a faint tinge of fulvous on the breast; primaries and their larger coverts black, the latter margined with yellow; middle tail-feathers green, the rest with a blackish medial band, and broad grey tips; lower tail-coverts cinnamon-coloured (more or less deep) in the male; subdued white, marked with green in the female. Bill greenish-white, with a large vermilion spot occupying the membrane at the lateral base of the

mandibles ; legs also vermillion ; irides deep red-brown, with a blue inner circle ; orbital skin bright green.

Length $10\frac{3}{4}$ by 17 inches ; closed wing $5\frac{3}{4}$ inches.

Inhabits the central and lower hilly regions of Nepal, and more abundantly those of Assam, and Arracan, spreading southwards to the Tenasserim Provinces and Malayan Peninsula. It also occurs, says Mr. Blyth, in the hilly districts of Bengal, but rarely strays into the plains, though specimens are occasionally met with even near Calcutta.

194. OSMOTRERON VIRIDIS.

Columba viridis, Scopoli, Del. Flor. et Faun. Insub. p. 94 (1786); Pl. Enl. 138 ; Sonn. Voy. t. 64, 65.

Columba vernans, Gmel. Syst. Nat. i. p. 789 (1788) ; Horsfield, Raffles.

Treron vernans, Blyth, J. A. S. Beng. xiv. p. 851 ; Mosley et Dillwyn, Nat. Hist. Labuan, p. 30.

Osmotreron vernans, Bonap. C. G. Av. ii. p. 12.

Col. purpurea, Gmel. (Brown's Ill. pl. 18).

KATE ♂, JOWAN ♀, Java (Horsf.).

POONAI CROCHI, Malays (Eyton).

POUYE, Malays (Blyth).

Malacca and Pinang. Common.

195. OSMOTRERON OLAX.

♂ *Columba olax*, Temm. Pl. Col. 241 ; Knip, et Prev. Fig. t. 12.

Osmotreron olax, Bonap. C. G. Av. ii. p. 15.

SEMBOAN, Malays.

Malacca.

Male. The whole head, nape, throat, flanks, rump, and upper tail-coverts ash-colour, palest on the forehead and throat ; mantle very dark maroon ; wings black, the larger coverts margined with yellow ; tail ashy-black, each feather, except the two medial, with a pale tip ; breast with a buff-orange patch, passing to green along the middle of the abdomen ; tarsal plumes, vent, and under tail-coverts dark cinnamon, mingled on the former with ashy.

Female. Differs in having the forehead and crown only ash coloured ; the upper parts being dark green, and the medial rectrices above wholly green, with the two next also greenish basally along the outer web ; throat pale ashy, passing to yellowish-green on the breast and middle of abdomen, the sides of the latter, below the ashy flanks, being dark green ; tarsal plumes, vent, and under tail-coverts cinnamon-white, mingled on the two former with dark green, the latter dusky along the shafts.

Length about 8 inches, of wing 5 inches, tail 3 inches.

196. RAMPHICULUS JAMBU.

Columba jambu, Gmel. S. N. i. p. 784 (1788) ; Temm. Fig. t. 27, 28 ; Raffles, Trans. Linn. Soc. xiii. p. 316.

No. 413.—PROCEEDINGS OF THE ZOOLOGICAL SOCIETY.

POONAI JAMBOO, Sumatra (Marsden ; Raffles).

POONAI GADING, Malays (Eyton ; Cantor).

From Pinang and Malacca.

Adult male. Head deep crimson, this colour extending from the front to the middle of the crown, behind the eyes, and across the ear-coverts to lower part of the throat ; a cinnamon-black stripe down the throat ; hind part of the head, nape, and whole upper parts dark green, but with a buffy caste of plumage ; primaries black, their outer webs dark greenish ; secondaries and tips of primaries narrowly margined exteriorly with buffy-white ; tail green, exterior feathers with the inner webs black, the whole with a broad pale terminal band ; hind part of ear-coverts, sides, and front of neck pure white, passing to buffy-white along the sides of the breast and whole of abdomen, the middle of the breast being of a beautiful suffused-pink colour ; flanks and axillaries greyish-green ; under tail-coverts deep cinnamon.

Female. Wholly green, with the crimson of the head and gular stripe very dull and pale ; abdomen mingled green and buff ; under tail-coverts paler.

Young male. Head and sides of throat greyish-green, gular stripe dark cinnamon ; breast mingled green and pink ; abdomen and under tail-coverts buff-white.

A still younger specimen is like the female, but has no trace of crimson about the head ; the throat being pale cinnamon-brown.

Length of adult about 9 inches ; of wing $5\frac{1}{2}$; tail $3\frac{1}{2}$ inches.

197. CARPOPHAGA SYLVATICA.

Columba sylvatica, Tickell, Journ. As. Soc. Beng. ii. p. 581 (1833).

Carpophaga sylvatica, Blyth, Journ. A. S. Beng. xiv. p. 856 ; Ann. N. H. xix. p. 52 ; Bonap. C. G. Av. p. 33 ; G. R. Gray, List of Columb. Brit. Mus. p. 17.

Carpophaga ænea of India, Auctorum.

Pinang.

"Iris and tarsus palpebrarum and feet crimson ; bill pale crimson, apex light grey."

198. MYRISTICIVORA BICOLOR.

Columba bicolor, Scop. Del. Flor. et Faun. Ins. p. 94 (1786) ; Sonn. Voy. t. 103.

Myristicivora bicolor, Reichenbach, Bonap. C. G. Av. ii. p. 36.

Carpophaga myristicivora (Scop.), G. R. Gray.

Columba alba, Gmelin.

Columba litoralis, Temm. Fig. t. 7.

"Iris blackish-brown. Tarsus palpebrarum cobalt. Bill cobalt, apex of mandibles black. Feet cobalt."

Province of Wellesley.

199. GEOPELIA STRIATA.

Columba striata, Linn. S. N. i. p. 282 (1767) ; Edw. Birds, pl. 16.

Columba malaccensis, Gmelin.

Columba bantamensis, Sparrman, Mus. Carls. iii. t. 67; Horsfield et Raffles.

KATITIRAN, Sumatrans (Raffles).
Pinang.

200. CHALCOPHAPS INDICA.

Columba indica, Linn. S. N. i. p. 284 (1767); Edw. B. pl. 14.

Columba javanica, Gmel. S. N. i. p. 781; Horsfield, Trans. Linn. Soc. xiii. p. 183; Raffles, id. p. 317.

Columba cæruleocephala, Gmel.

Columba superciliaris, Wagler, Syst. Av. Col. sp. 80.

Monornis perpulchra, Hodgson.

Chalcophaps augusta, Bonap. C. G. Av. ii. p. 92.

TAKOAT et POONAI TANNA, Malays.

From Pinang and Malacca. Identical with Indian and Javanese specimens.

"Iris dark brown; bill light scarlet; feet pale lake."—Cantor's Notes.

201. TURTUR TIGRINUS.

Columba tigrina, Temm. Pig. t. 43 (1808); Horsf. Trans. Linn. Soc. xiii. p. 183.

Turtur tigrinus, Blyth, Journ. As. Soc. Beng. xxiv. pp. 263, 480.

Turtur chinensis (pt.), Bonap. Consp. Gen. Av. ii. p. 63; G. R. Gray, List of Columbæ, Brit. Mus. p. 42.

DERO seu DERKUKU, Java (Horsfield).

Adult and young.

Specimens procured at Pinang and Malacca.

"This species resembles *T. suratensis*," says Mr. Blyth, "but wants the pale vinaceous spots on the scapularies and wings, whilst it retains the black mesial streaks, which are wanting in *T. chinensis*, Scop. (Sonn. Voy. t. 102): there is also much less ash-colour on the wings than in *T. suratensis*, but it is of the same size as the latter, or much smaller than *T. chinensis* (which last has also deep ash-coloured lower tail-coverts)."

5. REMARKS ON THE HABITS OF A HERRING GULL (*LARUS ARGENTATUS*). BY A. D. BARTLETT.

In calling attention to the singular and remarkable habits of a bird of this species, permit me to give an extract from the 'Garden Guide' of 1852, in order that the origin of this individual specimen may be perfectly known.

"In the beginning of June 1850, a Herring Gull (*Larus argentatus*) hatched out her young ones in the enclosure (No. 17), which is overshadowed by two weeping ash trees. The male bird had assisted her so constantly in incubation, that his strength gave way,



Moore, Frederic. 1859. "4. List of Malayan Birds collected by Theodore Cantor." *Proceedings of the Zoological Society of London* 27, 443–467.

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