

AN ACCOUNT OF THE SUMATRAN BIRDS IN THE ZOOLOGICAL
MUSEUM, BUITENZORG, WITH DESCRIPTIONS OF
NINE NEW RACES.

By

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(With 2 plates).

Though large collections of birds from other parts of Sumatra had been examined and written about by my late colleague H. C. ROBINSON and by myself ¹⁾, I had seen no extensive material from the extreme north and south parts of the island ²⁾ and I was very pleased therefore, when after returning the Bornean birds belonging to the Zoological Museum, Buitenzorg (my account of which appears in *Treubia*, XII, 1930, pp. 395—424), Dr. K. W. DAMMERMAN, the Director of that institution, sent me for determination the Sumatran birds in his charge, for many of them were obtained in the Achenese, Lampong and Palembang Districts.

Several papers dealing with South Sumatran birds have been published in the last fifty years ³⁾ but the most recent is practically thirty years old,

¹⁾ vide:

I. H. C. ROBINSON and C. BODEN KLOSS, Results of an Expedition to Korinchi Peak, 12,400 ft, Sumatra: Birds. Journ. Fed. Malay States Mus. VIII, Part II, Vertebrates, pp. 81—284, Plates IV—VII, (1918); pp. 319—362 (1923).

II. H. C. ROBINSON and C. BODEN KLOSS, On a collection of Birds from Northeast Sumatra made by Mr. A. C. F. A. VAN HEYST, Journ. Straits Branch, Royal Asiatic Soc. No. 80, pp. 73—133 & map (1919); No. 81, pp. 79—115 (1920).

III. H. C. ROBINSON and C. BODEN KLOSS, On a large collection of Birds chiefly from West Sumatra made by Mr. E. JACOBSON. Journ. Fed. Malay States Mus. XI, pp. 189—340, Plates VI—XI, 3 maps (1924).

²⁾ Mr. EDWARD JACOBSON's collections included material from Mt. Dempu (camps between 900 and 2400 metres) on the Palembang-Benkoelen Boundary and a series of skins from the vicinity of Benkoelen Town on the south-western coast.

³⁾ I. MARQUIS of TWEEDALE. On a collection of Birds made by Mr. E. C. BUXTON in the District of Lampong, S. E. Sumatra. *Ibis*, 1877, pp. 283—323, pls. V, VI.

II. A. G. VORDERMAN. Bijdrage tot de Ornithologie van Sumatra. *Natuurk. Tijds. v. Ned. Ind.* XLI, 1881, pp. 125—129.

III. F. NICHOLSON. On collections of Birds made by Mr. H. O. Forbes in South-eastern Sumatra. *Ibis*, 1882, pp. 51—65.

IV. F. NICHOLSON. On a second collection of Birds made in the Island of Sumatra by Mr. H. O. Forbes. *Op. cit.*, 1883, pp. 239—257, Plate X.

V. A. G. VORDERMAN. Tweede Bijdrage tot de kennis der Ornithologie van Sumatra, *op. cit.* XLIX, 1890, pp. 38—70.

VI. A. G. VORDERMAN. Over eene Collectie Vogels afkomstig van de Lampong (Zuid-Sumatra), *op. cit.* LI, 1891, pp. 210—249.

VII. A. G. VORDERMAN. Lampong-Vogels II. *op. cit.*, LV, 1895, pp. 137—156.

VIII. WITMER STONE. On a collection of Birds from Sumatra obtained by ALFRED C. HARRISON, Jr., and Dr. H. M. HILLER. *Proc. Acad. Nat. Sci. Phil.*, LIV, 1902, pp. 670—691.

IX. C. PARROT. Beitrage zur Ornithologie Sumatras und der Insel Banka. *Abhandl. der K. Bayer. Akad. Wiss. II. Kl.* XXIV, Bd. 1 Abt. 1907, pp. 151—286.

for PARROT'S account of Sumatran birds includes only a few obtained apparently in the South.

The largest of the present collections was made at Wai Lima in the Lampongs during 1921 by Mr. H. C. SIEBERS, until lately Ornithologist of the Buitenzorg Museum. The collection made in Palembang by Mr. B. STRASTERS in 1915 is carefully labelled. VORDERMAN'S skins, unaccompanied by field-labels, are merely marked "Palembang" and I do not know whether this refers to the district or to the town. Many of the older specimens are unsatisfactory in that it has not been possible to trace with absolute certainty the obscure localities given on their labels such as Kajoe Agoeng, Peloempang, Loboek Karet, Boekit Gadang. There are several mountains of the last name in Sumatra.

The most recent of the material before me was obtained by Dr. DAMMERMAN'S Javanese collector, MADSOED, in Acheen in 1930. A comparison of it with the material from the Lampongs and Palembang has been most interesting: the greater part of the northern collection, however, came from the mountains while the southern material is mostly from the lowlands.

I have often found considerable colour differences between certain of the Achenese skins obtained last year and those collected in Central and South Sumatra twenty to forty years ago, but I have regarded this difference as due in great part to postmortem changes in the older examples.

Acheen has been little explored zoologically and literature on its birds is not extensive. ⁴⁾

Part of the Achinese material comes from low localities on, or near, the eastern part of the north coast of Acheen. (Lho Seumawe, Blangkolam, Aloer Poerba, Pantong Laboe, Rampah); but most of it is from higher collecting stations between Bireuen, near the centre of the north coast, and Lake Takengon (Laut Tawar), about 70 kilometres inland. This lake, situated at a height of twelve or thirteen hundred metres among mountains, lies in the only region of Malaysia where pine-trees (*Pinus merkusii*) occur. Isaq, 1000 metres, is about 15 kilometres directly south of Lake Takengon and Pajatoeng Kalan (Pangmoh) 2000 metres, is south of Isaq.

Sumatra is after Borneo the largest island in Malaysia. It stretches from

¹⁾ I. A. O. HUME. Acheen (Birds collected by W. DAVISON) Stray Feathers, I, 1873, pp. 441—463.

II. C. W. RICHMOND. Birds collected by Dr. W. L. ABBOTT on the coast and islands of Northwest Sumatra. Proc. U. S. Nat. Mus., XXVI, 1903, pp. 485—524.

III. F. C. VAN HEURN and R. C. E. G. J. BARON SNOUCKAERT VAN SCHAUBURG. Avifaunistische Studien in de Gajo-landen. Club van Nederl. Vogelk. Jaarber. No. 11, 1921, pp. 4—19.

IV. F. C. VAN HEURN. Over een collectie Vogelhuiden van Oost-Atjeh. op. cit. supra., No. 12, 1922, pp. 65—83.

V. R. SNOUCKAERT VAN SCHAUBURG. On a collection of Birds from Acheen. Ibis 1922, pp. 662—675 (Practically a reprint of III & IV in English).

The following paper deals with a small collection from a locality a little south of those whence came the North-east Sumatran collections discussed by Messrs ROBINSON and KLOSS: the area is continuous with the south-east of Acheen:

A. C. F. A. VAN HEYST and R. SNOUCKAERT VAN SCHAUBURG. Aanteekeningen omtrent de avifauna van de Karhoogvlakte tusschen Seriboe Dolok en het Toba-Meer. Club. v. Nederl. Vogelk., Jaarber. No. 10, 1920, pp. 50—59.

Lat. 5° 4' North to 5° 59' South, lying across the equator at an angle of about 45 degrees. From end to end runs the Barisan range of mountains, of which Korinchi Peak (or Mt. Indrapura) has a height of 3806 metres (12487 feet). It is the second loftiest summit in the subregion.

The only important depression in the Barisan Range occurs in the neighbourhood of Padang Sidempuan (Lat. 1° 30' N). North of this locality the range is broader than to the south though the island is considerably narrower. A less marked interruption exists inland from Benkoelen (Lat. 4° 15' S.).

On either side of the mountains are low-lying plains, far broader on the east than on the west. The greatest breadth of Sumatra, at right angles to its axis and slightly south of the equator, is about 4½ degrees.

Such a great island, stretching through so many degrees of latitude and actually longer than the Malay Peninsula, has naturally evolved a number of geographical races. I do not propose to analyse the local zoological differences — best shown perhaps by the mammals and birds at present — but the Padang Sidempuan depression does appear to be the boundary of a number of local forms confined to the northern part of the island. Thus the orang utan is only known to the north of 1° 30' N. and subspecies of several tupaia and squirrels have the same restricted habitat. Of birds several races seem to be confined in Sumatra to this northern area: amongst them are the following forms represented by others in the centre and south:— *Arborophila orientalis rolli*, *Treron curvirostra* (?) *harterti*, *Treron vernans parva*, *Streptopelia chinensis* (?) *minor*, *Serilophus lunatus rothschildi*, *Pycnonotus bimaculatus snouckaerti*, *Stachyris poliocephala pulla*, *Thringorhina striolata umbrosa*, *Cyanoderma erythroptera pyrrophaea*, *Cettia montana sepiaria* and *Munia atricapilla batakensis*.

In the south there seems to be a small infiltration of Javanese forms.

As the result of the examination of this material I have proposed seven new races of Sumatran birds and have named Javanese representatives of *Pitta sordida* and *Aethostoma pyrrogenys*. The presence of *Phylloscopus occipitalis* (subsp. *coronatus*) in Sumatra does not appear to have been recorded before. Several other known races have been added to the fauna of the island.

Systematic.

Treron vernans parva subsp. nov. N. E. Sumatra.

Pitta sordida sumatrana subsp. nov. S. Sumatra.

Pitta sordida javana subsp. nov. West Java.

Aethostoma pyrrogenys besuki subsp. nov. East Java.

Stachyris poliocephala pulla subsp. nov. N. E. Sumatra.

Cettia montana sepiaria subsp. nov. N. Sumatra.

Munia punctulata fretensis subsp. nov. Malay Peninsula and Sumatra.

Zosterops aureiventer sumatrana subsp. nov. Sumatra.

Zosterops chlorates korinchi subsp. nov. Sumatra.

PHASIANIDAE.

Rhizothera longirostris longirostris (Temm.).

1 sex. inc., Fort van der Capellen, Sumatra's Westkust, 500—750 metres. (OUWENS coll.).

Wing 193 mm. (worn).

Arborophila rubrirostris (Salv.).

1 ♂, Sungei Kumbang, Korinchi, 1350 metres. (ROBINSON and KLOSS coll.).

1 ♀, Korinchi Valley, 900 metres. (ROBINSON & KLOSS coll.).

1 ♂, Pajatoeng Kalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 140, 144; ♀ 133 mm.

This partridge shows considerable variation in the amount of white on the crown and nape; in the black banding of the upper parts, the ground-colour of which is also somewhat variable; and in the colour of the throat and foreneck which varies from entirely white, as in the juvenile, to entirely black except for the chin. The ear-coverts vary from white with a black spot to the reverse, and the lores also.

Arborophila orientalis sumatrana O.-GRANT.

1 ♀, Pagar alam, Palembang, 500—750 metres.

1 ♀, Sumatra.

Wings 133, 137 mm.

As with the typical Javanese form this race also is very variable in the colour of the crown (brown tipped with black to black), black barring on the upper parts, variations in the amounts of black and white on the foreneck and amount of white on the abdomen.

Arborophila orientalis rolli (ROTHS.). Plate 3.

Arboricola rolli ROTHSCHILD, Bull. B.O.C. XXV, 1907, p. 7 (Sibajak near Brastagi, *) N. E. Sumatra); ROBINSON and KLOSS, Journ. Straits Branch Royal Asiatic Soc., No. 80, 1919, p. 74 (Bandar Baroe and Tengkeh, Simeloengen near Brastagi); VAN HEYST and SNOUCKAERT, Club v. Ned. Vogelk., Jaarb. No. 10, 1920, p. 52 (Singgalang, near Brastagi).

1 ♂, Redelong, Acheen, 1300 metres. 24 July 1930.

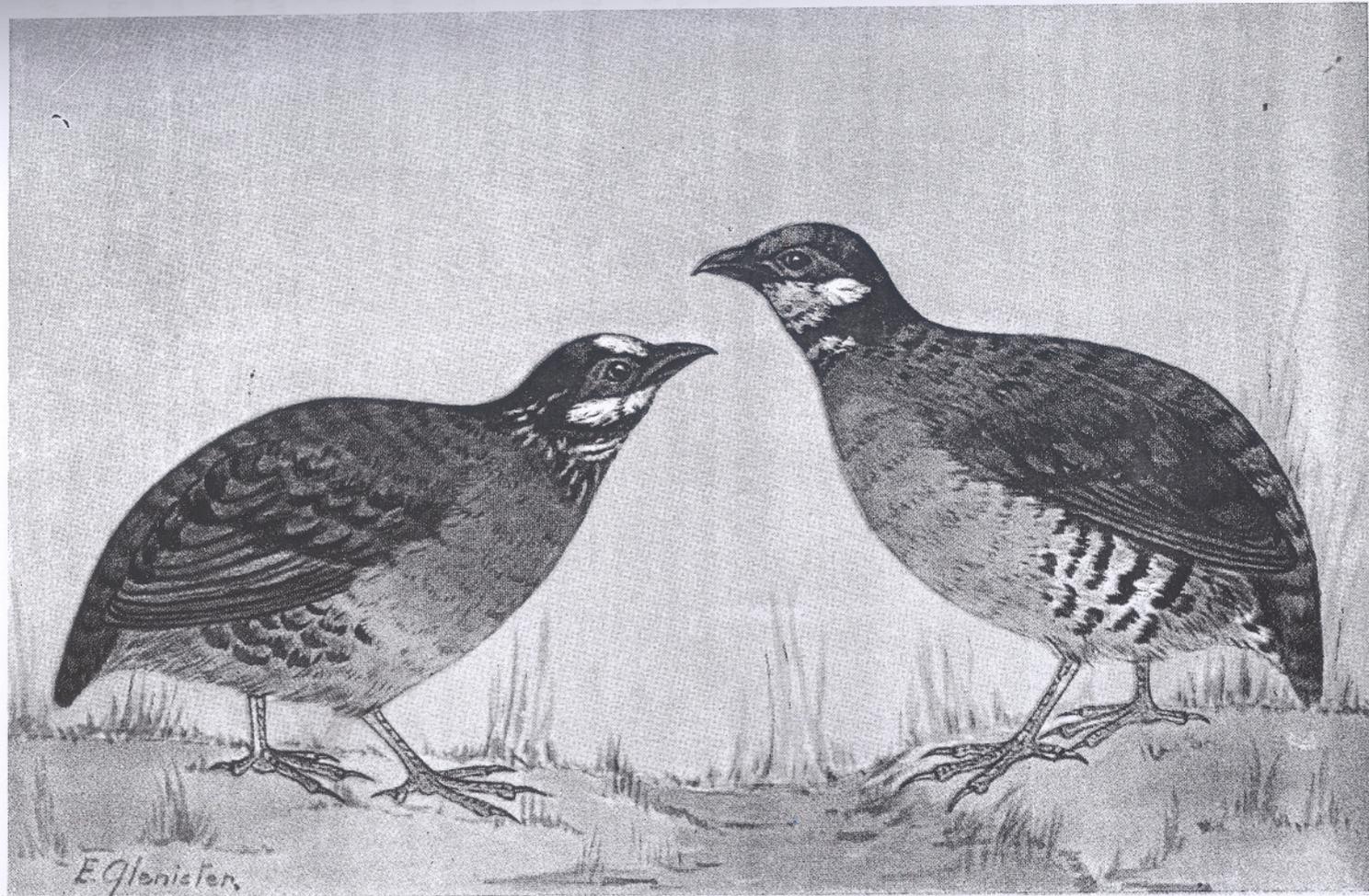
Bill black, orbital skin red, feet apparently pink or red (from dried skin).

Wing 145 mm, tarsus 45 mm.

This is apparently the fourth known adult specimen of this bird. I regard it as the representative in the northern mountains of Sumatra of *A. o. sumatrana* which is found in the centre and south.

As with the other subspecies the colours of the head and foreneck are evidently somewhat variable, but the present example agrees with ROBINSON and KLOSS' description of their adult male. The type was said to have the

*) Brastagi, now a well-known hill-station, is in the Battak Mountains not far from the north end of Lake Toba.



Arborophila orientalis campbelli, ♀ (Left); *A. o. rolli*, ♂ (Right).

throat rusty olive-brown, but that colour is found on the breast and this character easily distinguishes *rolli* from *sumatrana* (vide plate 3). The black bill and absence of white spots on crown and nape separate it from the red-billed *A. rubrirostris*.

The few specimens of this mountain partridge previously secured were all taken near the north end of Lake Toba so the present example extends the range by more than 150 miles.

The soft parts of the bird from Singgalang are given as:— feet, flesh-coloured; iris dark brown; bill black with orange-brown tip.

I have shown with this bird a figure of *A. o. campbelli* (ROBINSON) which is its representative in the Malay Peninsula. Coloured figures of the other Sumatran subspecies *A. o. sumatrana* (O. GRANT) and of the East Javanese form *A. o. orientalis* (HORSFIELD) are given in Journ. Fed. Malay States Mus. XI, 1924, plate VII.

Caloperdix oculo sumatrana O.-GRANT.

2 ♂, 1 ♀, Kajoetanam, Sumatra's Westkust. (OUWENS coll.).

1 ♀, Sawah loento, Sumatra's Westkust, 500 metres (RAPPAUD coll.).

1 ♂, Sumatra.

1 sex. inc., Komering ilir, Palembang.

1 sex inc., Sumatra.

Wings ♂ 134, 138, 140: ? 138, 147: ♀ 135 mm.

A good deal of variation is shown as regards the colour of the pale bars on mantle and sides of body, and in the presense or absence of black bars on breast and abdomen.

Rollulus roulroul (SCOP.).

1 ♂, Palembang.

1 ♂, Komering ilir, Palembang.

1 ♂, Aloer Poerba, Acheen.

Wings 138, 141, 143 mm.

Excalfactoria chinensis subsp.

1 ♂, Lampongs,

1 ♂, Sumatra.

1 ♂, Medan, N. E. Sumatra.

Wings 68, 69, 72 mm.

The males of this species are very variable but these specimens seem to be within the range of variation of a Malayan series. The only difference between the specimen from the Lampongs and that from Medan is that the former has rufous in the wing whereas there is none in the wing of the latter. The bird labelled "Sumatra" has the chestnut area of the underside much more extensive than the others. These individual differences are found in Malayan birds, *E. c. chinensis*.

Birds from South and West Sumatra have been determined as *E. c. lineata*, the Philippine form, the female of which is more heavily barred and darker than the continental one: and ROBINSON and KLOSS therefore included *E. c. palmeri* RILEY, a name given to Javanese birds, in their Sumatran List.

Houppifer erythrophthalmus erythrophthalmus (RAFFLES).

1 ♀, Talangbetoetoe, Palembang (KREHT coll.).

Wing 220 mm.

Houppifer inornatus SALV.

1 ♀, Palembang.

Wing 213 mm.

The female, which is chestnut with pale centres to the feathers, was first fully described and figured in Journ. Fed. Malay States Mus., VIII, part 2, 1918, p. 101, pl. IV.

Lophura ignita sumatrana (DUBOIS).

Euplocamus sumatranus DUBOIS, Bull. Ac. Belg. (2) XLVII, 1879, p. 825 (Palembang, South Sumatra); VORDERMAN, Nat. Tijd. Ned. Ind. XLIX, 1890, pp. 97—101.

Lophura sumatrana BÜTTIKOFER, Notes Leyden Mus., XVII, 1896, pp. 177—181.

1 ♀, Komering ilir, Palembang *).

Wing 246 mm.

A bird of very bright rufous colour only faintly vermiculated and only slightly patched with rufous on the foreneck and breast. Tail chestnut.

GHIGI has recently dealt with the Crested Fireback Pheasants of Sumatra in a paper in which he recognises four forms in the island, two of which are named by himself (Rev. d'Hist. Nat. App., L'Oiseaux, VII, 1926, pp. 48—52 and plate).

His views are weakened by two incorrect premises:— (I) that BÜTTIKOFER was the first to name *L. sumatrana* on an example in the Leyden Museum: (II) that the so-called *rufa* of Sumatra is not the typical *rufa*, because Sumatra is not inhabited by the true *rufa*. *Sumatrana* was described by DUBOIS and the type, a male, is in the Royal Natural History Museum at Brussels: BÜTTIKOFER, who discussed the genus *Lophura*, stated that there were two males in Leyden in every respect similar to the type in Brussels which he had examined. *Rufa* is based on a Sumatran female described by RAFFLES (*Phasianus rufus* Trans. Linn. Soc., XIII, 1822, p. 321. Undoubtedly from the West Coast of Sumatra: either Benkoelen or Padang) and this author also described the male under *Phasianus ignitus* LATHAM. (The female described by RAFFLES under this name is not a *Lophura*, but probably the female of *Acomus inornatus* SALV.).

I do not find GHIGI's treatment convincing and judging from the material I have seen and information given by live animal dealers am still strongly

*) The provenance of this female is the same as that of one of the two males in Leyden which BÜTTIKOFER definitely determined as *sumatrana* (l.c.s., p. 179).

inclined to believe that only two Crested Fireback Pheasants inhabit the island, the greater part of which is occupied by *L. rufa* (RAFFLES), syn. *Euplocamus vieilloti* G. R. GRAY, Malay Peninsula: while in the south (perhaps confined to Palembang and the Lampongs) occurs *L. ignita sumatrana* (DUBOIS). The presence of white central tail-feathers in the males of the latter is probably a local aberration as I am informed that the tails of living males imported into Singapore from Palembang do not differ in any way from those of the well-known Bornean bird *L. ignita ignita* (S. & N.), syn. *Euplocamus nobilis* SCLATER. Apart from other differences the South Sumatran bird is distinguished by its very bright female; in colour above between Sanford's brown (Ridgway) and burnt sienna; by its tail coloured between chestnut and bay, and by the faintness of the dark vermiculations which are absent on head, neck, mantle and tail. (These are the characters of the female listed above).

In both Sumatran species there is no doubt individual variation and variation due to age, as in the two species occupying respectively the Malay Peninsula and Borneo where no hybridisation can occur. If in Sumatra there are two true species — a black-bellied one with white flank markings and white tail-feathers (*rufa*), and a red-bellied one with fulvous tail-feathers (*ignita*) — interbreeding in the area common to both would, combined with the variations, produce the individuals which seem to suggest the existence of several forms.

Lophura sumatrana albipennis, the more northern form proposed by GHIGI, seems to be either the northern *rufa*, or a hybrid inheriting marked *rufa*-like characters: *L. sumatrana delacouri*, GHIGI's southern form, is the southern *ignita sumatrana*, or a hybrid in which the feature of that subspecies are dominant.

GHIGI's type localities are unfortunately conjectural: he suggests that *albipennis* occurs in Sumatra opposite the Malay Peninsula, *delacouri* in the south of the island — that is to say that *albipennis* is found in the habitat of *rufa*, which it resembles: and *delacouri* in the region of *sumatrana* to which it seems very similar.

In Borneo occurs one species only: the Malay Peninsula is occupied by another, different, species only: in neither area have these solitary species developed into two forms. In Sumatra both species occur: and there no reason to believe that they are less naturally stable there than elsewhere. I believe that the additional so-called forms occurring in Sumatra are merely the result of hybridisation where the two species meet or overlap in the south.

Gallus gallus bankiva TEMM.

Gallus gallus robinsoni ROTHS., vide KLOSS, Ibis, 1931, p. 322.

1 ♀, Sawah loento, Sumatra's Westkust, 500 metres (RAPPAUD coll.).

Wing 188 mm.

The typical form occurs in North Sumatra: from it the Javanese race differs in that the male has the mantle darker, its feathers less lanceolate and the dark centres, when present, broader and more truncate. The pattern of the mantle differs in the same way in females.

Polyplectron chalcurom LESS.

1 ♂, 1 ♀, Palembang.

Wings ♂ 178: ♀ 154 mm.

Argusianus argus argus (LINN.).

2 ♂, Banjoeasin, Palembang.

Wings 680, 790 mm.

TURNICIDAE.

Turnix suscitator suscitator (GM.).*Turnix pugnax* and *javanicus* auct.

1 ♂, Palembang.

2 ♀ ad., 1 ♀ juv., Medan, N. E. Sumatra.

Wings ♂ 80: ♀ 86, 87 mm.

The male agrees more nearly with the Javanese than with Malayan males in having the black bars on the breast very pronounced and extensive and in being more rufous above.

I have no Javanese females, but the Medan females differ from Malayan females in having the black of the foreneck less extensive; in being less rufous below; in having the pale areas of the wings whiter, less buffy; and in having more rufous markings above which tend to form a collar. Females from Central Sumatra are also rufous above, and less black on the foreneck than Malayan examples. They do not, therefore, bear out the statement of ROBINSON and BAKER (Bull. B.O.C. XLVIII, 1928, p. 60) that while the typical race occurs in the south of Sumatra, the north of the island is inhabited by the Malayan form (*atroglularis* EYTON)¹.

The juvenile is paler and browner than the adults.

The character of general rufescence is of doubtful value and seems due in a great degree to postmortem changes. A recently collected series of Malayan birds is much greyer than another which was collected some years ago: but in the latter there is, nevertheless, no trace of the rufous collar shown by the Sumatran females.

TRERONIDAE.

Butreron capellei (TEMM.) subsp.?

1 ♂, Lampongs. (VORDERMAN coll.).

1 ♀ ad., 1 ♂ juv., Wai Lima, Lampongs.

1 ♀, Deli, N. E. Sumatra.

Wings ♂ 192, 177 juv.: ♀ 188, 189 mm.

I have seen no typical Javanese specimens which appear to be very scarce: but I cannot separate from each other Malayan birds (*magnirostris* STRICKL.), Bornean (*messophora* OBERH.) and Sumatran (*panochra* OBERH.). My late colleague, Mr. H. C. ROBINSON, after carefully examining and taking detailed

¹) STRESEMANN, in his summary of the forms of *T. suscitator* found in the Malay Archipelago records only the typical race in Sumatra (Mitt. Zool. Mus. Berlin XV, 1930, p. 645).

measurements of forty-five specimens from the above three localities in the British Museum was of the same opinion. Non-Javanese birds may, as a whole, differ from the typical form which, SCHLEGEL has remarked, has a small bill: if so, they should stand as *B. c. magnirostris*.

ROBINSON found that one female from the Lampongs had the exposed culmen short, viz., 19.2 mm (the same measurement for the Wai Lima female is 21.2 mm) and he remarked that a few Javanese races extends to the Lampongs but that females from Palembang had the exposed culmen over 24 mm. I consider the measurement an unreliable one as the feathering of the maxilla is very variable. The exposed culmens of the Lampongs male and Deli female both measure 24 mm.

Sphenurus oxyurus (TEMM.).

1 ♀, Rimbau pandjang, Sumatra's Westkust (OUWENS coll.).

1 ♂, Korinchi Valley, 800 metres (ROBINSON & KLOSS coll.).

Wings ♂ 160: ♀ 150 mm.

Treron curvirostra curvirostra (GM.).

1 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 132: ♀ 130 mm.

Inseparable from typical birds from the Malay States.

PARROT has named *harterti* an adult male from Deli, N. E. Sumatra, on account of its small size (wing 123 mm). Typical Malayan have wings ranging from 127 to 138 mm.

An unusually small individual occurs occasionally in most areas of distribution and the type of *harterti* may be abnormal. On the other hand *Trerons vernans* is very small in N. E. Sumatra and it is possible that *curvirostra* is there small also.

Treron nasica SCHLEGEL, though recorded by him from S. W. Sumatra, is based on specimens of *curvirostra* from S. E. Borneo: the type locality is Bandjermasin.

Treron vernans griseicapilla SCHLEGEL.

Dendrophassa vernans abbotti OBERH., Journ. Wash. Acad. Sci., XIV, 1924, p. 298. Trang, Peninsular Siam.

2 ♂, 1 ♀ juv., Wai Lima, Lampongs.

1 ♂, Palembang.

1 ♀, Talang semoet, Palembang.

1 ♀, Blangkolam, Acheen.

Wings ♂ 136, 139, 140: ♀ 134, 138 mm.

This name was proposed very informally by SCHLEGEL (Ned. Tijd. Dierenk., 1, 1863, p. 71) for birds from Sumatra and Banka. I restrict the *terra typica* to southern Sumatra.

The birds we have examined from that half of the island have wings averaging about 140—141 mm in males: and birds from Borneo (other than

the south or south-east) and from the Malay Peninsula agree with them: so do the only West Javan birds I possess (a pair from Cheribon). Examples from East Java, which I regard as *T. v. purpurea* (GM.), have the head and foreneck paler grey in males and paler green in females.

Treron vernans parva subsp. nov.

Osmotreron vernans ROBINSON and KLOSS, Journ. Straits Branch Royal Asiatic Soc., No. 80, 1919, p. 77 (Deli, N. E. Sumatra).

Like *T. v. griseicapilla* SCHLEG., of southern Sumatra, but smaller. Wings ♂ 132—138: ♀ 128—131 mm. Average wing length of males about 134 mm.

Type. Adult male from Deli, N. E. Sumatra. Mus. Buitenzorg, No. 5978. A second example with the same history, No. 5979.

Wings 135, 135 mm.

The wings of a series obtained by Mr. A. C. F. A. VAN HEYST, also from Deli, measured:—♂ 132, 132, 133, 135, 136, 138: ♀ 128, 129, 131 mm. (R. & K., l.c.s.).

Treron olax (TEMM.).

1 ♂, Katimbang, Lampongs. VORDERMAN coll.).

1 ♀, Aloer Poerba, Acheen.

Wings 125, 126 mm.

PARROT has named a male from Deli *hageni*: paler than the typical form — also from Sumatra; wing 116 mm. Certainly small for a male, but I have seen another from Deli with a wing of 122 mm and regard PARROT's example as a minimum-size individual. I find that the wings of this bird vary from about 117 to 127 mm.

Ptilinopus porphyreus (REINW. in TEMM.).

1 ♀, Sungei Kumbang, Korinchi, Sumatra, 1400 metres (ROBINSON and KLOSS coll.).

Wing 142 mm.

Ptilinopus jambu (GM.).

3 ♂, 1 ♀, Medan, N. E. Sumatra.

Wings ♂ 138, 141, 148: ♀ 134 mm.

The type locality is Sumatra: Malayan and Bornean birds do not differ.

Ducula badia badia (RAFFLES).

1 sex. inc., Lampongs. VORDERMAN coll.).

2 ♂, Palembang.

Wings ♂ 229, 230: ? 230 mm.

Myristicivora bicolor (SCOP.).

1 sex. inc., Benkoelen.

Wing 223 mm.

COLUMBIDAE.

Macropygia unchall unchall (WAGL.).

1 ♀, Fort de Kock, Sumatra's Westkust, 900 metres (GROENEVELD coll.).
Wing 172 mm.

Macropygia phasianella emiliana BP.

Macropygia phasianella barussana SIEBERS, Treubia XI, 1929, p. 152.
Palembang.

1 ♂, 1 ♀, Palembang.
Wings ♂ 170: ♀ 161 mm.

I have not seen these specimens since recording them for Sumatra in 1923 (v. ROBINSON and KLOSS, Journ. Fed. Malay States Mus., VIII, part 2, 1923, pp. 323, 355). They are the material on which *barussana* is based. According to SIEBERS the Sumatran bird differs from *emiliana* of Java in lesser size and in the almost complete disappearance of brown on the inner web of the first primary and the much smaller size of the grey patches on the inner webs of the outer tail feathers. Examination of a considerable Javanese series shows that these characters are only individual and that everywhere birds vary considerably: in some the brown border to the primary and the grey patches on the tail feathers have entirely disappeared. Neither are Sumatran birds smaller (wings ♂ 170, ♀ 161 mm): the wings of Javanese birds range ♂♂ 163—180, ♀♀ 160—174 mm.

Macropygia ruficeps sumatrana ROBINSON & KLOSS.

1 ♀ imm., Wai Lima, Lampongs.
1 ♀ imm., Fort de Kock, Sumatra's Westkust, 900 metres.
1 ♂ imm., 1 ♀ imm., Geureudong, Acheen, 900 metres.
Wings ♂ 137: ♀ 136, 136, 137 mm.

PERISTERIDAE.

Streptopelia chinensis tigrina (TEMM.).

1 ♂, Wai Lima, Lampongs.
1 ♂, Palembang.
1 ♀, Rimbau pandjang, Sumatra's Westkust (OUWENS coll.).
1 ♂, Pangkalan Koto Baroe, Sumatra's Westkust (STRASTERS coll.).
Wings ♂ 138¹⁾, 144, 147: ♀ 144 mm.

PARROT²⁾ has separated as *minor* birds from Deli on account of small size. He places under this name, apparently, his unsexed type from Deli and also three males and one female? from "Sumatra" with wings of 135—138.5 mm and I have measured three females from Deli with wings 134—138 mm. The race is probably good, though DAVISON got a female in Acheen with a wing

¹⁾ Sumatra's Westkust (P. K. Baroe). ✓

²⁾ Abh. K. BAYER Akad. Wiss, II, Kl. XXIV, Bd. 1 1907, p. 275.

of 141 mm, for as far as I am aware Sumatran birds from south of the equator have wings of about 138—150 mm as have those of Java which is the terra typica of *tigrina*.

Geopelia striata striata (LINN.).

2 ♀, Wai Lima, Lampongs.

Wings 97, 98 mm.

RALLIDAE.

Hypotaenidia striata gularis (HORSF.).

1 sex inc., Benkoelen (VORDERMAN coll.).

2 ♀, Medan, N. E. Sumatra.

Wings ♀ 111, 118: ? 110 mm.

Sumatran and Malayan birds do not differ from Javanese. Bornean birds are darker beneath and are probably referable to the typical Philippine form.

Poliolimnas cinereus cinereus (VIEILL.).

1 ♂ imm., Takengon, Acheen, 1200 metres.

Wing 98 mm.

An immature bird with the crown brown and no dark patch in front of the eye.

Amaurornis phoenicura javanica (HORSF.).

1 ♀, Fort van der Capellen, Sumatra's Westkust, 500—750 metres. (GROENEVELD coll.).

1 ♀, Sitangkai, Sumatra's Westkust. (GROENEVELD coll.).

1 ♀, Medan, N. E. Sumatra.

Wings 138, 142, 152 mm.

Birds from Java, Borneo and its islands and Singapore, which we regard as *A. p. javanica*, are as a series greyer, less olivaceous above than those from the Malay Peninsula and Siam which appear to be *A. p. chinensis* (BODD). Their wings also run considerably smaller:— ♂ 138—160, ♀ 132—152 mm, against, in continental birds, ♂ 159—180, ♀ 148—164 mm.

It is practically certain, however, that *A. p. chinensis* (BODD) occasionally visits Sumatra as ROBINSON and KLOSS have recorded a bird from Korinchi with a wing of 170 mm and RILEY a male from East Sumatra with a wing of 175 mm.

Gallinula chloropus orientalis HORSF.

1 ♀, Takengon, Acheen, 1200 metres.

Wing 165 mm.

CHARADRIIDAE.

Charadrius leschenaulti LESS.

1 sex inc., Benkoelen.

Wing 144; bill from gape 26 mm.

***Tringa hypoleucos* LINN.**

1 ♂, 2 ♀, Wai Lima, Lampongs.

2 ♂, Palembang.

Wings ♂ 104, 108, 102: ♀ 105, 108 mm.

***Rhyacophilus glareola* (GM.).**

1 ♂, 1 ♀, Palembang.

Wings ♂ 124: ♀ 121 mm.

***Limonites minuta ruficollis* (PALL.).**

1 ♂, Telok Betong, Lampongs.

Wing 101 mm.

***Capella stenura* (KUHL).**

1 ♂, Palembang.

1 sex inc., Palembang.

Wings ♂ 123: ? 130 mm.

CICONIIDAE.

***Pseudotantalus cinereus* (RAFFLES).**

1 sex inc., Fort de Kock, Sumatra's Westkust, 900 metres.

Wing 465 mm.

ARDEIDAE.

***Bubulcus ibis coromandus* (BODD.).**

1 ♂, Pajokomboe, Sumatra's Westkust (STRASTERS coll.).

1 ♀, Kajoe agoeng, Palembang, (OUWENS coll.).

Wings ♂ 250: ♀ 234 mm.

Ixobrychus eurhythmus* (SWINH.).Nannocnus eurhythmus* ROB. & KLOSS, Journ. Fed. Malay States Mus., VIII, Part 2, 1923, pp. 328, 357*Ixobrychus eurhythmus* KLOSS, Treubia, XII, 1930, p. 399.

1 ♂, Palembang.

1 sex inc., Kajoe agoeng, Palembang (OUWENS coll.).

Wing ♂ 145: ? 135 mm.

This bird is now known in Malaysia from the Malay Peninsula, Sumatra, Java, Pulo Mata Siri in the eastern Java Sea, and Borneo.

ANATIDAE.

***Dendrocygna javanica javanica* (HORSF.).**

1 ♀, Palembang.

2 ♂, Kajoe agoeng, Palembang (OUWENS coll.).

Wings ♂ 195, 197: ? 192 mm.

FALCONIDAE.

Lophospizias trivirgatus trivirgatus (TEMME).

1 ♀ (sexed ♂), Rimbau pandjang, Sumatra's Westkust. (OUWENS coll.).

Wing 230 mm.

Astur soloensis (HORSF.).

5 ♂, 3 ♀, Wai Lima, Lampongs.

1 ♂, Pagaralam, Palembang, 500—750 metres.

1 ♂, Palembang.

1 ♂, Pajokomboe, Sumatra's Westkust.

Wings ♂ 178, 181, 181, 182, 187, 187, 187: ♀ 196, 199 mm.

BARTELS and STRESEMANN treat *soloensis* as a race of *Astur badius*. The latter, represented by *A. b. poliopsis*, may be a resident, whereas *soloensis* certainly breeds in China and migrates to the Malaysian and Austro-Oriental subregions in winter.

Astur badius poliopsis besides being a considerably larger bird is much paler above and the adults are always banded brown and white below instead of being generally uniform cinnamon rufous on the breast as in *soloensis*. The cere of *badius* turns black in dry skins, in *soloensis* it remains yellow. I think the colour of the cere is a species, not a racial, difference. Further, if *soloensis* were a form of *badius* we should expect it to be larger than the tropical *poliopsis*, but the contrary is the case.

Spilornis cheela malayensis SWANN.

1 ♂, Aoer, Lahat, Palembang (STRASTERS coll.).

1 sex inc., Palembang.

Wing ♂ 365: ? 348 mm.

Elanus caeruleus hypoleucos GOULD.

2 ♂, Palembang.

Wings 285, 285 mm.

Machaeramphus alcinus WESTERM.

1 sex inc., Pajokomboe, Padangsche Bovenlanden (VAN DER PLAS coll.).

1 sex inc., Padangsche Bovenlanden (VAN DER PLAS coll.).

Wing 365, 370 mm.

Pernis apivorous japonicus KURODA.

2 ♀, Wai Lima, Lampongs. November 1921.

Wings 415, 415 mm.

Rather pale birds without any indication of a crest. Feathers of the nape lanceolate. The dark bars on the tail are narrow and indistinct and the interspaces are much lineated, i.e., the examples are immature.

In 1922 STRESEMANN stated that the large Siberian race, *P. a. orientalis* TACZ., wintered in the Sunda Islands and, more or less following him, we have

ourselves recorded under that name crestless females with wings of 450 mm from Sumatra (February) and the Anamba Islands (October). Upon reconsideration, however, and on re-examination of a considerable series of birds collected in the Malay Peninsula (from Tenasserim to Singapore), Sumatra and Borneo I am inclined to think that the presence in Malaysia of this North Asiatic Continental form is doubtful.

The two large females mentioned above agree closely (except for size) with two crestless males from Kuala Lumpur and Singapore with wings of 408 mm. These four birds are dark brown throughout, blackish on the sides and front of the neck; the dark bars on the tail are narrow and the paler interspaces lineated: but in any series the variation in colour (probably to a large degree due to age) is enormous and no two birds are exactly alike ¹⁾.

SWANN gives for wing lengths of *orientalis*, male 450, female 475 mm, BAKER gives 483 mm, thus markedly larger than any individual known to me from Malaysia. KURODA, however, has recently separated crestless birds breeding in Japan from *orientalis* on account of smaller size ²⁾: his *P. a. japonicus* has the wings of males 402—432, females 430—447. Adults have "the middle throat always with a distinct longitudinal blackish mark continuing to a black band, extending round the lower throat, thus making a w-shaped black mark." This mark, however, frequently occurs in Malaysian birds, both crested and crestless. The latter agree well in size with KURODA's measurements.

Only ten out of the thirty-four birds before me have a distinct nuchal crest (of long black feathers with rounded ends, generally tipped with buff) and judging by the tail patterns these are all practically adult. The rest of the series, composed of adult, sub-adult and immature individuals, have no crest. It would perhaps be unreasonable to expect to find a crest present in all individuals that develop it — stage of plumage and condition of moult should be taken into consideration.

However, in the Jaarbericht v. d. Club v. Nederl. Vogelk., No. 13, 1923, p. 145, VAN HEURN quotes BARTEL's opinion that the feathers of the nape are broad and rounded in *ptilorhynchus* ³⁾, but small and lanceolate in *orientalis* (vide VAN HEURN's plate III) ⁴⁾ and concludes that the difficulty regarding the determination of HONEY-BUZZARDS found in Malaysia is thus solved.

The above is the case respectively (a) when a full crest is present, and (b) when there is no crest. It may still be, however, that the rounded nuchal feathers only appear with the moult that produces the full crest, but if BARTELS is correct the curious state of affairs is found that the crestless visiting (?) form seems to be met with in Malaysia in far greater numbers than the crested resident (?) race: for the crestless birds, if migrants, are

¹⁾ BAKER in Fauna Brit. Ind. Birds, V, 1928, p. 165, has some interesting remarks on stages of plumage of some Indian Honey-Buzzards.

²⁾ Dobuts. Zasshi, 37, 1925, p. 226 (English Version) Hondo, Japan: also Formosa and China.

³⁾ As indeed they are figured by TEMMINCK (Pl. Col. 44, 1823).

⁴⁾ See also the immature female figured by SCHLEGEL and MÜLLER as *Falco* (*Pernis*) *ptilonorhynchus* in TEMMINCK's Verh. Nat. Gesch., Aves, pl. 7 (1839—44).

apparently the Japanese form *japonicus* since they are not large enough to be determined as *orientalis*.

The wing lengths of the crested birds are:— males 387, 392, 395, 405, 416, 416, 418, 427, 432: female 422 mm.

The crestless birds measure:— males 400—438: females (408 once) 415—442 (450 twice): they were all taken between September and March while the crested individuals were met with through the summer as well.

For the present I use *japonicus* for the crestless Honey-Buzzard found in Malaysia ⁵⁾ though *Pernis maculosa* LESSON, from Bengal, is apparently uncrested. BAKER states that Celebean birds cannot be separated from *ptilorhyncus*, but they appear to range considerably smaller than those of Malaysia: wings 360—395 mm (vide GURNEY, Ibis, 1880, p. 217). Both crestless and crested birds are found in the island (again, vide GURNEY, l.c.s.), but, among recent authors, SWANN and MATHEWS treat both as one form of a distinct species, *P. celebensis celebensis* WALLACE.

All birds taken in the Philippines appear to be crested, and on this account SCLATER has separated them from Celebean birds, as *P. celebensis steerei* because of their crests. The examples seen by him varied in wing-length from 345 mm (♂ Samar. Worn), and 364 mm (♂ Negros. Type), to 390 mm (sex. inc., Luzon). MC GREGOR gives 390 and 395 mm for a male and female from Mindoro; GURNEY 395 for a female from Mindanao and 407 and 422 mm for unsexed Philippine birds. Though some of these are as large as *ptilorhyncus*, the average appears to be smaller.

Pernis torquata LESSON, is a crested individual from Sumatra.

I cannot recognise more than one species of *Pernis*, but BARTELS and STRESEMANN maintain *ptilorhyncus* as a second on account of differences between its eggs and those of *apivorous*. The various forms fall into two sections:— the northern crestless, the southern crested: but in the latter the farther north the birds are found the smaller the crests become. Indian birds (*ruficollis* LESS., Bengal) have the crest much less developed than in *ptilorhyncus* (fide BAKER): and of South Chinese birds LA TOUCHE records a female from Foochow with "a small, but well-defined crest" and states that the short-crested Indian and Chinese form is a very different bird from the long-crested island form (Ibis, 1913, p. 279).

The crest is a local character and its presence and state of development together with the size of the birds are the principal features of mere geographical races of *apivorous*.

It seems we may admit for the present:—

<i>P. a. apivorous</i>	} Northern: crestless.
<i>P. a. orientalis</i>	
<i>P. a. japonicus</i>	

⁵⁾ BARTELS, quoted by VAN HEURN, l.c.s., states that it occurs in Java as a non-breeding visitor.

- | | | |
|----------------------------|---|------------------------|
| <i>P. a. ruficollis</i> | } | Southern: crested. |
| <i>P. a. ptilorhynchus</i> | | |
| <i>P. a. steerei</i> | | |
| <i>P. a. celebensis</i> | | Southern: ? crestless. |

Spizaetus cirrhatus limnaetus (HORSF.).

- 1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).
 1 sex inc., Palembang.
 Wings ♂ 400: ? 388 mm.

Spizaetus nipalensis alboniger (BLYTH).

- 2 adults sex inc., Sumatra. (VAN DER PLAS col.).
 Wings 343, 370 mm.

Microhierax fringillarius (DRAP.).

- 1 ♂, 2 ♀, Wai Lima, Lampongs.
 1 ♂, Boemi agoeng, Lampongs.
 2 ♀, Talang betoetoe, Palembang.
 1 ♂, Palembang.
 1 ♀, Kajoe agoeng, Palembang. (OUWENS coll.).
 1 ♂, Fort van der Capellen, Sumatra's West Coast, 460 metres.
 1 ♂ imm., 1 ♀, Aloer Poerba, Acheen.
 Wings ♂ 91, 92, 93, 97, 101: ♀ 97, 97, 99, 100 mm.

It is possible that the two largest birds listed as males are wrongly sexed.

In the young bird the forehead, sides of neck and the cheeks are rufous instead of white.

BUBONIDAE. *)

Ketupa ketupu ketupu (HORSF.).

- 1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).
 2 ♀, Rimboe pandjang, Sumatra's Westkust. (OUWENS coll.).
 1 sex inc. juv., Sawah loentoe, Sumatra's Westkust, 500 metres. (OUWENS coll.).
 Wings ♂ 317: ? 290 juv.: ♀ 315, 333 mm.

Huhua sumatrana sumatrana (RAFFLES).

- 1 sex inc. ad., 1 sex inc. juv., Manindjau, Sumatra's Westkust, 500 metres.
 1 ♀ Isaq, Acheen, 1000 metres.
 Wings ? 345, 343 juv.: ♀ 360 mm.

The young bird is largely white barred with fuscous, but is assuming adult plumage on scapulars, wings and tail.

*) By a *lapsus calami* a specimen of *Glaucidium brodiei* was listed in my recent Bornean paper (Treubia, XII, 1930, p. 400) as *G. b. sylvaticum* (Bp.). It should have been recorded as *G. b. borneense* SHARPE, which is the Bornean race of this owl.

Otus babakkamoena lempiji (HORSF.).

1 sex inc., Lampongs. (VORDERMAN coll.).
Wing 147 mm.

Otus rufescens (HORSF.).

1 ♀, Wai Lima, Lampongs.
Wing 130 mm.

Ninox scutulata malaccensis (EYTON).

Ninox scutulata borneensis PARROT (Sumatra) partim.

1 sex inc., Lampongs. (VORDERMAN coll.).

1 ♀, Talang betoetoe, Palembang.

1 sex inc., 1 ♀ juv., Kajoetanam, Priaman, Sumatra's Westkust. (OUWENS coll.).

Wing ♀ 187: ? 191, 195 mm.

These are the smaller birds with less white on the lower surface which we consider to belong to the above race. In the majority of topotypes the crown is darker, rather greyer, than the back; in others it is concolorous with the back and in such the back is generally rather browner and paler than in the former. These three specimens have brown crowns, but in other Sumatran specimens the crowns are greyish.

A considerable series from the Malay Peninsula, which we regard as *N. s. scutulata* (RAFFLES. Sumatra) is larger; wing over 205 mm, and has more white on the lower parts: the colour of the upper parts varies as in *malaccensis*.

South Bornean and West Javan birds have both been named:— *borneensis* (BP.) and *javanensis* STRESEMANN. We have male topotypes of the former, wings 180 and 190 mm., and two females from Saribas, Sarawak, wings 175 and 186 mm. The Javanese bird (type unique) has a wing of 175 mm and is said to have less white on the lower parts than *borneensis* (vide Orn. Monats., 1928. p. 54).

SHARPE renamed the Bornean bird, i.e., the smaller breeding race, *labuanensis*. A fair series from Labuan and North Borneo in the British Museum measures 177 - 193 mm.

The larger form, *N. s. scutulata*, has been recorded from all the areas of Malaysia. In the Peninsula it has only been taken in the winter months, i.e., it is a migrant.

In Malaysia the species is a difficult one: but, at any rate, we have small resident birds (wings under 205 mm) which I hesitate to separate into races on the material I have seen because individuals in one place vary considerably both in dimensions and colour (the Bornean-Javan birds may be distinct, they seem to average rather smaller): the first name given to any of these is *malaccensis*. Then we have larger visitors (wings over 205 mm) of one or more races: everywhere the majority of these are *N. s. scutulata* (? syn. *japonica* SCHL.), but *burmanica* HUME, occurs sporadically in the Peninsula (Malacca and Singapore, fide H. C. ROBINSON in litt.) and Borneo is probably visited

by birds from the Philippine Islands where more than one form occurs: fide Mc GREGOR (Manual of Philippine Birds) who recognises three there under the names, *lugubris*, *scutulata* and *japonica*.

Below are the wing ranges in millimetres of some resident birds:—

Java	175.	
Borneo	175	193.
Sumatra	180	201.
Malay Peninsula	184	202.

TYTONIDAE.

Phodilus badius badius (HORSF.).

1 sex inc., Lampongs. (VORDERMAN coll.).

Wing 187 mm.

PSITTACIDAE.

Psittacula longicauda longicauda (BODD.).

1 ♂, Lampongs. (VORDERMAN coll.).

1 ♂, 1 ♀, Lahat, Palembang.

1 ♂, Pangkalan Koto Baroe, Sumatra's Westkust (GROENEVELD coll.).

Wings ♂ 145, 146, 156: ♀ 145 mm.

Psittinus cyanurus cyanurus (FORST.).

2 ♂, 1 ♀, Lampongs.

1 ♂, 1 ♀, Lahat, Palembang.

Wings ♂ 115, 116, 119: ♀ 115, 117 mm.

Coryllis galgulus galgulus (LINN.).

2 ♂, Wai Lima, Lampongs.

1 ♂, 1 ♀, Baleq, Acheen, 900 metres.

1 ♂, Aloer Poerba, Acheen.

Wings 84, 85, 85, 86: ♀ 90 mm.

PODARGIDAE.

Batrachostomus stellatus (GOULD).

1 sex inc., Lahat, Palembang.

Wing 129 mm.

Batrachostomus javensis (HORSF.).

1 sex inc., Lampongs.

1 ♂, Loeboek lontjang, Palembang.

Wings 137, 137 mm.

The Lampongs specimen is bright rufous cinnamon with well-defined white markings, the other is blackish brown with the pale areas much more extensive but less clearly defined.

CORACIDAE.

Eurystomus orientalis orientalis (LINN.).

- 1 ♀ imm., Wai Lima, Lampongs.
 1 ♂, Talang betoetoe, Palembang.
 1 ♀, Lho Seumawe, Acheen.
 Wings ♂ 179: ♀ 175 imm., 187 mm.

Eurystomus orientalis calonyx HODGS.

- 2 ♂, Talang betoetoe, Palembang.
 Wings 180, 195 mm.

ALCEDINIDAE.

Ramphalcyon capensis cyanopteryx OBERH.

- 1 ♂, Pangkalan Koto Baroe, Sumatra's Westkust (STRASTERS coll.).
 1 ♀, Medan, N. E. Sumatra.
 1 ♀ Rampah, Acheen.
 Wings ♂ 146: ♀ 149, 152 mm.

These birds, on locality, belong to the above race according to its proposer.

Ramphalcyon capensis arignota OBERH.

Proc. Biol. Soc. Wash. XXXVII, 1924, p. 136. Indragiri River, East Mid-Sumatra.

- 1 ♂, 1 ♀, Palembang.
 Wings ♂ 137: ♀ 147 mm.

These birds, on locality, belong to the above race according to its proposer. Sex for sex they happen to be smaller than the northern birds, but on colour I do not see how they can be separated. The males are perhaps of rather deeper blue above than males of the Javanese bird (*R. c. capensis*) which more nearly resemble the Sumatran females. The distribution attributed to the form is Southeastern Sumatra and Billiton Island.

Alcedo atthis bengalensis (GM.).

- 1 ♂, Takengon, Acheen, 1200 metres.
 1 ♂, Rampah, Acheen.
 Wings 70, 72 mm.

Alcedo euryzona TEMM.

- 1 ♂, Lahat, Palembang. (VORDERMAN coll.).
 Lores rufous, back pale turquoise, tail coverts deeper blue.

Ceyx rufidorsus STRICKL.

Ceyx euerythra & *C. dillwynni* ROBINSON & KLOSS, Journ. Straits Branch, R.A.S., No. 80, 1919, p. 85.

- 2 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).
 1 ♂ imm., Blangkolan, Acheen, 1 ♂, Rampah, Acheen.
 Wings 57 imm., 57, 58, 62 mm.

Halcyon chloris cyanescens (OBERH.).

1 ♂, Wai Lima, Lampongs.

1 ♂ imm., 1 ♀, Palembang.

Wings ♂ 102 imm., 112: ♀ 106 mm.

Halcyon concreta concreta (TEMM.).

1 ♂, Poentian near Palembang Town. (STRASTERS coll.).

Wing 107 mm.

Lacedo pulchella pulchella (HORSF.).

1 ♀, Wai Lima, Lampongs.

Wing 97 mm.

The extent of the black banding on the under parts of the female varies considerably in all localities.

BUCEROTIDAE.

Buceros rhinoceros LINN., ? subsp. **sumatranus** SCHLEG. & MÜLL.

1 ♂, Djepara, Lampongs. (TANS coll.).

Wing 520; casque 160; bill from gape 276; tail 430 mm.

This example has the wing longer than the largest typical male I have seen from the Malay Peninsula (503 mm) and it may be that the use of the name proposed for Sumatran birds is justified (Verh. Nat. Ges., Zool., Aves p. 22, 1839—44). A female from Siak has also a longer wing (460 mm) than the largest Malayan female known to me (448 mm). Vide Treubia XII, 1930, p. 410—411.

Anthracoceros coronatus convexus (TEMM.).

1 ♂, Poentian near Palembang Town (STRASTERS coll.).

Wing 316 mm.

Anthracoceros malayanus (RAFFLES).

1 ♂, Djambi (POSTHUMUS coll.).

Wing 318 mm. Superciliary stripe grey.

MEROPIDAE.

Merops viridis LINN.*Merops sumatranus* AUCT.

2 ♀, Wai Lima, Lampongs.

2 sex inc., 2 ♀, Medan, N. E. Sumatra.

1 ♂, 1 ♀ Rampah, Acheen.

Wings ♂ 113: ♀ 108, 108, 108, 111, 111: ? 105, 106 mm.

Merops superciliosus javanicus HORSF.

1 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, Palembang.

Wings ♂ 130: ♀ 129 mm.

Nyctiornis amicta (TEMME).

1 ♂, Wai Lima, Lampongs.

1 ♂, Lampongs. (GOLDMAN coll.).

3 ♂, Palembang.

1 ♂, Pagar alam, Palembang, 500—750 metres.

-1 ♂, Medan, N. E. Sumatra.

1 ♂ imm., Blangkolam, Acheen.

1 ♂, Aloer Poerba, Acheen.

2 ♂, Rampah, Acheen.

Wings ♂ 124 imm., 126, 127, 128, 128, 128, 130, 130, 133: ♀ 122 mm.

CAPRIMULGIDAE.

Caprimulgus affinis affinis HORSF.

1 ♂, 1 ♀, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♂, 1 ♀, Palembang.

Wings ♂ 157, 159: ♀ 157, 159 mm.

Caprimulgus macrurus bimaculatus PEALE.

1 ♂, Aloer Poerba, Acheen.

Wing 195 mm.

MICROPODIDAE.

Chaetura leucopygialis (BLYTH).

1 sex inc., Lampongs. (VORDERMAN coll.).

Wing 118 mm.

Hemiprocne longipennis harterti STRESEMANN.

1 ♂, Palembang.

1 ♀, Koeto Alam, (STRASTERS coll.).

2 ♀, Medan, N. E. Sumatra.

Wings ♂ 153 (moulting): ♀ 165, 171, 175 mm.

Hemiprocne comata comata (TEMME).

1 ♀, Lampongs (VORDERMAN coll.).

1 ♂, Pangkalan Koto Baroe, Sumatra's West Coast (STRASTERS coll.)

Wing ♂ 127: ♀ 125 mm.

TROGONIDAE.

Pyrotrogon diardi sumatranus (BLAS.).

1 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 143: ♀ 136 mm.

Sumatran and Malayan birds differ from the typical Bornean form in that the crimson on the head of the male is confined to the occiput and nape.

Pyrotrogon erythrocephalus flagrans (MÜLL.).

2 ♂, Palembang.

1 ♀ Geureudong, Acheen, 900 metres.

Wings ♂ 126, 130: ♀ 136 mm.

The Sumatran race has the head and breast brighter and the white bars on the wing coarser in males than in continental birds: the bars on the wing are also coarser in females. The present female has patches of yellow on the lower breast.

Pyrotrogon duvauceli (TEMM.).

2 ♂, 1 ♀, Lampongs.

Wings ♂ 104, 106: ♀ 102 mm.

Pyrotrogon oreskios uniformis ROBINSON.

1 ♀, Wai Lima, Lampongs.

Wing 120 mm.

Hapalarpactes reinwardti mackloti (MÜLL.).

1 ♀, Palembang.

1 ♂ subad., 1 ♀ Redelong, Acheen, 1300 metres.

Wing ♂ 130: ♀ 123, 128 mm.

The male is an immature bird in female plumage just beginning to change on the wing coverts. The posterior undertail coverts are still dark buff.

CUCULIDAE.

Clamator coromandus (LINN.).

1 ♂, Talangbetoetoe, Palembang.

Wing 158 mm.

Surniculus lugubris brachyurus STRESEMANN.

1 ♂, 1 ♀, Palembang.

1 ♂, 1 ♀, Pekan Koto Baroe, Sumatra's Westkust (STRASTERS coll.).

Wings ♂ 121, 125: ♀ 117, 117 mm.

A bird from Siak with a wing of 143 mm has been named *S. l. massorhinus* by OBERHOLSER: "similar to *dicruroides* of Nepal, but larger." The large continental race attains a wing length of 148 mm: it occurs in the Malay Peninsula and on islands in the Straits of Malacca during the winter months and there is no reason why it should not also visit Sumatra: the type of *massorhinus* was collected in January.

Hierococyx fugax fugax (HORSF.).

CHASEN and KLOSS, Journ. Fed. Malay States Mus. XIII, 1927, p. 277.

1 ♂, Wai Lima, Lampongs.

2 sex inc., imm. and juv., Lampongs. (VORDERMAN coll.).

1 ♂ imm., Palembang.

Wings ♂ 169 (worn), 173: ? 173 juv., 169 mm.

Bills, tip to nostril, 16.8, 16.8, 17.5, 18 mm.

The principal characters which separate this race from *H. f. nasicolor* (HODGS.), also occurring in Sumatra, are the larger bill and the broader pale and dark penultimate bands on the tail. Other characters of perhaps lesser value are, on the whole, correlated with these (vide CHASEN and KLOSS, l.c.s.). All Malaysian birds we have seen with back and wings as grey as the crown (i.e., fully adult) we refer to *H. f. nasicolor*; and all quite juvenile birds to *H. f. fugax* which suggests that the former are visitors and the latter resident. A third race of the species, *H. f. hyperythrus* (GOULD), is recorded as visiting North and East Borneo in the winter: it breeds in North China and Japan.

Hierococcyx sparveroides (VIG.).

1 sex inc., Lampongs (VORDERMAN coll.).

Wing 242 mm.

This appears to be the second record for Sumatra: the first being DE BEAUFORT and DE BUSSY's of a bird from Brastagi.

Cuculus micropterus concretus (S. MÜLL.).

1 ♀, Rimbau pandjang, Sumatra's Westkust (OUWENS coll.).

Wing 166 mm.

Cuculus poliocephalus lepidus (S. MÜLL.).

1 ♀, Palembang.

Wing 141 mm.

It is now considered that this bird, (the Bornean mountain form of which is *insulinde* HARTERT) which has also been recorded as *musicus* LJUNGH, is actually the *lepidus* of MÜLLER, and that LJUNGH's *musicus* belongs to the Javanese race of *Penthoceryx sonnerati* recently listed as *P. s. pravata* (HORSF.), a somewhat later name.

Cacomantis merulinus subsp.

1 ♂, Wai Lima, Lampongs.

1 ♂, Lampongs.

1 ♂, 1 ♀ sex inc., Palembang.

1 ♂, Medan, N. E. Sumatra.

Wings ♂ 97, 99, 100, 102: ? 97: ♀ 98 mm.

The birds from the Lampongs and Medan are almost pale enough to be placed with the Javanese race *C. m. lanceolatus* (MÜLL.): the Palembang examples are *threnodes* CAB. & HEINE, (Malacca) if different from the typical form of the Philippines.

Cacomantis variolosus sepulcralis (MÜLL.).

1 ♂, Wai Lima, Lampongs.

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♂, Palembang.

Wings 112, 114, 115 mm.

***Penthoceryx sonnerati fasciolatus* (MÜLL.).**

ROBINSON & KLOSS, Journ. Fed. Malay States Mus. VIII, part 2, 1923, pp. 336, 359.

1 sex inc., Palembang.

Wing 102 mm.

***Chalcites basalis* (HORSF.).**

1 ♀, Palembang.

Wing 104 mm.

***Centropus bengalensis javanensis* (DUMONT).**

1 ♂, Isaq, Acheen, 1000 metres.

1 ♀, Rampah, Acheen.

Wings ♂ 133: ♀ 142 mm.

The black-breasted bird (wing 142) is, if correctly sexed, very small for a female.

***Centropus sinensis bubutus* (RAFFLES)**

1 ♂, 2 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Aoer, Palembang. (STRASTERS coll.).

1 ♂, Palembang.

1 ♀, Pagar Alam, Palembang.

1 ♂, Rimbau Pandjang, Sumatra's West Coast. (OUWENS coll.).

1 ♂, Pangkalan Koto Baroe, Sumatra's West Coast. (OUWENS coll.).

1 ♀, Kajoetanam, Sumatra's West Coast (OUWENS coll.).

1 ♀ imm., Medan, N. E. Sumatra.

Wings ♂ 202, 208, 211, 215, 215: ♀ 215, 226, 226, 230, 232 mm.

The young female (wing 202) has the head and nape and upper tail-coverts streaked and barred with buff, foreneck, breast and undertail coverts with white, and the tail indistinctly barred with buff.

***Zanclostomus javanicus pallidus* ROB. & KLOSS.**

1 ♂, 2 ♀, Wai Lima, Lampongs.

Wings ♂ 147: ♀ 145, 148 mm.

Sumatran and Bornean birds are inseparable from this Malayan form.

***Rhopodytes tristis elongatus* (MÜLL.).**

1 ♀, Pagaralam, Palembang, 500—750 metres.

1 ♀, Rimbau pandjang, Sumatra's Westkust (OUWENS coll.).

Wings 149, 157 mm.

A somewhat variable race, the colour suffusing the grey breast varying from greyish-olive to olive-buff. These two examples practically represent the extremes in that respect.

Rhopodytes diardi diardi (LESS.).

- 2 ♂, 1 ♀, Wai Lima, Lampongs.
 2 ♀, Aoer, Lahat, Palembang. (STRASTERS coll.).
 1 ♀, Poentian near Palembang Town (STRASTERS coll.).
 1 ♂, 1 ♀, Palembang.
 1 ♂, Kajoe agoeng, Palembang (OUWENS coll.).
 1 ♀, Aloer Poerba, Acheen.
 Wings ♂ 130, 131, 132, 133: ♀ 129, 130, 131, 132, 132, 135 mm.

Rhinortha chlorophaea chlorophaea (RAFFLES).

- 2 ♂, 2 ♀, Wai Lima, Lampongs.
 1 ♂, 1 ♀, Aoer, Lahat, Palembang. (STRASTERS coll.).
 1 ♂, 1 ♀, Talang Betoetoe, Palembang.
 1 ♂, 1 ♀, Palembang.
 1 ♂, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).
 2 ♂, Medan, N. E. Sumatra.
 1 ♂, Tapatoean, W. Acheen.
 1 ♀, Aloer Poerba, Acheen.
 Wings ♂ 108, 110, 110, 111, 112, 113, 113, 117, 118: ♀ 111, 112, 114, 114, 116, 119 mm.

This series of topotypes shows the characters relied upon by BAKER to separate Bornean birds (foreneck and breast strongly washed with the ferruginous buff of the abdomen in females) are as common to Sumatran females as they are to Malayan. The female is equally variable everywhere, ranging from individuals with the foreneck and breast pure grey to others in which the tawny colour of the abdomen extends upwards to the throat.

Phoenicophaes curvirostris erythrognathus Br.

- 1 ♂, 2 ♀, Wai Lima, Lampongs.
 1 ♂, 1 ♀, Aoer, Palembang. (STRASTERS coll.).
 1 ♂, Talang betoetoe, Palembang.
 1 ♂, 1 ♀, 1 sex inc., Palembang.
 1 ♂, 1 ♀, Pangkalan Balei.
 1 ♀, Medan, N. E. Sumatra.
 1 ♀, Rampah, Acheen.
 Wings ♂ 163, 166, 173, 173, 173: ? 166: ♀ 165, 167, 167, 169, 172, 172, 175 mm.
 The median tail feathers in this race are sometimes entirely green.

CAPITONIDAE.

Calorhampus fuliginosus hayi (GRAY).

- 1 ♂, 1 ♀, Wai Lima, Lampongs.
 1 ♂, Aoer Lahat, Palembang. (STRASTERS coll.).
 2 ♂, 2 ♀, Talang betoetoe, Palembang.
 1 ♀, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).

2 ♂, 1 ♀, Blangkolam, Acheen.

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 77, 80, 81, 81, 82, 82, 83: ♀ 77, 78, 79, 82 mm.

Variable in the amount of reddish-brown on the under-surface exactly as in Malayan birds so that *sanguinolentus* LESS., cannot be used.

Chotorhea chrysopogon chrysopogon (TEMME.).

3 ♂, Wai Lima, Lampongs.

1 sex inc., Djepara, Lampongs (TANS coll.).

1 ♂, 1 ♀, Palembang.

1 ♂, Aoer, Lahat, Palembang. (STASTERS coll.).

1 ♂, 1 sex inc., Geureudong, Acheen, 900 metres.

1 ♀, Rampah, Acheen.

Wings ♂ 128, 130, 130, 130, 131: ? 128, 132: ♀ 122, 126, 127 mm.

Chotorhea rafflesi (LESS.).

C. versicolor AUCT.

4 ♂, 1 ♀, Talang betoetoe, Palembang.

1 sex inc., Palembang.

Wings ♂ 113, 113, 117, 117: ? 120: ♀ 114 mm.

Chotorhea mystacophanes mystacophanes (TEMME.).

2 ♂, 1 ♀, Wai Lima, Lampongs.

1 sex inc., Lampongs (VORDERMANN coll.).

1 ♀, Poentilan near Palembang TOWN (STRASTERS coll.).

1 ♂, 1 ♀, Aoer, Lahat, Palembang (STRASTERS coll.).

2 ♂, Palembang.

2 ♂, Rampah, Acheen.

Wings ♂ 95, 95, 96, 97, 97, 99, 101: ? 97: ♀ 93, 97, 101 mm.

Cyanops oorti oorti (MULL.).

1 ♂, 1 sex inc., Palembang.

1 ♂, Baleq, Acheen, 900 metres.

Wings ♂ 91, 96: ? 93 mm.

Mesobucco duvauceli duvauceli (LESS.).

1 ♀, Kajoe tanam, Priaman, Sumatra's Westkust (OUWENS coll.).

1 ♂, 1 ♀ imm., Rampah, Acheen.

Wings ♂ 74: ♀ 78 mm.

Xantholaema haemacephala delica (PARROT).

Xantholaema haemacephala rafflesius (Boie. Nomen nudum) ROBINSON and KLOSS, Journ. Straits Branch, R.A.S. No. 81, 1920, p. 95.

2 ♀, Wai Lima, Lampongs.

1 ♂, 2 ♀, Aoer, Lahat, Palembang.

2 ♀, Palembang.

- 1 ♂, 2 ♀, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).
 3 ♀, 1 sex inc., Medan, N. E. Sumatra.
 1 ♂, 1 ♀ Isaq, Acheen, 1000 metres.
 Wings ♂ 73, 78: ? 73: ♀ 73, 74, 74, 74, 75, 75, 75, 75, 77, 78, 79 mm.

Psilopogon pyrolophus MÜLL.

- 1 ♂, 1 ♀, Palembang.
 7 ♂, 2 ♀, Redelong, Acheen, 1300 metres.
 1 ♂, 2 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.
 Wings ♂ 114, 118, 121, 122, 124, 125, 127, 128: ♀ 116, 120, 122, 127, 127 mm.
 Females are without any crimson wash on the occiput.

PICIDAE.

Picus puniceus observandus HARTERT.

- 2 ♂, 1 ♀, Wai Lima, Lampongs.
 1 ♂, Palembang.
 2 ♂, 1 ♀, Aoer, Lahat, Palembang (STRASTERS coll.).
 1 ♀, Peloempang, ? Sumatra's Westkust (OUWENS coll.).
 1 ♂, Medan, N. E. Sumatra.
 1 ♀ Baleq, Acheen, 900 metres.
 1 ♀ Aloer Poerba, Acheen.
 1 ♀ Rampah, Acheen.
 Wings ♂ 121, 121, 122, 123, 127, 127: ♀ 126, 126, 128, 128, 130, 130 mm.

Picus chlorolophus vanheysti (ROB. & KLOSS).

Brachylophus chlorolophus vanheysti, ROBINSON & KLOSS, Journ. Straits Branch, Royal Asiat. Soc., No. 80, 1919, p. 97 (Bandar Baroe, Deli and Mt. Ophir, Padang).

- 1 ♀, Isaq, Acheen, 1000 metres.
 2 ♂, Redelong, Acheen, 1300 metres.
 Wings ♂ 129, 130: ♀ 125 mm.

This bird has a general resemblance to the more common *P. p. observandus*, but besides having much less red on the head and wings it has an area of whitish feathers before and below the eye.

Callolophus miniatus malaccensis (LATH.).

- 1 ♂, Wai Lima, Lampongs.
 1 ♂, 1 ♀, Palembang.
 1 ♂, Talang betoetoe, Palembang.
 1 ♂ juv., 1 ♀ juv., Batoe Sangkar. (OUWENS coll.).
 1 ♂, Sumatra. (VAN DER PLAS coll.).
 1 ♂, Tapatoean.
 1 ♂, Medan, N. E. Sumatra.
 1 ♂, 1 ♀ Lho Seumawe, Acheen.
 Wings ♂ 121 (worn), 122, 123, 127, 131: ♀ 123, 126, 127 mm.

Chrysophlegma mentale humei HARGITT.

3 ♂, 2 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Palembang.

2 ♀, Medan, N. E. Sumatra.

1 ♂, Geureudang, Acheen, 900 metres.

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 128, 128, 129, 131, 132, 135: ♀ 129, 129, 132, 132, 134 mm.

Chrysophlegma flavinucha mystacale SALV.

1 ♀, Palembang.

1 ♂, Deli, N. E. Sumatra.

1 ♂, Isaq, Acheen, 1000 metres.

1 ♀, Baleq, Acheen, 900 metres.

Wings ♂ 142, 146: ♀ 139, 141 mm.

Chloropicoides rafflesi rafflesi (VIG.).

1 ♀, Wai Lima, Lampongs.

1 ♂, Pagar alam, Palembang, 500—750 metres.

Wings ♂ 130: ♀ 138 mm.

Dryobates moluccensis moluccensis (GM.).

Dryobates nanus auritus STRESEMANN (nec EYTON) Ach. f. Naturges., 1921, Abh. A, p. 73.

2 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Palembang.

1 ♂ Pangkalan Koto Baroe, Sumatra's West Coast (STRASTERS coll.).

2 ♀, Medan, N. E. Sumatra.

Wings ♂ 74, 76, 78, 78: ♀ 76, 76, 77, 78 mm.

In his review of Sumatran Woodpeckers STRESEMANN has used *auritus* for this bird, but the name really applies to the southern Malayan race of *D. hardwickii* re-described by ROBINSON and KLOSS under the name *D. canicapillus suffusus*.

Blythipicus rubiginosus parvus CHASEN & KLOSS.

Journ. f. Ornith., 1929, Bd. 2, p. 112 (Borneo).

3 ♂, 1 ♀, Wai Lima, Lampongs.

2 ♀, Palembang.

2 ♂, Peloempang, ? Sumatra's Westkust. (OUWENS coll.).

1 ♂, Baleq, Acheen, 900 metres.

1 ♂ Rampah, Acheen.

Wings ♂ 113 (imm.), 116, 117, 117, 117, 118: ♀ 119, 119, 122 mm.

The small size of both Bornean and Sumatran birds distinguishes them from the typical Malayan form in which the wing-length varies from 122 to 130 mm.

Meiglyptes tristis micropterus HESSE.

- 4 ♀, Wai Lima, Lampongs.
 1 ♀, Blangkolam, Acheen.
 1 ♂, Aloer Poerba, Acheen.
 1 sex inc., Lahat, Palembang (VORDERMAN coll.).
 Wings ♂ 98: ? 95: ♀ 90, 92, 94, 94, 94, 95 mm.

Meiglyptes tukki tukki (LESS.).

- 1 ♂, Wai Lima, Lampongs.
 1 ♀, juv. Medan, N. E. Sumatra.
 1 ♂, Blangkolam, Acheen.
 1 ♀, Rampah, Acheen.
 Wings ♂ 99, 100: ♀ 95 mm.

Micropternus brachyurus badius (RAFFLES).

- 1 ♂, 1 ♀, Lampongs. (VORDERMAN coll.).
 1 ♂, 1 ♀, Wai Lima, Lampongs.
 1 ♂, Boengamas, Lahat, Palembang.
 1 ♀, Pagar alam, Palembang, 500—750 metres.
 2 ♂, 1 ♀, Medan, N. E. Sumatra.
 2 ♂, 1 ♀, Isaq, Acheen, 1000 metres.
 Wings ♂ 108, 112, 113, 113, 114, 114, 117: ♀ 108, 110, 112, 114, 114 mm.

It seems just possible to maintain *squamigularis* (Sund.) as distinct from this form on account of the more profuse and marked barring shown by the great majority of the Malayan birds.

Dinopium javanense javanense (LJUNGH).

Dinopium javanense palmarum STRESEMANN.

- 1 ♂, Palembang.
 1 ♂, 1 ♀, Talang betoetoe, Palembang.
 2 ♂, 1 ♀, Pangkalan Koto Baroe, Sumatra's West Coast (STRASTERS coll.).
 1 ♀ imm. Koeto Gedang, Sumatra's West Coast (OUWENS coll.).
 1 ♂, 2 ♀, Medan, N. E. Sumatra.
 2 ♂, 1 ♀, Isaq, Acheen 1000 metres.
 Wings ♂ 126, 126, 127, 129, 131, 131, 132; ♀ 121, 123, 124, 126, 130 mm.

Chrysocolaptes validus xanthopygius FINSCH.

- 1 ♂, 1 ♀, Lampongs. (VORDERMAN coll.).
 1 ♂, Lampongs (TANS coll.).
 4 ♂, 2 ♀, Wai Lima, Lampongs.
 1 ♂, 1 ♀, Palembang.
 1 ♂, 1 ♂, Juv., Talang betoetoe, Palembang.
 1 ♂, Baleq, Acheen, 900 metres.
 1 ♂, Geureundang, Acheen 900 metres.
 2 ♂, Blangkolam, Acheen.

Wings 152, 152, 154, 155, 155, 155, 158, 158, 158, 158, 158, 159, 162: ♀ 150, 150, 152, 155, 159 mm.

Hemicircus concretus coccometopus RCHB.

2 ♂ ad., 2 ♂ imm., 1 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Palembang.

1 ♂ imm., Batoe Gedang, Sumatra's West Coast (OUWENS coll.).

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 82, 84, 84, 86, 79 imm., 82 imm., 84 imm.; ♀ 83, 84 mm.

Birds from Sumatra, and also Borneo, average smaller than *sordidus*, their wings not apparently attaining the maximum of the Malayan form.

Thriponax javensis javensis (HORSF.).

1 ♂, 2 ♀, Talang betoetoe, Palembang.

Wings ♂ 230: ♀ 206, 210 mm.

Sasia ochracea abnormis (TEMM.)

1 ♀, Rampah, Acheen.

1 ♀ Aloer Poerba, Acheen.

Wings 53, 55 mm.

Vivia innominata malayorum (HARTERT).

1 ♂, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wing 60 mm.

One of the rarest of Malaysian woodpeckers.

BAKER states that *Picumnus*, the generic name by which this bird has hitherto been known, is based on an American species not congeneric with the Eastern birds.

EURYLAIMIDAE.

Calyptomena viridis viridis RAFFLES.

1 ♂, 1 ♀, Aloer Poerba, Acheen.

Wings ♂ 94: ♀ 105 mm.

Serilophus lunatus rothschildi HARTERT & BUTLER.

2 ♂, Redelong, Acheen, 1300 metres.

Wings 83, 83 mm.

These specimens appear to be inseparable from examples of *S. l. rothschildi* from Perak and the southern half of the Malay Peninsula: whereas *S. l. intensus* ROB. & KLOSS, (terra typica, Korinchi) of south and central Sumatra and the neighbourhood of Brastagi, at the north end of Lake Toba, is much more like *S. l. stolidus* ROB. & KLOSS, of the northern half of the Malay Peninsula by reason of its much browner upperparts, both in shade and extent. *S. l. intensus* is the darkest of the three forms, being a deeper brown above and a deeper grey below. There is practically no difference between the underparts

of *rothschildi* and *stolidus*, but the latter is suffused with pronounced buff above except on the forehead.

This is an addition to the list of Sumatran forms.

Eurylaimus javanicus harterti VAN OORT.

2 ♂, Aloer Poerba, Acheen.

1 ♂ ad., 1 ♂ juv., 1 ♀ juv., Geureudong, Acheen, 900 metres.

Wings ♂ adults 106, 108, 109 mm.

A juvenile male (wing 101 mm) from Wai Lima, Lampongs (23 Nov. 1921) has been recorded as *E. j. javanicus* HORSEF., *) but I am by no means certain of the identification as juveniles of *harterti* possess the yellow under-tail coverts retained in the adult Javanese bird. For the present the typical form should be regarded as not proved to occur in Sumatra though it may very likely exist in the extreme south.

Eurylaimus ochromalus ochromalus RAFFLES.

2 ♀, Poentian near Palembang Town. (STRASTERS coll.).

1 ♂, 1 ♀, Talang betoetoe, Palembang.

1 ♂, Loeboek karet, ? Palembang.

2 ♂, 1 ♀, Aloer Poerba, Acheen.

Wings ♂ 78, 79, 79, 82: ♀ 75, 77, 80, 82 mm.

Corydon sumatranus sumatranus (RAFFLES).

1 ♂ juv., 2 ♀, Wai Lima, Lampongs.

2 ♂, Djepara, Lampongs (TANS coll.).

2 ♂, 1 ♀, 1 ♀ juv., Aloer Poerba, Acheen.

Wings ♂ 128, 128, 130, 135: ♀ 130, 131, 139 mm.

The youngest bird (wing 104) is brownish black, lacks the yellow patch on the back and has the throat white. The other young example (wing 130) is black, but otherwise agrees with it.

Cymborhynchus macrorhynchus lemniscatus (RAFFLES).

1 sex inc., Lampongs. (VORDERMAN coll.).

1 ♂, 1 sex inc., Palembang.

1 ♂, Poentian near Palembang Town. (STRASTERS coll.).

1 ♂, 1 sex inc., Aoer, Lahat Palembang. (STRASTERS coll.).

1 ♂, imm., Talang betoetoe, Palembang.

2 sex inc., Sumatra. (GOLDMAN coll.).

1 ♂, Deli, N. E. Sumatra.

1 ♀, Blangkolam, Acheen.

1 ♂, 2 ♀, Rampah, Acheen.

Wings ♂ 100, 100, 103, 104, 105: ? 100, 102, 103, 104: ♀ 98, 99, 100 mm.

White bars occur on the tail feathers of all these examples, except one, and are confined to the inner webs.

*) Journ. Fed. Malay States Mus., VIII, Part II, 1923, pp. 339, 359.

PITTIDAE.

Pitta brachyura cyanoptera* TEMM.Pitta moluccensis* Auct.

1 ♀, Kajoetanam, Priaman, Sumatra's Westkust (OUWENS coll.).

1 ♂, 1 sex inc., Tapatoean, West coast of Acheen.

Wings ♂ 117; ? 117; ♀ 116 mm.

***Pitta granatina coccinea* EYTON.**

1 ♂ Rampah, Acheen.

Wing 92; bill from gape 28, from nostril 16 mm.

I think that *P. g. vanheurni* (KLOSS, Journ. Fed. Malay States Mus., X, 1921, p. 212. Langkat, N. E. Sumatra) based on a bird with an unusually large bill, may have to be suppressed.

***Pitta cucullata bangkana* SCHLEG.**

Pitta bangkana SCHLEG., Vog. Ned. Ind., Pitta, 1863, p. 8, pl. 2, fig. 5; id. Mus. Pays-Bas, III, Pitta, 1863, p. 3; Wallace, Ibis, 1864, p. 106 (Banka).

Pitta cucullata, WALLACE, Ibis, 1864, p. 106 (Palembang)?: VORDERMAN, Nat. Tijd. Ned. Ind., L. 1891, p. 488 (Billiton).

Pitta atricapilla bangkana PARROT, Abh. K. Akad. Wiss., II, Kl. XXIV, Bd. 1, 1907, p. 219 (Banka).

1 sex inc., Palembang.

Wing 110 mm.

This specimen has the top of the head markedly darker brown than *P. cucullata* HARTL., of the Malay Peninsula and the black portions of the feathers are larger and more visible than in the Malayan bird. It is possibly a little immature, but as it seems to agree with the four Banka examples described by PARROT (q.v.) I retain *bangkana* and use the name for this Sumatran bird, for it is quite possible that the birds of Banka and other southern localities are different from the continental and northern Sumatran form.

SCHLEGEL, after proposing *bangkana*, finally listed examples from Northern India, Malacca and Banka under "*Pitta cucullata et bangkana*" (Mus. Pays-Bas, III, Revue Pitta, 1874, pp. 2, 5) stating that in young birds only the edges of the crown-feathers were brown, the remaining part being black or blackish: i.e., on reconsideration he regarded the types of *bangkana* as immature individuals: and VORDERMAN, considering that SCHLEGEL had reduced *bangkana* to a synonym of *cucullata*, listed birds from Billiton under the latter name. They, and specimens from Banka, require re-examination as does PRILLWITZ' example from West Java in the Tring Museum (vide BARTELS and STRESEMANN, Treubia XI, 1929, p. 120).

P. c. cucullata occurs on continental Asia and is common at times on islands in the Straits of Malacca. Individually it varies appreciably in the tone of the blue areas and the extent of white on the wing. In a number of examples the green and blue feathers exhibit a dark median line so that the plumage

appears to be striped with brown or black. The Nicobar Island bird has been named *abbotti* by RICHMOND and the species also occurs on Sumatra, Banka, Billiton, Nias (fide BÜTTIKOFER), and Java.

***Pitta sordida sumatrana* subsp. nov.**

Pitta atricapilla VORDERMAN, Nat. Tijd. Ned. Ind., XLI, 1881, pp. 126, 129 (Lahat, Palembang).

Pitta muelleri WALLACE, Ibis, 1864, p. 106 (Palembang); NICHOLSON, Ibis, 1882, p. 63 (Lampongs).

Pitta mülleri VORDERMAN, op cit., LI, 1891, p. 232 (Lampongs).

1 ♂, Lampongs.

1 ♂, Palembang.

Wings 105, 108 mm.

Like *Pitta sordida mülleri* Bp., of Borneo, but with the black tips to the primaries much larger, the white area of the wing being proportionately reduced, and not extending to the outer web of the first primary, though this is sometimes edged with white. Length of the black tips of the second primary 35—40 mm: in *mülleri* 15—20 mm only. Tail more broadly tipped with blue. Size apparently a little smaller than *mülleri*.

Type. Adult male from Palembang collected on 1 January, 1920. BRAUTIGAM coll. In Mus. Zool. Buitenzorg.

Wing 108 mm.

Possibly GOULD's skin from Banka in the British Museum of Natural History recorded by SCLATER (Catalogue of Birds, XIV, p. 440) under *P. muelleri* should be placed here.

P. s. mülleri occurs throughout Borneo and on Sibutu Id., N. E. Borneo *).

The black-headed green *Pitta* of Java is also distinct and I take the opportunity to describe it below.

In Malaysia the species occurs in the Palawan group, Borneo, Sumatra, Banka (fide SCLATER) and Java. Thus both the species *sordida* and *cucullata*, so closely resembling each other except in the colour of the crown that were it not for their distribution they might be regarded as one species, seem to occur together in Sumatra, Banka and Java only.

***Pitta sordida javana* subsp. nov.**

Pitta mülleri AUCT.; VORDERMAN, Nat. Tijd. Ned. Ind. XLIV, 1884, p. 214 (Batavia, Java).

Like *P. sordida mülleri* but with the white area of the wing even more reduced than in *P. sordida sumatrana*, not extending to the outer webs or the first and second primaries and reaching the first primary only as a small patch on the edge of the inner web. Size and tail as in *sumatrana*; size smaller and apparently the tail more broadly tipped with blue than in *mülleri* of Borneo.

*) *Pitta mülleri* was said by BONAPARTE to be from Celebes but the name is based on MÜLLER and SCHLEGEL's *P. atricapilla* which referred to birds from Borneo. The type locality is thus erroneous and no green *Pitta* with a white wing-patch occurs on Celebes. The terra typica of *P. mülleri* is S. E. Borneo (Doesun R.).

Type. Adult female from Bandjar, on the boundary between West and Mid Java, in Mus. Zool., Buitenzorg.

Wing 105 mm.

Of the three Malaysian races, the Bornean form may be described as a white-winged bird having the primaries black-tipped, the white extending over the outer web of the first primary for a length of 30 mm or more: *sumatrana* as a black-winged bird with a white patch which does not reach the outer web of the first primary: and *javana* as a black-winged bird with a yet smaller white patch which only just reaches the inner web of the first primary.

According to Dr. K. W. DAMMERMAN this *Pitta* is confined in Java to the western third of the island.

***Eucichla guajana irena* (TEMM.).**

1 ♀, Lampongs (VORDERMAN coll.).

1 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Loeboek lontjang, Palembang.

1 ♀, Pagar Alam, Palembang, 500—750 metres.

1 ♂, Talang Betoetoe, Palembang.

1 ♀, Aloer Poerba, Acheen.

Wings ♂ 100, 102, 104: ♀ 101, 102, 102, 106 mm.

The type came from North Sumatra and was described by TEMMINCK as having the under parts blue from the bill. This, however, is a *lapsus calami* as the blue under parts commence at the base of the foreneck.

HIRUNDINIDAE.

***Hirundo rustica gutturalis* Scop.**

1 ♂, Wai Lima, Lampongs.

1 ♀, 1 sex inc., Palembang.

Wings ♂ 110: ? 112: ♀ 112 mm.

***Hirundo tahitica javanica* SPARRM.**

1 ♀, Wai Lima, Lampongs.

Wing 103 mm.

Inseparable from a series of Javanese birds.

OBERHOLSER states that Sumatran birds apparently, and southern Malayan birds probably, belong to his proposed race *H. t. hypolampra* from Nias *). It is a pity that when describing this form he did not compare it with his earlier *H. t. abbotti* from the Anamba Islands instead of with the more distant form *H. t. domicola* of Southern India. We refer Bornean, Malayan and North Sumatran birds to *abbotti*, a form with a rather darker foreneck than *javanica*.

*) Journ. Wash. Acad. Sci., 16, 1926, p. 515.

MUSCICAPIDAE.

Hemichelidon ferruginea HODGS.

1 sex inc., Lampongs (VORDERMAN coll.).

Wing 71 mm.

Alseonax latirostris latirostris (RAFFL.).

1 sex inc., Lampongs (VORDERMAN coll.).

1 ♂, 1 sex inc., Wai Lima, Lampongs.

Wings ♂ 70: ? 70, 69 mm.

Cyornis rufigastra rufigastra (RAFFL.).

Cyornis rufigastra rufigastra CHASEN and KLOSS, Bull. Raffles Mus. No. 2, 1929, p. 36.

1 ♂, Palembang.

1 ♂, Kandang, Lho Seumawe, Acheen.

Wing 72, 72 mm.

In the absence of properly associated females it is not easy to distinguish between the males of *C. banyumas cantatrix* (TEMM.) of Western Java and those of *C. r. rufigastra*: but the bright forehead and superciliaries in the latter are not so pale as in *cantatrix*; and *rufigastra* (of Sumatra and the Malay Peninsula at least) seems to be a trifle smaller. The wings of fourteen males of *cantatrix* measure 75—77 mm; of eleven Malayan-Sumatran *rufigastra* 71—75 mm.

Anthipes solitaria subsp.

1 ♀ subad., Baleq, Acheen, 900 metres.

Wing 66 mm.

This specimen is so much less saturate than topotypes from the neighbourhood of Padang and so closely resembles *A. s. malayana* from the Malay States that I should have no hesitation in referring it to the latter race were it not rather immature. It may well be, however, that birds of the north of Sumatra are the same as those of the same latitude in the Peninsula.

Niltava vivida sumatrana SALV.

1 ♂, Korinchi Peak, 3000 metres (ROBINSON & KLOSS coll.).

7 ♂, 4 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 80, 80, 80, 80, 81, 82, 83, 84: ♀ 79, 80, 81, 82 mm.

One of the males still retains traces of juvenile plumage in the form of large tawny spots on the back and wing-coverts. The under tail-coverts of the females vary from pale buff to deep tawny.

Niltava grandis decipiens (SALV.).

1 ♂, Isaq, Acheen, 1000 metres.

2 ♂, Redelong, Acheen, 1300 metres.

Wings 92, 95, 97 mm.

***Poliomyias mugimaki* (TEMME.).**

2 ♂ imm., 4 ♀, Wai Lima, Lampongs. January.

1 ♂ ad., Fort de Kock, Sumatra's Westkust, 1000 metres. December.
(GROENEVELD coll.).

Wings ♂ 72, 74, 76: ♀ 70, 70, 71, 72 mm.

***Dendrobiastes hyperythrus sumatranus* HACHISUKA.**

Bull. B.O.C. XLVII, 1926, p. 52. Korinchi.

1 ♂ subad., 1 ♂ juv., Redelong, Acheen, 1300 metres.

1 ♂ ad., 1 ♂ subad., 1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 58, 59, 59: ♀ 57 mm.

I use the name given to Sumatran birds though I am still by no means certain that they differ materially from *D. h. malayana* (O.-GRANT) of the Malay Peninsula.

***Muscicapula melanoleuca westermanni* SHARPE.**

Muscicapula melanoleuca westermanni ROBINSON & KLOSS, Journ. Fed. Malay States Mus., VIII, Part 2, 1918, p. 160 (Korinchi)?; id., op. cit. XI, 1924, p. 272 (Partim. Padang Highlands)?.

1 ♂, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

2 ♂ ad., 3 ♂ juv., 1 ♀ ad., Redelong, Acheen, 1300 metres.

Wings ♂ 57, 58, 58 (55, 56, 56 juv.): ♀ 55 mm.

This Malayan race will probably be found, on the acquisition of females, to occur in the central parts of the island as well as in the north.

***Muscicapula melanoleuca hasselti* (TEMME.).**

Muscicapula melanoleuca westermanni ROBINSON & KLOSS, (part.), Journ. Fed. Malay States Mus. XI, 1924, p. 272 (Mt. Kaba, Benkoelen; Mt. Dempu, Palembang)?.

1 ♀, Lampongs (VORDERMAN coll.).

Wing 55 mm.

This specimen belongs to the Javanese form in which the females have the upper parts strongly suffused with russet and the breast and flanks tinged with brown, whereas the Malayan female (*westermanni* SHARPE) is clear grey on those areas except on the rump and upper tail-coverts.

Males from Java, Sumatra and the Malay Peninsula are indistinguishable and hitherto I have only examined specimens of that sex from Sumatra: but those from Mt. Kaba and Mt. Dempu probably belong to this Javanese race which is possibly confined in Sumatra to the south only.

***Cyanoptila cyanomelana* subsp.**

1 ♀, Wai Lima, Lampongs: December 1921.

Wing 88 mm.

I have a precisely similar female from the valley of Korinchi (wing 87 mm) and have recorded a pair (no longer available) from Mt. Sibajak, N. E. Sumatra, as *C. bella* (Journ. Straits Branch, Roy. Asiat. Soc., No. 81, 1920,

p. 98). BARTELS and STRESEMANN listed both *cumatilis* and the typical race in Java (Treubia, XI, 1929, p. 122). These flycatchers only occur in Malaysia as occasional migrants and without topotypes I find it impossible to determine solitary females subspecifically. I have, however, before me of Malaysian birds adult and immature males of *C. c. cyanomelana* (TEMM.) from Borneo and other males from the Malay Peninsula and Sumatra which appear to be *C. c. cumatilis* THAYER and BANGS. All winter birds.

Xanthopygia narcissina xanthopygia (HAY).

1 ♂ imm., Aloer Poerba, Acheen.
In female plumage. Wing 72 mm.

Hypothymis azurea prophata OBERH.

1 ♀, Wai Lima, Lampongs.
1 ♂, Baleq, Acheen, 900 metres.
1 ♂, Aloer Poerba, Acheen.
Wings ♂ 72, 74 ♀ 67 mm.

Rhipidura albicollis atrata SALV.

1 ♂, Isaq, Acheen, 1000 metres.
1 ♂, Redelong, Acheen, 1300 metres.
Wings 80, 82 mm.

Rhipidura javanica longicauda WALLACE.

1 ♀, Pangkalan Koto Baroe, Sumatra's Westkust.
1 ♀, Medan, N. E. Sumatra.
Wings 73, 73 mm.

The typical form seems to be confined to Java: it is a little more tinged with ferruginous above and below than *longicauda* to which can be referred, as well as birds of Sumatra, those of the Malay Peninsula and Borneo.

Terpsiphone paradisi affinis (HAY).

1 ♂, Lampongs (VORDERMAN coll.).
1 ♂, Wai Lima, Lampongs.
Wings 92, 91 mm.

Tersiphone paradisi incii (GOULD).

1 ♂, Wai Lima, Lampongs.
Wings 87 mm.

Tersiphone atrocaudata atrocaudata (EYTON).

Terpsiphone princeps AUCT.
1 ♂, Lampongs (VORDERMAN coll.).
Wing 92 mm.

Drymophila pyrrhoptera pyrrhoptera (TEMM.).

1 ♂, Aloer Poerba, Acheen.
Wing 82 mm.

Rhinomyias umbratilis umbratilis (STRICKL.).

Rhinomyias umbratilis richmondi STONE, Proc. Acad. Nat. Sci., Philadelphia LIV. 1902, p. 686. Mansalar Id., W. Sumatra.

1 ♂, Palembang.

Wing 75 mm.

The Academy of Natural Sciences is in possession of STRICKLAND's Bornean type and STONE separated birds of the Sumatran area on account of their olivaceous colour, the old type being now tawny-brown. The latter colour is, however, merely the result of long-continued post-mortem change to which all olivaceous-brown Timeliads and Pycnotids are subject.

Rhinomyias olivacea olivacea (HUME).

1 ♂, 1 ♀, Isaq, Acheen, 1000 metres.

1 ♂, Baleq, Acheen, 900 metres.

1 ♂ imm., 1 ♀, Geurendong, Acheen, 900 metres.

Wings ♂ 74 imm., 76 imperfect, 78: ♀ 71, 72 mm.

Culicicapa ceylonensis ceylonensis (SWAINS.).

CHASEN & KLOSS, Journ. Fed. Malay States Mus., XIII, 1927, p. 279.

4 ♂, Redelong, Acheen, 1300 metres.

Wings 58, 60 imm., 61, 62 mm.

Abornis superciliaris schwaneri (BLYTH).

1 ♂, Isaq, Acheen, 1000 metres.

Wing 58 mm.

Cryptolopha trivirgata trivirgata (STRICKL.).

1 ♂, Korinchi Peak, 3000 metres. (ROBINSON & KLOSS coll.).

1 ♂, Isaq, Acheen, 1000 metres.

1 ♂, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

1 ♀, Redelong, Acheen, 1300 metres.

Wings ♂ 59, 60, 63: ♀ 56 mm.

Cryptolopha montis inornata ROB. & KLOSS.

Journ. Straits Branch, Royal Asiatic Soc., No. 81, 1920, p. 99 (Bandar Baroe, near Brastagi, N. E. Sumatra).

2 ♂, Redelong, Acheen, 1300 metres.

Wings 55, 56.5 mm.

Differing from the typical Bornean bird in the darker chestnut of the crown, nape and sides of head. The Malayan race, *C. m. davisoni* SHARPE, is distinguished from both by the possession of a marked yellow rump-band.

Stoparola indigo ruficrissa (SALV.).

1 ♂, 1 ♀, Korinchi Valley, 1000 metres (ROBINSON & KLOSS coll.).

3 ♂, 1 ♀, Redelong, Acheen, 1300 metres.

1 ♂, 2 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 75, 75, 77, 77, 78: ♀ 72, 75, 75, 77 mm.

Stoparola thalassina thalassoides (CAB.).*Stoparola melanops* AUCT.

1 ♂, 1 ♀, Wai Lima, Lampongs.

2 ♂, Palembang.

1 ♀, Aloer Poerba, Acheen.

Wings ♂ 74, 75, 77, 77: ♀ 76 mm.

CAMPEPHAGIDAE.

Coracina sumatrensis sumatrensis (S MÜLL.).

1 ♂, 1 ♀, Palembang.

1 ♀, Aoer, Palembang. (STASTERS coll.).

Wings ♂ 153: ♀ 145, 147 mm.

Lalage fimbriata culminata (HAY).

1 ♂, Lampongs. (VORDERMAN coll.).

Wing 102 mm.

Lalage nigra nigra (FORST.).*Lalage nigra brunnescens* BAKER.

2 ♀, Wai Lima, Lampongs.

1 ♂, Palembang.

1 ♀, Aloer, Lahat, Palembang. (STRASTERS coll.).

1 ♂, Boekit Gadang, Sumatra's Westkust.

1 ♂, 1 ♀, Medan, N. E. Sumatra.

1 ♂, 1 ♀, Lho Seumawe, Acheen.

Wings ♂ 85, 88, 89, 91: ♀ 86, 87, 89, 93 mm.

I have dealt with the names of this species in Journ. Malayan Branch, Royal Asiat. Soc. IV, 1926, pp. 158-161, and V, 1927, p. 351.

Pericrocotus flammeus xanthogaster (RAFFL.).

6 ♂, 2 ♀, Wai Lima, Lampongs.

2 ♂, Palembang.

1 ♀, Talang Betoetoe, Palembang.

Wings ♂ 82, 83, 84, 85, 85, 85, 85, 86: ♀ 79, 81, 83 mm.

Pericrocotus igneus igneus BLYTH.

1 ♀, Wai Lima, Lampongs.

Wing 75 mm.

Pericrocotus montanus montanus SALV.

1 ♂ ad., 1 ♂ imm., Isaq, Acheen, 1000 metres.

1 ♂, Takengon, Acheen, 1200 metres.

1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 80 imm., 82, 82: ♀ 79 mm.

The young male is of unusual colouration: instead of the yellow areas of the juvenile plumage (which is that of the female) changing to red in patches they have turned to deep orange except for one or two spots which are still yellow.

Pericrocotus miniatus miniatus (TEMME.).

1 ♀, Korinchi Peak, 2200 metres. (ROBINSON & KLOSS coll.).

Wing 81 mm.

PYCNONOTIDAE.

Aegithina viridissima viridissima (Bp.).

1 ♀, Aloer Poerba, Acheen.

Wing 63 mm.

Aegithina tiphia (?) **micromelaena** OBERH.

1 ♂, Palembang.

1 ♂, Aoer, Lahat, Palembang.

1 ♀, Talang Betoetoe, Palembang.

2 ♂, 3 ♀, 1 sex inc. juv., Medan, N. E. Sumatra.

1 ♂, Blangkolam, Acheen.

Wings ♂ 60, 61, 62, 62, 65: ♀ 61, 61, 62, 64, 64 mm.

The Malaysian forms of this species require consideration. Having no typical material of *tiphia* (Bengal) I quote HUME's review to show that the Malayan bird is not *Ae. t. tiphia*. "Passing into Burma, though the *tiphia* type may prevail, the variations become more numerous and conspicuous. Birds with the entire nape and back black, or the entire crown and nape black, and the back much fringed with that colour are not uncommon and become more and more so I believe as you go south, until at Singapore the majority, I believe, of the males when in breeding plumage exhibit a considerable amount of black on the upper surface and some at any rate occur of the purely typical *multicolor* type [the Ceylon and South Indian race]. We preserved a great many of these birds in the Malay Peninsula. That the yellow of the throat, etc., of many Malayan specimens is far more golden than those of Calcutta or even the great majority of North Burmese birds is undeniable but that is because in this, as in other points as you go south, the species reverts more and more to the Southern Indian type" (Stray Feathers V, 1877, p. 440).

Sumatran birds only appear to differ from southern Malayan *multicolor*-like ones ¹⁾ in that males do not seem to assume the intense black plumage described by HUME. No name has been given to them but as they are unlikely to differ appreciably from the bird of Banca Island they may be called *Ae. t. micromelaena* OBERHOLSER, ²⁾ the description of which seems to apply sufficiently. Birds from Peninsula Siam and the more northern of the Malay States also seem to agree with the small Sumatran series before me.

In Borneo the males of this species are not known to assume any black

¹⁾ *Ae. t. singapurensis* C. & K., Bull. Raffles Mus., 5, 1931, p. 85.

²⁾ Smithsonian Misc. Collns. vol. 76, No. 6, 1923, p. 7, Banca.

plumage, this being indicated at most by a few black patches only. The northern parts of the island are occupied by *Ae. t. viridis* (Br.) which further differs in having the forehead and lores of the males yellower than in other Malaysian races, the extreme development being the extension of the yellow of the forehead over the crown. Females are perhaps a little yellower in general. The southern half of Borneo is inhabited by *Ae. t. damicra* OBERHOLSER (l.c.s.: syn. *Ae. zophonota* OBERH.) a duller bird with a greenish forehead, leading to *Ae. t. scapularis* (HORSF.) of Java, the dullest form of all, in which the sexes are scarcely distinguishable, the males developing no "breeding" plumage. This so-called "breeding" plumage is, in Malaysia, possibly only an extreme adult phase in males.

While the nomenclature of Sumatran-North Malayan birds is not yet final the name I have used for them does indicate their positions more satisfactorily than does calling them all *Ae. t. tiphia*: certainly none of them are *viridis*.

Chloropsis viridis zosterops VIG.

- 3 ♂, 1 ♀, Wai Lima, Lampongs.
 1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).
 1 ♀, Talang Betoetoe, Palembang.
 1 ♂, Geureudong, Acheen, 900 metres.
 1 ♂, Rampah, Acheen.
 1 ♀, Aloer Poerba, Acheen.
 Wings ♂ 97, 97, 99, 100, 104, 108: ♀ 90, 96, 96 mm..

Chloropsis media (Br.).

- 1 ♂, 1 ♀, Palembang.
 1 ♂, 1 ♀, Korinchi Valley, 900 metres (ROBINSON & KLOSS coll.).
 Wings ♂ 97, 101: ♀ 92, 93 mm.

Chloropsis cochinchinensis icterocephala (LESS.).

- 4 ♂ ad., 1 ♂ imm., 2 ♀, Wai Lima, Lampongs.
 1 ♀, Pagar Alam, Palembang, 500—750 metres.
 1 ♀, Sumatra.
 Wings ♂ 80, 80, 81, 82, 84: ♀ 79, 80, 81, 81 mm.

The young male resembles females, but lacks the golden tint on the nape and the grass-green throat. It is tinged with yellow on the cheeks.

Chloropsis cyanopogon cyanopogon (TEMM.).

- 1 ♂, 2 ♀, Wai Lima, Lampongs.
 1 ♀ Aloer Poerba, Acheen.
 Wings ♂ 84: ♀ 75, 75, 79 mm.

Irena puella criniger SHARPE.

- 1 ♂ imm., Lampongs (VORDERMAN coll.).
 2 ♂, 2 ♀, Wai Lima, Lampongs.
 1 ♂, Boengamas, Lahat, Palembang.
 1 ♀, Geureudong, Acheen.

Wings ♂ 121, 122, 123, 124: ♀ 118, 122, 122 mm.

Only differs from *I. p. turcosa* of Java in having the blue in the males slightly tinged with violet.

***Ixos cinereus cinereus* (BLYTH).**

1 sex inc., Lampongs (VORDERMAN coll.).

1 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 100: ? 87 imm.: ♀ 94 mm.

***Ixos malaccensis malaccensis* (BLYTH).**

4 ♂, 3 ♀, Wai Lima, Lampongs.

1 ♂, Geureudong, Acheen, 900 metres.

Wings ♂ 103, 105, 105, 107, 110: ♀ 100, 102, 104 mm.

***Ixos virescens sumatranus* (WARDL.-RAMS.).**

1 ♂, Korinchi Valley, 900 metres. (ROBINSON & KLOSS coll.).

2 ♂, 3 ♀, Redelong, Acheen, 1300 metres.

1 ♂, Takengon, Acheen, 1200 metres.

2 ♂, 1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 93, 93, 94, 94, 96: ♀ 89, 89 mm.

The North Sumatran birds are of a much greener olive, both above and below, and have blacker tails than a series from South and Mid Sumatra collected in 1914—1916; but the topotypes may have undergone postmortem changes while the northern individuals are in fresh plumage having just completed a moult.

***Iole olivacea olivacea* (BLYTH).**

2 ♂, 4 ♀, Wai Lima, Lampongs.

1 ♂, Blangkolan, Acheen,

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 89, 89, 89: ♀ 80, 80, 81, 81 mm.

I find it impossible to distinguish between Sumatran and Malayan examples, but OBERHOLSER, who has separated the bird of the Anamba Islands as *crypta*, states that the Sumatran bird should also bear that name (Proc. Biol. Soc. Wash. 31, 1918, p. 197).

The genus *Iole* should probably be merged in *Ixos*.

***Brachypodius atriceps atriceps* (TEMM.).**

2 ♂, 3 ♀, Wai Lima, Lampongs.

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♂, 1 ♀, Pagar Alam, Palembang, 500—750 metres. (OUWENS coll.).

1 ♀, Pontian near Palembang Town. (STRASTERS coll.).

1 ♀, Kajoetanam, Priaman, Sumatra's Westkust.

Wings ♂ 74, 76, 76, 78: ♀ 73, 73, 74, 75, 75, 76 mm.

Criniger tephrogenys tephrogenys (JARD. & SELBY).

4 ♂, 2 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Aloer Poerba, Acheen.

Wings ♂ 100, 100, 101, 102, 105: ♀ 92, 97, 99 mm.

Criniger tephrogenys sumatranus WARDL.-RAMS.

1 ♀, 1 sex inc., Palembang.

1 ♀, Pagar Alam, Palembang, 500—750 metres.

1 ♂, Geureudang, Acheen, 900 metres.

Wings ♂ 122: ♀, 112: ? 112 mm.

A darker form than the last with the white throat more extensive.

Tricholestes criniger sericea (S. MÜLL.).

2 ♂, 2 ♀, Wai Lima, Lampongs.

Wings ♂ 78, 79: ♀, 71, 72 mm.

A series with very bright yellow underparts.

Trachycomus zeylanicus (GM.).

Trachycomus ochrocephalus AUCT.

1 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, 2 ♀, Palembang. (OUWENS coll.).

2 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♀, Medan, N. E. Sumatra.

1 ♂, Isaq, Acheen, 1000 metres.

2 ♂, 1 ♀, Blangkolam, Acheen.

Wings ♂ 119, 120, 120, 120, 121, 122: ♀ 115, 116, 119, 122, 123 mm.

A young male (wing 113) has the crown albescent.

Pycnonotus goiaver personatus HUME.

Pycnonotus analis AUCT.

1 ♂, Wai Lima, Lampongs.

1 ♂ 1 ♀, Palembang.

1 ♂, Pontian near Palembang Town.

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

2 ♀, Medan, N. E. Sumatra.

1 ♂, Isaq, Acheen, 1000 metres.

2 ♀, Blangkolam, Acheen.

Wings ♂ 83, 85, 89, 90, 92: ♀ 81, 86, 89, 89 mm.

This race is distinguished by the very white superciliaries and ear-coverts.

It extends to the Malay Peninsula.

Pycnonotus plumosus subsp.

1 ♂, Talang betoetoe, Palembang.

Wing 83 mm.

The Olive Bulbul of Sumatra is inseparable on size and colour from the typical Malayan bird: but it occurs in two forms. Along the east side of the

island where it has the irides brown or red it is *Pycnonotus plumosus plumosus*. Along the west side (and on the neighbouring islands) the irides are yellow or orange: and to this form I propose to attach the name *Pycnonotus inornatus* BONAPARTE, with terra typica Padang, as the type in Leyden is more likely to have come from that neighbourhood than from Eastern Sumatra. RILEY (Proc. U. S. Nat. Mus., 75, art. 4, 1929, p. 27) has suggested that examination of the type would settle the question. It is improbable, however, that any record of the colour of the irides was made.

***Pycnonotus brunneus brunneus* BLYTH.**

1 ♀, Palembang.

1 ♀, Pontian, near Palembang Town, "eyes light red" (STRASTERS coll.).

1 ♂, Aoer, Lahat, Palembang, "eyes red-brown" (STRASTERS coll.).

1 sex inc., Benkoelen.

2 ♂, 3 ♀, Wai Lima, Lampongs.

Wings ♂ 84, 85, 89: ? 85: ♀ 79, 79, 80, 82, 84 mm.

***Pycnonotus simplex simplex* (LESS.).**

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

Wing 80 mm. "Iris cream white".

***Pycnonotus erythrophthalmos erythrophthalmos* (HUME).**

Pycnonotus erythrophthalmos cyanochrus OBERH. (Sumatra).

1 ♂, Pontian, near Palembang Town. (STRASTERS coll.).

2 ♂, 1 ♀ Aloer Poerba, Acheen.

2 ♂ ad., 1 imm., 1 juv., 2 ♀ ad., Wai Lima, Lampongs.

Wings ♂ 75, 75, 75, 76, 76, 71 imm., 71 juv.: ♀ 72, 73, 73 mm.

The young birds are without the olivaceous tinge of the adults, being brown above and one is washed with the same colour on the breast and flanks.

I cannot separate Sumatran from continental birds.

***Pycnonotus bimaculatus barat* ROBINSON & KLOSS.**

1 ♀, Palembang.

1 sex inc., Pagar Alam, Palembang, 500—750 metres.

1 ♂, Korinchi Valley, 900 metres (ROBINSON & KLOSS coll.).

Wings ♂ 90: ? 89: ♀ 87. Tail ♂ 102: ? 100: ♀ 100 mm.

***Pycnonotus bimaculatus snouckaerti* SIEBERS (Plate 4).**

Pycnonotus bimaculatus barat VAN HEURN and SNOUCKAERT VAN SCHAUBURG, 1921; SNOUCKAERT, 1922.

Pycnonotus snouckaerti SIEBERS, Treubia, X, 1928, p. 395 (Takengon Lake, Acheen).

1 ♂, 1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

1 ♂, Pangmoh, Acheen, 2000 metres.

Wings ♂ 98, 99: ♀ 93. Tail ♂ 106, 110: ♀ 101 mm.

While *P. b. barat* ROB. & KLOSS, of West Java and Sumatra (northwards at least as far as Lake Toba) ¹⁾ only differs from the typical bird of East Java in having the ear coverts more extensively and deeply yellow, the upper parts more olive and the throat paler (vide plate 4), the Achinese race is very distinct. It is rather larger, has the upper surface blacker and much less olive, no yellow on the cheeks, the orange frontal patches larger but not reaching the eye; only the middle of the lower abdomen whitish, the rest of the underparts fuscous edged with whitish; and the centres of the under tail-coverts olive. The edge of the wing and the under wing-coverts are fuscous, not yellow and whitish respectively.

The examples figured in plate 4 are from Tamansari, near Banjoewang, East Java (*P. b. bimaculatus* ♂); from Korinchi Valley, Central Sumatra (*P. b. barat* ♂) and from Acheen, North Sumatra (*P. b. snouckaerti* ♂).

***Pycnonotus cyaniventris cyaniventris* BLYTH.**

1 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 74, 77: ♀ 73 mm.

***Pycnonotus aurigaster aurigaster* (VIEILL.).**

Pycnonotus aurigaster martini PARROT (Sumatra).

1 sex inc., Medan, N. E. Sumatra.

Wing 97 mm.

We believe this to be a species introduced from Java.

***Rubigula dispar dispar* (HORSF.).**

1 ♂, 3 ♀, Wai Lima, Lampongs.

1 ♂, Palembang.

2 ♂, Poentian, near Palembang Town. (STRASTERS).

2 ♂, Pagar Alam, Palembang, 500—750 metres.

2 sex inc., Benkoelen. (VORDERMAN coll.).

Wings ♂ 80, 80, 82, 83, 84, 84: ? 82, 85: ♀ 81, 82, 83 mm.

***Rubigula squamata webberi* (HUME).**

2 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 71 (moult), 78: ♀ 73 mm.

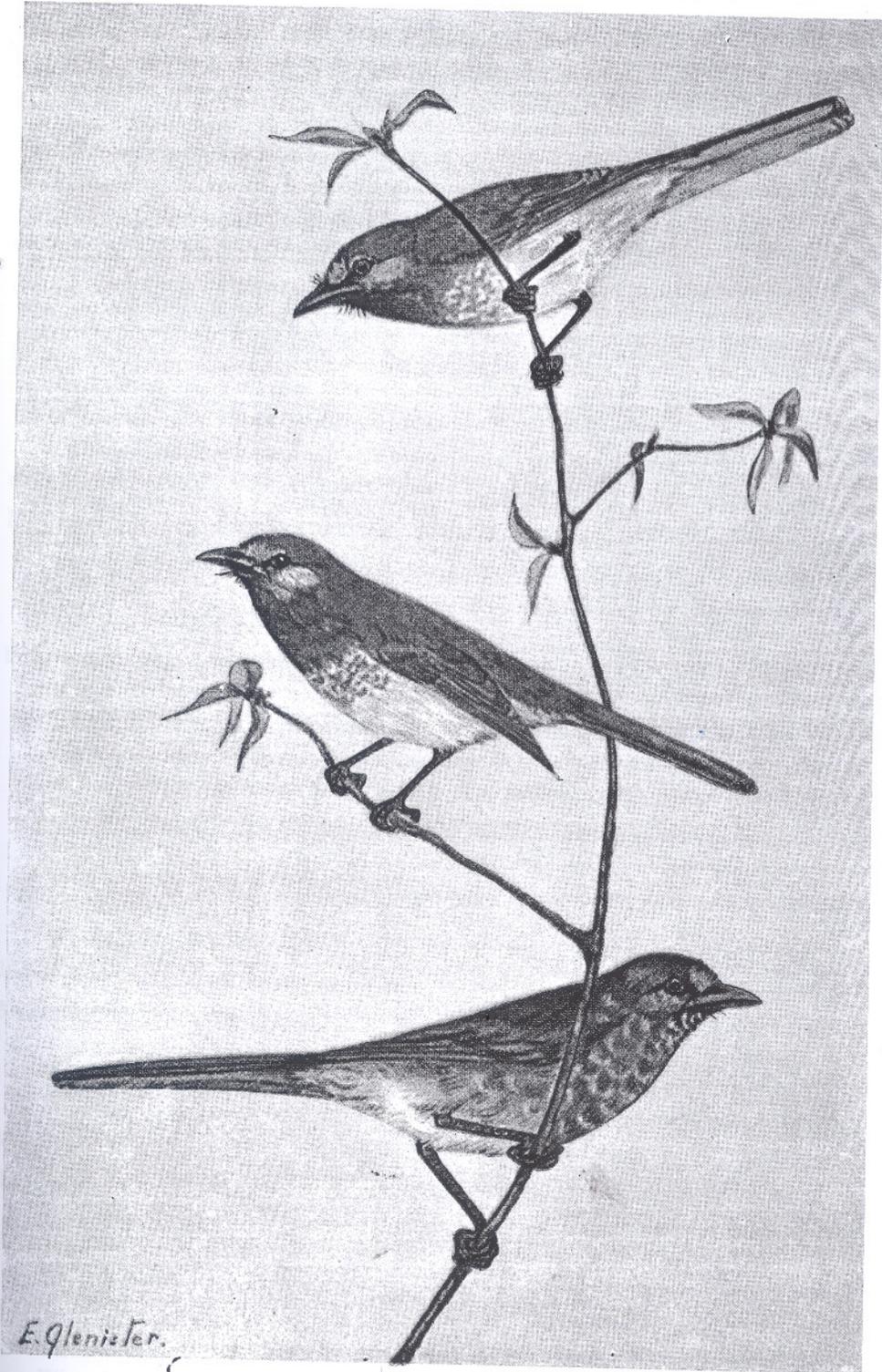
TIMALIIDAE.

***Eupetes macrocercus macrocercus* (TEMM.).**

1 sex inc., Lampongs (VORDERMAN coll.).

Wing 99 mm.

¹⁾ Journ. Straits Branch, R. A. S., No. 81, 1920, p. 103.



Pycnonotus bimaculatus bimaculatus, ♂ (Top); *P. b. barat*, ♂ (Middle);
P. b. snouckaerti, ♂ (Bottom).

Garrulax leucolophus bicolor S. MÜLL. in HARTL.

1 ♂, Korinchi Valley, 900 metres (ROBINSON & KLOSS coll.).

1 ♀, Tabat Patah, Pajakombo, Sumatra's Westkust. (GROENEVELD coll.).

1 sex inc., Sumatra.

1 ♂, 4 ♀ Redelong, Acheen, 1300 metres.

Wings ♂ 128, 129: ? 130: ♀ 119, 122, 125, 127, 129 mm.

It would appear that in Museum skins the colour seems to change rapidly from brownish black to chocolate brown.

Garrulax palliatus palliatus (BP.).

1 ♀, Sungei Kumbang, Korinchi Peak, 1400 metres (ROBINSON and KLOSS coll.).

1 ♂, Redelong, Acheen, 1300 metres.

Wings ♂ 133: ♀ 118 mm.

In this bird the extent of the brown wash on the flanks and black on the chin is variable. In old skins the brown areas seem to become more saturate.

Melanocichla lugubris lugubris (S. MÜLL.).

1 ♀, Pagar Alam, Palembang.

1 ♂, Pintu ? (OUWENS coll.).

Wings ♂ 122: ♀ 127 mm.

Rhinocichla mitrata mitrata (S. MÜLL.).

1 ♂, 1 ♀, Palembang.

1 ♂, 1 ♀, Pagar Alam, Palembang, 500—750 metres.

1 sex inc. Djambi River, E. Sumatra.

1 ♂, Palembang, Sumatra's Westkust (OUWENS coll.).

1 ♀, Batoe Gedang, Sumatra's Westkust (OUWENS coll.).

1 ♂, Fort de Kock, Sumatra's Westkust, 900 metres. (GROENEVELD coll.).

1 ♀, Isaq, Acheen, 1000 metres.

2 ♂, 4 ♀, Redelong, Acheen, 1300 metres.

Wings ♂ 92, 97, 101, 101, 105, 107: ? 92: ♀ 97, 99, 100, 100, 103, 103, 105, 105 mm.

Malaccocincla sepiaria subsp.

1 sex inc., Lampongs. (VORDERMAN coll.).

Wing 73 mm.

It is now impossible to say to which of the subspecies occurring in Sumatra this bird belongs — *tardinata* HARTERT, or *barussana* ROB. & KLOSS.

Turdinus rufipectus SALV.

1 ♂, Sungei Kumbang, Korinchi Peak, 1400 metres. (ROBINSON and KLOSS coll.).

Wing 88 mm.

Erythrochla bicolor (LESS.).

1 sex inc., Lampongs. (VORDERMAN coll.).

Wing 74 mm.

Pellorneum capistratum nigrocapitatum (EYTON).

1 sex inc., Aloer Poerba, Acheen.

Wing 74 mm.

OBERHOLSER has separated the Banka bird (*Drymocapthus n. nyctilampis*, Smithsonian Misc. Coll. 72. No. 2, 1922, p. 10) as being duller and darker above than Malayan examples and considers that Sumatran birds agree with it.

Aethostoma pyrrogenys büttikoferi (VORDERMAN).

1 ♂, Wai Lima, Lampongs.

Wing 67 mm.

A very dull coloured race of *Myiothera pyrrogenys* TEMM., having the crown concolorous with the back. The Bornean form, *Turdinus canicapillus* SHARPE, is the most richly coloured, especially on the underparts, and has the most pronounced dark cap.

Two forms occur in Java, the western bird being well fitted by TEMMINCK's figure and description. The eastern bird is rather more richly coloured; the cap darker and more distinct; the forehead with less fulvous; the cheeks and sides of neck and breast more deeply ferruginous.

This form from East Java I would call

Aethostoma pyrrogenys besuki subsp. nov.

Type: Adult female collected at Tamansari, near Banjoewangi, East Java, 1600 ft. on 20th January 1920 by C. BODEN KLOSS. Wing 60 mm.

The type locality of the typical race may be restricted to the West Javanese province of Bantam.

This treatment gives us four races of *Aethostoma pyrrogenys*, as follows:—

- I. *Ae. p. canicapillus* Borneo the most richly coloured form with a pronounced dark cap and fulvous under tail-coverts.
- II. *Ae. p. besuki* East Java. Cap paler, underparts less washed with brown: under tail-coverts white.
- III. *Ae. p. pyrrogenys* West Java. Crown merely duller than back, forehead more fulvous, cheeks and sides of neck less brilliant rufous.
- IV. *Ae. p. büttikoferi* Sumatra. The dullest form, olivaceous-brown above with cap of the same colour, no bright colour on sides of neck or underparts.

A fifth race of *Aethostoma pyrrogenys* is *A. p. erythrota* (*Malacopteron erythrota* SHARPE, Cat. Birds, VII, 1883, p. 567, pl. XIII, fig. 2). The type is in the British Museum and Mr. N. B. KINNEAR writes me that as compared with the West Javan bird it has the back and wings distinctly lighter in colour, the cheeks redder and the pectoral band more distinct. He gives the following measurements:— Wing 68, tail 50, bill from base of skull 18, width at front of feathers at posterior end of nostrils 6.5 mm.

Mr. F. N. CHASEN who has compared the type of *erythro* with the East Javanese bird says that the former is paler and brighter above with the pectoral band more complete.

Malacopteron erythro was reported to have come from Borneo, though SHARPE later doubted this derivation. The type is still unique and the provenance attributed to it had better remain for the present.

Malacopteron cinereum cinereum EYTON.

1 sex inc., Lampongs. (VORDERMAN coll.).

2 ♂, Wai Lima, Lampongs.

Wings ♂ 78, 79: ? 74 mm.

I am of opinion that *Malacopteron rufifrons* CAB. of Java (syn. *M. lepi-docephalum* GRAY) and the closely allied form *indochinensis* ROB. and KLOSS, of East Siam and Cochin China, are only races of *M. cinereum* and do not form a separate species, for the occurrence of a *rufifrons* form in Sumatra is more than doubtful. The section of the species having a black patch on occiput and nape occurs in Sumatra, the Malay Peninsula and Borneo, that in which the dark patch is absent in Java and Indo-China.

Malacopteron magnirostris magnirostris (MOORE).

2 sex inc., Lampongs (VORDERMAN coll.).

5 ♂, 2 ♀, Wai Lima, Lampongs.

Wings ♂ 75, 76, 78, 84: ? 77, 79: ♀ 74, 75 mm.

A young male (wing 72 mm) has numerous rufous feathers on the back and wings and the underparts washed with earthy brown.

Anuropsis malaccensis malaccensis (HARTL.).

1 ♂, Loeboek Karet, ? Palembang.

1 ♂, Blangkolam, Acheen.

1 ♂ Aloer Poerba, Acheen.

Wing 66, 69, 72 mm.

The Sumatran bird has been named *A. m. drymodrama* by OBERHOLSER (SMITHS. Misc. Collns., 74, No. 2, 1922, p. 9, Siak). I cannot separate from topotypes the examples I have seen from the island.

Alcippe cinerea cinerea BLYTH.

2 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 68, 69, 71: ♀ 68 mm.

Stachyris nigriceps larvata (Bp.).

1 ♂, Redelong, Acheen, 1300 metres.

Wing 59 mm.

Stachyris poliocephala poliocephala (TEMM.).

1 ♂, Wai Lima, Lampongs.

1 ♂, Geureudong, Acheen, 900 metres.

Wing 66, 66 mm.

The Achinese specimen has an unusually dark nape and mantle.

In Ibis, 1918 (p. 587) ROBINSON and KLOSS, with examples before them of *S. poliocephala* from Deli, N. E. Sumatra, separated Malayan and Bornean birds, with the name *S. p. diluta*, principally on account of the paler, less black, throat and sides of the head.

They concluded that the examples from Deli were typical of all Sumatran birds, but the specimen from the Lampongs shows that this is not the case. As with *Thringorhina striolata* it would seem that the darker birds are restricted to N. E. Sumatra ¹⁾ and that it is the paler, not the darker, form that is the typical one (head, cheeks and throat pale grey). I propose therefore to treat *P. s. diluta* as synonymous with *S. p. poliocephala* which occurs, as TEMMINCK states, in Sumatra and Borneo (and in the Malay Peninsula as well) and to distinguish the bird of N. E. Sumatra as

Stachyris poliocephala pulla subsp. nov.

Stachyris poliocephala ROBINSON and KLOSS, Journ. Straits Branch, Roy. Asiat. Soc., No. 80, 1919, p. 117; id., op. cit., No. 81, 1920, p. 105.

Like the typical form but with the sides of the head, chin and throat blackish grey instead of pale grey ("gris cendre", TEMMINCK).

Type. Adult male collected at Toentoengan, Deli, N. E. Sumatra on 17 December, 1918 by A. C. F. A. VAN HEYST.

One male and four females examined.

Wings ♂ 71: ♀ 67, 67, 68, 69 mm.

Compared with one specimen from the Lampongs, another from North Acheen, and with large series from the Malay Peninsula and Borneo which both show a little individual variation in the brown colour of the body.

I restrict the type locality of *Timalia poliocephala* TEMM., to Benkoelen, as birds seen by TEMMINCK must all have come from south of the equator.

Stachyris maculata maculata (TEMM.).

1 ♂, 1 ♀, Rampah, Acheen.

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 85, 85: ♀ 79 mm.

Stachyris chrysaea bocagei (SALV.).

2 ♂, Isaq, Acheen, 1000 metres.

1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

1 ♀, Takengon, Acheen, 1200 metres.

Wings ♂ 52, 57: ♀ 52, 56 mm.

¹⁾ *Thringorhina striolata umbrosa* KLOSS, Journ. Fed. Malay States Mus., X, 1921, p. 212. Deli, N. E. Sumatra.

***Thringorhina striolata striolata* (S. MULL.).**

1 ♂, Sungei Kumbang, Korinchi Peak, 1400 metres (ROBINSON & KLOSS. coll.).
Wing 70 mm.

This is a darker bird than the continental *T. s. guttata* (BLYTH). A yet darker form, *T. s. umbrosa* KLOSS, occurs in Deli, N. E. Sumatra, to which part of the island it is apparently confined.

***Cyanoderma erythroptera erythroptera* BLYTH.**

1 sex inc., Lampongs. (VORDERMAN coll.).

2 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 60, 60: ? 56: ♀ 56 mm.

Not separable from Malayan topotypes in which the colours of breast and abdomen exhibit individual variation.

***Cyanoderma erythroptera pyrrhophaea* (HARTL.).**

ROBINSON & KLOSS Journ. Straits Branch Royal Asiatic Soc., No. 81, 1920, p. 106.

1 ♀, Aloer Poerba, Acheen.

Wing 60 mm.

Differs from the Malayan form (also occurring in South Sumatra) in being darker above, the head more extensively grey; and the abdomen less washed with isabelline than in many typical birds, though in this respect closely approached by others.

In 1920 (l.c.s.) we used *pyrrhophaea* HARTL. (Rev. Zool., 1844, p. 402, Malacca, Sumatra) for a similar dark North Sumatran bird citing Sumatra as type locality as the description ("Capite ... saturate murinis") applied to it and not to Malayan examples.

OBERHOLSER's selection of Malacca in 1922 comes too late and his *C. erythroptera eripella* (SMITHSONIAN Misc. Coll., 74, No. 2, 1922, p. 7, Siak, East Central Sumatra) appears to be a synonym of *pyrrhophaea*.

This form seems to be confined to the northern half of the island.

***Mixornis gularis gularis* (HORSF.).**

2 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, Poentian near Palembang Town. (STRASTERS coll.).

1 ♀, Medan, N. E. Sumatra.

1 ♀, Blangkolam, Acheen.

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 53, 57, 60, 60: ♀ 55, 58, 58 mm.

***Macronus ptilosus ptilosus* JARD. & SELBY.**

1 sex inc., Lampongs. (VORDERMAN coll.).

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 75: ? 67 mm.

Myiophoneus flavirostris dicrorhynchus SALV.

1 sex inc., Boemi agoeng, Lampongs.

Wing 185 mm.

Myiophoneus castaneus WARDL.-RAMS.

1 ♂, Takengon, Acheen, 1200 metres.

Wing 132 mm.

A young bird generally chestnut with blue shoulder patches, the head dark brown slightly tinged with blue from crown to nape.

Myiophoneus melanurus (SALV.).

2 ♂, Palembang.

1 ♂, 1 ♀, Korinchi Peak, 2200 metres. (ROBINSON & KLOSS coll.).

1 ♂, 1 ♂ imm., 3 ♀, Redelong, Acheen, 1300 metres.

1 ♂, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

1 ♂, Isaq, Acheen, 1000 metres.

1 ♂ imm., Takengon, Acheen, 1200 metres.

Wings ♂ 125, 125, 128, 127, 129, 131, 122 imm., 125 imm.: ♀ 112, 114, 119, 120 mm.

Young males are less blue on the forehead where, and on the underparts, they are spotted with buff.

Brachypteryx montana saturata SALV.

1 ♂, Korinchi Peak, 2200 metres. (ROBINSON & KLOSS coll.).

1 ♂, 1 ♀, Pajatoengkalan, Acheen, 2000 metres.

Wing ♂ 69, 70: ♀ 69 mm.

Brachypteryx leucophris leucophris (TEMM.).

1 ♂, Sungei Kumbang, Korinchi, 1400 metres. (ROB. & KLOSS coll.).

Wing 60 mm.

Sibia picaoides simillima (SALV.).

1 ♂, Sungei Kumbang, Korinchi, 1400 metres. (ROB. & KLOSS coll.).

1 ♂, 2 ♀, Redelong, Acheen, 1300 metres.

2 ♂, Pajatoengkalan, Acheen, 2000 metres.

1 ♂, 1 ♀, Isaq, Acheen, 1000 metres.

Wings ♂ 112, 115, 117, 117, 118: ♀ 115 mm.

Mesia argentauris laurinae (SALV.).

1 ♂, 1 ♀, Korinchi Peak, 1400—2200 metres. (ROB. & KLOSS coll.).

6 ♂, 3 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

1 ♀, Redelong, Acheen, 1300 metres.

Wings ♂ 79, 80, 80, 82, 82, 82, 82: ♀ 77, 79, 79, 80, 81 mm.

Pteruthius flaviscapis cameranoi SALV.

1 ♂, Korinchi Peak, 2200 metres. (ROBINSON & KLOSS coll.).

1 ♂, 1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 74, 79: ♀ 77 mm.

***Pteruthius aenobarbus aenobarbus* (TEMM.).**

- 1 ♂, Lampongs. (VORDERMAN coll.).
Wing 67 mm.

TROGLODYTIDAE.

***Pnoepyga pusilla lepida* SALV.**

- 1 ♂, 1 ♀, Korinchi Peak, 1400—2200 metres. (ROBINSON and KLOSS coll.).
1 ♀, Isaq, Acheen, 1000 metres.
1 ♂ Redelong, Acheen, 1300 metres.
Wings ♂ 50, 52: ♀ 51, 51 mm.

TURDIDAE.

***Geocichla sibirica* (?) *sibirica* (PALL.).**

- 2 ♂ imm., Wai Lima, Lampongs. 19 Nov. and 5 Dec. 1921.
Wings 115, 119 mm.

One cannot with any satisfaction allocate immature males to one or other of the two forms of this species which seem to visit Malaysia. Of slate-coloured males which have no pale spots on the breast we refer to the typical form those examples which have slaty abdomens and very little white on the under-tail coverts and the tip of the tail: to *davisoni* those with an elongate white patch on the abdomen and a considerable amount of white on the tail-coverts and tail-tip. We have the former from the mountains of Java (east and west) and from the islands of the Straits of Malacca: the latter from the mountains of the Malay Peninsula and of Central Sumatra. BARTELS and STRESEMANN (Treubia XI, 1929, p. 130) record *sibirica* and suggest that *davisoni* appears to visit Java: and on account of the amount of white on the tail-coverts and tail-tips of the present specimens from the Lampongs I am inclined to think that the typical *sibirica* occurs in Sumatra as well as *davisoni*.

Females and immature birds associated with the adult males appear to agree with them in the lesser or greater amount of white in the tail and its under coverts.

***Enicurus ruficapillus* TEMM.**

- 1 ♂, Wai Lima, Lampongs.
Wing 93 mm.

***Copsychus saularis musicus* (RAFFLES).**

- 1 ♀, Wai Lima, Lampongs.
1 ♂, 1 ♀ imm., Palembang.
1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).
1 ♂, Pangkalan Koto Baroe, Sumatra's West Coast (STRASTERS coll.).
3 ♂, 1 ♀ imm., Medan, N. E. Sumatra.
1 ♀, Isaq, Acheen, 1000 metres.
1 ♂, Baleq, Acheen, 900 metres.
Wings ♂ 101, 101, 102, 102, 104, 105, 106: ♀ 93 imm., 95, 97, 98 mm.

Kittacincla malabarica tricolor (VIEILL.).

2 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Palembang.

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♂, 1 ♀, Baleq, Acheen, 900 metres.

1 ♂, Blangkolan, Acheen.

1 ♂, Rampah, Acheen.

3 ♂, 1 ♀, imm., Aloer Poerba, Acheen.

Wings ♂ 94, 95, 96, 96, 96, 97, 97, 99: ♀ 88, 88, 89 mm.

I cannot separate this series from birds of West Java (*tricolor*). Compared with Malayan and Indochinese females Sumatran birds of that sex have the upper parts and the foreneck darker, blackish, with a metallic sheen; the breast and flanks generally more deeply rufescent. These are the characters OBERHOLSER has used to separate the bird of Singkep Island, East Sumatra, from the continental form ¹⁾; but he did not compare it with the West Javanese race. He states that the Singkep bird apparently inhabits the mainland of Sumatra and its eastern islands except Banka and Billiton: to the Banka bird he has given the name *K. m. abbotti* (l.c.s.). Be it noted, however, FINSCH states that birds from West Java, Sumatra, Banka and Billiton all agree perfectly. (Notes Leyden Mus., XXXII, 1910, p. 145).

Trichixus pyrropyga LESS.

1 ♀, Langkat, N. E. Sumatra.

Wing 97 mm.

SYLVIIDAE.

Acrocephalus stentoreus orientalis (TEMM. & SCHL.).

1 ♂, Lampongs.

Wing 77 mm.

Locustella certhiola (PALL.).

1 sex inc., subad., Lampongs.

Wing 67 mm.

Cettia montana sepiaria subsp. nov.

2 ♂, 3 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 55, 56: ♀ 52, 52, 53 mm.

Much darker and duller than *C. m. sumatranus* OGILVIE-GRANT, which occurs throughout Sumatra at least as far north as Mt. Talamau, Ophir Districts. More nearly resembling *C. m. oreophila* SHARPE, of Mt. Kinabalu, North Borneo, but still darker and duller above where it is sepiaria (RIDGWAY).

¹⁾ *Kittacincla malabarica malloperca* Gberh., Smithsonian Misc. Coll., 76, No. 6, 1923, p. 5, Singkep Island.

Of the Malaysian forms the typical race is the palest, near "Dresden Brown"; *sumatrana* is brightest, near "Raw Umber"; *oreophila* is very like *sumatrana* above, but duller, less rufous below; *sepiaria* is darkest and dullest above, but very similar to *oreophila* beneath.

Type. Adult male collected at Pajatoengkalan, Pangmoh, Acheen, 2000 metres on 11th Sept. 1930, No. 293.

The above series has been compared with good series of each of the other races. All these Malaysian examples have the outer tailfeathers falling short of the tip of the tail by much less than the length of the tarsus. BARTELS and STRESEMANN have recently placed the Javanese race in *Horeites*.

***Orthotomus atrogularis atrogularis* TEMM.**

1 ♂, Aloer Poerba, Acheen.

Wing 47 mm.

OBERHOLSER has separated the bird of Banka Island as *O. a. eumelas* (Smithsonian Misc. Collns., 76, No. 6, 1923, p. 6) and suggests that it is the form occurring in Sumatra.

***Orthotomus ruficeps ruficeps* (LESS.).**

2 ♂, Wai Lima, Lampongs.

Wings 51, 53 mm.

***Orthotomus sepium cineraceus* BLYTH.**

2 ♂, 2 ♀, Wai Lima, Lampongs.

1 ♂, Medan, N. E. Sumatra.

Wings ♂ 47, 50, 50: ♀ 44, 45 mm.

***Cisticola juncidis malaya* LYNES.**

Ibis, 1930, p. 92 (Selangor, Malay Peninsula).

1 ♂, Wai Lima, Lampongs.

1 ♀, Poentian, near Palembang Town. (STRASTERS coll.).

Wings ♂ 52: ♀ 47 mm.

***Phylloscopus borealis borealis* (BLAS.).**

1 ♀, Wai Lima, Lampongs.

Wing 65 mm.

***Phylloscopus occipitalis coronatus* (TEMM. & SCHL.).**

1 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 62: ♀ 60 mm,

Apparently a new record for Sumatra.

***Phyllergates cucullatus* (?) *sumatranus* SALV.**

1 ♂, Isaq, Acheen, 1000 metres.

1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

1 ♂, Redelong, Acheen, 1300 metres.

Wings ♂ 46, 48: ♀ 48 mm.

I am doubtful if characters to distinguish this race have any real existence. The nuchal collar is perhaps greyer, rather less tinged with brown than in the typical Javanese bird. The type was an immature individual with a green pileum.

Suya superciliaris albogularis (HUME).

2 ♂, Takengon, Acheen, 1200 metres.

Wings 52, 53 mm.

Prinia familiaris olivacea RAFFLES

Motacilla olivacea RAFFLES, TRANS. Linn. Soc., XIII, 1821, p. 313, Sumatra.

1 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 67: ♀ 65 mm.

Prinia familiaris (HORSEF.) came from Java and was described in 1820: a little later RAFFLES named the Sumatran bird which, with West Javan birds, differs from those of East Java in having the abdomen a rather brighter yellow. By elimination, therefore, East Java becomes the type locality of *Prinia f. familiaris*: and it is here further restricted to the province of Besoeki where HORSFIELD did much of his collecting.

Prinia flaviventris rafflesi TWEED.

Prinia rafflesi TWEEDALE, Ibis, 1877, p. 311, pl. VI, fig. 1. Lampongs, South Sumatra.

1 ♂, Wai Lima, Lampongs.

1 sex inc., Medan, N. E. Sumatra.

Wings ♂ 47: ? 48 mm.

The type locality of *Orthotomus flaviventris* DELESS., is Bhutan. My colleague, Mr. F. N. CHASEN, after examining the considerable series in the British Museum, informs me that southern birds have the abdomen paler yellow than northern ones. Malayan, Sumatran and Javanese birds will, therefore, have to be known by the above name.

LANIIDAE.

Hemipus hirundinaceus (TEMM.).

Hemipus obscurus (HORSEF. & AUCT.).

7 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♀, Poentian near Palembang Town. (STRASTERS coll.).

1 ♀, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).

1 ♀, Aloer Poerba, Acheen.

Wings ♂ 64, 65, 65, 66, 66, 68, 68: ♀ 63, 65, 65, 67 mm.

Hemipus picatus SYKES.

1 ♀, Palembang.

1 ♀, Geureudang, Acheen, 900 metres.

Wings 64, 65 mm.

Tephrodornis gularis gularis (RAFFLES).

1 ♂, 2 ♀, Wai Lima, Lampongs.

Wings ♂ 87: ♀ 90, 92 mm.

This is the smallest form of the species. In Sumatra it seems to be confined to the lower levels of the south-west parts of the island: it occurs also in Java (syn. *virgatus* TEMM.).

Tephrodornis gularis fretensis ROB. & KLOSS.

1 ♂, 1 ♀, Palembang.

Wings ♂ 106: ♀ 106 mm.

This subspecies inhabits Sumatra except in the area occupied by the smaller typical race. It occurs also throughout the southern parts of the Malay Peninsula.

Platylophus galericulatus coronatus (RAFFLES).

1 sex inc., Lampongs (VORDERMAN coll.).

1 ♂, Wai Lima, Lampongs.

1 sex inc., Palembang.

2 ♂, 1 sex inc., Pagar Alam, Palembang, 500—750 metres.

Wings ♂ 133, 134, 134: ? 127, 130, 138 mm.

Lanius schach bentet HORSF.

1 ♂, Boekit Gadang, Sumatra's Westkust.

1 ♀, Palembang.

1 ♀, Palembang, Sumatra's Westkust (OUWENS coll.).

1 ♀, Wai Lima, Lampongs.

1 ♀, Fort van der Capellen, Sumatra's Westkust, 500—750 metres (GROENEVELD coll.).

1 ♀, Isaq, Acheen, 1000 metres.

1 ♀, Takengon, Acheen, 1200 metres.

Wings ♂ 88: ♀ 87, 88, 89, 90, 90, 94 mm.

The amount of black on the forehead and crown of this race is variable and KURODA has recently named *L. s. tosariensis* (Tori, V, 1930, 76. Tosari, Java) what seem to me to be merely extremely black-headed examples of *bentet*. OGILVIE-GRANT has drawn attention to the varying amount of black on the head of Javanese birds (Nov. Zool. IX, 1902, p. 478).

Lanius tigrinus DRAP.

1 sex inc., Lampongs (VORDERMAN coll.).

1 ♂, 1 ♀, Wai Lima, Lampongs.

3 ♂, Talang Betoetoe, Palembang.

1 ♂, Rampah, Acheen.

1 ♀, Aloer Poerba, Acheen.

Wings ♂ 79, 80, 82, 83, 85: ? 82: ♀ 83, 86 mm

Lanius cristatus (?) cristatus LINN.

1 sex inc., Lampongs (VORDERMAN coll.).

1 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 86: ? 92: ♀ 88 mm.

Mr. H. C. SIEBERS has determined these birds as *lucionensis* LINN., but though the typical form does not seem to have been recorded from Sumatra or Java, it is the commonest of the three races in the Malay Peninsula and I am inclined to refer the specimens to it. They are more brightly coloured above than other Malaysian skins which we consider to be *lucionensis*.

Lanius cristatus superciliosus LATH.

1 ♂, Wai Lima, Lampongs.

Wing 87 mm.

An example in very worn and faded plumage taken in December. Patches of bright rufous-cinnamon feathers are still present.

PARIDAE.

Parus major ambiguus (RAFFLES).

Turdus ambiguus RAFFLES, Trans. Linn. Soc. XIII, 1822, p. 311. Sumatra.

Parus major malayorum ROB. & KLOSS, Journ. Fed. Malay States Mus., VIII, Part 2, 1918, p. 226. Korinchi.

1 ♀, Isaq, Acheen, 1000 metres.

1 ♀, Baleq, Acheen, 900 metres.

Wings 62, 63 mm.

SITTIDAE.

Sitta frontalis frontalis (SWAINSON).

2 ♂, Wai Lima, Lampongs.

1 ♂, Palembang.

Wings 74, 77, 77 mm.

Not separable from Javanese birds, a series of which has wings ranging from 71 to 81 mm in length. In Sumatra apparently confined to the south. PARROT'S *S. f. hageni* for Banka, based on the presumed large size of a single example (wing 77.5 mm) will not stand.

Sitta frontalis saturatior HART.

1 ♀, Isaq, Acheen, 1000 metres.

1 ♂, Geureudong, Acheen, 900 metres.

Wings ♂ 73: ♀ 75 mm.

This race, described from the Malay States, is more deeply coloured (more vinous) below than the typical form which is not only found in Java and South Sumatra, but in Indochina as well. The specimen from the West Coast of Sumatra in the latitude of Korinchi recorded as *S. frontalis* by ROBINSON & KLOSS (Journ. Fed. Malay States Mus., VIII, Part 2, 1918, p. 227) also

belongs to this form which, therefore, seems to inhabit the centre as well as the north of Sumatra.

***Sitta azurea expectata* (HARTERT).**

♂, Isaq, Acheen, 1000 metres.

♂, ♀, Takengon, Acheen, 1200 metres.

♂, Tlaga, Redelong, Acheen, 1700 metres.

Wings ♂ 80, 81, 82: ♀ 80 mm.

The West Javanese race, *S. a. nigriventer* ROB. & KLOSS, has much less blue on the wings and is more washed with buff on the foreneck and breast. Both *expectata* and *nigriventer* differ from the typical form of East Java (in which the wings are as in *nigriventer*) in having the abdomen black instead of dark blue.

CORVIDAE.

***Platysmurus leucopterus leucopterus* (TEMM.).**

1 sex inc., Lampongs (VORDERMAN coll.).

1 ♂, Djepara, Lampongs. (TANS coll.).

1 sex inc., Palembang.

1 ♂, Poentian near Palembang Town. (STRASTERS coll.).

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♀, Talang Betetoe, Palembang.

1 ♂, 1 ♀, Pangkalan Koto Baroe, Sumatra's West Coast (STRASTERS coll.).

Wings ♂ 184, 185, 189, 189, 191: ? 191: ♀ 182 mm.

***Cissa chinensis minor* (CAB.).**

1 ♀, Boemi agoeng, Lampongs.

1 ♀, Pagar Alam, Palembang, 500—750 metres.

1 ♂, 2 ♀, Palembang.

Wings ♂ 130: ♀ 125, 126, 127, 131 mm.

***Dendrocitta occipitalis occipitalis* (S. MÜLL.).**

1 ♀, Palembang.

3 ♀, Peloempang, Sumatra's Westkust.

1 ♀, Palembang, Sumatra's Westkust. (OUWENS coll.).

1 ♀, Tabat Palah, Pajokomboe, Sumatra's Westkust. (GROENEVELD coll.).

2 sex inc., Palembang.

1 ♂, Goenoeng Agoeng, ?

1 ♀, Korinchi Valley, 720 metres (ROBINSON & KLOSS coll.).

1 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

1 ♀, Tlaga, Redelong, Acheen, 1700 metres.

1 ♀, Redelong, Acheen, 1300 metres.

Wings ♂ 142: ? 140, 144: ♀ 130, 130, 134, 137, 137, 138, 140, 140, 145, 151 mm.

The last measurement, that of the female from Pajatoengkalan, seems to be unusually large.

The brown areas in the older skins are much more rufous than in the recently collected Achinese birds. I regard the difference as due to postmortem changes.

DICRURIDAE.

Dicrurus leucophaeus phaedra (REICHN.).

Buchanga leucophaea batakensis ROBINSON & KLOSS, Journ. Straits Br. Roy. Asiat. Soc., No. 80, 1919, p. 125. N. E. Sumatra.

1 ♀, Palembang.

1 ♀, juv. Redelong, Acheen, 1300 metres.

Wings 121, 123 (juv.) mm.

The young bird is darker than the adult and has grey lores.

A fresh treatment of the grey drongos which are found in Malaysia seems desirable. I propose to regard as one species all the forms intermediate between *leucophaeus* VIEILL., which has black to grey lores and no white on the sides of the head, and *leucogenis* (WALDEN) in which the lores are white and the sides of the head largely white also.

Malaysian races fall into three sections which may be roughly indicated as follows:—

I. No white on the sides of the head:—

D. leucophaeus leucophaeus VIEILL. (Java). Java, Bali.

D. l. celaenus OBERH. Simalur Id., W. Sumatra ¹⁾.

D. l. mouhoti (WALDEN) (Cambodia). Isthmus of Kra, Malay Peninsula.

D. l. hopwoodi BAKER (Dacca, E. Bengal). Isthmus of Kra, Malay Peninsula.

II. White on head confined to the lores:—

D. l. stigmatops SHARPE (Borneo). Borneo.

D. l. phaedra (REICHN.) (West Sumatra). Sumatra ²⁾.

III. White extending to a variable degree behind the eye:—

D. l. leucogenis (WALDEN) (Japan, errore! China, fide BAKER. Here restricted to YUNNAN). Malay Peninsula to Malacca.

D. l. cerussata (BANGS & PHILLIPS) (Hupeh, China). Malay Peninsula to Trang.

D. l. periophthalmica (SALV.) (Sipora Id.). Sipora and Pagi Ids., Mentawi Group, W. Sumatra ³⁾.

D. l. siberu CHASEN & KLOSS. Siberut Id., Mentawi Group, W. Sumatra.

With more material now in hand it appears that the characters relied on for distinguishing *batakensis*, viz., "no black frontal band and grey lores not very clearly defined but still paler than the forehead" are of no value. In both Bornean and Sumatran birds the lores vary from white to greyish and the black forehead may be present or absent.

¹⁾ Not seen by me. "Like *Dicrurus cineraceus cineraceus* [i.e., *leucophaeus*] from Java, but darker, particularly on the lower surface."

²⁾ syn. *D. l. batakensis* ROB. & KLOSS.

³⁾ syn. *D. l. diporus* OBERH.

It is highly probable that *phaedra* will have to be reduced to a synonym of *stigmatops*, but I retain it for the present as the Sumatran series before me has the wing a little shorter (121—132 mm) than a Bornean series (wings 125—138 mm) and the tail varies in the same way. There are no other differences.

Some of the birds visiting the northern part of the Malay Peninsula, which have been recorded as *leucogenis*, are so pale that they may fairly be referred to the northern race, *D. l. cerussata* (BANGS & PHILLIPS, Bull. Mus. Comp. Zool., LVIII, 1914, p. 302; *Buchanga leucogenis* BACKWELDER, Carnegie Institute of Washington, Publ. No. 54, 1907, p. 500, plate LXI). At the same time it must be noted that there is complete gradation in colour in my Malayan series between the darker individuals (*leucogenis*) and the pale examples I now call *cerussata*.

Dicrurus borneensis sumatranus WARDL.-RAMS.

1 sex inc., Palembang.
Wing 150 mm.

Chaptia aenea malayensis HAY.

Edolius picinus BONAPARTE.
2 ♂, 1 ♀, Wai Lima, Lampongs.
1 ♂, Lahat, Palembang.
2 ♀, Medan, N. E. Sumatra.
Wings ♂ 107, 110, 112: ♀ 110, 112, 115 mm.

Dissemurus paradiseus platurus (VIEILL.).

1 sex inc., Djepara, Lampongs. (TANS coll.).
1 sex inc., Lampongs (VORDERMAN coll.).
1 ♂, 2 ♀, Wai Lima, Lampongs.
2 ♂, 1 ♀, Palembang.
1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).
1 ♂, Palembang, Sumatra's Westkust. (OUWENS coll.).
1 ♂, Kajoetanam, Priaman, Sumatra's Westkust. (OUWENS coll.).
1 ♀, 1 sex inc., Medan, N. E. Sumatra.
2 ♀, Aloer Poerba, Acheen.

Wings ♂ 138, 138, 142, 147, 148, 151: ? 137, 146, 147: ♀ 133, 134, 134, 137, 142, 144 mm.

The above series includes material from East, West, North and South Sumatra. Each place shows some individual variation; but I cannot separate the birds from the various localities from each other, nor those of Sumatra as a whole from the birds of the southern half of the Malay Peninsula.

The type locality of *platurus* is Malacca (ROBINSON and KLOSS det. 1920) and these birds from Sumatra seem to be the same as those of the southern third of the Peninsula with Singapore. OBERHOLSER has proposed for East

Sumatran birds *D. p. siakensis* (Siak, E. Sumatra) and for West Sumatran birds *D. p. colpiotes* (Loh Sido Bay, Acheen, N. W. Sumatra) (Journ. Wash. Acad.-Sci., XVI, 1926, pp. 519, 520); and for the birds of Singapore Island only, *D. p. messatius* (t.c.s., p. 519).

D. p. hypoballus OBERH. (Journ. Wash. Acad. Sci., XVI, 1926, p. 519. Trang, Peninsular Siam) will not stand; Dr. OBERHOLSER's argument to show that the name *malayensis* is not available for a form of *Dissemurus paradiseus* is faulty.

[*Edolius*] *Malayensis* BLYTH in JERDON, Birds of India, I, 1862, p. 438, is not "a mistaken identification of *Chaptia malayensis* BLYTH" (i.e. *Chaptia aenea malayensis* HAY in BLYTH, Journ. Asiat. Soc. Bengal, XV, 1846, p. 294: Malacca) but is a citation of *Edolius malayensis* BLYTH, op. cit., XXVIII, 1859, p. 292: Penang and Andamans. JERDON himself regarded this last, quite correctly, as a form allied to *Edolius malabaricus* and cited *C. malayensis* HAY, under *Chaptia aenea*. In 1918 (Ibis, p. 229) I revived *malayensis* as the name for the form of *D. paradiseus* occupying the greater part of the Malay Peninsula and (t.c. p. 518) selected Penang as type locality, at the same time pointing out that JERDON (1862) was not the author of the name, but BLYTH (1859 as above).

If birds from the Mergui Archipelago are distinct they should probably be called *D. p. cristatellus* (BLYTH)¹⁾ instead of *D. p. mallomicrus* OBERH. (l.c.s.: Hastings Island).

Bhringa remifer remifer (TEMM.).

Bhringa remifer sumatrana HACHISUKA, Bull. B.O.C., XLVII, 1926, p. 57. (Korinchi).

1 ♂, Redelong, Acheen, 1300 metres.

1 ♂, 1 ♀, Geureudong, Acheen, 900 metres.

Wings ♂ 125, 128: ♀ 131 mm. Tail-racket 137 mm.

HACHISUKA has separated Sumatran birds in the belief that they were smaller and had shorter tail-rackets than the typical Javanese race, but this is not the case. Individuals from the two islands are indistinguishable. The Malayan form, *B. r. peracensis* BAKER, which extends to French Indochina, has much longer and narrower rackets.

The species does not occur in Borneo.

ORIOLIDAE.

Oriolus chinensis maculatus (VIEILL.).

2 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Palembang.

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♂, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).

1 ♀, 2 sex inc., Medan, N. E. Sumatra.

¹⁾ *Edolius cristatellus* (BLYTH, Journ. Asiatic. Soc. Bengal XI, 1842, p. 171: Tenasserim Coast.

1 ♀, Isaq, Acheen, 1000 metres.

1 ♂, Blangkolam, Acheen.

Wings ♂ 140, 141, 141, 142, 145, 148: ? 137, 132, (imm.): ♀ 130, 135, 137, 140 mm.

The young bird has the breast-feathers with brown shaft-stripes.

Oriolus xanthonotus xanthonotus HORSE.

2 ♂, 3 ♀, Wai Lima, Lampongs.

1 ♂, Lahat, Palembang. (VORDERMAN coll.).

1 ♀ subad., Isaq, Acheen, 1000 metres.

1 ♀ subad., Aloer Poerba, Acheen.

Wings ♂ 102, 107 (subad.), 107, 112: ♀ 96 (subad.), 98 (subad.), 100 (subad.), 100 mm.

Oriolus cruentus consanguineus (WARDL.-RAMS.).

1 ♂, Sungei Kumbang, Korinchi, 1400 metres. (ROB. & KLOSS coll.).

1 ♀, Isaq, Acheen, 1000 metres.

2 ♂, 1 ♂ imm., Redelong, Acheen, 1300 metres.

1 ♂, Takengon, Acheen, 1200 metres.

2 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 128, 130, 131, 134: ♀ 132, 134, 134 mm.

The young male is black with a few rufescent edges to the feathers of the breast, abdomen and under tail-coverts; the edges of the primaries are white and there is a faint red spot on the edge of the wing.

Of the females two have blackish grey breasts and one of them exhibits an irregular crimson patch in this area. The third female has the breast-feathers edged with pinkish rufous and has a minute red spot near the bend of the wing.

STURNIDAE.

Sturnopaster capensis jalla (HORSE.).

1 ♂, Wai Lima, Lampongs.

Wing 117 mm.

Sturnia sturnina (PALL.).

1 ♀, Talang Betoetoe, Palembang. (OUWENS coll.).

1 ♂, Aloer Poerba, Acheen.

Wings ♂ 105: ♀ 107 mm.

Gracula javana javana (CUV.).

1 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♂, Palembang.

1 sex inc., Lahat, Palembang.

1 ♂, 1 ♀, Aloer Poerba, Acheen.

Wings ♂ 175, 178, 180: ? 177: ♀ 173, 178 mm.

Aplonis panayensis strigatus (HORSF.).*Lanius insidiator* RAFFLES.

1 ♂, 1 ♀, Wai Lima, Lampongs.

1 ♀, 1 sex inc., Palembang.

1 ♀, Aoer, Lahat, Palembang. (STRASTERS coll.).

1 ♂, 2 ♀, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).

2 ♂, Palembang, Sumatra's Westkust (OUWENS coll.).

4 ♂, 1 ♀, Medan, N. E. Sumatra.

1 ♂, 1 ♀, Blangkolam, Acheen.

Wings ♂ 92, 93, 93, 95, 96, 97, 98, 99, 101: ? 93: ♀ 88, 88, 94, 94, 95, 96, 98 mm.

Not separable in any way from Javanese birds.

ARTAMIDAE.

Artamus leucoryn amydrus OBERH.

1 ♂, 1 ♀, Palembang.

1 ♂ juv., 1 ♀, Pangkalan Koto Baroe, Sumatra's West Coast. (STRASTERS coll.).

1 ♂, 1 ♀, Isaq, Acheen, 1000 metres.

Wings ♂ 131, 134: ♀ 128, 135, 138 mm.

Young birds are brown above, the feathers of the back and wing-coverts edged with fulvous: the foreneck grey.

PLOCEIDAE.

Munia oryzivora (LINN.).

1 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 68: ♀ 68 mm.

Munia maja maja. (LINN.).*Loxia leucocephala* RAFFLES.

2 ♀, Wai Lima, Lampongs.

1 ♀, 1 ♀ imm., Palembang.

2 ♂, 3 ♀, 3 sex inc., Medan, N. E. Sumatra.

Wings ♂ 52, 52, 55: ? 52, 53, 56: ♀ 53, 54, 54, 55 mm.

The type locality of *Loxia maja* ("Habitat in India oriental") has been restricted to Malacca. I can perceive no differences between Malayan, Sumatran and Javanese birds. I have not seen *simalurensis* OBERH., of Simalur Id., nor *pallida* WALLACE of Lombok.**Munia atricapilla sinensis** BLYTH.*Munia sumatrensis* BARTLETT, Mon. Weaverbirds, 1888; *Munia*, p. 29, plate V, fig. 3.

1 ♂, Pangkalan Koto Baroe, Sumatra's West Coast. (STRASTERS coll.).

Wing 52 mm.

This race is pale, with black confined to head and breast, the colour of the abdomen scarcely, or not at all, deeper than the flanks. It occurs in the southern half of the Malay Peninsula and in parts of Sumatra where it is

probably confined to the lowlands, since in the mountains near Lake Toba occurs a very pale form with a sharply-margined black belly, *M. a. batakana* CHASEN & KLOSS.

***Munia atricapilla* (?) *batakana* CHASEN & KLOSS.**

Bull. RAFFLES Mus., 2, 1929, p. 23, Brastagi, 1400 metres, N. Sumatra.

♂, Redelong, Acheen, 1300 metres.

Wing 53 mm.

An immature example in the brown stage. Compared with specimens in the same stage of plumage of *M. a. sinensis* BLYTH, the lowland form, it is duller above with a paler head; less buffy below; and has cheeks, ear-coverts and throat greyish white.

It is probably an example of the Sumatran mountain race, adults of which are of a paler chestnut than *sinensis*, but of which I have seen no immature topotypes.

***Munia punctulata fretensis* subsp. nov.**

Closely resembles the Javanese bird, but with the markings of the breast and flanks paler and a little more elongate: throat and foreneck generally darker (twelve adults from the Malay States and eight from Sumatra).

Markings of the undersurface darker and less elongate than in *M. p. subundulata* from the latitude of Mergui (*superstriata* HUME) and from Bangkok, etc., in which the pattern tends to become more stripe-like (many examples examined).

Type. Adult male from Kuala Lumpur, Selangor, Federated Malay States.

No. 2184/08.

Wing 53 mm.

Habitat. Malay Peninsula northwards towards the Isthmus of Kra. Sumatra.

Specimens examined:—

1 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Palembang.

1 ♂, Pangkalan Koto Baroe, Sumatra's West Coast (STRASTERS coll.).

1 ♂, 1 ♀, 1 sex inc., Medan, N. E. Sumatra.

Wings ♂ 51, 52, 53: ? 52, 53, 53: ♀ 52 mm.

And a good series from the Malay Peninsula. Compared with sixteen specimens from Java.

I had proposed to use *Loxia punctularia* as the name of the Javanese form; but Dr. STRESEMANN has pointed out to me that GMELIN's name is only an amendment, or misprint, for *Loxia punctulata* LINN., and this is undoubtedly the case. Their positions in the sequences in the tenth, twelfth and thirteenth editions are the same, their bases are the same and the descriptions are the same. GMELIN's *punctularia* of Java is therefore synonymous with LINNAEUS' *punctulata* of "Asia", but the former's action has had the effect of restricting the type locality of *punctulata* to Java. It follows that *punctulata punctulata* cannot

be used for the Indian race which must be called *punctulata lineoventer* (*Munia lineoventer* HODGSON, Asiat. Res. XIX, 1836; p. 154. Nepal.).

But by including a reference to BRISSON in the twelfth edition LINNÆUS himself has virtually restricted the type locality.

***Munia striata subsquameicollis* (BAKER).**

Uroloncha acuticauda lepidota OBERHOLSER.

2 ♀, Medan, N. E. Sumatra.

Wing 47, 50 mm.

***Munia leucogastra leucogastra* (BLYTH).**

1 sex inc., Lampongs (VORDERMAN coll.).

Wing 49 mm.

***Munia leucogastra leucogastroides* HORSF. & MOORE.**

3 ♂, 1 ♀, Wai Lima, Lampongs.

Wings ♂ 47, 50, 51: ♀ 49 mm.

M. leucogastra is the bird found in the Malay Peninsula, *M. leucogastroides* that in Java. Both occur in Sumatra, but I still regard them as subspecifically related and it is probable that *leucogastroides* has spread to, or has been introduced into, Sumatra as it has into Singapore Island.

***Erythrura prasina prasina* (SPARRM.).**

1 ♂, 1 ♀, Palembang.

Wings ♂ 60: ♀ 58 mm.

***Ploceus passerinus infortunatus* HARTERT.**

1 ♂, 1 ♀, Wai Lima, Lampongs.

5 ♂, Medan, N. E. Sumatra.

Wings ♂ 68, 70, 70, 70, 71, 71: ♀ 67 mm.

FRINGILLIDAE.

***Passer montanus malaccensis* DUBOIS.**

1 ♀, Tabat Patah, Pajokomboe, Sumatra's Westkust. (GROENEVELD coll.).

2 ♀, 1 sex inc., Medan, N. E. Sumatra.

Wings ♂ 63, 65, 70: ? 67 mm.

MOTACILLIDAE.

***Motacilla cinerea caspica* (S. G. GM.).**

Motacilla melanope AUCT.

1 ♂, 1 ♀, Wai Lima, Lampongs. December.

2 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres. September.

Wings ♂ 77: ♀ 77, 78, 78 mm.

***Motacilla flava simillima* HARTERT.**

1 ♂, 1 sex inc., Palembang. January and February.

Wings ♂ 81: ? 78 mm.

Dendronanthus indicus (GM.).

- 1 sex inc., Lampongs (VORDERMAN coll.).
 1 ♂, Lho Seumawe, Acheen.
 2 ♂, Aloer Poerba, Acheen.
 Wing 75, 75, 75, 79 mm.

Anthus richardi malayensis EYTON.

- 1 sex inc., Lampongs (VORDERMAN coll.).
 1 ♂, Poentian, near Palembang Town. (STRASTERS coll.).
 2 ♀, Medan, N. E. Sumatra.
 1 ♂, Geureudang, Acheen, 900 metres.
 Wings ♂ 75, 79: ? 80: ♀ 78, 79 mm.

NECTARINIIDAE.

Aethopyga mystacalis temmincki (S. MÜLL.).

- 1 ♂, Sungei Kumbang, Korinchi, 1400 metres (ROBINSON and KLOSS coll.).
 1 ♂, Takengon, Acheen, 1000 metres.
 Wings ♂, 58, 60 mm.

Aethopyga siparaja siparaja (RAFFLES).

- 1 ♂, Lampongs. (VORDERMAN coll.).
 4 ♂, 1 ♀, Wai Lima, Lampongs.
 1 ♂, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).
 1 ♂, Fort de Kock, Sumatra's Westkust, 1000 metres.
 1 ♂, Medan, N. E. Sumatra.
 Wings ♂ 49, 50, 51, 51, 52, 52, 53: ♀ 45 mm.

Leptocoma brasiliana brasiliana (GM.).

- 1 ♂, Blangkolam, Acheen.
 Wing 48 mm.

Leptocoma jugularis pectoralis (HORSEF.).

- 2 ♂, 1 ♀, Wai Lima, Lampongs.
 2 ♂, Medan, N. E. Sumatra.
 1 ♂, Takengon, Acheen, 1200 metres.
 1 ♂ ad., 1 ♂ imm., 1 ♀, Isaq, Acheen, 1000 metres.
 1 ♀, Blangkolam, Acheen.
 Wings ♂ 50, 51, 52, 53, 53, 54, 54: ♀ 49, 50 mm.

The male from Isaq has the breast bordered with brown, showing an approach to the race *L. j. flammixillaris* of Peninsular Siam northwards.

Anthreptes macularia hypogrammica (S. MÜLL.).

Anthreptes hypogrammica intensior HARTERT, Bull. B.O.C., XXXVIII, 1917, p. 27. Sarawak.

- 2 ♂, Wai Lima, Lampongs.
 2 ♂ imm., Aloer Poerba, Acheen.
 Wings 64, 65, 66, 67 mm.

MÜLLER described *Nectarinia hypogrammica* as from Sumatra and Borneo and I now have sufficient material to state that birds from both places are alike. (Sumatra is to be regarded as *terra typica*). They differ from the Malayan bird, *macularia* (as HARTERT stated when proposing *intensior*) in being of a deeper yellow on the under-side, especially on the throat and breast where the edges of the feathers are often whitish in the typical form. Occasionally, however, the Malayan bird is as richly coloured as the Bornean-Sumatran and *vice versa*.

The younger birds are altogether duller, have little or no blue above and are much paler yellow, more olivaceous below.

***Anthreptes simplex* (S. MÜLL.).**

- 1 ♀ imm., Wai Lima, Lampongs.
- 1 ♂, Blangkolam, Acheen.
- Wing ♂ 65 mm.

***Anthreptes malaccensis malaccensis* (SCOP.).**

- 2 ♂, 2 ♀, Wai Lima, Lampongs.
- 1 ♂, Poentian, near Palembang Town. (STRASTERS coll.).
- 2 ♂, 1 ♀, Pangkalan Koto Baroe, Sumatra's Westkust. (STRASTERS coll.).
- 2 ♂, 3 ♀, Medan, N. E. Sumatra.
- 2 ♂, 1 ♀, 1 juv., Blangkolam, Acheen.
- Wings ♂ 64, 65, 66, 66, 66, 67, 67: ♀ 59, 60, 61, 61, 61, 62, 63 mm.

***Anthreptes rhodolaema* SHELLEY.**

- 1 ♂, Wai Lima, Lampongs.
- 1 ♂, Blangkolam, Acheen.
- Wings ♂ 67, 69 mm.

***Arachnothera longirostra longirostra* (LATH.).**

Arachnothera longirostra melanchima OBERHOLSER, Smiths. Misc. Collns. LX, No. 7, 1912, p. 7. Siak, E. Sumatra.

- 2 ♀, Wai Lima, Lampongs.
- 1 ♀, Talang Betoetoe, Palembang.
- 2 ♂, Poentian, near Palembang Town. (STRASTERS coll.).
- 1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).
- 1 ♂, Isaq, Acheen, 1000 metres.
- 1 ♂, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.
- 1 ♂, Blangkolam, Acheen.
- Wings ♂ 67, 69, 69, 70, 70: ♀ 59, 60, 60, 61 mm.

I cannot separate the Sumatran bird from the Malayan (Isthmus of Kra to Singapore) of which OBERHOLSER makes two races:— *antelia* of Trang, Peninsular Siam; and *heliocrita* confined to Singapore Island (Journ. Wash. Acad. Sci., XIII, 1923, pp. 227, 228).

If the Malayan bird is different from the typical form of Assam (BAKER, 1926, says it is not) it will apparently have to be called *A. l. pusilla* BLYTH

(Cat. Birds Mus. Asiat. Soc., 1849, p. 328) a new name for *A. affinis* BLYTH (Journ. Asiat. Soc. Bengal, XV, 1846, p. 43. Eastern Coast of the Bay of Bengal from Arracan to Malacca).

***Arachnothera affinis* (HORSF.) subsp.**

3 ♂, 1 ♀ ad., 3 ♀ imm. and juv., Wai Lima, Lampongs.

1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

Wings ♂ 80, 81, 81, 83: ♀ 72 ad.: 3 juv. 70 mm.

This bird varies in any one place in length of bill, colour of upper parts and stripes on the breast. The last are absent in young birds which are often strongly washed with green on the lower surface.

The male from Palembang and one from Wai Lima have large greenish-yellow patches on the lower back and there are traces of the same on the other males. This feature is not present in specimens I have examined from Central Sumatra (*A. concolor* SCHLEGEL, Pl. 1, AVES in VETH's Midden-Sumatra, IV, 1887) and Northeast Sumatra (? *A. affinis heliophilus* OBERH., Acheen) all of which, with Bornean birds, are inseparable from the Malayan *A. affinis modesta* (EYTON). Nor does it occur in the typical and very distinct Javanese bird, nor in *A. everetti* (SHARPE) of Borneo, also apparently a race of *A. affinis* in spite of its curious distribution in the island. However, for the present I regard it as an aberration rather than a racial character and so do not propose a name for southern Sumatran birds.

***Arachnothera chrysogenys chrysogenys* TEMM.**

2 ♀, Wai Lima, Lampongs.

Wings 79, 80 mm.

I have before me 37 examples from Java (*A. c. chrysogenys* TEMM.); Sumatra (*A. c. coph*a OBERH., N. W. Sumatra); the Mentawi Islands (*A. c. isopega* OBERH., Pagi Island); Borneo; the Malay Peninsula (*A. c. intensiflava* BAKER¹); South Tenasserim (*A. c. astilpna* OBERH.). I have not seen birds from Nias Islands, *A. c. pleoxantha* OBERH., based on a single example of unknown sex with a wing of 96 mm (fide RILEY): if the figures are not a misprint the birds of Nias Island attain unusual size. In my considerable series the maximum wing lengths are 89 mm (Penang Island) and 90 mm (North Borneo).

The measurements of the series are:—

Java	♀ 78 (subad.)
Sumatra ♂ 83—86	♀ 79—81
Mentawi Ids. ♂ 86. ²)	
Nias sex inc. 96 (?): fide RILEY.	
Borneo ♂ 84—90	♀ 77—80
S. Tenasserim ♂ 85	♀ 78
Malay Peninsula ♂ 84—89	♀ 78—85

¹) The type locality is Kossoom, not in Tenasserim as stated, but in the province of Takuatung in Peninsular Siam, lat. 8°20' N. The subspecies proposed was stated to range from Mergui in Tenasserim to Singapore.

²) Specimen in moult, but the longest primary is still present in one wing.

Except*for the single Nias bird there is no regardable difference in size. Individual colour variation in any one place (largely dependent on the date of the last moult) is somewhat marked but I can see no local differences: freshly moulted birds are yellower below and a rather brighter green above. The size of the bill varies noticeably everywhere and cannot be used as a distinguishing character.

Arachnothera robusta robusta MÜLL. & SCHL.

1 ♂, Lampongs. (VORDERMAN coll.).

Wing 88 mm.

Arachnothera flavigaster (EYTON).

1 ♂, Lampongs. (VORDERMAN coll.).

1 ♂, Palembang.

1 ♀, Aloer Poerba, Acheen.

Wings ♂ 108, 109: ♀ 94 mm.

DICAEIDAE.

Dicaeum cruentatum sumatranum CAB.

1 ♂, Lampongs. (VORDERMAN coll.).

2 ♂, Poentian, near Palembang Town. (STRASTERS coll.).

1 ♂, Benkoelen. (VORDERMAN coll.).

1 ♂, Fort de Kock, Sumatra's Westkust, 1000 metres. (GROENEVELD coll.).

1 ♀, Medan, N. E. Sumatra.

1 ♂, Lho Seumawe, Acheen.

1 ♂ juv., 2 ♀, Blangkolam, Acheen.

Wings ♂ 44, 45, 45, 45, 46, 47: ♀ 42, 43, 43 mm.

It is towards this black-throated Sumatran race that many Bornean males (*nigrimentum* SALV.) are tending.

Dicaeum trigonostigma trigonostigma (SCOP.).

6 ♂, 4 ♀, Wai Lima, Lampongs.

1 ♂, Pagar Alam, Palembang, 500—750 metres.

1 ♂ juv., Aoe, Lahat, Palembang.

1 ♂, 1 ♀, Medan, N. E. Sumatra.

2 ♂, 1 ♀, Blangkolam, Acheen.

Wings ♂ 47, 47, 47, 47, 47, 48, 48, 50, 47 juv., 49 imm.: ♀ 43, 46, 47, 47, 50 mm.

Young males are like adult females.

Dicaeum chrysorrhoeum chrysorrhoeum TEMM.

1 ♂, Talang betoetoe, Palembang.

1 ♂, 1 ♀, Blangkolam, Acheen.

Wings ♂ 57, 58: ♀ 55 mm.

Prionochilus percussus ignicapillus (EYTON).

4 ♂, Wai Lima, Lampongs.

1 ♂, Talang Betoetoe, Palembang.

1 ♂, Blangkolam, Acheen.

Wings 54, 54, 55, 55, 57, 57 mm.

Slightly immature males have a few olive feathers on the upper parts and the wings edged with the same colour.

Prionochilus maculatus maculatus (TEMM.).

1 ♂, Wai Lima, Lampongs.

Wing 53 mm.

ZOSTEROPIDAE.

Zosterops aureiventer sumatrana subsp. nov.

1 ♂, 2 ♀, Wai Lima, Lampongs.

1 ♂, 1 ♀, Isaq, Acheen, 1000 metres.

Wings ♂ 50, 50: ♀ 49, 51, 52 mm.

Javanese and Sumatran birds average yellower above than Malayan and Bornean. Of the material before me from the first two localities the Sumatran series has the forehead, loral line and foreneck less yellow, and therefore less bright, than in *Z. a. buxtoni* NICHOLSON, of Java and the difference seems to be of subspecific value.

Type. Adult male obtained at Siolak Dras, Korinchi Valley, Sumatra, 900 metres, by H. C. ROBINSON and C. BODEN KLOSS on 19th May 1914. Wing 49 mm.

Seven Sumatran compared with four Javanese specimens.

The continental race, *Z. a. aureiventer* HUME (syn. *tahanensis* O.-GRANT; ? *mesoxantha* SALV.) besides being duller in colour has a markedly larger bill. The Bornean form, *Z. a. media* ROB. and KLOSS (syn. *Z. a. parvus* HACHISUKA) is also a dull bird but has a slightly brighter rump than *Z. a. aureiventer* and has the small bill of *buxtoni* and *sumatrana*. The Javanese race is the most brightly coloured of the four subspecies.

Zosterops chlorates korinchi subsp. nov.

Zosterops montana ROBINSON and KLOSS (not BONAPARTE), Journ. Fed. Malay States Mus., VIII, part 2, 1918, p. 248 (Korinchi Peak); id., op. cit. XI, 1924, p. 338 (Mt. Talamau).

Zosterops chlorates chlorates STRESEMANN (not HARTLAUB), Mitt. Zool. Mus. Berlin, 17, Band 2, 1931, p. 215 (Korinchi and Talamau Mts.).

1 ♂ Korinchi Peak, 3000 metres (ROBINSON and KLOSS coll.).

Wing 58 mm.

Size about as in *Z. c. neglecta* SEEBOHM, of East Java; rather smaller than *Z. c. sindorensis* SIEBERS¹⁾ of Mid and West Java: bill larger than in either. Underparts brighter: foreneck and breast deeper yellow and abdomen much more washed with primrose yellow; isabelline area much more extensive and brightly coloured than in the Javanese forms (*Z. c. sindorensis* does not differ in colour from *neglecta*).

¹⁾ Treubia, XI, 1929, p. 151. (Mt. Tjiremai).

Not entirely yellow below as *Z. difficilis* ROB. & KLOSS, from Mt. Dempu, South Sumatra ¹).

Wings of *neglecta* (19 ex.) 52 (once) 54—56, 57 (once) 58 (once)
 „ *sindorensis* (31 ex.) 58—61.5 (fide SIEBERS)
 „ *korinchi* (29 ex.) 55—59.

Type: adult male collected on Korinchi Peak, 10,000 ft., Sumatra, on 9 May 1914 by H. C. ROBINSON and C. BODEN KLOSS. Wing 57 mm.

Specimens examined: a large series from between height of 7,300 ft. and 10,500 feet.

On consideration I am now unable to refer this bird to *Z. montana* BP. (probably from Mt. Singgalang or Mt. Merapi in the Padang Highlands) as the description of that is "Like *Z. flava* of Java but a little larger." Neither can I apply to it HARTLAUB's name *Z. chlorates*, for a bird from Morotai Island, in the northern Molucca group. This provenance has been rejected by several authors, but I see no need to query it. There is no reason to doubt the presence of a *Zosterops*, and of *chlorates* in particular, on Morotai: for that island is in an area possessing numerous forms only subspecifically distinct from it (fide STRESEMANN, Mitt. Zool. Mus. Berl. 17, 1931, pp. 215—216).

It is possible that the yellow-bellied *Zosterops difficilis* ROBINSON and KLOSS, Journ. Fed. Malay States Mus., VIII, part 2, 1918, p. 250 (*Zosterops chlorates* SHARPE, Cat. Birds B. M. IX, 1884, p. 191, ROBINSON, Bull. Liverpool Mus. II, 1899, p. 47, pl. 1, fig. 1) is the *Zosterops montana* of BONAPARTE of 1850, "Similis *Z. flavae* ex Java, sed paullo major" but I am not yet prepared to place *difficilis* as a synonym of BONAPARTE's unidentified name since on account of its brown-tinged flanks it seems to be merely a still more richly coloured ally of the Javanese birds than is the present one.

While no form of *Zosterops flava* has been obtained in Sumatra since BONAPARTE described *montana* in 1850, there is intrinsically no reason why one should not occur. On the other hand, the presence of an "*Oreosterops*" is strongly to be doubted and BONAPARTE's *Oreosterops montana* of 1854 is probably a synonym of *Zosterops javanica* (HORSF.), or *Z. frontalis* REICHENB. both of Java.

***Zosterops atricapilla* SALV.**

1 ♂, 2 ♀, Pajatoengkalan, Pangmoh, Acheen, 2000 metres.

Wings ♂ 58: ♀ 55 mm.

Like FINSCH I find Kinabalu birds (*Z. clara* SHARPE) of which a large series is before me, identical with those of Sumatra.

CHALCOPARIIDAE.

***Chalcoparia singalensis sumatrana* KLOSS.**

1 ♀ juv., Wai Lima, Lampongs.

2 ♂, 1 ♂, Aoer, Lahat, Palembang. (STRASTERS coll.).

Wings ♂ 53, 56: ♀ 53, 53 mm.

¹) Journ. Fed. Malay States Mus., VIII, part 2, 1918, p. 250; id., op. cit. XI, 1924, p. 338.