

NOTES ON SOME SUMATRAN BIRDS

by

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During the war I was able to identify some collections of birds from Sumatra, present in the Leiden Museum. These collections were brought together by E. Jacobson and W. C. van Heurn in the Padang Highlands in 1913; by W. Groeneveldt in the same area in 1914 and 1915; by L. P. Cosquino de Bussy and by Dr. F. C. van Heurn in Deli in 1912-1913 and 1918-1919 respectively; by C. J. Batenburg in the Palembang residency between 1918 and 1920 (many skins without exact locality) and by H. R. Rookmakers in Acheen in 1930.

This paper contains remarks on those specimens, which are of more special interest. For the loan of material or for most useful information I am much indebted to Dr. H. G. Deignan (Washington), A. Hoogerwerf (Buitenzorg), J. G. van Marle (Bussum), R. M. de Schauensee (Philadelphia) and Dr. K. H. Voous (Amsterdam).

***Treron curvirostra curvirostra* (Gm.)**

Columba curvirostra Gmelin, Syst. Nat. 1, pt. 2, 1789, p. 777 (Malay Peninsula).

The Batenburg collection contains 3 ♂♂ collected in the Palembang residency on 7-1, 18-4 and 3-7-1920. The wing measurements are 128, 125 and 127 mm, tail 69, 75, 77 mm, culmen 15 mm, tarsus 21, 20, 21 mm respectively. The small wing measurements of these birds make it very doubtful if Deli birds can be separated. Parrot (Abh. K. Bay. Akad. der Wissensch., 2. Klasse, 24, Band 1, 1907, p. 261) took this course, stating that Deli birds are smaller. Compared with the measurements of Deli birds, other Sumatra and Banka birds, which I gave in Temminckia, vol. 1, 1936, p. 8, the wing measurements of the birds from NE Sumatra fall entirely within the range of variation of those from the other parts of Sumatra. The wing measurements of the latter are 125-135 mm for the ♂♂, 3 ♂♂ from Deli measure 127-130 mm.

Treron vernans griseicapilla Schlegel

Treron griseicapilla Schlegel, Ned. Tijdschr. Dierk., vol. 1, 1863, p. 70 (SE Sumatra).

In Temminckia. vol. 1, 1936, p. 6 I gave the measurements of Sumatra and Banka material. Now the measurements of 1 ♂, 2 ♀♀ from the Padang Highlands (coll. Groeneveldt) and 5 ♂♂ (3 ♀♀ from Palembang (coll. Batenburg)) can be added. The wing measurements of birds from W and SW Sumatra range: ♂♂ 134-147, ♀♀ 132-145 mm. Dr. van Heurn collected in Deli (Medan) and Serdang (Soengai Karang) 2 ♂♂, 3 ♀♀ with wing measurements ♂♂ 140-143, ♀♀ 134-137 mm, Rookmakers in Blang Kolam, Acheen 3 ♀♀, wing 135-143 mm.

Boden Kloss (Treubia, vol. 13, 1931, p. 308) separated Deli birds from the rest of the Sumatra population on account of the smaller wing as *parva*. The measurements of the Deli birds before me do not confirm the existence of a separate race for this part of Sumatra. The wing measurements agree completely with those of birds from the other parts of the island. Recently De Schauensee and Ripley reached the same conclusion (Proc. Ac. Nat. Sci. Philadelphia, vol. 91, 1939, p. 321). Chasen (Treubia, vol. 18, suppl., 1941, p. 18), however, upholds the race.

Treron fulvicollis fulvicollis (Wagl.)

Columba fulvicollis Wagler, Syst. Av. Columba, sp. 8, 1827 (Java errore = Sumatra).

A ♂ collected in the Palembang residency on 15-11-1919 (coll. Batenburg). Measurements: wing 142, tail 82, culmen 15, tarsus 24 mm. The species has been recorded only a few times from Sumatra.

Streptopelia chinensis tigrina (Temm.)

Columba Tigrina Temminck in Les Pigeons I, 1810, p. 94, pl. 43 (Java).

The question whether N Sumatra is really inhabited by a smaller race of this dove than the other parts of Sumatra is still open. Parrot (Abh. K. Bay. Akad. der Wissensch., 2. Klasse, 24, Band 1, 1907, p. 275) separated Deli birds as *minor*. Boden Kloss (Treubia, vol. 13, 1930, p. 309) thought it probably a good race, but Peters (Checklist Birds of the World, vol. 3, 1937, p. 98) united *minor* again with *tigrina*. Jacobson and Van Heurn collected at Fort de Kock 4 ♂♂, 1 ♀ and at the beach NW of Padang 2 ♂♂ imm.; Groeneveldt 1 ♀ at Fort de Kock and Dr. Van Heurn at Medan 3 ♂♂, 1 ♀. Besides this material I saw from W Sumatra the skins collected by Jacobson and Van Heurn and commented upon by Robinson & Boden Kloss (J. Fed. Mal. St. Mus., vol. 11, 1924,

pp. 211-212), 2 mounted specimens from the mid-Sumatra Expedition (Silago) and one from Padang. Six specimens from Acheen (Takengon and Alas Peurba) (cf. Snouckaert van Schauburg, *Ibis*, 1922, p. 664) and another single specimen from Deli (coll. Hagen). According to this material the wing measurements are:

Acheen population (6)	136-148 (1 of 154) mm
Medan population (4)	136-141 mm
W and SW Sumatra population (18)	138-146 mm

This shows that the Acheen birds agree with the W and SW Sumatra birds and that Deli birds fall within this variation range, though on an average perhaps they are smaller. The difference is too small, however, to recognize in literature (cf. also De Schauensee and Ripley, *Proc. Ac. Nat. Sci. Philadelphia*, vol. 91, 1939, p. 322, and Chasen, *Treubia*, vol. 18, suppl., 1941, p. 19-20).

Porzana pusilla pusilla (Pallas)

Rallus pusillus Pallas, *Reise versch. Prov. Russ. Reichs*, 3, 1776, p. 700 (Dauria).

A ♂ was collected by De Bussy at Perbaoengan, Deli on 24-3-1918 (coll. Zool. Museum, Amsterdam). Wing 92, culmen 16 mm. The first specimen (♂) was collected in the Padang Highlands (Koto Gadang, Salimpaung) by Jacobson on 15-1-1914 and recorded as *pusilla* (*Journ. Fed. Mal. St. Mus.*, vol. 11, 1924, p. 213). Hoogerwerf secured another specimen at Blang Kedjeren on 18-4-1937, reported by Chasen as *P. p. mira* (*Treubia*, vol. 18, suppl., 1941, p. 21).

From the Dutch East Indies I have before me besides the specimens from Deli and the Padang Highlands, 3 ♂♂, 2 ♀♀ from Krawang, Java, collected by Verwey on 28-1-1931, 1-2-1931 and 9-2-1931, a ♀ from Bekassi, Java, collected by the same collector on 18-1-1931. A ♂? = ♀ from Ceram collected by Van Musschenbroek on 8-10-1873. A ♀ juv. from Toemaratas (Langoean), Minahassa, N Celebes, collected by Coomans de Ruiter on 17-6-1939.

This series could be compared with a series of 17 ♂♂, 3 ♀♀, 8 - from Japan, 1 ♂ from Dauria, E Siberia, all belonging to the nominal race and moreover with 1 ad. from the Philippines (Verreaux coll.).

Mira was described by Riley (*Proc. Biol. Soc. Washington*, vol. 51, 1938, p. 95) on one bird only as the resident form from Borneo. It was separated on account of the more rufous tinged upper parts, the white throat and breast, the paler grey superciliary and cheek, the yellow sides

of the bill, if compared with birds from the nominal race from N China.

The series of the nominal race before me shows that there is a good deal of individual variation. The colour of the upper parts varies between rufous and more yellowish rufous. Also the amount of rufous is variable, there are specimens in which the rufous on the upper parts is very pronounced, in others the rufous is more reduced and the black is more dominant. In these respects the series from the Dutch East Indies fall entirely within the variation range of the Japanese birds. Even the Celebes bird, which may be (though not yet proved) a breeding bird, and which has the upper parts mainly rufous without much black, is entirely matched by one of the Japanese birds. The darkest rufous is found in some of the Japanese birds! The birds from Java with much black on the upper parts agree with the bird from Dauria. I cannot see a difference in the grey colour of the superciliary and cheeks in the ad. specimens of the series before me.

The white throat and breast described by Riley are a ♀ character, a character already indicated by Hartert (Vögel Palaärkt. Fauna, vol. 3, 1921, p. 1831). This sexual difference in plumage is very clear in the series from Java. In the ♂♂ the under side is bluish grey, washed with a variable amount of rufous, whitish in the ♀♀. In juvenile specimens the sides of the head are rufous without the grey superciliary streak.

The colour of the bill can only be judged in fresh specimens. In the Celebes specimen Coomans de Ruiter wrote on the label that the maxilla is dark horn coloured, the mandible olive green. In the Sumatra bird collected by Jacobson the bill is described as greenish black, the lower mandible with a yellow line in the middle. Here too some variation is found. La Touche (Handbook Birds Eastern China, vol. 2, 1931-1934, p. 278) describes the bill of *pusilla pusilla* as horny green to green, the culmen and tip darker.

At the time being I cannot see a reason to place any of the above mentioned birds as *mira* and list all these birds as *pusilla pusilla*.

Limosa lapponica baueri Naum.

Limosa Baueri Naumann, Vögel Deutschl., vol. 8, 1836 (p. 429) (New Holland = Victoria).

Vorderman in his paper "Les oiseaux de Sumatra et leur présence dans les îles avoisinantes" (Nat. Tijdschr. Ned. Indië, vol. 49, 1890, p. 416) mentions this species as probably occurring in Sumatra. In the list of Robinson and Kloss (J. Fed. Mal. St. Mus., vol. 8, 1923, p. 326) they list the species without a point of interrogation. The same is done by Chasen

in his Handlist. I fail to find the reference, but at any rate the species is rarely recorded in the western part of the archipelago. At suitable places it may occur, however. See Bartels' observations on the south coast of middle Java (Orn. Monatsber., vol. 46, 1938, p. 76). Dr. Van Heurn shot 2 ♂♂ at the beach of Tandjong Tiram, Assahan, on 14-11-1921. Wing 213, 222 mm; tail 75, 77 mm; culmen 107, 111 mm; tarsus 53, 60 mm respectively.

Arenaria interpres (L.)

Tringa Interpres Linné, Syst. Nat. 10th ed., 1758, p. 148 (Gothland, Sweden).

At Perboengan Dr. Van Heurn collected 1 ♂ (3-4-1919) and 1 ♀ (23-10-1920). Wing 153, 148 mm; tail 62, 58 mm; culmen 23, 22 mm, tarsus 25, 24 mm respectively. Only once recorded for Sumatra proper, Van Heyst shot a ♀ at Pantai Tjernim, Serdang on 5-12-1918 (cf. Robinson & Boden Kloss, Str. Br. R. As. Soc., nr. 81, 1920, p. 89).

Crocethia alba (Pall.)

Tringa alba Pallas, Vroeg's Cat. Coll., Adumbratiuncula, 1764, p. 7 (Holland).

A ♂ shot at Perbaoengan, Serdang, on 10-12-1920 by Dr. Van Heurn is the first record of the sanderling for Sumatra. Wing 120 mm, tail 54 mm, culmen 28 mm, tarsus 25 mm. The species was supposed to be a very rare winter visitor in the Malayan archipelago. Kooiman (Ardea, vol. 29, 1940, p. 103), however, collected 4 specimens out of a flock of about 100 at the south coast of Java on 18-9-1938.

Tringa stagnatilis (Bechst.)

Totanus stagnatilis Bechstein, Orn. Taschenbuch, 1803, p. 292 (Germany).

Jacobson and Van Heurn collected at Ajer Bangis on the coast of W Sumatra a ♂ in winter plumage on 2-11-1913. Wing 132 mm, tail 50 mm, culmen 41 mm, tarsus 50 mm. It is the first record for Sumatra.

Sterna albifrons albifrons Pall. et *Sterna albifrons sinensis* Gm.

Dr. Van Heurn collected 4 ♂♂ and 4 ♀♀ on the following dates: 23-10-1920, 11-12, 12-12, 13-12 and 14-12-1920 at Perbaoengan. Wing: ♂♂ 164, 164, 170, —; ♀♀ —, 166, 170, 176. Tail: ♂♂ —, 56, 54, 69; ♀♀ 67, 60, 64, 71. Culmen: ♂♂ 28, 29, 31, 31; ♀♀ 30, 29, 29, 31. Tarsus: ♂♂ 15, 16, 16, 17; ♀♀ 17, 16, 15, 15 mm.

All birds are in winter plumage with the dark grey band along the edge of the wing.

In most of these birds the first shaft is whitish, the second and third darker, more suffused with brown, in one specimen the shafts of all these primaries are blackish brown. In two the first primaries are moulting which makes it impossible to be certain about the colour of the shafts and the wing measurements. In one of these birds the first shaft (not yet moulted) is white.

According to Robinson and Chasen (Birds Mal. Peninsula, vol. 3, 1936, pp. 102-105) *sinensis* and *pusilla* occur in the Malay Peninsula. *Saundersi* from the west coast of India is recorded with all reserve. The differences given between *sinensis* and *pusilla* are only the colour of the first three primaries, which is white in *sinensis*. In *pusilla* the first shaft should be white, the second and third brownish. This character was already brought forward by Stuart Baker (Bull. B.O.C., vol. 49, 1928, pp. 37-39) in his review of the species. Ticehurst (Bull. B. O. C., vol. 49, 1928, pp. 66-67) criticized this view mentioning that the shaft colour is not a reliable character as it is more or less variable in British birds of the nominal race (cf. also Ibis, 1924, p. 124).

During a stay in London I was able to examine the material in the British Museum. If birds in breeding plumage of India and China are compared I found that Indian birds are slightly darker (more greyish) on the upper parts, which are more bluish in Chinese birds, when seen in a series. Moreover, Chinese birds are larger:

India (36) wing 163-180 mm, culmen 29-32 mm.

China (20) wing 177-192 mm, culmen 29-33 mm.

Mostly they can also be distinguished by the colour of the primary shafts. In Chinese birds they are paler, mostly white or whitish slightly suffused with brown. In Indian birds the colour of the shafts is variable, the first white or brownish, the others brownish white to blackish. This character therefore is not quite reliable. The measurements are probably a better indicator.

The differences between the Indian birds and the nominal race are very small. The only difference is that in the Indian birds there are more birds with pale coloured primary shafts, but this character is too inconstant to use it for the separation of the Indian birds. I cannot see a difference in the colour of the mantle in breeding plumage, nor is there any difference in size. The measurements of *albifrons* given in the Handbook of British Birds (vol. 5, 1941, p. 43) are: wing 164-180, culmen 27-32 mm. They cover exactly the measurements found for Indian birds. In my opinion the best course to take is the one followed by Ticehurst, who synonymized the Indian birds with *albifrons*.

Robinson and Chasen used the name *pusilla* for Indian birds. There has been confusion in the use of this name. A type has never been designated. Temminck (Man. d'Orn., ed. 2, 4e partie, 1840, pp. 464-465) described *pusilla* as follows:

"Il paraît que la petite Hironnelle de mer des îles de la Sonde et des Moluques, diffère un peu de celle d'Europe par la taille, moins forte, et par la forme plus grêle du bec. Quoique M. Horsfield la considère comme la même que notre *Minuta*, nous sommes d'avis qu'elle forme une espèce distincte, à la vérité très-peu disparate de la nôtre. Elle a été désignée par nos voyageurs sous le nom de *Pusilla*. On la trouve jusqu'à la Nouvelle-Guinée."

In the Leiden Museum the following specimens stood under the name *pusilla* and were collected before 1840: one specimen from Java, collected by Kuhl, two specimens (♂ and ♀) from Borneo and two specimens from Timor, collected by S. Müller. Temminck must have seen these specimens when describing *pusilla*. The specimens from Java and Borneo are in summer plumage and are *sinensis* with white primary shafts and the wing measurements are: 177 + x — 191 mm. The Timor birds are in winter plumage. The primaries are moulting, one has the first two primary shafts white, the other white a trifle brownish. Wings measure 174 + x — 179 mm. As type specimen of *pusilla* I fixed the specimen from Java, wing 191, culmen 32 mm, which makes *pusilla* a synonym of *sinensis*. Howard Saunders (Cat. Birds Brit. Mus., vol. 25, 1896, p. 114) and Hartert (Vögel Paläarkt. Fauna, vol. 2, 1921, p. 1715) placed *pusilla* already under the synonymy of *sinensis*.

The birds mentioned above make it probable that the breeding bird in the Dutch East Indies is *sinensis*. This is confirmed by the material from the Buitenzorg Museum, kindly placed at my disposal by A. Hoogerwerf. A specimen in breeding condition collected by Hoogerwerf at Tandjong Priok, West Java on 31-5-1934 is *sinensis*, wing 181, culmen 28 mm. Other birds in summer plumage and belonging to *sinensis* in my opinion are:

- ♂ Mboing, West Flores, collected 2-7-1927. Wing 182, culmen 28 mm.
- ♀ Ake-Lamo, Halmahera, collected 23-4-1938. Wing 190, culmen 31 mm.
- ♂ and ♀ Pionierbivak, Mamberamo river, New Guinea, collected 4-7-1920. Wings 178-180, culmen 28 mm.

Of the old mounted material in the Leiden Museum 3 specimens labelled Java, and 1 from Pontianak, Borneo, are in summer dress. The bird from Borneo and 1 from Java *sinensis*, wings 182 + x and 189 mm, culmen 31.5 — 34 mm. Both other birds have brown primary shafts and the wings measure 165 — 175 + x mm, culmen 27-29 mm. These are *albifrons* and

perhaps birds not yet returned to their breeding grounds (no dates are given).

In winter *albifrons* occurs along the coasts of Sumatra and Java as migrants as is shown by the series from Perbaoengan and by other skins in the Buitenzorg and Leiden Museums. Some of these winter birds are difficult to place, so 3 birds collected by Vorderman near Batavia on 1-11-1888 and 1 by Hoogerwerf at Semarang on 28-12-1935. They have small wing measurements (all 170 mm) and whitish primary shafts. Collecting of breeding birds in SE Asia would be of interest to detect where these populations occur. I am inclined to lay more stress upon the wing measurements than on the colour of the primary shafts, though birds with a wing measurement of about 180 mm and up have always pale shafts as far as I have seen. In birds with a wing measurement below 180 mm there is a great deal of variation. In the Indian breeding birds, however, I never saw birds with all the shafts as pale as in the above mentioned birds.

Egretta intermedia intermedia (Wagl.)

Ardea intermedia Wagler, Isis, 1829, p. 659 (Java).

A ♀ was shot from the nest at Sarilamak, Padang Highlands on 2-11-1913 by Jacobson and Van Heurn. The bird had the eyes yellow, feet black, bill black with yellow at the base. The same colour of the bill is found in two other Sumatra specimens in breeding plumage, 1 ♂ ad. collected near Solok by the Sumatra expedition and one specimen from Padang 1872.

Recently Deignan (Proc. Biol. Soc. Washington, vol. 60, 1947, pp. 97-98) separated the birds from the Indo-Chinese countries (*palleuca*) on account of the fact that these birds have the bill yellow at all seasons. He suggested that it was improbable now that the name *intermedia* is applicable to birds from Japan, India and Ceylon. In the Leiden Museum there are 7 old mounted birds from Japan (coll. Von Siebold and Bürger). The specimens have all well developed egrets, but have the bill yellow with a blackish brown tip. Deignan (in litt.) saw 4 breeding birds from Japan with the bills black. The explanation is that the plumes and black colour of the bill develop simultaneously, as is to be expected, but according to the experience Hoogerwerf has with Java birds in the field, the bill turns earlier into yellow than the egrets are lost. He tells me that it can occur that the bird, when breeding, has the bill black, but the same bird has a yellow bill again when feeding the young. It can happen that when a colony is disturbed the birds start breeding again, but now in the non-breeding plumage (Hoogerwerf in litt.).

Perhaps the Japanese birds on an average are larger, but I do not think that they require an own name. The measurements are (in mm):

		Wing	Tail	Culmen	Tarsus
Japan	♂♂ (5) ¹⁾	307-317	114-133	75-77.5	109-119.5
	♀♀ (7) ¹⁾	293-315	111-128.5	73-77	102-116
Java and	♂♂ (7)	300-313	111-126	66-78	105-113
Sumatra	♀♀ (4)	268-307	103-120	64-74	104-114

Anas querquedula L.

Anas Querquedula Linné, Syst. Nat. 10th ed., 1758, p. 126 (Sweden).

A ♂ collected by De Bussy at Medan on 6-12-1913 and a ♀ at Perbaengan on 11-12-1917. The latter specimen is in the collection of the Zool. Museum, Amsterdam. As far as I am aware only collected by the mid-Sumatra expedition, a ♀ juv. at Solok (cf. Snelleman, Bijdragen tot de kennis der Fauna van Midden Sumatra, vol. 1, 1887, p. 52). Measurements of the specimens are: wing 184, 181 mm, tail 60, — mm, culmen 39, 38 mm, tarsus 32, — mm respectively.

Accipiter badius bifasciatus (Peale)

Astur bifasciatus Peale, U.S. Explor. Exped., 1848, p. 70 (Singapore).

De Bussy shot a ♀ near Medan at 18-6-1913, Rookmakers another ♀ at Lho Seumawe, Acheen at 23-12-1930. Wing 212, 208 mm; tail 170, 159 mm, culmen 16, 14 mm; tarsus 54, 51 mm respectively. Before these only reported from Medan by De Beaufort and De Bussy (Bijdr. tot de Dierkunde, 1919, p. 244).

Elanus caeruleus hypoleucus Gould

Elanus hypoleucus Gould, Proc. Zool. Soc., 1859, p. 127 (Celebes).

All the Black-winged Kites of the Greater Sunda Islands are brought together under the name *hypoleucus* with terra typica Celebes. The series from Sumatra before me show that this large area is not inhabited by a uniform population. In the birds from Celebes and the Sulu Islands, which I saw, the underside of the wings in general is white with the tips greyish to blackish. In the Java birds there are birds which have these parts white too, in some specimens they are darker, however, the proximal parts

¹⁾ Included are 2 ♂♂ and 2 ♀♀ from the U.S. Nat. Museum kindly supplied to me by Dr. Deignan.

of the inner webs being mottled with greyish black or greyish brown. In a few other ones the lower part of the inner webs is uniformly dark coloured. In Sumatran birds there is a larger percentage, which have the under side of the wing dark, which can go to the extreme with the whole under side of the wing blackish coloured as in birds from India and Malacca (*vocifer*). These birds are not identical with *vocifer*, however, being decidedly larger. The colour of the under side of the wings shows a large individual variation. Many of the Sumatran birds are darker than any of the Java birds, others cannot be separated in this respect. It seems unwise to give the Sumatran population a name at the moment, though in future it may be shown that the breeding birds of N Sumatra at the end of the cline can be separated. The size of the birds seems to increase from India to Celebes.

The measurements of the examined birds are:

India	(5)	262-273 mm
Malacca	(2)	280-282 mm (267-280 mm according to Chasen, Birds Malay Peninsula, vol. 4, 1939, p. 43)
Sumatra	(27)	282-304 mm
Java	(19)	290-306 mm
Borneo	(1)	306 mm
Celebes	(8)	286-307 (316) mm (cf. Stresemann, Journ. f. Ornith., vol. 88, 1940, p. 476)
Sulu Islands	(3)	293-301 mm

Alcedo meninting meninting Horsf.

Alcedo meninting Horsfield, Trans. Linn. Soc., vol. 13, 1821, p. 172 (Java).

I could compare a series of 10 birds from Palembang residency and 2 birds from Kalung, Padang Highlands and the 4 specimens commented upon by Robinson and Kloss (Journ. Fed. Malay States Museum, vol. 11, 1924, p. 234). Altogether 16 specimens from Sumatra with 16 fresh skins from Java, but I cannot see any difference in the blue upper parts in these two series. The other difference, which should separate the Sumatran population (*verreauxi*) from the nominal Javan race is that the latter is said to be slightly larger. As the Sumatran series ranges from 62 to 68 mm (average 64.0) for the wing measurements and the Javan series I have before me from 63 to 69 mm (average 65.1) I do not believe that there is an essential difference between birds from SE and W Sumatra and those from Java. The small difference in the average can be no reason to separate them. I list these Sumatran birds as *meninting* therefore.

Halcyon coromanda minor Temm. & Schleg.

Alcedo (Halcyon) coromanda minor Temminck & Schlegel, Fauna Japonica, Aves, 1848, p. 76 (Pontianak, Borneo).

Five birds from Palembang residency are unseparable from some birds from Borneo (4), Sumatra (Padang Highlands) (2), Banka (2) and Java (1). Not only that I cannot point out any colour differences, but the measurements too agree to a large extent. This makes Oberholser's race *neophora* rather doubtful. Oberholser in his review of the races of this kingfisher (U.S. Nat. Mus., vol. 48, 1915, p. 647) gave for one bird from Tapanuli Bay W Sumatra (*neophora*) a rather large measurement for the exposed culmen (54.5 mm). One of the specimens from the Padang Highlands also has a large culmen measurement (55). I do not think, however, that there is any reason to separate the birds from Palembang and Padang from Borneo and Java birds.

The measurements are:

Sumatra (Padang Highlands)	106-108 mm	50 (one of 55) mm
Sumatra (Palembang)	96-106 mm	45-48 mm
Banka	102 mm	49 mm
Borneo (type included)	101-107 mm	45-49 mm
Java	104 mm	51 mm

Halcyon chloris cyanescens (Oberh.)

Sauropatis chloris cyanescens Oberholser, Proc. U.S. Nat. Mus., vol. 52, 1917, p. 189 (Pulo Taya, SE coast of Sumatra).

I could compare a series of 35 skins from Sumatra (Palembang residency, Padang Highlands and Deli) with 75 skins from Java¹), but I could not point out the differences Oberholser mentioned (Proc. U.S. Nat. Mus., vol. 55, 1920, pp. 369-370) for birds from Sumatra and Java. There is no constant difference in colour nor in measurements of wing or culmen. The measurements are:

	Wing	Culmen
Java (75)	105-116 mm	38-48 mm
Sumatra (except Deli) (29)	105-116 mm	38-48 (1 of 50) mm
Sumatra (Deli) (6)	96-101 mm	38-42 mm

I arrive therefore at the same conclusion as Boden Kloss (Journ. Fed. Mal. St. Mus., 1921, vol. 10, pp. 214 and 215) that Java and the greater

1) For the loan of a splendid series of fresh skins of 24 ♂♂, 20 ♀♀ I am much indebted to Jhr. W. C. van Heurn.

part of Sumatra are populated by one race, *cyanescens*. The small series from Deli proves that birds from NE Sumatra are decidedly smaller, as has already been stated by Boden Kloss (l.c.). As I have not seen material from the Malay Peninsula I follow Kloss, who brought these smaller birds to the same race as inhabits the Peninsula, south of Kra (*humii*).

***Cuculus fugax fugax* Horsf.**

Cuculus fugax Horsfield, Trans. Linn. Soc., vol. 13, 1821, p. 178 (Java).

The fact that *Cuculus fugax* is a breeding bird in Sumatra was already made probable by S. Müller more than a century ago. He collected a young specimen, now in the Leiden Museum and only labelled Sumatra, 1834. The specimen was wrongly placed by Schlegel as *Cuculus concretus* in Cat. Mus. d'Hist. Nat., I, Cuculi, 1864, p. 14, but Finsch (Notes Leyden Mus., vol. 23, 1901, p. 99) corrected the misidentification. Jacobson collected a pullus at Air Taman, Gunung Talaman, Ophir districts (300 m) on 20-6-1917. Head and neck are blackish brown with white edges to the feathers and a black subterminal band. On the sides of the neck there are two white patches. Feathers of the rest of the upper parts edged with brownish white. The tail feathers are just growing out and are black, white tipped with a small rufous subterminal band. Chin and throat also black with small white edges. Rest of under parts white with irregular blackish spots. The outgrowing primaries with some indistinct rufous brown bars. The bird collected by S. Müller is in a more advanced stage. The tail is growing out and has the design of that of an adult specimen. Head, neck and chin, however, are still blackish brown, all feathers edged with brown instead of white as in the pullus.

The specimens from Balun, Muara Labu, Padang Highlands and Sungai Kumbang, Korinchi, mentioned by Robinson and Boden Kloss (Journ. Fed. Mal. St. Mus., vol. 11, 1924, p. 248) belong to this race.

***Penthoceryx sonneratii schlegeli* nom. nov.**

The Sumatran race is well recognizable from the Javan race and is now known as *P. s. fasciolatus* (S. Müller). Unfortunately I do not believe that the name of this race is tenable for the Sumatran birds. Müller described *fasciolatus* in Verh. Nat. Geschiedenis Land- en Volkenkunde, 1843, p. 177, and from his original description with the single remark at the end that a bird from Sumatra was much darker on the upper parts it is clear that the description was based on Javan birds. Moreover this is proved by the comparison of the description with the two Java birds and

the bird from Sumatra collected by Müller. The distribution was given as Java and Sumatra. Consequently Schlegel in *Mus. d'Hist. Nat. des Pays-Bas*, I, Cuculi, 1864, pp. 24-25 mentioned as the type-specimens of *fasciolatus* both birds from Java collected by Müller, not, however, the single specimen from Padang, Sumatra also collected by the latter. Schlegel's restriction of the type-locality to Java antedates the restriction Sumatra made by Robinson and Boden Kloss (*Journ. Fed. Mal. St. Mus.*, vol. 8, 1923, pp. 336 and 359). *Fasciolatus* therefore is a synonym of *musicus*. The other names used for East Indian birds *pravata* and *rufo-vittatus* cannot be used for Sumatra birds either. *Pravata* was described by Horsfield (*Trans. Linn. Soc.*, vol. 13, 1821, p. 179 and the bird came from Java. The bird described as *Cuculus rufo-vittatus* by Drapiez (*Dict. Class. d'Hist. Nat.*, IV, 1823, p. 568) came from the same locality. Both names are synonyms therefore of *musicus*. About the name *Cuculus venustus* Jerdon, Chasen and Boden Kloss make the following remark (*Bull. Raffles Mus.*, no. 5, 1931, p. 85): "... a reference to the passage in which the name was suggested (*Madras Journal*, XIII, Part II, 1845, p. 141) shows that it was proposed for the bird of the West Coast of Peninsular India. A specimen from Malacca mentioned at the same time was referred to *pravata* Horsf.

The name is a nomen nudum and was later made a synonym of *Cuculus sonneratii* by Jerdon (*Birds of India*, I, 1862, p. 325)."

This leaves the Sumatran birds without a name and for these birds I propose the name: *Penthoceryx sonneratii schlegeli* nom. nov.

Type: ♂ juv. collected at Padang by S. Müller in 1834.

The wing measurements are:

Sumatra	(14)	104-113 mm, 1 juv. of 102 mm
Java	(14)	107-115 mm
Borneo	(2)	102-103 mm

Are Bornean birds smaller?

According to Chasen and Boden Kloss (l.c.) Sumatran birds are more brightly coloured than birds from the Malay Peninsula (*malayanus*).

Centropus sinensis bubutus Horsf.

Centropus Bubutus Horsfield, *Trans. Linn. Soc.*, vol. 13, 1821, p. 180 (Java).

I cannot see differences between a series from Sumatra (Palembang residency 9, Padang Highlands 2, Assahan 1) and birds from Java. In the colour of the head and neck there is some individual variation as already pointed out by Mayr (*Bull. Raffles Mus.*, no. 14, 1938, p. 26). I cannot

see a reason therefore to bring Sumatran birds to *eurycercus* and list them as *bubutus* (cf. also Hoogerwerf, *Limosa*, vol. 19, 1946, pp. 40-44).

***Picus canus dedemi* (Van Oort)**

Gecinus dedemi Van Oort, Notes Leyden Mus., vol. 34, 1911, p. 59 (Sibajak, Battak mountains, ± 1450 m, NE Sumatra).

Batenburg collected a ♂ at Pasemah Lebar, Palembang residency on 25-10-1918, a bird already commented upon by Van Heurn (Jaarber. Club Ned. Vogelk., vol. 13, 1923, pp. 134-138). Another specimen was shot by Rookmakers at Redelong, Acheen (1400 m) on 16-7-1930. In all probability it is an immature ♀. Breast and abdomen are blackish with a reddish green tinge. On the abdomen there are some feathers slightly barred with green. On the breast some darker red feathers are coming through. Upper parts as in adult specimens. The head is black capped. Recently 1 ♂ and 1 ♀ imm. were collected at Blangbeke, Acheen by the Vanderbilt Sumatra expedition (De Schauensee and Ripley, Proc. Ac. Nat. Sci. Philadelphia, vol. 91, 1939, p. 333).

***Garrulax leucolophus obscurus* nov. subspec.**

Birds from Acheen and Upper Deli are compared with those of W and SW Sumatra blacker on the upper parts. I could compare 10 birds from N Sumatra with a series of 18 birds from Padang Highlands, Ophir districts, Korinchi and Bencoolen. There is no difference in measurements between both forms. For the darker northern birds I propose the name *Garrulax leucolophus obscurus* nov. subspec.

Type: ♂ collected at Balek, Acheen on 5-8-1930 (coll. Rookmakers).

The measurements are:

<i>bicolor</i>	wing ♂♂ (9)	127-139 mm
	♀♀ (6)	127-131 mm
<i>obscurus</i>	♂♂ (7)	128-134 mm
	♀♀ (2)	128-130 mm

***Malacocincla abbotti olivacea* (Strickl.)**

Malacopteron olivaceum Strickland, Proc. Zool. Soc., 1847, p. 102 (Malacca).

Groeneveldt collected a ♂ and a ♀ at Boeo, Padang Highlands, on a 14-12-1914, the same locality where the species was collected for the first time on Sumatra by Jacobson. Batenburg shot a ♂ at Kiboeran Tjima, Palembang residency, and another ♂ at Boekit Kitjil on 7-1-1920 and 29-4-1920 respectively. The species is rarely found in Sumatra collections.

Mesia argentauris rookmakeri nov. subsec.

A series of 6 ♂♂ and 14 ♀♀ from Pang Mok, Acheen, I could compare with 19 birds from Sungei Kumbang, Korinchi and it was shown that the Acheen birds can be separated. The upper and under parts in the latter are greener, not so suffused with reddish as in the W Sumatran birds. In the birds from Pang Mok there is a more sharp boundary between the red neck band and the rest of the upper parts, which are clearer green in W Sumatran birds. The ear coverts in the birds from Pang Mok are of a slightly darker grey when seen in a series, the wing edges of the primaries are clearer yellow. Finally the N Sumatran birds have decidedly smaller bills as can be seen from the following figures:

Acheen birds	culmen 12-14 mm, average 12.75.
W Sumatran birds	culmen 13-15 mm, average 14.00.

Three birds from Malacca (*tahanensis*) are quite different with the upper parts much more grey and throat and neck band much more yellowish.

Type: ♀, Pang Mok (North of Lake Takengon), Acheen, collected on 1-9-1930 by Rookmakers. Wing 81, tail 78, culmen 13, tarsus 28 mm.

The wing measurements of the ♂♂ are 80-82, ♀♀ 75-84 mm.

A bird from Kaban Djahe, Deli (coll. De Bussy) agrees with *laurinae* from W Sumatra.

Myiophonus melanurus (Salvad.)

Arrenga melanura Salvadori, Ann. Mus. Civ. Gen., vol. 14, 1879, p. 227 (Mt. Singalan, Padang Highlands, Sumatra).

Rookmakers collected a series of 4 ♂♂, 4 ♀♀, 3 ♀♀ imm. at Pang Mok, Redelong (North of Lake Takengon) and Isak (South of Lake Takengon), Acheen. The wing measurements of these specimens range rather large. My measurements show that Korintji specimens are the smallest and N Sumatran birds show an increase in size from south to north as is shown in the following table:

Palembang and)	♀♀ (4)	116-122, average 122.7 mm
Benkulen Mts.)	♂♂ (4)	120-129, average 124.2 mm
Korintji Mts.	♂♂ (9)	114-129, average 121.1 mm
	♀♀ (3)	120-122, average 121 mm
Ophir Mts.	♂♂ (7)	124-135, average 129.5 mm
	♀♀ (6)	120-127, average 122.6 mm

Leuser Mts.	♂♂ (17)	123-138, average 131.4 mm
	♀♀ (13)	118-135, average 123.5 mm
Acheen	♂♂ (4)	128-139, average 133 mm
	♀♀ (3)	128-134, average 130.6 mm

The type locality of *melanurus* is nearest to Mt. Ophir. There is too much overlapping, however, to get clear cut divisions, which makes that all these populations can be better kept under one name.

Motacilla flava macronyx (Stres.)

Budytes flavus macronyx Stresemann, Avifauna Macedonica, 1920, p. 76 (Wladivostok).

De Bussy collected an adult undated specimen (♂) at Medan, which may belong to this race (coll. Zool. Museum, Amsterdam). It is an old and mounted specimen and badly discoloured. Head and ear coverts are dark with a very faint indication of an eye stripe. Wing 83, hind claw 11.8 mm. In this connection a series of 7 ad. ♂♂ from Ceylon, present in the Leiden Museum, are of interest. These birds were collected at Narupitya, Ceylon, on 13 and 14-4-1922. These specimens may also be *macronyx*. They were compared with 10 ♂♂ ad. from *thunbergi*, migrants collected at Harderwijk, Netherlands, in May. It is shown that in a series the Ceylon birds have the head and earcoverts slightly paler grey, the back slightly greener, the edges of the wing coverts more vividly coloured. These are about the same colour differences as Sushkin (Proc. Boston Soc. Nat. Hist., vol. 38, no. 1, 1925, p. 33) gives between *thunbergi* and *macronyx*. It is said (l. c., p. 31) that *plexus* is duller and more grayish on the back than *thunbergi*. This certainly cannot be said from the Ceylon birds. The measurements of the latter are: wing 80-83, hind claw 10.3-12.0 mm. The 10 birds from Harderwijk have the following measurements: wing 80-82, hind claw 8.1-9.8 mm.