

BIRDS FROM MT. KINA BALU, NORTH BORNEO

By JAMES L. PETERS

ACCIPITRIDAE

ACCIPITER VIRGATUS VIRGATUS (Temminck)

2 ad. ♂, 1 ad. ♀, 3100 feet, 9-26 August, 1937.

None of the three specimens has completed the post-nuptial molt and for this reason wing and tail lengths cannot be measured; the tarsal length is 47.5, 45, 48 mm.

ICTINAËTUS MALAYENSIS MALAYENSIS (Temminck)

1 ♀, 3100 feet, 11 August, 1937.

Compared with a male of *I. m. perniger* from Mt. Angka, Siam, the Bornean bird is much blacker throughout and definitely smaller, wing 550 against 570; if corresponding sexes were to be measured the difference in size would doubtless be even more apparent.

PHASIANIDAE

ARBOROPHILA BRUNNEOPECTUS ERYTHROPHRYS (Sharpe)

2 ad. ♂, 4 ad. ♀, 2 juv. ♂, 1 juv. ♀, 5000-5500 feet, 10 June- 16 July, 1937.

This race was originally described from an adult pair collected on Kina Balu by John Whitehead. When first studying Whitehead's collections, Sharpe thought the specimens represented the young of *A. hyperythra* described by himself from the Lawas River in 1879, but later became convinced that the characters on which *erythrophrys* (i.e., rusty lores, superciliary and sides of face as opposed to the ashy gray color of the corresponding parts of *hyperythra*) was based were not an age character. *A. erythrophrys* was upheld by Ogilvie-Grant in Cat. Bds. Brit. Mus., 22, 1893, p. 218 but was later synonymized with *hyperythra* by Sharpe himself in his Hand-list, 1, 1899, p. 29. As far as I can discover this was its fate until reinstated by Chasen, Bull. Raffles Mus., no. 11, 1935, p. 3 in a laconic footnote that reads "*A. erythrophrys* and *A. hyperythra* are distinct forms." I have not seen the latter race, but all the Kina Balu specimens agree with the plate of *erythrophrys* in Ibis, 1890, pl. 4, the rusty parts of the head and face are present in both adults and juvenals. The old females have

more black in the crown than the males, and in one the crown and lores are entirely black. The color of the throat varies independently of age or sex; in one male and one female it is entirely reddish brown; in the other male chiefly so but with a few scattered feathers with black centres, the other three females all have a sprinkling of black centered feathers. The feathering on the throats of the juvenals is rather sparse, but there is enough to show that the chin is whitish and that the black freckling is variable; it is much more extensive and noticeable in the juvenal female than in the two males.

HAEMATORTYX SANGUINICEPS SHARPE

1 ad. ♂, 1 ad. ♀, 1 imm. ♂, 1 imm. ♀, 1 juv. ♀, 5500 feet, 21 June-8 July, 1937.

The crimson-tipped undertail coverts are fully developed in both the immature birds. The adult male has three spurs on the left tarsus, two on the right. Compared with an adult male from Mt. Dulit, the Kina Balu male is a clear slatey black, not brownish black, but quite possibly the brownish cast to the plumage of the former specimen is due to a post mortem change.

RALLIDAE

RALLINA FASCIATA (Raffles)

1 ♂, 3000 feet, 13 July, 1937.

The single specimen of this rail has the middle of the abdomen white, instead of being regularly barred with black and white like the flanks, as is the case of three old specimens without data, that are available for comparison.

COLUMBIDAE

TRERON VERNANS GRISEICAPILLA Schlegel

1 ad. ♂, 1 juv., sea level, 4 and 6 September, 1937.

Two races of this fruit pigeon occur in Borneo, *griseicapilla* in northern and *purpurea* in southern and southeastern. However the boundary between the two races is by no means clearly defined. Mayr (1938 p. 10) refers specimens from Parit, on the Tjempaga River, south Borneo to *purpurea* (type locality, Java) qualifying his identification by the statement that they are somewhat intermediate between

griseicapilla and *purpurea* but nearer the latter. Stresemann records specimens of *T. v. griseicapilla* from the Bahau River in northern Dutch Borneo.

In addition to the birds listed above I have available for comparison with two topotypical Sumatran males of *griseicapilla* the following Bornean specimens:—1 ♂, Baram, 1 ♂, Tawao, 1 ♂, Limbang, 1 ♂, Poelau; the Jesselton bird and the first two listed are surely *griseicapilla*; the two latter are best placed as intermediate between *griseicapilla* and *purpurea* but nearer the former.

DUCULA AENEA AENEA (Linné)

2 ♀, 3100 feet, 18 and 22 August, 1937.

North Bornean examples of *D. aenea* as Chasen and Kloss (1930, p. 13) have already pointed out, differ from *D. a. palawanensis*, the nearest geographic relative, in having the pale head and neck sharply defined from the color of the back and in being smaller. Four Palawan specimens have a wing measurement of 236, 239, 243, 247; North Bornean skins run 225, 228, 229, 235; other Bornean measurements, including 3 from the interior measured by me, 5 ♂ and 2 ♂ from southern Borneo by Mayr and a north Bornean ♀ by Chasen and Kloss run from 230–241; Stresemann's single ♀ from Badang is the largest with a wing of 244.

DUCULA BADIA BADIA Raffles

3 ♂, 3100 feet, 15–25, August; 1 ♂, 2 ♀, 1 not sexed, 5500 feet, 11 June–31, July; 1 ♂, 7000 feet, 21 July, 1937.

A male and female of topotypical *badia* from Sumatra have wings 231 and 218 mm. respectively, while the Kina Balu series measures, males, wing 220, 227, 232, 233; females 221, 233, 234. Both Sumatran birds, the male especially, have the crown much clearer gray, less washed with vinaceous than the Kina Balu series.

MACROPYGIA RUFICEPS NANA Stresemann

5 ♂, 1 ♀, 3100 feet, 27 July–25 August; 1 ♀, 4790 feet, 7 July; 2 ♂, 1 ♀, 5500 feet, 21 June–30 July, 1937.

This nice series is virtually topotypical; the type came from an elevation of 3000 feet on Mt. Kina Balu.

CUCULIDAE

CUCULUS SPARVERIOIDES BOCKI (Wardlaw Ramsay)

2 ♂, 3100 feet, 27 July and 18 August; 1 ♂, 4500 feet, 6 June, 1937.

Wings 172, 178, 185.5; tails 164, 168, 177.

CUCULUS FUGAX FUGAX Horsfield

2 ♂, 3100 feet, 11 August, 1937.

Wings 168, 170.

CUCULUS POLIOCEPHALUS INSULINDAE (Hartert)

1 ♀, 4700 feet, 6 June; 1 ♂, 1 ♀, 5500 feet, 12 June and 21 July, 1937.

Topotypes of the subspecies, originally named from Kina Balu.

CACOMANTIS MERULINUS THRENODES Cabanis & Heine

2 ♂, 3100 feet, 26 August, 1937.

CHALCITES MALAYANUS MALAYANUS (Raffles)

1 ♂, 3100 feet, 26 August, 1937.

This is apparently an immature bird; the underparts are plain grayish white, bars are apparent on the posterior flank feathers and a single barred feather has made its appearance on the breast. A male collected by H. G. Deignan at Abai, Borneo, 28 July, 1937 is in a more advanced stage of this same plumage, numerous barred feathers having made their appearance on the underparts, but the completely barred under surface of the adult plumage is not yet fully developed.

STRIGIDAE

OTUS SPILOCEPHALUS LUCIAE (Sharpe)

1 ♂, 2 ♀, 6000 feet, 5-8 July, 1937.

This form was originally described from specimens collected on Kina Balu by Whitehead during his second expedition. He found it only "in the dark and gloomy forests which occur in large patches at about 9000 feet."

The bird is now known to occur on other mountains in Borneo and is probably not as restricted in its altitudinal range as first supposed. The Museum of Comparative Zoölogy possesses a skin from Mt. Dulit collected at an elevation of only 3400 feet.

APODIDAE

COLLOCALIA VESTITA MARATUA Riley

1 ♂, 1 ♀, 3100 feet, 8 and 9 August, 1937.

♂, wing 116.3; ♀, wing 115.1

COLLOCALIA ESCULENTA DODGEI Richmond

1 ♂, 1 ♀, 4900 feet, 3 July, 1937.

This small montane form was originally described from Mt. Kina Balu; according to Chasen it occurs on other mountains in northern Borneo and on Korinchi Peak, Sumatra.

The measurements of the two specimens before me are ♂, wing 91.5, tail 35; ♀, wing 90.5, tail 31.5 mm.

A female of *C. e. cyanoptila* from Sandakan has a wing of 99.3 and tail 36.6; it is also a much glossier bird.

CAPITONIDAE

CHOTORHEA CHRYSOPOGON CHRYSOPSIS (Goffin)

1 ♂, 1 ♀, 3100 feet, 12 and 21 August, 1937.

These birds are identical with birds from the Bornean lowlands from the region about Sandakan.

CYANOPS MONTICOLA Sharpe

3 ♂, 3100 feet, 23 and 24 August; 2, not sexed, 3500 feet, 27 June; 1 ♂, 1 ♀, 4750 and 4900 feet, 7 June and 3 July; 1 ♂, 5500 feet, 18 July, 1937.

I cannot agree to the inclusion of *monticola* in the *oorti* Formenkreis; the latter association should of course include *nuchalis* and *annamensis* and probably *incognita* and *faber*, but according to my conceptions *monticola* is definitely out; of course it does not belong in Chotorhea where Sharpe placed it in his Hand-list, it seems to fit better in Cyanops.

It is a species of an arrested or retrograded type of color and pattern, the throat is never golden yellow, the definite black markings on the sides of head are entirely lacking, there is no red spot on the lores or across the forehead; in addition the bill is relatively much larger.

CYANOPS ARMILLARIS PULCHERRIMA (Sharpe)

1 ♂, 3100 feet, 23 August; 4 ♂, 8 ♀, 5500 feet, 10 June-26 July; 3 ♂, 7000 feet, 18-31 July, 1937.

This form is no doubt correctly placed as a montane representative of the Javan *armillaris* which is also replaced in the Bornean lowlands by *C. a. brachyrhyncha* Neumann, the latter occupying a more or less intermediate position between the two extremes. In addition to the large series collected by Mr. Griswold I have examined another Kina Balu specimen taken by Everett's native collectors and a ♂ and ♀ from Mt. Tibang, Dutch Borneo collected by E. Mjöberg. None of the specimens examined show the slightest approach to *C. a. brachyrhyncha*.

CYANOPS EXIMIA CYANEA (Harrisson and Hartley)

Mesobucco duvaucelii cyaneus Harrisson and Hartley, Bull. Brit. Orn. Cl., **54**, 1934, p. 151 (Mt. Kina Balu.)

1 ♀, 3500 feet, 27 June, 1937.

This form was very briefly characterized in the original description as having "frontal band blue, not black or blue-black." As poor a description as can be imagined!

Chasen regards both *eximia* and *cyanea* as races of *C. australis* which is represented in the Bornean lowland by *C. a. duvaucelii*. Mayr believes that *eximia*, (type locality, Mt. Dulit), a montane form, should be accorded specific rank in which I concur. The comparative differences between *C. a. duvaucelii*, *C. e. eximia*, and *C. e. cyanea* are shown in the following table:

Throat blue	<i>cyanea</i>
	<i>duvaucelii</i>
Throat black	<i>eximia</i>
Ear coverts blue	<i>cyanea</i>
	<i>eximia</i>
Ear coverts black	<i>duvaucelii</i>
Forehead blue	<i>cyanea</i>

Forehead black	<i>duvaucelii</i>
	<i>eximia</i>
Subocular spot red	<i>duvaucelii</i>
Subocular spot yellow	<i>cyanea</i>
	<i>eximia</i>
With red on crown	<i>cyanea</i>
With red on occiput	<i>eximia</i>
No red on head	<i>duvaucelii</i>

It might be well to mention that in *C. australis*, the longest facial bristles extend well beyond the tip of the bill while in the specimens of *cyanea* examined they barely reach the tip, the same condition is found in *eximia* if the plate in the Ibis, 1892 is accurate.

PICIDAE

CALLOLOPHUS MINIACEUS DAYAK Stresemann

1 ♀, 3100 feet, 16 August, 1937.

According to Chasen it is *C. m. miniaceus* that occurs on the lower slopes of Kina Balu, but this specimen with a wing of only 112 mm. is clearly identifiable as the small *dayak*; in the typical race the wings range from a minimum of 120 for females to a maximum of 134 for males.

CHRY SOPHLEGMA MENTALE HUMII Hargitt

1 ♂, 1 imm. ♂, 5500 feet, 16 and 29 June, 1937.

In size these birds are about the minimum for *humii* and thus approach the smaller *saba* of southern and eastern Borneo; the ad. ♂ has a wing of 125, the immature one of 124 mm. The presence of a slight admixture of chestnut in the feathers of the malar stripe of the adult throws the scales in favor of *humii*.

EURYLAIMIDAE

CALYPTOMENA WHITEHEADI Sharpe

3 ad. ♂, 1 imm. ♀, 5000–5500 feet, 24 July–3 August, 1937.

I can detect no differences between this topotypical series and a pair collected by Mjöberg at about 4000 feet on the upper Kajan River near Mt. Tibang.

PSARISOMUS DALHOUSIAE BORNEENSIS Hartert

1 ad. ♂, 1 imm. ♂, 1 ♀, 3100 feet, 23 and 24 August; 3 ♂, 1 imm. ♀, 5500 feet, 18 June–28 July, 1937.

The Bornean race of this bird is very close to *psittacinus*, the form inhabiting the Malay States and Sumatra, but is of a yellower green, the difference is not too apparent unless *psittacinus* and *borneensis* are compared in series.

EURYLAIMUS OCHROMALUS KALAMATAN Robinson and Kloss

2 ♂, 2 ♀, 30 August, 1937.

Mayr reduces *kalamatan* to a synonym of *ochromalus* on the grounds that the overlap in wing measurements is more than 50%. I am not willing to accept this disposal offhand. Robinson and Kloss type series came from the Saribas district of Sarawak (altitude not given), the males have a wing of 82–89, the females one of 81–84; in 1930 Chasen and Kloss gave the wing measurements of 10 ♂ from the north Bornean lowlands running from 77–85, and of 5 ♀ from 75–79, remarking that the north Bornean series was less distinct from the Malay Peninsula population than the Sarawak birds. My two Kina Balu males have wings 82.5 and 83, the females 79 and 80. A ♂ from 4000 feet on the upper Kajan River has a wing of 82.5 and three females from the same locality, 80, 83 and 84. On the other hand two males from about Sandakan have wings only 74–78 and three females 73.5–77.5, thus rather closely approximating five males of *o. ochromalus* (Malay trade skins) whose wings measure 75, 75.5, 76, 77.5, 78 and three females (Malay trade skins) 71.5, 76, 77. While the absence of any reference to the altitude of the Saribas type series and the omission of the altitude from the labels of much of the material available to me prevents positive conclusions, evidence points to *kalamatan* being a recognizable race of the mountains of Borneo, with *ochromalus* occupying the lowlands. Stresemann refers the birds collected by von Plessen on the Kajan River to *kalamatan* without comment. Unfortunately the measurements he gives are not segregated by locality.

CORVIDAE

CISSA JEFFERYI Sharpe

1 ♂, 1 ♀, 7000 feet, 24 and 25 July, 1937.

Chasen regards this bird as a race of *chinensis* replacing *minor* at the higher elevations. In my opinion it is more nearly allied to *thalas-*

sina of Java (which Chasen also believes to be conspecific with *chinensis*). My own feeling in the matter is that both *thalassina* and *jefferyi* should be kept as distinct species, a treatment that was accorded them by Delacour in his review of the genus (Ois., 10, 1929, p. 2-12.)

DENDROCITTA OCCIPITALIS CINERASCENS SHARPE

3 ♂, 3 ♀, 3100 feet, 20-24 August; 2 ♂, 1 ♀, 4800 feet, 6 and 7 June; 2 ♀, 5000 feet, 8 and 18 July; 1 ♂, 1 ♀, 7000 feet, 9 and 13 July, 1937.

So many of this series are in moult that satisfactory wing and tail measurements are not possible. The range of variation in the color of the upper parts indicate that Chasen's objection to the recognition of *D. o. tuckeri* Harriison and Hartley, is well founded.

MUSCICAPIDAE

MUSCICAPULA MELANOLEUCA WESTERMANNI Sharpe

1 juv. ♂, 3100 feet, 11 August, 1937.

A juvenile, still in spotted plumage, is without doubt referable to this form; no adults accompany it.

DENDROBIASTES HYPERYTHRA MALAYANA (Ogilvie-Grant)

5 ♂, 3 ♀, 7 juvs., 5500 feet, 12 June- 3 August; 1 ♂, 11,000 feet, 12 August, 1937.

These birds, with brown (instead of blue-gray) backed females, must surely be referred to *malayana*, not to *mjöbergi*.

PYCNONOTIDAE

CHLOROPSIS COCHINCHINENSIS FLAVOCINCTA Sharpe

1 ♂, 2 ♀, 3100 feet, 21-23 August; 1 ♂, 3500 feet, 7 June, 1937.

I have doubts as to whether this bird is correctly placed as a race of *C. cochinchinensis*. Though the male of this form bears a close resemblance to the males of the *cochinchinensis* Formenkreis, the female is quite different in the possession of a black throat. Thus we have a species with a black throated male and a female with a blue-green throat found in India and Ceylon (*jerdoni*); the greater part of south-

eastern Asia (*cochinchinensis*); Malay States, Sumatra, Natuna Islands (*icterocephala*); Java (*nigricollis*) and parts of Borneo (*viridinucha*). Then suddenly we find that the female of the bird of the mountains of Borneo has a black throat; this to my mind indicates that the nearest relationships of *flavocincta* are with *media* of the Sumatran highlands in which both sexes have a black throat.

CRINIGER RUFICRISSUS Sharpe

6 ♂, 6 ♀, 3100 feet, 11–24 August; 1 ♂, 5500 feet, 12 July, 1937.

Mayr has recently stated that *ruficrissus* is a distinct species, not a race of *gutturalis*. He does not say on what grounds he bases this statement; certainly there is a strong superficial resemblance between the two forms, but there can be little doubt that Mayr is right and that the much larger and relatively longer tailed *ruficrissus* deserves specific rank.

TIMALIIDAE

RHINOCICHLA MITRATA TREACHERI (Sharpe)

14 ♂, 7 ♀, 3100 feet, 7–26 August; 1 ♂, 1 ♀, 1 juv. ♀, 1 not sexed, 4750 feet, 6 and 7 June; 10 ♂, 5 ♀, 5500 feet, 9 June–1 August; 1 ♂, 7000 feet, 18 July, 1937.

Harrisson and Hartley have named (Bull. Brit. Orn. Cl., **54**, 1934, p. 154) *R. m. damnata* from Mt. Dulit; not all the characters enumerated in the original description hold good, but the absence of pale shaft lines to the breast and throat feathers of *damnata* (4 examined) and their presence in every skin of *treacheri* from Kina Balu (46 examined) serve to distinguish the two races at a glance. Messrs. Harrisson and Hartley believe that a least one additional race may be separated, and this supposition is fully borne out by a series of seven specimens from the interior of Dutch Borneo (Kajan River and Mt. Tibang). This form may be called

RHINOCICHLA MITRATA GRISWOLDI subsp. nov.

Type.—M. C. Z. no. 236020, adult not sexed (= ♂ by measurement), Mt. Tibang, 4000 feet, collected 19 November, 1923, by Eric Mjöberg.

Characters, similar to *R. m. damnata* Harr. and Hartl. in lacking prominent pale shaft lines to the feathers of throat and breast, but

anterior under-parts much richer, Cinnamon Buff¹ to Clay Color instead of Cinnamon Buff to Dark Olive Buff.

Measurements:

treacheri 10 ♂ wing 99-109; 10 ♀ 96-104.5

damnata 3 ♂ 96-106; 1 ♀ 103

griswoldi 5 ♂ 98-109; 2 ♀ 95.5-100

POMATORHINUS MONTANUS BORNENSIS Cabanis

1 ♂, 3100 feet, 18 August; 1 ♂, 5500 feet, 19 June, 1937.

Wings 83 and 79.5 respectively. Not different from two specimens from the upper Kajan River.

NAPOTHERA BREVICAUDATA CRASSA (Sharpe)

1 ♂, 3100 feet, 19 August; 1 ♀, 4900 feet, 3 July; 4 ♂, 7 ♀, 5500 feet, 11 June-27 July; 2 ♂, 1 ♀, 7000 feet, 6 and 28 July, 1937.

This bird is of course a geographic representative of *Napothera brevicaudata* several forms of which occur in the mountains of south-eastern Asia. Another form of *Napothera*, *N. epilepidota exsul* (Sharpe) occurs on Kina Balu, but was not secured by Mr. Griswold. The generic name *Napothera* was originally introduced by Boie in 1832 and subsequently used as *Nopothera* and *Napothera* by S. Müller in 1835 but was a nomen nudum in each case; its first valid proposal was by G. R. Gray in 1842.

STAPHIDIA CASTANICEPS EVERETTI Sharpe

6 ♂, 3 ♀, 3100 feet, 6-24 August; 1 ♂ 4400 feet, 6 June; 3 ♂, 2 ♀, 5500 feet, 29 June-3 July, 1937.

In addition to the series of topotypes listed here, I have examined specimens of this bird from Long Navang and Mt. Penrissan, Dutch Borneo, Mt. Poi, 5000 feet, Sarawak, and Gunong Kanepai. While there is some variation in the color of the upper parts and especially in that of the top of the head, in the skins examined from the different localities, more material is required to determine how much of it is geographical and how much is due to wear, season or post mortem change. There appears to be no size difference.

¹Ridgway, Color Standards and Color Nomenclature, 1912, pl. 29 and 40.

PTERUTHIUS FLAVISCAPIS ROBINSONI Chasen and Kloss

4 ♂, 4 ♀, 5500 feet, 9 June–12 July; 1 ♂, 7000 feet, 16 July, 1937.

There is no question but that this race is quite distinct from *P. f. aerulatus* with which it was principally compared, but it is very close to *cameranoi*, differing chiefly in slightly larger size.

Measurements:	♂	W.	B.	♀	W.	B.
<i>aerulatus</i>		78	15.1		77.	13.5
		76	14.2		76.5	13.7
					77.5	13.5
					76	13.7
<i>cameranoi</i>		69.5	12.9		71.5	12.3
<i>robinsoni</i>		72.5	12.7		73	12.5
		74	12.7		73.5	12.1
		76	13.4		74.5	12.5
		74	12.4		72.5	12.5
		74	11.1			

TURDIDAE

COPSYCHUS SAULARIS NIGER Wardlaw Ramsay

1 ♂, 1 ♀, 3100 feet, 29 July and 18 August, 1937.

Both these birds are certainly referable to *niger*, the underparts of the male are entirely glossy black, with a small amount of white in the under tail-coverts; both outer pairs of rectrices are entirely white and some of the inner secondaries white-edged; the female has the under tail-coverts mostly white; the two outer pairs of rectrices entirely and the next pair mostly, white; the white on the inner secondaries is greater in extent.

BRACHYPTERYX MONTANA ERYTHROGYNA Sharpe

8 ad. ♂, 6 ad. ♀, 2 imm., 5500 feet, 9 June–25 July; 2 ad. ♀, 2 imm., 7000 feet, 6–28 July; 1 ♂, 9790 feet, 29 July, 1937.

Both *Myiophonus* and *Brachypteryx* have been placed in the *Turdidae* by most recent authorities. Removing these genera from the *Timeliidae* to the *Thrushes*, even though the plumage of the juvenals is not characteristically thrush-like, is almost certainly the proper procedure. Anything that can be done to distribute the genera of the

so-called Timeliidae among the better characterized and more natural groups is a step in the right direction.

LANIIDAE

HYLOTERPE HYPOXANTHA HYPOXANTHA Sharpe

1 ♂, 4 ♀, 3100 feet, 19–23 August; 1 ♀, 3500 feet, 27 June; 2 ♂, 3 ♀, 5500 feet, 10 June–31 July; 1 ♂, 1 ♀, 7000 feet, 16–30 July, 1937.

This series is exactly topotypical; three specimens from Mt. Tibang agree with it and are not like *H. h. sarawacensis* Chasen which is said to have the underparts more uniformly yellow.

The Tibang birds have wings 81.5, 84.5, 84.5; Kina Balu birds,—80, 82, 82.5, 83, 83.5, 84, 84, 85, 87 mm.

SYLVIIDAE

SEICERCUS TRIVIRGATUS KINABALUENSIS (Sharpe)

2 ♂, 1 ♀, 5500 feet, 16–30 June, 1937.

These birds appear to be of the normal type of coloration for the form.

SEICERCUS MONTIS MONTIS (Sharpe)

2 ♂, 25 and 27 June, 1937.

This species looks to be out of place in *Seicercus*, but is retained here for want of a better position.

HOREITES MONTANA OREOPHILA (Sharpe)

1 ♀, 5500 feet, 30 June; 2 ♂, 11,000 feet, 15 August, 1937.

Chasen places the *montana* Formenkreis in *Cettia*, but that genus is characterized by very weak and poorly developed rictal bristles while those of *Horeites* are prominent. A general revision of the Sylviidae will doubtless result in a very different arrangement from that in use at present.

ZOSTEROPIDAE

ZOSTEROPS ATRICAPILLA CLARA Sharpe

1 ♂ juv., 3100 feet, 13 August; 1 ♂, 4750 feet, 7 June; 1 ♂, 5500 feet, 11 June, 1937.

Chasen synonymizes *clara* with typical *atricapilla* from the highlands of Sumatra; Stresemann in his review of the Zosteropidae maintains it.

CHLOROCHARIS EMILIAE EMILIAE Sharpe

2 ♂, 1 ♀, 5500 feet, 16 June–6 July; 1 ♂, 7000 feet, 5 July; 5 ♂, 3 ♀, 9800–11,000 feet, 29 July–14 August; 2 ♂, 1 ♀, 12,000 feet, 9–11 August, 1937.

This series is topotypical of *emiliae*; in the mountains of Sarawak it is replaced by *C. e. moultoni* Chasen and Kloss.

NECTARINIIDAE

AETHOPYGA MYSTACALIS TEMMINCKI (S. Müller)

2 ♂, 3100 feet, 19 and 25 August, 1937.

Not different from two males from Sumatra as far as I can see. Chasen has given his reasons for not recognizing *A. m. perretti* Harrison and Hartley, from Mt. Dulit.

CINNYRIS JUGULARIS MICROLEUCA Oberholser

3 ♂, 1 ♀, sea level, 4–6 September; 1 ♀, 3500 feet, 7 June, 1937.

I have insufficient topotypical material of the various named forms of this species to attempt to work out their characters and distribution, but rely on Chasen's arrangement whereby the birds inhabiting the Malay Peninsula, Sumatra, Borneo and the Natuna Islands are all referred to this race, the type locality of which is Taya Island, south-eastern Sumatra.

ANTHREPTES MALACENSIS BORNENSIS Riley

2 ♂, 1 ♀, sea level, 4 and 6 September; 1 ♂, 1 juv. ♀, 3100 feet, 26 August, 1937.

The identification of this small series is made largely on the grounds of probability; *bornensis* is a pretty thin form, and the fact that the males have not quite completed their post nuptial moult makes identification uncertain.

ARACHNOTHERA EVERETTI (Sharpe)

1 ♂, 3100 feet, 14 August, 1937.

Originally described from Mt. Kina Balu, the measurements given were wing 3.6", culm. 1.7" roughly equivalent to 95 and 45 mm.

respectively. Griswold's bird measures wing 95.5, culm. 40; a bird from Long Navang, Dutch Borneo taken by E. Mjöberg measures wing 90, culm. 39. Four skins from the lowlands of North Borneo (Morutai Besar and Sandakan) taken by H. Deignan have wings of 88 mm. and culmens 35, 36, 36.8, 38.2. Stresemann records a male with a wing of 87 mm. from Peleben near the junction of the Kajan and the Bahau.

PLOCEIDAE

LONCHURA ATRICAPILLA JAGORI Martens

1 ♂, 1 imm.? sea level, 4 September; 2 ♂, 3100 feet, 20 and 24 August; 1 ♀, 5500 feet, 10 July, 1937.

Bornean and Philippine examples of this species do not appear to be separable. Chasen and Kloss correctly refer to this form as *jagori*, but Mayr has recently called it *minuta*. The latter name is the older, but happens to be preoccupied.

In addition to the forms discussed in the body of this paper, Mr. Griswold collected the following species on Mt. Kina Balu, the list of which is appended for the sake of completeness.

- Chalcophaps indica indica* (Linné)
- Centropus bengalensis javanensis* (Dumont)
- Cypsiurus balasiensis infumatus* (P. L. Sclater)
- Buceros rhinoceros borneoensis* Schlegel and Müller
- Rhyticeros plicatus subruficollis* (Blyth)
- Harpactes whiteheadi* Sharpe
- Harpactes oreskios dulitensis* Ogilvie-Grant
- Pericrocotus flammeus xanthogaster* (Raffles)
- Pericrocotus montanus cinereigula* Sharpe
- Chlamydochera jefferyi* Sharpe
- Hemipus picatus picatus* (Sykes)
- Cissa chinensis minor* Cabanis
- Rhipidura albicollis albicollis* (Vieillot)
- Rhinomyias umbratilis umbratilis* (Strickland)
- Rhinomyias gularis* Sharpe
- Culicicapa ceylonensis ceylonensis* (Swainson)
- Stoporalia indigo cerviniventris* (Sharpe)
- Stoporalia thalassina thalassoides* (Cabanis)
- Microtarsus melanoleucus* Eyton
- Ixos flavala connectens* (Sharpe)

- Trachycomus zeylonicus* (Gmelin)
Pycnonotus goiavier gourdinii (Jacquinot and Pucheran)
Pycnonotus (Oreoctistes) leucops (Sharpe)
Pycnonotus (Otocompsa) flaviventris montis (Sharpe)
Garrulax palliatus schistochlamys Sharpe
Androphilus accentor Sharpe
Aethostoma pyrrhogenys canicapillum (Sharpe)
Stachyris nigriceps borneensis Sharpe
Enicurus leschenaulti borneensis Sharpe
Myiophonus borneensis P. L. Sclater
Turdus javanicus seebohmi (Sharpe)
Geokichla everetti Sharpe
Artamus leucoryn. leucoryn. (Linné)
Tesia whiteheadi (Sharpe)
Prinia flaviventris superciliaris Salvadori
Orthotomus sepium borneonensis Salvadori
Dicaeum sanguinolentum monticolum Sharpe
Dicaeum trigonostigma dayakanum Chasen and Kloss
Dicaeum concolor borneanum Lönnberg
Arachnothera longirostra büttikoferi van Oort
Lonchura fuscans (Cassin)
Oriolus cruentus vulneratus Sharpe
Dicrurus leucophaeus stigmatops (Sharpe)
Dicrurus hottentottus borneensis (Sharpe)

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