

to be building a second nest in a spot about fifty yards from the site of the first. Not caring to disturb them further we made no search for this second nest. Of its fate we know nothing definite, but there are good reasons for believing that the eggs were hatched and the young successfully reared.

A LIST OF BIRDS FROM NORTHEAST BORNEO, WITH FIELD NOTES BY MR. C. F. ADAMS.

BY D. G. ELLIOT.

(Concluded from Vol. VII, p. 359.)

FAMILY PICIDÆ.

50. *Xylolepes validus*.

Picus validus TEMM. Plan. Col. pls. 378, 402.

Megapicus validus MALH. Mon. Pic. I, p. 28, pl. 9, figs. 4-7 (1861).

Xylolepes validus CAB. & HEIN. Mus. Hein. IV, 2, p. 108 (1863). —SALV.

Ucc. Born. p. 44 (1874). —SHARPE, Ibis, 1890, p. 6.

[Sandakan. Iris reddish orange.—C. F. A.]

51. *Chrysophlegma mentalis*.

Picus mentalis TEMM. Plan. Col. pl. 384.

Chloropicus mentalis MALH. Mon. Pic. II, p. 112, pl. 75, figs. 4, 5 (1862).

Callolophus mentalis SALV. Ucc. Born. p. 49 (1874).

[Suanlamba River. Iris brown.—C. F. A.]

52. *Chrysophlegma malaccensis*.

Picus malaccensis LATH. Ind. Orn. I, p. 241 (1790).

Chrysonotus miniatus EYTON, Proc. Zool. Soc. 1839, p. 106.

Callolophus malaccensis SALV. Ucc. Born. p. 50 (1874).

Chrysophlegma malaccense SHARPE, Ibis, 1890, p. 7.

[Kinabatangan River. Iris red.—C. F. A.]

53. *Thriponax javensis*.

Picus javensis HORSF. Trans. Linn. Soc. XIII, p. 172 (1821).

Dryopicus leucogaster MALH. Mon. Pic. I, p. 47, pl. 13, figs. 4, 5.

Thriponax javensis CAB. & HEIN. Mus. Hein. IV, Picturæ, p. 105 (1863).

—SALV. Ucc. Born. p. 52 (1874).—SHARPE, Ibis, 1890, p. 8.

[Sandakan. Iris red. Taken in large trees, bordering a clearing.—C. F. A.]

54. *Meiglyptes tukki*.

Picus tukki LESS. Rev. Zool. 1839, p. 167.

Phæopicus pectoralis MALH. Mon. Pic. II, p. 8, pl. 47, figs. 5, 6 (1862).

Meiglyptes tukki SALV. Ucc. Born. p. 57 (1874).—SHARPE, Ibis, 1890, p. 9.

[Bahala Island. Iris brown. Runs over the rough-barked trees, apparently searching for insects.—C. F. A.]

55. *Micropternus badius*.

Picus badius TEMM. Mus. Leyd.—SUND. Consp. Av. Pic. p. 91 (1866).

Phæopicus badius MALH. Mon. Pic. II, p. 6 (1862).

Meiglyptes badius SCLAT. Proc. Zool. Soc. 1863, p. 210.

Micropternus badius SALV. Ucc. Born. p. 58 (1874).—SHARPE, Ibis, 1890, p. 9.

[Sapagaya River. Iris brown.—C. F. A.]

FAMILY MEGALAIMIDÆ.

56. *Xantholæma duvaucelii*.

Bucco duvaucelii LESS. Trait. Orn. p. 164 (1831).

Xantholæma duvaucelii SALV. Ucc. Born. p. 38 (1874).—SHARPE, Ibis, 1890, p. 5.

[Sandakan. Iris brown. Legs greenish.—C. F. A.]

57. *Calorhamphus fuliginosus*.

Micropogon fuliginosus TEMM. Plan. Col. Texte, Liv. 83.

Calorhamphus sanguinolentus LESS. Rev. Zool. 1839, p. 139.

Calorhamphus fuliginosus MARSII, Mon. Cap. pl. 71 (1870-71).—SALV. Ucc. Born. p. 39 (1874).—SHARPE, Ibis, 1890, p. 6.

[Sandakan. Iris brown. Legs salmon.—C. F. A.]

FAMILY BUCEROTIDÆ.

58. [*Buceros rhinoceros*.

Malay name, *Luke-läng*.

Male.—Base of horn and mandibles, cutting edges of latter, and a narrow longitudinal line on side of horn, curving upward with the upturned

part in front, black; top and sides of horn down to the black line and basal portion of the upper mandible in front of the black, bright carmine; lower sides and front of upturned horn, upper mandible in front of carmine, and lower mandible in front of black—fading off into white toward the tips—bright yellow, almost Indian yellow; bare skin around eye, black. Iris red.

Female.—The black at base of horn and the narrow longitudinal line of black wanting. The cutting edges of mandibles and bare skin around eye pinkish salmon. Iris white.

There seems to be an exudation of yellowish oil which colors the white feathers of the abdomen. In cases where this part of the plumage needed washing, on account of blood stains, the yellow color almost entirely disappeared.

No information of its nesting habits could be obtained from servants or guides. They are abundant in those regions along the rivers where fruit trees occur, and their peculiar, sonorous notes can be heard at a considerable distance. Although these birds were numerous and could easily be located by their calls, they were difficult to procure. So far as wariness is concerned, they can put a Crow to shame, and it is very seldom that one can be approached within gun-shot, the most successful way being to lie in wait for them under a fruit tree. Owing to their striking colors they are very conspicuous objects in the trees, a fact of which they seem to be aware.

Their flight consists of several rapid wing beats, followed by majestic sailing, during which they gradually rise to a greater elevation. The general color being jet black, they are clearly outlined against the sky, the horn reminding one of a figurehead, and as with firmly set wings and outstretched necks they sail high overhead, they recall the appearance of a full-rigged ship with all canvas set, probably though more on account of their sturdiness than grace. The sound produced by their wings during flight is astonishingly loud and often betrays their presence to a collector.

As showing the extreme pneumaticity of the bones of this species, it may be stated that in one case a No. 5 shot passed clear through the humerus without breaking it.—C. F. A.]

59. *Anthroceros convexus.*

Buceros convexus TEMM. Plan. Col. pl. 530. — SALV. Ucc. Born. p. 80 (1874).

Anthroceros convexus ELLIOT, Mon. Bucer. pl. xii.

[Kinabatangan River. Iris dark red; eyelids black; bare skin around eye purplish blue; that at angle of jaws bluish flesh-color.

Commonly of wider distribution than the other species of Hornbills taken, being found on some of the small islands in Sandakan Harbor and near the coast as well as in the up river regions.—C. F. A.]

60. *Anorrhinus galeritus.*

Buceros galeritus TEMM. Plan. Col. pl. 520.

Anorrhinus galeritus SALV. Ucc. Born. p. 79 (1874). — ELLIOT, Mon. Bucer. pl. 42.—SHARPE, Ibis, 1890, p. 16.

[Sandakan. Iris deep wine red. Eyelids black. Skin above and behind eyes, and over angle of jaw, fleshy white. Other parts dark blue. Usually found feeding in the same trees as the last species, but less noisy and more stealthy in its movements.—C. F. A.]

FAMILY ALCEDINIDÆ.

61. *Alcedo meninting*.

Alcedo meninting HORSF. Trans. Linn. Soc. XIII, p. 172 (1821).—SALV. Ucc. Born, p. 93 (1874).—SHARPE, Ibis, 1890, p. 18.

Alcedo asiatica SHARPE, Mon. Alced. pl. 5.

[Sandakan. Iris dark brown. Frequents small creeks which empty into the rivers or near river sources. It has the habit of sitting on some dead twig or snag a few feet above the surface of the water watching for its prey in true Kingfisher style.—C. F. A.]

62. *Halcyon coromanda*.

Alcedo coromanda LATH. Ind. Orn. I, p. 252 (1790).

Callialcyon coromanda SALV. Ucc. Born, p. 101 (1874).

Halcyon coromanda SHARPE, Mon. Alced. pl. 57; *id.* Ibis, 1890, p. 20.

[Sandakan. Iris brown. Bill and legs vermilion. The only specimens seen were taken along the hilly side of Sandakan Harbor.—C. F. A.]

63. *Halcyon pileata*.

Alcedo pileata BODD. Tab. Pl. Enl. p. 41 (1783).

Entomobia pileata SALV. Ucc. Born. p. 102 (1874).

Halcyon pileata SHARPE, Mon. Alced. pl. 62; *id.* Ibis, 1890, p. 20.

[Sapagaya River. Iris brown. Bill and legs red. Found along the larger streams, and, so far as observed, seems strictly piscivorous. Very wary, seldom allowing a boat to approach within gunshot.—C. F. A.]

64. *Halcyon concreta*.

Dacelo concreta TEMM. Plan. Col. pl. 346.

Caridagrus concretus SALV. Ucc. Born. p. 102 (1874).

Halcyon concreta SHARPE, Mon. Alced. pl. 83; *id.* Ibis, 1890, p. 21.

[Suanlamba River. Iris brown. Feet and legs yellow. The most common species of Kingfisher taken. Found in low, thickly wooded regions at considerable distances from streams.—C. F. A.]

65. *Nyctiornis amicta*.

Merops amictus TEMM. Plin. Col. pl. 310.

Nyctiornis amicta SALV. Ucc. Born. p. 91 (1874).—DRESSER, Mon. Mer. pls. 1, 2, p. 3 (1884-86).—SHARPE, Ibis, 1890, p. 18.

[Sandakan River. Iris golden yellow. Of general distribution but rather uncommon.—C. F. A.]

FAMILY CORACIDÆ.

66. *Eurystomus orientalis*.

Coracias orientalis LINN. Syst. Nat. I, p. 159 (1766).

Eurystomus orientalis SALV. Ucc. Born. p. 105 (1874). — SHARPE, Ibis 1890, p. 21.

[Sandakan. Iris brown; bill, legs, and feet light red. A conspicuous bird, often seen perched on the top of some large dead tree in a clearing, occasionally leaving its place to make a short excursion after insects.—C. F. A.]

FAMILY CUCULIDÆ.

67. *Rhopodytes erythrognathus*.

Phanicophæus erythrognathus HARTL. Verz. Mus. Brem. p. 95 (1844).

Rhamphococcyx erythrognathus SALV. Ucc. Born. p. 74 (1874).

Rhopodytes erythrognathus SHARPE, Proc. Zool. Soc. 1873, p. 604; *id.* Ibis, 1890, p. 12.

[Suanlamba River. Iris pale blue in the male, golden yellow in the female. Skin around eye light maroon. Maxilla and tip of mandible pale green.—C. F. A.]

68. *Rhinortha chlorophæa*.

Cuculus chlorophæus RAFF. Trans. Linn. Soc. XIII, p. 288 (1822).

Rhinortha chlorophæa SALV. Ucc. Born. p. 69 (1874).—SHARPE, Ibis, 1890 p. 13.

[Suanlamba River. Iris dark brown. Skin around eye emerald green, bill darker.—C. F. A.]

69. *Zanclostomus javanicus*.

Phanicophæus javanicus HORSE. Trans. Linn. Soc. XIII, p. 178 (1822).

Zanclostomus javanicus SALV. Ucc. Born. p. 75 (1874). — SHARPE Ibis, 1890, p. 13.

[Kinabatangan River. Iris red. Shot in coarse grass or rushes growing in swampy places.—C. F. A.]

ORDER PSITTACI.

FAMILY PSITTACIDÆ.

70. *Palæornis longicauda*.

Psittacus longicauda BODD. Tabl. Pl. Enl. 887 (1783).

Palæornis longicauda G. R. GRAY, Gen. Bds. II, p. 410 (1846). — SALV. Ucc. Born. p. 22 (1874).—SHARPE, Ibis, 1877, p. 9; *ib.* 1890, p. 1.

[Sandakan River. The only specimens seen were in an old clearing where they alighted on the tops of some high trees left standing. Occasionally several would start off together, flying very swiftly as they circled about, keeping up a continual chatter, and then re-alight.—C. F. A.]

71. *Loriculus galgulus*.

Psittacus galgulus LINN. Syst. Nat. I, 150 (1766).

Coryllis galgulus FINSCH, Die Papag. II, p. 699 (1868).

Loriculus galgulus SALV. Ucc. Born. p. 26 (1874). — SHARPE, Ibis, 1890, p. 1.

[Sandakan River. Iris brown. Apparently not common.—C. F. A.]

ORDER ACCIPITRES.

FAMILY STRIGIDÆ.

72. *Ketupa ketupa*.

Strix ketupa HORSF. Trans. Linn. Soc. XIII, p. 141 (1821).

Ketupa javanensis LESS. Trait. Ornith. p. 114 (1831).—SALV. Ucc. Born. p. 20 (1874).—SHARPE, Cat. B. p. 8 (1875).

Strix ceylonensis LATH. (*nec* GMEL.) Ind. Orn. I, p. 52, sp. 3 (1790). — TEMM. Plan. Col. pl. 74.

[Suanlamba River. Iris yellow. Malay name, *Boor'-ung han'-tu*. The Malays of the country are quite timid if, while out at night, the notes of this Owl are heard, as they think the spirits of the departed manifest their presence through the agency of these birds.—C. F. A.]

73. *Syrnium myrtha*.

Ciccaba myrtha BON. Consp. Av. I, 44.—SALV. Ucc. Born. p. 21 (1874).

Myrtha sumatrana BON. Rev. Mag. Zool. 1854, p. 541.

Syrnium myrtha SHARPE, Cat. B. p. 264 (1875).

A single specimen of *Syrnium* I refer to *S. myrtha* described by Bonaparte (*l. c.*), as it seems considerably larger than *S. leptogrammicum*, and differs in having the breast dark chestnut brown barred with black, and the entire under parts white barred narrowly with black, agreeing in these respects with Bonaparte's description. Total length about 17 in.; wing, 12½; tail, 7½.

[Sapagaya River. Iris brown. Only one specimen was seen, which was taken near a path cut through a dense jungle.—C. F. A.]

FAMILY FALCONIDÆ.

74. *Spilornis pallidus*.

Spilornis pallidus WALL, Ibis, 1872, p. 363. — SHARPE, Cat. B. I, p. 290 (1874).

Very closely resembling *S. bacha* Daud., but apparently a smaller bird.

[Iris, lores, and legs yellow. Found sitting on stumps in old clearings, usually with the crest erect.—C. F. A.]

75. *Butastur indicus*.

Falco indicus GMEL. Syst. Nat. Suppl. p. 32 (1787).

Falco poliogenys TEMM. Plan. Col. pl. 325.

Butastur indicus SHARPE, Cat. B. I, p. 297 (1874); *id.* Ibis, 1889, p. 72.

[Sandakan. Iris light brown. Legs yellow. Common in open places.—C. F. A.]

ORDER COLUMBÆ.

FAMILY TRERONIDÆ.

76. *Treron nasica*.

Columba curvirostra GMEL. Syst. Nat. I, p. 777 (1788).

Treron nasica SCHLEG. Tidgsch. Dierk. I, p. 67 (1863).—SALV. Ucc. Born. p. 283 (1874).

[Sandakan. Iris dark green. Skin around eyes and bill, green. Lores and feet carmine. Found in small flocks, feeding on berries, etc.—C. F. A.]

77. *Treron olax*.

Columba olax TEMM. Plan. Col. pl. 241.

Treron olax SALV. Ucc. Born. p. 289 (1874).

[Suanlamba River. Iris pale yellow. Similar in habits to *T. nasica*, preferring open places where fruit-bearing bushes grow.—C. F. A.]

78. *Ptilopus jambu*.

Columba jambu GMEL. Syst. Nat. I, p. 784 (1788).

Ptilopus jambu SALV. Ucc. BORN. p. 289 (1874).—ELLIOT, Proc. Zool. Soc. 1878, p. 554.—SHARPE, Ibis, 1889, p. 134.

[Suanlamba River. Iris golden yellow. Usually found on the ground in dense jungle. When startled it rises with a strong noisy flight, perhaps to stop an instant on a low branch, take a hurried look at the intruder, and then disappear. It seems to feed on fallen fruit knocked off by monkeys, Hornbills, etc.—C. F. A.]

79. *Carpophaga ænea*.

Columba ænea LINN. Syst. Nat. I, p. 283 (1766).

Carpophaga ænea SALV. Ucc. BORN. p. 290 (1874).—SHARPE, Ibis, 1890 p. 134.

[Kinabatangan River. Iris and legs carmine. This fine Pigeon is very common and of general distribution. It may usually be found feeding in the same trees with the Hornbills, and what with the noise of their wings as the members of a large flock fly from branch to branch and the constant rain of the fruit which is knocked off, they can be heard at a considerable distance. Sometimes while feeding, a monkey will go dashing toward them, causing them to rise with a whirl, but after circling about a few times they re-alight in a safe place. As monkeys are numerous in Borneo, and many of them actually feed in the same trees with the Pigeons, it seems, considering the abundance of the latter, that in this locality at least monkeys do not seriously interfere with them.—C. F. A.]

ORDER GALLINÆ.

FAMILY PHASIANIDÆ.

80. [*Argus grayi*].

Malay name, *Chow-h-o-i*. Of pretty general distribution, seeming to prefer the hilly, broken regions. Although this bird may frequently be heard, it is very difficult to procure, either by means of the gun or in snares which as a rule are very effective in taking other gallinaceous birds and small mammals found in the same regions. The Malay name somewhat resembles its notes, when the second syllable is strongly accented and prolonged. The tone of its voice is much like that of our domestic peacock.—C. F. A.]

81. **Euplocomus ignitus.**

Euplocomus ignitus LATH. Ind. Ornith. p. lxi (1801). — ELLIOT, Ibis, 1878, p. 411.

Euplocomus nobilis SCLAT. Proc. Zool. Soc. 1863, p. 119, pl. xvi.—ELLIOT, Mon. Phas. pl. xxvii (1872).—SALV. Ucc. Born. p. 306 (1874).

[Kinabatangan River. Iris red. Bare skin of head purplish blue. Malay name, *Eidm-u-tan*. Common in up-river regions. The specimens taken were caught in snares, as used by the Malays of the country.—C. F. A.]

FAMILY PERDICIDÆ.

82. **Arboriphila charltoni.**

Perdix charltoni BLYTH, Ann. Mag. Nat. Hist. XVI, p. 230 (1845).

Arboricola charltoni HUME & MARSH, Game B. Ind. II, p. 93 (1879).

Arboriphila charltoni SHARPE, Ibis, 1890, p. 140.

[Sapagaya River. Iris brown. Legs yellowish olive. A quiet bird, inhabiting the river districts. Not shy, so that the collector does not need to resort to the snare in order to obtain specimens, as opportunities for shooting are rather common. Most of the specimens procured, however, were taken from snares set for other species.—C. F. A.]

83. [**Rolulus roulroul.**

Iris brown; eyelids and legs carmine. This beautiful species seems to prefer the level districts near the rivers, where its pleasing, powerful, liquid whistle may be heard from morning until night. Being less shy than the Pheasants, it is not unfrequently seen in small flocks running through the underbrush. When frightened, the males elevate the crest and carry their bodies nearly erect, as they make their short runs, suddenly coming to a standstill with a jerk, after the fashion of our Quails.—C. F. A.]

ORDER LIMICOLÆ.

FAMILY CHARADRIIDÆ.

84. **Eudromias veredus.**

Cursorius isabellinus HORSF. (*nec* TEMM.) Trans. Linn. Soc. XIII, p. 137 (1821).

Charadrius veredus GOULD, Proc. Zool. Soc. 1848, p. 38.

Charadrius xanthochilus BLYTH, Ibis, 1865, p. 34.

Eudromias veredus WALD. Trans. Zool. Soc. VIII, p. 88 (1872).—SALV. Ucc. Born. p. 315 (1874).

[Bahala Island. Iris brown.—C. F. A.]

85. *Ægialitis peronii*.

Charadrius peronii (TEMM.) BON. Compt. Rend. XLIII, p. 417, sp. 68 (1856).

Ægialitis peronii WALD. Trans. Zool. Soc. VIII, p. 90, pl. 10, fig. 2. (1872).—SALV. Ucc. Born. p. 315 (1874).—SHARPE, Ibis, 1890, p. 142.

[Bahala Island. Iris brown.—C. F. A.]

86. [*Actitis hypoleucus*.

Bahala Island. Iris brown. Not uncommon.—C. F. A.]

ORDER ALECTORIDES.

FAMILY RALLIDÆ.

87. *Rallina fasciata*.

Rallus fasciata RAFF. Trans. Linn. Soc. XIII, p. 328 (1822).

Gallinula euryzona TEMM. Plan. Col. p. 417.

Rallina fasciata G. R. GRAY, Gen. B. p. 120 (1855).—SALV. Ucc. Born. p. 337 (1874).—SHARPE, Ibis, 1890, p. 145.

[Sapagaya River. Iris and eyelids red; legs reddish. Only one specimen taken, which was shot in a dense second growth in the swampy part of an old clearing.—C. F. A.]

NOTE.—Mr. F. A. Lucas of Washington informs me that he has received from Mr. Adams two skeletons of *Cypselus subfurcatus*. The locality in Borneo whence they came is not given. This information was received too late to enable me to insert the species in its proper place.—D. G. E.