78. Coccystes cafer.

Coccystes cafer (Licht.); Sharpe, Hand-l. B. ii. p. 156 (1900).

Coccystes afer (Leach); Hartert, Nov. Zool. vii. p. 31.

No. 643. 3 ad. Lake Baringo, March 1901.

79. Centropus superciliosus.

Centropus superciliosus Hempr. & Ehr.; Hartert, App. Afr. Sun, p. 334; Sharpe, Hand-l. B. ii. p. 168 (1900); Neum. J. f. O. 1900, p. 191; Hartert, Nov. Zool. vii. p. 32.

No. 1. 2 ad. Lake Naivasha, 6300 feet, Oct. 10. Iris carmine.

80. Lybius ÆQUATORIALIS.

Lybius æquatorialis (Shelley); Sharpe, Hand-l. B. ii. p. 178 (1900).

Melanobucco æquatorialis Neum. J. f. O. 1900, p. 196.

Melanobucco bidentatus æquatorialis Hartert, Nov. Zool. vii. p. 32.

No. 284. 2 ad. Mt. Ruwenzori, 5600 feet, Sept. 1900. Iris light hazel.

81. TRICHOLÆMA DIADEMATUM.

Tricholæma diadematum (Heugl.); Sharpe, Hand-l. B. ii. p. 180 (1900).

No. 27. 3 ad. Ravine, 7600 feet, Nov. 6, 1899.

82. Trachyphonus Boehmi.

Trachyphonus böhmi Fischer & Reichenow; Hartert, App. Afr. Sun, p. 335; Sharpe, Hand-l. B. ii. p. 186 (1900); Neum. J. f. O. 1900, p. 199.

Nos. 649, 650. 3 2 ad. Lake Baringo, March 1901.

83. Mesopicus spodocephalus.

Mesopicus spodocephalus (Bp.); Sharpe, Hand-l. B. ii. p. 223 (1900).

No. 655. Imm. Lake Baringo, March 1901.

84. Dendropicus hemprichi.

Dendropicus hemprichi (Hempr. & Ehr.); Sharpe, Hand-l. B. ii. p. 218 (1900).

a. 9 ad. Lake Baringo, 4000 feet, Dec. 21, 1899.

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85. TERPSIPHONE CRISTATA.

Terpsiphone cristata (Gm.); Neum. J. f. O. 1900, p. 227; Sharpe, Hand-l. B. iii. p. 264 (1901).

No. 26. 3 imm. Ravine, 7600 feet, Nov. 4, 1899. pale yellow.

86. EURILLAS EUGENIUS.

Eurillas eugenius (Reichenow); Sharpe, Hand-l. B. iii. p. 325 (1901).

Andropadus eugenius Hartert, App. Afr. Sun, p. 349; id. Nov. Zool. vii. p. 47.

Andropadus latirostris eugenius, Neum. J. f. O. 1900, p. 292.

No. 287. d ad. Mpanga Forest, Sept. 22, 1900. hazel.

87. CRATEROPUS SHARPII.

Crateropus sharpei Reichen.; Neum. J. f. O. 1900, p. 302; Jackson, Ibis, 1901, p. 79.

No. 261. 3 ad. West Ankole, July 1900.

88. Turdus Bocagii.

Turdus bocagei (Cab.); Sharpe, in Seebohm's Monogr. Turdidæ, i. p. 331 (1899); Hartert, App. Afr. Sun, p. 354; Neum. J. f. O. 1900, p. 311.

No. 277. Ad. North Ankole, 3500 feet, Aug. 1900.

89. Turdus elgonensis. = mer. johnstoni sharpe, (265, 1906).

Sharpe, Ibis, 1891, p. 445, 1892, p. 160. Turdus elgonensis Sharpe, in Seebohm's Monogr. Turdidæ, i. p. 311, pl. lxxii. (1899); Neum. J. f. O. 1900, p. 311; Jackson, Ibis, 1901, p. 74.

Nos. 105, 106. 3 9. N'tebi, 3800 feet, April 22, 1900. Iris hazel.

90. Cossypha Heuglini.

Cossypha heuglini Hartl.; Hartert, Nov. Zool. vii. p. 52; Jackson, Ibis, 1901, p. 72.

No. 289. & ad. Western Uganda, Sept. 1900.

No. 645. 3 ad. Lake Baringo, March 1901.

## 91. Pogonocichla intensa.

Pogonocichla intensa Sharpe, Bull. Brit. Orn. Club, xi. p. 67 (1901).

No. 100. 3 ad. N'tebi, 3800 feet, April 22, 1900.

The bird from N'tebi differs conspicuously from the other species of *Pogonocichla* in being deep orange-yellow on the rump, tail-feathers, and under surface of the body. The head and throat are of a darker slaty blue than in *P. orientalis*, its nearest ally, and the back is a dark olive-brown, instead of being yellowish green.

### 92. LANIUS EXCUBITORIUS.

Lanius excubitorius (Prév. et Des Murs); Sharpe, Ibis, 1892, p. 597; Hartert, App. Afr. Sun, p. 340; Neum. J. f. O. 1900, p. 263; Hartert, Nov. Zool. vii. p. 38; Jackson, Ibis, 1901, p. 33.

Nos. 268, 279. 3 9 ad. North Ankole, 3500 feet, Aug. 1900.

### 93. Lanius humeralis.

Lanius humeralis Stanl.; Sharpe, Ibis, 1892, p. 597; Jackson, Ibis, 1901, p. 34.

Lanius collaris humeralis Hartert, App. Afr. Sun, p. 340; Neum. J. f. O. 1900, p. 264; Hartert, Nov. Zool. vii. p. 138. No. 24. ? ad. Ravine, 7600 feet, Oct. 28, 1899.

#### 94. CINNYRIS CYANESCENS.

Cinnyris cyanescens Reichen. Orn. MB. vii. p. 171 (1899); Sharpe, Ibis, 1900, p. 496.

No. 12. & ad. Ravine, 7600 feet, Nov. 2, 1899. Iris black.

This specimen seems to be of the same race as one from Ukambani in Mr. Jackson's collection, which I determined as C. cyanescens (Ibis, 1900, p. 496). I must again say that I think it will be difficult to distinguish this species from C. niassæ.

#### 95. CINNYRIS FALKENSTEINI.

Cinnyris falkensteini Fischer & Reichen.; Sharpe, Ibis, 1900, p. 496; Jackson, Ibis, 1899, p. 634; Hartert, App. Afr.

Sun, p. 350; Shelley, B. Africa, ii. pt. 1, p. 66, pl. iii. fig. 1 (1900); Neum. J. f. O. 1900, p. 299; Sharpe, Ibis, 1900, p. 496.

No. 264. & ad. Western Ankole, July 1900.

96. Drepanorhynchus reichenowi.

Drepanorhynchus reichenowi Fischer; Sharpe, Ibis, 1891, p. 590; Jackson, Ibis, 1899, p. 630; Neum. J. f. O. 1900, p. 301.

Nectarinia reichenowi Shelley, B. Africa, ii. pt. 1, p. 29 (1900).

No. 109. 3 ad. N'tebi, 3800 feet, April 1, 1900. Iris black.

## 97. NECTARINIA KILIMENSIS.

Nectarinia kilimensis Shelley; Sharpe, Ibis, 1891, p. 591; Jackson, Ibis, 1899, p. 631; Hartert, App. Afr. Sun, p. 351; Shelley, B. Africa, ii. pt. 1, p. 28, pl. i. fig. 1 (1900); Hartert, Nov. Zool. vii. p. 49; Neum. J. f. O. 1900, p. 300.

Nos. 10, 24. 3 ad. Ravine, 7600 feet, Nov. 2, 3, 1899.

98. CINNYRIS KIRKI.

Cinnyris kirki Shelley; Sharpe, Ibis, 1891, p. 592; Jackson, Ibis, 1899, p. 632.

Chalcomitra kirki Shelley, B. Africa, ii. pt. 1, p. 107 (1900).

Chalcomitra kirki kalckreuthi Neum. J. f. O. 1900, p. 296.

No. 14. & juv. Ravine, 7600 feet, Nov. 2, 1899.

No. 25. 3 ad. Ravine, 7600 feet, Nov. 3, 1899.

# 99. CINNYRIS DOGGETTI, sp. n.

Similis C. kirki, sed plaga metallica frontali aureo-viridi et gutture diverse colorato, chalybeo nec purpurascenticupreo distinguenda. Long. tot. 5·3 poll., culm. 1·0, alæ 2·7, caudæ 1·95, tarsi 0·65.

Nos. 19, 20. 3 ad. Ravine, 7600, Nov. 2, 1899. Iris black.

It will be noticed that these two specimens were procured at the Ravine at the same height (7600 feet) on the 2nd of November, the day before an example of the true C. kirki was obtained. There is nothing about the plumage of these

specimens, which are in excellent feather, to suggest that the differences in the metallic colour of the forehead and throat have been produced by damp or by any artificial means, and consequently I am constrained to consider them distinct, strange though the circumstances of their capture may be.

I have named the species after Mr. W. G. Doggett, who acted as Sir Harry Johnston's taxidermist, and is now the Naturalist to the Government of the Uganda Protectorate.

100. CINNYRIS GUTTURALIS.

Cinnyris gutturalis inæstimata Hartert, App. Afr. Sun, p. 351 (1899); id. Nov. Zool. vii. p. 51.

Chalcomitra gutturalis Shelley, B. Africa, ii. pt. 1, p. 93 (1900).

Chalcomitra gutturalis inæstimata Neum. J. f. O. 1900, p. 296.

No. 11. & ad. Ravine, 7600 feet, Nov. 2, 1899.

This specimen belongs to the northern form which Mr. Hartert has called *C. inæstimata*, but which Captain Shelley does not consider worthy of separation from *C. gutturalis*.

## 101. CINNYRIS CUPREA.

Cinnyris cuprea (Shaw); Sharpe, Ibis, 1891, p. 593; Hartert, App. Afr. Sun, p. 350; Jackson, Ibis, 1899, p. 633; Neum. J. f. O. 1900, p. 299; Hartert, Nov. Zool. vii. p. 50; Shelley, B. Africa, ii. pt. 1, p. 36 (1900).

No. 265. & ad. Western Ankole, July 1900.

## 102. MACRONYX CROCEUS.

Macronyx croceus (V.); Sharpe, Ibis, 1891, p. 589; Jackson, Ibis, 1899, p. 629; Hartert, App. Afr. Sun, p. 348; Neum. J. f. O. 1900, p. 290.

No. 15. & ad. Ravine, 7600 feet, Nov. 4, 1899.

## 103. SERINUS ALBIFRONS.

Serinus albifrons (Sharpe); Jackson, Ibis, 1899, p. 621; Neum. J. f. O. 1900, p. 289; Hartert, Nov. Zool. vii. p. 43. Crithagra kilimensis Richmond, Auk, xiv. p. 155 (1897). No. 23. 2 ad. Ravine, 7600 feet, Nov. 6, 1899. Iris light hazel.

Mr. Richmond has kindly sent to me for examination his type of S. kilimensis, which turns out to be the same as my S. albifrons, as already suggested (Ibis, 1899, p. 622).

104. PENTHETRIA LATICAUDA.

Penthetria laticauda (Licht.); Sharpe, Ibis, 1891, p. 245; Jackson, Ibis, 1899, p. 598.

Coliuspasser laticauda Neum. J. f. O. 1900, p. 286.

a. Ad. Nandi, 5000 feet, April 1901.

105. DREPANOPLECTES JACKSONI.

Drepanoplectes jacksoni Sharpe, Ibis, 1891, p. 247, pl. v.; Jackson, Ibis, 1899, p. 599; Hartert, Nov. Zool. vii. p. 41. No. 641. 3 ad. Lake Baringo, March 1901.

106. Urobrachya media, sp. n.

Similis *U. traversi* et plaga humerali aurantiaca insignis, sed supercilio castaneo et gastræo toto castaneo lavato distinguenda. Long. tot. 6.2 poll., culm. 0.7, alæ 3.3, caudæ 2.2, tarsi 0.95.

Nos. 263, 263. 3 imm. West Ankole, 3200 feet, July 1900. Iris light hazel.

The two specimens procured by Sir Harry Johnston, although not in full plumage, are very much darker than any examples of *U. phænicea* or *U. traversi* of a similar age in the collections of the British Museum or of Mr. F. J. Jackson. The rufous portion of the wing-coverts is more chestnut than cinnamon, while the eyebrows, sides of face, and neck, as well as the under surface of the body, are also pervaded with chestnut, giving the Ankole birds a much darker appearance.

107. Pyromelana xanthomelana.

Pyromelana xanthomelana (Rüpp.); Sharpe, Ibis, 1891, p. 248; Jackson, Ibis, 1899, p. 601.

Orynx xanthomelas Neum. J. f. O. 1900, p. 285.

Nos. 16, 28. 3 9 ad. Ravine, 7600 feet, Nov. 6, 1899. Iris black.

108. Pyromelana franciscana.

Pyromelana franciscana (Isert); Sharpe, Ibis, 1892, p. 248; Jackson, Ibis, 1899, p. 601.

Pyromelana franciscana pusilla Hartert, Bull. B. O. C. xi. p. 71.

a. 3 ad. Ravine, 7600 feet.

I am unable to appreciate the differences in size on which my friend Mr. Hartert proposes to separate a race as P.f. pusilla. The specimen in Sir Harry Johnston's collection, as well as those presented by Lord Delamere and Emin Pasha, agree in measurements with others from Nigeria and the Gold Coast, and I am afraid that Pyromelana pusilla will not stand, even as a subspecies.

109. Pyromelana flammiceps.

Pyromelana flammiceps (Swains.); Sharpe, Ibis, 1891, p. 247; Jackson, Ibis, 1899, p. 601; Hartert, Afr. Sun, p. 344; Neum. J. f. O. 1900, p. 285.

a, b. 3 ad. Nandi, 5000 feet, April 1901.

110. HETERHYPHANTES REICHENOWI.

Heterhyphantes reichenowi (Fischer); Sharpe, Ibis, 1891, p. 252; Jackson, Ibis, 1899, p. 610.

Otyphantes reichenowi Neum. J. f. O. 1900, p. 282.

No. 13. 3 ad. Ravine, 7600 feet, Nov. 3, 1899. Iris black.

111. HYPHANTORNIS ABYSSINICUS.

Hyphantornis abyssinicus (Gm.); Sharpe, Ibis, 1891, p. 253; Jackson, Ibis, 1899, p. 616; Hartert, Nov. Zool. vii. p. 40.

No. 29. & imm. Ravine, 7600 feet, Nov. 7, 1899. Iris black.

112. MALIMBUS RUBRICOLLIS.

Malimbus rubricollis (Swains.); Jackson, Ibis, 1899, p. 617. Nos. 465, 466. ♂ ♀ ad. N'tebi, 3700–3800 feet, Dec. 1900. Iris hazel.

113. PLOCEIPASSER MELANORHYNCHUS.

Ploceipasser melanorhynchus Rüpp.; Sharpe, Ibis, 1891,

p. 250; Jackson, Ibis, 1899, p. 602; Hartert, Nov. Zool. vii. p. 41; Neum. J. f. O. 1900, p. 283.

No. 657. 3 ad. Lake Baringo, March 1901.

114. ORIOLUS ROLETI.

Oriolus larvatus Sharpe (nec Licht.), Ibis, 1891, p. 243.

Oriolus rolleti Salvad; Jackson, Ibis, 1899, p. 595; Hartert, Afr. Sun, p. 341.

No. 291. 2 ad. North Ankole, August 1900. Iris pale vellow.

a. Ad. Nandi Forests, April 1901. Feet pale blue; iris hazel.

115. AMYDRUS WALLERI.

Amydrus walleri Shelley, Ibis, 1880, p. 335, pl. viii.; Sharpe, Cat. B. Brit. Mus. xiii. p. 164 (1890); Neum. J. f. O. 1900, p. 281.

Amydrus elgonensis Sharpe, Ibis, 1891, p. 242; Jackson, Ibis, 1899, p. 591.

Amydrus nyasæ Shelley, Ibis, 1898, pp. 554, 557.

a, b. 3 ? ad. Mount Elgon, 7000 feet. Iris yellow.

The two specimens procured by Sir Harry Johnston are slightly larger than the type of A. elgonensis, having their wings 4.9 inches as against 4.65 in the type, which is a female. On re-comparing the whole series of these Amydri in the Museum I have come to the conclusion that A. elgonensis and A. nyasæ must be united under the heading of A. walleri. The length of bill, wing, and tail varies considerably, and I believe that not much importance can be attached to these characters.

116. STILBOPSAR STUHLMANNI.

Stilbopsar stuhlmanni Reichen. Orn. MB. i. p. 31 (1893); Shelley, B. Africa, i. p. 45 (1896).

Pæoptera greyi Jackson, Bull. Brit. Orn. Club, viii. p. 50 (1899); id. Ibis, 1899, p. 592.

a. ? ad. Mount Elgon, 7000 feet.

During my recent visit to Berlin I examined the type of Stilbopsar stuhlmanni, which is certainly the same as Pæoptera greyi Jackson and must stand under the former name.

Stilbopsar kenricki still seems to me to be distinct (cf. Sharpe, Ibis, 1899, p. 593).

117. SPREO SUPERBUS.

Spreo superbus (Rüpp.); Sharpe, Cat. B. Brit. Mus. xiii. p. 189 (1890); Jackson, Ibis, 1899, p. 595; Hartert, App. Afr. Sun, p. 342; Neum. J. f. O. 1900, p. 280.

Nos. 646, 647 &, 648 \( \). Lake Baringo, March 1901.

118. LAMPROTORNIS BREVICAUDA.

Lamprotornis brevicauda Sharpe; Jackson, Ibis, 1899, p. 591; Neum. J. f. O. 1900, p. 281.

No. 644. &. Lake Baringo, March.

119. HETEROCORAX CAPENSIS.

Heterocorax capensis (Licht.); Sharpe, Ibis, 1891, p. 239; Jackson, Ibis, 1899, p. 587.

Nos. 635, 636. 3 2 ad. Lake Baringo, March 22, 1901.

# VIII.—On a Collection of Birds from Western Australia. By Robert Hall.

The collection which is the subject of these notes was formed by the writer between Albany and the Houtman's Abrolhos between Sept. 23rd and Nov. 8th, 1899. In it the species represented number 69, the specimens 156. They are from three types of country—the heavily timbered southwest corner of the district, the flat region beyond, and the Houtman's Abrolhos. Although I did not travel on the southeast of the Stirling Range, I secured a collection of eggs of the birds resident in those parts which indicate the boundary between the moist mountain-district and the lightly timbered sandy lands to the eastward.

The places of special interest to me were the country between Albany and Denmark, some 40 miles west of the former; Katanning, 100 miles north of the same; Geraldton, 300 miles above Perth; and the Houtman's Abrolhos, some 40 miles off Geraldton. In Denmark I did not meet with sufficient success to compensate me for some three days

spent in that vast area, the timber of which seemed to me too heavy for any other purpose with regard to bird-life than to hide its representatives. I was slightly more fortunate at Tor Bay, which is midway between Albany and Denmark, and less heavily wooded. It being more or less rainy in that district for eight months of the year, the birds partial to a damp atmosphere congregate there. After leaving Albany for Katanning, the wet country changes at Mt. Barker, some fifty miles from the coast, and the Acacia known as the "Raspberry-jam Tree" becomes the prevailing timber. Katanning is the centre of a flat area bearing the "jam" tree, and possessing an occasional supply of water. This is just suited to the Yellow-throated Minah (Manorhina flavigula). Some eighteen miles west of Katanning is a creek that attracts a certain number of species throughout the year, and to the east of it is a shallow lake that furnishes a variety of bird-life at certain seasons. Near Perth a naturalist can profitably spend some time, and an outing of three or four miles will take him to something worth seeing. Even in the picturesque suburb of South Perth Banksias are still to be met with and Honey-eaters are numerous. Within a mile of the Zoological Garden a Haliastur sphenurus had, I found, built its nest. Geraldton, where I spent a week, is the south-western sea-port of the arid country, and one need only walk along the deep dry bed of a river to find that birdlife is there associated with hot air. The Meliphagidæ are abundant, while the flora is, as elsewhere, magnificent in spring.

The Abrolhos are coral-islands which sea-birds haunt in abundance. A cruise through them will ensure success to the explorer. As these notes will so often refer to specimens collected on the Houtman's Albrohos, I will give (see Appendix), along with some nesting-data, a list of the birds found there. Two such have been previously published—one, in 1890, by Mr. A. J. Campbell, and a second, in 1898, by Mr. R. Helms \*. The latter list included all the species given in the former with two additions (Anthus australis and

<sup>\* &#</sup>x27;Producer's Gazette of Western Australia,' v. p. 6.

Limosa uropygialis), making a total of thirty-nine in all. To this list I can now add nine species—four (Cinclorhamphus rufescens, Halcyon sanctus, Petræca goodenovii, and Phaps elegans) of which I myself collected specimens; three (Heteractitis brevipes, Glottis nebularius, and Squatarola helvetica) which were obtained through the Director of the Perth Museum; and two more (Chenopis atrata and Eudyptula minor) guaranteed by other authorities. This makes a total of forty-eight species now known from these islands.

I did not meet with the Pipit previously mentioned, but, on the other hand, a Lark (Cinclorhamphus rufescens) is now recorded, I believe for the first time, for these islands. It is, moreover, of interest from a geographical point to know that Heteractitis brevipes is found in Western Australia. Both Chenopis and Eudyptula are rare visitors to the islands.

The numerals given in the list correspond with those used in the 'Key to the Birds of Australia,' and additional nesting-data are supplied from the author's own observations as well as from original information supplied by Mr. O. Lipfert, an Assistant in the Perth Museum, and obtained during a tour to the Abrolhos in 1894.

My thanks are due to the Hon. George Throssell, late Minister of Lands (now Premier) for full permission to collect specimens in the State, to Messrs. Broadhurst, McNeil & Co. for placing a cutter-yacht at my service at the Abrolhos, and to Mr. Justice Pennefather for making special travelling arrangements for me.

1. Accipiter cirrhocephalus. Sparrow-Hawk. (Hall's Key, p. 4.)

One ad. 3 and one ad. 4 were obtained. 18.10.99. Geraldton.

I find that the male of this species takes a share in the incubation of the eggs. I note, however, that the tail-feathers of the hen are much more worn. Neither of the parents were timid as we approached along the dry bed of the deep-banked river-course and ascended a tall acacia to see into the nest some twenty-five feet above the sand below.

It was built of dead twigs of the above tree, but was lined with green leaves of the Eucalypt near it. For comparison, the dimensions were: breadth 16 inches, internal diameter 7 inches, depth of bowl about 1.5 inches, depth of the whole solid tapering mass 5 inches; ledges of nest narrow. There were two fresh eggs. 13.10.90. Geraldton.

- 2. PANDION LEUCOCEPHALUS. Osprey. (Hall's Key, p. 5.)
- A. Nestling. Pelsart Group, Houtman's Abrolhos. 17.10.99.
- B. Nestling. Easter Group, Houtman's Abrolhos. 22.10.99.

No descriptions have been published, to the best of my knowledge, of the nestling of this species, and that given for *P. haliaëtus* in the British Museum Catalogue does not agree with either of these specimens. In stage A the outer toe was not reversible, giving the bird the appearance of three toes in front and one behind. In B the outer toe was reversible.

A. Nestling (about 7 days old).—Downy, save for imperfect feathers upon the head, neck, lower fore-neck, both sides of the median line of the mantle, tail, inner edge of each wing, and region above the humerus. Except as regards the head and hind-neck these are feeble. The feathers of this stage would be replaced by quite another series before the young left the nest. The plumage upon the head and hind-neck is rufous buff, and upon the cheeks light rufous buff; between the crown and cheeks, immediately behind the eyes, is a conspicuous broad oblong line of black; the chin, throat, and the greater part of the lower fore-neck are sooty brown, with rufous feathers appearing below the chin; the chest is sooty brown, between which and the throat is a broad zigzag line of black feathers that are just bursting, among which are a few of a like nature that are rufous; the breast is ruddy greyish white; the abdomen sooty brown, with a circular featherless area half an inch in diameter; while parts of the flanks are greyish white. The dorsal surface is

sooty brown, medially divided by a line of whitish down (spinal tract down) from below the upper neck to the tail; the upper leg is sooty brown, regularly spotted with white; the tarsus and toes are covered with a soft yellow skin composed of reticulated hexagonal scales; the bill is horn-black, the lower mandible is tipped with yellow; the nails are black; the iris is hazel. Length 12 inches.

B. Nestling (strongly feathered; about to leave nest).— Feathers of the head and neck all round light rufous, more so on the lower than on the upper part, each feather streaked. along the middle with black and bounded laterally with white; the rufous is conspicuous on the lower fore-neck and less so on the nape, which is streaked; chin and throat whitish, tinged only with rufous and narrowly marked down each centre with brownish black; behind the eve a line of black feathers; no broad line of white running down the side of the neck; a broad band of light brown down upon the chest, with only two or three feathers; breast, abdomen, and under tail-coverts white, slightly tinged in the median part with light yellowish buff; interscapulium and back deep brown, each feather broadly edged with buff; outer wing-quills black, tipped with pale rufous; inner quills chocolate-brown, edged with pale rufous like the majority of the upper tail-coverts, which are chocolate-brown broadly edged with buff; under tail-coverts deep brown edged with rufous buff; tail-feathers, only partially "burst," blackish brown and ashy brown alternately barring the tail, tips pale rufous; legs partly clothed with down and white feathers; tarsus and foot with loose tawny skin in a complete Total length 22.5 inches, fold; talons and bill horn-black. wing 12, tail 6.5, tarsus about 2.1.

Each islet has its pair of Ospreys with a nest upon the high land above the beach, which rarely exceeds five feet in altitude. This year the eggs were laid early in October, and I only succeeded in finding eggs on the 17th and 26th of that month. Many nests contained two young birds each, while one had a nestling and an addled egg. They were made of a mass of coral, shells, sticks, and seaweeds, while

a large salt-bush was easily hidden by the structure for which it formed a basis. Many of the nests were not more than three feet high, but others were much larger, and all were upon the ground. Mr. Gilbert spoke of a wonderful structure upon Rotnest Island being fifteen feet in circumference. One of those I found measured at the base twenty feet six inches, the top being only two feet from the ground, and being forty inches across, with a depression for the young of three inches. Living Salsolaceæ were growing upon three sides. Another nest upon an islet south-east of East Wallabi Island of the Abrolhos may be described as five feet six inches high, seven feet at the base, three feet six inches across the top, with a depression of about four inches; it was cone-shaped with the apex sliced off, and was composed of salt-bush branches regularly heaped up, having dead pieces of coral and sponges interspersed. The nest had salt-bush growing up one side. Within it were marine weeds, sponges, and a few pieces of green plants. The whole structure was practically a small stack of wood cylindrically placed on end in the middle of a few acres of dead coral, of which the island is almost entirely composed.

The Osprey is referred to by Professor Newton\* as a daring bird, and one that, if possible, severely handles the collector of its eggs or young. On that part of our coast washed by the Indian Ocean the birds do not appear to attack an intruder, and all that attracted my attention when handling the young was their plaintive cry high above the nest.

3. STREPERA PLUMBEA. Leaden Crow-Shrike. (Hall's Key, p. 8.)

Sk. ad. d. 3.10.99. Denmark River.

The only specimen secured helps to support the view that S. plumbea is a subspecies of S. cuneicaudata. For two hundred miles northward this bird is commonly known as "the squeaker." Young were in the nest on October 25th.

<sup>\* &#</sup>x27;Dictionary of Birds,' p. 661 (1896).

4. GRALLINA PICATA. Magpie-Lark. (Hall's Key, p. 10.)

Sk. ad. and juv. 5.10.99. Katanning.

One notices the fact that in western birds there is a lack of vivacity and a want of melody in the voice. The eastern and western representatives of this species shew a remarkable difference in this respect, for, while one pipes pleasantly, the other gives forth a broken and unpleasant series of jarring notes. The call is harsh and creaky, and so continuous as to resemble grinding. In the Denmark River and Albany districts I did not meet with a specimen, so that my first impressions were formed at Katanning, where young birds were essaying their first flights in a tree in the town.

5. Collyriocincla rufiventris. Rufous-bellied Shrike-Thrush. (Hall's Key, p. 11.)

Sk. ad. 9. 28.9.99. Tor Bay, Albany.

I met with this species breeding freely at Geraldton. Five clutches of eggs that I found varied in a similar way to those of *C. harmonica*.

Like that eastern bird, it prefers to have the nest as well hidden as possible, and chooses a twiner (Cuscuta) where it can. I found the whole depth of a nest to be 3.75 inches and that of the bowl 2.25 inches; diameter 5.5 inches × 4 inches, making the structure ovate. One such had been used for two seasons, and was formed of Melaleuca bark, the lining being composed of rootlets of a wiry nature.

6. Graucalus mentalis. Little Cuckoo-Shrike. (Hall's Key, p. 12.)

Imm. sk. 2. 30.9.99. Tor Bay, Albany.

Near the mouth of the Denmark River I noticed several individuals of what appeared to be this species on the wing.

This skin agrees with the description in the key supplied for the species by Dr. Sharpe, but I quite believe that a good series of skins would allow of fuller keys with which to work. There is so wide a range of measurements between G. melanops, G. parvirostris, G. hypoleucus, and G. mentalis that the identification of a specimen is most

difficult. The species under review is, I believe, new to Western Australia.

7. LALAGE TRICOLOR. White-shouldered Caterpillar-eater. (Hall's Key, p. 12.)

A, B. & ad. sks. 27.10.99. Geraldton.

C. & semi-ad. sk. 6.10.99. Katanning.

These three skins are intensely black or metallic green-black, according to the light. They are much more black and lustrous than eastern skins in my cabinet, one of which is dated (in the breeding-season) 5.10.98, and another 5.3.99. The plumage is most likely a matter of age, and the first-named bird had probably moulted early or had only experienced the autumn moult.

Specimen C.—This clearly indicates a transitional stage; because the right half of the rectrices (except one, which is new) are brown, the innermost secondaries (two on the left and three on the right wing) being also brown, and the wing-coverts having their edges marked with light brown. The basal portion of the under mandible has the brown indicative of youth.

Change of plumage.—Points of interest are presented to us not only by specimen C itself, which is just concluding a heavy moult of quills and contour-feathers, but by the fact of finding in the same specimen the white of the secondaries rapidly commencing the moult by "tuck pointing." This specimen, I should say, is not proceeding normally. In A and B the white of the secondaries is fast disappearing by the same process, for whereas a broad band of white (0.7 inch) exhibits itself along a part of the outer web, a ragged and short band shews along another part of it. This applies to many secondaries, and probably commences while the birds are nesting, because I saw no young birds fledged, but found nests of young and collected male birds on the same ground.

I presume that, having served their purpose of adornment in A and B, if not C, such feathers are the first, by this special form of moult, to change.

Specimen C is moulting its quills in early October instead

of in autumn, as may be seen by my specimens. In the above-given observations it is shown that this species has two methods of changing its plumage.

8. MICRECA ASSIMILIS. Lesser Brown Flycatcher. (Hall's Key, p. 13.)

There is little of interest in the skin obtained at Katanning, except that the under surface, save for the tail-coverts and throat, is brown; the coverts are white, while the throat is a dull white. This probably indicates a stage between the nestling and adult. Wing 3.45 inches.

9. Petræca campbelli. Western Scarlet-breasted Robin. (Hall's Key, p. 13.)

A-F. Sk. ad. &s. Sept. to Oct. 1899. Denmark River; Tor Bay; Katanning.

G. Sk. ad. 9. 29.9.99.

H. Fledgling. 28.9.99. Tor Bay, Albany.

J-K. Young. 30.9.99.

M-N. Imm. &s. Sept. 29th, Tor Bay; Oct. 5th, Katanning.

O-P. Imm. 9 s. Sept. 27th, Tor Bay; Oct. 5th, Katanning.

The first notice of this species, as such, is to be found in 'The Ibis' (1899, p. 303), but it is very brief and refers only to the male. Up to the moment of writing no description has appeared, in this colony, of the female. As, however, Mr. Campbell has sent an account of both sexes to Dr. Sharpe, no doubt it will soon follow, and I am able to devote my attention to the several stages marked above which deal with immature examples. I was specially pleased to find between fifteen and twenty individuals of this species in the hill-country of Western Australia, and each time to note the large black cap and small white forehead, that convinced me of its being distinct from the eastern P. leggii. Like our Robin it does not confine itself to forest-land only, but is to be found in lightly timbered country. Eggs were collected last season in the Stirling Range, one of which was given to me during my visit, and at the moment of writing this still

remains one of the few Australian birds' eggs not yet described in scientific literature. The clutch is composed of three eggs, one being deposited each successive day. A nest found at Katanning was built with three walls: (a) external, bark; (b) thin middle, grass-stems and horsehair; (c) internal layer, animals' brownish-red hair. Slightly oval in shape, its greatest diameters were 3 inches × 2.5 inches; the bowl-diameter was half an inch less, while its depth was 1.5 inch; the depth of the whole structure (which tapered to accommodate itself to the fork, 7 feet above the ground, in a Casuarina) was 3 inches. A much more beautiful and broader nest is exhibited in the Perth Museum.

Specimen H.—Upper surface brown, each feather streaked with white along the mid-rib; lores and base of forehead shewing white; throat a mixture of brown and whitish; chest deep brown; abdomen white; under tail-coverts pale chestnut; all the white on the wing-quills of the adult represented by rufous; under surface of wing with a white line across the basal part of the quills; outer tail-feather as in adult, except for the measurements; each tail-feather with the rachis extended so as to appear spinose; bill and feet lemon-coloured; nails black; soft ring round eye pale yellow; eyes black. Total length 3.4 inches, wing 2.2.

Specimen J.—This appears to have left the nest only a few days before being killed, and is similar to H, but has larger measurements, while the bill is not so yellow. Total length 4 inches, wing 2.3.

Specimen K.—This is very little older than H or J. The upper mandible is maturing into black, and the rufous of the wings is becoming white; there is more white on the forehead than in H or J, and it is now becoming a definite frontal mark; feet below rich orange, above light orange. Total length 4.55 inches, wing 2.75.

Specimen M.—A great change is now being effected in the plumage. No red appears in H, J, K, but here we have an outburst of not only "reds," but "blacks" and "whites," a large proportion of the streaked feathers of all stages being still retained in the dorsal region.

The white frontal mark has enlarged to the size normally found in the adult, but the texture of each feather is soft, and there is no superimposed layer of cells to give a glint. The wings still retain some light rufous marks in place of the white shown by the adult, while white is present in the primaries and secondaries. Black feathers are mixed with the brown on the head, throat, interscapulium, rump, and lesser wing-coverts; the red of the chest is pronounced in one spot, but sparse below and on the left of it. Bill black above, pale yellow at base of lower mandible; feet blackish; soft skin round eye yellow. Total length 4.9 inches, wing 2.75.

Specimen N.—Similar to M, but has a broader and deeper patch of red, which is lighter than in the adult; more black feathers on the throat and back; a darker bill; and more white shewing on the small brown edges of the wing-coverts, that form so fine an appearance of clear white in the mature bird.

Specimens O and P.—These are skins of females further advanced towards the adult stage than are M and N in the male. There is no sign of immaturity on the backs, and the red of the breasts is broadly though feebly distributed. The throat-plumage varies, being brown in O, whitish in P, but in neither grey as in the adult. The lower mandible and frontal marks serve to prove the specimens nearly mature. The white band on the wing-coverts is stronger in O than in the adult. Total length 5 inches, wing 2.7.

Just as the green on the wings and tail of certain Meliphagidæ is pronounced in the fledgling and weak in the adult, so it is with this Robin as regards the rufous upon the upper surface of the wings and upon the under tail-coverts. Rufous is clearly shown in the nestling, but disappears gradually through the various stages, until the white of the adult appears (within ten weeks).

The tail-feathers are practically pointed in the nestling—the spinose appearance vanishing gradually in all the stages above noted until the rounded form of the rectrices of the adult is reached.

Stages H, J, K, M, and N are clear steps in the "ladder" of development to the mature form.

10. Petræca goodenovii. Red-capped Robin. (Hall's Key, p. 13.)

Young sk. Long Island, Pelsart Group, Houtman's Abrolhos. 27.10.99.

This species is generally mentioned as met with singly or in pairs. I saw only one specimen upon the whole group, the species being now recorded from the Abrolhos for the first time. The struggle of so young a bird to reach an island forty miles from the mainland must have been great. No assistance to do so would, most likely, be given to it beyond the strong off-shore wind with which it started. An island-life did not seem to have affected its short course of continental manners, for it flew from stone to stone instead of from branch to branch, keeping to the beach and behaving just as a Robin does.

The bird was so young that the fledgling feathers still remained in places, and the forehead bore no trace of a red flush; commissure yellow; length of wing 2.4 inches.

11. Petræca bicolor. Hooded Robin. (Hall's Key, p. 14.)

A. Sk. ad. 3. 7.10.99. B-C. Sks. ad. 2 s. 5.10.99. D. 3. Moulting. 6.10.99. E. Young. 5.10.99.

F. Young. 6.10.99. Nannine, Cue.

Specimen D.—This bird is in a tricolor state—white, brown, and black. It does not show the streaked brown or white of the young, nor the black of the adult (there is a uniform brown phase that seems to indicate a stage between them). All the upper surface is brown and black intermixed, the browns eventually giving way to the blacks. On the interscapulium and back is a small patch of black feathers with merely a few that are brown; the throat is jet-black; the cheeks shew a mixture of black and brown; the breast and abdomen are white; the scapulars not a clear white; the wings and tail are marked with white as in the adult; the

wings, their coverts, and the tail are uniform brown; the bill and feet black.

Specimens E and F.—Both about the same age and just out of the nest in localities three hundred miles apart. The characteristic white marks upon the wings and tail that distinguish this species are clearly shown. The greater part of each contour-feather and wing-covert is marked longitudinally with white in E and light rufous brown in F; the breast is blotched with white upon black and partly upon brown in F, while light rufous takes the place of white in E. The birds thus present a much streaked and blotched appearance. E has a black iris, the upper and lower surfaces of the bill blackish with the lateral parts dull yellowish. It is noticeable as regards F (kindly furnished by Mr. L. D. Cameron) that the main white parts of the wings and tail in the adult are also white in this skin, but all the other parts, such as the edging to the quills and scapulars, which should be white, are light rufous brown.

I observe, in the limited number of skins at my disposal, that, of the male birds collected in Victoria during September and in West Australia during October, the former are much blacker and have reflecting surfaces.

In the development of the male of this species there are three stages of plumage that are quite dissimilar:—1. The streaked phase; 2. The greyish-brown and white; 3. The deep black and white \*.

12. Pseudogerygone culicivora. Western Fly-eater. (Hall's Key, p. 14.)

One adult skin obtained 27.9.99. Denmark River. High up in the tall Karri-timber you may expect to find

\* Since writing these notes, I find that my collection furnishes the intermediate stage required. Locality Kewell, Vic. 3 juv. (skin), Oct. 1896, obtained by Mr. Joseph A. Hill. All the upper surface is brownish grey, except for a few black feathers coming on the interscapulium and upper tail-coverts, which indicate a moult for the next stage; throat and chest brownish; rest of under surface white; tail-feathers brown. It is noticeable that while the younger stages E and F exhibit black tails similar to those of the adult, this phase and the more developed specimen D have tails that are for the most part brown.

this tiny bird. In order to see it for the first time you must trace it by the "see-saw" music, and the most pleasing voice in the western bush, which should not be compared with that of a *Malurus*, for there is no vivacity in it and not much energy is expended. Rather does it tend towards a lullaby. To hear it aloft among the branches for the first time and to trace it to one of the smallest of our birds, say 200 feet above, is a special delight to a naturalist.

13. Malurus elegans. Red-winged Wren. (Hall's Key, p. 16.).

A & B. Ad. & s. } 27.9.99. Denmark River.

The feathers of the back appear as if in two layers, an upper silvery blue and an under silvery white, both intermingling to give the silvery appearance. The blue feathers are visible for nearly three quarters of an inch.

14. Malurus lamberti. Lambert's Wren. (Hall's Key, p. 16.)

A, B, C, D. Ad. &s. 15th to 29th Oct., 1899. Geraldton. This species was fairly plentiful on the scrub-covered sand-hills of the beach at Geraldton, and the discovery of a nest with three unfledged young (28.10.99) warned me that it was breeding-time. The nest was constructed in much the same manner as that of *M. cyaneus*, and was placed in a Melaleuca not above twelve inches from the ground.

Since my return, I have been informed from Geraldton that the males have moulted and become like the females in plumage.

15. Rhipidura albiscapa. White-shafted Fan-tail. (Hall's Key, p. 17.)

A. Ad. Tor Bay, Albany. 30.9.99.

B. Ad. Katanning. 6.10.99.

I here record this species as found in Western Australia, and venture to do so because I cannot recognise in these skins R. preissi of Cabanis, the difference, if any, between that and R. albiscapa appearing to me to be of the

slightest. Skin A is as like a Victorian skin dated 17.7.96 (1-2 years old) as those of any two birds from localities so far apart can be\*. This induces me to consider the western species as identical with the eastern, and in support of my view I may adduce the following points:—

Dr. Sharpe, in the Brit. Mus. Cat., has left the question open, because the key given for *R. preissi* is in the main the same as that for *R. pelzelni* of Norfolk Island. Mr. Gould called the former a species on the authority of Dr. Cabanis; and Dr. Sharpe, I believe, had a bird in the Museum (Gray's Hand-list, p. 331, 1869) which did not convince him that the species was valid, although he did not make a synonym of the name on account of the doubt attaching to it.

Eggs found last season south-east of the Stirling Range may be described as resembling those of the eastern form.

16. SISURA INQUIETA. Restless Flycatcher. (Hall's Key, p. 19.)

An adult skin secured upon the banks of the Denmark River (2.10.99) has its chest pure white and the primaries blue-black, in keeping with the secondaries.

17. Acanthiza inornata. Plain-coloured Tit. (Hall's Key, p. 25.)

Two adult specimens were secured between Albany and the Denmark River on the 5th and 7th of November.

- 18. Acanthiza apicalis. Broad-tailed Tit. (Hall's Key, p. 25.)
  - A. Ad. 9. B. Ad. 3.11.99.
  - C. Ad. Tor Bay, Albany. 30.9.99.
- \* While age intensifies the black of the collar beneath the throat, it also makes the contrast clearer between this collar and the tawny chest of the perfectly mature eastern bird. As to the West-Australian bird having more white on the terminal half of the tail, I can only say that its tail must be nearly all white if it has more of that colour than is shown in one of my skins (3.8.96, Victoria). I consider this difference as merely a matter of age, and that Gould's record needs his specimens to support it (see his 'Handbook,' i. p. 246).



Hall, Robert. 1902. "VII.—On a Collection of Birds from Western Australia." *Ibis* 2(1), 121–143. <a href="https://doi.org/10.1111/j.1474-919x.1902.tb03585.x">https://doi.org/10.1111/j.1474-919x.1902.tb03585.x</a>.

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