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AUSTRALIAN MUSEUM, SYDNEY.

Catalogue No. 4.

CATALOGUE

OF THE

AUSTRALIAN BIRDS

IN THE

AUSTRALIAN MUSEUM, SYDNEY, N.S.W.

PARTS 1 & 2

ACCIPITRES AND STRIGES:

BY

E. P. RAMSAY, LL.D., F.R.S.E., &c.

SECOND EDITION

WITH ADDITIONS BY A. J. NORTH, C.M.Z.S.

PRINTED BY ORDER OF THE TRUSTEES.

R. ETHERIDGE, Junr.,

CURATOR.

SYDNEY: WILLIAM APPLEGATE GULLICK, GOVERNMENT PRINTER.

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1874—1898.

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MEMORANDUM.

THE stock of the First Edition of the "Catalogue of the Australian Birds" (Pt. I, Accipitres—Pt. II, Striges) having become exhausted, a Second Edition was authorised by the Board of Trustees. The revision, with the addition of later references and facts, was entrusted to Mr. A. J. North, Ornithologist to the Australian Museum, but he has avoided altering the original matter as much as possible, under the circumstances.

R. ETHERIDGE, JUNR.,
Curator.

Australian Museum,
Sydney, January, 1898.

CATALOGUE

OF THE

AUSTRALIAN BIRDS

IN THE

AUSTRALIAN MUSEUM,

AT

SYDNEY, N.S.W.

PART I

ACCIPITRES.

BY

E. P. RAMSAY.

1874.

SECOND EDITION WITH ADDITIONS BY

A. J. NORTH.

1898.

PREFACE TO THE FIRST EDITION OF PART I.

THIS Part I. of the Catalogue of Australian Birds contains a description of all the Species of the Accipitres or Diurnal Birds of Prey at present known to inhabit Australia—in all 28 Species—and a list of such as are contained in the collection of the Australian Museum.

E. P. R.

Sydney, 1876.

PREFACE TO THE SECOND EDITION OF PART I.

THE present Edition of Dr. E. P. Ramsay's "Catalogue of the Australian Birds in the Australian Museum, Part I. Accipitres," has had incorporated with it an Appendix prepared by the same author, and published in 1890. The synonymy and literary references to each species for the past twenty-one years have been added, and the measurements of a series of specimens, when available, are given in every instance in tabular form. Since the publication of the First Edition specimens of *Astur cruentus* and *Gypoictinia melanosternon* have been added to the collection. I have endeavoured to make as few changes in the nomenclature as possible, and with one or two exceptions it remains the same as in the First Edition. A few remarks of mine on some of the species are placed between square brackets.

A. J. N.

Sydney, 1898.

Introduction to the First Edition of Part I.

The fine collection of the Australian Diurnal Birds of Prey now exhibited in our Museum contains, with one exception,* examples of all the species which at the present time are known to inhabit this vast continent. Even in so extensive an exhibition of but comparatively a small group, certain breaks arising from the absence of specimens to duly represent the varied stages of growth, still occur and interfere with the regularity of the series appropriate to each species.

In order then to render this descriptive Catalogue of our raptorial birds as complete as possible, other collections have been carefully examined, and the additional information thus obtained has been embodied in the general text. In two or three instances where the specimens were very indifferent, or altogether wanting, recourse has been had for their description to the British Museum Catalogue of 1874, always in such cases pointing out the authorities relied on.

The total number examined of specimens belonging to this group (Diurnal Birds of Prey) amounted to over 250, of which 140, comprising 26 species, are in the Museum collection; and for this ample display we are chiefly indebted to the exertions of our talented late Collector and Assistant Curator, Mr. George Masters, now in charge of the Macleay Collection.

This Catalogue contains not only an account and description of all the known species of Diurnal Accipitres indigenous to this country, but exhibits clearly what examples are required as desiderata for the accomplishment of a perfect series of the group, even from the nestling to the adult in each species.† We call attention to these wants, and urge our friends to assist by their contributions towards the completion of our national collection.

E. PIERSON RAMSAY.

Sydney, 1876.

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* The Black-breasted Buzzard, *Gypoictinia melanosterna*.

†NOTE.—A complete series of any species would be fairly represented by a male and female in each of the sections A, B, C, and D—

A representing the adults in full plumage.
B „ semi-adult.
C „ the young.
D „ the nestling.

"*Pres.*"	stands for	Presented by.
"*Col.*"	,,	Collected by Museum employees.
"*Pch.*"	,,	Purchased.
"*Exch.*"	,,	Received in Exchange.
"*O.C.*"	,,	Old Collection.
"*semi-ad.*"	,,	semi-adult or half grown.
"*ad.*"	,,	adult or full grown.
"*juv.*"	,,	young.
"*sk.*"	,,	skin—not "set up."
"*mntd.*"	,,	"set up" or "mounted."
"♂"	,,	male.
"♀"	,,	female.

SYSTEMATIC INDEX.

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Order ACCIPITRES.

Suborder FALCONES.

Family FALCONIDÆ.

Subfamily ACCIPITRINÆ.

1. CIRCUS.

1. Circus assimilis.

Jardine's Harrier, Spotted Swamp Harrier.

Circus assimilis, *Jard. and Selby, Ill. Orn.*, vol. i, pl. 51 (1826); *Wallace, Ibis*, 1868, p. 19; *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 63 (1874); *Ramsay, Proc. Zool. Soc.*, 1875, p. 580; *Finsch, Ibis*, 1882, p. 399; *Gurney, List Diurn. Bds. Prey*, p. 23 (1884); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. ii, 2nd ser., p. 165 (1888); *id. Tab. List. Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs Austr. Bds.*, p. 1, pl. 2, fig. 4 (1889); *Broadb., Proc. Roy. Soc., Queensld.*, p. 16 (1889); *Cox and Ham., Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 397 (1890); *North, l.c.* p. 1023 (Roeburne); *Sharpe, Ind. Gould's Works*, p. 69 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 19 (1894); *Hartert, Nov. Zool.*, vol. iii, p. 163 (1896).

Circus jardinii, *Gould, Proc. Zool. Soc.*, 1837, p. 141; *id. Syn. Bds. Austr.*, pt. 3 (1838); *Gray, Gen. Bds.*, vol. i, p. 32 (1845); *Gould, Bds. Austr.*, vol. i, pl. 27 (1848); *Sturt, Exped. Centr. Austr.*, vol. ii, *App.* p. 16 (1849) *Strickl., Orn. Syn.*, p. 154 (1855); *Gould, Handbk. Bds. Austr.*, vol. i, p. 60, sp. 27 (1865); *Gray, Hand-l. Bds.*, vol. i, p. 37 (1869); *Schleg, Mus. P.-B. Revue Accipitr.*, p. 50 (1873); *Sharpe, Ind. Gould's Works*, p. 69 (1893).

Spilocircus jardinii, *Kaup, Isis*, 1847, p. 102.

Strigiceps jardinii, *Bonap. Consp. Av.* tom. i., p. 34 (1850.)

Adult female. Above pale bluish slate-colour; the crown of the head, cheeks, and ear-coverts broadly margined with bright deep chestnut; scapulars and wing-coverts with terminal spots of white, and a row of larger spots on either side of the shaft, on the body of the feather; shoulders deep rufous chestnut; wings bluish grey; anterior portion of primaries blackish, basal portion dark brown; secondaries narrowly edged at the tip with white; all barred with dark brown, the subterminal bar being the broadest; wings (underneath) light ashy grey; bars more distinct on the

inner webs, except of the first four primaries, which are freckled with brown and washed with pale rufous buff in some specimens; under primary-coverts whitish, crossed with brown bars and tinged with chestnut on the margins; upper tail-coverts deep ashy brown, tipped and transversely blotched on both webs with white, interspaces of the outer ones washed with deep chestnut; tail ashy grey, lighter on the basal margin of inner webs; all the feathers tipped with white, crossed with seven or eight blackish bands; under surface of tail lighter; facial ruff and neck bluish grey; chest ashy grey, washed with rufous and spotted with white; remainder of under surface of the body, under wing-coverts, and axillaries deep rufous chestnut, each feather with a row of round white spots on each web; the spots are largest on the abdomen, flanks and axillaries, and smallest on the thighs; under tail-coverts ashy grey near the end, and tipped with white, the spots forming oblong transverse white bars on some; cere olive; bill bluish horn-colour at base, culmen and tip black; tarsi olive; iris yellow. Total length 23 inches, wing 17·5, tarsi 3·9, middle toe 1·8, bill from posterior margin of cere 1·3, along the culmen, 1·5.

Adult male. The adult male is a little smaller in its measurements, but the same in plumage.

Young. "Above ashy brown, the feathers broadly margined with pale tawny buff; the head and lesser wing-coverts deep rusty, with a few central streaks of dark brown; sides of face and of neck, as well as facial ruff, similarly coloured, but with rather broader streaks of brown; primaries black, secondaries browner, with tawny buff tips; all the quills pale ashy below on inner web, washed with rufous and mottled with ashy brown near base of primaries, barred with the same colour on the secondaries, the primaries coppery-brown underneath towards their tips; upper tail-coverts white, washed with rufous, and having dark brown centres; tail sepia-brown, tipped with tawny buff and crossed with six bands of black, the subterminal one being the broadest; under surface of body pale tawny buff, inclining to white on abdomen and thighs, narrowly streaked with dark brown on the breast; the under wing-coverts coloured like the latter, but with rather broader streaks, the lower ones barred with ashy brown and pale tawny buff; axillaries brown, margined and notched with pale tawny."*

Nestling, Reg. No. A. 9317. "Taken from the nest December 23rd, 1879, Lachlan River, N.S.W.; about five weeks old."* Down on the head and neck dull ashy-grey, ear-coverts rufous, on the remainder of the under surface white, the ends of pin-feathers on the chest deep rufous, those on the flanks similar, but with a broad lanceolate shaft stripe; under tail-coverts

* Sharpe, Cat. Bds., Brit. Mus., vol, i, p. 63 (1874).

rufous; down on the legs white mixed with buff, a few buff pin-feathers showing through the down; on the nape, hind neck, back, scapulars and wing-coverts, rump and upper tail-coverts, the feathers are blackish at the base, broadly margined and tipped with rufous; quills and tail blackish-brown, margined with buff or rufous; under surface of the secondaries showing transverse bars as in the adult, nearly all the feathers tipped with down. Total length 15·5 inches, wing 8·3, tail 5, bill from forehead 3·4, from gape 1·5, from nostril 0·6, tarsus 3·5, mid-toe (s.u.) 1·75.*

Habitat.—Derby (N. W. Austr.), Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South and West Australia.

Measurements of average-sized specimens from different localities.

Sex:	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	23	18	11·5	1·25	1·43	4·1	1·7	1·15
A 2 ♂	19	15·7	10·5	1·1	1·25	3·6	1·4	0·85
A 3 ♂	18·5	15·4	10·3	1·12	1·25	3·7	1·5	0·9
B 1 ♀	21	17·3	11·3	1·2	1·4	3·87	1·8	1·1
B 2 ♂	19·5	15·2	10·3	1·18	1·35	3·6	1·6	0·9
C 1 ♀	20·5	14·7	10	1·1	1·2	3·5	1·38	0·8

A 1 ♀ ad. sk.	Richmond River, New South Wales	Col.
A 2 ♂ ad. sk.	Lachlan River, New South Wales.	Pres.
A 3 ♂ ad. sk.	Richmond River, New South Wales.	Pch.
B 1 ♀ semi-ad. sk.	Botany, New South Wales.	Pres.
B 2 ♂ semi-ad.	King George's Sound, West Australia.	Col.
C 1 ♀ juv. sk.	New South Wales.	Pres.

2. Circus approximans.

Gould's Harrier.

Circus approximans, *Peale, U.S. Expl. Exped.*, p. 64 (1848); *Gurney, Ibis*, 1876, p. 384; *id. List Diurn. Bds. Prey*, pp. 21–22 (1884); *Gurney, jun., Cat. Bds. Prey*, p. 19 (1894).

Circus gouldi, *Bonap. Consp. Av.* tom. i., p. 34 (1850); *id. Rev. Zool.*, 1850, p. 491; *Gray, Ibis*, 1862, p. 215; *Gurney, Ibis*, 1870, p. 536; *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 72 (1874); *Ramsay, Proc.*

* The nestlings in every instance described in this catalogue were taken by the late Mr. K. H. Bennett, who has attached a note, giving the date and locality of each specimen, together with the colours of those parts liable to fade.

Zool. Soc., 1875, p. 580; *id. Proc. Linn. Soc., N.S.W.*, vol. i., 2nd ser., p. 165 (1888); *id. Tab. List Austr. Bds.*, p. 1 (1888); *Buller Bds., New Zeal.*, vol. i, 2nd edit., p. 206 (1888); *North, Proc. Linn. Soc., N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs, Austr. Bds.*, p. 2, pl. ii, fig. 3 (1889); *Broadb., Proc. Roy. Soc., Queensld.*, vol. v, p. 16 (1889); *Forbes, Ibis*, 1893, p. 527 (Chatham Is.); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 381 (1896).

Circus assimilis, *Gould, Bds. Austr.*, vol. i, pl. 26 (1848); *Strickl. Orn. Syn.*, p. 155 (1855); *Cassin, U.S. Expl. Exped.*, p. 101 (1858); *Gould, Handb. Bds. Austr.*, vol. i, p. 58, sp. 26 (1865); *Finsch and Hartl. Faun. Centr. Poly.*, p. 7 (1867); *Gray, Hand-list. Bds.*, vol. i, p. 36 (1869).

Adult male. "Above earthy brown; the nape and hind neck slightly streaked with buff, most of the dorsal feathers with central markings of darker brown; quills brown shaded externally with grey; the secondaries narrowly tipped with fulvous, all with more or less distinct remains of blackish, forming on some of the secondaries a distinct subterminal spot; upper tail-coverts white, on some of them a slight spot of pale rufous; tail ashy grey, tipped with white; the central feathers entirely grey, the exterior one gradually becoming more and more tawny rufous near the base, with a few dark brown mottlings; frontal and superciliary feathers dull whitish, not very distinct; sides of face and of neck dull rufous brown, streaked with dark brown; facial ruff rufous buff, streaked with blackish, and mottled with white; under surface of the body creamy white, with distinct streaks of pale rufous brown along the centre of the feathers, broader on the under wing-coverts and very narrow on the thighs and under tail-coverts; culmen pale greenish yellow; bill dark brown, bluish at the base; tarsi greenish white; feet yellowish buff; iris yellow. Total length 21·5 inches, culmen 1·5, wing 16·25, tail 9·8, tarsus 3·9." *

Progress towards maturity—light-coloured variety. Feathers on head and neck dark brown margined with buff or light rufous, basal portion of the feathers white, which shows conspicuously on nape and hind neck; throat, chest, and facial ruff buff, each feather on throat narrowly, and those of the chest and ruff broadly centered with a dark brown stripe; ear-coverts and sides of the head dark brown tinged with rufous buff, a dark line down centre of each feather; lower portion of hind neck and between shoulders dark brown margined with rufous buff; scapulars above, back, and rump blackish brown, deeper towards end of each feather; a few of the scapulars having a narrow margin of buff, and a few of the rump feathers being tipped with rufous;

* Sharpe, Cat. Bds. Brit. Mus., vol. i, p. 72 (1874).

upper tail-coverts white with a transverse blotch of pale rufous near their tip; exposed portions of tail feathers above ashy grey, all tipped with white and crossed with transverse bars of blackish brown; inner webs washed with rufous; outer webs of external feathers washed with same colour, but of a deeper tint towards base; under surface of tail feathers buff, the bars showing through indistinctly; general colour of wings above dark brown, feathers on shoulders margined with deep rufous, wing-coverts narrowly margined with buff; secondaries, primaries, and primary-coverts ashy grey, margined narrowly with white, their inner webs tinged with light rufous buff at the base, all crossed with a series of transverse blackish bars—indistinct only on the anterior portion of the primaries, which is of a blackish brown, the terminal bars the widest, forming a subterminal blotch of blackish brown; under surface of primaries and secondaries light ashy grey, having the basal portion of inner webs washed with rufous buff, dark bars of the upper surface distinctly showing through; axillaries and under wing-covers light rufous buff strongly barred with deep rufous, shoulders underneath light rufous buff, each feather striped with deep rufous down the centre; chest and breast buff; abdomen, flanks, thighs, and upper tail-coverts rufous buff, deepest in tint on abdomen and flanks, each feather on chest and breast centered with a lanceolate stripe of dark brown, those of abdomen and flanks with a broad stripe, and those of thighs and under tail-coverts with a narrow stripe of rich rufous; bill black, cere greenish yellow; tarsi dark brown with a greenish tinge. Total length 21 inches, bill 1·3 inch, along the culmen 1·45, from anterior margin of nostril 0·75, wing from flexure 15·5 inches, tail 9·5, tarsi 3·83, middle toe 1·7, hind toe 0·8.

Young. Above uniform dark sooty brown; nape and hind neck tinged mesially with deep rufous buff; wings blackish, secondaries, and some of the wing-coverts and primaries, margined with light brown, shafts reddish brown; under surface of the wing dull dark brown, basal portion of inner webs of primaries light brown and washed with fulvous on the margins, small feathers on under surface of shoulders tipped with deep rufous; axillaries indistinctly lined transversely in certain lights; rump and upper tail-coverts dark blackish brown—the latter margined with fulvous, with the basal half buff tinged near the middle with pale fulvous; tail above dark brown, blackish brown at the tips, margined with buff, inner webs of nearly all the feathers mottled with rufous, and showing signs of indistinct blackish bars, external feathers becoming more and more strongly washed with tawny rufous; tail beneath light brown, margins of inner webs washed with rufous, more extensively on external feathers, tips of all dark brown, their margins washed with buff, shafts whitish;

whole of under surface of body very dark blackish brown tinged with chocolate in certain lights, centres of feathers darkest; flanks and abdomen washed with chocolate; thighs deep rufous; under tail-coverts blackish brown, a few tipped with fulvous; bill blackish brown; cere greenish yellow, legs and feet greenish white. Total length 20·5 inches, wing 15·3, tail 10, tarsi 3·8, middle toe 1·55, hind toe 0·8.

Habitat.—Derby (N. W. Austr.), Rockingham Bay, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, Tasmania, New Zealand, Fiji, New Caledonia.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	22·5	16·7	10	1·35	1·6	3·95	1·8	1·05
A 2 ♂	20	15·6	9	1·3	1·45	3·8	1·7	0·8
A 3 ♀	24	15·7	9·8	1·25	1·45	3·65	1·8	0·72
C 1 ♂	20·5	15·3	10	1·2	1·4	3·8	1·55	0·8

A 1 ♀ ad. sk.	King George's Sound, West Australia.	Col.
A 2 ♂ not quite ad. sk.	,, ,, ,,	Col.
A 3 ♀ ad. mntd.	Botany, New South Wales.	Pres.
C 1 ♂ juv. sk.	Victoria.	Pch.

2. ASTUR.

1. Astur cinereus.

The Grey-backed Goshawk.

Sparvius cinereus, *Vieill. Nouv. Dict.*, tom. x, p. 338 (1817).

Astur raii, *Vig. and Horsf. Trans. Linn. Soc.*, vol. xv, p. 180 (1827); *Bonap., Consp. Av.*, tom. i, p. 31 (1850); *Gray, Hand-list Bds.*, vol. i, p. 30 (1869).

Astur novœ-hollandiæ, *Gould, Bds. Austr.*, vol. i, pl. 14 (1848).

Leucospizia raii, *Kaup, Contr. Orn.* 1850, p. 67; *Gould, Handbk. Bds. Austr.*, vol. i, p. 37, sp. 14 (1865).

Astur cinereus, *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 117 (1874); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. ii, p. 177 (1877); *id. Tab. List. Austr. Bds.*, p. 1 (1888); *North, Proc. Linn. Soc., N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs. Austr. Bds.*, p. 2 (1889).

Leucospizias cinereus, *Gurney, Ibis*, 1875, p. 365; *id. List Diurn. Bds. Prey*, p. 33 (1884); *Gurney, jun., Cat. Bds. Prey*, p. 20 (1894).

Adult female. Upper surface of body, wings, and the tail, bluish ashy grey, concealed portion of the feathers of the body and of the smaller scapulars white barred more or less with same tint; the side of the head and ear-coverts of a lighter tint; tips of the primaries darker, very narrowly margined with white, their inner webs tinged with ashy brown, obsolete bars visible in certain lights on outer webs of primaries and secondaries; central portions of the inner webs of these feathers crossed with dark ashy-grey bars; the basal portions and inner margins (except at the tips) white; the whole of the under surface of the wing, except the outer margin of the tips of the primaries past the notch (where it is ashy grey) is of a pure glistening white, the bars and marking of the upper surface distinctly showing through; shafts of the quills white below, dark reddish-brown above; small feathers on the margins of the shoulders, the chest, breast, axillaries, and flanks white, crossed by numerous narrow lines of light bluish ashy grey; sides of the neck barred like the chest but less distinctly; abdomen, thighs, and under tail-coverts, pure white; tail above, same as the back and wings, bluish ashy-grey, the tips of the feathers narrowly margined with white; the two centre tail feathers and the outer webs of the rest indistinctly, but the inner webs distinctly barred with a darker tint; the inner webs, which have a faint brownish tinge, are white at the base along the margin of the inner web, the shafts brown; under surface of tail glistening white, the bars and marking of the upper surface showing through distinctly on the inner webs, shafts white; bill and claws black; cere, base of bill, eyelids, legs and feet citron yellow; iris deep yellow; total length 20 inches, wing 12·9, tail 9·5, tarsus 3·4, hind toe 1·2, middle toe 2·1, bill from base of cere 1·3, along the culmen 1·45.

Adult male. Mr. Sharpe describes the male of this species as similar to the female, but smaller, and gives the following measurements:—"Total length 16·5 inches, culmen 1·2, wing 10·15, tail 7·8, tarsus 2·7"; and also mentions an adult female in the collection of the British Museum which has the "wing-coverts and tail tipped with whitish, and the bars on the breast, which are a little more distinct than in the specimen of the adult male he describes, mixed with brown, evidently the signs of immaturity. Total length 20 inches, wing 12·25, tarsus 2·95."

"A younger bird does not exhibit the whitish margins to the wing coverts, but has the markings on the chest more elongate, these, as well as the other pectoral markings, being broad and distinct and brownish in colour; iris brown."*

* Sharpe, Cat. Bds., Brit. Mus., vol. 1, p. 118 (1874).

Young female. Above dull ashy brown, in some slaty brown; lower part of hind neck brown; wings ashy or slaty-brown above, white underneath, the tips of the primaries being ashy grey, and the basal portion of the inner webs of secondaries and some of the nearest scapulars barred with brown not quite across the feathers, under primary-coverts barred with brown; sides of the head and neck dull brown, concealed portion of the feathers barred; the upper tail-coverts and tail dull ashy brown, strongly barred with darker brown; shafts reddish-brown; under surface of tail, light grey almost white, the bars showing through; the whole of the under surface of the body white; chest, a few feathers on the breast, and the flanks, crossed with dull ashy brown or ashy grey bands, frequently wavy, or in some broadly hastate; sides of the face and neck, throat and chest white, crossed with a few narrow wavy or hastate markings of brown.

In apparently full grown but not full plumaged birds, the upper surface is ashy-grey instead of brown, and the chest and breast crossed with numerous wavy bracket-shaped (⁀) bands of light ashy brown. The tail is always strongly barred in young birds.

Remarks. Both Mr. Gould (in his *Hand-book to the Birds of Australia*, vol. i, p. 38) and Mr. R. B. Sharpe (in the *British Museum Catalogue*, *Accipitres*, vol. i, p. 118) describe the male of this species as being similar in plumage to the female, but smaller. I can only say that during the last ten years having examined over fifty specimens of *A. cinereus* and *A. novæ-hollandiæ* from Tasmania and all parts of Australia from Adelaide to Cape York, I have never yet met with one male in any other than a *snow white* plumage; in size they differ considerably, some males being 21 inches in length, others only 14 inches, or perhaps less.

[I formerly shared with Dr. Ramsay the belief that the male of *Astur cinereus* was purely white,† but we have now undoubted adult males of this species which cannot be distinguished from the females except by their smaller size. Moreover, a male and female, shot at a nest containing eggs, near Dubbo, New South Wales, were precisely alike in colour A male in the collection, probably a very old bird, has entirely lost the narrow transverse ashy bars on the under surface, except on the sides of the chest.]

Habitat.—Derby (N.W. Austr.), Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Victoria, South Australia.

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† North, Nests and Eggs Austr. Bds., p. 3 (1889).

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	20·5	12·1	9·5	1·23	1·42	2·95	1·9	1·2
A 2 ♀	20·5	12·7	9·75	1·3	1·5	3·2	1·9	1·2
A 3 ♀	20	12	9	1·3	1·6	3	2·1	1·2
A 4 ♂	16·2	10·3	7·7	1·1	1·27	2·7	1·58	0·92
A 5 ♂	15	10·1	7·5	1·15	1·3	2·7	1·6	0·95
B 1 ♂	14·5	9·7	7·5	1·1	1·2	2·7	1·55	0·95
B 2 ♂	16	10·1	8	1·08	1·2	2·7	1·5	0·9

A 1 ♀	ad. sk.	Gayndah, Queensland, 1807.	Col.
A 2 ♀	,, ,,	Near Sydney, New South Wales.	Pres.
A 3 ♀	,, ,,	Wide Bay, Queensland.	Col.
A 4 ♂	,, ,,	Woolloomooloo, Sydney.	Pres.
A 5 ♂	not quite ad. sk.	Cambewarra, New South Wales.	Pch.
B 1 ♂	semi-ad. sk.	Cairns, Queensland.	,,
B 2 ♂	,, ,,	Shot at Dobroyde, near Sydney, by Mr. John Ramsay, 18th March, 1894.	Pres.

2. Astur novæ-hollandiæ.

The White Goshawk, "White Hawk."

New Holland White Eagle, *Lath. Gen. Syn.*, vol. i, p. 40 (1781).

Falco novæ-hollandiæ, *Gmel. Syst. Nat. tom.* i, p. 264 (1788 *ex Lath.*).

Falco albus, *White, Voy. N.S.W.*, pl. 35 (1790).

Falco novæ-hollandiæ, *Lath. Ind. Orn.*, vol. i, p. 16 (1790).

Sparvius niveus, *Vieill. Nouv. Dict. d'Hist. Nat. tom.* x., p. 338 (1817).

Astur novæ-hollandiæ, *Vig. Zool. Journ.*, vol. i, p. 338 (1824); *Gould, Syn. Bds. Austr.*, pt. 3 (1838); *id. Bds. Ausir.*, vol. i, pl. 15, (1848); *Gray, Gen. Bds.*, vol. i, p. 27 (1845); *Bonap., Consp. Av. tom.* i, p. 31 (1850); *Strickl., Orn. Syn.*, p. 118 (1855); *Schleg. Mus., P.-A. Astures*, p. 20 (1862); *Gray, Hand-list Bds.*, vol. i, p. 29 (1869); *Schleg, Rev. Accipitr.*, p. 63 (1873); *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 118(1874); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii., p. 177 (1877); *Legge, Proc. Roy. Soc. Tas.*, p. 237 (1886); *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *De Vis, Rep. Sci. Exp. N.E. Queensld.*, p. 14 (1889); *Broadb., Proc. Soc. Queensld.*, p. 33 (1889); *Cox and Ham., Proc. Linn. Soc. N.S.W.*, vol. iv, 2nd ser., p. 397 (1890); *Sharpe, Index Gould's Works*, p. 21 (1893); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 395 (1896).

Astur Albus, *Jard and Selby, Ill. Orn.* vol. i, p. 1, pl. i.

Dædalion candidum, *Less. Traité d'Orn.*, p. 66 (1831).

Falco leucaetus, *Forster, Descr. An.*, p. 70 (1844).

Leucospiza novæ-hollandiæ, *Kaup, Classif. Säug u. Vög.*, p. 119 (1844); *id. Contr. Orn.* 1850, p. 67 ; *Gould, Handbk. Bds. Austr.*, vol. i, p. 38, sp. 15 (1865); *Ramsay, Proc. Zool. Soc.*, 1875, p. 578; *Masters, Proc. Linn. Soc. N.S.W.*, vol. i, p. 45 (1876), *Cape York.*

Leucospizias novæ-hollandiæ, *Gurney, Ibis*, 1875, p. 365 ; *id. Diurn. Bds. Prey*, p. 33 (1884); *Gurney, jun., Cat. Bds. Prey*, p 20 (1894).

Adult male. The whole of the plumage is of a pure white ; cere and legs, base of bill and eyelids, yellow ; bill and claws black ; iris carmine. Length 16·5 inches, wing 10·3, tail 7·5, tarsus 2·85, bill 1·1, culmen 1·3, hind toe 1·, middle toe 1·7.

Adult female. Pure white as in the male, but much larger. Total length from 18·5 inches to 20·2, wing 12 to 12·2, tail 9·2 to 9·5, bill 1·3, culmen 1·5, tarsus 1·2 to 1·3.

Young. Upper surface ashy-brown, browner on the scapulars, concealed portions of all the feathers being white ; face, sides of the head and neck, ear-coverts, and lower portions of the back, white, tipped and barred with ashy brown, lower part of hind neck, ashy brown, tinged with pale brown ; margins of the shoulders tipped or barred with brown ; primaries and secondaries dark brown, basal portion barred not quite across with darker brown, basal marginal half of inner webs white, secondary coverts above white tipped and barred with brown ; wing coverts, secondaries, and some of the inner primaries margined with white at the tips ; under surface of the wing pure white, the margins of the primaries at the tips ashy grey, crossbars of upper surface shining through ; upper tail-coverts and rump white at the base, narrowly margined, and barred with brown ; tail above ashy brown, a little lighter on the inner webs, base of which is white extending along the margin to near the tips ; all the feathers barred with dark brown, shafts reddish, brown, barred with white on the centre two feathers ; outer webs narrowly margined with white at the base ; under surface of tail pure glistening white, the markings of the upper surface showing through ; all the under surface white, throat having a narrow line down centre of many of the feathers, chest and flanks with a broader central line and a few transverse bracket-shaped bars of brown ; bill and claws black ; base of bill, cere and legs, citron yellow ; iris brownish yellow. Total length 14 inches, wing 9·5, tail 7·1, tarsus 2·1, bill 1·05, culmen 1·2.

Habitat. Cape York, Port Denison, Richmond, and Clarence River Districts, New South Wales, Victoria, South Australia, and Tasmania.

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	18	12·1	9·5	1·28	1·45	3·1	1·73	1·2
A 2 ♂	16	10·25	8	1·12	1·3	2·8	1·55	0·85
A 3 ♂	17	10·2	7·8	1·1	1·3	2·7	1·52	0·9
A 4 ♀	19	12·2	9·5	1·25	1·45	3·2	1·9	1·2
A 5 ♀	19·5	12·2	9·5	1·25	1·45	3·2	1·93	1·2
A 6 ♂	16	10·1	7·8	1·05	1·2	2·6	1·52	0·9
* ♀	19·5	11·5	8·8	1·28	1·48	2·95	1·9	1·1

A. 1 ♀ ad. sk. Blue Mountains, New South Wales. Pres.
A. 2 ♂ ad. sk. Illawarra, New South Wales. Col.
A. 3 ♂ ad. sk. Nepean River, New South Wales. Pres.
A. 4 ♀ ad. sk. Oban, New South Wales. Pres.
A. 5 ♀ ad. sk. New South Wales. Pres.
A. 6 ♂ ad. sk. Port Denison, Qeensland. Pres.
* ♀ ad. sk. (Macl. Mus.) Cape York.

3. Astur leucosomus.

The Lesser White Goshawk.

Falco novæ-hollandiæ, *S. Müller, Verh. Land-en Volkenk.*, p. 21 (1844); *Gray, Cat. Bds. New Guin.*, p. 16 (1859); *Sclater, Ibis*, 1860, p. 322; *Gray, Proc. Zool. Soc.*, 1861, p. 433; *Schleg. Mus. Pays-Bas*, Astures, p. 20 (1862); *Rosenb. Journ. f. Orn.*, 1864, p. 116; *Finsch, New Guin.*, p. 155 (1865); *Schleg. Vög. Ned. Ind. Valkvog.*, pp. 19, 58, pl. 11, fig. 3 (1866); *id. Mus. Pays-Bas, Revue Accipitr.*, p. 63 (1873).

Astur leucosomus (sub-sp. *a*), *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 119 (1874); *id. Mitthl. Zool. Mus., Dresd.*, vol. i, p. 355 (1874); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. iii, p. 248 (1879); *Sharpe, Journ. Linn. Soc.*, vol. xvi, p. 425 (1882).

Astur leucosoma, *Becc. Ann. Mus. Civ. Gen.*, vol. vii, p. 707 (1875); *Guill. Proc. Zool. Soc.*, 1885, p. 617.

Leucospizias leucosomus, *Gurney, Ibis*, 1875, p. 365; *Salvad. Ann. Mus. Civ. Gen.*, vol. x, p. 118 (1877); *id. Orn. Pap. et Molucc.*, p. 42 (1880); *Gurney, List Diurn. Bds. Prey*, p. 33 (1884); *Salvad. Aggiunte, Orn. Pap. et Molucc.*, p. 16 (1889); *De Vis, Ann. Rep. Brit. New Guin.*, 1891, App. C.C., p. 4; *Gurney, jun., Cat. Bds. Prey*, p. 20 (1894).

Astur novæ-hollandiæ, sub-sp. leucosomus, *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888).

Adult male. The same in plumage as *Astur novæ-hollandiæ*, being "uniformly white like that species, but very much smaller; cere yellow; bill black; feet citron yellow; iris orange-yellow. Total length 12·3 inches, culmen 1·1, wing 7·8, tail 5·9, tarsus 2·25, middle toe 1·2. (*Mus Lugd*)."

Hab. New Guinea and adjacent Islands.*

[I have never seen the specimen obtained in Torres Strait, and referred to by Dr. Ramsay in the Proceedings of the Linnean Society of New South Wales,† as belonging to this species. Neither can I find in the Museum or Dobroyde Collection any *adult* specimen of White Goshawk, from Cape York, agreeing in size with the smaller dimensions of *A. leucosomus*, from New Guinea. A young male, *A. novæ-hollandiæ*, from Cape York measures, total length 15 inches, wing 9·5, tail 7·4, bill 1·2, tarsus 2·6. An adult female in the Macleay Museum, from the same locality, shot by the Curator, Mr. George Masters, on the 18th of September, 1875, measures—total length 19·5 inches, wing 11·5, tail 8·8. This is only 0·7 inches smaller in wing measurement than our largest specimen from New South Wales. The smallest adult male of *A. novæ hollandiæ* we have in the collection at present was obtained at Cairns, North-eastern Queensland, and has the wing and tail feathers much worn at the tips; it measures—total length 14·8 inches, wing 9·5, tail 7·6. Dr. Sharpe's measurements of the type specimen of *A. leucosomus* (an adult male) are as follows—total length 12·3 inches, wing 7·8, tail 5·9, tarsus 2·25, middle-toe 1·2.]

Habitat. New Guinea and adjacent islands (Sharpe, Salvadori), Cape York, Islands of Torres Strait (Ramsay).

4. Astur approximans.

The Australian Goshawk.

Falco radiatus, *Temm. Pl. Col. tom. i.*, pl. 123 (1823) *juv.*

Astur radiatus, *Vig. and Horsf. Trans. Linn. Soc.*, vol. xv, p. 181 (1827) *juv.* ♂

Astur fasciatus, *id. tom. cit.*, p. 181 (1827), ad. ♂ and ♀.

Astur approximans, *id. tom. cit.*, p. 181 (1827) *juv.* ♀; *Gould, Syn. Bds. Austr.*, pt. 3 (1838); *id. Bds. Aust.*, vol. i, pl. 17 (1848); *Sturt Exp. Centr. Austr.*, vol. ii, App., p. 15 (1849); *Gould, Handbk., Bds. Austr.*, vol. i, p. 41, sp. 17 (1865); *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 126 (1874); *Ramsay, Proc. Zool. Soc.*, 1875, p. 579; *Masters, Proc. Linn. Soc., N.S.W.*, vol. i, p. 45 (1876); *Legge, Proc. Roy. Soc., Tas.*, p. 237 (1886); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. i, 2nd ser., p. 1085 (1887), *Derby, N.W.A.*; *id. Tab. List Austr. Bds.*, p. 1 (1888); *North, Proc.*

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* Sharpe, Cat. Bds. Brit. Mus. vol. i, p. 119 (1874).
† Ramsay, Proc. Linn. Soc. N.S.W , vol. iii, p. 248 (1879).

Linn. Soc., N.S.W., vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs Austr. Bds.*, p. 3 (1889); *De Vis. Sci. Exp., N.E, Queensld.*, p. 84 (1889); *Cox and Ham., Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 397 (1890); *Norton, Bull. No. 1, Dept. Agri., N.S.W.*, p. 246 (1890); *Sharpe, Index Gould's Works*, p. 21 (1893); *North and Keartl., Aves, Horn Exped., Centr. Austr.*, p. 54 (1896); *Keartl., Vict. Nat.*, vol. xiii, p. 60 (1896); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 395 (1896).

Accipiter approximans, *Strickl. Ann. Mag. Nat. Hist*, vol. xi, p. 335 (1843); *Gray, Gen. Bds.*, vol. i, p. 29 (1845); *Bonap. Consp. Av. tom. i*, p. 33 (1850); *Strickl. Orn. Syn.*, p. 111 (1855); *Gray, Hand-list Bds.*, vol. i, p. 34 (1869).

Urospiza approximans, *Bonap. Rev. et Mag. de Zool.*, 1854, p. 538.

Nisus approximans, *Schl. Mus. P.B. Astures*, p. 42 (1862); *id. Rev. Accipitr.*, p. 79 (1873).

Astur cruentus, *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 127 (1874).

Urospizias approximans, *Gurney, Ibis*, 1875, pp. 365, 468; *id. List Diurn. Bds. Prey*, p. 38 (1884); *Gurney, jun., Ibis*, 1893, p. 349; *id. Cat. Bds. Prey*, p. 21 (1894).

Astur maculosus, *Coles, Vict. Nat.*, vol. xiv., p. 43 (1897) *juv.*

Adult male. Above ashy brown, head, nape, shoulders, outer webs of secondaries and primaries bluish grey, inner webs light ashy grey, indistinctly barred with dark brown; a band across the hind neck vinous red, inclining to rufous, forming a collar wider on the sides of the neck, where it is of a deeper tint; rump and upper tail-coverts ashy brown; tail browner, indistinctly barred with darker brown; bars more distinct on the inner webs of the feathers, which are of a lighter tint, and tinged with fulvous at the base of the outer ones; under surface of the tail feathers light silvery grey, bars much more distinct on all except the outermost on either side; inner webs of the first three on either side washed with light rufous; thighs rufous, barred with narrow indistinct lines of white; under tail-coverts, flanks, and remainder of the under surface except the throat, deep dull rufous, crossed with numerous wavy narrow bars of white, each bar bounded above and below with a narrow line of ashy brown; throat whitish, mottled with numerous transverse bars of ashy brown, tinged with rufous nearest the chest; under surface of primaries ashy grey, tips dark brown, washed with fulvous or light rufous on basal portion, and freckled with dark brown; concealed portions of the feathers on the inner webs crossed with blackish bars, interspaces near the shafts white; secondaries light ashy brown, silvery, bars nearly obsolete; under surface of the wings and the axillaries light fulvous or nearly white, crossed with numerous bars of rufous, bounded below with ashy; behind the thighs is a patch of clear rufous tinging the adjoining upper tail coverts; cere greenish yellow; bill dark horn-colour at tip, and

culmen, greenish olive at base; legs and feet yellow, claws black; iris deep yellow. Total length 16· to 17·2 inches, wing 10·5, tail 7·5 to 8·5, tarsi 2·9 to 3·1, bill 0·9 to 1 inch.

Remark. In some apparently fully adult specimens the back is browner, the colour vinous red and less distinct, the under surface of the primaries washed with a deeper tint of light rufous, and the bars on quills and tail much more distinct.

Adult female. The same in plumage, but larger. Total length 17·5 to 20·5 inches, wing 12· to 12·3, tarsi 3·2 to 3·5, tail 9·5 to 10·5.

Progress towards maturity. The longitudinal stripes on the throat, chest, and breast become transverse, the whole of the under surface is crossed with narrow, wavy rufous bars, margined with dark brown, the whole of the upper surface of a uniform brown, without any rufous margins to the feathers; the head inclines to bluish slate-colour; few, if any, of the feathers on nape or hind neck show any white; the wings underneath become more and more washed with rufous, and the bars on the tail less distinct.

Young. Varying from ashy brown to dark brown above, all the feathers more or less edged with rufous; sides of head, face, and throat, with a dark brown stripe down centre of each feather; the basal portion of the feathers on the back of the head and nape white, showing conspicuously with the brown and rufous markings of those parts; wings and tail dark brown, the inner webs of the feathers pale rufous, except at the tips, all crossed with numerous transverse narrow bars of blackish brown, eighteen to twenty in number on the tail, twelve to fourteen on wings; secondaries and tail feathers tipped with fulvous or dirty white; inner webs of tail feathers between the bars, light rufous above; outer webs above, deep rufous at the base of the external feathers in some; under surface of the tail white, shining, the rufous tint and bars distinctly showing through; under surface of body white or nearly so; chest streaked with irregular shaped somewhat oval blotches of dark brown—in some specimens strongly tinged with rufous, many of the feathers having a concealed transverse blotch near their centre; breast, abdomen, flanks, and under tail-coverts broadly barred with dark brown or rufous bands, margined on either side with brown, and barred with narrow wavy markings of a similar tint; under surface of wings white tinged with fulvous, crossed with dark brown bars; cere, and bill at base bluish lead-colour; culmen dark bluish horn-colour; legs and feet yellowish; iris bright yellow. Total length sixteen to nineteen inches.

Nestling, Reg. No. B. 6432. "Taken from the nest December 6th, 1883, Darling River, Interior, N.S.W. About a fortnight old. Iris brown, cere light green; bill black; legs and feet yellow, claws lead colour"; length 6 inches; bill from forehead 0·7 inch, from gape 0·75, tarsus 1·65, mid toe (s.u.) 1. Body

covered all over with creamy-white down, longest on the head and nape; pin-feathers just beginning to show on the primaries.

Nestling, Reg. No. B. 10158. Taken from the nest November 24th, 1885, Ivanhoe, N.S.W. "Iris dark brown, eyelids, cere and gape greenish, bill dark horn colour, legs and feet yellow, claws light horn colour." Body covered with creamy-white down, longest on the head and breast; pin-feathers showing through the down of the primaries and secondaries. Total length 7 inches, tarsus 1·6.

Habitat. Derby (N.W. Austr.), Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South and West Australia, and Tasmania.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe (s.u.)
A 1 ♀	19	12·1	10·5	1	1·3	3·5	1·6
A 2 ♀	20	12	10	1·1	1·35	3·3	1·7
A 3 ♂	15	10·5	8·2	0·9	1·25	3	1·5
A 4 ♂	16·5	10·6	8·5	0·9	1·25	2·7	1·5
A 5 ♂	16·5	9·3	8·2	0·85	1·2	3·2	1·5

A. 1 ♀	ad. mntd.	New South Wales.	Pres.
A. 2 ♀	ad. mntd.	New South Wales.	Pres.
A. 3 ♂	ad. sk.	Pine Mountains, Queensland.	Col.
A. 4 ♂	ad. sk.	Gainsford, Queensland.	Pres.
A. 5 ♂	ad. sk.	King George's Sound, West Australia.	Col.

5. Astur cruentus.

The Chestnut-collared Goshawk.

Astur cruentus, *Gould, Pro. Zool. Soc.*, 1842, p. 113; *id. Ann. & Mag. Nat. Hist.*, vol. xi, p. 528; *Gray, Gen. Bds.*, vol. i, p. 28 (1845); *Gould, Bds. Austr.*, vol. i, pl. 18 (1848); *id. Handbk. Bds. Austr.*, vol. i, p. 43, sp. 18 (1865); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. ii, 2nd ser., p. 165 (1888); *id. Tab. List Austr. Bds.*, p. 1 (1888); *Sharpe, Index Gould's Works*, p. 21 (1893); *Gurney, jun., Ibis*, 1893, p. 349.

Urospizia cruenta, *Kaup, Proc. Zool. Soc.*, 1867, p. 176.

Urospizias cruentus, *Gurney, Ibis*, 1875, p. 365.

Adult male. All the upper surface of the head, wings and their coverts, back, rump, and tail lead-blue with a slight shade of brown; a distinct rufous collar round the hind neck and

joining the chest; throat ashy-white, slightly mottled with bluish-grey, the remainder of the under surface, under wing- and tail-coverts barred alternately with narrow lines of rufous and white, the rufous bars the broader; tail ashy-white below with from twelve to fifteen narrow black bars on the feathers, the centre two having spots on the shaft-line showing remains of the cross-bars; primaries with twelve to fourteen blackish cross-bars, which in very old birds are broken and altogether obsolete at the tips of the feathers; the inner webs of the under surface of all the quills have a tinge more or less of fawn colour. Description from a freshly moulted specimen, bill bluish at the base, tip black, legs and feet dull-yellow, claws black. Towards the moulting season the plumage of the upper surface becomes bleached and is then of a dull-brown. Total length 13·5 inches, wing 9 inches, tail 7 inches, bill from forehead 1 inch, from nostril 0·6 inch, from gape 0·9 inch, tarsus 2·8 inch, mid. toe (s.u.) 1·3 inch.

The female is slightly larger and browner upon the upper surface, the collar is not so well-defined, and the chin and cheeks are mottled with brown. Total length 15 inches, wing 10·5 inches, tail 8 inches, bill from forehead 1·05 inch, from nostril 0·6 inch, from gape 1 inch, tarsus 2·9 inches; mid. toe (s.u.) 1·6 inch.

[None of our Australian Accipitres have puzzled ornithologists so much as the present species. Gould, who described and figured it under the name of *Astur cruentus* states in his Birds of Australia, that it is very common in Western Australia, particularly in the York district and at the Murray. Whether he was quoting from Gilbert's notes, or whether the statement was only a surmise on Gould's part it is impossible to say, but the fact remains that this species is undoubtedly the rarest of all our diurnal birds of prey. The late Mr. J. H. Gurney considered *A. cruentus* to be a synomyn of *A. approximans*, a belief, also for many years, partly shared by Dr. Ramsay. Mr. George Masters did not meet with it on either of his collecting trips to Western Australia in 1863 and 1868. Mr. E. J. Cairn and the late Mr. T. H. Boyer-Bower spent over twelve months collecting at Derby, in the north-western part of that colony, and although both obtained several specimens of *A. approximans*, it was only a short time before the decease of the latter gentleman, that he was enabled to send a box to Dr. Ramsay for examination which contained examples of the true *A. cruentus*, of Gould. These were at that time the only known specimens obtained since Gould described the type nearly half a century before. Count Salvadori, who, however, has had the advantage of examining a typical specimen of Cuvier's *Falco torquatus* in the Leyden Museum, and which Temminck, in his description of this species in his

"Planches Coloriées," in 1823, states is found in Northern Australia, Timor, and the Moluccas, pronounces Gould's *A. cruentus*, identical with this species, and also *Nisus australis* in the Paris Museum, described by Lesson in 1831 from a specimen brought by Peron from West Australia. Count Salvadori also ranks *Astur sharpii*, of Ramsay, from Port Moresby, New Guinea, as a synonym of *A. torquatus*.* Dr. Sharpe refers the New Guinea examples with the barred under tail-coverts to *A. cruentus*, of Gould, and considers them distinct from *A. torquatus*, of Cuvier, as the specimens of the latter in the British Museum collected by Dr. Wallace in East Timor have the under tail-coverts, white. Temminck's plate of the adult of this species also represents the under tail-coverts as greyish-white and unbarred. However closely the *Astur* from New Guinea, described by Dr. Ramsay under the name of *A. sharpii*, resembles the continental form, I cannot agree in regarding it as the same as *A. cruentus*, from North-west Australia. I have three adult specimens of *A. sharpii*, now before me, including presumedly the type, and will point out where they differ from the latter species. The collar on the hind neck is paler and of a tawny-rufous, the under surface is tawny-red and is more numerously crossed with narrow transverse dull-white bars in the male, and ashy-grey on the breast in the female; in both sexes also a faint wash of tawny-red extends all over the mottled greyish-white throat. The under tail-coverts vary considerably; in the female they are dull-white, conspicuously barred with rufous; in one of the males the cross-bars are much narrower, and in the other they are reduced to narrow indistinct transverse lines. In a specimen of *A. cruentus*, from Derby (North-west Australia), the collar on the hind neck is darker and of a chestnut-red, the under surface is not so rich in colour as the New Guinea examples, being of a pale rufous, conspicuously barred with dull-white, these barrings being bordered above and below with a narrow line of dark-ashy as in *A. approximans*, there is no faint wash of rufous on the throat, and the under tail-coverts are similarly marked as the breast, with the exception of having the dull-white cross-bars very much broader. Although the New Guinea and North-west Australian birds can thus be distinguished from each other, and the name of *A. sharpii* is preoccupied by Oustalet, I do not care to suggest a new name for the *Astur* from New Guinea, as the variable character of the under tail-coverts tends to prove that Count Salvadori is correct in referring it to *A. torquatus*. If *A. australis* from West Australia is identical with *A. torquatus* from Timor, as stated by Count Salvadori, Lesson's name must rank as a synonym of the latter species, but if it is the same as

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* Salvadori, Aggiunte, Orn. Pap. et Molucc. pt. 1, p. 20 (1889).

Gould's *A. cruentus*, Lesson's specific name of *australis* must take precedence. As some doubt exists to which species the latter name was applied, I have for the present retained Gould's name of *A. cruentus* for the small Goshawk from North-west Australia.]

Habitat. North-west Australia.

3. ERYTHROTRIORCHIS.

1. Erythrotriorchis radiatus.

The Rufous-bellied Buzzard.

Radiated Falcon, *Lath. Gen. Syn. Suppl.*, vol. ii, p. 53, pl. 121 (1801).

Falco radiatus, *Lath. Ind. Orn. Suppl.*, vol. ii, p. xii. (1801).

Sparvius radiatus, *Vieill. Nouv. Dict. d'Hist. Nat.* tom. x, p. 340 (1817).

Haliætus caleii, *Vig. & Horsf. Trans. Lin. Soc.*, vol. xv, p. 186 (1827).

Nisus radiatus, *Less. Man. d'Orn.*, p. 97 (1828).

Astur radiatus, *Gray, Ann. & Mag. Nat. Hist.*, vol. xi, p. 189 (1843); *Gould, Bds. Austr.*, vol. i, pl. 16 (1848); *Gray, Gen. Bds.* vol. i, p. 27 (1845); *Bonap. Consp. Av.* tom. i, p. 31 (1850); *Strickl. Orn. Syn.*, p. 119 (1855); *Schleg. Mus-Pays. Bds. Astures*, p. 15 (1862); *Gould, Handbk. Bds. Anstr.*, vol. 1, p. 40, sp. 16 (1865); *Gray, Hand-list Bds.*, vol. i, p. 29 (1869); *Ramsay, Pro. Linn. Soc. N.S.W.*, vol. i, 2nd ser., p. 1141 (1887); *North, Nest and Eggs Austr. Bds. App.*, p. 380, pl. ii, fig. 2 (1889); *Sharpe, Index Gould's Works*, p. 21 (1893).

Accipiter radiatus, *Gould, Ann. & Mag. Nat. Hist.*, vol. xi, p. 335 (1843).

Astur testaceus, *Kaup, Isis*, 1847, p. 367; *id. Contr. Orn.*, 1850, p. 66.

Urospizia tricolor, *Bonap. Rev. et Mag. de Zool.*, 1854, p. 538.

Urospizias radiatus, *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 159 (1874).

Erythrotriorchis radiatus, *Gurney, Ibis*, 1875, p. 364; *Sharpe, Proc. Zool. Soc.* 1875, p. 338; *Gurney, Ibis*, 1876, pp. 65–66; *id. List Diurn. Bds. Prey*, p. 45 (1884); *Gurney (jun.), Cat. Bds. Prey*, p. 22 (1894).

Astur (Erythrotriorchis) radiatus, *Ramsay, Proc. Lin. Soc., N.S.W.*, vol. ii, p. 177 (1877); *id. Tab. List. Bds.*, p. 1 (1888).

Adult male. Upper surface of the body and wings (except the quills) bright rufous, duller on the head, brightest on the wing-coverts, shoulders, and upper tail-coverts, the feathers of the head and neck having a black stripe down the centre, all the others centered with black and broadly margined with bright rufous; the upper tail-coverts are ashy at the base and barred with dark brown, deepest near the tips of the feathers, which are

broadly margined with bright rich rufous, through which a narrow black shaft-line is produced from the subterminal bar. The spurious-wings, primaries and secondaries, dark ashy-brown, darkest at the ends of the primaries, all crossed with blackish-brown bars, darker and broader towards the tips of the feathers, the shafts light reddish-brown; the inner webs of a lighter brown, becoming white at the base, where they are thickly freckled and spotted with markings and broken bars of dark-brown. The secondaries very narrowly margined with white at the tips; under surface of primaries and secondaries ashy-white (*glistening white in certain lights*), crossed with dark ashy-brown bars, becoming broken up into spots and freckles at the base of the inner webs, some of which have their margins slightly tinged with light rufous; the outer series of the under wing-coverts ashy-white, crossed with ashy-brown bars, and washed with light rufous on the tips and margins, those nearest the scapulars having a black shaft-line, and remains of dark-brown bars; the rest of the under wing-coverts rich rufous, with a black shaft-stripe widening into an angular subterminal spot, and remains of blackish cross-bars; wing-coverts above dark ashy-brown, the outer series margined broadly on the outer, and slightly on the inner webs with rufous; the remainder ashy-brown at the base, blackish at the tips, and broadly margined with rich rufous, deepest in tint on the marginal feathers and shoulders; throat buff tinged with rufous, and having a narrow black stripe down the centre of each feather; sides of the face and ear-coverts dull dark brown, narrowly margined with buff, those nearest the sides of the neck tinged with rufous; the whole of the under surface of the body bright deep rufous, each feather (except the axillaries, thighs, and under tail-coverts) centered with a black streak, widest on the chest and breast, narrowing on the flanks, where it forms at the tips of the feathers a subterminal angular spot, almost obsolete or forming a narrow shaft-line only on the abdomen; tail below ashy-white (*glistening in certain lights*), crossed with bars of blackish-brown, the subterminal one broadest; upper surface of the tail dark, ashy-brown, crossed with (twelve or more) wavy bars of blackish-brown, the last deepest and broadest, the tips narrowly margined with white; inner webs of the lateral feathers almost white at the base, the bars broken, and the interspaces thickly mottled with dark ashy-brown; bill blackish horn colour, cere yellowish, iris deep yellow, legs and feet light yellow.

Total length 20 inches, wing 14·3, tail 9, tibia* 3·94, tarsus* 3, hind claw along the curve 1·35, across the curve 1·15; bill from forehead 1·1 inch, from gape 1·2, from nostril 0·7, height at nostril 0·5, width 0·45.

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* Measurements taken from ad. ♂ sk. the ends of the bones laid bare.

Adult female. Similar in plumage to the male but a little larger. Total length 22 inches, wing 15·8, tibia* 4·34, tarsus* 3·3, hind claw along the curve 1·8, across the curve 1·4.

Habitat. Rockingham Bay, Wide Bay District, Dawson River, New South Wales, Interior.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	22	16	11	imperf	imperf.	3·4	2·4	1·38
A 2 ♂	20	14	9·3	1·1	1·3	3·1	2·25	1·15
A 3 ♂	20	14	9·4	1·12	1·33	3·1	2·2	1·23
A 4 ♀	23	15·7	10·7	1·3	1·5	3·4	2·5	1·2

A 1 ♀ ad. sk.	Dawson River, Queensland.	Pch.
A 2 ♂ ad. sk.	,, ,,	Pch.
A 3 ♂ ad. sk.	Wide Bay, Queensland.	Pch.
A 4 ♀ ad. sk.	Cairns, N. E. Queensland.	Col.

4. ACCIPITER.

1. Accipiter cirrhocephalus.

The Collared Sparrow-hawk.

New Holland Sparrow-hawk, *Lath.*, *Gen. Syn. Suppl.*, *vol. ii*, p. 51 (1801).

Falco nisus, *var.*, *Lath.*, *Ind. Orn. Suppl.*, *vol. ii*, p. xi (1801).

Sparvius cirrhocephalus, *Viell. Nouv. Dict d'Hist.*, tom x, p. 329 (1817).

Accipiter torquatus, *Vig. and Horsf. Trans. Linn. Soc.*, vol. xv, p. 182 (1827); *Gould, Syn. Bds. Austr.* pt. iii (1838); *Gray, Gen. Bds.*, vol. i, p. 29 (1845); *Gould, Bds Austr.*, vol. i, pl. 19 (1848); *Bonap., Consp. Av.* tom. i, p. 33 (1850); *Gould, Handbk. Bds. Austr.*, vol. i, p. 45, sp. 19 (1865); *Ramsay, Proc. Zool. Soc.* 1875, p. 579; *Sharpe, Index. Gould's Works*, p. 3 (1893).

Urospiza torquata, *Kaup, Isis*, 1847, p. 181.

Accipiter cirrhocephalus, *Gray, List. Bds. Brit. Mus.* Accipitr. 2nd ed., p. 73 (1849); *Sparpe, Cat. Bds. Brit. Mus.*, vol i, p. 141 (1874); *Gurney, Ibis*, 1875, pp. 468–475; *Ramsay, Proc. Linn. Soc., N.S. W.*, vol. ii, p. 177 (1877); *Sharpe, Journ. Proc. Linn. Soc. Zool.*, vol. xiii, p. 488 (1878); *Salvad. Ann. Mus. Civ. Gen.*, vol. xii, p. 39 (1878); *id. Orn. Pap. et Molucc.*, vol. i, p. 67 (1880); *Ramsay, Proc.*

* Measurements taken from ad. ♀ mounted, the ends of the bones laid bare

Linn. Soc., N.S.W., vol. vii, p. 53 (1883); *Gurney, List Diurn. Bds. Prey*, p. 38 (1884); *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *id. Proc. Linn. Soc., N.S.W.*, vol. ii, 2nd ser., p. 166 (1888), *Derby, N.W. Austr.*; *North, Proc. Linn. Soc., N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs Austr. Bds.*, p. 5, pl. ii, fig. 6 (1889); *Salvad. Aggi. Orn. Pap. et Molucc.*, p. 21 (1889); *De Vis, Rep. Sci. Exped., N.E. Queensland*, p. 84 (1889); *Broadb., Proc. Roy. Soc., Queensland*, p. 15 (1889); *Cox and Ham., Proc Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 397 (1890); *Gurney, jun., Cat. Bds. Prey*, p. 21 (1894); *North and Keartl., Aves, Horn Exped. Centr. Austr.*, p. 54 (1896); *Keartl., Vict. Nat.*, vol. xiii, No. 5, p. 60 (1896).

Accipiter melanops, *Strickl. Orn. Syn.*, p. 111 (1855).

Nisus cirrhocephalus, *Schleg. Mus. Pays-Bas*, Astures, p. 38 (1862); *Finsch, New Guin.*, p. 155 (1865); *Schleg. Mus. Pays-Bas*, Revue Accipitr., p. 77 (1873).

Urospiza cirrhocephala, *Kaup. Proc. Zool. Soc.*, 1867, p. 176; *Gray, Hand-list. Bds.*, vol. i, p. 34 (1869).

Adult male. Above bluish ash-colour; head and wings slightly darker; sides of the face and ear-coverts lighter; a distinct collar of bright deep vinous red, broadest at the sides of the neck, where, in some specimens, a few of the feathers are also barred like those on the chest; basal portion of the nape feathers white; scapulars with concealed white spots, the lesser ones tinged and spotted in addition with vinous-red near the base; inner webs of secondaries, and of the primaries as far as the notch, ashy-brown; all crossed with dark ashy-brown bars, most conspicuous on the marginal basal portion of the inner webs, which is white or slightly shaded with pale rufous; tail above bluish ash-colour, inner webs having an ashy-brown tinge, crossed with dark ashy-brown bars; under surface light ashy-brown, whitish in certain lights, and the dark bars showing more distinctly; wings underneath light ashy-brown, whitish in certain lights; quills distinctly barred with dark brown, obsolete on outer webs; inner webs tinged and freckled with vinous red towards the base; under surface of shoulders and the under wing-coverts vary from buff to ashy-white, crossed with numerous narrow wavy bars of ashy-brown and vinous-red; throat ashy-white, with indistinct transverse bars of ashy-brown; under tail-coverts ashy-white, with remains of transverse bars of ashy-brown and vinous-red; chest and remainder of the under surface crossed with numerous narrow bars of ashy-brown, deep bright vinous-red, and white—the bars being broadest on the flanks and narrowest on the thighs; bill black, lead coloured at base, cere, legs, and feet yellowish, tinged with olive, iris yellow. Total length 12 inches, wing 8, tail 6,

tarsus 2·3, middle toe 1·3, its first joint 0·6, culmen 0·7. A very highly coloured male in the Museum collection, from King George's Sound, has the chest and flanks and thighs of a deep rich vinous-red, the cross-bars almost obsolete; the collar is of a much deeper tint than usual, but interrupted on the hind neck.

Adult female. Differs only in size, being a little larger and perhaps not so highly coloured as the male. Total length 14 inches, wing 9·35, tail 7, culmen 9, middle toe 1·55, its first joint 0·7.

Progress towards maturity. The longitudinal blotches on the chest widen into transverse bars, which gradually become narrower, the rufous markings develop into bars, and the brown becomes reduced into narrow conterminous lines; the white mottlings become less conspicuous on the back of the neck, and its sides tinged with rich vinous-red.

Young. Dark-brown above, with the feathers more or less margined with rufous; basal portions of the feathers on the nape and upper part of hind neck white, giving to those parts a mottled appearance; scapulars white at the base, barred with brown; the base of the feathers on the lower part of hind neck, back, and upper tail-coverts are ashy brown; quills of wings and tail dark-brown, margined with rufous at the tips, crossed with blackish-brown bars most numerous on the tail; the marginal half of the inner webs of the wing feathers at the base ashy-white, washed with pale rufous; same parts of the tail feathers light ashy-brown, tinged with rufous on the edges; shafts dull reddish-brown; under surface of the wings and tail ashy-white, the inner margins washed with pale rufous, except at the tips of primaries, which are ashy-brown past the the notch; all the under surface ashy-white, tinged with rufous on the thighs; throat white, with a stripe of dark-brown down centre of each feather; chest blotched with dark-brown, forming a triangular patch at the tip of each feather, which is centered with rufous; chest, breast, abdomen, flanks, and thighs, crossed with numerous transverse bands of dark-brown, the terminal band more conspicuously centered with rufous; the bands are narrowest and most numerous on the thighs; under tail-coverts sparingly barred with somewhat hastate markings of dark-brown; bill dark horn colour; base and cere greenish; feet and legs yellowish, greenish-grey in front; iris yellow.

Remark. The young females of this species are frequently confounded with the young males of *Astur approximans*, which they closely resemble in size and plumage. The *Accipiter's long middle*

toe, with its *long first joint*, its *shorter* and somewhat *square tail*, which never exceeds more than 7·6 inches, will at once distinguish them.

Habitat. Derby (N.W. Austr.), Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers District, New South Wales, Interior, Victoria, South and West Australia, Tasmania, New Guinea.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Its first joint.
A 1 ♀	14	9·3	7·6	0·9	0·97	2·5	1·55	0·7
A 2 ♂	12	8·1	6	0·6	0·7	2·35	1·3	0·6
A 3 ♀	14·3	9·3	7·1	0·8	0·9	2·45	1·55	0·7
A 4 ♂	12·7	8·2	6	0.65	0·8	2·4	1·4	0·6
A 5 ♀	14·5	9·4	7	0·8	0·95	2·6	1·65	0·7
C 1 ♀	13·5	9·3	7	0·8	0·9	2·45	1·6	0·7

A 1 ♀	ad. sk.	King George's Sound, West Australia.	Col.
A 2 ♂	ad. sk.	,, ,, ,,	Col.
A 3 ♀	ad. sk.	Gayndah, Queensland.	Col.
A 4 ♂	ad. sk.	Port Lincoln, South Australia.	Col.
A 5 ♀	ad. mntd.	New South Wales.	Pres
C 1 ♀	juv. sk.	King George's Sound, West Australia.	Col.

Sub-family AQUILINÆ.

5. AQUILA.

1. Aquila audax.

The Wedge-tailed Eagle.

Bold Vulture, *Lath. Gen. Syn. Suppl., vol. ii*, p. 10 (1801).

Vulture audax, *Lath. Ind. Orn. Suppl.*, p. 2 (1801).

Mountain Eagle of New South Wales, *Collins, New South Wales*, pl. opp., p. 525 (1804).

Aquila albirostris, *Vieill. Nouv. Dict. d'Hist. Nat.*, tom, i, p. 229 (1816); *Pucheran, Rev., et Mag. de Zool.* (1850), p. 81.

Falco fucosus, *Temm. Pl. Col.* tom. i, pl. 32 (1824).

Aquila fucosa, *Vig. Zool. Journ., vol. i,* p. 337 (1824); *Gould, Syn. Bds. Austr.* pt. iii (1838); *id. Bds. Austr.*, vol. i, pl. i (1848); *Sturt, Exped. Centr. Austr.*, vol. ii, App., p. 12 (1849); *Gulliver, Proc. Zool. Soc.* (1875), p. 491; *Sharpe, Index Gould's Works*, p. 16 (1893).

Aquila audax, *Gray, Ann. and Mag. Nat. Hist.*, vol. xi, p. 189 (1842); *id. Gen. Bds.*, vol. i, p. 14 (1845); *Gurney, Ibis.*, 1860, p. 171; *id. Ibis.*, 1862, p. 208; *Gould, Handbk. Bds. Austr.*, vol. i, p. 8, sp. i (1865); *Gray, Hand-list Bds.*, vol. i, p. 11 (1869); *Ramsay, Proc. Zool. Soc.*, 1875, p. 578; *Broadb., Proc. Roy. Soc., Queensland*, vol. i, p. 93 (1894, Cape York); *id. op. cit.*, vol. ii, p. 119 (1886); *id. op. cit.*, vol. iii, p. 24 (1887); *id. op. cit.*, vol. v, p. 14 (1889); *North, Nests and Eggs, Austr. Bds.*, p. 5, pl. i, fig. i (1889); *id. Proc. Linn. Soc. N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *Norton, Bull, No.* 1, *Dept. Agri., N.S.W.*, p. 246 (1890); *Cox and Ham., Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 398 (1890); *Sharpe, Index Gould's Works*, p. 16 (1893); *Newton, Dict. Bds.*, pt. i, p. 177 (1893); *Keartland, Aves, Horn Exped., Centr. Austr.*, p. 106 (1896); *id. Vict. Nat.*, vol. xiii, No. 5, p. 59 (1896); *Stirling, Anthro., Horn Exped., Centr. Austr.*, pp. 17–25 (1896); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 390 (1896).

Uroaetus fucosus, *Kaup, Classif. Säug. u. Vög.*, p. 121 (1844).

Aquila cuneicaudata, *Brehm, Isis*, 1845, p. 356.

Uroaëtus audax, *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 231 (1874); *Gurney, List Diurn. Bds. Prey*, p. 57 (1884); *Legge, Proc. Roy. Soc., Tas.*, vol. p. 237 (1886); *Gurney, jun., Cat. Bds. Prey*, p. 23 (1894).

Aquila (*Uroaëtus*) audax, *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. ii, p. 177 (1877); *id. Tab. List Austr. Bds.*, p. i (1888).

Adult female. Above blackish-brown, all the feathers white at the base; hind neck and nape tawny-chestnut; median wing-coverts ashy-brown, centered with blackish; primaries black; remainder of the quill feathers of the wings and the tail blackish, crossed near the tips with ashy-brown bars, and margined with brown at the tips; the basal portion of the inner webs light-ash, almost white in the tail feathers, and mottled with white in those of the wings; the feathers of the back and rump all more or less tipped with fulvous-brown; upper tail-coverts light-brown, shaded with ashy on their margins. The whole of the under surface blackish-brown, each feather more or less distinctly tipped or margined with light-brown; under tail-coverts buffy-brown. Cere and orbits whity-brown; bristles black; bill pale horn-brown, black at the tip and for a short distance along the culmen; feet yellowish; claws blackish horn-colour; iris hazel. Total length, 3 feet 6 inches, tail 17, wing 25·7, bill from posterior margin of cere 2·6, from anterior margin of cere 2·7, height from culmen to lower margin 1·2; tarsus 4·8, hind toe 2·1, its claw 2·6, middle toe 3·3, its claw 1·7.

Adult male. Similar in plumage to the female, but seldom quite so large; deeper in tint of colouring, the nape, hind neck and median wing-coverts being bright rufous-chestnut.

Young. General colour rusty-red intermixed with dark-brown; crown of the head dark-brown, each feather tipped with rufous fawn-colour; nape and hind neck rufous-chestnut, lower part of hind neck paler, and shaded with dark-brown, in the centre tipped with fulvous; on the back and rump dark-brown, lighter near the tips, which are fringed with whitish down; the base of the feathers mottled with white and brown in the form of broken transverse bars; upper tail-coverts shaded with light and dark brown, lateral and terminal ones of fulvous, some with a subterminal spot of fulvous, and all finally fringed with whitish down, and mottled with white and brown broken transverse bars at the base; tail black above, dark brown below, whitish at the base of the feathers, towards the tips barred transversely with light brown and tipped with fulvous; under tail-coverts fulvous tipped with down of a paler tint; shoulders above rufous fawn-colour, mesially shaded with dark-brown; smallest wing-coverts dark-brown slightly tipped with light-rufous, median coverts fawn-colour, greater coverts blackish-brown, indistinctly barred with ashy-brown, mottled with white near the base of the feathers; primaries black, dark ashy-brown mottled with white at the base; secondaries and scapulars blackish-brown barred near the tips with ashy-brown, which colour predominates on those nearest the body, the basal interspaces on the inner webs being white; under surface of the shoulders to the angle of the wing dark-brown tipped with whitish, from thence to the base of the primaries, fulvous shaded with dark-brown; under primary coverts brown, washed with ashy-brown at the base; under surface of quills dark-brown, at the base washed with ashy and mottled with white; the secondaries, inner primaries, and scapulars all crossed more or less distinctly with ashy-brown bars; throat and remainder of the under surface blackish-brown; feathers on lower part of the neck and chest tipped with rufous-fawn, the remainder tipped with whitish-brown, and fringed with white down. In a much younger bird the whole of the feathers, including the wing and tail quills, are fringed with down at the tips.

Nestling, Reg. No. A. 18558. "Taken from the nest, about two or three days old. Iris dark brown, feet whitish. Locality Moolah, Interior, N.S.W., August, 1883." Total length 6 inches, bill from forehead 0·9, from gape 0·95; tarsus 0·8. Entirely covered with snow-white down, long on the thighs and legs, longest upon the head and hind neck where the down is erect and hairy.

Nestling, Reg. No. B. 6431. "Taken from the nest near Mossgiel, N.S.W., September 12, 1884." About a fortnight old, uniformly covered with white down, hairy in texture and longest on the head and hind neck, very short on the inner side of the thighs and under the wings. "Iris brown, bare plate in front of the eyes lead colour; cere greenish-white; bill, horn-colour; black at the tip; gape yellow; feet white, claws light horn-colour, dark at the base. Total length 11 inches, wing 3, pin-feathers of the primaries just beginning to show through the down, tarsus 1·3, bill from forehead 1·4, from gape 1·5.

Nestling, Reg. No. B. 10145. "Taken from the nest September 30th, 1884; about two months old; iris clear light-brown, cere greenish-white; bill, basal half horn colour, remainder black; feet white." Total length 21 inches, wing 10 inches, tail 4·3, tarsus 3·5, mid. toe (s.u.) 2·5, bill from forehead 2·2, from gape 2·3. This specimen is covered with short white down, except on the wings and tail, where black pin-feathers mottled with rusty-brown appear; a small patch of narrow lanceolate feathers of dark rusty-brown on the base of the occiput; the tips of a few black feathers also appear through the down; the sides of the chest, breast, and the outer sides of the thighs and legs, and the upper and under tail-coverts rusty.

Nestlings, Reg. Nos. B. 6422, and B. 6423. Taken from the same nest, between three and four months old, have rufous feathers tipped with down developing on the head, hind neck, chest, wing-coverts, upper and under tail-coverts, primaries—as far as developed—black; secondaries and coverts dark-brown barred with black; tail blackish at the base barred with black and ashy-brown towards the tip; feathers of the lower part of the breast blackish-brown tipped with fawn colour; thighs and legs almost black tipped with light brown. A second specimen, a female is of the same dimensions and similarly marked. Total length 255. inches, wing 14, tail 7·7, tarsus 3·9, "iris clear light-brown; bill, horn colour at base, remainder black; cere bright yellow; feet yellowish, claws black, sex male. Mossgiel, October 13th, 1884."

Remarks. "As a rule this bird nests in the early part of July, and the young leave the nest about the end of November; young ones have been taken as early as the 10th of July, which were apparently about a week old, such instances of early breeding are however rare." (K.H.B.)

Habitat. Derby (N.W. Austr.), Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South and West Australia, Tasmania.

Measurements of averaged-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	42	25	18	2·4	3·4	4·7	3·2	2
A 2 ♀	42	24·5	17·5	2·4	3·4	4·5	3·3	2·2
A 3 ♂	43	25·6	17·5	2·6	3·5	4·5	3·3	2·1
A 4 ♂	42	23·5	16·5	2·3	3·2	4·2	2·9	1·5
C 1 ♀	34	20	13	2·45	3	4·3	2·9	1·6

A. 1 ♀ ad. sk.	Wide Bay, Queensland.	Col.
A. 2 ♀ ,, mntd.	New South Wales.	Pres.
A. 3 ♂ ad. sk.	Ouse River, Tasmania.	Col.
A. 4 ♂ ,, ,,	New South Wales.	Pres.
C. 1 ♀ juv. sk.	Wide Bay, Queensland.	Col.

6. NISAETUS.

1. Nisaetus morphnoides.

The Little Eagle.

Aquila morphnoides, *Gould, Proc. Zool. Soc.* 1840, p. 161 ; *id. Bds. Austr.*, vol. i, pl. 2 (1848) ; *Bonap. Consp. Av.*, tom. i, p. 14 (1850) ; *Strickl., Orn. Syn.*, p. 62 (1855) ; *Gray, Hand-list Bds.*, vol. i, p. 12 (1869) ; *Bennett, Ibis*, 1884, p. 465 ; *Broadb., Proc. Roy. Soc., Queensld.*, vol. iii, p. 24 (1887) ; *id. op. cit.*, vol. v, p. 14 (1889) ; *North, Nests and Eggs, Austr. Bds.*, p. 6, pl. ii, fig. 1 (1889) ; *Sharpe, Index Gould's Works*, p. 17 (1893) ; *Keartl., Vict. Nat.*, vol. xiii, p. 60 (*Centr. Austr.*, 1896).

Butaëtus morphnoides, *Blyth, Journ. As. Soc. Beng.*, vol. xiv, p. 546 (1845).

Hieraetus cristatus, *Blyth, Journ. As. Soc. Beng.*, vol. xv, p. 4 (1846).

Hieraetus morphnoides, *Kaup, Isis*, 1847, p. 243 ; *Gould, Handbk. Bds. Austr.*, vol. i, p. 11, sp. 2 (1865).

Nisaetus morphnoides, *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 254 (1874) ; *id. Proc. Zool. Soc.*, 1875, p. 338 ; *Gurney, Ibis*, 1877, p. 419, *id. op. cit.* 1882, p. 454 ; *id. List Diurn. Bds. Prey*, p. 53 (1884) ; *Gurney, jun., Cat. Bds. Prey*, p. 23 (1894).

Aquila (Nisaetus) morphnoides, *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. ii, p. 177 (1877) ; *id. Tab. List Austr. Bds.*, p. i, (1888).

Adults. Both the male and the female vary considerably, both in size and in the intensity of the colouring and tints, in some the prevailing colour below being rufous brown, in others buff or white.

Adult female (*the most usual variety*). The whole of the head and neck, chest, breast, and flanks, dark-brown washed with tawny rufous or dull rust-red, each feather with a stripe of blackish-brown down the centre, which stripe becomes almost jet black on the crown of the head, nape, and sides of the face, and extends over the tips and greater portion of each feather; abdomen and thighs rufous-brown, with a narrow line of blackish down the shaft of each feather; under tail-coverts dull rufous-brown washed with ashy at the tips and freckled with ashy-brown and white (*in some* forming white cross-bars). Primaries blackish-brown, black at the tips, the inner four quills ashy-brown, margined with white at the tips, all crossed with seven or eight blackish bands, interspaces at the base ashy-white; secondaries varying from dark to light ashy-brown, lightest at the base of inner webs, all more or less tipped with white and barred similar to the primaries; wing-coverts of various shades of light and dark brown, some washed with ashy-brown, indistinct obsolete bars on most of them on the concealed portions, interspaces whitish; median coverts ashy-brown shaded mesially with darker tint, and margined with ashy-white, forming a light-coloured and more or less broad longitudinal band across the wing to the shoulder; larger scapulars dark blackish-brown, the basal half of the feathers becoming lighter, barred like the secondaries; smaller scapulars and remaining coverts lighter brown shaded mesially with darker, occasionally margined with ashy-white, as in the median coverts; all the wing feathers being white at the base; shoulders varying from dark to light brown, the feathers all more or less margined with ashy-white, the central portion darker, the marginal feathers brown washed with rufous, having a blackish shaft-line; under surface of the wings blackish-brown tinged with rufous near the body, the primaries and secondaries ashy-brown, lighter on the inner webs, the cross-bars of the upper surface showing through, the interspaces ashy-brown becoming white at the base, secondaries margined with white at the tips, tips of the primaries blackish-brown, shafts brown, white at the base; under surface of the scapulars ashy, inner webs ashy-white, bases white, bars indistinctly showing through on the larger feathers; back and rump dark-brown, shaded mesially with blackish-brown, feathers white at the base; central upper tail-coverts, blackish-brown, lateral ones ashy-brown washed with rufous nearest the thighs; terminal ones ashy-brown tipped with white, outer ones margined with white and occasionally crossed with whitish bars; tail above ashy-brown, inner webs of a duller brown, their bases white mottled with brown, all the feathers crossed with seven or eight curved bars of dark-brown, the last the darkest, the tips margined with ashy-white, shafts brownish, at the base white; tail below glistenig ashy-white, two or three of the bars showing through near the tips;

cere lead-blue; bill bluish lead at base, black at the tip; iris reddish-brown; feet lead blue. Total length 22 inches, wing $15\frac{1}{2}$, tail $9\frac{1}{2}$, tarsus $2\frac{3}{4}$, bill 1·4.

A very remarkable variety, apparently fully adult, has the sides of the head and hind neck tawny rufous with a blackish stripe down the centre of each feather; the under wing-coverts and basal portions of the inner webs of the primaries below pure white, with a linear or lanceolate mark of brown or pale rufous, on the shaft or near the tips of the feathers; the axillaries and some of the under wing-coverts have two or three such marks, the terminal one being usually broadest; sides of the chest and flanks buff washed with light rufous, with a blackish-brown stripe down the centre of each feather; thigh and legs to the toes buff shaded with light rufous, under tail-coverts buff, abdomen white; the inner primaries above the secondaries and feathers of the longitudinal band across the wing are largely margined with whitish ash.

Adult male. In plumage similar to the females, but in size much smaller, they are usually darker in colour, and the abdomen, flanks, and thighs of a more uniform tint of rufous, the shaft lines always darker.

Nestling, Reg. No. B. 6429. "Taken from the nest, December 24th, 1883, just hatched." Total length 3·5 inches, bill from forehead 0·6, from the gape 06·5; covered with creamy-white down, erect and hairy upon the upper surface; "iris pale brown, cere yellowish, bill light horn colour. feet flesh colour."

Nestling, Reg. No. B. 10147. "Taken from the nest, November 5th, 1884, Mossgiel, New South Wales." Total length 4.5 inches; bill from forehead 0 85, from gape 0·9; slightly larger than the preceding; colouring the same. "Iris dark-brown, cere yellowish; bill dark horn colour; feet yellowish-white, claws light horn colour."

Nestling, Reg. No. B. 6427. "Taken from the nest, December 7th, 1883, Mossgiel, Interior, N.S.W." Total length 9·7 inches, wing 4·5, bill 1·2, from gape 1·3; covered with short white down below the head and the neck; interscapular region, scapulars, and the primaries blackish-brown; upper wing-coverts brown, tinged here and there with rufous-brown, the tips of a few rufous pin-feathers showing upon the sides of the chest. "Iris light brown, bill black, cere greenish; feet yellowish-white, claws black, bare space round the eyes dark lead colour."

Nestling, B. 10146. "Taken from the nest, December 4th, Mossgiel, New South Wales; iris clear light brown, cere yellowish, bill bluish horn colour at base, remainder black, bare space around the eyes lead colour, feet yellowish-white." Total length 12·5 inches, wing 6·2, bill from forehead 1·2, from gape 1·4, from nostril 0·7; similar to the preceding, the down very much shorter and the hairy portions worn off, a few rusty feathers

on the occiput, nape and interscapular region, those on the shoulders, scapulars, and back dull-brown, dark in the centre; primaries black, tipped with light-brown, a few brown feathers upon the rump and upper tail-coverts, pushing through the down, dark-brown; tail dark brown margined with ashy-white and tipped with white down; rufous tinge on some of the pin-feathers of the under tail-converts; a few rufous feathers appearing on the sides of the breast and centre of the abdomen. "Iris clear light brown, cere yellowish, bill bluish horn colour, tip black; bare space in front and around the eyes lead colour, feet yellowish-white."

Nestling, Reg. No. B. 6428. Taken from nest, December 24th, 1883, Interior, N.S. Wales, about two months old, or more. "Iris light brown; bill horn colour at base, tip black; cere yellowish; feet greenish-white, claws black; bare space in front and around the eyes blackish." A much more advanced bird than the last. Total length 14 inches, wing 8·7, tail 4, bill from forehead 1·35, from gape 1·5, from nostril 0·75, tarsus 2·2, mid. toe (s.u.) 1·75. Rufous feathers on the head and nape covering the down, interscapular region brown, slightly tinged with rufous; wing-coverts dark-brown, shaded with ashy-brown and margined with ashy at the tips; primaries black, slightly tipped with ashy-white; secondaries dark brown, ashy at the tips showing blackish bars; on the under surface the bars on the secondaries are well-defined; chest, and all the under surface, sides, and under tail-coverts rufous, a few feathers only above the flanks fully developed; throat and sides of the neck with very short down.

Habitat. Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Central Australia, West Australia.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe (s.u.)	Hind toe (s.u.)
A 1 ♀	21·5	15·5	9·5	1·4	1·7	2·8	2	1·3
A 2 ♀	21	15·2	8·5	1·45	1·7	2·6	2·1	1·3
A 3 ♂	17·5	13·7	8	1·2	1·5	2·2	1·7	1
A 4 ♂	16·2	13	8	1·1	1·4	2·1	1·5	1
A 5 ♂	16·6	13·5	8·1	1·2	1·5	2·2	1·6	1·1

A 1 ♀ ad. sk. King George's Sound, West Australia. Col.
A 2 ♀ ad. sk. Barcoo River, New South Wales. Pres.
A 3 ♂ ad. sk. King George's Sound, West Australia. Col.
A 4 ♂ ad. sk. Near Sydney, New South Wales. Pres.
A 5 ♂ ad. sk. Queensland. Pch.

7. HALIAETUS.

1. Haliaetus leucogaster.

The White-bellied Sea Eagle.

White-bellied Eagle, *Lath. Gen. Syn.*, vol. i, p. 33 (1781).

Falco leucogaster, *Gmel. Syst. Nat.*, tom. i, p. 257 (1788 ex Lath.); *Lath. Ind. Orn.*, vol. i, p. 13 (1790); *Daud. Traité d'Orn*, tom. ii, p. 49 (1800); *Temm. Pl. Col.*, tom. i, pl. 49 (1823).

Falco dimidiatus, *Raffl. Trans. Linn. Soc.*, vol. xiii, p. 277 (1822).

Pandion blagrus, *Bonn. et Vieill. Enc. Méth.*, p. 1200 (1823).

Haliaetus leucogaster, *Vig. Zool. Journ.*, vol. i, p. 336 (1824); *Less. Man. d'Orn.*, tom. i, p. 85 (1828); *Gould, Syn. Bds. Austr.*, pt. 3, pl. 36, fig. i (1838); *Moore, Proc. Zool. Soc.* 1854, p. 261; *Strickl. Orn. Syn.*, p. 53 (1855); *Gurney, Ibis*, 1862, p. 36; *Schleg. Mus. Pays Bas*, Aquilæ, p. 14 (1862); *Jerd. Bds. Ind.*, vol. i, p. 84 (1862); *Finsch, New Guin.*, p. 154 (1865); *Blair, Ibis*, 1866, p. 221; *Finsch et Hartl. Faun. Centralpolyn*, p. 1 (1867); *Schleg. Mus. Pays Bas*, Revue Accipitr., p. 117 (1873); *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 307 (1874); *Ramsay, Proc. Linn. Soc., N.S. W.*, vol. i, p. 369 (1877); *Castle. and Rams., Proc. Linn. Soc., N.S. W.*, vol. i, p. 379 (1877); *Sharpe, Ibis*, 1879, p. 236; *Sclat. Voy. Chall. Bds.*, p. 30 (1881); *Gurney, Ibis*, 1882, p. 235; *id. List. Diurn. Bds. Prey*, p. 113 (1884); *Broadb., Proc. Roy. Soc., Queensld.*, vol. i, p. 93 (1884); *Forbes, Proc. Zool. Soc.*, 1884, pp. 426, 431; *Guill. Proc. Zool. Soc.*, 1885, p. 545; *Ramsay, Tab. List. Austr. Bds.*, p. 1 (1888); *North, Proc. Linn. Soc., N.S. W.*, vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs Austr. Bds.*, p. 7, pl. 1, fig. 2 (1889); *id. Proc. Linn. Soc. N.S. W.*, vol. iv, 2nd ser., p. 1024 (1890); *Oates, Nest and Eggs Ind. Bds.*, p. 161 (1890); *Sharpe, Index Gould's Works*, p. 145 (1893); *Newton, Dict., Bds.*, pt. i, p. 176 (1893); *Sharpe, Ibis*, 1894, p. 258; *Gurney, jun., Cat. Bds. Prey*, p. 23 (1894); *Gabriel, Vict Nat.*, vol. xiii, No. 1, p. 8 (1896); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 386 (1896); *Everett, Nov. Zool.*, vol. iii, p. 597 (1896).

Falco oceanica, *Less. Voy. de la Coq. Zool.*, tom. i, p. 343 (1826).

Haliaetus dimidiatus, *Vig. Mem. Raffl.*, p. 648 (1830); *Gray, Gen. Bds.*, vol. i, p. 17 (1845); *Strickl., Orn. Syn.*, p. 54 (1855).

Haliaetus sphenurus, *Gould, Proc. Zool. Soc.*, 1837, pp. 97, 138 (juv.); *id. Syn. Bds. Austr.*, pt. 3, pl. 37, fig. 2 (1838).

Ichthyaetus leucogaster, *Blyth, Journ. As. Soc. Beng.*, vol. xi, p. 110 (1842); *Gray, Cat.* Acciptr. *Brit. Mus.*, p. 13 (1844); *Gould, Bds. Austr.*, vol. i, pl. 3 (1848); *Macgill. Voy. Rattlesn*, vol. ii, p. 356 (1852); *Sclat. Journ. Proc. Linn. Soc.*, vol. ii, p. 154 (1858); *id. Ibis*, 1860, p. 322; *Diggles, Orn. Austr.*, pt. 5 (1866); *Buller, Bds. New Zeal.*, ed. i, p. 16 (1873).

Ichthyaetus cultrunguis, *Blyth. Journ. As. Soc. Beng.*, vol. xi, p. 110 (1842).

Pontoaetus leucogaster, *Gray, Gen. Bds.*, vol. i, p. 8 (1845).

Cuncuma leucogaster, *G. R. Gray, Cat.* Accipitr., *Brit. Mus.*, p. 24 (1848); *Wall, Ibis*, 1868, p. 15; *Gray, Hand-list*, vol. i, p. 17 (1869); *Gray, Ann. and Mag. Nat. Hist.*, ser. 4, vol. v, p. 329 (1870); *Wald. Trans. Zool. Soc.*, vol. viii, p. 35, sp. 149 (1872)

Hume, Nests and Eggs Ind. Bds., p. 48 (1873); *Salvad. Cat. Ucc. Born.*, p. 5 (1874); *id. Ann. Mus. Civ. Gen.*, vol. vii, p. 750 (1875); *D'Alb., Sydn. Mail*, 1877, p. 248; *Meyer, Ibis*, 1879, p. 56; *Salvad. Orn. Pap. et Molucc.*, vol. i, p. 7 (1880); *id. Voy. Chall. Bds.*, p. 73 (1881); *Blas. Proc. Zool. Soc.*, 1882, p. 698; *Guill. Proc. Zool. Soc.*, 1885, p. 562; *Salvad. Aggiunte. Orn. Pap. et Molucc.*, p. 11 (1889); *id. Ann. Mus. Civ. Gen.*, 2nd ser., vol. xvi, p. 58 (1896).

Blagrus leucogaster, *Blyth, Cat. Bds. Mus. As. Soc. Beng.*, p. 30 (1849); *id. Ibis*, 1863, p. 22; *Swinhoe, Ibis*, 1870, p. 86; *Blyth, Bds. Burmah*, p. 64 (1875).

Cuncuma leucogastra, *Sclater, Ibis*, 1859, p. 328.

Polioaetus leucogaster, *Gould, Handbk. Bds. Austr.*, vol. i, p. 13, sp. 3 (1865); *Ramsay, Proc. Zool. Soc.*, 1875, p. 578.

Adult female. The whole of the head and neck, and all the under surface of the body and under wing-coverts white, some of the lateral wing-coverts shaded with ashy-grey on the outer webs, the greater coverts, ashy-grey becoming white at the base, and shaded with white along the margins and at the tips; remainder of the under surface of the wings ashy-grey, the primaries shaded with a blackish tinge towards the tips, and the secondaries shaded with white at the tips; tail ashy-black towards the base, the terminal third being white; the inner webs on the under surface mottled with white, and the extreme base white; under tail-coverts white, concealing the ashy-black basal portion; the upper surface of the body and wings ashy-grey; the tips of the primaries blackish, and upper tail-coverts dark ashy-grey; the basal portion of the tail above ashy-black; the secondaries slightly margined at the tips with ashy-white; iris yellowish-brown; cere, lores, and base of the bill lead-colour; culmen greenish-brown; feet yellowish; claws black. Total length 30 inches, wing 23·8, tail 11·7, tarsus 4·1, bill 2·4, culmen 3·0, middle toe 3·0, hind toe 1·6.

Adult male. Is the same in plumage, but slightly smaller in size. Total length 28·5 inches, wing 22·3, tail 10·5, tarsus 4·0, bill 2·0, culmen 2·6, middle toe 2·9, hind toe 1·6.

Progress towards maturity. The throat, abdomen, flanks, and under tail-coverts become white first; the chest retaining its brown markings until about the third year, when a broad central line of white, with a brown or black hair line down the shaft, appears; the white and brown markings of the body above grow out and change to ashy-grey, which increases and becomes darker in tint each year until the basal portion of the tail and the tips of the primaries past the notch become in the adult almost black; the brown on the terminal third of the tail becomes freckled, and lastly white, like the head and neck; in some apparently adult birds there is a hair-line of black or brown down the shaft of many feathers on the chest, head, and neck.

Young. Brown above all the feathers, margined at the tips with lighter brown, shafts dull brown, the nape and hind neck sometimes tinged with tawny, back and rump of a darker dull brown, the feathers tipped with whitish-brown; wings dark-brown, feathers margined at the tips with whitish-brown; shoulders and smaller wing-coverts margined with whitish; primaries dull brown, blackish-brown at the tips, white freckled with dark-brown at the base, especially on the inner webs; secondaries becoming whitish at the base, more extensively on the inner webs, and freckled with brown; head and neck dull brown, sometimes tinged with tawny, streaked with brownish-white down the centre of each feather, shafts blackish; throat buff; under surface rufous-brown, each feather centered with a streak of buff, and tipped with buffy-white; flanks, abdomen, and under tail-coverts buff, freckled with brown; legs brown with a broad shaft stripe of deep buff; axillaries and under wing-coverts buff; base of the primaries and their coverts white, freckled with brown; under surface of shoulders dull brown, margined with deep buff; tail beneath white freckled with dark brown and tipped with white; above white, freckled with brown and becoming darker brown near the ends, which are margined and tipped with white, base white; upper tail-coverts similarly marked to the tail, but of a lighter brown.

Habitat. The coastal districts of Australia and Tasmania, and sometimes being found on the continent, a distance of 300 miles inland; New Guinea, the whole of the Malay Archipelago, and extending to Ceylon and India.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	27.5	23	10·5	2	2·6	4	2·9	1·6
A 2 ♀	30	23·8	11·7	2·4	3	4·1	3	1·6
A 3 ♂	26·5	22·7	10·6	2	2·6	3·9	2·8	1·6
A 4 ♂	28·5	22·3	11·2	2·1	2·6	3·7	2·5	1·6
B 1 ♂	28·3	23·5	13	2·15	2·6	3·8	2·7	1·6
B 2 ?	28·7	22·7	11·6	2·1	2·7	4	2·9	1·7
B 3 ♀	30·3	23·6	12·3	2·1	2·6	4	2·8	1·6

A 1	♂	ad. sk.	Gayndah, Burnett River, Queensland.	Col.
A 2	♀	ad. mntd.	Port Macquarie, New South Wales.	Col.
A 3	♂	ad. mntd.	New South Wales.	Pres.
A 4	♂	ad. sk.	Wide Bay, Queensland.	Col.
B 1	♂	semi-ad. sk.	Port Macquarie, New South Wales.	Col.
B 2	?	semi-ad. sk.	Wide Bay, Queensland.	Col.
B 3	♀	semi-ad. mntd.	Port Macquarie, New South Wales.	Col.

8. HALIASTUR.

1. Haliastur girrenera.

The Red-backed Fish-eagle.

Falco ponticerianus, *Shaw and Nodd, Nat. Miscl.*, vol. x, pl. 389 (1799).

White-headed Rufous Eagle, *Lath. Gen. Hist.*, vol. i, p. 218 (1821).

Haliaetus girrenera, *Vieill, Gal. Ois.*, tom. i, p. 31 (1825); *Less. Voy. Coq. Zool.*, tom. i, p. 615 (1828); *Blyth, Ibis*, 1865, p. 28.

Haliaetus leucosternus, *Gould, Proc. Zool. Soc.*, 1837, p. 138; *id. Syn. Bds. Austr.*, pt. iii, pl. 3, fig. i (1838); *id. Intr. Bds. Austr.*, p. 18.

Haliastur leucosternus, *Gould, Bds. Aust.*, vol. i, pl. 14 (1848); *Gray, Gen. Bds.*, vol. i, p. 18 (1845); *id. List Bds. Brit. Mus.*, Accipitr., p. 27 (1848); *Bonap. Consp. Av.*, tom. i, p. 15 (1850); *Macgill. Voy. Rattles.*, vol. ii, p. 356 (1852); *Strickl., Orn. Syn.*, p. 75 (1855); *Sclat., Journ. Proc. Linn. Soc.*, vol. ii, p. 154 (1857); *Gray, Proc. Zool. Soc.*, 1858, p. 189; *id. Cat. Bds. New Guin.*, p. 54 (1859); *Sclat., Ibis*, 1860, p. 322; *Wall., Proc. Zool. Soc.*, 1863, p. 21; *Gould, Handbk. Bds. Aust.*, vol. i, p. 17, sp. 4 (1865); *Ramsay, Proc. Zool. Soc.*, 1867, p. 393; *Gray, Hand-list Bds.*, vol. i, p. 18 (1869); *Diggles, Orn. Austr.*, pt. 17 (1870); *Ramsay, Proc. Zool. Soc.*, 1875, p. 578; *Masters, Proc. Linn. Soc., N.S.W.*, vol. i, p. 45 (1876): *id.* op. cit., vol. ii, p. 269 (1877); *Meyer, Ibis*, 1879, p. 56; *Sharpe, Index Gould's Works*, p. 145 (1893).

Haliaetus leucosternon, *Kaup, Isis*, 1847, p. 275.

Haliastur leucosternon, *Bonap. Rev. et Mag. de Zool.*, 1854, p. 533.

Haliastur leucosternus, *var.*, *Gray, Proc. Zool. Soc.*, 1858, p. 169; *id., Cat. Bds. Trop. Isl.*, p. 2 (1859); *id. Proc. Zool. Soc.*, 1860, p. 342; *id. Proc. Zool. Soc.*, 1861, p. 433.

Haliastur leucosternum, *Blyth, Ibis*, 1865, p. 28.

Haliastur girrenera, *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 315 (1874); *Salvad. et D'Alb. Ann. Mus. Civ. Gen.*, vol. vii., p. 804 (1875); *D'Alb. Syd. Mail*, 1877, p. 248; *Sclat. Proc. Zool. Soc.*, 1877, p. 109; *Salvad. Ann. Mus. Civ. Gen.*, xii, p. 34 (1878); *id. Proc. Zool. Soc.*, 1878, p. 91; *Gurney, Ibis*, 1878, p. 466; *Sharpe, Journ. Linn. Soc.*, vol. xiii, p. 246 (1879); *Salvad. Orn. Pap. et Molucc.*, vol. i, p. 15 (1880); *id. Voy. Chall. Bds.*, p. 73 (1881); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. vii, p. 29 (1882); *Tristr. Ibis*, 1882, p. 141; *Salvad. Proc. Zool. Soc.*, 1883, p. 51; *Forbes, Proc. Zool. Soc.* 1884, p. 431; *Gurney, Diurn. Bds. Prey.* p. 79 (1884); *Pleske, Bull. Acad. Petersb.*, 1885, p. 617; *Grant, Proc. Zool. Soc.*, 1887, p. 329; *Broadb., Proc. Roy. Soc., Queensld.*, vol. v, p. 14 (1889); *Salvad. Aggiunte Orn. Pap. et Molucc.*, p. 12 (1889); *Tristr. Ibis*, 1892, p. 298; *Gurney, jun., Cat. Bds. Prey*, p. 26 (1894); *Salvad. Ann. Mus. Civ. Gen.*, 2nd ser., vol. xvi, p 58 (1896); *Hartert, Nov. Zool.*, vol. iii, p. 536 (1896).

Haliastur indus, var. leucocephalus, *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. i, p. 369 (1876).

Haliastur indus, var. girrenera, *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. ii, 2nd ser., p. 166 (1888).

Haliastur indus, subsp. girrenera, *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs Austr. Bds.*, p. 8 (1889).

Haliastur indus girrenera, *Hartert, Nov. Zool.*, vol. iii, p. 248 (1896).

Adult male. The whole of the head, neck, chest, and breast snowy white, the tips of the primaries above past the notch black, below black, shaded in certain lights with brown along the shaft, which is white at the base; tips of the tail above white, which extends more over the centre two and adjacent feathers, the outer two on either side with no white, the next to them with only a wash white round the margin of the tips, under surface of the tail, except the afore-mentioned white tipped portions light cinnamon red; the secondaries and base of the primaries rich cinnamon red; the remainder of the upper and under surface bright, rich, deep chestnut (or deep maroon chestnut); cere, legs, and feet yellow; bill light horn colour, bluish lead-colour at the base. Total length, 18·5 inches, wing 15·3, tail 7·7, tarsus 2 inches.

Adult female. Similar to the male, but slightly larger. Total length 21 inches, wing 15·5, tarsus, 2·3, tail 8·6.

Young. Head and neck dull creamy white, washed with brown at the base and along the margins of the feathers, giving to these parts a striped appearance; face brown; throat and chest whitish; breast light rufous-brown, streaked with ashy-white down the centre of each feather; abdomen, thighs, and under tail-coverts dull white, margined with light rufous-brown; primaries blackish-brown, secondaries washed with rufous, becoming white at the tips; tail rufous-brown, tipped with whitish.

Remark. In some specimens the primary coverts above, nearest the margin of the shoulders have a black shaft-stripe and remains of black cross-bars, the latter also are noticeable on the inner webs of some of the inner primaries and inner secondaries, and on the tail feathers. The plumes covering the flanks, and the feathers at the upper joint of the thighs also, are occasionally white, as well as the small feathers at the base of the scapulars; the smaller scapulars have occasionally black shaft-lines and also transverse bars of black on their concealed portions, basal portions white. These facts will assist in bearing out Mr. Sharpe's opinion, with which I entirely coincide, that the Australian bird (*Haliastur girrenera*) cannot be admitted to hold full specific rank, but with *Haliastur intermedius* (Gurney) must be considered a fixed variety of the Indian Fish-Hawk (*Haliastur indus*).

Habitat. Derby (N.W. Austr.), Port Darwin, Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Northern Coastal Districts of New South Wales, New Guinea, Celebes, Louisiade Archipelago, Solomon Islands.

Measurements of average-sized specimens.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	18	15·6	8	1·4	1·7	2	1·4	0·8
A 2 ♂	17·5	15·6	8	1·4	1·7	2	1·35	0·9
A 3 ♀	19·5	15·6	9	1·45	1·7	2·1	1·5	0·9
A 4 ♀	19	15	9	1·5	1·8	2·1	1·4	0·97

A 1 ♂ ad. mntd. Port Denison, Queensland. Col.
A 2 ♂ ad. mntd. ,, ,, Col.
A 3 ♀ ad. mntd. ,, ,, Col.
A 4 ♀ ad. mntd. ,, ,, Col.

2. Haliastur sphenurus.

The Whistling Eagle.

Cinereous Eagle, *var. Lath Gen. Syn. Suppl.*, p. 18 (1801); *Shaw. Gen. Zool.*, vol. vii, p. 80 (1809).

Milvus sphenurus, *Vieill. Nouv. Dict. d'Hist. Nat.*, tom. xx., p. 564 (1818); *id. Enc. Méth.*, p. 1204 (1823); *Vieill. Gal. Ois.*, tom i, p. 41, pl. 15 (1825); *Less, Traité d'Orn.*, p. 71 (1831); *Swains. Classif. Bds.*, vol. ii, p. 212 (1837).

Haliaetus canorus, *Vig. and Horsf., Trans. Linn. Soc.*, vol. xv, p. 187 (1826); *Less, Man. d' Orn.*, tom. i, p. 86 (1828); *id. Traité d' Orn.* p. 44 (1831); *Gould, Syn. Bds. Austr.*, pt. iii, pl. 3, fig. 2 (1838); *Gray, List Bds. Brit. Mus. Accipitr.*, p. 12 (1844).

Haliastur sphenurus, *Gould, Bds. Austr.*, vol i, pl. 5; *Gray, List Bds Brit. Mus. Accipitr.* p. 27 (1844); *id. Gen. Bds.*, vol. i, p. 18 (1845); *Bonap. Consp. Av.* tom. i, p. 15 (1850); *id. Rev. et Mag. de Zool.*, 1854, p. 532; *Sturt. Exp. Centr. Austr. App.*, p. 13 (1849); *Strickl., Orn. Syn.*, p. 74 (1855); *Gray., Proc. Zool. Soc.* 1858, p. 189; *id. Cat. Bds. New Guin.*, p. 54 (1859); *Sclater, Ibis.* 1859, p. 276; *Verr. et. Des Murs, Rev. et Mag. de Zool.*, 1860, p. 385; *Finsch. New Guin.*, p. 154 (1865); *Gould, Hand-bk. Bds Austr.*, vol i, p. 20, sp. 5 (1865); *Ramsay, Proc. Zool. Soc.*, 1867, p. 393; *Gray, Hand-list,* vol. i, p. 18 (1869); *Sharpe, Cat. Bds. Brit. Mus.*, vol i, p. 316 (1874); *Salvad. et D'Alb. Ann. Mus. Civ. Gen.* vii, p. 804 (1875); *Ramsay, Proc. Linn. Soc., N.S. W.*, vol. i,

p. 387 (1876); *Marie, Ibis*, 1877, p. 361; *Salvad., Ann. Mus. Civ. Gen.*, vol xii, p. 35 (1878); *Gurney, Ibis*, 1878, p. 460; *Masters, Proc. Linn. Soc., N.S.W.*, vol. ii, p. 269 (1878); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. iii, p. 246 (1879); *Salvad., Orn. Pap. et Molucc.*, vol i, p. 19 (1880); *Finsch, Vög. d Südsee*, p. 24 (1884); *Gurney, List Diurn. Bds. Prey*, p. 80 (1884); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii, 2nd series, p. 166 (1888); *id. Tab. List Austr. Bds.*, p. 1 (1888); *Broadb., Proc. Roy. Soc., Queensld.*, p. 14 (1889); *Salvad. Aggiunte Orn. Pap. et Molucc.* p. 12 (1889); *North, Proc. Linn. Soc. N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs Austr. Bds.*, p. 9, pl. iv, figs. 1 and 2 (1889); *id. Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 1024 (1890); *Norton, Bull. No.* 1 *Dept. Agric., N.S.W.*, p. 246 (1890); *Sharpe, Index Gould's Works*, p. 145 (1893); *De Vis, Ann. Rep. Brit. New Guin., App. E.E.*, p. 99 (1894); *Keartl., Aves. Horn Exped. Centr. Austr.*, p. 106 (1896); *id. Vict. Nat.*, vol. xiii, No. 5, p. 60 (1896); *Salvad., Ann. Mus. Civ. Gen.*, 2nd ser., vol. xvi, p. 58 (1896); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 384 (1896).

Haliaetus (Ictinaetus) canorus, *Kaup, Isis*, 1847, p. 277.

Haliaetus sphenurus, *Schleg. Mus. Pays-Bas. Aquilæ*, p. 21 (1862).

Ictinoaëtus sphenurus, *Gurney, jun., Cat. Bds. Prey*, p. 26 (1894).

Remarks. The following description of what appears to me to be a fully adult but not a very old bird will be found to agree with the stage of plumage in which full-grown birds of this species are usually obtained.

Adult female. General colour dull ashy brown, shaded with fulvous and dark brown; primaries blackish; the whole of the head and neck dull brown tinged with rufous, chiefly down the centre of the feathers, with the shafts black, giving a streaked appearance; sides of the face and throat light brown, the bases of the feathers darker; chest, breast, and abdomen dull fulvous brown, with blotches of dull white or fulvous near the centre of feathers on either side of the shaft, and a stripe of dull white down the tip, which is sometimes washed with fulvous; on those parts nearest the abdomen the stripes are narrower and the blotches larger and more conspicuous; flanks fulvous brown, bases of the feathers white; thighs dull fulvous with a dark brown shaft-stripe and irregular cross-bars; under tail-coverts fulvous crossed with irregular broken bars of dull deep brown; tail below ashy brown, washed with fulvous on the inner webs and freckled with dark brown; tail above dark brown washed with ashy on the outer margins and tips, and freckled with light rufous at the base; inner webs fulvous, shaded at the tips and thickly freckled and crossed with irregular broken bars of dark brown on the body of the feathers; upper tail-coverts, rump, and back, dull brown, the feathers white at the base; margins of the shoulders and the under wing-coverts white at the base, becoming ashy brown crossed with

dark brown bars, and largely tipped with deep fulvous; shaft-stripe black; primaries above black, the outer and the inner webs near the base rich sepia brown. The basal marginal half of the inner two primaries and outer two secondaries light rufous barred with dark brown; remainder of the feathers dark brown, lighter at the tip, outer web sepia brown; secondaries deep sepia brown, with rich metallic lustre, inner webs from near the tips light rufous barred and freckled with dark brown; median and primary coverts similarly coloured; remainder of the upper wing-coverts dark brown, some on the shoulders washed with pale rufous, all margined or tipped with ashy white, fulvous, or light rufous, and having a brownish black shaft-stripe; scapulars deep sepia brown, smaller ones margined and tipped with ashy brown, all washed, freckled or barred with pale rufous, which predominates on the concealed portion of the feathers, where also the brown forms irregular bars; extreme base, white; under surface of the wing quills are ashy brown, all, except the outer primaries which are whitish at the extreme base more or less freckled or barred with light rufous; cere bluish grey; bill dark horn brown, lighter on the sides; feet and legs bluish grey; iris, rich hazel. Total length 22 inches, wing 16·9, tail 10·7, tarsus 2·3, bill 1·5, culmen 1·8, culmen without cere 1·35.*

Adult Male. Similar in plumage to the female, but not so large. Total length 20·5 inches, wing 15·5, tail 10·5, tarsus 2·25, bill 1·3, culmen 1·6, without cere 1·3.

Young. Similar to the above description, but having the wing-coverts and most of the feathers of the upper surface tipped largely with ashy or fulvous white, a well-defined blackish shaft-line on all the feathers, and those of the head and neck washed with rufous; on the back of the neck the feathers are crossed with irregular dark brown bars, the bases of all being white; the under surface is of a lighter dull fulvous brown, blotched and striped with fulvous white.

Nestling. Reg. No. B. 6434. "Taken from the nest December 18th, 1883, Interior of New South Wales. Iris light reddish-brown bill and cere dark horn colour; feet and legs bluish-white, claws dark horn colour." Total length 8 inches; bill from forehead 1 inch, from gape 1·1; tarsus 1 inch; covered with short white down, erect, longer and of a brownish tinge on the hind neck and head.

Habitat. All parts of Australia, New Caledonia, South Coast of New Guinea.

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* NOTE.—Not having met with any specimens in such adult plumage as that described and figured by Mr. Gould, whose description has evidently been taken from a very old bird, I transcribe it here verbatim:—"Head, neck, and all the under surface light sandy brown, each feather margined with a darker colour; feathers of the back and wings brown, margined with grayish white; primaries blackish brown; tail greyish brown, rather long and rounded at the end; cere and bill brownish white, gradually becoming darker towards the tip; legs bluish white; irides hazel." (*Gould, Bds. Aust.*, vol. i, pl. 5.)

Specimens from New Caledonia are often of a much lighter colour, especially on the upper portion of the head, neck, and scapulars.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	23	16·6	10·7	1·4	1·7	2·4	1·5	1·05
A 2 ♂	21·5	16	10·5	1·4	1·62	2·35	1·4	0·82
A 3 ♀	22·5	17·3	11	1·4	1·8	2·4	1·55	1
B 1 ♀	22	16·3	10·5	1·4	1·7	2·35	1·5	0·85
B 2 ♀	21·7	15·4	10·7	1·43	1·7	2·45	1·56	0·85

A 1 ♀ ad. sk.	New South Wales.	Pres.
A 2 ♂ ad. sk.	Mossgiel, New South Wales.	Pres.
A 3 ♀ ad. sk.	Dobroyde, N.S. Wales.	Pres.
B 1 ♀ not quite ad. sk.	King George's Sound, West Australia.	Pres.
B 2 ♀ semi-ad. sk.	Wollongong, N.S. Wales.	Pres.

9. MILVUS.

1. Milvus affinis.

The Fork-tailed Kite.

Milvus affinis, *Gould, Proc. Zool. Soc.*, 1837, p. 140; *id Syn. Bds. Austr.*, p. 3 (1838); *Gray, Gen. Bds.* vol. i, p. 24 (1845); *Gould, Bds. Austr.*, vol. i, pl. 21 (1848); *Sturt Exped. Centr. Austr.*, vol. ii, App. p. 15 (1849); *Bonap., Consp. Av.*, tom. i, p. 21 (1850); *Kaup. Contr. Orn.*, 1850, p. 60; *Macgill., Voy. Rattlesn.*, vol. i, p. 356; *Bonap., Rev. et Mag. de Zool.*, 1854, p. 534; *Gray, Proc. Zool. Soc.*, 1858, p. 189; *id Cat. Bds. New Guin.*, p. 54 (1859); *Schleg. Mus. Pays-Bas., Milvi*, p. 8 (1862); *Wallace, Proc. Zool. Soc.* 1863, p. 484; *Finsch, New Guin.*, p. 154 (1865); *Gould, Handbk. Bds. Austr.*, p. 49, sp. 21 (1865); *Diggles, Orn. Austr.*, pt. 1 (1866); *Ramsay, Proc. Zool. Soc.*, 1867, p. 393; *Wall., Ibis.* 1867, p. 16; *Gray, Hand-list Bds.*, vol. i, p. 27 (1869); *Jerd., Ibis*, 1874, p. 343; *Salvad., Cat. Bds. Borneo*, p. 10 (1874); *Sharpe, Cat. Bds. Brit. Mus.*, vol. 1, p. 323 (1874); *Salvad., et D'Alb., Ann. Mus. Civ. Gen.*, vol. vii, p. 805 (1875); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. i, pp. 369, 387 (1876); *Hume, Stray Feath.*, iv, p. 456 (1876); *Gurney, Ibis*, 1879, p. 77; *Salvad., Orn. Pap et Molucc.*, p. 21 (1880); *Gurney, List. Diurn. Bds. Prey*, p. 80 (1884); *Broadb., Proc. Roy. Soc., Queensld.*, vol. ii, p. 119 (1886);

Ramsay, Proc. Linn. Soc., N.S.W., vol. ii, 2nd ser., p. 166 (1888); *id Tab. List Austr. Bds.*, p. 1 (1888); *North, Proc. Linn. Soc., N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *id Nests and Eggs Austr. Bds.*, p. 10, pl. iv, figs. 5 and 6 (1889); *Salvad., Agguinte, Orn. Pap. et. Molucc.*, p. 12 (1889); *Cox and Ham., Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 398 (1890); *Oates, in Hume's Nests and Eggs Ind. Bds.*, 2nd edit., vol. iii, p. 176 (1890); *Sharpe, Index Gould's Works*, p. 205 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 22 (1894); *North and Keartl., Aves. Horn Exped. Centr. Austr.*,p. 55 (1896); *Keartl., Vict. Nat.*, vol. xiii, No. 5, p. 61 (1896); *Salvad., Ann. Mus. Civ. Gen.*, 2nd ser., vol. xvi, p. 58 (1896).

Adult male. All the upper surface blackish brown, the median wing-coverts and margins of the feathers being lighter, the shaft-stripes blackish; primaries and secondaries blackish brown, the first six primaries black at the tips, the remainder and the inner secondaries slightly margined with light brown, indistinct bars of blackish brown showing on the inner webs of all the quills; the inner webs of the outer series of the wing-coverts, of a few of the innermost secondaries, and of the scapulars, becoming white at the base and barred with dark brown; wing-coverts brown barred with blackish brown, base of the feathers white; back, rump, and upper tail-coverts dark brown fading into a little lighter brown on the margins, the bases white, shaft-stripes blackish brown; tail slightly forked, dark brown above indistinctly barred with blackish, the inner webs becoming lighter towards the base, and freckled with dark brown; under surface of the tail ashy brown freckled and barred with darker brown; under tail-coverts rufous brown, with blackish shaft-lines; the head and neck above brown washed with rufous and streaked with blackish shaft-lines; lores and ear-coverts dark brown, the latter tinged with rufous brown; chin whitish; the throat light rufous brown, remainder of the under surface of the body dull rufous brown darker on the chest, sides, and flanks, all the feathers having a blackish shaft-line; under wing-coverts rufous brown striped with blackish down the centre, the outer series, and the bases of the primaries ashy, irregularly shaded or barred with dark brown; quills blackish brown, the inner webs especially, towards the base lighter; bill black; base and cere yellowish; feet and legs yellowish; iris hazel. Total length 19·5 inches, wing 15·8, tail (*to tip of outer feathers*) 10, tarsus 2·1, middle toe (without claw) 1·6, inner toe 0·9, outer 1·15.

Adult female. Similar to the male in size and color.

Young. The young may be distinguished by all the feathers being tipped with rufous, the head and neck rufous margined with brown and striped with blackish shaft-lines; under surface

brown striped with rufous down the centre of the feathers; shaft-lines blackish; throat and sides of the face rufous brown; lores, region of the eye, and upper portion of the ear-coverts blackish.

Habitat. All parts of Australia, New Guinea, Duke of York Island, India.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	20	16·5	10·7	1·2	1·4	2·05	1·4	0·85
A 2 ♂	19·8	15	10·5	1·2	1·5	2·02	1·5	0·85
A 3 ♂	21·5	16·5	10	1·2	1·4	2·1	1·4	0·8
A 4 ♂	21·5	16·6	10·6	1·25	1·5	2·1	1·45	0·8

A 1 ♂	ad. sk.	Knuckey's Lagoon, Port Essington.	Col.
A 2 ♂	ad. sk.	Eastern Creek, New South Wales.	Pres.
A 3 ♂	ad. sk.	Yandembah ,, ,,	Pch.
A 4 ♂	ad. mntd.	Wilcannia ,, ,,	Col.

10. LOPHOICTINIA.

1. Lophoictinia isura.

The Crested Kite, Square-tailed Kite, Long-winged Kite.

Milvus isurus, *Gould, Proc. Zool. Soc.*, 1837, p. 140; *id. Syn. Bds. Austr.*, pt. iii (1838); *Gray, Gen. Bds.*, vol. i, p. 24 (1845); *Gould, Bds. Austr.*, vol. i, pl 22 (1848); *Bonap., Consp. Av.*, tom. i, p. 21 (1850); *Schleg. Mus. Pays-Bas* Milvi, p. 4 (1862); *Gould, Handbk. Bds. Austr.*, vol. i, p. 51, sp. 22 (1865); *Gray, Hand-list, Bds.*, vol. i, p. 27 (1869); *Ramsay, Proc. Zool. Soc.*, 1875, p. 579; *id. Proc. Linn. Soc., N.S.W.*, vol. vii, p. 53 (1883); *Sclater, List Vert. Animals, Zool. Gard.*, 9th ed., p. 401 (1896).

Lophoictinia isura, *Kaup, Isis*, 1847, p. 117; *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 326 (1874); *Gurney, List Diurn. Bds. Prey*, p. 81 (1884); *Broadb., Proc. Roy. Soc., Queensld.*, vol. iii, p. 251 (1887); *Ramsay, Tab. List Austra. Bds.*, p. 1 (1888); *De Vis Rep. Sci. Exped. N. Queensld.*, p. 89 (1888); *North, Nests and Eggs Austr. Bds.*, p. 11, pl. iv, figs. 3 and 4(1889); *Cox and Ham., Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd. ser., p. 398 (1890); *Sharpe, Index Gould's Works*, p. 187 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 26 (1894); *Keartl. Vict. Nat.*, vol. xiii, No, 5, p. 61 (1896).

Milvus pacificus, *Strickl. Orn. Syn.*, p. 135 (1855).

Adult female. The feathers of head and nape elongated into an occipital crest; forehead whitish buff; sides of the face, chin, and ear-coverts greyish white, the terminal portion of each feather

and the shaft-line black; those on the crown of the head, nape, and hind neck rich light rufous, broadly centered with blackish-brown, the basal portions of all the feathers being white; throat buffy white, a broad stripe of dark ashy brown margined with rufous, down the centre of each feather; sides of the neck, hind neck, and all the under surface rich rufous, being lighter on the flanks, each feather having a black shaft-line, and a broad stripe of black down the centre, washed with ashy on the sides of the neck and chest, and narrowing into a shaft-line of black on the lower portion of the breast and flanks; abdomen rich rufous; the breast, centre of abdomen, and flanks, mesially shaded or faintly barred with ashy brown on the concealed portions of the feathers; thighs, lower part of abdomen, and under tail-coverts rich rufous, paler in tint on the latter, with shaft-lines of a deeper rufous tint; the extreme base of all the feathers on the under surface snow-white; under surface of the tail ashy-brown, becoming ashy-white towards the base, indistinctly barred near the end with blackish brown; tail above dark brown, washed with ashy on the outer webs; margins of the inner webs fading into ashy-white, freckled with brown at the base, crossed with a few indistinct bars of brown which are wider and become blackish brown at the tips; tips narrowly margined with white; upper tail-coverts and rump dark brown, back and interscapular region darker brown; primaries brown, washed with ashy; the tips darker, base white, and the basal marginal two-thirds of the inner webs as far as the notch white; secondaries dark ashy brown, becoming white freckled with brown at the base of the inner webs; all the feathers banded with blackish brown, the last band broader and darker on the tips of primaries and secondaries, where they form a sub-terminal blotch; median and greater wing-coverts dull brown, mesially shaded with darker brown, and washed with fulvous brown on the margins; remainder of the wing-coverts above brown, shaded with blackish brown at the tips, bases snow white; under surface of the primaries ashy brown, with blackish brown bars, basal portion of the inner margin white; secondaries ashy brown, becoming white at the base, bars on all the quills showing through; under coverts of primaries and secondaries ashy white, shaded and barred with ashy-brown, darkest at the tips, where some are washed with pale rufous; remainder of the under coverts and the axillaries rich rufous, mesially shaded towards the base with ashy brown, shafts blackish; small marginal feathers of the wing light rufous, edged with buff at the tips; cere and base of the bill flesh white, blackish at the tip; legs and feet greyish flesh colour, iris yellow. Total length 22 inches; wing 19·9; tail slightly forked, central feathers 10·3, outer 10·9; tarsus 2·0, bill 1·9, culmen without cere 1·1; from the angle of the mouth to the base of anterior margin of nostril 0·95, from thence to tip of bill 0·95.

Those specimens I have examined show very little variation in colouring; the flanks are in some a little paler, and occasionally washed with ashy brown, and the median wing-coverts in some incline to fulvous or pale rufous on their margins; wings very long, extending beyond the tip of the tail.

Young. Not so bright in the rufous colouring of the chest and abdomen; the blackish markings on the tips of the feathers duller brown, flanks lighter, tail more distinctly barred, no ashy grey on cheeks and sides of the neck.

Habitat. Wide Bay District, Dawson River, Richmond and Clarence Rivers District, New South Wales, Interior, Victoria, South and West Australia.

Measurements of average-sized specimens from different localties.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s-u.)
A 1 ♀	22	19·9	10·9	1·38	1·5	2	1.6	1
A 2 ♂	20	18	10.3	1.3	1.5	1.9	1.5	0.85
A 3 ♂	21·5	18·2	10	1·28	1·48	1·9	1·5	0·9
A 4 ♀	21	18·2	10	1·25	1·45	1·9	1·4	0·8

A 1 ♀ ad. sk.	Gayndah, Burnett River, Queensland.	Col.
A 2 ♂ ad. sk.	New South Wales.	Pres.
A 3 ♂ ad. sk.	Ashfield, New South Wales.	Pres.
A 4 ♂ ad. mntd.	Carlingford, New South Wales.	Pres.

11. GYPOICTINIA.

1. Gypoictinia melanosternon.

The Black-breasted Kite.

Buteo melanosternon, *Gould, Proc. Zool. Soc.* 1840, p. 162; *id. Bds. Austr.* pl. 20 (1848); *Gray, Gen. Bds.* vol. i, p. 12 (1849); *Strickl. Orn. Syn.* p. 34 (1855); *Gray, Hand-list Bds.* p. 7 (1869); *Diggles, Orn. Austr.* pt. 21 (1870).

Gypoictinia melanosternon, *Kaup. Contr. Orn.*, 1850, p. 61; *Bonap. Consp.* p. 19 (1850); *Gould, Handbk. Bds. Austr.* vol. i, p. 47 (1865); *Gurney, Ibis.* 1878, p. 459; *K. H. Bennett, Proc. Linn. Soc. N.S.W.*, vol. vi, p. 146 (1882); *id. Ibis*, 1884, p. 465; *Gurney, List Diurn. Bds. Prey*, p. 82 (1884); *id. Ibis*, 1886, p. 457; *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii, 2nd ser., p. 165 (1888, Derby); *id. Tab. List. Austr. Bds.* p. 1 (1888); *North, Nests and*

Eggs, Austr. Bds., p. 11, pl. v, figs. 3 and 4 (1889); *Sharpe, Index Gould's Works*, p. 144 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 26 (1894); *Keartl. Aves, Horn. Exped. Centr. Austr.*, p. 107 (1896); *id. Vict. Nat.*, vol. xiii, p. 60 (1896).

Gypoictinia melanosterna, *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 335 (1874); *id. Proc. Zool. Soc.* 1875, p. 339.

Gypoictinia leucosternon, *Kaup, Arch. f. Naturg.*, 1850, p. 33.

Male. "Above blackish, browner on the scapulars, lower back, and rump, the latter part washed with rufous, some of the feathers lighter-edged; smaller wing-coverts ashy grey, each feather blackish in the centre, the rest of the wing-coverts black, the inner ones washed with rufous; quills black, the secondaries ashy grey towards their tips; primaries externally ashy white at base, the outer ones shaded with grey; primaries underneath white at base, black towards the tip, the secondaries greyish below; upper tail-coverts black, outer ones washed with rufous; tail ashy grey above, paler below, and inclining to white near the base; head crested, the fore part of the crown black, the hinder part and the nape, as well as the sides of the neck, tawny rufous, some of the feathers black in the centre, producing a striped appearance; cheeks, ear-coverts, and entire under surface, black, some of the flanks and abdominal feathers inclining to ashy; thighs and under tail-coverts rufous, with black shaft-lines; under wing-coverts blackish, the small ones varied with white, and some washed with rufous. Total length 24 inches, culmen 2·45, wing 19·, tail 8·5, tarsus 2·65, middle toe 1·95."*

Adult female. Total length 22·5 inches; wing 19; tail 8·5; tarsus 2·55; bill from forehead 2·1, from gape 2·1, from nostril 1·35, culmen 2·2. "Iris hazel; bill pale horn colour; cere ashy brown; feet and legs greyish; claws black. Sex female, shot from nest."

Adult female. Total length 23·5 inches; wing 18·6; tail 8·7; tarsus 2·5; bill from forehead 1·85, from nostril 1·18, from gape 2·27; culmen 2·2.

Nestling. Covered with white fluffy down. Cere bluish, bill dark horn colour, feet ashy-white, bare space on the face bluish-lead colour. Total length about 11 inches. Dark rufous-brown feathers first appear on the nape, interscapular region, upper wing-coverts and tail; the quills blackish with reddish-brown margins.

Remarks. In addition to Mr. Sharpe's very good description of this bird, in specimens usually examined the feathers of the nape, hinder part and sides of the neck are rich rufous with a black shaft stripe; mantle, interscapular region, and the outer

* Sharpe, Cat. Bds. Brit. Mus. vol. i, p. 335 (1874).

webs of the wing-coverts jet black, inner webs of the wing-coverts rufous, under primary coverts dark slate colour, thighs and under tail-coverts rich rufous with a blackish shaft stripe, the notch in the first four primaries are largely developed. When the wings are extended the large white patch at the base of the quills is very conspicuous and the bird can thus easily be recognised at a great height.

Habitat. Derby (N.W. Austr.), New South Wales, Interior, South Australia, West Australia.

Measurements of average-sized specimens.

Sex.	Total engtth of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	23·5	18·8	9	1·87	2·2	2·5	2	0·97
A 2 ♀	23	18·2	9	1·9	2·2	2·65	1·95	1·12
A 3 ♀	24	18·8	8·5	2	2·3	2·7	1·95	1·12
C 1 ♂	17	10·5	4·6	imperf	imperf.	2·4	1·68	0·92
C 2	17·8	11	5	1·6	1·85	2·4	1·95	1·03

A 1 ♀ ad. sk.	Mossgiel, New South Wales.	Pch.
A 2 ♀ ad. sk.	Mossgiel, New South Wales.	Pch.
A 3 ♀ ad. sk.	Lachlan River Plains, N.S.W.	Pres.
C 1 ♂ sk. nestling, 6 weeks old.	Mossgiel, New South Wales.	Pch.
C 2 sk. nestling, 2 months old.	Mossgiel, New South Wales.	Pres.

12. ELANUS.

1. Elanus axillaris.

The Black-shouldered Kite.

Axillary Falcon, *Lath. Gen. Syn. Suppl.*, vol. ii, p. 43 (1801).

Falco axillaris, *Lath. Ind. Orn. Suppl.*, vol. i, p. ix (1801).

Circus axillaris, *Vieill. Nouv. Dict. d'Hist. Nat. tom.* iv, p. 453 (1816).

Elanus melanopterus, *Vig. and Horsf. Trans. Linn. Soc.*, vol. xv, p. 185 (1827).

Elanus notatus, *Gould. Proc. Zool. Soc.* 1837, p, 141; *id. Syn. Bds. Austr.*, pt. 4 (1838).

Elanus axillaris, *Gray, Ann. and Mag. Nat. Hist.*, vol. xi, p. 189 (1843); *id. Gen. Bds.*, vol. i, p. 26, pl. 9, fig. 5 (1845); *Gould, Bds. Austr.*, vol. i, pl. 23 (1848); *Bonap. Consp. Av. tom.* i, p. 22 (1850); *Strickl. Orn. Syn.* p. 139 (1855); *Schleg. Mus. Pays-Bas*, Milvi, p. 8 (1862); *Gould, Hand-bk. Bds. Austr.*, vol. i, p. 53 (1865);

Diggles, Orn. Austr., pt. iii (1866); *Gray, Hand-list Bds.* vol. 1, p. 28 (1869); *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 338 (1874); *Ramsay, Proc. Zool. Soc.*, p. 579 (1875); *Gurney, Ibis*, 1879, p. 333; *id. List. Diurn. Bds. Prey*, p. 84 (1884); *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs Austr. Bds.*, p. 14, pl. iii, fig. 6 (1889); *id. Proc. Linn. Soc. N.S.W.*, vol. iv, 2nd ser., p. 1024 (1890); *Ramsay, Bull. No. 1, Dept. Agri. N.S.W.*, p. 240 (1890); *Sharpe, Index Gould's Works*, p. 99 (1893); *Keartl. Aves, Horn Exped. Centr. Austr.*, p. 107 (1896); *id. Vict. Nat.*, vol. xiii. p. 61 (1896).

Adult female. Forehead white, becoming bluish-grey on the crown of the head; all the upper surface light silvery bluish-grey, becoming almost white on the outer webs of the tail-feathers, pure white on the inner webs and on the under surface; the whole of the under surface of the body snow-white, with a faint shade of silvery grey on the flanks and sides of the chest; wing-coverts (shoulders), except the largest series, black; wing bluish silvery grey, darker on the primaries, which are darkest at the tips; under surface of primaries dark bluish-grey, inclining to blackish on the outer quills; inner series of the primary coverts black, remainder dark bluish-grey, shaded with blackish on margins, small feathers under spurious wing, at base of upper primary coverts black; margins of the wing and rest of the under wing-coverts and axillaries snow-white; under surface of the secondaries and scapulars white, with a faint shade of bluish grey; lores, and a narrow line over the eye black; bill and claws black; cere citron; legs and feet yellow; iris varying from deep carmine to blood red. Total length 13·4 inches, expanse of wings 37·7, wing from flexure 12, tail 6, tarsus 1·5, tibia 2·8. mid-toe 1·2, outer toe 0·75, inner toe 0·8, hind toe 0·75, bill from posterior base of cere 0·9, culmen 1·1, bill from nostril 0·6, from anterior margin of cere 0·8, from angle of the mouth to tip of bill 1·3, shield over the eyelid 0·45 × 0·2

Adult male. Similar to the female in plumage, and equal in size.

Young. Resembling the adult, but having the crown of the head and all the upper surface of the body brown, washed with pale rufous on the sides of the neck, scapulars and adjacent wing-coverts, rump, and upper tail-coverts; the chest washed with pale rufous at the tips of the feathers, which are centered with a narrow shaft stripe of dark brown; shafts of the wings above dark brown, those of the tail feathers almost black; of both the wings and tail below white, except those of the primaries, which are brown; the two centre tail feathers and outer webs of the rest ashy brown, tips and remainder of the tail feathers white; wings ashy brown, darker towards the tips of the primaries; secondaries and greater wing-coverts largely tipped with white, those parts of the wing above black in the adult are

of a blackish brown, many of the feathers margined with white; under surface of the primaries and the larger series of their coverts ashy brown, becoming white freckled with brown on the margins of the inner webs; a small blackish brown patch at the base of primaries; margins of the shoulders white.

Habitat.—Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South and West Australia.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe (s.u.).	Hind toe (s.u.).
A. 1 ♀	14	11·7	6	0.9	1· 1	1·45	1·18	0·65
A. 2 ♂	13·5	11·5	5·8	0.88	1·07	1·42	1·15	0· 6
A. 3 ♂	13·5	11·8	6	0·92	1·12	1·45	1·15	0·62
B. 1 ♀	15	12	6·2	0·92	1· 1	1· 4	1·05	0·63
B. 2 ♂	14·6	11·75	6·5	0·85	1·02	1· 4	1·18	0·65

A. 1 ♀ ad. sk.	Petersham, Sydney, N. S. Wales.	Pres.
A. 2 ♂ ad. sk.	Nowra, Shoalhaven, N. S. Wales.	Pres.
A. 3 ♂ ad. sk.	New South Wales.	Pres.
B. 1. ♀ not quite ad sk.	New South Wales.	Pres.
B. 2. ♂ not quite ad. sk.	New South Wales.	Pres.

2. Elanus scriptus.

The Letter-winged Kite.

Elanus scriptus, *Gould, Proc. Zool. Soc.*, 1842, p. 80; *Gray, Gen. Bds.*, vol. i, p. 26 (1845); *Gould, Bds. Austr.*, vol. i, pl. 24 (1848); *Sturt, Exped. Centr. Austr.*, vol. ii, App., p. 15 (1849); *Bonap. Consp. Av.*, tom. i, p. 26 (1850); *Gould, Handbk. Bds. Austr.*, vol. i, p. 55, sp. 24 (1865); *Gray, Hand-list Bds.*, vol. i, p. 28 (1869); *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 340 (1874); *Gurney, Ibis.*, 1879, p. 334; *id., List Diurn. Bds. Prey*, p. 84 (1884); *Broadb., Proc. Roy. Soc., Queensld.*, vol. iii, p. 25 (1887); *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs Austr. Bds.*, p. 15 (1889); *Ramsay, Bull. No.* 1, *Dept. Agri. N.S.W.*, p. 240 (1890); *Sharpe, Index Gould's Works*, p. 99 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 26 (1894); *Keartl. Aves, Horn Exped. Centr. Austr.*, p. 107 (1896); *id., Vict. Nat.*, vol. xiii, p. 61 (1896).

Adult female. Above delicate ashy white, forehead, sides of the face, margins of the shoulders and of the wings, and the whole of the under surface, pure white, spot on the lores and narrow ring round the eye black; shoulders above and all the upper wing-coverts, except the largest series, black; small feathers at the base of the primaries concealed by the spurious

wing, black; greater wing-coverts ashy grey, secondaries light ashy grey fading into white at the tips and inner margins, primaries and primary-coverts ashy grey washed with ashy brown, becoming white on the margins of the inner webs, their shafts brown; scapulars light ashy brown above, white beneath; centre two tail feathers and outer webs of next two on either side ashy white, remainder of the tail feathers above, the shafts, and all below pure white; axillaries and all the under wing-coverts except the larger series black (which following the line of the wing-bones forms a black-shaped mark); the larger series of the wing-coverts and those at the base of the primaries ashy grey, under margin of the wing white. Cere and feet yellow; bill black; iris orange red. Total length 14·5 inches, wing 12·2, tarsus 1·6, tail 7, bill 1, culmen 1·1.

Adult male. In plumage the same as the female, in size slightly smaller. Total length 13·5 inches, wing 11·4, tarsus 1·4, tail 6·5, bill 0·95, culmen 1.

Young. Above ashy brown, the tips of all the feathers more or less margined with white, except those on back of the neck and interscapular region. Those parts of the wing black in the adult are of a blackish brown, margined with white near the primaries and on the shoulders. This specimen is of the same size as the adult male.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South and West Australia.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	14	11·6	6	0·95	1·1	1·5	1·3	0·73
A 2 ♀	14·7	12·1	6·5	0·95	1·1	1·45	1·25	0·72
A 3 ♀	14	12	6.2	0·97	1·15	1·45	1·25	0·7
A 4 ♀	14·7	12·4	6·4	0·95	1·1	1·5	1·28	0·7
A 5 ♂	14·4	12	6·5	0·92	1·1	1·45	1·2	0·62
B 1 ♀	14·7	12·1	7	0·92	1·15	1·5	1·25	0·72

A 1 ♂ ad. sk.	New South Wales.	Pres.
A 2 ♀ ad. sk.	Lismore, Richmond River, New South Wales.	Pch.
A 3 ♀ ad. sk.	Sydney, New South Wales.	Pres.
A 4 ♀ ad. sk.	Lachlan River, New South Wales.	Pch.
A 5 ♂ ad. sk.	Lachlan River, New South Wales.	Pch.
B 1 ♀ not quite ad. sk.	New South Wales.	Pres.

Subfamily FALCONINÆ.

13. BAZA.

1. Baza subcristata.

The Crested Hawk.

Lepidogenys subcristatus, *Gould*, *Proc. Zool. Soc.*, 1837, p. 140 ; *id. Syn. Bds. Austr.*, part iii, (1838) ; *id. Bds. Austr.*, vol. i, pl. 25, (1848) ; *Pelz. Reis. Novara, Vög.* p. 8 (1865).

Baza subcristata, *Gray*, *Gen. Bds.*, p. 23 (1845) ; *Strickl.*, *Orn. Syn.*, p. 127 (1855) ; *Schleg.*, *Mus. Pays-Bas*, *Milvi*, p. 4 (1862) ; *Gould*, *Handbk. Bds. Austr.*, vol. i, p. 56, sp. 25 (1865) ; *Ramsay*, *Proc. Zool. Soc.*, 1867, p. 392 ; *Gray*, *Hand-list Bds.*, vol. i, p. 25 (1869) ; *Sharpe*, *Cat. Bds. Brit. Mus.*, vol. i, p. 357 (1874) ; *Ramsay*, *Proc. Zool. Soc.*, 1875, p. 579 ; *Gurney*, *Ibis*, 1880, p. 462 ; *id. List Diurn. Bds. Prey*, p. 89 (1884) ; *Forbes*, *Proc. Zool. Soc.*, 1884, p. 431 ; *Ramsay*, *Tab. List Austr. Bds.*, p. 1 (1888) ; *North*, *Nests and Eggs Austr. Bds.*, p. 15, pl. ii, fig. 5 (1889) ; *Broadb.*, *Proc. Roy. Soc.*, *Queensld.*, vol. v, p. 15 (1889) ; *Sharpe*, *Index*, *Gould's Works*, p. 30 (1893) ; *Gurney*, *jun.*, *Cat. Bds. Prey*, p. 27 (1894).

Avicida subcristata, *Lafr. Rev. Zool.*, 1846, p. 127 ; *Bonap. Consp. Av.* tom. i, p. 20 (1850) ; *id. Rev. et Mag. de Zool.*, 1854, p. 535.

Pernis subcristatus, *Kaup*, *Isis*, 1847, p. 343 ; *id. Contr. Orn.*, 1850, p. 77.

Adult. Head and neck ashy grey, darker on the crown and towards the occipital crest, which is almost black ; scapulars, inner secondaries, and their coverts, and the remainder of the upper surface of the body brown ; the wing-coverts interscapular region, tips of the outer scapulars, blackish slate ; primaries and secondaries above very dark brown, becoming blackish on the outer webs, the base of their inner webs and their under surface light ashy grey (white in certain lights), narrowly margined with white at the base ; all the quills broadly barred with black, the last bar the broadest, and forming a subterminal spot at the tip, which on the inner primaries and the secondaries is sometimes narrowly margined with white ; bars on the basal portion of the under surface obsolete—or confined to the outer webs : tail ashy brown above, light ashy grey below, the basal half crossed with three interrupted black bands formed by a series of spots which are confined to the central part of the feathers, and not extending to the margins ; the terminal half of the feather is crossed at the tip with a broad black band, which on the outer two feathers forms a subterminal blotch, the tips of these feathers more or less margined, and the outer ones broadly tipped with ashy white on the under surface, the shafts blackish above, white below ; sides

of the face, lores, throat, and chest ashy grey of a lighter tint than the neck; the breast, upper portion of the abdomen, and thighs, and the flanks, buffy white, washed towards the tips, with rufous and broadly barred with chestnut brown on the exposed portions, and dark ashy brown on the concealed portions of the feathers (*the chestnut brown bars consisting of a broad bar of dark ashy brown, centred and margined with a narrow bar of rufous chestnut*); the abdomen, lower half of the tibia, under tail and wing coverts rich rufous buff, the outer series of the under primary-coverts buff. Bill black, iris bright yellow, cere and legs greyish yellow. Total length 16·6 inches, wing 13·6, tail 8·5, tarsus 1·5, bill from forehead 1·1, from cere 0·75, culmen 1·2.

Adult female. Similar to the male in plumage and size, or perhaps a trifle larger.

Immature birds are of a lighter brown above than in the fully adult, occipital crest dark brown; throat buffy white; chest, sides of the neck, and dorsal feathers ashy grey, washed with pale rufous; the breast and the remainder of the under surface buffy white, the bars narrower, and of a chestnut brown tint; abdomen, under tail and wing coverts buff; all the bars on the tail extend across the feathers, the bars near the base being dark brown, that at the tip broadest and blackish brown; the inner webs at the base are lighter and frequently freckled, and marked with spots of blackish brown, margined with white.

Young. "Above paler brown than in the adult, with narrow margins of ochraceous buff to the dorsal feathers and wing-coverts, becoming broader and more white on the inner secondaries; crown dark brown, as also the occipital crest, the white bases to the feathers rather conspicuous; forehead and sides of the face dusky cinerous, the former inclining to whitish; throat whitish; fore neck and chest buff, with a rufous tinge, which extends on to the sides and hinder part of the neck; breast buffy white, barred with rufous brown, much more narrowly than in the old bird; thighs and under wing and tail coverts rich buff, the former crossed near the base with a few narrow bars of rufous brown."*

Habitat. Port Darwin, Port Essington, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales.

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* Sharpe, Cat. Bds. Brit. Mus., vol. i, p. 358 (1874).

Measurements of averaged-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe (s.u.)	Hind toe (s.u.)
A. 1 ♀	17	13·2	8·5	1·02	1·15	1·45	1·2	0·7
A. 2 ♀	15·5	13·3	8·5	1	1·12	1·45	1·2	0·68
A. 3 ♀	17·4	13·5	8·8	1·05	1·2	1·5	1·2	0·65
A. 4 ♂	16·5	13	8·3	imp.	imp.	1·45	1·1	0·72
B. 1 ♀	16·5	13	8·5	1·05	1·22	1·42	1·2	0·72
B. 2 ♀	16·5	13	8·3	1·02	1·1	1·42	1·15	0·72

A 1 ♀ ad. sk.	New South Wales.	Pres.
A 2 ♀ ad. sk.	Pine Mountains, Queensland.	Col.
A 3 ♀ not quite ad. sk.	Bellinger River, New South Wales.	Col.
A 4 ♂ ad. sk.	Richmond River, New South Wales.	Pres.
B 1 ♀ semi-ad. sk.	Cape York, Queensland.	Pres.
B 2 ♀ semi-ad. sk.	Gayndah, Burnett River, Queensland.	Col.

14. FALCO.

1. Falco melanogenys.

The Black-cheeked Falcon.

Falco peregrinus, *Vig. and Horsf.* (*nec Gmel.*) *Trans. Linn. Soc.*, vol. xv, p. 183 (1826); *Diggles, Orn. Austr.*, pt. 20 (1868).

Falco melanogenys, *Gould, Proc. Zool. Soc.*, 1837, p. 139; *id. Syn. Bds. Austr.*, pt. 3, pl. 40 (1838); *id. Bds. Austr.*, vol. i, pl. 8 (1848); *Gould, Intr. Bds. Austr.*, p. 19; *Sturt Exped. Centd. Austr.*, vol. ii, App. p. 14 (1849); *Kaup, Contr. Orn.* 1850, p. 56; *Bonap., Consp. Av.* tom. i, p. 23 (1850); *id. Rev. et. Mag. de Zool.* (1850), p. 484; *Strickl. Orn. Syn.*, p. 84 (1855); *Gurney, Ibis*, 1861, p. 131; *Gould, Handbk. Bds. Austr.*, p. 26, sp. 8 (1865); *Blyth, Ibis* (1866), p. 234; *Ramsay, Proc. Zool. Soc.* (1867), p. 393; *Gurney, Ibis* (1867), p. 465; *Müller, Proc. Zool. Soc.* (1869), p. 279; *Gray, Hand-list Bds.*, vol. i, p. 19 (1869); *Hume, Ibis* (1871), p. 24; *Jerdon, Ibis* (1871), p. 238; *Garrod, Proc. Zool. Soc.* (1873), p. 466; *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 385 (1874); *Tweedd. Trans. Zool. Soc.*, vol. ix, p. 139 (1875); *Salvad. Ann. Mus. Civ. Gen.*, p. 172 (1879); *Finsch, Ibis* (1881), p. 535; *Gurney, Ibis*, 1882, p. 153; *Salvin. Cat. Strickl. Coll.*, p. 500 (1882); *Finsch, Vög. d. Sudsee*, p. 5 (1884); *Gurney, List Diurn. Bds. Prey*, p. 107 (1884); *Wardlaw-Ramsay, Ibis*, 1884, pp. 331–2; *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs Austr. Bds.*, p. 16, pl. iii, fig. 4 (1889); *Broadb. Proc. Roy.*

Soc. Queensld., vol. v, p. 15 (1889); *Salvad. Aggiunte Orn. Pap. et Molucc.*, pt. 1, p. 13 (1889); *North, Proc. Linn. Soc., N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *Cox and Ham., Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 398 (1890); *Bennett, Rec. Austr. Mus.*, vol. i, pp. 107–8 (1891); *North, Rec. Austr. Mus.*, vol. ii, p. 12 (1892); *Sharpe, Index Gould's Works*, p. 109 (1893); *Newton, Dict. Bds.*, pt. 1, p. 236 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 29 (1894); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 396 (1896); *Everett, Nov. Zool.*, vol. iii, p. 597 (1896).

Falco macropus, *Swain's Anim. in Menag.*, p. 341 (1837).

Falco communis, part, *Schleg. Mus. Pays-Bas*, Falcones, p. 3 (1863); *id. Vög. Ned. Ind.*, p. 22, pl. i, fig. 2 (1866).

Adult male. The whole of the head, the nape, and the back of the neck, sides of the face, ear-coverts, and cheeks, extending to the sides of the throat, black; throat pale buff, almost white; chest creamy buff, deepening in tint towards the breast, where the feathers have a pale rufous shaft-stripe, and frequently a spot of black near the tip; the rest of the under surface buffy white, closely barred with narrow cross lines of black; the flanks, sides of the body, and thighs washed with bluish grey; the breast and central portion of the abdomen washed with pale rufous fawn, shaft-lines rufous fawn on the interspaces; axillaries and under wing-coverts light buff, barred with brownish black, and washed with bluish grey; the greater series and the under surface of the primaries, dark ashy brown, barred with buffy white; inter-scapular region black, having a few transverse obsolete bars of bluish ashy grey; the remainder of the upper surface bluish ashy grey barred with black and having a black shaft-stripe, which joining the bars, gives them a somewhat triangular form on the rump and upper tail-coverts; the bands on the tail broad, eleven or twelve in number, and increasing in size towards the tip where, being broadest, they take a triangular form; the tips of all the tail-feathers creamy white; the secondaries and inner primaries above narrowly margined with creamy white at the tips, the interspaces on the inner webs, towards the base, washed with buff; the primaries at the tips and on the outer webs black, on the inner brownish at the base, barred with rufous buff, the bars obsolete towards the tip, where they are washed with bluish grey nearest the shaft, and confined to the middle portion of the web; bill bluish green at the base, blackish horn-colour at the tip, lower mandible greenish yellow, bluish horn-colour at the tip; cere greenish grey; iris hazel; legs and feet greyish yellow; claws dark horn-colour. Total length 16·5 inches, wing 12·7, tail 6·7, tarsus 2·0, bill from gape 2·3, from forehead 1·1, culmen 1·2.

Adult female. Similar in plumage to the male, but larger and more highly coloured; the under surface is washed with deep rufous fawn, being pale rufous on the chest and buff on the throat; the

bars on the under surface are narrower, wider apart, and sometimes irregular. Total length 17 inches, wing 13·3, tail 7·5, tarsus 2·05 ; bill from forehead 1·1, from gape 1·35, culmen, 1·25.

Young. The young of both sexes somewhat resemble the adults. The under surface is of a more fawn-coloured or ferruginous hue from the chest downwards ; the chest is streaked with dart-shaped markings, and the breast and abdomen with longitudinal markings of blackish brown ; the flanks and thighs barred with bracket-shaped, and the legs with hastate markings of the same colour; the axillaries and under wing-coverts are centered and barred with blackish brown ; the upper surface is tinged with brown, the quills margined at the tips with buffy white ; all the feathers of the body above margined with fulvous, more broadly on the wing-coverts, secondaries, and upper tail-coverts.

Habitat. Derby (N. W. Austr.), Port Denison, Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Victoria, South and West Australia, Tasmania.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	16	13	6·7	1·1	1·3	2	1·9	0·95
A 2 ♀	18	13·3	7·4	1·2	1·4	1·9	2·08	1
B 1 ♀	18	13 3	7·3	1·1	1·25	2	2·2	1
B 2 ♀	17	12·35	7	1·15	1·3	1·95	2	0·98
C 1 ♂	14·7	10·4	6·5	0·92	1	1·6	1·67	0·82

A 1 ♂ ad. sk.	Lithgow, New South Wales.	Exch.
A 2 ♀ ad. sk.	New South Wales.	Pres.
B 1 ♀ semi-ad. sk.	Port Lincoln, South Australia.	Col.
B 2 ♀ semi-ad. sk.	Lachlan River, New South Wales.	Pch.
C 1 ♂ juv. sk.	Sherwood, New South Wales.	Pres.

2. Falco hypoleucus.

The Grey Falcon.

Falco hypoleucus, *Gould*, *Proc. Zool. Soc.*, 1840, p. 162 ; *Gray*, *Gen. Bds.*, vol. i, p. 19 (1845) ; *Gould*, *Bds. Austr.*, vol. i, pl. 7 (1848) ; *Sturt*, *Exped. Centr. Austr.*, *App.*, vol. ii, p. 13 (1849) ; *Bonap. Consp. Av.*, tom. i, p. 24 (1850) ; *Strickl. Orn. Syn.*, p. 80 (1855) ; *Gould*, *Handbk. Bds. Austr.*, vol. i, p. 24, sp. 7 (1865) ; *Gray*, *Hand-list Bds.*, vol. i, p. 18 (1869) ; *Sharpe*, *Cat. Bds. Brit. Mus.*,

vol. i, p. 394 (1874); *id. Proc. Zool. Soc.* (1875), p. 339; *Ramsay, Proc. Zool. Soc.* (1875), p. 579; *id. Tab. List Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs, Austr. Bds.*, p. 17, pl. iii, fig. 3 (1889); *Cox and Ham, Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 398 (1890); *Sharpe, Index Gould's Works*, p. 109 (1893); *Keartl. Aves. Horn Exped. Centr. Austr.*, p. 107 (1896); *id. Vict. Nat.*, vol. xiii, p. 61 (1896); *North, Ann. Rep. Austr. Mus.* for 1895, p. 8 (1896).

Gennaia hypoleucus, *Kaup, Contr. Orn.*, 1850, p. 55.

Gennaia hypoleuca, *Gurney, Ibis*, 1882, p. 452; *id. List Diurn. Bds. Prey*, p. 111 (1884); *Gurney, jun., Cat. Bds. Prey*, p. 29 (1894).

Hierofalco hypoleucus, *Bonap. Rev. et Mag. de Zool.*, 1854, p. 536.

Adult female. All the upper surface bluish ashy grey, all the under surface of a lighter ashy grey tint, each feather having a blackish shaft-line down the centre, more conspicuous on the upper than on the under surface. Wings above have a more ashy tint on the margins of the coverts and secondaries; all the wing-feathers, scapulars, rump, upper and under tail-coverts and tail crossed with ashy brown bars, darkest and more distinct on the tail and wings; tips of the tail-feathers margined with ashy white, the bars of the under surface of the tail of a browner tint; primaries above blackish brown; shafts lead-colour; the outer webs of the basal portion washed with bluish ashy grey, inner webs ashy white, freckled with brown and crossed with triangular denticulations of a darker tint, running from the shaft and reaching nearly to the margin; secondaries ashy grey; the margins of the inner webs ashy white freckled with brown and barred like the primaries; the inner primaries and secondaries narrowly margined with white at the tips; under surface of the wings and axillaries ashy white, with indistinct shaft-lines; the throat and abdomen and under tail-coverts are paler than the rest of the under surface of the body, and in some specimens almost white; the frontal line and sides of the face light ashy grey; ear-coverts whitish, tinged with ashy grey on the upper portions; a narrow line of black round the anterior portion of the eye, widening below it, formed by produced black shafts of feathers about the lores; iris hazel; orbits, legs and feet bright deep yellow; bill yellowish at the base, dark horn-colour at the tip. Total length 15 inches, wings 12·6, tarsus 1·8, tail 6·5, bill from forehead 0·9, from gape 1·1, culmen 1·1.

Adult male similar in plumage, but slightly smaller. Total length 12 inches, wing 11·1, tail 6·2, tarsus 1·75, bill 0·85, from gape 1·1.

Habitat.—Gulf of Carpentaria, Wide Bay District, Dawson River, New South Wales, Interior, South and West Australia.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	15·3	12·5	6·5	0·97	1·12	1·8	1·85	0·85
A 2 ♂	14	11	6·2	0·9	1	1·75	1·65	0·7
A 3 ♀?	16	12·6	6·6	0·92	1	1·7	1·65	0·75
B 1 ♂	12·25	10·8	6	0·92	1	1·7	1·62	0·7
B 2 ♀	15	10·8	6·5	0·9	1	1·8	1·7	0·75

A 1 ♀	ad. sk.	Barcoo River, Queensland.	Shot at the nest.	Pres.
A 2 ♂	,, ,,	,,	,, ,, ,,	,,
A 3 ♀?	,, ,,	North Australia.		Pch.
B 1 ♂	semi-ad. sk.	Springsure, Queensland.		Pres.
B 2 ♀	,, mntd.	Singleton, New South Wales.		,,

3. Falco subniger.

The Black Falcon.

Falco subniger, *Gray, Ann. and Mag. Nat. Hist.*, vol. xi, p. 371 (1843); *id. Gen. Bds.*, vol. i, p. 19, pl. 8 (1845); *Gould, Bds. Austr.*, vol. i, pl. 9 (1848); *Sturt, Exped. Centr. Austr.*, vol. ii, App. p. 14 (1849); *Bonap. Consp. Av.*, tom. i, p. 24 (1850); *Strickl. Orn. Syn.*, p. 80 (1855); *Gould, Handbk. Bds. Austr.*, vol. 1, p. 28, sp. 9 (1865); *Gray, Hand-list Bds.*, vol. i, p. 18 (1869); *Diggles, Orn. Austr.*, pt. 9 (1869); *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 394 (1874); *id. Proc. Zool. Soc.* (1875), p. 339; *Ramsay, Proc. Zool. Soc.* (1875), p. 579; *Bennett, Proc. Linn. Soc., N.S.W.*, vol. x, p. 162 (1886); *Broadb., Proc. Roy. Soc., Queensland*, p. 24 (1887); *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs. Austr. Bds.*, p. 18, pl. iii, fig. 1 (1889); *Broadb., Proc. Roy. Soc., Queensland*, vol. v, p. 15 (1889); *De Vis, Rep. Sci. Exp., N.E. Queensland*, p. 84 (1889); *Sharpe, Index Gould's Works*, p. 109 (1893).

Hierofalco subniger, *Kaup, Contr. Orn.*, 1850, p. 56; *Bonap. Rev. et Mag. de Zool.* (1854), p. 536.

Gennaia subnigra, *Gurney, Ibis* (1882), p. 452.

Gennaia subniger, *Gurney, List Diurn. Bds.*, p. 111 (1884); *Gurney, jun., Cat. Bds. Prey*, p. 29 (1894).

Adult female. The whole of the upper and under surface dark brown, becoming blackish brown on the upper surface and dull

slaty brown on the under surface of the primaries and secondaries; margins at the tips of the scapulars, inner primaries, and secondaries buffy white; inner webs of the primaries barred on the central portion and much freckled at the base with very pale rufous, the secondaries with a few spots of same tint near the base; the under-tail and primary-coverts spotted on either side of the shaft with oblong marks of buffy white; tail crossed with indistinct broken bars of very pale rufous, and tipped with buffy white; on the chest and breast, and on some of the axillaries are a few scattered spots of pale rufous; the feathers of the throat, cheeks, and ear-coverts white, tipped with brown, giving them a mottled appearance; a narrow line over the eye, and from the lores a broad oblique short blackish stripe descends to below the ear-coverts on the side of the throat; bill lead-blue at the base, blackish at the tip and along the culmen; cere yellow; legs and feet yellowish; claws black. Total length 20·5 inches, wing 15·7, tail 10, tarsus 2·2, bill from gape 1·4, from forehead 1·1, from nostril 0·8, culmen 1·2.

Adult male. Similar in plumage, but smaller than the females. Some specimens have no spots or bars on the under tail-coverts and tail, and the chin alone white. Total length 18 inches, wing 14·3, tail 8·6, tarsus 1·9, bill from forehead 1, culmen 1·1, from gape 1·2.

Habitat.—Rockingham Bay, Wide Bay District, Dawson River, New South Wales, Interior, Victoria, South Australia.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	20·5	15·1	10	1·03	1·2	2	1·8	0·76
A 2 ♂	18·3	14	8.7	1	1·1	1·95	1·6	0·73
A 3 ♀	20	16	10	1·15	1·25	2·1	1·9	0·9
A 4 ♀	21	15·6	10	1·08	1·2	2	1·9	0·85
A 5 ♂	18	15·5	9·5	1·12	1·3	2	1·83	0·83

A 1 ♀	ad.	sk.	South Australia. Pch.
A 2 ♂	,,	,,	,, ,, ,,
A 3 ♀	,,	,,	Lachlan River, New South Wales. Pres.
A 4 ♀	,,	,,	Queensland. ,,
A 5 ♂	,,	,,	Central Queensland. ,,

4. Falco lunulatus.

The White-fronted Falcon.

Lunated Falcon, *Lath. Gen. Syn.*, Suppl. ii, p. 54 (1801).

Falco lunulatus, *Lath. Ind. Orn.*, Suppl. ii, p. 13 (1801) ; *id. Gen. Hist.*, vol. i, p. 227 ; *Shaw, Gen. Zool.*, vol. vii, p. 184 (1809) ; *Gray, Ann. and Mag. Nat. Hist.*, vol. xi, p. 189 ; *Strickl. Orn. Syn.*, p. 89 (1855) ; *Gould, Hand-bk. Bds. Austr.*, p. 29, sp. 10 (1865) ; *Ramsay, Proc. Zool. Soc.* (1867), p. 393 ; *Schleg. Mus. Pays-Bas, Revue Accipitr.*, p. 39 (1873) ; *Sharpe, Cat. Bds., Brit. Mus.*, vol. i, p. 398 (1874) ; *id. Proc. Zool. Soc.* (1875), p. 339 ; *Ramsay, Proc. Zool. Soc.* (1875), p. 579 ; *Broadb. Proc. Roy. Soc.*, vol. ii, p. 119 (1886) ; *Ramsay, Tab. List Austr. Bds.*, p. 1 (1888); *id. Proc. Linn. Soc. N.S.W.*, vol. ii, 2nd ser., p. 165 (1888) ; *North, op. cit.*, vol. iii, 2nd ser., p. 1773 (1889) ; *id. Nests & Eggs, Austr. Bds.*, p. 19 (1889) ; *Cox and Ham. Proc. Linn. Soc. N.S.W.*, vol. iv, 2nd ser., p. 398 (1890) ; *Sharpe, Index Gould's Works*, p. 109 (1893) ; *North and Keartl., Aves Horn Exped. Centr. Aus.*, p. 55 (1896) ; *Keartl., Vict. Nat.*, vol. xiii, p. 62 (1896) ; *Everett, Nov. Zool.*, vol. iii, p. 597 (1896).

Sparvius lunulatus, *Vieill. Nouv. Dict. d'Hist. Nat.*, tom. x, p. 324 (1817) ; *id. Enc. Méth.*, p. 1264 (1823).

Falco frontatus, *Gould, Proc. Zool. Soc.*, 1837, p. 139 ; *id. Syn. Bds. Austr.* pt. iii, pl. 40, fig. 1 (1838) ; *id. Bds. Austr.*, pl. 10 (1848) ; *Sturt, Exped. Centr. Austr.*, vol. ii, App., p. 14 (1849) ; *Schleg. Naumannia* (1855), p. 253 ; *id. Vög. Ned. Ind. Valkv.*, pp. 5, 146, pl. 2, figs. 4–6 (1866) ; *Diggles, Orn. Austr.*, pt. ii (1869).

Falco longipennis, *Swains. Anim. in Menag.*, p. 341 (1837).

Hypotriorchis frontatus, *Gray, Gen. Bds.*, vol. i, p. 20 (1845) ; *id. List Bds. Brit. Mus. Accipitr.*, p. 54 ; *Bonap. Consp. Av.*, tom. i, p. 25 (1850) ; *Kaup. Isis* (1847), p. 65 ; *id. Contr. Orn.* (1850), p. 55 ; *Bonap. Rev. et Mag. de Zool.* (1854), p. 535 ; *Wallace, Proc. Zool. Soc.* (1863), p. 484.

Falco subbuteo frontatus, *Schleg. Mus. Pays-Bas. Falcones*, p. 22 (1862).

Hypotriorchis lunulatus, *Wallace, Ibis* (1868), p. 5 ; *Gray, Hand-list Bds.*, vol. i, p. 20 (1869) ; *Salvad. Ann. Mus. Civ. Gen.* xii, p. 36 (1878) ; *id. Orn. Pap. et Molucc.*, vol. i, p. 34 (1880) ; *Gurney, Ibis* (1882), p. 153 ; *id. List Diurn. Bds. Prey*, p. 103 (1884) ; *Salvad. Aggiunte Orn. Pap. et Molucc.*, pt. i, p. 14 (1889) ; *Gurney, jun., Cat. Bds. Prey*, p. 29 (1894).

Falco religiosus, *Temm. Mus. Lugd. (var. nigra) Bonap. Consp. Av.*, tom. i, p. 25 (1850) ; *Sharpe, Cat. Bds.*, vol. i, p. 397 ; *Gurney, List Diurn. Bds. Prey*, p. 102 (1884).

Adult male. All the upper surface slaty-blue, being darkest on the shoulders and interscapular region ; lightest and inclining to lead-colour on the back, rump, and upper tail-coverts, and of a dark brownish tinge on the head ; lores and forehead white, or

of a buffy hue; nape and adjacent feathers on the sides of the neck tinged with rusty; sides of the neck, throat, and lower part of the ear-coverts white, occasionally tinged with rufous buff; cheeks, sides of the face, and upper parts of the ear-coverts, brownish black; chest, buffy-white washed with light rufous, becoming light rusty rufous on the remainder of the under-surface, deepest on the flanks, where faint greyish cross-bars appear; breast striped with shaft-lines of greyish brown; under surface of the wings dull rufous, lighter on the margins of the shoulders, and crossed with ashy brown bars; the outer series of the under wing-coverts and the axillaries ashy brown, tipped and spotted on both webs with pale rufous; primaries dark brown washed with slaty blue on the outer web, and barred with a series of transverse oblong spots of pale rufous on the central portion of the inner webs; secondaries slaty blue, barred like the primaries with light rufous; upper wing-coverts and scapulars slaty blue, with a few oblong spots of light rufous near the base of the feathers—many of the wing-coverts, scapulars, and quills showing indistinct dark cross-bars; the tips of the secondaries and some of the inner primaries margined with white; the rump and upper tail-coverts light slaty blue, with indistinct cross-bars; shaft-stripes dark brown; the two centre tail-feathers and the outer webs of all the rest, slaty blue barred with blackish brown, the inner webs barred alternately with blackish brown and rufous, the last brown bar the deepest in tint and forming a broad subterminal blackish band; the tips of all the feathers rufous; lower part of the abdomen, and under tail-coverts, buff, shaded with rufous and having obsolete bars of ashy brown; orbits, cere, and base of the under mandible yellowish; bill bluish lead-colour; tip black; feet yellow; iris dark brown. Total length 11·2 inches, wing 9·7, tail 5·5, tarsus 1·35, bill 0·75, culmen 0·8.

Remark. The first primary is frequently margined on the outer web with a narrow wavy line of pale rufous; the forehead and lores, even in fully adult birds, and the nape and sides of the neck, tinged with deep rusty rufous.

Adult female. Similar in markings, but not so brightly tinted as the male, and considerably larger. Total length 13·8 inches, wing 11·4, tail 6·1, tarsus 1·45, bill 0·8, culmen 0·9.

Young. "Above slaty blue, with broad rust-coloured margins to the feathers, the secondaries plainly tipped with buffy white; the crown and upper tail-coverts rusty, being quite obscured by the margins to the feathers; forehead whitish; fore part of cheeks, region of the eye, and ear-coverts brownish black; hinder part of cheeks, sides of neck and throat creamy white; chest creamy buff, tinged with rufous, with several dark brown streaks

down the centre of the feathers; remainder of the under surface deep rufous; the lower abdomen, vent, and under tail-coverts tawny buff, with a few rufous shaft-stripes and bars; under wing-coverts dull rufous, with oval spots of creamy buff; primaries dark brown, tipped with whitish and barred on the inner web with rufous; tail greyish above, browner beneath, all the feathers barred across and tipped with rufous."*

Remarks. Not having a young specimen from N. S. W., the above description has been taken from the British Museum Catalogue. The following descriptions, however, are from a fine series in the Australian Museum of the young, and adult female, from King George's Sound; but although differing in some respects from the New South Wales birds, they can scarcely lay claim to be considered a distinct species.

Specimen No. 1 *juv. K.G.S.*—Above slaty blue tinged with brown, tail dark brown tinged with ashy, the inner webs and the under surface dark brown, the central portion of the inner webs barred, and that of the outer spotted with rufous, the spots being obsolete on the two central and on the outer web of two external feathers, a few of the upper tail-coverts also spotted near the base with rufous; all the feathers of upper surface broadly tipped with rufous; feathers of the head and neck rufous, with a blackish brown shaft-line and base, giving a streaked appearance; forehead buff tinged with rufous; throat buff; sides of the neck and lower part of the ear-coverts buff washed with rusty rufous, deepest in tint behind the ear-coverts; lores, forepart of the cheeks, sides of the head, and ear-coverts brownish black; chest buff, rufescent on the breast, and becoming rufous on the remainder of the under surface, being lighter on the lower part of the abdomen and under tail-coverts, and deepest on the central portions, sides, and flanks; all the feathers centered with a shaft-line of brownish black, which widens into narrow stripes on the chest; the flanks crossed with ashy brown bars triangular in form, the axillaries and outer series of the under wing-coverts dark brown with oval spots of pale rufous; the remainder of the under wing-coverts brown, washed with rufous, and tipped and spotted with a lighter tint; primaries above blackish brown; secondaries washed with ashy; all the quills barred on the central portion of their inner webs with light rufous, and with the primary coverts having the tips margined with buff narrowly edged with white; bill bluish horn-colour; culmen darker, lower mandible whitish, at the tip horn-colour; legs and feet flesh grey. Total length 12·3 inches, wing 9·7, tail 5·3, tarsus 1·55, bill 0·63, culmen 0·73.

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* Sharpe, Cat. Bds. Brit. Mus., vol. i, p. 399 (1874).

Spm. No. 2 *juv.* Is similar in plumage, the stripes on the breast may be a trifle broader, the under surface is of the same deep rufous tint; and the flanks a little more distinctly barred, the rufous spots and bars on the tail are closer together but not continuous.

Spm. No. 3. This bird had apparently only just arrived in adult plumage, but the whole of the colouring is much brighter than in any other specimens I have examined. The whole of the upper surface is of a fine rich slate-blue, head and wings rich blackish brown; tail blackish brown washed with slaty blue on two central feathers, and outer webs of remainder tipped, and barred in most instances quite across the feather, with rufous the two central feathers barred with slaty black, the interspaces near the base tinged with rufous; the cheeks, ear-coverts, and region of the eye, brownish black; forehead buff tinged with rufous; a few tawny feathers on the sides of the neck; throat white, lower parts tinged with rufous buff, all the feathers with blackish shaft-lines. All the under surface light rusty rufous deepening into rufous on the breast, sides, flanks, and thighs; down the breast are broad streaks of blackish brown, which alter into narrow-shaped markings having a slaty-blue tinge on the side, and irregular broad cross bands of the same tint on the flanks; on the abdomen and remainder of under surface the shaft-stripes are very narrow, but slightly swollen near the tips of the feathers on the legs; on the thighs they are occasionally hastate or arrow-shaped; the primaries and secondaries narrowly margined with white at the tips; bill bluish horn-colour, blackish at the tip; lower mandible lighter at the base; cere bluish grey; feet flesh grey; claws black.

Habitat. All parts of Australia, Tasmania, Flores, Ternate.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	13·8	11·4	6·1	0·8	0·9	1·45	1·6	0·7
A 2 ♀	14	11·3	6·1	0·7	0·75	1·4	1·5	0·65
A 3 ♀	12·6	10	6	0·75	0·85	1·45	1·5	0·65
A 4 ♂?	11·5	10·7	5·5	0·75	0·85	1·45	1·5	0·65
A 5 ♂	11·5	9·6	5·4	0·7	0·75	1·35	1·35	0·55
A 6 ♀?	12·3	9·7	5·3	0·63	0·73	1·55	1·4	0·6
C 1 ♀	13·1	10·95	5·9	0·75	0·85	1·65	1·5	0·6
C 2 ♀	13·7	10·85	6	0·8	0·9	1·6	1·55	0·61

A 1 ♀ ad. mntd.	Port Augusta, South Australia.	Col.
A 2 ♀ ad. mntd.	Port Denison, Queensland.	Col.
A 3 ♀ ad. mntd.	Clarence River, New South Wales.	Pres.
A 4 ♂? ad. mntd.	New South Wales.	Pres.
A 5 ♂ ad. mntd.	New South Wales.	Pres.
A 6 ♀? ad. sk.	King George's Sound, West Australia.	Col.
C 1 ♀ juv. sk.	King George's Sound, West Australia.	Col.
C 2 ♀ juv. sk.	King George's Sound, West Australia.	Col.

15. HIERACIDEA.

1. Hieracidea berigora.*

The White-breasted Hawk, Berigora Hawk.

Falco berigora, *Vig. and Horsf.*, *Trans. Linn. Soc.*, vol. xv, p. 184 (1827); *Schleg. Mus. Pays-Bas, Revue Accipitr.*, p. 47 (1873).

Hieracidea occidentalis, *Gould, Proc. Zool. Soc.* (1844), p. 105; *Gray, Gen. Bds.*, vol. i, p. 20 (1844); *Gould, Bds. Austr.*, vol. i, pl. 12 (1848); *Bonap. Consp. Av.*, tom. i, p. 22 (1850); *id. Rev. et Mag. de Zool.* (1854), p. 536; *Strickl., Orn. Syn.*, p. 101 (1855); *Pelz., Verh. Z.—b., Wien.* xiii, p. 621 (1863); *Gould, Handbk. Bds. Austr.*, vol. i, p. 33, sp. 12 (1865); *Gray, Hand-list Bds.*, p. 22 (1869); *Sharpe, Index Gould's Works*, p. 153 (1893).

Falco berigora occidentalis, *Schleg. Mus. Pays-Bas., Falcones*, p. 37 (1862).

Hieracidea berigora, *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 421 (1874); *Masters, Proc. Linn. Soc. N.S.W.*, vol. ii, p. 269 (1878); *Gurney, List Diurn. Bds. Prey*, p. 96 (1884); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. i, 2nd ser., p. 1086 (1887); *id. Tab. List Austr. Bds.*, p. 1 (1888); *North, Nests and Eggs Austr. Bds.*, p. 21 (1889); *Salvad. Aggiunte, Orn. Pap. et Molucc.*, p. 15 (1889); *Gurney, jun., Cat. Bds. Prey*, p. 27 (1894); *North and Keartl., Aves Horn Exped. Centr. Austr.*, p. 56 (1896); *Keartl., Vict. Nat.*, vol. xiii, p. 62 (1896); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 398 (1896).

Adult male. "Upper surface sandy brown, strongly inclining to rufous, with which colour most of the feathers are edged, excepting the scapulars and inner secondaries, where the margins incline to fulvous; the feathers of the lower back, rump, and upper tail-coverts broadly tipped with rufous; head a little lighter than the back, with blackish shaft-stripes; forehead, lores, and an indistinct eyebrow, whitish; nape scarcely at all mixed with white; sides of the face creamy white, the sides of the neck slightly washed with rufous and narrowly streaked with brown; a narrow supraorbital line of feathers, as well as a moustarchial streak, from the fore part of eye down the cheeks and the hinder part of ear-coverts, dark brown; under surface of the body creamy white, with brownish shaft-stripes; thighs, axillaries, and inner under wing-coverts chestnut; outer wing-coverts

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* Sharpe, Cat. Bds. Brit. Mus., vol. i, p. 421 (1874). Mr. Sharpe remarks: "That the possession by the British Museum of the original types of *Hieracidea berigora*, which were received from the Linnean Society, enables him to prove that the *H. occidentalis* of Gould is the true *H. berigora*."

white; quills dark brown, with a slight tinge of ashy grey, the secondaries paler brown, with rufous white tips, inner surface of wing white, the inner webs barred with rufous above, each bar being almost continuous with the preceding one on the primaries; tail brown, tipped with white and shaded with ashy, barred with rufous, the bars not being continued entirely across the feather; cere pale yellow; orbits bluish flesh-colour; bill bluish lead-colour, black at tip; feet light ashy grey, tarsal scales in front yellowish white; iris brown. Total length 15·5 inches, culmen 1·15, wing 13, tail 7·8, tarsus 2·55."

Adult female. Similar to the male, but a little larger. Total length 17 inches, culmen 1·1, wing 14, tail 8·8, tarsus 2·8.

Young. "Similar to the adults, but plainly spotted and banded with rufous above, especially on the wing-coverts and inner secondaries; under surface of body for the most part pale sandy rufous, mottled with creamy white, where the plumage shows signs of approaching adolescence; thighs deep chestnut brown, with faint cross bars of rufous; the facial features more pronounced than in the adult."*

Remark. The *type specimens* of this species being now in the British Museum, the above descriptions have been doubtless taken from them, and on that account they have been transcribed here.

Habitat. Derby (N. W. Austr.), Interior, New South Wales, Victoria, South and West Australia, South-eastern New Guinea.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	16	12·5	7·8	0·92	1·11	2·55	1·4	0·68
A 2 ♂	15·8	11·5	7·5	0·92	1·08	2·55	1·42	0·68
A 3 ♀	18	14·2	8·7	1·03	1·2	2·75	1·7	0·8
A 4 ♀	19·5	14·1	8·8	1·03	1·12	2·5	1·6	0·8
B 1 ♀	17·75	12·3	8·3	1	1·12	2·6	1·5	0·75

A 1 ♂ ad. sk.	Derby, North-west Australia.	Pch.
A 2 ♂ ad. sk.	King George's Sound, West Australia.	Col.
A 3 ♀ ad. sk.	Yandembah, N.S.W.—Shot from the nest.	Pres.
A 4 ♀ not quite ad. sk.	Lachlan River, New South Wales.	Pch.
B 1 ♀ semi-ad. sk.	King George's Sound, West Australia.	Col.

2 Hieracidea orientalis.

The Brown Hawk.

Cream-bellied Falcon, *Lath. Gen. Hist.*, vol. i, p. 230 (1821).

Hieracidea berigora, *Gray, Gen. Bds.*, vol. i, p. 20 (1845); *Gould, Bds. Austr.*, vol. i, pl. 11 (1848); *Bonap. Consp. Av.*, tom. i, p. 22 (1850); *Kaup, Contr. Orn.* (1850), p. 56; *Bonap. Rev. et Mag. de Zool.* (1854), p. 536; *Strickl., Orn. Syn.*, p. 101 (1855); *Pelz. Verh. z-b. Wien.*, xiii, p. 621 (1863); *Gould, Handbk. Bds. Austr.*, p. 31, sp. 11 (1865); *Pelz. Reis. Novara. Vög.*, p. 8 (1865); *Gray, Hand-list Bds.*, vol. i, p. 22 (1869); *Sharpe, Index Gould's Works*, p. 152 (1893).

Falco berigora orientalis, *Schleg. Naumannia* (1855), p. 254.

Hieracidea orientalis, *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 422 (1874) *Ramsay and Castlenau, Proc. Linn. Soc., N.S.W.*, vol. i, p. 379 (1877); *Sharpe, Journ. Linn. Soc.*, vol. xiv, p. 627 (1879); *Salvad., Orn. Pap. et Molucc.*, p. 39 (1880); *Gurney, List Diurn. Bds. Prey*, p. 96 (1884); *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. i, 2nd ser., p. 1086 (1887); *id. op. cit.*, vol. ii, 2nd ser., p. 166 (1888); *id. Tab. List Austr. Bds.*, p. 1 (1888); *Salvad., Agg. Orn. Pap. et Molucc.*, p. 15 (1889); *North, Proc. Linn. Soc., N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs Austr. Bds.*, p. 20, pl. iii, fig. 2 (1889); *Norton, Bull. No. 1, Dept. Agri., N.S.W.*, p. 246 (1890); *Cox and Ham, Proc. Linn. Soc., N.S.W.*, vol. iv, 2nd ser., p. 399 (1890); *North, tom. cit.*, p. 1023 (1890); *Gurney, jun., Cat. Bds. Prey*, p. 27 (1894).

Adult male. "Above brown, the feathers very slightly inclining to rufous on their edges, these margins being a little more distinct on the inner secondaries; crown slightly paler brown, with indistinct blackish shaft-stripes, the nape mixed with white; forehead and a distinct eyebrow, as well as of the sides of the face and of the neck, creamy or buffy white; a narrow streak above the supraorbital ridge, as well as a scant stripe from the fore part of the eye across the cheek, and another running under the eye along the upper margin of the ear-coverts, blackish brown, collecting a little behind the latter; quills dark brown, the primaries and outer secondaries tipped with whitish; spotted on the outer web and barred on the inner one with rufous, the inner face of the quills whitish, owing to all but the terminal bars being joined together; tail brown, with an ashy gloss on the upper surface, slightly tipped with white, barred with rufous on the two centre feathers, but not right across the feather, the others barred on the inner and spotted with rufous on the outer web, the latter marks gradually becoming less on the outer feathers; under surface of body creamy buff, the sides of the body and outer face of thighs brown, converging towards the centre of the lower breast, some of the feathers edged with

fulvous; under wing-coverts rich creamy buff, the lower ones and axillaries marked with brown; cere and orbits pale bluish lead-colour; feet very light lead-colour; iris very dark brown. Total length 15·3 inches, culmen 1·1, wing 13, tail 8, tarsus 2·5."

Adult female. Similar to the male. Total length 19·5 inches, wing 15·7, tail 9·, tarsus 2·1, bill from base of cere 1·1, from centre of nostril 0·9, culmen 1·3.

Young. "Warmer and more chocolate brown than the adult, from which they are at once distinguished by the brown on the under parts, which in the nestling covers the whole of the breast, and as the bird advances in age gradually disappears, leaving the chest striped with brown, and the flanks much spotted with fulvous; throat and sides of the face ochraceous buff; forehead very indistinctly indicated, the moustache and feathers below the eye and behind the ear-coverts deep chocolate, and broader than in the adult's; feathers of the upper surface edged with rufous, and spotted and half-barred with the same colour, the bars on the tail a little narrower and more rufous that the adult's."*

I have before me a pair of young birds which differ so considerably from what have previously been described as the young of the species that I shall here describe them in full:—

Young. All the upper surface dull dark brown, all the feathers conspicuously margined at the tips with rufous, being deepest in tint on the rump and upper tail-coverts; feathers on the head centered with a blackish shaft-stripe; forehead and line over the eye buff; round the back of the neck from the ear-coverts a well-defined broad collar of buffy white; immediately behind the eye and extending over the upper portion of the ear-coverts a patch of white pencilled with blackish shaft-lines; hind portion of the ear-coverts blackish brown, with rufous margins, lower portion of the ear-coverts, throat, sides of the neck, and chest, rich buff; a narrow black moustarchial stripe extending from the lores on either side of the throat to opposite the ear-coverts; all the under surface rich buff, lighter on the abdomen and under tail-coverts; the sides, flanks, outer portion of the thighs blackish brown, margined with rufous-buff; a few of the feathers on the breast and chest having a brown shaft-line widening into a triangular mark at the tips; under surface of the tail brown, margined at tips with buff, and barred with light

* I have here given Mr. Sharpe's descriptions, as they have in all probability been taken from the type specimens, or from others carefully compared with the types of this species, for although I have examined a large series of both adults and young of both sexes from various parts of Australia, widely separated, I cannot find any which coincide either with Mr. Gould's description of the adults, or with that given by Mr. Sharpe in the British Museum Catalogue, neither of these agreeing with such birds as, until further proof to the contrary, I must consider to be the adults.

rufous, upper surface dark brown, slightly shaded with ashy; the two central feathers barred but not quite across, the outer webs of the others spotted near the shaft and the inner webs barred right across with rich rufous, all margined at the tips with pale rufous; under wing-coverts and axillaries rich buff, many of the feathers blotched at the tips with irregular markings of dark brown; under surface of the wings light rufous buff, the ends of the quills of a darker tint, all the feathers margined at the tips with rufous edged with white, the outer webs spotted, the inner ones crossed with broad bands of rufous which run together on the margins towards the base; scapulars similarly tipped, spotted, and barred with the same tint. Bill light horn colour, bluish round the base, brownish along the culmen, lower mandible faded to straw colour, orbits and cere grey; feet and legs bluish grey; claws brownish.*

These specimens are very similar in size and markings, the male being 16 inches, the female 17 inches in length. The former is from the Ouse River, Tasmania, the latter from "Dabee," New South Wales.

Nestling, Reg. No. B. 6433. "Taken from the nest, October 9th, 1884, about three weeks old, Mossgiel, N.S. Wales. Iris dark brown; bill and cere lead colour, dark at the tip; legs and feet bluish-white, claws dark brown." Total length 9 inches; wing 4; bill from forehead 1, from gape 1; tarsus 1·8; mid. toe (s.u.) 1·15. Covered with dull whity-brown down above and below, under surface dull white, down on the flanks long and of an ashy tinge; pin-feathers of the wing as far as exposed, and of the tail blackish with rufous margins tipped with down.

Nestling, Reg. No. B. 10155. "Taken from the nest, Mossgiel, October 29th, about a month old. Iris rich dark brown; cere greyish, eyelids bluish-white; bill horn colour; legs fleshy-white; feet whitish, tinged with blue, claws dark horn colour." Total length 11·35 inches; wings 6·1; tail 2·7; bill from forehead 1, from gape 1·2; tarsus 2·4; mid. toe (s.u.) 1·5. Dark brown pin-feathers tinged with rufous-fawn colour upon the sides of the breast; a broken row on the chest, hind neck, interscapular region and back dark brown tipped with light rufous; quills and wing-coverts where visible, black, strongly margined with rufous-fawn, some of the secondaries showing rufous-fawn coloured spots or broken bars, pin-feathers of the upper tail-coverts and tail blackish, broadly margined with deep fawn; all but the centre pair with a spot or band of rufous-fawn.

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* A still younger bird, from the Macleay Collection, and kindly lent me for examination, has remains of white down on the head, and the light coloured portions of the under surface are of a rich creamy buff, facial features strongly pronounced.

Nestling, Reg. No. A. 9316. "Taken from the nest, November 13th, 1880, Lachlan River, N.S. Wales. Female. Iris dark brown; bill and cere whitish; legs and feet pale lead blue, claws black; orbits pale bluish." Similar in plumage but slightly more advanced than the preceding, feathers on the sides of the chest blackish; thighs and abdomen brown margined with fawn colour; under tail-coverts fawn colour. Wing 6·3 inches; tarsus 2·4; mid. toe (s.u.) 1·5 inch.

Nestling, Reg. No. B. 10156. "Taken from the nest, October 29th, 1883, Mossgiel, N.S.W. Female? Iris rich dark brown, cere lead colour; bill light horn colour; eyelids white; legs white; feet white tinged with bluish lead colour, claws dark horn colour; between three and four weeks old." Similar in plumage to the preceding. Total length 10 inches; wing 5·5; tail 2·7; bill 1·1, from gape 1·2, from nostril 0·7; tarsus 2·1; mid. toe (s.u.) 1·6 inch.

Habitat. All parts of Australia, Tasmania, South-eastern New Guinea.

Measurements of averaged-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	18·3	14·8	9·5	1	1·1	2·7	1·4	0·8
A 2 ♀	19·8	15	9	1	1·2	2·75	1·6	0·82
A 3 ♀	19·5	15·4	9	1·1	1·3	3·1	1·5	0·76
A 4 ♀	16	14·1	8·5	1	1·1	2·6	1·55	0·8
A 5 ♀	17	14·7	8·5	1·1	1·2	2·85	1·6	0·82
B 1 ♀	15·8	12·5	7·8	0·9	1·05	2·6	1·5	0·75
C 1 ♀ ?	16·6	13·5	8·4	0·9	1·1	2·8	1·62	0·82
C 2 ♂	16·4	13·1	8·3	0·85	1	2·6	1·45	0·73

A 1 ♂	ad. sk.	Shoalhaven River, New South Wales.	Pres.
A 2 ♀	ad. mntd.	New South Wales.	Pres.
A 3 ♀	ad. sk.	Gayndah, Queensland.	Col.
A 4 ♀	ad. mntd.	Rockhampton, Queensland.	Col.
A 5 ♀	ad. mntd.	New South Wales.	Pres.
B 1 ♀	semi-ad. sk.	King George's Sound, West Australia.	Col.
C 1 ♀ ?	juv. sk.	"Dabee," New South Wales.	Pres.
C 2 ♂	juv. sk.	Ouse River, Tasmania.	Col.

16. TINNUNCULUS.

1. Tinnunculus cenchroides.

The Nankeen Kestrel.

Falco cenchroides, *Vig. and Horsf.*, *Trans. Linn. Soc.*, vol. XV, p. 183 (1826); *Schleg. Mus. Pays-Bas. Falcones*, p. 29 (1862).

Tinnunculus cenchroides, *Gray, Gen. Bds.*, vol. i, p. 21 (1844); *Gould, Bds. Austr.*, vol. i, pl. 13 (1848); *Sturt, Exped. Centr. Austr.*, vol. ii, App. p. 14 (1849); *Bonap. Consp.* Av., tom. i, p. 27 (1850); *Kaup, Contr. Orn.*, 1850, p. 53; *Bonap. Rev. et Mag. de Zool.*, 1854, p. 527; *Strickl., Orn. Syn.*, p. 98 (1855); *Pelz. Verh., z.-b. Wein*, xiii, p. 626 (1863); *Gould, Handbk. Bds. Austr.*, vol. i, p. 35, pp. 13 (1865); *Diggles, Orn. Austr.*, pt. 8 (1869); *Gray, Hand-list Bds.*, vol. i, p. 23 (1869); *Gurney, Ibis*, 1881, p. 469; *id. List Diurn. Bds. Prey*, p. 98 (1884); *Broadb. Proc. Roy. Soc. Queensld.*, vol. ii, p. 119 (1886); *id. op. cit.*, vol. iii, p. 24 (1887); *Ramsay, Proc. Linn. Soc.*, vol. ii, 2nd ser., p. 166 (1888); *id. Tab. List Austr. Bds.*, p. 1 (1888); *North. Nests and Eggs Austr. Bds.*, p 22, pl. iii, fig. 5 (1889); *id. Proc. Linn. Soc. N.S. W.*, vol. iii, 2nd ser., p. 1774 (1889); *id. op. cit.*, vol. iv, 2nd ser., p. 1024 (1890); *Cox and Ham., tom. cit.*, p. 399 (1890); *Sharpe, Index Gould's Works*, p. 332 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 28 (1894); *North and Keartl., Aves Horn Exped. Centr. Austr.*, p. 56 (1896); *Keartl. Vict. Nat.*, vol. xiii, p. 62 (1896); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 399 (1896).

Cerchneis cenchroides, *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 431 (1874); *id. Rep. Voy. Alert*, p. 13 (1884).

Adult male. All the upper surface of the body light rufous; the scapulars, a few of the inner secondaries and outer series of the wing-coverts having a triangular spot of black near the tip; head bluish-grey, washed with rufous on the margins of the feathers, the shafts black, which also appears on the nape, and on the sides and back of the neck; primaries and secondaries blackish brown, the marginal half of the inner webs (except at the tips) toothed with white, more widely towards the base, the apex of the teeth-like markings margined with pale rufous which forms a wavy line along the centre of the web; inner primaries and secondaries margined at the tips with buffy white; primary coverts, spurious wings, and a few of the innermost secondaries irregularly blotched or mottled with rufous; interscapular region and back clear rufous without spots; lower part of the rump and upper tail coverts bluish grey; tail feathers blue-grey, whitish on the outer webs near the base, but slightly washed with pale rufous towards the tip, all except the outer one, on either side

crossed with a broad black band near the tips, the outer feather on either side having a small black dot near the margin of the inner web, the tips of all white, of less extent on the two central feathers; forehead whitish, sides of the face and ear-coverts greyish—a blackish oblique stripe occasionally tinged with rufous, on either side of the throat from the lores to opposite the ear-coverts; throat and all the under surface white; the chest, sides, and flanks washed with pale rufous, and having narrow shaft-lines of tawny-rufous, which become blackish on the tips of the feathers, widening into a narrow streak on the flanks; axillaries white with blackish brown stripe down the centre; under surface of the wings white, the blackish markings of the upper surface showing through, the tips brown. Bill bluish horn-colour—blackish at the tips—the base of the lower mandible yellowish; cere, orbits, and legs yellow; iris, hazel. Total length 12·5 inches, wing 9·4, tail 6, tarsus 1·55, bill 0·7, culmen 0·8.

Adult female. Similar to the male, but having the head, rump, and tail rufous, of the same tint as the body, the upper tail-coverts tinged with bluish-grey towards the tip; tail rufous, the outer feathers of a paler tint, the inner webs white towards the base, all the feathers crossed with narrow alternate bars, and a subterminal broad band of black, and tipped with white, to a greater extent on the outer ones, the shafts reddish brown; the whole of the head and neck striped with shaft-lines of black, widening into somewhat triangular-shaped markings on the interscapular region, smaller scapulars and median wing-coverts having a triangular spot of black near the tip, the secondaries and larger scapulars barred on both webs with black; shoulders and smallest wing-coverts with a broad lanceolate stripe down the centre; a short broad stripe of blackish tinged with rufous on either side of the throat from the lores; facial features more distinct than in the male; the forehead, throat, and whole of the under surface white, the chest, sides, and flanks washed with pale rufous; more of the feathers striped than in the male. Total length 13·2 inches, wing 10·5, tail 6·6, tarsus 1·65, bill 0·7, culmen 0·8.

Young. The young of both sexes resemble the adult females, but have the under surface of a dull white and a more extended wash of rufous on the chest and sides, and the stripes more numerous; no tinge of bluish-grey on the upper tail coverts.

Nestling, Reg. No. B. 10157. "Apparently about a week old, taken from nest October 24th, 1883; iris blackish, bill and cere white, legs and feet yellowish." Total length 3·7 inches, tarsus 0·8, bill from forehead 0·65. Covered entirely with whitish down, longest on the head.

Habitat. Derby (N.W. Austr.); Port Denison, Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales; Interior, Victoria, South Australia, West Australia, Tasmania.

Measurement of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♂	12·9	9·5	6	0·7	0·75	1·5	1	0·5
A 2 ♂	12·3	9·5	6·5	0·67	0·73	1·5	0·98	0·43
A 3 ♀	13·5	10·5	6·8	0·72	0·8	1·5	1	0·5
B 1 ♂	12·2	9·6	6·5	0·62	0·7	1·45	0·95	0·43
B 2 ♀	12·8	10	6·7	0·65	0·72	1·47	0·9	0·47

A 1 ♂ ad. sk.	Port Augusta, South Australia.	Col.
A 2 ♂ ad. sk.	Lachlan River, New South Wales.	Col.
A 3 ♀ ad. sk.	New South Wales.	Col.
B 1 ♂ semi-ad.	Lachlan River, New South Wales.	Col.
B 2 ♀ semi-ad.	Campbelltown, New South Wales.	Pres.

Sub-family PANDIONINÆ.

17. PANDION.

1. Pandion leucocephalus.

The White-headed Osprey.

Pandion leucocephalus, *Gould, Proc. Zool. Soc.* (1837), p. 138; *id. Syn. Bds. Austr.*, pt. 3, pl. 6 (1838); *Gray, Gen. Bds.*, vol. i, p. 17 (1845); *Gould, Bds. Austr.*, vol. i, pl. 6 (1848); *Gray, List Bds., Brit. Mus., Accipitr.*, 2nd ed., p. 2 (1848); *Temm. and Schleg., Faun., Japon., Aves*, p. 13 (1850); *Bonap. Consp. Av.*, tom. i, p. 16 (1850); *id. Rev. et Mag. de Zool.* (1850), p. 480; *Macgill. Voy. Rattles*, vol. li, p. 356 (1852); *Strickl. Orn. Syn.*, p. 65 (1855); *Gray, Proc. Zool. Soc.* (1858), p. 189; *id. Cat. Bds., New Guin.*, p. 54 (1859); *id. Proc. Zool. Soc.* (1861), p. 433; *Gould, Handbk. Bds. Austr.*, vol. i, p. 22, sp. 6 (1865); *Finsch, New Guin.*, p. 154 (1865); *Wallace, Ibis* (1868) p. 15; *Gray, Hand-list Bds.*, vol. i, p. 15 (1869); *Marie, Act Soc. Linn. Bord*, tom. xxvii (1870) *Cab. and Reichnw. Jour. f. Orn.* (1876), p. 325; *Marie, Ibis* (1877), p. 361; *Gurney, op. cit.* (1878), p. 56; *Sharpe, Journ. Linn. Soc.*, vol. xiii, pp. 309, 490 (1878); *D'Alb., Syd. Mail* (1877), p. 19; *id. Ann. Mus. Civ. Gen.*, vol. x, p. 19 (1877); *Castl. and Rams., Proc.*

Linn. Soc., N.S.W., vol. i, p. 379 (1877); *Masters, op. cit.*, vol. ii, p. 269 (1878); *D'Alb. and Salvad., Ann. Mus. Civ. Gen.*, vol. xiv, p. 25 (1879); *Salvad., Orn. Pap. et Molucc.*, vol. i, p. 12 (1880); *id. Voy. Chall. Bds.*, p. 67 (1881); *Meyer, Verh., z.-b., Ges. Wien* (1881), p. 772; *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. vii, p. 28 (1883); *Gurney, List Diurn. Bds. Prey*, p. 113 (1884); *Broadb., Proc. Roy. Soc., Queensld.*, p. 93 (1884); *Forbes, Proc. Zool. Soc.* (1884), p. 431; *Pleske, Bull. Acad., Petersb.*, vol. xxix, p. 520 (1884); *Grant, Proc. Zool. Soc.* (1887), p. 329; *Ramsay, Proc. Linn. Soc.*, vol. ii, 2nd ser., p. 166 (1888); *id. Tab. List Austr. Bds.*, p. 1 (1888); *Broadb., Proc. Roy. Soc., Queensld.*, vol. v, p. 14 (1889); *North, Proc. Linn. Soc., N.S.W.*, vol. iii, 2nd ser., p. 1773 (1889); *id. Nests and Eggs Austr. Bds.*, p. 23, pl. v, figs. 1 and 2 (1889); *Salvad., Aggiunte Orn. Pap. et Molucc.*, p. 11 (1889); *id. Ann. Mus. Civ. Gen.*, 2nd ser., vol. x, pp. 799, 828 (1891); *Gurney, jun., Cat. Bds. Prey*, p. 30 (1894); *Salvad. Ann. Mus. Civ. Gen.*, 2nd ser., vol. xvi, p. 58 (1896).

Pandion gouldi, *Kaup, Isis* (1847), p. 270.

Pandion haliœtus var. leucocephalus, *Hartl., Proc. Zool. Soc.* (1867), p. 828.

Pandion leucocephalus, subsp., *Sharpe, Cat. Bds. Brit. Mus.*, vol. i, p. 451 (1874).

Adult. Upper surface of the body, wings, and tail, glossy brown, the feathers mesially shaded with a darker tint, many of the feathers of the interscapular region, back, scapulars and shoulders margined with white; primaries blackish brown, black at the tip past the notch, the inner web becoming white on the margin towards the base, some showing remains of brown bars; a few of the inner primaries, some of the adjacent secondaries and wing-coverts, narrowly margined with buffy white; under surface of the wings white, the outer series of the under-coverts blotched with brown; feathers along the outer margin of the wing from the elbow to the base of the primaries, dark brown margined with white, under surface of the secondaries and of the primaries past the notch ashy-brown, the basal marginal portion of the inner webs white barred down the centre portion with brown; head, throat, and back of the neck white, a few feathers on the nape having a streak of blackish brown down the centre; lores blackish lead-colour; ear-coverts blackish brown, which colour extends on to the sides of the neck, where the feathers are brown margined with white; chest, breast, and the lower part of the hind-neck white, much mottled with brown on the tips of the feathers, and occasionally centred with a blackish stripe; the remainder of the under surface, thighs and under tail-coverts white; tail above brown, feathers narrowly margined at the tips with white, the inner webs of a lighter brown, all except the two centre quills broadly margined and toothed with white

towards the base; under surface of the tail ashy white, tips of the feathers ashy margined with white; bill black; legs and feet lead-blue; iris yellow. Total length 25·5, wing 20·, tail 9, tarsus 2·5, bill 1·7*, from nostril 1·2, culmen 1·95.

Obs.—In some specimens, apparently fully adult, the whole of the breast, chest, and sides of the neck are strongly mottled with brown, and the feathers centred with a blackish stripe; the under wing-coverts are barred with brown; the scapulars, upper wing-coverts, and quills scarcely if at all margined with white; in others the whole of the head and neck, except the ear-coverts and sides of the neck immediately behind them, is white, without any brown markings, and the dull brown on the chest takes no definite form, but is for the most part darkest on the centre of the feathers.

Habitat.—The coastal districts of Australia and Tasmania, New Guinea, Celebes, New Britain, Solomon Islands.

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill.	Culmen.	Tarsus.	Middle toe. (s.u.)	Hind toe. (s.u.)
A 1 ♀	25	19·3	9·25	1·6	1·8	2·55	2	1·05
A 2 ♂	21·5	16·3	8·25	1·55	1·7	2·4	1·65	1
A 3 ♂	21	17	8	1·55	1·7	2·4	1·63	1
A 4 ♀	21	17·75	9	1·53	1·77	2·4	1·9	1
B 1 ♀	19	17·5	8	1·45	1·75	2·5	1·75	0·97

A 1 ♀ ad. sk. King George's Sound, West Australia. Col.
A 2 ♂ ad. sk. ,, ,, ,, Col.
A 3 ♂ ad. sk. Fraser's Island, Queensland. Col.
A 4 ♀ ad. sk. ,, ,, Col.
B 1 ♀ semi-ad. sk. New South Wales. Pres.

* The length of the bill varies considerably, some specimens, measured from the *anterior* margin of the cere, being only 1·2, others 1·35.

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CATALOGUE

OF THE

AUSTRALIAN BIRDS

IN THE

AUSTRALIAN MUSEUM,

AT

SYDNEY, N.S.W.

PART II.

STRIGES.

BY

E. P. RAMSAY.

1890.

SECOND EDITION, WITH ADDITIONS, BY

A. J. NORTH.

1898.

PREFACE TO FIRST EDITION OF PART II.

This Part II of the Catalogue of the Australian Birds contains a description of all the species of the Striges or Nocturnal Birds of Prey at present known to inhabit Australia—in all 14 species—and a list of such as are contained in the collection of the Australian Museum. Opportunity has also been taken to add an Appendix to the Accipitres or Diurnal Birds of Prey, as in many instances the young of these species have not been previously described. Measurements of a large series of *Gypoictinia melanosternon*, Gould, have also been added, as well as those of authentic specimens of *Astur cruentus*, Gould.* The author has endeavoured to make these descriptions as concise as possible, but the material in some instances has not been as large as could be desired. In addition to those specimens in the Australian Museum, private collections have been examined, notably that of the Macleayan Museum and the Dobroyde Collection. In all about 200 specimens have been examined coming from various parts of Australia. We trust our correspondents in the country will endeavour to complete our National Collection by forwarding specimens; those most required are the young of the various species mentioned.

E. P. RAMSAY.

Sydney, 1890.

PREFACE TO SECOND EDITION OF PART II.

In Part II has been added a description of the species of the Striges or Nocturnal Birds of Prey, which previously were not represented in the collection of the Australian Museum. Special thanks are due to Mr. C. W. De Vis, M.A., the Curator of the Queensland Museum, for his assistance in the loan of specimens of *Ninox humeralis* and *N. lurida*.

ALFRED J. NORTH.

Sydney, 1898.

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* Which have now been incorporated in the new edition of Part I.—(A.J.N.)

"*Pres.*"	stands for	Presented by.
"*Col.*"	,,	Collected by Museum employees.
"*Pch.*"	,,	Purchased.
"*Exch.*"	,,	Received in Exchange.
"*O.C.*"	,,	Old Collection.
"*semi-ad.*"	,,	semi-adult or half grown.
"*ad.*"	,,	adult or full grown.
"*juv.*"	,,	young.
"*sk.*"	,,	skin—not "set up."
"*mntd.*"	,,	"set up" or "mounted."
"♂"	,,	male.
"♀"	,,	female.

SYSTEMATIC INDEX.

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Order STRIGES.

Family STRIGIDÆ.

1. STRIX.

1. Strix novae-hollandiæ.

The New Holland Owl, Masked Owl.

Mouse Owl, *Lath., Gen. Hist.*, vol. i, p. 358.

Strix novae-hollandiæ, *Stephen, Gen. Zool.*, vol. xiii, p. 61 (*ex Lath.*) *Strickl. Orn. Syn.*, p. 181 (1855); *Gould, Handbk. Bds. Austr.*, vol. i, p. 64, sp. 29 (1865); *Sharpe, Cat. Bds., Brit. Mus.*, vol. ii, p. 303 (1875); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii, p. 178 (1877); *id. Tab. List. Austr. Bds.*, p. 2 (1888); *North, Proc. Linn. Soc. N.S.W.*, vol. iii, 2nd ser., p. 1774 (1888); *Ramsay, Bull. No. 1, Dept. Agri. N.S.W.*, p. 240 (1890); *Sharpe, Index Gould's Works*, p. 317 (1893); *Gurney, jun., Cat. Bds. Prey.*, p. 43 (1894); *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 369 (1896).

Strix personata, *Vigors, Proc. Zool. Soc.*, 1831, p. 60; *Gould, Syn. Bds Austr.*, pl. 49, fig. 1 (1838); *Gray, Gen. Bds.*, vol. i, *p.* 41 (1845); *Gould, Bds. Austr.*, fol., vol. i, pl. 29 (1848); *Sturt, Exp. Centr. Austr.*, vol. ii, app., p. 16 (1849); *Bonap. Consp.*, tom. i., p. 54 (1850); *Schleg. Mus. P.B. Striges*, p. 6 (1862).

Dactylostrix personata, *Kaup, Isis* (1848), *p.* 770; *id. Contr. Orn.* (1852), p. 119; *id. Trans. Zool. Soc.* (1852), p. 249.

1. Light Variety.

Adult. The feathers on all the upper surface of the body and interscapular region brown at the base, tinged with a more or less deep tint of orange-buff on the sides near the end, which is blackish-brown spotted or irregularly barred with white, a white spot at the tip of each feather; feathers of the wing-coverts and scapulars similar, the latter conspicuously barred with blackish-brown, the interspaces vermiculated with white, and having a spot of white at the tip; secondaries more strongly barred with from three to five blackish-brown cross-bars, whitish towards their base and on the inner webs, and margined with white at their tips where there is a distinct black spot, the interspaces between the bars being vermiculated with blackish-brown and

occasionally tinged with buff; primaries white on the inner webs and at the base, crossed with from six to eight blackish-brown bars, the interspaces vermiculated with white and blackish-brown, occasionally tinged with buff; tail feathers white, occasionally tinged with buff, crossed with six distinct blackish-brown bars, the interspaces vermiculated with zigzag lines of the same colour. Facial disc whitish and tinged with reddish-buff; a black spot in front of the eye, plumes in front of it tinged with reddish-buff. Frill feathers all white at the base, the tips buff, those over the forehead vermiculated with white and black, and often at the extreme tip having a minute white dot, or in some instances an irregular shaft line of black, the inner rows round the ears altogether white, the outer ones with an irregular shaft line and margin of black, the ends of the feathers being orange-buff, those round the throat white tinged with buff towards the tip and broadly margined with black; all the under surface of the body white, with a slight tinge of buff on the sides of the chest and on the under margin of the wing and flanks, the under wing-coverts, flanks, and thighs, and remainder of the under surface except the abdomen and under tail-coverts, marked with rather large spots, on the breast and chest a single spot, joined to a narrow shaft line which becoming distinct, forms a second spot on the breast feathers, the flank feathers have a narrow shaft line with a tear-shaped, pear-shaped, hastate or sagittate spot near the tip of the feather; the lowermost flank feathers have two distinct spots, but on the thighs the marking are obsolete.

In an apparently fully adult bird from Port Essington, there is scarcely a tinge of buff to be found, a mere trace on the scapulars and upper wing-coverts, the facial disc is white with a chocolate spot in front of the eye, quills white with five or six blackish bars best defined near the shaft of the feather, but not extending quite across the inner web, the interspaces closely vermiculated with blackish-brown and white, secondaries similarly marked, but with nearly the whole of the inner webs white, on the scapulars the bars become lost in the close vermiculations of black and white which occupy the greater portion of the feather, and the white apical spot found on those of the interscapular region is here more strongly defined and larger. The tail in this specimen has only five bars and the outer feather on either side white with obsolete vermiculations at the tip, and remains of three bars only along the shaft line.

A very old bird from South Australia is similar in plumage, but is more or less tinged with buff all over the upper surface except on some of the secondaries and innermost primaries, and on the outer tail feathers where remains of five or six cross-bars are to be found, the centre two and adjacent feathers of the tail

have six well defined bars, the whole of the under surface white, only the faintest trace of spots on the outer series of the under wing-coverts and along the flanks where there are a few minute dots, facial disc white with a small dark chocolate eye-spot.

Dark Variety.

The dark varieties of this species may be described as differing only in the general colour of the plumage; the black and white markings being the same, the apical half of the feathers being more or less strongly tinged with tints varying from orange-buff to almost a chocolate colour, conspicuously on the interspaces between the cross-bars and on the under margin of the wings, upper and under coverts and flanks; the chest is also washed with orange-buff and the ends of the gular portion of the frill more broadly margined with black. The facial disc is often as deeply tinted with rich dark orange-buff as that variety known as *Strix castanops* from Tasmania. In fact one specimen from New South Wales is, with the exception of the under tail-coverts and flanks, quite as dark as any examined from Tasmania.

Habitat. Port Darwin and Port Essington, Gulf of Carpenteria, Rockingham Bay, Port Denison, Wide Bay District, Richmond and Clarence River District, New South Wales, Interior, Victoria and South Australia, West and South-West Australia.

Measurements of average-sized specimens from different localties.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Inner toe.
A 1 ♀	14·5	12·5	5·75	1·5	0·75	1·9	2·65	1·75
A 2 ♂	14	12	5·65	1·5	0·7	1·8	2·75	1·7
B 1 ♂	15·5	13·5	6	1·7	0·8	2	2·75	1·7
B 2 ♀	17	14·5	6·8	1·6	0·8	2	2·8	1·8

A 1 ♀ ad. sk. (light phase) Port Essington, Queensland, Jan., 1879. Col.
A 2 ♀ ad. sk. (dark phase) Illawarra, N.S.W Col.
A 3 ♂ ad. mntd. (light phase) New South Wales. O.C.
A 4 ad. mntd. (light phase) North Australia. Col.
B 1 ♀ nearly ad. sk.,—bones laid bare for measurement—(light phase) Concord, New South Wales. Pres.
B 2 ♀ nearly ad. sk. (medium var.) King George's Sound, W. Aust. Col.
B 3 nearly ad. mntd. (dark phase) New South Wales. O.C.
B 4 nearly ad. mntd. (light phase) Parramatta, N.S.W. Pres.

2. Strix castanops.

The Chestnut-faced Owl, Tasmanian Owl.

Strix castanops, *Gould, Proc. Zool. Soc.*, 1836, p. 140; *id. Syn. Bds. Austr.*, pl. 49, fig. 2 (1838); *Gray, Gen. Bds.*, vol. i, p. 41 (1845); *Gould, Bds. Austr.*, fol. vol. i, pl. 28 (1848); *Bonap., Consp. Av.*, tom. i, p. 54 (1850); *Strickl., Orn. Syn.*, p. 181 (1855); *Schleg., Mus. P.-B. Striges*, p. 7 (1862); *Gould, Handbk. Bds. Austr.*, vol. i, p. 62, *sp.* 28 (1865); *Gray, Hand-list Bds.*, vol. i, p. 53 (1869); *Sharpe, Cat. Bds. Brit. Mus.*, vol. ii, p. 304 (1875); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. 2, p. 178 (1877); *id. Tab. List Austr. Bds.*, p. 2 (1888); *Sharpe, Index Gould's Works*, p. 317 (1893); *Gurney, jun., Cat. Bds. Prey*, p. 43 (1894).

Dactylostrix castanops, *Kaup. Contr. Orn.* 1852, p. 119; *id. Trans. Zool. Soc.*, vol. iv. p. 248 (1862).

Adult male. The whole of the upper and under surface of the body of a rich chestnut inclining to chocolate-red, all the feathers of the head, neck and mantle with the ends black, sparingly, faintly and minutely vermiculated with white, a small white dot at the tip of each feather, and occasionally an obsolete cross band about the middle of the feathers adjacent to the scapulars; on the back and interscapular region they are distinctly barred as well as tipped with black, and the apical portion vermiculated with very fine white zigzag lines; upper tail-coverts similarly marked and tinted. Tail feathers deep orange-buff, with five distinct broad black bands on all except the outer two which show four only, but on the centre two the remains of a sixth band is visible on the basal portion of the feathers, the interspaces are vermiculated with black and on the extreme tip a few white dots appear. Wings: primaries dark brown, whitish towards the base on the inner webs, crossed by six broad blackish bands, the interspaces on the outer webs orange-buff or deep chestnut, and freckled with black, secondaries with a few very minute dots of white on the end of the feathers, the scapulars similar but more uniformly coloured, no white on the inner webs, the black bands irregular, some narrower and broken and with a very few white dots on the apical portion of the feathers. Facial disc rufous or deep chestnut, the eye spot black, the frill varying from chestnut to deep rufous, the plumes all more or less tipped or broadly margined with black on the gular region, they are lighter on their lower parts, but the black margins are wider. All the under surface rich chestnut, an oval spot of black at the tip of each feather, smaller on the chest and under wing-coverts, larger on the flanks; legs chestnut without spots; on the under primary coverts a large blotch of blackish-brown at the tips, bill horn yellow; feet and claws light brown, iris yellow.

Habitat.—New South Wales, Victoria, and South Australia, Tasmania.

Measurements of average-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Inner toe.
A 1 ♂	14·5	12	5·6	1·45	0·8	2	2·5	1·5
* ♀	17	14	7	1·7	0·9	2·2	2·8	2

A 1 ♂ ad. sk. New South Wales. Col.
A 2 ♀ ad. sk. Tasmania. Pres.

3. Strix tenebricosa.

The Sooty Owl.

Strix tenebricosus, *Gould, Proc. Zool. Soc.*, (1845) p. 80; *id. Bds. Austr.*, fol. vol. i, pl. 30 (1848); *id. Handbk. Bds. Austr.*, vol. i, p. 65, sp. 30 (1865); *Müll., Proc. Zool. Soc.* (1869), p. 279; *Sharpe, Index Gould's Works*, p. 317 (1893).

Strix tenebricosa, *Gray, Gen. Bds.*, vol. i, *App.* p. 3 (1849); *Bonap. Consp. Av.*, tom. i, p. 54 (1850); *Strickl. Orn. Syn.*, vol. i, p. 182 (1855); *Schleg., Mus. P.-B. Striges.*, p. 7 (1862); *id. Mus. P.-B. Revue. Aves Noctuæ*, p. 17 (1873); *Sharpe, Cat. Bds. Brit. Mus.*, vol. ii, p. 306 (1875); *id. Rowley, Orn. Miscl.* (1876); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii, p. 178 (1877); *Salvad., Ann. Mus. Civ. Gen.*, vol. xii, p. 41 (1878); *id. Orn. Pap. et Molucc.*, vol. i, p. 91 (1880); *Ramsay, Tab. List*, p. 2 (1888); *Broadb., Proc. Roy. Soc. Queensld.*, vol. v, p. 16 (1889); *Ramsay, Dept. Agri. N.S.W., Bull. No. 1*, p. 240 (1890); *Gurney, jun., Cat. Bds. Prey*, p. 43 (1893).

Strix (Megastrix) tenebricosa, *Kaup, Contr. Orn.* (1852), p. 120; *Bonap., Rev. et Mag. de Zool.* (1854), p. 540; *Kaup, Trans. Zool. Soc.*, vol. iv, p. 249 (1862).

Megastrix tenebricosa, *Gray, Hand-l. Bds.*, vol. i, p. 53 (1869).

All the upper surface dark smoky blackish-brown, all the feathers with a small white dot near the tip, on the scapulars and wing-coverts are remains of vermicular white cross lines, primaries sooty-brown, the basal portion of the inner webs vermiculated with white, inner webs of secondaries white at the base, vermiculated with brown on their mesial portion, in some specimens showing the remains of six blackish-brown cross-bars; facial disc smoky-brown round the ears and the lower part of the frill whitish, all the feathers widely tipped with blackish-brown, a blackish spot in front of the eye; under wing and tail-coverts ashy-white at the base, the ends of the feathers sooty-black

spotted and vermiculated with white, tail sooty-brown with whitish vermiculations at the base of the feathers of the inner web and remains of six to eight indistinct cross-bars ; all the under surface of the body sooty-brown, the base of the feathers ashy-white, the terminal half spotted and vermiculated with white, showing the remains of alternate white and brown cross-bars, feathers on the thighs and legs ashy-white at the base, and barred alternately with brown and white cross-bars, bristles on the feet whitish, claws black, bill yellowish, dark brown on the margins.

Specimens not quite adult have the facial disc as in the adults smoky brown, the lower and gular portion ashy-white, the inner series of the plumes white very slightly margined with brown, the outer series strongly tipped and the mesial portion of the plumes vermiculated with brown, the feathers of all the upper surface with a white subterminal spot, those of the interscapular region with remains of white vermiculations ; the basal portion of the inner webs of the primaries whitish, the outer webs with six to eight obsolete cross-bars of blackish-brown and vermiculations of ashy-white on the outer webs, the secondaries white at the base, the outer webs like those of the primaries and showing remains of cross-bars on the shaft line, tail feathers dark brown and similarly marked to the secondaries, under tail-coverts brown at the ends, vermiculated with white ; all feathers of the under surface ashy-white at the base, the ends crossed with irregular wavy blackish-brown bars, still younger birds are similar, with the facial disc dusky, a blackish shade all round the eye, the frill more distinctly tipped with black, the upper surface of the feathers of a clear slaty-black with much larger spots, formed by the remains of alternate black and white bars, largest upon the interscapular region and wing-coverts, scapulars with a larger white spot at the tip and crossed with numerous wavy narrow white bands, primaries with six to eight blackish bands separated by lines and vermiculations of white, outer webs strongly vermiculated with white, all the quills with a white spot at the tip, secondaries white at the base of the inner web, the remainder of the feather banded with from six to eight blackish-brown bars, the interspaces on both webs vermiculated with black and white, centre tail feathers similar but without the white bases, the outer feathers white on the inner webs toward the base, and showing remains of from six to eight blackish bars, the interspaces vermiculated with black and white, the under surface feathers of the chest dusky at the base, on the remainder of the body white crossed with three or four irregular wavy lines of slaty-black, with indications of a white spot at the tip of each feather, under wing-coverts, thighs and legs similar, the cross-bars not so well defined, the under tail-coverts with broader bars towards the end of the feathers.

Remark. Upon more adult birds the spots become very much smaller, the cross-bars on the under surface broken and the bases of the feathers dusky instead of white, the vermiculations and bars on the primaries and secondaries nearly obsolete.

Habitat. Rockingham Bay, Wide Bay District, Richmond and Clarence River District, New South Wales, Victoria, and South Australia, South Coast of New Guinea.

Measurements of average-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Inner toe.
A. 1 ♀	16	12·5	6·1	1·7	1	2·2	3·2	2·1
A. 2 ♂	15	10·8	5	1·5	0·8	1·8	2·7	1·5
B. 1 ♂	13·5	10·4	5·1	1·5	0·9	1·9	2·6	1·3
B. 2 ♂	14	10·7	5·3	1·7	0·9	2·1	2·1	1·7
B. 3 ♀	13	9·75	5·1	1·5	0·9	1·95	2·9	1·6

A. 1 ♀ ad. sk., Victoria. Col.
A. 2 ♂ ad. sk., Victoria. Pres.
A. 2 ♂ ad. sk., North Australia. Pch.
A. 4 ♀ ad. sk., North Australia. Pch.
B. 1 ♂ semi ad sk., Cairns, Queensland. Col.
B. 2 ♂ semi ad. sk., Lismore, Richmond River, N.S.W. Pres.
B. 3 ♀ semi ad. sk., Victoria. Pres.

4. Strix candida.

The Grass Owl, Long-legged Owl.

Strix candida, *Tickell, Journ. As. Soc. Beng.*, vol. ii, p. 572; *Jerd. Ill. Ind. Orn.*, pl. 30; *Kaup, Contr. Orn.* (1852), p. 119; *Strickl., Orn. Syn.*, vol. i, p. 181 (1855); *Jerd. Bds. Ind.*, vol. i, p. 118 (1862); *Schleg., Mus. P. B. Striges*, p. 6 (1862); *Gray, Hand-l. Bds.*, vol. i, p. 53 (1869); *Gould, Bds. Austr.*, fol. vol. Suppl., pl. i (1869); *Swinhoe, Proc. Zool. Soc.* (1871), p. 344; *Sharpe, Cat. Bds. Brit. Mus.*, vol. ii, p. 308 (1875); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii, p. 178 (1877); *id. Tab. List Austr. Bds.*, p. 2 (1888); *North, Nests and Eggs Austr. Bds.*, p. 24, pl. 6, fig. 5 (1889); *Ramsay, Bull. No. 1 Dept. Agri. N.S.W.*, p. 240 (1890); *North, Rec. Austr. Mus.*, vol. ii, p. 13 (1892); *Sharpe, Index Gould's Works*, p. 317 (1893).

Strix longimembris, *Jerd. Madr. Journ.*, vol. x, p. 86; *Gray, Gen. Bds.*, vol. i, p. 41 (1845).

Glaux candida, *Blyth, Journ. As. Soc. Beng.*, vol. xix, p. 513; *Ball, Stray Feath.* (1874), p. 381; *Hume, Nests and Eggs Ind. Bds.*, p. 60.

Scelostrix candida, *Kaup, Trans. Zool. Soc.*, vol. iv, p. 248 (1862); *Blyth, Ibis* (1866), p. 251; *Hume, Rough Notes*, vol. ii, p. 345; *Walden, Trans. Zool. Soc.*, vol. ix, p. 145; *Gurney, jun., Cat. Bds. Prey*, p. 43 (1894).

Strix amauronota, *Cab. Journ. of Orn.* (1866), p. 9; *Gray, Hand-l. Bds.*, vol. i, p. 52 (1869).

Strix pithecops, *Swinhoe, Ibis* (1866), pp. 396-7; *Gray, Hand-l. Bds.*, vol. i, p. 53 (1869).

Strix walleri, *Diggles, Bds. Austr.* (1869); *Gray, Hand-l. Bds.*, vol. i, p. 52 (1869).

Nestling. "Covered with long filamentous down of a dull orange-buff colour; the feathers of the upper part, as far as developed, of a dark-brown colour, spotted near the end of the shaft of the feathers with white, the basal part of the dorsal plumes bright orange."*

Adult. Facial disc white, with a spot of blackish-brown in front of the eye, frill white except on three or four of the outer rows of feathers next the forehead which are centred and mottled with dark brown and fulvous. The feathers of the head, hind neck, back and upper tail-coverts dark brown, indistinctly freckled with white, but with a small distinct dot of white at the tip. The concealed portions of the feathers at the base fluffy and ashy-white, the mesial portion extending more or less across the tip fulvous or buff, leaving the tips alone brown; the sides of the hind neck adjacent to the frill white or occasionally tinged with buff, and with a dark brown dot near the end of the feather, some feathers nearest the forehead show remains of a dark brown shaft stripe, margins of the wings white or tinged with buff and with a dark brown spot towards the end of each feather, wing-coverts dark brown, white at the base, the mesial portion buff freckled with brown, a white spot near the tip of each feather, the inner web white except at the tip, primaries white at the base and on the inner web except at the tip, the outer web and along the shaft buff, and having the remains of four dark brown irregular bars, the ends of all the feathers vermiculated with white and brown, in some specimens merging into a white margin at the tip; the secondaries similarly marked but having the inner webs almost all white, the outer webs barred tinged occasionally with buff and their tips vermiculated with dark brown, scapulars

* Sharpe, Cat. Bds. Brit. Mus., vol. ii, p. 308 (1875).

similar but more definitely freckled with darkish brown on and towards their tips, which are almost wholly brown and have a distinct subterminal spot, or a patch of white freckles, sometimes forming a white margin, two centre tail feathers and the outer webs of all except the outermost on either side, buff, crossed with four distinct dark brown bars, the end of each feather freckled with white and having an irregular spot of white at the tip, the outer feather on either side altogether white, with remains of two to four dark bands; under wing-coverts white with a small spot of dark brown near the end of each feather, the tips of the outer series freckled with brown and buff, all the under surface white with a tinge of buff on the breast, each feather having a diamond shaped, triangular, or hastate spot of blackish-brown near the tip, under tail-coverts white, with a minute dot of brown towards the ends of the feathers, some specimens are also occasionally tinged with pale buff, thighs and legs white, the lower portion of the tarsi almost bare, feet yellowish sparsely covered with stiff white hairs; bill pale straw colour; claws brown.

Remarks. In some specimens which are apparently immature, the surface of the facial disc and tips of the frill are tinged with fulvous or light orange buff, the margins and mesial portions of the feathers on all the upper surface and on the sides of the neck, on the chest, the flanks, and the tips of the under tail-coverts are washed with buff, the prevailing colour of the feathers on the upper surface is buff, with dark brown tips, with an oblong linear spot of white towards the end of the feather, the bars on the tail more defined and the tips of the feathers more distinctly freckled with white.

Habitat. Rockingham Bay, Wide Bay District, New South Wales, Victoria.

Measurements of average-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from fore-head.	Bill from nostril.	Culmen.	Tarsus.	Inner toe.
A 1 ♀	12·5	12·5	4·55	1·45	0·75	1·8	3·5	1·4
A 2 ♂	12	Pin'd.	4·8	1·5	0·75	1·7	3·4	1·45
A 3 ♂	13·2	12·75	5	1·5	0·73	1·8	3·45	1·2

A 1 ♀ ad. mntd.	Sydney, New South Wales.	Pres.
A 2 ♂ ad. mntd.	New South Wales, 1888.	Pres.
A 4 ♂ ad. sk.	Richmond River, Aug., 1889.	Pch.

5. Strix delicatula.

Delicate Owl, Australian Barn Owl.

Strix delicatula, *Gould, Proc. Zool. Soc.* (1836), p. 140 ; *id. Syn. Bds. Austr.*, pl. 50, fig. i (1838) ; *id. Bds. Austr.*, fol., vol. i, pl. 31 (1848) ; *Sturt, Exp. Centr. Austr.*, vol. ii, App., p. 17 (1849) ; *Bonap. Consp. Av.*, tom. i, p. 54 (1850) ; *Kaup, Contr. Orn.* (1852), p. 119 ; *Strickl. Orn. Syn.*, vol. i, p. 180 (1855) ; *Cass. U.S. Expl. Exped.*, p. 105 (1858) ; *Gray, Cat. Bds. Trop. Isl.*, p. 3 (1859) ; *Verr. Rev. et Mag. de Zool.* (1860), p. 421 ; *Gould, Handb. Bds. Austr.*, vol. i, p. 66, sp. 31 (1865) ; *Finsch and Hartl. Vög. Centr. Polyn.*, p. 11 (1867) ; *Gray, Hand-l. Bds.*, vol. i, p. 52 (1869) ; *Salvad. Ann. Mus. Civ. Gen.*, vol. xii, p. 42 (1878) ; *id. Orn. Pap. et Molucc.*, vol. i, p. 92 (1880) ; *id. Agg. Orn. Pap. et Moluc.*, p. 25 (1889) ; *De Vis, Rep. Sci. Exped. N.E. Queensld.*, p. 31 (1889) ; *Broadb. Proc. Roy. Soc.*, vol. v, p. 16 (1889) ; *Gurney, jun., Cat. Bds. Prey*, p. 43 (1894) ; *Sclater, List Vert. Anim. Zool. Gard.*, 9th ed., p. 369 (1896) ; *Kearll. Vict. Nat.*, vol. xiii, p. 62 (1896).

Strix flammea, part., *Sharpe, Cat. Bds. Brit. Mus.*, vol. ii, p. 291 (1875) ; *id. Journ. Proc. Linn. Soc. Zool.*, p. 490 (1878).

Strix flammea, var., delicatula, *Ridgw. North Am. Bds.*, vol. iii, p. 13.

Strix delicatulus, *Castl. and Rams. Proc. Linn. Soc. N.S.W.*, vol. ii, p. 379 (1877) ; *Sharpe, Index Gould's Works*, p. 317 (1893).

Strix flammea, *subsp.* delicatula, *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii, p. 178 (1877) ; *id. Tab. List Austr. Bds.*, p. 2 (1888) ; *North, Nests and Eggs Austr. Bds.*, p. 24 (1889) ; *Cox and Ham. Proc. Linn. Soc. N.S.W.*, vol. iv, 2nd ser., p. 399 (1889).

Aluco delicatula, *Sharpe, Voy. Ereb. and Terr. Birds*, p. 22.

Adult. On all the upper surface of the body the feathers are light ashy-grey, with faint zigzag and wavy lines of dark brown or blackish-brown in some specimens, tinged more or less towards their mesial portion with light tawny-buff, each with a roundish spot of white and a subterminal spot of black at the top ; the mantle, wing-coverts and scapulars are similarly coloured and marked, but with the spots larger and more distinct, and the white spot margined with blackish, edges of the shoulders and margins of the wings white, and the concealed portions of the coverts white ; the outer and inner margins and base of the feathers of the bastard wings pure white, the rest of the feathers freckled like those of the body but occasionally tinged more or less with tawny or orange-buff, primaries white on the inner webs and at the base, towards the end and on the outer web freckled and tipped like the rest of the feathers, occasionally tinged with orange-buff and showing the remains of four or five dark brown bars or blotches ; facial disc white with a dark brown (inclining to rufous in the young) triangular patch in front of the eye which extends in a narrow line to the gape, frill white at the base, round the forehead strongly tinged with buff, minutely freckled

and tipped with white and subterminal spot of black, those surrounding the ears altogether white, and those of the inner rows below the eye and round the throat also pure white, the outer rows more or less tinged with buff at the tips and margined with a narrow cross subterminal band of black, the narrow white terminal line here disappearing; all the under surface of the body and tail pure white, with a few scattered oblong spots of blackish-brown sprinkled over the sides of the chest, under wing-coverts and flanks; the outer two feathers of the under wing-coverts with a brownish blotch at their tip; the quills white below, freckled at their tips, and having the four blackish bands of the upper surface showing through more conspicuously on the inner webs; upper tail-coverts and the feathers above freckled and spotted like those of the back except the outer feather on either side, the centre two feathers with four blackish cross bands, the others with three only, their inner webs and nearly the whole of the outer two feathers on either side white, showing only remains of the cross-bars; bill light straw yellow, darker and inclining to brown on the margins; feet with a few weak bristles of dark brown, claws brown.

Habitat. Derby, N. W. Australia; Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Richmond and Clarence River District. New South Wales, Interior, Victoria and South Australia, West and South-West Australia, South Coast New Guinea.

Measurements of average-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from fore-head.	Bill from nostril.	Culmen.	Tarsus.	Inner toe.
A 1 ♂	13·5	11	5	1·45	0·7	1·75	2·65	1·3
A 2 ♀	11·5	10·6	4·4	1·35	0·7	1·75	2·5	1·3
A 6 ♀	12·6	10·6	4·5	1·3	0·7	1·7	2·3	1·2
B 1 ♂	12	11	5·5	1·3	0·7	1·6	2·5	1·2
B 2 ♀	11·8	10·5	4·3	1·25	0·7	1·6	2·5	1·3
B 3 ♀	12	10·6	4·8	1·2	0·7	1·7	2·4	1·3

A 1 ♂ ad. sk.	New South Wales, Aug., 1865.	Col.
A 2 ♀ ad. sk.	Clarence River, N.S.W., May, 1866.	Col.
A 3 — ad. sk., mntd.	Port Denison.	Col.
A 4 — ad. sk., mntd.	Dubbo, N.S.W.	Pres.
A 5 — ad. sk., mntd.	New South Wales.	Pres.
A 6 ♀ ad. sk., mntd.	Blayney, N.S.W.	Pres.
B 1 ♂ not quite ad. sk.	Dubbo, N.S.W.	Pres.
B 2 ♀ semi ad. sk.	Concord, N.S.W., Oct.	Pres.
B 3 ♀ semi ad. sk.	Parramatta River, N.S.W.	Pres.

Remarks. In some specimens not quite mature the whole of the upper surface is suffused with a rich orange-buff, particularly noticeable on the wing-coverts, scapulars, and margins of the wings; the tail, moreover, has four distinct bars on all the feathers each with a small distinct black spot near the tip, and the interspaces between the cross-bars are of a rich orange-buff; the under wing-coverts and the whole of the under surface of the body except the thighs and under tail-coverts are thickly sprinkled with blackish dots, and the sides of the chest and flanks are tinged with buff.

In a younger specimen the freckles on the wing and tail feathers are coarser, the chest appears tinged with ashy, caused by each feather having a shaft-line or spot and an irregular subterminal wavy line of brown across the end of the feather, these lines first become bracket-shaped and finally sagittate, these markings are always larger and more numerous in young birds. In very adult bird these spots entirely disappear.

Family BUBONIDÆ.

2. NINOX.

1. Ninox boobook.

Boobook Owl.

Boobook Owl, *Lath. Gen. Syn. Suppl.*, vol. ii, p. 64.

Strix boobook, *Lath. Ind. Orn. Suppl.*, vol. ii, p. 15 (1801).

Noctua boobook, *Vigors and Horsf. Trans. Linn. Soc.*, vol. xv, p. 188 (1826); *Schleg., Mus. P.-B. Striges*, p. 38 (1826); *Less. Man. d'Orn.* tom. i, p. 113 (1828).

Athene boobook, *Gould, Syn. Bds. Austr.*, pl. 48, fig. 2 (1838); *Gray, Gen. Bds.* vol. i, p. 35 (1845); *Gould, Bds. Austr.*, fol. vol. i, pl. 32 (1848); *Sturt, Exped. Centr. Austr.*, vol. ii, *App.* p. 17 (1849); *Bonap., Consp. Av.*, tom i, p. 42 (1850); *Strickl. Orn. Syn.*, vol. i, p. 165 (1855); *Gray, Hand-l. Bds.*, vol. i, p. 41 (1869); *Sharpe, Index Gould's Works*, p. 21 (1893).

Athene marmorata, *Gould, Proc. Zool. Soc.*, 1846, p. 18; *Bonap. Consp. Av.*, tom. i, p. 42 (1850); *Strickl., Orn. Syn.*, vol. i, p. 165 (1855); *Gray, Hand-l. Bds.*, vol. i, p. 41 (1869).

Spiloglaux marmoratus, *Kaup, Isis*, 1848, p. 768; *Bonap., Rev. et Mag. de Zool.*, 1854, p. 544; *Kaup., Contr. Orn.*, 1858, p. 108; *id Trans. Zool. Soc.*, p. 218 (1862); *Gould., Handbk. Bds. Austr.*, vol. i, p. 73, sp. 35 (1865).

Spiloglaux boobook, *Kaup., Isis*, 1848, p. 768; *id Contr. Orn.*, 1852, p. 108; *Bonap., Rev. et Mag. de Zool.*, 1854, p. 544; *Kaup. Trans. Zool. Soc.*, vol. iv., p. 218 (1862); *Gould, Handbk. Bds. Austr.*, vol. i, p. 74, sp. 36 (1865); *Masters, Proc. Linn. Soc.*, vol. ii, p. 269 (1877); *Gurney, jun. Cat. Bds. Prey*, p. 41 (1894).

Ninox boobook, *Sharpe*, *Ibis*, 1875, p. 258 ; *id Cat. Bds. Brit. Mus.*, vol. ii, p. 168 (1875) ; *Ramsay*, *Proc. Linn. Soc. N.S.W.*, vol. ii, p. 178 (1877) ; *Broadb.*, *Proc. Roy. Soc. Queensl.*, vol. ii, p. 119 (1886) ; *Ramsay*, *Tab. List Austr. Bds.*, p. 2 (1888) ; *North*, *Proc. Linn. Soc. N.S.W.*, vol. iii, 2nd ser., p. 1774 (1888) ; *id. Nests and Eggs Austr. Bds.*, p. 25 (1889) ; *Broadb.*, *Proc. Roy. Soc. Queensld.*, vol. v, p. 16 (1889) ; *Norton*, *Bull. No.* 1 *Dept. Agri. N.S.W.* p. 246 (1890) ; *North and Keartl. Aves Horn Exp. Centr Austr.*, p. 62 (1896) ; *Sclater*, *List. Vert. Anim. Zool. Gard.*, 9th ed., p. 377 (1896) ; *Keartl.*, *Vict. Nat.*, vol. xiii, p. 62 (1896).

Adult male. All the upper surface dull earthy-brown, the feathers of the chin and forehead white at the base, with narrow dark-brown shaft lines, those immediately over the eyes and under the bill in some specimens altogether white, base of all the feathers of the upper surface dusky, with tawny margins giving a mottled appearance, those of the hind neck mottled with one or two spots of fulvous-white, the interscapular region without spots, the back, rump and upper tail-coverts mottled with fulvous or ashy-white, indicating the remains more or less distinctly of white and fulvous cross-bars ; scapulars distinctly blotched with white, the spots occasionally confluent and forming two white cross-bars, secondaries with from four to six large white blotches on the inner web, becoming fulvous on the outer web and forming alternate indistinct fulvous and brown cross-bars, primaries similarly barred, the white blotches more distinct on the inner webs, and on the margin of the outer an irregular wavy line of ashy-white or fulvous, with indications of from five to seven cross-bars on the body of the quills ; tail earthy-brown, with from six to eight cross-bars of fulvous more or less distinctly indicated and becoming ashy-white on the margin of the inner webs ; under tail-coverts white with a lanceolate shaft stripe and remains of one or two broken bars of brown towards the end ; chest tawny with a spot of fulvous or fulvous-white on the outer edge of the feathers towards the end, on the breast the spots become elongate and form an irregular broad white margin, on the abdomen the white margin expands almost meeting at the shaft stripe and forming large white blotches on either side, fluffy feathers on the lower part of the abdomen white, legs tawny, almost rufous in some specimens ; feet dark brown, claws and bill blackish-horn colour, the latter whitish on the culmen and angle of lower mandible, underwing-coverts tawny mottled with fulvous, the margins of the shoulders white ; the facial disc round the eye broadest over the ear-coverts, dark brown without the white markings, the bases of the feathers behind the ear-coverts silky white in some specimens, and the bristles of the face white at the base, with dark shaft lines and black tips.

Remarks.—The broad white margins to the feathers on the under surface being almost confluent, give the appearance to the feathers of having alternate broken bands of white and rufous-brown.

Specimens from South Australia presumably of that variety called *N. marmorata*, by Mr. Gould (see Handbook, Vol. i, p. 73), are heavily blotched with white on the scapulars, which show the remains of three white cross-bars in the form of large white blotches separated by a narrow shaft line and alternate irregular bars of brown; on the under surface, the feathers, except at the base which is fluffy and dusky, are almost altogether white, having only a lanceolate or diamond-shaped shaft stripe and a triangular spot of brown at the tip; in others the flank feathers show two or three irregular bars of brown on a white ground.

Habitat. Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence River District, New South Wales, Interior, Victoria and South Australia, West and South-West Australia.

Measurements of average-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid. toe.
A 1 ♂	12	9·8	6	1	0·6	1·3	1·8	1·2
A 2 ♀	13·3	10·2	6·15	1·07	0·65	1·3	1·8	1·15
A 3 ♀	13·8	10·3	6·2	1·2	0·7	1·4	1·9	1·35
A 4 ♂	12·2	9·2	6·25	1·05	0·55	1·2	1·62	1·15
A 5 ♀	13	10	6·5	1·05	0·6	1·3	1·55	1·25
A 6 ♀	12·7	9·8	6	1·1	0·6	1·35	1·7	1·2
A 7 ♂	13·2	9·8	6·2	1·05	0·6	1·2	1·65	1·1
A 8 ♀	13	9·6	6	1	0·6	1·2	1·55	1·2
A 9 ♀	13·2	10	6·1	1·1	0·6	1·3	1·9	1·15
A 10 ♂	12	9·2	6·1	1·15	0.65	1·3	1·55	1·1
B 1 ♀	13	9·7	5·8	1·1	0·6	1·2	1·7	1·2

A 1 ♂ ad. sk.	Eastern Creek, New South Wales.	Col.
A 2 ♀ ad. sk.	New South Wales.	Col.
A 3 ♀ ad. sk.	Wide Bay, Queensland, October, 1867.	Col.
A 4 ♂ ad. sk.	"Mongup" Salt River, Western Australia, Jan., 1869.	Col.
A 5 ♀ ad. sk.	Lachlan River, New South Wales, 5th Oct., 1880.	Col.
A 6 ♀ ad. sk.	Cambewarra, New South Wales, Oct., 1887.	Col.
A 7 ♂ ad. sk.	,, ,, ,,	Col.
A 8 ♀ ad. sk.	Lachlan River, Sept., 1883.	Col.
A 9 ♀ ad. sk.	Sydney, New South Wales, June, 1876.	Pres.
A 10 ♂ ad. sk.	Cambewarra, New South Wales.	Pch.

2. Ninox ocellata.

Spotted Owl.

Chevéche oceléé, *Hombr. and Jacq. Voy. Pôle. Sud. Atlas*, pl. 3, fig. 2 (1843).

Athene ocellata (*Hombr. and Jacq.*), *Bonap. Consp. Av.*, tom. i, p. 42 (1850) ; *Jacq. and Pucher Voy. Pôle. Sud. Zool.*, tom. iii, p. 51 (1853) ; *Strickl. Orn. Syn.*, p. 174 (1855) ; *Gray, Hand-l. Bds.*, vol. i, p. 42 (1869).

Spiloglaux ocellata, *Bonap. Rev. et Mag. de Zool.* (1854), p. 544 ; *Gurney, jun., Cat. Bds. Prey*, p. 41 (1894).

Ninox ocellata, *Sharpe, Ibis* (1875), p. 258 ; *id. Cat. Bds. Brit. Mus.*, vol. ii, p. 170 (1875) ; *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. ii, p. 178 (1877) ; *id. Tab. List Austr. Bds.*, p. 2 (1888).

Nestling. "Clothed in whitish down, washed with golden buff on the head, neck, and breast ; the feathers, as far as developed, resembling the plumage of the adult, but the white spots on the scapulars extremely large and of an oval shape on both webs ; head ochraceous, all the feathers centred and tipped with dark brown ; lores and forehead whitish ; ear-coverts entirely dark brown, contrasting strongly with the light-coloured head and neck ; under surface of body whitish, with a few narrow central streaks of brown, rather broader on the chest, which is washed with golden buff."

Adult. "General colour above rather pale or earthy-brown, the hind neck washed with fawn colour ; the head rather darker than the back, and slightly streaked with fulvous ; scapulars brown like the back, broadly barred with white, occupying the greater part of the outer web, and showing very conspicuously ; wing-coverts brown, the greater and median series with some distinct white oval spots ; primary-coverts dark brown, with fainter indications of lighter brown bars ; quills dark brown, barred across with lighter brown, the primaries externally washed with pale rufous, the light bars fading into a buffy white notch on the outer web of the outermost primaries ; lower back and rump more rufous than the rest of the upper surface, the feathers having fawn-coloured bases ; tail brown, the centre feathers uniform, the rest barred with fulvous on the inner web, these bars becoming gradually more distinct towards the outer feather, the last one being barred with fulvous on the inner web, and spotted with the same on the outer one ; lores and frontal plumes whitish, with black shaft-lines ; sides of the head fulvous, narrowly streaked with brown, and forming a tolerably distinct eyebrow ; ear-coverts dark brown, contrasting with the rest of the head ; cheeks whitish, as also the feathers behind the ear-coverts, these latter streaked with brown ; chin whitish ; rest of

under surface white, the breast yellowish, broadly streaked with rufous-brown, the abdominal feathers almost entirely white, mesially streaked with brown and broadly tipped with pale fawn colour, leg feathers fawn colour, whitish on the inner aspect; under wing-coverts ochraceous fawn, with scarcely any indications of brown markings beyond an occasional streak near the outside margin of the wing, the greater series brown, irregularly barred with fulvous, resembling the inner lining of the wing, which is brown, with large bars of fulvous on the inner lining of the web; 'bill slate-coloured, darker at tip; iris dark brown.' (*Elsey, M.S.*) Total length 13·5 inches, wing 8·6, tail 5·5, tarsus 1·65."

Observations. "Although closely allied to *N. boobook*, this is a much smaller and more rufous species, and differs especially in its fawn-coloured under parts and under wing-coverts, the latter being uniform. In some of the brown-looking examples, there are some markings or stripes of brown upon these under wing-coverts, but never so thickly distributed as in the true *N. boobook*. The difference in size may best be estimated by a comparison of two males, the specimens described not having the sexes determined."

	Total length. in.	Wing. in.	Tail. in.	Tarsus. in.
"*a* ♂ ad., Percy Island.....	16 ...	9·3 ...	6·4 ...	1·65
b ♂ ad., N.W. Aust. (Elsey)	13 ...	8·8 ..	5·4 ...	1·45

**Hab.* Northern and Western Australia."

Measurements of average-sized specimens.

Sex.	Total length.	Wing.	Tail.	Bill from fore-head.	Bill from nostril.	Culmen.	Tarsus.	Mid-toe. (s.u.)
A 1 ♂	11·4	8·5	5·3	1·1	0·52	1·2	1·42	1·1
A 2 ♀	12	8·8	5·2	1·1	0·51	1·25	1·45	1·08

A 1 ♂ ad sk.	Port Essington.	Col.
A 2 ♀ ad sk.	,, ,,	Col.

3. Ninox lurida.

Ninox lurida, *De Vis, Rep. Sci. Exped. N.E. Queensland*, p. 31 (1889).

"*Adult male.* Upper surface of head and neck uniform dark brown, hind neck and back coffee-brown, with a few concealed white spots on the lateral and anterior feathers of the mantle. Lower back and upper tail-coverts uniform paler brown. Tail with two central feathers uniform, the laterals with four or five

* Sharpe, Cat. Bds. Brit. Mus., vol. ii, p. 171 (1875).

distinct or nearly obsolete pale bars on the inner web. Scapulars brown, with one or two large white median spots or bars on one or both webs. Quills externally washed with greyish-brown, the outer webs with broad obscure subrufous cross-bars; the inner webs with a few obscure transverse bars, the inner ends of those near the base forming a white spot. Wing-coverts uniform brown, a little brighter than on the head. Lores and cheeks anteriorly white, the plumes with black shafts; hinder part of cheeks and ear-coverts brown like the head; a supraciliary stripe over the fore part of the orbit, white more or less stained with buff. Chin whitish, its median hinder feathers with brown shaft streaks, the laterals buff with brown centres, these forming a line behind the ear-coverts. Throat rufous-brown, obscurely spotted or streaked with buffy-white. Breast and abdomen deep rufous-brown, largely spotted with white. Under tail-coverts with a median spot on both webs, and the tips brown or buffy-brown, with one or two white median spots. Under surface of tail pale brown with four or five more or less obsolete transverse bars. Axillaries rufous or ochreous. Under wing-coverts rufous, edge of wing buffy-white or white. Under surface of wing silky-brown with the transverse bars of the quills in strong contrast. Legs rufous. Bill white, blackish below the nostrils. Mandible blue-black, yellow at the base. Total length 290, wing 225, tail 137, tarsus 38."

"*Adult female.* Like the male, but with the throat and upper breast rich chocolate brown with fulvous stripes. The tail uniform brown above and below, the quills narrowly edged with buffy-grey, and the bill black except the basal half of the culmen."

"*Loc.* Herbert Gorge, Bellenden-Ker."*

[*Ninox connivens*, and *N. boobook*, are each beautifully represented in the north-eastern and the north-western portions of the continent, by closely allied, but distinct species. The former respectively by *N. peninsularis*, and *N. occidentalis;* the latter by *N. lurida*, and *N. ocellata*. Mr. De Vis has been good enough to send me on loan for examination a female specimen of *N. lurida*. This diminutive representative of *N. boobook*, in the tropical scrubs and mountain ranges of North-eastern Queensland is in contradistinction to its northern and north-western ally, *N. ocellata*, distinguished by the intensely rich colouring of its plumage. This is more apparent on the throat, upper portion of the breast, axillaries, and under wing-coverts. Total length 11 inches, wing 8·5, tail 5, tarsus 1·4. Locality, Mulgrave River.]

Habitat. Bellenden-Ker, Sea View Range, Cardwell. (De Vis.)

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* De Vis, Rep. Sci. Exped. N.E. Queensland, p. 31 (1889).

4. Ninox maculata.

Spotted Owl.

Noctua maculata, *Vig. and Horsf.*, *Trans. Linn. Soc.*, vol. xv., p. 189 (1826); *Less. Man. d'Orn.*, tom. i, p. 113 (1828); *Schleg. Mus. Pays-Bas. Striges*, p. 39 (1862).

Athene maculata, *Gould*, *Syn. Bds. Austr.*, pt. iii (1828); *id. Bds. Austr.* fol. vol. i, pl. 33 (1848); *Gray*, *Gen. Bds. Austr.* p. 35 (1845); *Bonap. Consp. Av.*, tom. i, p. 42 (1850); *Strickl. Orn. Syn.* p. 166 (1855); *Gray*, *Hand-l. Bds.*, vol. i, p. 41 (1869); *Sharpe*, *Index Gould's Works*, p. 21 (1893).

Spiloglaux maculatus, *Kaup. Contr. Orn.*, 1852, p. 108; *id. Trans. Zool. Soc.*, vol. iv, p. 217 (1862); *Bonap.*, *Rev. et Mag. de Zool.*, 1854, p. 544; *Gould*, *Handbk. Bds. Austr.*, vol. i, p. 76, sp. 37 (1865); *Gurney*, *jun.*, *Cat. Bds. Prey*, p. 41 (1894).

Ninox maculata, *Sharpe*, *Ibis*, 1875, p. 258, *id. Cat. Bds. Brit. Mus.*, vol. ii, p. 174 (1875); *Ramsay*, *Proc. Linn. Soc.*, *N.S.W.*, vol. ii, p. 178 (1877); *id. Tab. List Austr. Bds.*, p. 2, (1888); *North Proc. Linn. Soc. N.S.W.*, vol. iii, 2nd series, p. 1774 (1888); *id. Nests and Eggs Austr. Bds.*, App. p. 382 (1889); *Ramsay*, *Bull. No.* 1, *Dept. Agri.*, *N.S.W.*, p. 240 (1890).

General colour above varying from rich dark brown to chocolate-brown, with white dots on the head and hind neck in pairs on either side of the shaft line near the margin of the feathers, on the mantle these spots are larger, and occasionally become confluent on the scapulars, forming two or three white cross bands or broken bars, in some instances a third bar is found on the larger scapulars towards the base of the feathers; inter-scapular region, back and upper tail-coverts without spots; secondaries dark brown showing from four to six indistinct broken cross-bars, fulvous on the outer webs, but becoming white and forming large blotches on the inner webs towards the base of the feathers; primaries similar, barred with lighter brown, and merging into a row of white spots on the inner webs, with one or two spots of white or fulvous white near the notch of the outer web, there are indications of from five to seven bars on each feather of the primaries; smaller coverts like the back without spots, the greater coverts with one or two pairs of white spots, the primary coverts without spots but show faint indications of bars; tail dark brown, with from six to eight bars of a lighter tint inclining to fulvous, but becoming white at the base of the feathers on the inner webs; chin and the basal portion of the feathers round the forehead and over the eyes white, shafts and ends of the bristles black, ear-coverts dark brown, a few feathers behind the ears occasionally margined with white; all the under surface rich chocolate-brown inclining to rufous on the abdomen each feather largely blotched with white, the blotches confluent

towards the base and forming there a white cross band, on the flanks the spots or blotches frequently form two distinct cross-bars; thighs and legs tawny, inclining to rufous; under tail-coverts fulvous white, with a lanceolate shaft line and tip of chocolate-brown, under wing-coverts tawny, the outer series and the axilliaries barred irregularly with white, bill black, the culmen and tip horn colour; feet blackish-brown, the bristles almost white.

Remarks. In some aged individuals the spots upon the crown of the head disappear, and the white markings on the feathers of the hind neck are less distinct, or replaced with fulvous, and there is also a larger amount of white surrounding the bill and on the forehead.

Habitat. Wide Bay District, New South Wales, Victoria and South Australia, Tasmania.

Measurements of average-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Middle toe.
A 1 ♀	11	8	5·1	0·97	0.52	1·1	1·4	1
A 2 ♀	10·6	8·1	5·15	0·98	0·54	1·1	1·4	1
A 3 ♂	11·2	8	5	0 92	0·51	1·1	1·45	0·98
A 4 ♀	10·6	8·2	5·1	0·98	0·56	1·12	1·4	1
A 5 ♂	10·8	8·1	5	1	0·55	1·1	1·5	1
A 6 ♂	10	8	5	0·95	0·5	1·1	1·4	1

A 1 ♀ ad. sk. Tasmania. Col.
A 2 ♀ ad. sk. New South Wales. Col.
A 3 ♂ ad. sk. Caught off Gabo Island, N.S.W., April, 1885. Pres.
A 4 ♀ ad. sk. Launceston, Tasmania, October, 1878. Pur.
A 5 ♂ ad. sk. Petersham, N.S.W. Pres.
A 6 ♂ ad. sk. North Shore, Sydney, October, 1886. Pres.

5. Ninox connivens.

The Winking Owl.

Winking Falcon, *Lath. Gen. Syn.*, suppl. ii, p. 53.

Falco connivens, *Lath. Ind. Orn.*, suppl. ii, p. 12 (1801).

Buteo connivens, *Vieill. Nouv. Dict. d'Hist.*, tom. iv, p. 481 (1818).

Noctua frontata, *Less. Traité d'Orn.*, p. 106 (1831); *Pucheran, Rev. et Mag. de Zool.*, 1849, p. 21.

Athene fortis, *Gould. Proc. Zool. Soc.*, 1837, p. 141; *id. Syn. Bds. Austr.*, pt. iii (1839).

Athene connivens, *Gray, Ann. and Mag. Nat. Hist.*, vol. xi, p. 189; *id. Gen. Bds.*, vol. i, p. 35 (1845); *Gould, Bds. Austr.*, vol. i, pl. 34 (1848); *Bonap. Consp. Av.*, tom. i, p. 43 (1850); *Strickl. Orn. Syn.*, p. 164 (1855); *Gray, Hand-list, Bds.*, vol. i, p. 40 (1869); *Sharpe, Index Gould's Works*, p. 21 (1893).

Athene frontata, *Gray, Gen. Bds.*, vol. i, p. 35 (1845).

Ieraglaux connivens, *Kaup, Contr. Orn.*, 1852, p. 109; *id. Trans. Zool. Soc.*, vol. iv, p. 220 (1862).

Noctua connivens, *Schleg. Mus. Pays-Bas, Striges*, p. 39 (1862); *id. Revue Accipitr.*, p. 31 (1873).

Hieracoglaux connivens, *Gould, Handbk. Bds., Austr.*, vol. i, p. 71, sp. 34 (1865); *Masters, Proc. Linn. Soc., N.S.W.*, vol. i, p. 45 (1876); *id. op. cit.*, vol. ii, p. 269 (1877); *Gurney, junr., Cat. Bds. Prey*, p. 42 (1894).

Ninox connivens, *Sharpe, Ibis*, 1875, p. 258; *id. Cat. Bds., Brit. Mus.*, vol. ii, p. 176 (1875); *Ramsay, Proc. Linn. Soc., N. S. W.*, vol. ii, p. 178 (1877); *Broadb. Proc. Roy. Soc., Queensld.*, vol. iii, p. 25 (1887); *Ramsay, Tab. List, Austr. Bds.*, p. 2 (1888); *De Vis, Rep. Sci., N. E. Queensld.*, p. 31 (1889); *Ramsay, Bull. No.* 1, *Dept. of Agri., N.S.W.*, p. 240 (1890); *North, Nests and Eggs, Austr. Bds.*, p. 25 (1889); *id. Rec. Austr. Mus.*, vol. i, p. 111 (1891).

Adult female. Plumage similar to that of male, general colour above dull dark brown, feathers of the hind neck and on the sides of the neck above spotted on either side of the feathers with white apparently the remains of cross-bars, lower part of the hind neck and the interscapular region without the white spots, rump and upper tail-coverts spotted or barred across with white towards the end of the feathers, tail dull brown like the back white at the base of each feather and on the basal portion of the inner webs of side feathers, all the feathers barred alternately with broad dark brown and narrow whitish bands, the latter becoming almost pure white on the lateral feathers, tips of all the tail feathers margined with white; on the under surface of the tail the brown and white bars are more distinct; scapulars and upper wing-coverts largely blotched, spotted or margined broadly with white showing the remains of two or three cross-bars, some of the larger scapulars with two distinct unequal cross-bars, and a roundish spot of white on either side of the feather towards the end; primaries with from six to eight dark brown bars the outer webs narrowly margined with white, and the interspaces gradually becoming white on the inner webs where the bars are most distinct; secondaries similar, with a very narrow marginal line of white and indistinct spots of white (remains of the cross-bars) on the outer web, the inner webs heavily blotched with five or six cross-bars which do not extend to the shaft, under wing-coverts similarly barred with white and dark brown alternately; facial disk incomplete, dusky, the shafts of the feathers and those over the nostrils for the most part

black, white at the base; chin ashy-white, mesially streaked with blackish-brown; concealed portions of all the feathers of the under surface dusky, surface portion dark brown with an irregular broad markin of white, which on the breast, abdomen, flanks and under tail-coverts occupies the greater portion of the exposed part of the feathers, in some specimens reducing the central portion to a more or less narrow shaft line which reaches to the extreme tip of each feather, the white on the sides of the feathers predominating; thighs and legs similarly marked, but in a less degree, and occasionally of a tawny tint; bill yellowish, the tip and margins of the mandibles and the claws blackish-brown, iris yellow.

Total length 16 inches, wing 11·9, tail 7·3, tarsus 1·9, bill from the forehead 1·3, from nostril 0·8, mid toe 1·5, culmen 1·6.

Habitat. Rockingham Bay, Port Denison, Wide Bay District, Richmond and Clarence River District, New South Wales, Interior, Victoria and South Australia, West and South-West Australia.

Measurements of average-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen	Tarsus.	Mid toe.
A 1 ♀	16	11·9	7·3	1·3	0·8	1·6	1·6	1·5
A 2 ♂	17·5	12·3	7·5	1·35	0 8	1·7	1·5	1·65
A 3 ♀	15·7	10·6	7	1·35	0·8	1·4	1·4	1·6
A 4 ♂	16	12	7·5	1·3	0·75	1·55	1·55	1·6

A 1 ♀ ad. sk.	Clarence River, N.S.W., July, 1886.	Col.
A 2 ♂ ad. sk.	Tweed River, 1889.	Pres.
A 3 ♀ ad. mtd.	New South Wales.	Col.
A 4 ♂	Clarence River.	Pres.

6. Ninox peninsularis.

The Cape York Winking Owl.

Ninox peninsularis, *Salvad. Ann. Mus. Civ. Gen.*, vol. vii, 1st ser., p. 992 (1875).

Ninox peninsularis, *Sharpe, Rep. Voy. H.M.S. "Alert,"* p. 11 (1884).

Ninox connivens-peninsularis, *Ramsay, Tab. List. Austr. Bds.*, p. 2 (1888).

"*Ninox*—N. conniventi, Lath., valde affinis, sed minor, supra obscurior, maculis gastraei obscurioribus, tibius rufescentioribus." Long tot. 0m, 430-0m, 400; al. 0m, 275-0m, 260; caud. 0m, 170-0m, 160; rostri hiat. 0m, 031; tarsi 0m, 0·47. Hab. Caput York.

This species appears from the above description to be only a smaller race, otherwise almost identical with *N. connivens* of Latham, but coming from so high an authority as Count Salvadori, it is advisable to give the remarks on the species in the original :— "Sig. D'Albertis ed il Sig. Tomasinelli hanno racolte presso Somerset tre individui de questa nuova specie, la quale differisce dalla *N. connivens*, dell' Australia meridionale per le dimensioni minori, pel color più oscuro delle parti superioi, e delle macche longitudinali delle inferiori e pel colore rossigno più vivo delle tibie e dei tarsi. Le differenze fra questa specei e la *N. connivens* appaiono evidente quando so confrontino individui delle due specie." (*Salvad. Ann. M.C. Genov*, vol. vii, 1st ser., p. 992.) In the Voyage of the "Alert," p. 11, 1884, Mr. Sharpe remarks as follows :—"The British Museum contains a good series of this apparently well-marked species, which differs from *Ninox connivens* by the rufous streaks on the lower parts. The following is a description of Dr. Coppinger's specimen :—"

"*Adult female.* General colour above dull sooty-brown, darker on the head, which is blackish-brown, forming a tolerably distinct cap ; scapulars brown like the back, with large white markings on the outer web, forming a continuous white line on each side of the back ; wing-coverts almost entirely uniform, with only here and there a spot of white, a little plainer on the outer web of the median and greater coverts, the latter of which are washed with pale rufous ; bastard-wing feathers and primary coverts uniform sooty brown ; quills dark brown, barred on both webs with lighter brown, taking the form of whity-brown notches on the outer web ; inner secondaries spotted with white on the outer and barred with white on their inner webs ; lower back and rump sooty brown, with more or less concealed spots of white ; upper tail-coverts deep brown ; tail feathers dark brown, plainly though narrowly barred and tipped with whity-brown, these light bars being eight in number besides the terminal one ; lores, base of forehead, and plumes over the eye and round the fore and lower part of the latter white, with hair-like black shaft-lines ; ear-coverts dark brown ; chin and cheeks white, the hinder part of the latter streaked with dusky brown ; lower throat tinged with yellow and streaked with blackish centres to the feathers ; remainder of under surface white, slightly tinged with yellow and broadly streaked with dark brown on the fore neck and chest and with rufous-brown on the breast and abdomen ; thighs and tarsal plumes yellowish, spotted with brown ; under tail-coverts white, with a few heart-shaped spots near the end of the feather ; axillaries and under wing-coverts deep yellowish-buff, broadly streaked with chocolate-brown, the central markings more or less irregular in shape ; quills dusky-brown, barred with white, somewhat ashy-whitish on the quills, but very pure white

on the lower series of under wing-coverts, which resemble the lower surface of the quills in appearance. Total length 15 inches, culmen 0·85, wing 10·2, tail 6·5, tarsus 1·45. Bill yellow with black tip; feet and iris yellow."

Hab. Peninsula of Cape York, N.A., Thursday Island, Torres Straits."

7. Ninox occidentalis.

The Western Winking Owl.

Ninox connivens-occidentalis, *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. i, 2nd series, p. 1086 (1886); *id. Tab. List Austr. Bds.*, p. 2 (1888).

Hieraglaux occidentalis, *Gurney, jun., Cat. Bds. Prey*, p. 42 (1894).

A variety? from North-western Australia, distinguished under the name of *N. occidentalis* (*P.L.S., N.S.W.*, vol. i, second series, p. 1086, 1886), has the upper surface lighter and somewhat of an ashy-brown, tinged with rufous on the wings, thighs and legs of some specimens, more white on the face, forehead, and chin, and the feathers of the under surface whiter from the narrowness of the shaft lines, which are more defined and of a rufous-brown tint; the under tail-coverts white with a narrow lanceolate shaft line or spot near the end of the feathers, the white spots on the wing-coverts and scapulars are larger, but the bars on the wings and tail similar to the New South Wales specimens.

In one of the Western Australian specimens the shaft lines of the feathers of the under surface are broader, swollen on the mesial portion and expanding again at the end of the feather.

Adult male. Length 14·5 inches, wing 12, tail 7, tarsus 1·8, mid toe 1·45, bill from forehead 1·3, from nostril 0·65, culmen 1·5.

Adult female. Length 15·5 inches, wing 11, tail 6·8, tarsus 1·65, mid toe 1·4, bill from forehead 1·2, from nostril 0·8.

"Two specimens alike in plumage show a large amount of white on the upper wing-coverts, scapulars and hind-neck, than in the New South Wales or Cape York specimens; the whitish bands on the tail do not reach the shaft of the feathers; all the under surface of the body white, with a distinct well-defined band of rufous-brown down the centre of each feather; the outer webs of the primaries near the adjacent tips of the secondaries have also a faint reddish tint; the face is almost white; length 15 inches, wing 12 inches, tail 6·8 inches, tarsus about 1·4 inch; the feet small, claws comparatively weak. I believe this will prove to be a distinct species, but must be compared with some

of its New Guinea allies. For the present I place it as a western variety of *N. connivens*, which may be distinguished as *occidentalis*."

Habitat. North-western Australia.

[Specimens since obtained in the same locality prove it to be a distinct species.]

Measurements of average sized specimens.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid. toe.
A 1 ♀	15·5	11	6·8	1·2	0·8	1·65	1·65	1·4
A 2 ♂	14·5	12	7	1·3	0·65	1·5	1·5	1·45

A 1 ♀ ad. sk., Derby, North-western Australia, 1886. Col.
A ♂ ad. sk., Derby, North-western Australia. Col.

Ninox strenua.

The Powerful Owl.

Athene strenua, *Gould, Proc. Zool. Soc.*, 1837, p. 142; *id. Syn. Bds. Austr.*, pt. iii (1838); *Gray, Gen. Bds.*, vol. i, p. 35 (1845); *Gould, Bds. Austr.*, fol. vol. i, p. 35 (1848); *Bonap. Consp. Av.*, tom. i, p. 35 (1850); *Strickl. Orn. Syn.*, p. 165 (1855); *Diggles, Austr. Orn.* (1865); *North, Proc. Linn. Soc. N.S.W.*, vol. iii, 2nd ser., p. 1774 (1888); *Sharpe, Index Gould's Works*, p. 21 (1893).

Ieraglaux strenua, *Kaup, Monog. Strig. in Jard. Contr. to Orn.*, 1852, p. 109; *id. Trans. Zool. Soc.*, vol. iv, p. 220 (1862).

Noctua strenua, *Schleg. Mus. P.-B. Striges*, p. 40 (1862).

Hieracoglaux strenuus, *Gould, Handbk. Bds. Austr.*, p. 68, sp. 32 (1865).

Ninox strenua, *Sharpe, Ibis*, 1875, p. 258; *id. Cat. Bds. Brit. Mus.*, vol. ii, p. 178 (1875); *Ramsay, Proc. Linn. Soc. N.S.W.*, vol. ii, p. 178 (1877); *Broadb. Proc. Roy. Soc., Queensld.*, vol. ii, p. 119 (1886); *Ramsay, Tab. List. Austr. Bds.*, p. 2 (1888); *Broadb. Proc. Roy. Soc. Queensld.*, vol. v, p. 16 (1889); *Ramsay, Bull. No.* 1, *Dept. Agri. N.S.W.*, p. 240 (1890).

Hieraglaux strenuus, *Gurney, junr., Cat. Bds. Prey*, p. 42 (1894).

Young. "Head, neck and under surface of body pure white, all the feathers fluffy, apparently the remains of nestling-plumage; on the crown some brown feathers barred across with white; the forehead streaked with brown, the lores obscured by blackish bristles, as also the eyebrows and cheeks; ear-coverts dark brown, streaked with white; the under surface with a few narrow shaft-streaks of dark brown, broader on the flanks and sides of the body, the plumes on the sides of the upper breast barred with brown; the back and all the rest of the upper

surface ashy-brown, transversely barred with white, some of the bars washed with rufous; quills dark brown, tipped with white and crossed besides by fine narrower whitish bars."*

Adult male. Feathers on the forehead and over the eye white at the base, the remainder of the feathers dark brown, with a white cross band near the base, and remains of two anterior bars in the form of white spots on the webs of the feathers, some also with a narrower margin of white, on the crown of the head, nape, sides of the neck, interscapular region, back, upper tail-coverts, the bases of the feathers are dusky-brown, the exposed portion of the feathers blackish-brown, on the head and hind neck with two or in some the remains of a third white band and a narrow white margin, on the interscapular region are two distinct white bands, the remains of a third, near the base and on some a narrow subterminal line of white, on the back the bars are less distinct, and in some cases almost obsolete; the upper tail-coverts show two or three distinct white bars, and also a narrow white margin, tail feathers tipped with white and alternately crossed with broad blackish and narrow white bands, six to nine in number, the white expanding on and margining the inner webs towards the basal portions of all but the centre two feathers where they are narrowest; wing-coverts blackish-brown, the smaller narrowly barred with irregular ashy-white lines, the larger series with three broader lines, and a distinct margin of white; quills blackish-brown tipped with white and having from six to eight oblique or bracket shaped bars of fulvous becoming white on the margins of the inner webs, secondaries similarly marked but showing more white on the basal portions and inner webs, scapulars blackish-brown like the back and crossed with from three to six white bars tinged with fulvous, the last being sub-terminal and narrowest; chin and throat ashy-white with a lanceolate dark brown shaft-stripe, all the feathers of the under surface dusky at the base, the exposed portion of the feathers white crossed with two bars of dark brown and having a narrow white margin; under wing-coverts barred alternately with blackish-brown and white, under tail-coverts white with two or three irregular cross-bars, all the white cross-bars both on the upper and under surface are in most specimens tinged with fulvous, or have an anterior conterminal narrow line of fulvous, which tint is more conspicuous on the wing-coverts; the outer webs of the quills are also tinged with fulvous; bill yellowish horn-colour, the tip and margins dark brown, iris yellow, claws dark brown.

Habitat. Port Darwin, Port Essington, Cape York, Wide Bay District, Richmond and Clarence River District, New South Wales, Victoria, and South Australia.

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* Sharpe, Cat. Bds. Brit. Mus., vol. ii, p. 179 (1875).

Measurements of averaged-sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid. toe.
A 1 ♀	22	15	10	1·8	1·2	2·3	2	2·1
A 2 ♂	23	16	11	1·7	1·1	2·1	2·1	2·1
A 3 ♂	22	15	10·5	1·75	1·1	2·25	2·1	2
B 1 ♀	22	15·6	10·5	1·8	1	2	2·1	2
B 1 ♀	22	15·5	10	1·75	1	2·1	2·15	2

A. 1 ♀ ad. sk., Macquarie Fields, N.S.W., Sept., 1875. Pres.
A. 2 ♂ ad. sk., Port Denison, Queensland, 2nd Oct., 1862. Pres.
A. 3 ♂ ad. mntd., New South Wales. Col.
B. 1 ♀ ad. mntd., New South Wales. Col.
B. 2 ♀ semi ad. sk., New South Wales Pres.

9. Ninox rufa.

The Rufescent Powerful Owl.

Athene rufa, *Gould, Proc. Zool. Soc.*, 1846, p. 18; *id. Bds. Austr.*, fol. vol. i, pl. 36 (1848); *Bonap. Consp. Av.* tom. i, p. 43 (1850); *Strickl. Orn. Syn.*, p. 165 (1855); *Sharpe, Index Gould's Works*, p. 21 (1893).

Ieraglaux rufa, *Kaup. Contr. Orn.*, 1852, p. 109; *id. Trans. Zool. Soc.*, vol. iv, p. 220 (1862).

Rhabdoglaux rufus, *Bonap., Rev. et Mag. de Zool.*, 1854, p. 544.

Hieracoglaux rufus, *Gould, Hanbk. Bds. Austr.*, vol. i, p. 69, sp. 33, (1863).

"ATHENE RUFA.—*Ath. disco faciali saturatè fusco; omni corpore, suprà saturatè fusco, infrà arenaceo-rufo, multis autem lineis rufofuscis transversim fasciato.*"

"Facial disc dark brown; all the upper surface dark brown, crossed by numerous narrow bars of reddish-brown, the tints becoming paler and the barrings larger and more distinct on the lower part of the body, wings, and tail; all the under surface sandy-red, crossed by numerous bars of reddish-brown; the feathers of the throat with a line of brown down the centre; vent, legs and thighs of a paler tint, with the bars more numerous but not so decided; bill horn colour; toes yellowish, slightly clothed with feathers. Total length 20 inches, bill 1·75, wing 13·5, tail 9·5, tarsi 2·25."

"*Habitat.* Port Essington."

"*Remark.* Very powerful, nearly allied to *Athene strenua*."*

* Gould, Proc. Zool. Soc., 1846, p. 18.

[Mr. G. R. Gray in his "Hand-list of Birds"* places Gould's name of *N. rufa*, as a synonym of *N. strenua*, in which he is followed by Dr. Sharpe in the Catalogue of Birds in the British Museum.† *N. rufa* is, however, a good and distinct species. Closely allied, if not identical with it, is *N. humeralis*, of Hombron and Jacquinot. Judging by a single specimen in the collection from North Australia, where the type of *N. rufa*, was obtained by Gilbert, it may be distinguished from *N. humeralis*, by its paler and more numerously barred upper surface, its ear-coverts being brown indistinctly streaked with white, instead of entirely black; the barrings on the breast sandy rufous and without any conterminous lines of dark brown, and the tail-feathers being crossed with thirteen pale brown bars, instead of eight as in *N. humeralis*. Total length 19·25 inches, wing 14·5, tail 9·75, bill 1·95, tarsus 2. Gould's figure, which is not a good one, of *N. rufa*, however, exhibits the same number of cross-bars on the exposed portion of the under surface of the tail feathers as are found in *N. humeralis*, and the wing measurement in the description is almost the same as that given by Dr. Sharpe of the latter species. Should subsequent research prove these two birds alike, which I have here kept distinct, Hombron and Jacquinot's name of *N. humeralis*, must rank as a synonym of Gould's older name of *N. rufa*.]

10. Ninox humeralis.

Chevêche à épaulettes, *Hombr. et Jacq., Voy. Pôl. Sud., Atlas*, pl. 4, fig. i (1843).

Athene humeralis *(Hombr. et Jacq.) Bonap. Consp. Av.* tom. i, p. 40 (1850); *Jacq. et Pucheran, Voy. Pole Sud., Zool.*, tom. iii, p. 53 (1853); *Strickl. Orn. Syn.*, p. 174 (1855); *Gray, Proc. Zool. Soc.*, 1858, pp. 170, 189; *id. Cat. Bds., New Guin.*, pp. 17, 54 (1859); *Wall. Ibis*, 1868, p. 24.

Ieraglaux humeralis, *Kaup., Contr. Orn.*, 1852, p. 109; *id. Trans. Zool. Soc.*, vol. iv, p. 221 (1862).

Rhabdoglaux humeralis, *Bonap. Rev. et. Mag. de Zool.*, 1854, p. 543.

Spiloglaux humeralis, *Sclater, Journ. Proc. Linn. Soc.*, vol. ii, p. 155 (1858).

Noctua humeralis, *Finsch, New Guin.*, p. 156 (1865).

Ninox humeralis, *Sharpe, Ibis*, 1875, p. 258; *id. Cat. Bds., Brit. Mus.*, vol. ii, p. 180 (1875); *Salvad. Ann. Mus. Civ. Gen.*, vol. xii, p. 41 (1878); *id. Orn. Pap. et Moluce.*, vol. i, p. 84 (1880); *De Vis, Ann. Rep. Brit. New. Guin., App. E.E.*, p. 99 (1894).

Ninox undulata, *Ramsay, Proc. Linn. Soc., N.S.W.*, vol. iii, p. 24 (1879).

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* Gray Hand-list Bds., vol. i, p. 40 (1869).
† Sharpe, Cat. Bds. Brit. Mus., vol. ii, p. 179 (1875).

Adult (type of species). General colour above dark chocolate-brown, everywhere on the upper surface crossed with indistinct bars of paler brown, rather more distinct on the scapulars and on the sides of the hind-neck; head darker than the back, and nearly uniform, the cross-bars very indistinct, excepting on the sides of the crown, above the ear-coverts, and on the sides of the neck, which are brown, distinctly rayed with fulvous cross-bars; ear-coverts black; cheeks rayed like the sides of the neck, the fore-part whitish like the lores, the latter having very distinct blackish shaft-stripes forming overhanging bristles; under surface of body orange-buff, barred across with light brown, more dingy on the chest; the abdomen white, barred across with pale orange-brown, these bars disappearing on the under tail-coverts, which are pure white, with only a slight indication of pale bars at the tips of the long feathers; leg-feathers orange-buff, with a few indistinct brown markings; under wing-coverts orange-buff or fulvous, barred across with light brown, with a brown patch near the outside of the wing, this being pure white, the lower series brown, barred with white, so as to resemble the inner lining of the quills, which are dark brown below, with pale greyish bars on the inner webs; the wings above chocolate-brown, with the same indistinct cross-bars as on the back, less distinct on the external coverts and on the least series, which are almost uniform; primary-coverts uniform blackish-brown; quills dark brown barred across with lighter brown, the secondaries paler and the cross-bars rather lighter on the extreme edge both of the primaries and secondaries; upper tail-coverts like the back, but the cross-bars a little paler; tail dark brown narrowly tipped with whitish, and barred across with lighter brown, about eight bars being distinguishable. Total length 18 inches, wing 13·4, tail 9, tarsus 1·8 (*Mus. Paris*).*

[The above is Dr. Sharpe's description of the type specimen in the Paris Museum, of which a figure is given in the Atlas of the "Voyage au Pôle Sud." It was in an Appendix to the "Annual Report on British New Guinea for 1894," that Mr. De Vis,† the Curator of the Queensland Museum, first drew attention to the existence of this species in Australia, and he there states his belief that it is identical with *Ninox rufa* of Gould. Mr. De Vis has kindly sent me for examination a specimen obtained in the scrubs of north-eastern Queensland. It is a male and is labelled Herbert Gorge, October, 1886. This specimen cannot be distinguished from typical examples of *N. humeralis*, obtained in New Guinea. In all the specimens examined belonging to this species, the ear-coverts are black and the tail feathers crossed with eight pale brown bars.

Habitat. New Guinea, North-eastern Queensland.

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* Sharpe, Cat. Bds. Brit. Mus., vol. ii, p. 180 (1875).
† De Vis, Ann. Rep. Brit. New. Guin., App. E.E., p. 99 (1894).

Measurements of average-sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Inner toe (s.u.)
ad. ♂	18	13·8	9	1·7	0·98	1·9	1·9	1·25
ad. ?	19	13·2	9	1·7	0·95	1·9	1·8	1·2
A 1 ♂	20	13·3	9·2	1·63	1	1·95	1·8	1·27
A 2 ♂	17	12·2	8·5	1·55	0·9	1·85	1·75	1·1
A 3 ♂?	17	12·4	8	1·6	0·92	1·85	1·75	1·1

ad. ♂ Herbert Gorge, Bellenden Ker, Oct. 1886, N.E. Queensland, Queensland Mus.

ad. ? ? Queensland Mus.

A. 1 ♂ ad. sk. Laloki River, New Guinea. Pch.

A. 1 ♂ ad. sk. Goldie River, S.E. New Guinea. Pch.

A. 3 ♂ ? ad. sk. Laloki River, New Guinea. Pch.

11. Ninox albaria.

The White-faced Owl.

Ninox albaria, *Ramsay, Tab. List. Aust. Bds.*, p. 36 (1888).

Spiloglaux albaria, *Gurney, junr., Cat. Bds. Prey*, p. 41 (1894).

For the sake of reference, a description of this species which has been recently described from Lord Howe Island is here appended. It will be found allied to but distinct from *N. novæ-zealandiæ*, and *N. boobook*.

Specimens of a small Ninox from Lord Howe Island differ considerably from either of the continental forms *N. maculata* or *N. boobook*, and also from *N. novæ-zealandiæ*, to which latter it is most closely allied; this species, which I propose to distinguish under the name of *Ninox albaria*, may be briefly described:— The face, lores, forehead, chin, and upper part of the throat in some specimens snow white; the general colour of the plumage rich fawn or rusty-brown, deeper in tint on the sides of the chest and under surface and upper tail-coverts; each feather of the chest has two distinct roundish spots of white which elongate transversely and form two detached bars on the breast, but become confluent on the flanks, the feathers of the under tail-coverts are white with a terminal bar and centre shaft spot of rufous-brown; abdomen, legs, and thighs rufous-brown, paler on the outer parts; no spots on the head or hind neck; the mantle and interscapular region without spots in some, but sparingly spotted with white

on the concealed parts of the feathers in other individuals. Scapulars with two broken bands of white which sometimes take the form of oval spots on either side of the shafts of the feathers. Wings with seven or eight dull ashy bands. Centre two tail feathers without any bands, the others with about ten oblique narrow ashy bands on the inner webs only, except the outer feathers on either side, where they are just distinguishable; a few spots of white on the concealed portions of the rump and upper tail-coverts. Bill black, feet dull yellowish-brown; bristles brown. Length 12 inches, wing 8 inches, tail 6 inches, tarsus 1·7 inch, bill from forehead 1 inch. Some of the New Zealand specimens come very close to the Lord Howe Island birds, but lack the white face, lores, and chin. Should they eventually prove to be identical, this will form an interesting link, connecting the avifauna of the two islands. The Norfolk Island bird is said to be *Ninox boobook*, but it is more likely to prove to be *Ninox novæ-zealandiæ*, or perhaps the present species.

Habitat. Lord Howe Island.

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Sydney : William Applegate Gullick, Government Printer.—1898.

2

CATALOGUE

OF THE

AUSTRALIAN BIRDS

IN THE

AUSTRALIAN MUSEUM,

AT

SYDNEY, N.S.W.

PART III.

PSITTACI.

BY

E. P. RAMSAY, LL.D., F.R.S., E., &c.,

CURATOR.

SYDNEY:

PRINTED BY ORDER OF THE TRUSTEES.

1891.

INTRODUCTION.

This Part III. of the Catalogue of the Australian Birds, contains a description of all the species of the Psittaci or Parrot tribe at present known to inhabit Australia, in all, including varieties, 65 in number, and a list of such as are contained in the Australian Museum. In addition to those in the Museum, specimens have been received for examination from the Adelaide Museum, and opportunity has been taken of examining specimens at the Macleayan Museum at the University, and the Dobroyde Collection at Ashfield. In all about 750 specimens have been examined, coming from various parts of Australia. We trust our correspondents throughout the colonies will endeavour to complete our National Collection by forwarding specimens of such species as will be seen by the list to be wanting; those most required are the smaller species of White Cockatoos, Polytelis alexandræ, and all species of Euphema, with the exception of *E. pulchella*. I have much pleasure in acknowledging the assiduity and diligence of my Assistant, Mr. A. J. North, in the preparation of this work.

E. P. RAMSAY.

INTRODUCTION

"*Pres.*" stands for Presented.

"*Col.*" ,, Collected by Museum employees.

"*Pch.*" ,, Purchased.

"*O.C.*" ,, Old Collection.

"*Exch.*" ,, Exchanged.

"*semi-ad.*" ,, semi-adult or half grown.

"*ad.*" ,, adult or full grown.

"*juv.*" ,, young.

"*sk.*" ,, skin—not "set up."

"*mntd.*" ,, "set up" or "mounted."

"♂" ,, male.

"♀" ,, female.

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Order PSITTACI.

Fam. CACATUIDÆ.

1. CACATUA.

1. Cacatua (Plictolophus) galerita.

Great Sulphur-crested Cockatoo.

The Crested Cockatoo, *White's Journal*, pl. at p. 237.

Psittacus galeritus, *Lath. Ind. Orn.* (1790) p. 109; *Bechst. Kurze Ueb.* p. 89.

Crested Cockatoo, *Lath. Gen. Syn. Supp.* ii. (1801) p. 92; *id. Gen. Hist.* ii. (1822) p. 205; *Wagler Mon.* p. 694.

Psittacus (Kakadoe) galeritus, *Kuhl, Consp. Psitt.*, pp. 12, 87.

Great Sulphur-crested Cockatoo, *Shaw, Gen. Zool.* Vol. viii. p. 479.

Cacatua chrysolophus (?), *Lesson, Tr. d'Orn.* p. 182.

Plyctolophus galeritus, *Vig. & Horsf. Linn. Trans.* xv. (1826) p. 268; *Lear, Parr.* pl. 3; *Steph. Gen. Zool.* xiv. p. 108.

Kakadoe sulfureus major vel australensis, *Bourj. de St.-Hil. Perr.* tab. 79.

Cacatua galerita, *Vieill. 2nd Ed. du Nouv. Dict. d'Hist. Nat.* Tome xvii. p. 11; *Gray, Gen. of Bds.* ii. No. 6; *id. List Psitt.* p. 94 (1859); *Gould, Bds. Austr.* fol. Vol. v. pl. 1; *Reichenb. Neuentd. Vög. N. H.* No. 188; *O. Finsch, Nederl. Tijdschr. v Dierk. Berigten* (1863) p. xxi.; *Sclater, Proc. Zool. Soc. Lond.* p. 188 (1864); *Rosenb. Cab. J. f. Orn.* p. 115 (1864); *Schleg. Mus. P. B. Psitt.* (1864) p. 134.; *Gould, Handbk. Austr.* Vol. ii. p. 2, sp. 391; *Masters, Proc. Linn. Soc. N.S.W.* Vol. i. p. 57; *id.* Vol. ii. (1877) p. 274; *Sharpe, Voy. Alert* (1883) No. 53, p. 25; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. ii. (1885) p. 154; *id.* Vol. iii. (1886) p. 30; *id.* Vol. v. (1887) p. 26; *Cox & Hamilton, Proc. Linn. Soc. N.S.W.*, Vol. iv. 2nd Series, (1889) p. 416; *De Vis. Rep. Sci. Exp. N. Queensld.* (1889) p. 33; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 250.

(?) Plyctolophus licmetorhynchus, *Bp. Compt. Rend.* (1850) p. 139 ; *id. Rev. et Mag. Zool.* (1854) p. 156.

Cacatua licmetorhyncha, *G. R. Gray, List Psitt.* (1859) p. 94.

Plictolophus galeritus, *Finsch, Die Pap.* Vol. i. (1867) p. 286; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 237.

Plictolophus (Cacatua) galerita, *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1887) sp. 446, p. 192.

Cacatua (Plictolophus) galerita, *Ramsay, Tab. List Austr. Bds.* (1888) sp. 467, p. 15.

"Car'away" also "Cur'riang" (Caley), *Aborigines of N.S.W., Sydney tribe.*

Adult male. All the upper and under surface of the body pure white ; an elongated up-curved occipital crest and ear-coverts sulphur-yellow ; basal portion of the inner webs of the wing and tail feathers except the centre two light sulphur-yellow ; bill black ; feet blackish-brown, powdery ; eyes black.

The sexes are alike in plumage.

Habitat. Port Darwin, Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, Tasmania, West and South-west Australia, South Coast New Guinea. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen	Tarsus.	Mid toe.
A 1 ♂	19	14·5	6·2	2·05	1·6	2·28	1·2	1·75
A 2 ♀	20	14·3	8	1·95	1·57	2·26	1·15	1·63
A 3 ♂	18·6	14·5	8·6	2	1·5	2·25	1·18	1·77
A 4 ♂	18·25	13·1	8	2·05	1·65	2·3	1·2	1·62
A 5 ♂	18·5	13·3	8	1·9	1·5	2	1·15	1·62

A 1 ♂ ad. sk., Pine Mountains, Queensland, March, 1865. Col.
A 2 ♀ ad. sk., Gayndah, Burnett River, Queensland, Sept., 1870. Col.
A 3 ♂ ad. sk., Cambewarra, N.S.W., April, 1887. Pch.
A 4 ♂ ad. sk., Moolah, New South Wales, July, 1883. Col.
A 5 ♂ ad. sk., Lachlan River, New South Wales, June, 1883. Col.

2. Cacatua (Plictolophus) leadbeateri.

Leadbeater's Cockatoo.

Plyctolophus leadbeateri, *Vigors*, *Proc. Zool. Soc. Lond.* (1831) p. 61 ; *Lear*, *Parr.* pl. 3 ; *Jard. & Selb. Nat. Libr.* Vol. vi. p. 126, pl. 13 ; *Mitch. Exp. Inter. Austr.* Vol. ii. fig. 50, p. 47 ; *Bp. Rev. et Mag. Zool.* 1854 ; *id. Naum.* 1856.

Plyctolophus erythropterus, *Swainson*, *Class of Bds.* Vol. ii. p. 302.

Cacatua leadbeateri, *Wagler*, *Mon. Psitt.* (1832) *in Abhand.* p. 692 ; *Gould*, *Bds. Austr.* fol. Vol. v. pl. 2 ; *G. R. Gray*, *Gen. of Bds.* Vol. ii. No. 3 ; *id. List of Psitt*, p. 95 (1859); *Sclater*, *Proc. Zool. Soc.* (1864) p. 188 ; *Schleg. Mus. P. B. Psitt.* (1864) p. 141 ; *Gould*, *Handbk. Bds. Austr.* Vol. ii. p. 5, sp. 392 ; *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) sp. 446, p. 192 ; *id. Tab. List Austr. Bds.* (1888) sp. 468, p. 15 ; *North*, *Austr. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* (1889) p. 251.

Lophochroa leadbeateri, *Bp. Compt. Rend. de l'Acad. Sci.* 1857 ; *O. Finsch. Nederl. Tijdschr. v. Dierk. Berigten* (1865) p. xxii.

Plictolophus leadbeateri, *Finsch*, *Die Pap.* Vol. i. (1867) p. 304.

Jak-kul-yak-kul, *Aborigines of the mountain districts of Western Australia.* (Gould.)

Pink Cockatoo, *Colonists of Swan River.* (Gould.)

Major Mitchell, *Residents of New South Wales.*

Adult male. General colour above white, below tinged with rosy-salmon ; crown of the head and a few of the anterior crest plumes white ; crest crimson on the basal half with a spot of yellow on the central portion, the apical half white ; lores and a band round the base of the nostrils and upper mandible, the chin, ear-coverts, throat, breast, and upper portion of the abdomen rich rosy-salmon colour ; lower portion of the abdomen, flanks, and the under tail-coverts white ; sides of the body and axillaries tinged with salmon-rose ; the greater portion of the inner webs of the primaries and secondaries rich salmon-rose, the tips and shaft lines of the feathers white above and below, hind neck white, tinged with rose, interscapular region and all the upper surface of the body, wings and tail white, centre two tail feathers altogether white, the rest rich salmon-rose on the basal portion of the inner webs, under tail-coverts white ; bill horn-white the base bluish-black ; skin round the eye pinkish-white ; feet dull brown, mealy.

Adult female. Resembles the male, but is slightly lighter in the rose coloured tints, and usually has more yellow in the mesial portion of the crest.

Habitat. New South Wales, Interior, Victoria, South Australia, West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen	Tarsus.	Mid toe.
A 1 ♂	14·2	10·8	6·2	1·44	1·1	1·52	0·9	1·35
A 2 ♀	14·5	10·75	6·6	1·38	1·08	1·48	0·9	1·35
A 3 ♂	14·3	11	6·6	1·42	1·1	1·47	0·88	1·4
* ♂	16	11	6·8	1·42	1·12	1·48	0·9	1·37
* ♀	16·1	10·8	6·6	1·36	1·1	1·45	0·9	1·25

A 1 ♂ ad. sk., Moolah, Interior of New South Wales, Aug., 1883. Col.
A 2 ♀ ad. sk., Moolah, Interior of New South Wales, Aug., 1883. Col.
A 3 ♂ ad. sk., Lachlan River, New South Wales. Col.
* ♂ ad. sk. (Dob. Mus.), Riverina, New South Wales.
* ♀ ad. sk. (Dob. Mus.), Riverina, New South Wales.

3. Cacatua sanguinea.

Blood-stained Cockatoo.

Cacatua sanguinea, *Gould, Proc. Zool. Soc.* (1842) pt. x. p. 138 ; *id. Bds. Austr.* fol. Vol. v. pl. 3 ; *G. R. Gray, Gen. Bds.* Vol. ii. No. 9 ; *Reichb. Vög. Neu. Holl.* No. 190 ; *G. R. Gray, List Psitt.* (1859) p. 95 ; *Schleg. Dierentuin* (1864) p. 81 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 393, p. 6 ; *Ramsay, Tab. List Austr. Bds.* (1888) sp. 469, p. 15.

Plyctolophus sanguineus, *Bonap. Comp. Rend.* (1850) p. 139 ; *id. Rev. et Mag. de Zool.* (1854).

Eolophus sanguineus, *Bonap. Comp. Rend.* (1857) p. 537.

Lophochroa sanguinea, *O. Finsch, Nederl. Tijdschr. voor Dierk. Berigten* (1863) p. xxii.

Plictolophus sanguineus, *O. Finsch, Die Pap.* Vol. i. (1867) p. 307.

Plictolophus (Cacatua) sanguineus, *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 192.

Adult male. All the upper and under surface of the body white ; the lores, feathers at the angle of the mouth, base of the feathers of the crest, head, nape, ear-coverts, cheeks and throat

rosy-salmon ; basal portion of the primaries, secondaries, some of the scapulars and axillaries washed with light sulphur-yellow on their inner webs ; centre two tail feathers all white, the remainder washed with sulphur-yellow on the basal portion of the inner webs ; bill white, bluish-horn colour at the base ; feet dark brown, mealy ; claws black ; a large naked space in front, below, behind the eye, and a very narrow bare line over the eye, slate-blue. Total length (of skin) 15·6 inches, wing 12, tail 6·5, tarsus 1·1, mid toe 1·8, its nail 0·75, bill from forehead 1·5, from the nostril 1·2, culmen 1·6, width of cutting front edge of lower mandible 0·6, length of lower mandible from angle 0·9, extent of bare space above the eye 0·2, below it 0·7, in front to the feathered lores 0·5, behind towards the ear coverts 0·65.

Adult female. Similar to the male, but somewhat smaller. The whole of the plumage above and below white on the surface ; lores, basal portion of the feathers of the head, crest, cheeks, ear-coverts and hind neck deep rosy-salmon-red ; basal portion of the inner webs of the primaries, secondaries, and of all the tail feathers except the centre two light sulphur-yellow ; the crest is white, short, deep rose-red at the extreme base, and not recurved, no bare space behind it as in the Great Sulphur-crested Cockatoo *(C. galerita)* ; bare space round the eye, nearly equal above and below and of a dull slate-blue ; bill white horn colour ; feet dark brown, mealy. Total length 13·5 inches, wing 10, tail 5·5, tarsus 1, mid toe 1·4, its nail 0·45, bill from forehead 1·3, from nostril 1, culmen 1·2, width of cutting and front edge of lower mandible 0·4, length from angle 0·8, height of upper mandible 0·7, width at base 0·6.

Habitat. Derby (N. W. Australia), Port Darwin, Port Essington, Gulf of Carpentaria,* Cape York, New South Wales, Interior. (*Ramsay.*)

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* Cacatua goffini.

Goffin's White Cockatoo.

Lophochroa goffini, *O. Finsch, Nederl. Tijdschr. voor Dierk. Berigten* (1863) p. xxii.

Cacatua goffini *Schleg. Dierentuin* (1864) p. 82.

Cacatua sanguinea, *Schleg. Mus. P. B. Psitt.* (1864) p. 144 *(Syn. emend)* ; *id. Nederl. Tijdschr. voor Dierk.* (1866) p. 319.

Plictolophus goffini, *O. Finsch, Die Pap.* i. p. 308, gen. 14, sp. 11 (1867).

Diagnosis. Similar to *Cacatua sanguinea*, but smaller. Finsch states there is no tint of red on the lores, but the bases of the feathers of the head, neck and breast rose. "Pl. sanguineo similis, at minor ; loris rubris nullis; basi plumarum cervicis pectorisque rosea." *(Finsch, Die Pap.* i. p. 309.) A specimen from Molucca in the Adelaide Museum agrees with this description.

NOTE.—Count Salvadori, in his Supplement to the Birds of New Guinea and Molucca (Aggiunte alla Ornitologia della Papuasia e delle Molucche

Measurements of average sized specimens.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen	Tarsus.	Mid toe.
A 1 ♂	15	11·8	7	1·5	1·25	1·72	1	1·63
† ♀	14	10·7	5·65	1·47	1·2	1·7	0·87	1·5
† ♂	13·6	10·5	6·1	1·4	1·2	1·62	0·85	1·5

A 1 ♂ ad. sk., Derby, North-western Australia. Pch.

† ♀ ad. sk., (Macl. Mus.), Port Darwin, Northern Australia.

† ♂ ad. sk., (Macl. Mus.), Port Darwin, Northern Australia.

4. Cacatua gymnopis.

Bare-faced Cockatoo.

Cacatua gymnopis, *Sclater*, *Proc. Zool. Soc.* 1871, p. 493; *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) sp. 449 p. 192; *id. Tab. List Austr. Bds.* sp. 470, p. 15.

Adult male. All white, except the basal portions of the inner webs of the primaries, secondaries, and a few of the scapulars and axillaries light sulphur-yellow; all the tail feathers except the centre pair sulphur-yellow on the basal portion of the inner webs; lores rosy-salmon colour; head and crest altogether white without any tinge of rose at the base of the feathers; naked space round the eye extending about two and a quarter times more below than above it; bill white, dull horn colour at the base; feet blackish-brown, mealy above, with the soles whitish. Total length 13·5 inches, wing 10·5, tail 5, tarsus 0·9, mid toe 1·4, its nail 0·5, bare space above the eye 0·3, in front 0·4, below 0·65, behind 0·5, bill from forehead 1·5, from nostril 1·25, culmen 1·5, height 0·65,

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Pt. ii., 1890, p. 28), states in his description of this bird that the lores and margin of the forehead are red—(*"loris et margine frontali rubris"*), while in the original description by Finsch the lores are stated to be without the red or rose tint (*"loris rubris nullis"*). Specimens of *C. sanguinea* from the Gulf of Carpentaria are on the whole smaller than those from Derby and the North-West Coast generally, an average specimen measures as follows:—Total length 13·5 inches, wing 10·3, tail 6, tarsus 0·9, mid toe 1·4, bill from forehead 1·25, from nostril 1, culmen 1·2, lower mandible from angle 0·8, width across the front cutting edge of ditto 0·35, width at gape 0·7.

Under these circumstances, if Dr. O. Finsch's description is incorrect and Count Salvadori's correct, then *C. goffini* is only a smaller variety of *C. sanguinea*. If Dr. Finsch's bird has *no red on the lores*, it may be Dr. Sclater's *C. gymnopis*. It is to be hoped that this matter will be finally settled in the coming No. of the British Museum Catalogue of the Psittaci.

breadth 0·6, width of front cutting edge of lower mandible 0·4, from angle of lower mandible 0·8.

Habitat. Derby (N. W. Australia), Port Darwin, Port Essington, Gulf of Carpentaria, Cape York, New South Wales, Interior, South Australia. (*Ramsay.*)

5. Cacatua roseicapilla.

Rose-breasted Cockatoo.

Cacatua roseicapilla et rosea, *Vieill. Nouv. Dict. d'Hist. Nat.* Tome xviii. p. 12 (1818).

Cacatua rosea, *Enc. Méth.* p. 1414 ; *id. Gal. des Ois.* Tome xxv. p. 5.

Rose-coloured Cockatoo, *Lath. Gen. Hist.* Vol. ii. (1822) p. 207.

Rose Cockatoo, *Sturt's Travels in Australia*, Vol. ii. pl. in p. 79.

Psittacus eos, *Kuhl. Consp.* (1820) p. 88 ; *Temm.* Pl. Col. 81.

Plyctolophus eos, *Vig. & Horsf. Linn. Trans.* xv. (1826) p. 269.

Cacatua eos, *Less. Man. d'Orn.* ii. p. 143 ; *id. Tr. d'Orn.* (1831) p. 183 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 4.

Kakadoe rosea, *Bourj. de St.-Hil. Perr. t.* 74 *(av ad. ap.* pl. col.).

Eolophus roseus, *Bp. Rev. et Mag. de Zool.* (1854) p. 155.

Eolophus roseicapilla, *Bp. Compt. Rend. de l'Acad. Sci.* (1857) p. 537 ; *O. Finsch, Nederl. Tijdschr. v. Dierk. Berigten.* (1863) p. xxiii. ; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. iii. (1886) p. 30 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1887) p. 192.

Cacatua roseicapilla, *Wagler, Mon.* p. 691 ; *G. R. Gray, Gen. of Bds.* ii. No. 1 ; *id. List Psitt.* (1859) p. 95 ; *Schleg. Mus. P.B. Psitt.* (1864) p. 145 ; *Gould, Handbk. Bds. Austr.* (1865) Vol. ii. sp. 394 p. 8 ; *Masters, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 269 ; *Ramsay, Tab. List Austr. Bds.* (1888) sp. 471, p. 16 ; *Cox & Ham. Proc. Linn. Soc. N.S.W.* Vol. iv., 2nd Ser. (1889) p. 416 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 251.

Plictolophus roseicapillus, *Finsch. Die Pap.* Vol. i. (1867) p. 313, sp. 14.

Adult male. Exposed portion of the feathers on the crown of the head and nape pinky-white, the bases of the feathers being deep clear rose colour; sides of the head and face, hind neck, chin, throat and all the under surface of the body rich deep rose; under wing-coverts and axillaries rose; shoulders, interscapular region, the scapulars and their coverts, upper wing-coverts dark ashy-brown; quills ashy-brown; outer webs of the secondaries and of their coverts light ashy-grey; lower part of the back ashy-grey, becoming ashy-white on the rump and upper tail-coverts, the basal half of the centre two feathers, and on the basal portion of the outer webs of the remaining tail feathers, the tip of the feathers dark ashy-brown, below blackish-brown, flanks light ashy-grey, thighs tipped with rose, under tail-coverts tipped with rose near the crissum, the median and greater series ashy-grey, becoming darker at the tips; bill white; legs mealy-brown; bare space round the eye dull red. Total length 13·8 inches, wing 9·7, tail 5·7, tarsus 0·9, mid toe 1·2, its nail 0·4, bill from forehead 1·2, from nostril 1·1, height 0·6, width 0·6, width of lower mandible across front cutting edge 0·3, length from angle of ditto 0·6.

Adult female. Similar to the male, but of a paler tint on the head, and the under surface of not so deep a rose colour.

Habitat. Derby (N.W. Australia), Port Darwin, Port Essington, Gulf of Carpentaria, New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen	Tarsus.	Mid toe.
A 1 ♂	13·3	10·6	6	1·13	0·98	1·27	0·88	1·16
A 2 ♀	12·3	10·3	5·9	1·15	0·95	1·25	0·88	1·08
A 3 ♂	13·3	10·2	5·75	1·14	1	1·3	0·85	1·18
† ♂	11·8	9·4	5·5	1·25	0·9	1·28	0·85	1·2
A 4 ♀	11·55	10·25	6·1	1·16	0·92	1·3	0·84	1·14

A 1 ♂ ad. sk., Moolah, New South Wales, July, 1883. Col.

A 2 ♀ ad. sk., Lachlan River, New South Wales, 8th June, 1883. Col.

A 3 ♂ ad. sk., Lachlan River, New South Wales, 17th May, 1880. Col.

† ♂ ad. sk. (Macl. Mus.), Port Darwin, Northern Australia.

A 4 ♀ ad. sk., Derby, N.W. Australia, 1886. Col.

2. LICMETIS.

1. Licmetis nasicus.

Long-billed White Cockatoo.

Psittacus nasicus, *Temm. Trans. Linn. Soc. Lond.* Vol. xiii. p. 115 (read 1819) 1822 ; *Less. Man. d'Orn.* ii. (1828) p. 143 ; *Voigt, Cuv. Uebers.* (1831) p. 738.

Long-nosed Cockatoo, *Latham, Gen. Hist.* Vol. ii. p. 205 ; Pl. Col. 331.

Psittacus tenuirostris, *Kuhl, Nov. Acta,* Tome x. p. 88 (1820).

Licmetis nasicus, *Gould, Bds. Austr.* fol. Vol. v. pl. 5 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 16, sp. 472.

Licmetis nasica, *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) sp. 451, p. 193 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 252.

Kakadoe tenuirostris, *Bourj. de St. Hil. Perr,* tab. 76 (Ap. Pl. Col.).

Licmetis tenuirostris, *Wagler, Mon. Psitt. in Abhand.* Vol. i. pp. 505 and 695 (1832).

Cacatua nasica, *Less. Tr. d'Orn.* p. 183 (1831) ; *Schleg. Mus. P. B. Psitt.* p. 146 (1864).

Plyctolophus tenuirostris, *Steph. Con. of Shaw's Gen. Zool.* Vol. xiv. p. 108 ; *Thienem., Fortpflz. d. ges. Vög.* p. 79 (1852).

Licmetis tenuirostris, *Bp. Rev. et Mag. de Zool.* (1854) ; *G. R. Gray, Gen. of Bds.* ii. No. 1 ; *id. List of Psitt.* (1859) p. 96 ; *O. Finsch, Nederl. Tijdschr. v. Dierk. Berigten* (1865) p. xxiii. ; *Sclater, List of live Anim. in Zool Gard. Lond.* (1862) ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 395, p. 11.

Plictolophus nasica, *Temm.* ; *O. Finsch, Die Papag.* Vol. i. (1867) p. 316, gen. 18, sp. 15.

Red-vented Cockatoo, *Brown's Ill.* p. 10, pl. 5.

Adult male. General colour white. A narrow line over the nostril, a large patch on the side of the face in front of the eye, a narrow line round it, and the bases of the feathers on the throat, abdomen and chest scarlet ; the basal portion of all the

feathers of the head, nape, hind neck, and of the mantle crimson; basal portion of the inner webs of primaries and secondaries on the under surface light sulphur-yellow; centre two tail feathers white, the remainder white, washed with sulphur-yellow on the inner webs; the remainder of the plumage white; bare skin round the eye bluish, changing to dark bluish-slate colour, or black in old skins; bill white, bluish-horn at the base above the nostrils; legs and feet dark olive-brown. Total length 15·5 to 16 inches, wing 10·6, tail 5·3, tarsus 0·6, bill from forehead 2, from nostril 1·65, height 0·7, width 0·65, width of lower mandible at cutting edge at tip 0·35. The sexes are alike in plumage.

Habitat. Gulf of Carpentaria, New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid toe.
A 1 ♀	14·1	10·65	5·8	2·15	1·92	2·3	1	1·38
A 2 ♀	13·5	10·8	5·4	1·95	1·6	2·08	1	1·3
* ♂	15	10·7	5·5	1·93	1·65	2·05	0·98	1·4
* ♂	14·6	10·8	5·7	1·97	1·7	1·95	0·96	1·36
† ♂	14·6	10·2	6	2	1·7	2·05	1	1·5

A 1 ♀ ad. sk., Hay, New South Wales. Col.

A 2 ♀ ad. sk., Hay, New South Wales. Col.

* ♂ ad. sk. (Dob. Mus.), Deniliquin, New South Wales.

* ♂ ad. sk. (Dob. Mus.), Deniliquin, New South Wales.

† ♂ ad. sk. (Macl. Mus.), Murrumbidgee, New South Wales.

2. Licmetis pastinator.

Western Long-billed White Cockatoo.

Licmetis pastinator, *Gould, Proc. Zool. Soc. Lond.* 1840, Pt. viii., p. 175; *Reichenbach, Neuentd. Vög. N. Holl.* No. 366; *G. R. Gray, Gen. of Bds.* ii. No. 2; *id. List Psitt.* (1859) p. 225, *Bp. Rev. et Mag. de Zool.* (1854); *id. Naum.* (1856); *Sclater, List of live Anim. Zool. Gard. Lond.* (1862); *Gould, Handbk. Bds. Austr.* Vol. ii. p. 12, sp. 396; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194; *id. Tab. List Austr. Bds.* (1888) sp. 472*a*, p. 16.

Plictolophus pastinator, *Finsch, Die Papag.* Vol. i. (1867) p. 318.

Psittacus pastinator, *(Kuhl.) Thienem., Fortpflz. d. ges. Vög.* (1852) p. 79.

Adult male. General colour above and below white; the lores and the base of the crest, and of all the feathers of the head, neck and throat of a rich rosy-salmon, a few feathers here and there of the breast, abdomen and flanks, slightly tinged with the same tint. Crissum and tuft of down round the oil glands salmon-red; inner webs of the primaries, secondaries and scapulars, except at the tips, and some of the adjacent upper and under wing-coverts, the axillaries, bases of the centre two tail feathers, and the inner webs of all the rest, light sulphur-yellow; some specimens have also the upper and under tail-coverts towards their basal portions washed with light sulphur-yellow. Total length 16·4 inches, wing 12·5, tail 7, tarsus 0·9, mid toe 1·65, its nail 0·7, bill from forehead 2·2, from nostril 1·9, culmen 2·15,* height 0·85, width of base 0·75, front cutting edge of lower mandible 0·45, from angle to the tip of ditto 1·1, width at base 0·94, length from gape to front edge 1·2.

Adult female. In plumage similar to the male.

Remarks. The bills in the genus vary; in those inhabiting the soft ground in the open plains they are longest, while others of the same species frequenting the stony parts of the country, have the tips worn down and the length of the upper mandible shorter. The western form, *L. pastinator*, is a larger bird than the South Australian and New South Wales species, *L. nasicus*, it may also be distinguished by its larger bill and the salmon tint of the basal portion of the feathers of the lores, head, neck and chest; in *L. nasicus* there is a distinct frontal band and a large patch, almost scarlet on the lores and over the eye, narrower but distinctly marked in front and behind the eye. A large series of specimens recently examined from South Australia, the central portion of New South Wales, and from South-West and West Australia, tend to prove the distinctness of these two forms, which previously from insufficient material were considered only to be local varieties of one and the same species.

Habitat. South-West and Western Australia generally.

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*The length of bills vary considerably according to the style of country frequented by the individuals.

Measurements of average sized specimens from different localities.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen	Tarsus.	Mid toe.
A 1 ♂	17	12	7·1	1·95	1·72	2·33	1·1	1·5
A 2 ♀	17·3	12·1	7·1	2·1	1·72	2·4	1·1	1·55
A 3 ♂	16	12	7·1	1·8	1·51	2	1	1·48
A 4 ♀	17	12·75	7·15	2·25	1·93	2·52	1·1	1·65
† ? ♂	15·7	12·2	6·7	2	1·8	2·2	1·1	1·7
† ? ♀	16·3	11·5	6·8	1·6	1·3	1·8	1·1	1·6

A 1 ♂ ad. sk., King George's Sound, W. Australia, March, 1866. Col.
A 2 ♀ ad. sk., King George's Sound, W. Australia, March, 1866. Col.
A 3 ♂ ad. mtd., Salt, River, W. Australia. Col.
A 4 ♀ ad. mtd., Salt River, W. Australia. Col.
† ? ♂ semi ad. (Macl. Mus.), Western Australia.
† ? ♀ semi ad. (Macl. Mus.), Western Australia.

3. CALOPSITTACUS.

1. Calopsittacus novæ-hollandiæ.

Cockatoo-Parrot.

Psittacus novæ-hollandiæ, *Gml. S.N.* (1788) p. 328.

Crested Parrakeet, *Lath. Gen. Syn. Bds.* Vol. i. (1781) p. 250; *id. Gen. Hist.* ii. (1822) p. 174; *id. Psitt. N. Holl. Ind. Orn.* (1790) p. 102; *Bechst, Kurze Ueb.* p. 79; *Kuhl, Consp.* p. 100; *Vieill. Nouv. Dict. d'Hist. Nat.* p. 278; *id. Enc. Méth.* p. 1388; *Shaw, Gen. Zool.* p. 452.

Palaeornis novæ-hollandiæ, *Lears, Ill. Parr.* pl. 27.

Nymphicus novæ-hollandiæ, *Wagler, Mon. Psitt. in Abhand,* pp. 490-522 (1832); *Nat. Libr.* p. 186, pl. 50; *Gould, Bds. Austr.* fol. Vol. v. pl. 45; *Bp. Rev. et Mag. de Zool.* (1854); *id. Naum.* 1856.

Leptolophus auricomis, *Swainson* (1832) *Zool. Ill.* 2nd Ser. pl. 112; *id. Class. Bds.* ii. p. 305; *Bourj. Perr.* t. 11 ♂ et 11*b* ♀.

Calopsitta guy, *Less. Ill. de Zool.* (1852) pl. 49 ♂ et 50 ♀.

Calopsitta novæ-hollandiæ, *G. R. Gray, List Gen. Bds.* (1855), p. 85; *id. List Psitt.* (1859) p. 1.

Cacatua novæ-hollandiæ, *Schleg. J. F. Orn.* (1861) p. 380; *id. Dierentuin* (1864) p. 83.

Platycercus novæ-hollandiæ, *Schleg. Mus. Pays-Bas*, p. 99.

Calopsitta novæ-hollandiæ, *Gould, Handbk. Bds. Austr.* ii. p. 84, sp. 440 ; *North, Austr. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* (1889) p. 254.

Callipsittacus novæ-hollandiæ (Gml.), *O. Finsch, Die Pap.* i. p. 261, gen. 3, sp. 1.

Calopsittacus novæ-hollandiæ (Gml.), *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877), p. 193 ; *id. Tab. List Austr.* (1888) sp. 481, p. 16.

Adult male. Forehead, crown and sides of the head, base of the crest, cheeks and throat yellow, becoming white at the lower parts of the throat and below the ear-coverts ; apical portion of the crest dull brown, ear-coverts deep orange-red ; hind neck, interscapular region, back, the scapulars and their coverts, the shoulders, and the upper primary coverts blackish-brown ; lower part of the back, rump and upper tail-coverts ashy-brown ; outer webs of the scapulars and of the secondaries and the median upper wing-coverts white—forming a broad oblong patch down the centre of the wing ; quills black at the tips and on their inner webs, ashy-white on their outer ; chest and the whole of the under surface of the body, under wing and tail-coverts, and the under surface of the wings dark ashy-brown ; under surface of the tail black ; centre two tail feathers above, and the outer webs of the adjacent pair on either side ashy-grey, the inner webs and the remaining feathers black ; bill ashy-white, feet light brown or mealy grey.

Adult female. Forehead, base of the crest, lores, sides of the face and the chin ashy tinged with dull yellow ; apical portion of the crest dull ashy-brown ; ear-coverts dull orange-red ; shoulders, scapular and primary-coverts dark slate colour, scapulars lighter ; their outer webs, the median upper coverts of the wing, and the outer webs of the secondaries, white, primaries dark slate, ashy-grey on their outer webs, becoming blackish-brown on their inner, all more or less spotted with from two to six oblong markings of light yellow across the median portion of the inner webs, but not reaching to the shafts of the feathers—these spots appear to become obsolete with age ; the back, rump, upper tail-coverts, and the centre two tail feathers except at the extreme tips, crossed alternately with narrow wavy bars of ashy-white and slate-brown, the three adjacent feathers on either side similar on the outer webs, barred with yellow on the inner, the fourth with yellow bars on both webs, and the fifth with yellow bars on both webs slightly broader on the outer, the outermost (sixth) on either side all yellow with irregular wavy bars of black on the inner web only ; under surface of the tail feathers similar, but showing

traces only of the bars, except on the outer two feathers; throat and all the under surface of the body and of the under wing-coverts dull ashy-brown; thighs, legs and under tail-coverts with narrow wavy irregular cross-bars of pale yellow, slightly broader on the under tail-coverts; bill dark horn colour; legs and feet grey.

Young. The young males resemble the females until after the first moult.

Remarks. Specimens from Northern and the Interior of Queensland are of a much darker tint of brown, almost black on the upper surface, and the ashy-grey of the centre tail feathers and wings duller and darker, the yellow of the head and face brighter.

Measurements of average sized specimens from different localities.

Sex.	Total length.	Wing.	Outer Tail Feathers.	Centre tail Feathers.	Bill from forehead.	Bill from Nostril.	Tarsus.	Mid Toe.
A 1 ♂	11·9	6·7	4·75	7·1	0·75	0·61	0·58	0·82
A 2 ♀	11	6·6	4·82	6·85	0·73	0·6	0·61	0·81
A 3 ♀	11	6·62	4·85	6·8	0·7	0·6	0·6	0·81
A 4 ♂	11·7	6·7	4·73	7·1	0·72	0·58	0·58	0·83
A 5 ♂	11·62	6·6	4·7	7·1	0·73	0·55	0·55	0·78
A 6 ♂	11·7	6·55	4·2	6·8	0·71	0·6	0·6	0·82

A 1 ♂ ad. sk., Derby, North-western Australia, 1886. Pch.

A 2 ♀ ad. sk., Derby, North-western Australia, 1886. Pch.

A 3 ♀ ad. sk., Lachlan River, New South Wales, August, 1883. Col.

A 4 ♂ ad. sk., Lachlan River, New South Wales, August, 1883. Col.

A 5 ♂ ad. sk., New South Wales. Pres.

A 6 ♂ ad. sk., Roeburne, North-western Australia, July, 1889. Pch.

4. CALLOCEPHALON.

1. Callocephalon galeatum.

Gang-gang Cockatoo.

Psittacus galeatus, *Latham, Ind. Orn. Supp.* ii. (1802), p. xxiii. No. 13; *Shaw, Gen. Zool.* viii. (1811) p. 523; *Kuhl. Consp.* p. 88; *Voigt. Cuv. Uebers* (1831) p. 759.

Red-crowned Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) pl. 38.

Psittacus fimbriatus, *Grant (ap. Gray).*

Calyptorhynchus galeatus, *Vig. & Horsf. Linn. Trans.* xv. (1826) p. 274 ; *Less. Man d'Orn.* ii. p. 144 ; *G. R. Gray, Gen. of Bds.* ii. No. 40 ; *G. R. Gray, List of Psitt. Brit. Mus.* (1859) p. 99.

Calyptorrhynchus galeatus, *Lath. O. Finsch, Die Pap.* Vol. i. (1867) p. 337, gen. 22, sp. 1.

Cacatua galeata, *Vieill. Nouv. Dict. d'Hist. Nat.* Tome xvii. p. 12 ; *Schleg. Dierentuin* (1864) p. 82 ; *id. Mus. P. B. Psitt.* (1864) p. 142.

Psittacus phœnicocephalus, *Mus. de Paris.*

Corydon galeatus, *Wagler, Mon. Psitt. in Abhand.* Vol. i. pp. 504, 689-90 (1832).

Banksianus galeatus, *Less. Traité d'Orn.* (1831) p. 181.

Callocephalon australe, *Less. Voy. Thetis* (1837) pls. 47-48.

Kakadoe rubro-galeatus, *Bourj. de St. Hil. Perr.* tabs. 75, *75a, 75b, juv. 75c juv.*

Plyctolophus galeatus, *Swainson, Class. of Bds.* Vol. ii. p. 302.

Callocephalon galeatum, *G. R. Gray, List Gen. Bds.* 2nd Edit. p. 68 ; *Bp. Rev. et Mag. de Zool.* 1854 ; *id. Naum.* 1856 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 14 ; *id. Handbk. Bds. Austr.* Vol. ii. p. 29, sp. 405 ; *Reichenb. Neuentd. Vog. N. Holl.* No. 457 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193 ; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 237 ; *Ramsay, Tab. List Austr. Bds.* (1888) sp. 473, p. 16 ; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Ser. (1888) p. 1777.

Callicephalus galeatus, *Brehm. Thierl. Vög.* (1865) p. 43.

Adult male. Front, crown, nape, sides of the head, ear-coverts and crest rich crimson, the tips of the crest recurved and when erect hanging over the front of the head ; feathers around the lower mandible, and on the whole of the upper and under surface of the body, scapulars, and the wing-coverts blackish slate-grey, with a narrow margin of ashy-white ; primaries and their coverts and all the feathers of the tail dark slate-grey, a very slight gloss of a bronzy-green shade on the centre and adjacent feathers ; secondaries and the greater series of their coverts dark slate-grey on the inner webs, bronzy-green on the outer ; no ashy-white margin on any of the quills of the wings or tail ; margins of the feathers on the flanks, abdomen, thighs, and under tail-coverts,

occasionally tinged with yellow or orange; bill whitish-horn colour; feet dark brown.

Adult female. Front, crown, sides of the head, ear-coverts and crest dark slate-grey; the crest recurved as in the male, and with a slight tinge of greenish in certain lights, the extreme tips of some of the longer feathers indistinctly margined with a yellowish or orange tint; chin and all the feathers on the under surface of body dark slate-grey, mesially crossed with two or three more or less distinct lines of ashy-white, and distinctly margined with crimson, changing into yellow on the flanks, or has a narrow subterminal line of orange-yellow bounding the crimson terminal bar, the last mesial bar often becoming yellow on the flanks and abdomen; under tail-coverts dark slate colour, with from eight to ten ashy-white cross-bars, tinged with yellowish or orange as they approach the tips of the feathers, which are often margined with red; the feathers of the hind neck and the whole of the upper surface dark slate-grey, mesially crossed with narrow white bars, tinged with greenish-yellow on the apical portion of the feathers of those of interscapular region, scapulars, back, and upper wing and tail-coverts; primaries dark slate on the outer webs, darker on the inner, crossed with from four to six rather broad whitish bars; secondaries and their coverts similar, but having their outer webs strongly washed with bronzy-green, becoming clear bronze on the margins of the median feathers; shoulders, smaller wing-coverts, and the under wing-coverts blackish-slate, crossed with ashy-white, becoming yellowish on the terminal bar; tail dark slate-grey above, blackish-slate below, crossed with from ten to fourteen irregular wavy broken bars of ashy-white, becoming white on the basal portion of the inner webs; bill and feet as in the male.

Young males. Similar to the females, but showing the crimson of the head at a very early stage, and the mesial portion of the feathers mottled with yellow; the shoulders, hind neck, and interscapular region very narrowly and indistinctly margined with ashy-white; the back and rump similar, and having at first minute dots of yellow on the apical half of the feather before the cross-bars appear; the secondaries and three coverts washed with greenish-yellow; the primaries show from three to six, and the secondaries as many as eight ashy bars, with the remains occasionally of one or two more; under tail-coverts with ten, and the tail feathers with from twelve to fifteen narrow ashy bars; margins of the under and some of the upper tail-coverts washed with light yellow, and occasionally tipped with orange-red; bill dull horn colour; feet dark mealy-brown.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Victoria, South Australia, Tasmania. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen	Tarsus.	Mid toe. (s.u.)
A 1 ♂	12·8	9·8	6	1·3	1·05	1·6	0 73	1·1
A 2 ♀	13·3	10·05	6·3	1·28	1·04	1·75	0·72	1
A 3 ♀	12·1	9·7	6·1	1·3	1·12	1·65	0·75	1·1
* ♀	13·9	10·15	6·6	1·3	1·03	1·65	0·77	1·15
* ♂	13·6	9·9	5·8	1·3	1·13	1·72	0·75	1·05

A 1 ♂ ad. sk., Illawarra, New South Wales, June, 1866. Col.

A 2 ♀ ad. sk., Victoria, 1865. Pch.

A 3 ♀ ad. sk., Cambewarra, New South Wales. Col.

* ♀ ad. sk. (Dob. Mus.), Blue Mountains, New South Wales.

* ♂ ad. sk. (Dob. Mus.), Blue Mountains, New South Wales.

5. CALYPTORHYNCHUS.

1. Calyptorhynchus banksii.

Banksian Cockatoo. Great Red-tailed Black Cockatoo.

Psittacus banksii, *Lath. Ind. Orn.* Vol. i. p. 107 (juv.) 1790; *Temm. Linn. Trans.* Vol. xiii. p. 112 (1819); *Voigt. Cuv. Uebers.* (1851) p. 738.

Psittacus magnificus, *Shaw, Nat. Misc.* pl. 50.

Banksian Cockatoo, *Lath. Gen. Syn.* i. p. 63, t. 109 (1781); *Cook, Voy.* ii p. 18; *Parkins, Voy.* p. 144; *Lath. Gen. Hist.* ii. p. 199, No. 128, pl. xxvii. cum var. C.; *id.* 3rd & 5th var. *Syn. Suppl.* ii. p. 92, (1802).

Psittacus (Kakadoe) banksii, *Kuhl. Consp. Psitt.* pp. 12, 90.

Psittacus banksi et funereus, *Less. Voy. Coq.* (1826) p. 624.

Banksianus australis, *Less. Traité, d'Orn.* (1831) p. 80.

Cacatua banksii, *Vieill. Nouv. Dict. d'Hist. Nat.* tom. xvii. p. 8; *id. Enc. Méth.* p. 1412.

Plyctolophus banksii, *Swain. Class. of Bds.* Vol. ii. p. 302, (juv.).

Calyptorhynchus banksii, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 271 ; *Gould, Bds. of Austr.* fol. Vol. v. pl. 7 ; *id. Handbk. Bds. Austr.* Vol. ii. p. 13, sp. 397 (1865) ; *Bourj. Perr.* pl. 71 ; *G. R. Gray, List Psitt.* (1859) p. 97 ; *Schleg. Mus. P. B. Psitt.* (1864) p. 153 ; *Ramsay, List Austr. Bds. in Proc. Linn. Soc. N.S.W.* (1877) p. 193, sp. 454 ; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 474 ; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. iv. (1887) p. 27 ; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Ser. (1888) p. 1777 ; *De Vis, Rep. Sci. Exp. N. Queensld.* (1889) p. 33.

Calyptorhynchus banksii et stellatus, *Wagler, Mon. Psitt. in Abhand.* tom. i. pp. 685, 686, pl. 27.

Psittacus banksii, var. *Lath. Ind. Orn.* p. 107.

Banksian Cockatoo, var. B, *Lath. Syn. Supp.* ii. p. 91.

Cook's Cockatoo, *Lath. Gen. Hist.* ii. p. 201 ; *Phill. Voy. Botany Bay*, pl. in p. 166.

Calyptorhynchus leachi (juv.), *Wagler, Mon. Psitt.* p. 683.

Calyptorhynchus temminckii. *Bourj. Perr.* pl. 72, juv.

Psittacus cookii, *Temm. in Linn. Trans.* xiii. No. 12 (1822) (read 1819) p. 111 ; *Voigt, Cuv. Uebers.* p. 738 (1831).

Psittacus leachii, *Kuhl. Consp.* p. 21 (1820).

Calyptorhynchus cookii, *Vig. & Horsf. Linn. Trans.* Vol. xv. p. 271.

Calyptorhynchus banksii et macrorhynchus, *Bp. Rev. et Mag. de Zool.* (1854) ; *id. Naum.* (1856).

Calyptorhynchus banksii et cookii, *G. R. Gray, Gen. of Bds.* Vol. ii. Nos. 2 & 3.

Calyptorrhynchus banksi, *Finsch, Die Pap.* Vol. i. (1867) p. 345, sp. 24.

Adult male. The whole of the plumage black, slightly glossed with a greenish tint on the ends of the feathers, the median portion of all the tail feathers except the centre pair is crossed by a broad band of deep vermilion, margined on the basal portion of the inner webs with yellow ; this vermilion band does not extend to the outer webs of the outermost tail feather on either side in all specimens, occasionally the outer web is black on one side of the tail only, but usually black on both the outer feathers. Bill black, the median portion of the upper and the lower mandible dull horn colour ; legs and feet blackish-brown.

Remark. In one specimen a large oblong spot of rich vermilion centres the outer web of one of the larger of the upper tail-coverts.

Adult female. General plumage black with a slight gloss of green; feathers of the crest, sides of the head, cheeks, ear-coverts, shoulders above, and upper wing-coverts with roundish irregular shaped spots of yellow; shoulders below, and the under wing-coverts with a broad subterminal bar of yellow, which in some specimens is reduced in size; all the under surface of the body crossed with irregular wavy lines of yellow tinged on the abdomen with orange or red, each feather with from one to three bars, the last being subterminal; flanks spotted with the same tints; under tail-coverts black, with from three to five zig-zag cross-bars of yellow tinged with red; centre two tail feathers black throughout, the remainder black at the base and at the tip, mesially crossed with broad bands of crimson, becoming yellow or orange on the inner webs, and separated by narrow lines of black; towards the ends of the feathers the red, orange-tinted or yellow bands form narrow zigzag or wavy lines as they approach the tip, where they are lost: on the under surface of the feathers the orange and yellow tints prevail, on the upper the crimson, which decreases both towards the central and outer tail feathers. Bill whitish-horn colour, darker at the tip; legs and feet blackish-brown. Total length 26·7 inches, wing 18, tail 13·5, tarsus 0·8, bill from forehead 2·1, from nostril 1·55, width at base 1, height 1·3, across tip of lower mandible 0·5, from angle of ditto to tip 1·3, from base to tip 1·05, width at base 1·2.

Remarks. In some specimens the cross-bars of the under surface become obsolete, and the spots of the head reduced to small dots; the tail feathers have less crimson and more yellow on the margins of the inner webs.

Habitat. Cape York, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Height of upper Mandible.	Greatest width at base.	Across tip of lower Mandible.	Width of ditto at base.	Tarsus
A 1 ♂	26·6	18·1	12.75	2·1	1·6	2·55	1·33	1·1	0·5	1·2	1·16
A 2 ♀	26	17	13	2·08	1·63	2·4	1·25	1·12	0·47	1·15	1·1
A 3 ♀	27	18·2	14	2·2	1·56	2·45	1·33	1	0·5	1·15	1·16

A 1 ♂ ad. sk., Gayndah, Burnett River, Queensland, Septr., 1870. Col.
A 2 ♀ ad. sk., Gayndah, Burnett River, Queensland, Aug., 1870. Col.
A 3 ♀ ad. sk., Gayndah, Burnett River, Queensland, Aug., 1870. Col.

2. Calyptorhynchus stellatus.

Western Black Cockatoo.

Calyptorhynchus stellatus, *Wagler*, *Mon. Psitt.* (1832) p. 685, t. xxvii.

Calyptorhynchus naso, *Gould*, *Proc. Zool. Soc. Lond.* Pt. iv. (1836) p. 106 ; *id. Bds. Aust.* fol. Vol. v. pl. 9 ; *Reichenbach*, *Neuentd. Vög. Neu-Holl.* No. 458 ; *Bp. Rev. et Mag. de Zool.* 1854 ; *id. Naum.* 1856 ; *Gould, Handbk. Bds. Austr.* Vol. ii. p. 17, sp. 399 (1865) ; *North*, *Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 252.

Calyptorhynchus stellatus, macrorhynchus et naso, *G. R. Gray*, *Gen. of Bds.* ii. Nos. 6. 7 & 9 ; *id.* Calyptorhynchus macrorhynchus et naso, *List Psitt.* (1859) pp. 97, 98.

Calyptorhynchus macrorhynchus, *Schleg. Mus. P. B. Psitt.* 1864, p. 154.

Calyptorrhynchus stellatus, *Finsch*, *Die Pap.* Vol. i. (1867) p. 351, sp. 25.

?Calyptorhynchus macrorhynchus, *Gould*, *Proc. Zool. Soc.* (1842) p. 138 ; *id. Bds. Austr.* fol. Vol. v. pl. 8 ; *id. Handbk. Bds. Austr.* Vol. ii. (1865) p. 15, sp. 398 ; *Masters*, *Proc. Linn. Soc. N. S. W.* Vol. ii. (1877) p. 274.

Calyptorhynchus stellatus (Wagler), *sub-sp.* naso (Gould), *Ramsay*, *Tab. List Austr. Bds.* (1888) p. 16, sp. 476.

Calyptorhynchus stellatus, *Ramsay*, *Tab. List Austr. Bds.* (1888) p. 16, sp. 475 ; *De Vis*, *Rep. Sci. Exp. N. Queensld.* (1889) p. 33.

"Kar-rak," *Aborigines of Western Australia* (Gould).

"Keer-jan-dee," *Aborigines of the northern districts of Western Australia* (Gould).

Adult male. The whole of the outer surface of the feathers of the head, body and wings sooty black, slightly glossed with dark metallic green, the basal portions dull brown ; tail black, with a broad band of rich crimson margined with yellow below, across the median portion of all the feathers except the centre pair, and in some specimens the inner webs of the next pair, and outer webs of the outermost on either side, to which portions the crimson band very seldom extends ; bill black ; feet blackish-brown. Total length 21·5 to 22·2 inches, wing 16·3, tail 11·8, tarsus 0·9, mid toe 1·85, its claw 0·6, bill from forehead 2·2, from

nostril 1·8, culmen 2·7, height 1·4, width 1·2, front cutting edge of lower mandible 0·6, from angle of lower mandible to centre of cutting edge 1·4, greatest width across in front 1, at gape 1·3.

Adult female. General colour above and below black, with here and there a tinge of metallic green on the tips of the feathers ; the feathers of the head, crest, ear-coverts and cheeks with irregular shaped spots and dots of light yellow, those of the shoulders and wing-coverts similarly spotted, but with larger markings, which on the under wing-coverts take the form of short subterminal cross-bars at the tips of the feathers ; breast and all the under surface of the body barred with narrow irregular wavy lines of light yellow tinged with orange ; under tail-coverts black, with from three to six cross-bars of yellow, which become dull orange-scarlet on the sides and towards the tips of the feathers ; centre two tail feathers all black, the remainder scarlet on the median portion above, yellow or inclining to orange on the inner webs and under surface of the feathers ; the extreme base and tips of each feather black ; the median portion crossed by narrow wavy lines of black, increasing in width until the whole of the apical third becomes altogether black, crossed by narrow wavy sometimes zig-zag lines of rich scarlet above, light rose or yellow below ; bill dull horn-white, darker at the tip ; feet dark brown. Total length 22·6 inches, wing 15, tail 11, tarsus 0·9, bill from forehead 2·1, from nostril 1·6, culmen 2·7, height 2·35, width 1·1, width across the cutting edge of lower mandible 0·5, from gape to tip of ditto 1, from angle to tip of ditto 1·3, width at base of ditto 1·2.

Another specimen *(female)* measures : total length 21·6 inches, wing 15·6, tail 11·5, tarsus 1, mid toe 1·6, its nail 0·6, bill from forehead 2·1, from nostril 1·7, culmen 2·5, height 1·35, width 1·4, front cutting edge of lower mandible 0·55, from angle to ditto 1·3, width at gape 1·3.

Remarks. In some specimens, probably younger birds, the whole of the under surface of the body is strongly barred with broader markings of yellow tinged with dull orange-scarlet, occasionally some of the upper tail-coverts have a spot of the same tint at the tip.

Habitat. Western Australia, Derby (N. W. Australia), Port Darwin, Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Height of upper Mandible.	Greatest Width at base.	Across tip of lower Mandible.	Width of ditto at base.	Tarsus
A 1 ♀	22	15·1	10·5	2·15	1·6	2·65	1·43	1·1	0·5	1·26	0·95
A 2 ♂	20	15·3	11	2·25	1·8	2·8	1·45	1·12	0·55	1·35	0·92
† ♂	22	15·5	11·5	2·2	1·63	2·9	1·47	1·1	0·58	1·3	1
† ♀	20·4	14·15	11	2·1	1·63	2·8	1·45	1·1	0·51	1·35	1·02
† ♂	22·4	15·6	11·5	2·1	1·61	2·81	1·43	1·12	0·51	1·28	1·15
† ♀	22·4	15·8	12	2·1	1·53	2.8	1·47	1·14	0·5	1·32	1·12

A 1 ♀ ad. sk., King George's Sound, Western Australia, March, 1866. Col.

A 2 ♂ ad. mtd., King George's Sound, Western Australia. Col.

† ♂ ad. sk. (Macl. Mus.), Western Australia.

† ♀ ad. sk. (Macl. Mus.), Western Australia.

† ♂ ad. sk. (Macl. Mus.), Gulf of Carpentaria, June, 1875.

† ♀ ad. sk. (Macl. Mus.), Gulf of Carpentaria, June, 1875.

3. Calyptorhynchus solandri.

Solander's Black Cockatoo.

Psittacus solandri, *Temm. Linn. Trans.* xiii. No. 12 (1819) p. 113.

Calyptorhynchus solandri, *Vig. & Horsf. Linn Trans.* xv. (1826) p. 274; *Schleg. Mus. P.B. Psitt.* (1864) p. 155; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. ii. p. 124 (1885); *Ramsay, Tab. List Austr. Bds.* (1888) p. 16, sp. 477.

Calyptorhynchus cookii, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 272.

Calyptorhynchus leachii, *Wagler, Mon. Psitt. in Abhand.* Vol. i. p. 683; *Bp. Rev. et Mag. de Zool.* 1854; *G. R. Gray, List Psitt.* (1859) p. 98; *Schleg. Cat. J. f. Orn.* (1861) p. 379; *Gould, Bds. Austr.* fol. Vol. v. pl. 10; *id. Handbk. Bds. Austr.* Vol. ii. p. 18, sp. 400 (1865).

Solander's Cockatoo, *Lath. Gen. Hist.* Vol. ii. (1822) p. 201.

Calyptorhynchus temminckii, *Wagler, Mon. Psitt.* Vol. i. p. 684; *G. R. Gray, Gen. Bds.* ii. No. 4.

Psittacus banksii, var. B, *Lath. Ind. Orn.* (1790) p. 107.

Banksian Cockatoo, var. A, *Lath. Ind. Orn. Supp.* ii. (1802) p. 91 ; *id.* 2nd var. p. 92 ; *id.* vars. A & B, *Gen. Hist.* ii. p. 200.

Psittacus temminckii, *Kuhl. Consp.* (1820) Vol. x. p. 89.

Cacatua viridis, *Vieill. Nouv. Dict. d'Hist. Nat.* tom. xvii. pp. 12–13 ; *id. Enc. Meth.* p. 1415.

Psittacus leachii, *Kuhl. Consp. Psitt. in Nova Acta*, Vol. x. p. 91, pl. 3.

Banksianus australis, *Less. Traité d'Orn.* p. 180, *Atlas*, pl. 18, fig. 2, female (1831).

Plyctolophus solandri et cookii, *Swainson, Classif. of Bds.* Vol. ii. p. 302.

Calyptorrhynchus solandri, *Finsch, Die Pap.* Vol. i. (1867) p. 340, sp. 23.

"Carat," *Aborigines of N.S.W.* (Caley).

Adult male. The whole of the head, hind neck, throat, and under surface of the body, under tail and under wing-coverts sooty black ; all the upper surface of the body, wings and tail black, with a shade of glossy dark green, centre tail feathers like the back, the rest with a large patch of deep crimson (inclining to vermilion-red in not quite adult birds) extending through the median portion of the feathers on both webs, except on the outermost pair, in which it is confined to the inner web ; bill whitish-horn colour, darker at the base ; feet dark blackish-brown, mealy. Total length 18·5 inches, wing 13, tail 9·4, tarsus 0·55, bill from forehead 1·8, from nostril 1·5, height 1·15, width 1·1, culmen 2·5, breadth of lower mandible at base 1·1, at front cutting edge 0·7, from angle to centre of cutting front edge 0·9.

Adult female. Similar to the adult male, but having the median portion of all but the centre two tail feathers crimson, shading into yellow or orange on the inner webs of the feathers, and the whole patch crossed with narrow lines of black. Total length 18·4 inch, wing 13, tail 8·5, tarsus 0·54, bill from forehead 1·7, from nostril 1·3, culmen 2·25, height 1·1, width 1·05.

Remarks. Occasionally the ear-coverts, throat, shoulders and under wing-coverts are spotted with minute yellow dots, which are largest on the under surface of the wing and sometimes tinged with orange ; one very fine specimen of a female in the Dobroyde collection, has the head, crest, sides of the face and hind neck ornamented with yellow, some of the feathers being wholly of this tint and here and there margined with orange. *Female.* Total length 19 inches, wing 13, tail 9·2, bill from forehead 1·8, from nostril 1·4, height 1·2, width 1·1, across the front cutting

edge of lower mandible 0·7, from angle to centre of cutting edge 0·75. The specimens here described are from the same flock, and were obtained in the Richmond River District,

Habitat. Cape York, Rockingham Bay, Port Denison, Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Height of upper Mandible.	Greatest Width at base.	Across tip of lower Mandible.	Width of ditto at base.	Tarsus
A 1 ♂	19·7	13·7	9	1·7	1·4	2·13	1·2	1·1	0·7	1·15	0·7
A 2 ♀	15·2	13·6	9	1·9	1.5	2·2	1·1	1·1	0·7	1·1	0·7
A 3 ♀	17·8	13·5	9·7	1·83	1·4	2·1	1·2	1·1	0·7	1·2	0·7
A 4 ♂	18	13·3	9·5	1·8	1·5	2·4	1·25	1·2	0.7	1·2	0·65
A 5 ♂	18·5	14	10	1·85	1·5	2·4	1·25	1·2	0·73	1·2	0·6

A 1 ♂ ad. sk., Gayndah, Burnett River, Queensland. Col.
A 2 ♀ ad. sk., Pine Mountains, Queensland, May, 1865. Col.
A 3 ♀ ad. sk., Bellinger River, New South Wales. Col.
A 4 ♂ ad. sk., Bellinger River, New South Wales. Col.
A 5 ♂ ad. sk., Bellinger River, New South Wales. Col.

4. Calyptorhynchus funereus

Funereal Black Cockatoo.

Psittacus funereus, *Shaw, Nat. Misc.* (1789) pl. 186 ; *Lath. Syn. Supp.* ii. (1802) p. 22 ; *Kuhl, Consp. Psitt.* (1821) pp. 12, 89.

Banksian Cockatoo, var. *C. Lath., Syn. Suppl.* ii. (1802) p. 91 ; *id.* first and fourth vars. p. 92.

Funereal Cockatoo, *Lath. Gen. Hist.* Vol. ii. p. 202, also vars. A & B.

Calyptorhynchus funereus, *Vig. et Horsf. Linn. Trans.* Vol. xv. (1826) p. 271 ; *Wagler, Mon.* p. 688 ; *Gould, Bds. Austr.* Vol. v. pl. 11 ; *Reichenb. Neuentd. Vög. N.-Holl.* No. 464; *Bourj. Perr.* pl. 70 ; *Gould, Handbk. Bds. Austr.* Vol. ii. p. 20, sp. 401 ; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. ii. (1885) p. 124.

Psittacus (Banksianus) australis, *Less. Traité d'Orn.* (1851) p. 180 (female).

Psittacus (kakadoe) funereus, *Kuhl. Consp. Psitt.* pp. 12, 89.

Plyctolophus funeralis, *Swainson, Class. Bds.* Vol. ii. p. 302.

Cacatua banksii, *Vieill. Nouv. Dict. d'Hist. Nat.* tom. xvii. p. 9.

Calyptorhynchus xanthonotus, *Gould, Proc. Zool. Soc. Lond.* (1837) pt. v. p. 151 ; *id. Bds. Austr.* fol. Vol. v. pl. 12 ; *Reichenb. Neuentd. Vög. N. Holl.* No. 463 ; *Schleg. Orn. Journ.* (1861) p. 380 ; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 237 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 253.

Calyptorhynchus funereus et xanthonotus, *G. R. Gray, Gen. Bds.* ii. Nos. 1 & 8 ; *id. List Psitt.* (1859) pp. 98, 99 ; *Bp. Rev. et Mag. de Zool.* (1854); *Schleg. Mus. P.B. Psitt.* (1864) p. 155 ; *Gould, Handbk. Bds. Austr.* Vol. ii. pp. 20, 22, sp. 401 & 402 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 16, sp. 478, with note.

Calyptorrhynchus funereus, *Finsch, Die Pap.* Vol. i. (1867) p. 357, sp. 26.

Adult male. Above and below brownish-black, slightly glossy on the upper surface, where the body feathers are very narrowly margined with a brown line, which has a yellowish-straw tint on the tips of the primaries and secondaries ; under wing and tail-coverts narrowly margined with yellow ; the feathers of the breast, axillaries, abdomen and flanks have the margin at the tips slightly broader ; ear-coverts wax-yellow ; the whole of the centre two tail feathers and the outer webs of the outermost pair black, the remaining feathers of the tail black, crossed with a broad band of light yellow, closely freckled with zig-zag lines and dots of black through their median portions. The whole of the outer web of the outermost feather on either side, and a narrow margin on the outer webs of the others, black ; some of the under tail-coverts mottled with yellow ; bill dark horn-brown at the base and extreme tip, the under mandible horn-white ; legs and feet reddish-brown ; total length 26·5 inches, wing 17·2, tail 14·6, tarsus 1, mid toe 1·9, its nail 0·8, bill from forehead 2·15, from nostril 1·7, culmen 2·5, height 1·3, width at gape 1·05, width of front cutting edge of lower mandible 0·3, from angle of same 1·3, width at gape 1·2, length from gape to tip 1·4.

Remarks. A female not quite adult shot at Springfield, near Goulburn, N.S.W., 15th February, 1865, has the ear-coverts quite as bright as in any of the so-called *C. xanthonotus*, and has the yellow margins of the under wing-coverts and axillaries well defined, the under tail-coverts are moreover heavily blotched mesially with light yellow of the same tint as shown on the central portions of the tail feathers. Total length 26·5 inches, wing 1·5, tail 13·7, tarsus 1·1, bill from forehead 2, from nostril 1·7, height 1·2, width 1, across lower mandible at the tip 0·25, from the angle 1·2, width at gape 1, length to tip 1·2.

Nestling. Total length 9·3 inches, wing 3·6, tail and upper tail-coverts in one tuft 1·6, tarsus 0·8, mid toe 1·4, its nail 0·5, bill from forehead 1·25, from nostril 1, opening much dilated, height 0·7, width 0·5, lower mandible from gape to tip 0·8, the sides much dilated in the median portion 0·65, below the lateral margin much compressed, height 0·6. Bill light straw-yellow, feet yellowish flesh colour, nails dark brown, bare orbital space flesh colour, in length 0·9 x 0·6 inch; plumage black above, with long narrow streamers of yellow down some 0·9 inch in length; the ear-coverts yellow, the feathers of the under surface black, with a narrow margin of yellow and long streamers of down on the flanks and feathers of the legs and thighs; the throat and cheek feathers, and those of the occiput, hind neck, scapulars, and breast longest, and more developed.

Habitat. Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Victoria, South Australia, Tasmania. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Height of upper Mandible.	Greatest width at base.	Across tip of lower Mandible.	Width of ditto at base.	Tarsus
A 1 ♂	26	16	11·55	2·15	1·65	2·45	1·3	1	0·3	1·1	1·1
A 2 ♀	24·5	16	13·8	2·1	1·6	2·35	1.25	1·05	0·3	1·1	1·1
A 3 ♀	25	14·7	13·8	2·1	1·7	2·4	1·3	1	0·29	1·1	1·1
A 4 ♀	25·8	16·2	13·7	2	1·6	2·35	1·34	1	0·25	1	1·1
† ♀	24·6	16·4	13·7	2	1·6	2·35	1·28	1	0·25	1·05	1·15

A 1 ♂ ad. sk., Moss Vale, New South Wales, March, 1876. Pres.
A 2 ♀ ad. sk., Moss Vale, New South Wales, March, 1876. Pres.
A 3 ♀ ad. sk., Wide Bay, Queensland, November, 1867. Col.
A 4 ♀ ad. sk., New South Wales. Col.
† ♀ ad. sk. (Macl. Mus.), New South Wales.

Var. A. Calyptorhynchus xanthonotus.

Yellow-eared Black Cockatoo.

(For synonymy see *C. funereus.*)

This is an insular form of *C. funereus*, but has also been obtained on the mainland. It is the same in plumage, but has the yellow ear-coverts of a darker tint, and is also slightly smaller in size. Total length 23 inches, wing 15, tail 13, bill from forehead 1·9, from nostril 1·55, height 1·2, width at gape 0·9,

across front cutting edge of lower mandible 0·25, from angle of same 1·2, width of lower mandible at gape 1, length from gape to tip 1·2. (Type examined.)

Habitat. Tasmania, South Australia.

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Height of upper Mandible.	Greatest width at base.	Across tip of lower Mandible.	Width of ditto at base.	Tarsus
A 1 ♀	25	15.5	13	2·25	1·68	2·62	1·3	1	0·25	1·06	1·15
A 2 ♀	24	15·4	13	2·1	1·65	2·5	1·25	0·95	0·3	1·12	1·16
A 3 ♀	24	14·7	12·5	2.2	1·76	2·65	1·33	0·95	0·3	1·06	1·17
† ♂ ?	21	14	12·5	2	1·51	2·42	1·28	0·93	0·21	1·03	1·02

A 1 ♀ ad. sk., Ouse River, Tasmania, March, 1867. Col.
A 2 ♀ ad. sk., Ouse River, Tasmania, March, 1867. Col.
A 3 ♀ ad. sk., Lachlan Vale, Tasmania, March, 1867. Col.
† ♂ ? juv. sk. (Macl. Mus.), Tasmania.

6. Calyptorhynchus baudinii.

Baudin's Black Cockatoo, White-tailed Black Cockatoo, &c.

Calyptorhynchus baudinii, *Vigors, in Lear's Ill. Psitt.* pl. 6 ; *Bourj. Perr.* pl. 73 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 13 ; *Reichenb. Neuentd. Vög. N. Holl.* No. 462 ; *G. R. Gray, Gen. of Bds.* Vol. ii. No. 5 ; *id. List of Psitt*, p. 98, (1859) ; *Bp. Rev. et Mag. de Zool.* 1854 ; *Schleg. Mus. P. B. Psitt.* (1864) p. 155 ; *Gould, Handbk. Bds. Austr.* (1865) Vol. ii. p. 25, sp. 403 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193, sp. 460 ; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 479 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 253.

Plyctolophus ? baudinii, *Swainson, Class. of Bds.* Vol. ii. p. 302.

Calyptorrhynchus baudini, *Finsch, Die Papag.* Vol. ii. p. 363, sp. 27.

"Oo-laak," *Aborigines of the low lands of Western Australia.* (Gould.)

"Ngol-ye-nuk," *Aborigines of mountain districts of Western Australia.* (Gould.)

"White-tailed Black Cockatoo," *Colonists of West Australia.* (Gould.)

Adult male. General colour of the entire plumage blackish-brown, with a very slight tinge of dull oil-green on the outer webs of the quills and upper coverts of the wings and tail, and on the tips of the body-feathers and those of the forehead and crown ; all the feathers of the body both above and below, of the neck, wings, tail, and of the head with the exception of the front and crown are margined or tipped with a narrow line of dull white ; a patch of dull white on the ear-coverts ; centre two tail feathers altogether black, all the remainder with the median portion white, extending over both webs, leaving a very narrow margin of black on the outer webs of all except the outermost on either side, the outer webs of which are all black ; bill black ; margins of both mandibles whitish-horn colour ; feet dark olive-brown, claws brown.

Adult female. Total length 21 inches, wing 14·5, tail 11, tarsus 1·1, mid toe, 1·6, its nail 0·8, bill from forehead 1·9, from nostril 1·5, culmen 2·2, height 1·15, greatest width 0·9, across front cutting edge of lower mandible 0·3, from angle to ditto 1·15, width at gape 1.

Habitat. West and South-west Australia.

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Height of upper Mandible.	Greatest width at base.	Across tip of lower Mandible.	Width of ditto at base.	Tarsus
A 1 ♂	22	14·8	10·6	1·9	1·6	2·3	1·2	0·9	0·3	1.1	1·25
A 2 ♀	22·5	15	10·8	2·1	1·8	2·4	1·1	0·9	0·3	1	1·2
A 3 ♀	21·5	14·2	10·3	1·9	1·6	2·25	1·2	0·9	0·3	1	1
A 4 ♀	21	14·8	11·6	2·2	1·8	2·3	1·1	0·85	0·3	1	1·2
†	21	15	11·5	2·3	1·95	2·7	1·15	0·85	0·3	1	1·2
†	22	15·2	12	1·81	1·5	2·25	1·2	0·9	0·28	1·05	1·25

A 1 ♂ ad. sk., King George's Sound, Western Australia. Col.
A 2 ♀ ad. sk., King George's Sound, Western Australia. Col.
A 3 ♀ ad. sk., King George's Sound, Western Australia. Col.
A 4 ♀ ad. sk., King George's Sound, Western Australia. Col.
† ad. sk., (Macl. Mus.), King George's Sound, Western Australia.
† ad. sk., (Macl. Mus.), King George's Sound, Western Australia

6. MICROGLOSSUS.

1. Microglossus aterrimus.

Great Black Palm-Cockatoo.

Great Black Cockatoo, *Edw. Glean.* Vol. vii. (1764) pl. 316.

Psittacus aterrimus, *Gmelin, Edit. Linn. Syst. Nat.* Vol. i. p. 330 (1788); *Voigt, Cuv. Uebers.* (1831) p. 749.

Black Cockatoo, *Lath. Gen. Syn.* i. (1781) p. 261; *id. Gen. Hist.* ii. (1822) p. 198; *Shaw, Gen. Zool.* viii. p. 274.

Le Kakatoës noir, *Buffon, Hist. Ois.* vi. p. 97; *id.* vii. (1783) p. 79.

Psittacus gigas, *Lath. Ind. Orn.* Vol. i. (1790) p. 107.

Psittacus griseus, *Bechst.*

Psittacus goliath, *Kuhl, Consp. Psitt. in Nov. Acta,* Vol. x. p. 92; *S. Muller & Schlegel, Verhandel. (Land-en Volken-kunde)* p. 107.

Microglossus aterrimus, *Wagler, Mon. Psitt. in Abhand.* Vol. i. (1832) p. 682; *Jard. & Selb. Nat. Libr.* Vol. vi. (1836) p. 138 (descrip. ap. Edw.) pl. 16; *Ramsay, Tab. List Austr. Bds.* (1888) p. 16, sp. 480.

Solenoglossus zeylanicus, *Ranz. Elem. d'Orn.* tom. ii. p. 21.

Ara alecto, *Temm. Faun. Jap.* p. 17.

Macroglossus alecto, *Temm. Coup. d'Oeil,* tom. iii. (1849) p. 405 (note).

Microglossum aterrimum et alecto, *G. R. Gray, Gen. of Bds.* ii. No. 1 & 2.

Microglossus alecto, *Bp. Consp. Av.* i. (1850) p. 7; *id. Naumann* (1856) Heft. iv.; *G. R. Gray, List Psitt.* (1859) p. 97; *Schleg. Dierentuin* (1864) p. 84; *id. Mus. P. B. Psitt.* (1864) p. 151.

Cacatua intermedia et alecto, *Schleg. Cat. J. f. Orn.* (1861) p. 380.

Microglossum aterrimum, *Wallace, Proc. Zool. Soc. Lond.* (1864) p. 281; *Gould, Handbk. Bds. Austr.* Vol. ii. p. 27, sp. 404; *O. Finsch, Die Papag.* Vol. i. p. 370, sp. 28.

Microglossus aterrimus, intermedia, and minor, *Salvad. Orn. Pap. et Molucc.* Vol. i. (1880) pp. 107-8.

Adult male. General plumage black with faint purplish or violet reflections; crest black tinged with ashy-grey, elongated, pointed in form; lores deep velvety black; bare space round the

eye and the cheeks dull reddish-flesh colour, tinged with a narrow margin of light yellow; bill and feet black; irides purplish-brown. (*Gould.*)

Female. Resembles the male, but may be slightly smaller in its admeasurements.

Young. In the young of both varieties (*Microglossus aterrimus* and *M. goliath*) the feathers of the breast and abdomen are margined with pale yellow; bill dull horn colour; feet blackish-brown.

Habitat. Cape York, South Coast of New Guinea.

Measurements of averaged sized specimens.

Sex.	Total Length.	Wing.	Tail.	Crest.	Bill from forehead.	Bill from nostril.	Culmen.	Upper Mandible.	Width of ditto.	Across tip of lower Mandible.	Width of lower Mandible.	From ang. of ditto to tip.	Tarsus.
A1 ♂	20·5	13·4	10	5·7	3	2·4	3·3	1·3	0·9	0·5	1·2	1·5	1·1
† ♂	21·5	14·5	11	6·8	4	3·3	4·4	1·5	1	0·6	1·4	1·9	1·2
† ♀	20	13·5	10·5	6	4·2	2·6	3·3	1·3	0·9	0·6	1·3	1·5	1·05

A 1 ♂ ad. sk., Cape York. Col.

† ♂ ad. sk. (Dob. Mus.), Cape York.

† ♀ ad. sk. (Dob. Mus.), Cape York.

Var. M. Goliath.

Psittacus Goliath, *Kuhl. Consp.* (1820) p. 92; *Voigt, Cuv. Uebers* (1851) p. 749.

Psittacus aterrimus et griseus, *Bechst. Kurze Ueb.* p. 87, pl. 14.

Cacatua aterrima, *Vieill. Nouv. Dict. d'Hist. Nat.* tom. xvii. p. 13; *id. Enc. Méth.* p. 1415; *id. Gal. des Ois.* i. (1834) p. 47, pl. 50; *Schleg. Cab. J. f. Orn.* (1861) p. 380.

Grey Cockatoo, *Lath. Gen. Hist.* ii. (1822) p. 199.

Microglossus aterrimus, *Wagler, Mon. Psitt.* Vol. i. p. 632; *Bp. Rev. et Mag. de Zool.* (1854) p. 156; *id. Naumn.* Heft iv. (1856); *G. R. Gray, List Psitt.* (1859) p. 96; *Salvad. Orn. Pap. et Molucc.* Vol. i. p. 107; *id. Voy. Chall. Bds.* (1881) p. 74; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. iii. p. 105; *Salvad. Aggiun. Ornit. Pap. et Molucc.* part i. (1889) p. 28.

Microglossus aterrimus et griseus, *Swainson, Classif. of Bds.* ii. p. 302.

Microglossus ater, *Lesson, Traité d'Orn.* (1831) p. 184.

Microglossum aterrimum, *Schleg. Mus. P. B. Psitt.* (1864) p. 147 ; *Gould, Suppl. Bds. Austr.* (1869) pl. 61 ; *id. Handbk. Bds. Austr.* Vol. ii. p. 27, sp. 404 ; *Schleg. Nederl. Tijdschr. voor Dierk.* (1866) p. 338 ; *Masters, Proc. Linn. Soc. N.S.W.* Vol. i. p. 58 ; *D'Alb. Neu Guin.* Vol. ii. (1880) p. 406 ; *North, Austr. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* (1889) p. 254.

Microglossus goliath, *Wallace, Proc. Zool. Soc. Lond.* (1864) p. 281 ; *Ramsay, List Austr. Bds. Proc. Linn. Soc. N.S.W.* Vol. ii. p. 193, sp. 462.

In this variety both sexes, but especially the male, is much larger, but of the same plumage in adults and young ; both varieties have been obtained from Cape York as well as from New Guinea.

Habitat. Cape York, South Coast New Guinea.

Measurements of average sized specimens.

Sex.	Total Length.	Wing.	Tail.	Crest.	Bill from forehead.	Bill from nostril.	Culmen.	Upper Mandible.	Width of ditto.	Across tip of lower Mandible.	Width of lower Mandible.	From aug. of ditto to tip.	Tarsus.
A1 ♂	22	15·5	11·5	9	4·2	3·6	5·1	1·8	1·15	0·7	1·5	2·1	1·1
A2 ♂	21·6	15	11	7	3·5	2·9	3·9	1·7	1·1	0·6	1·4	1·6	1

A 1 ♂ ad. sk., Cape York. Pch.

A 2 ♂ ad. sk., Cape York. Col.

Fam. PSITTACIDÆ.

7. CYCLOPSITTA.

1. Cyclopsitta coxenii.

Coxen's Parrakeet, Fig-Parrot, &c.

Cyclopsitta coxeni, *Gould, Proc. Zool. Soc.* (1867) p. 182; *id. Bds. Austr.* fol. Suppl. pl. 65 (1869); *id. Proc. Zool. Soc.* (1875) p. 315; *Ramsay, Proc. Zool. Soc.* (1875) p. 603.

Cyclopsitta coxenii, *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 195; *id. Tab. List Austr. Bds.* (1888) sp. 525, p. 17.

Psittacula coxeni, *Finsch, Die Pap.* Vol. iii. (1868) p. 957.

Adult male. A spot of crimson on the forehead immediately over the cere; lores, and sides of the face extending in a narrow line around the eye, verditer-blue; a broad streak from the base of the lower mandible extending beneath the eye and over the ear-coverts, dull crimson, bounded by a narrow line of blue extending upon either side of the throat; crown of the head, hind neck, the whole of the upper surface of the body, upper wing and tail-coverts, and the tail above, green; a narrow line of crimson on the inner webs of the outermost scapulars; quills blackish on their inner webs; the primaries dark blue on the outer webs, a spot of white commencing upon the fourth primary, and extending on the outer webs of the secondaries, forming a whitish band on the wing, conspicuous upon the under surface; throat, all the under surface of the body, under tail-coverts, grass-green; under surface of the tail feathers blackish-brown, under wing-coverts green, a narrow line of bluish feathers upon the margin of the wing, an elongated patch of yellow on the sides of the body, occasionally extending as far as the flanks; bill blackish-horn colour, feet brown.

Remarks. The female differs in having a spot of blue over the cere instead of crimson, and the crimson on the sides of the head not so bright as in the male.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♀	5·9	3·75	2·02	0·75	0·58	0·5	1·59
A 2 ♂	5·8	3·8	2·1	0·75	0·62	0·5	0·6
A 3 ♂	5·6	3·75	2·05	0·75	0·63	0·5	0·6
A 4 ♀	5·75	3·77	2	0·75	0·65	0·5	0·61
B 1 ♂	5·6	3·8	2·02	0·72	0·6	0·5	0 6

A 1 ♀ ad. sk., Richmond River, New South Wales. Pch.
A 2 ♂ ad. sk., Richmond River, New South Wales. Pch.
A 3 ♂ ad. sk., Richmond River, New South Wales. Pch.
A 4 ♀ ad. sk., Richmond River, New South Wales. Pch.
B 1 ♂ semi ad. sk., Queensland. Col.

2. Cyclopsitta macleayana.

Macleay's Fig Parrot.

Cyclopsitta macleayana, *Ramsay, Syd. Morn. Herald*, Nov. 15, 1874 ; *id. Proc. Zool. Soc.* (1875) p. 602 ; *id. Proc. Linn. Soc. N.S.W.* Vol. ii. (1887) p. 195 ; *id. Tab. List Austr. Bds.* (1888) sp. 526, p. 17 ; *De Vis, Rep. Sci. Exp. N. Queensld.* (1889) p. 33.

Cyclopsitta maccoyi, *Gould, Proc. Zool. Soc.* (1875) p. 314 ; *id. Bds. New Guin.* pt. i. (1875) pl. 10.

Cyclopsitta leadbeateri, *McCoy, Ann. & Mag. Nat. Hist.* 4, (1874) No. 74, p. 137.

"*Adult male.* Upper surface bright grass-green ; forehead crimson, bounded by a band of bright verditer-blue, which extends through the lores, and, narrowing round the eye, reaches to the ear-coverts ; from the base of the lower mandible, extending over the ear-coverts, an oblong patch of crimson, bounded below by a patch of deep blue ; outer webs of primaries and secondaries deep blue ; inner webs blackish-brown ; shoulders tinged with blue, under surface of the shoulders bright green, having a narrow band of yellow, formed by a series of spots on the larger under wing-coverts ; across the centre of the wing a larger band of yellow, formed by a series of elongated marks on all but the first and third primaries ; a longitudinal spot of red on the inner webs of the third and fourth tertiaries nearest the body ; the remainder of the wings on the under surface blackish-brown ; whole of the under surface of the body bright green ; on the sides of the breast, from under the wing, extending nearly to the flanks, is an oblong patch of bright yellow ; under tail-coverts and flanks bright green, tipped with verditer-blue ; bill, tarsi, and feet dark horn colour. Total length 5 inches, wings from

flexure $3\frac{3}{16}$, tarsi $\frac{7}{16}$, tail $1\frac{1}{2}$, bill from cere along the culmen $\frac{9}{16}$, width at base $\frac{1}{2}$.

Female. The female differs in having the whole of the sides of the face, from the base of the upper mandible to the ear-coverts, of a bright verditer-blue, the outer and lower portions of the ear-coverts deep cobalt-blue, and in having no trace of red on these parts; the spot on the forehead just in front of the cere is of a duller and more of an orange-red than in the male; the breast and abdomen have a slight tinge of yellowish-green.

Young. In the not quite adult birds the breast and under surface of the body is of a paler green, and has a decided yellowish tinge; the cheeks are of a paler blue, and void of the red patch so conspicuous in the adult male; bill pale horn colour, darker at the tip.

Remarks. This very prettily marked species is the second of the genus *Cyclopsitta* now known to inhabit Australia, it is closely allied, although quite distinct from *C. coxeni*, Gould, being much smaller and more beautifully and distinctly marked about the face and head. The specimens now gracing the collection of William Macleay, Esq., M.L.C., of Elizabeth Bay, Sydney, those in the Australian Museum, and in the Dobroyde Museum Collection, from which the above descriptions have been jointly taken, were procured by Mr. K. Broadbent, taxidermist, during a collecting tour in the neighbourhood of Cardwell. They were found feeding on the fruit of the native fig trees, which abound in the dense scrubs and brushes clothing the margins of creeks and rivers at the foot of the coast range. It is doubtless the northern representative of *Cyclopsitta coxeni*, which I believe has not been met with north of the Brisbane District."*

Hab. Scrubs of the Coast Range near Cardwell, Rockingham Bay, Queensland.

Measurements of average sized specimens.

	Sex.	Total length.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1	♂	5	3·5	2·05	0·67	0·54	0·48	0·6
A 2	♂	5·2	3·42	2	0·67	0·54	0·46	0·55
A 3	♂	5·3	3·56	2·04	0·7	0·57	0·48	0·54
A 4	♀	5	3·55	2·1	0·68	0·55	0·47	0·55
A 5	♀	5	3·5	2	0·68	0·54	0·48	0·55

A 1 ♂ ad. sk., Cairns, Northern Queensland, 1874. Pch.
A 2 ♂ ad. sk., Cairns, Northern Queensland, 1874. Pch.
A 3 ♂ ad. sk., Cairns, Northern Queensland, 1874. Pch.
A 4 ♀ ad. sk., Cairns, Northern Queensland, 1874. Pch.
A 5 ♀ ad. sk., Cairns, Northern Queensland, 1874. Pch.

* Ramsay, Proc. Zool. Soc. (1875) p. 602.

8. APROSMICTUS.

1. Aprosmictus scapulatus.

King Lory.

Psittacus scapulatus *(Bechst.)*, *Kuhl*, *Consp.* (1821) p. 56 ; *Voigt*, *Cuv. Uebers* (1831) p. 731.

Psittacus cyanopygius, *Vieill. Nouv. Dict. d'Hist. Nat.* tom. xxv. (1823) p. 339.

Tabuan Parrot, *Phill. Voy. Bot. Bay*, pl. in p. 153 ; *White's Journ.* (1790) pl. in p. 168 ♂ and 169 ♀ ; *Lath. Syn. Suppl.* ii. (1802) p. 81.

Psittacus tabuensis, Var. B. *Lath. Ind. Orn.* (1790) p. 88 ; *Shaw*, *Gen. Zool.* viii. (1811) p. 407, pl. 55 ; *Bechst. Kurze Ueb.* (1811) p. 69.

Scarlet and Green Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 116.

Platycercus scapulatus, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 284 ; *Wagl. Mon. Psitt.* p. 537 ; *G. R. Gray*, *List Psitt.* (1859) p. 10 ; *Schleg. Mus. P.B. Psitt.* (1864) p. 89.

Platycercus scapularis, *Swains. Zool. Ill.* 2nd Ser. pl. 26 ; *id. Classif. Bds.* pp. 304, 305.

La Grande Perruche à collier et croupion bleu, *Le Vaill. Hist. des Perr.* pls. 55 & 56.

Aprosmictus scapulatus, *Gould*, *Proc. Zool. Soc.* Part x. (1842) p. 112 ; *id. Bds. Austr.* fol. Vol. v. pl. 17 ; *Reichenbach*, *Neuentd. Vög. N. Holl.* No. 184 ; *Bp. Rev. et Mag. de Zool.* (1854) ; *O. Finsch*, *Nederl. Tijdschr. van Dierk. Berigten.* (1863) p. xiii. ; *Gould*, *Handbk. Bds. Austr.* Vol. ii. (1865) sp. 409, p. 35 ; *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193 ; *id. Tab. List Austr. Bds.* (1888) sp. 485, p. 16 ; *Broadbent*, *Proc. Roy. Soc. Queensld.* Vol. iv. (1887) p. 27 ; *Cox & Hamil. Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 417 ; *De Vis*, *Rep. Sci. Exp. N. Queensld.* (1889) p. 33 ; *North*, *Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 255.

Platycercus cyanopygius, *Finsch*, *Die Papag.* Vol. ii. (1868) sp. 154, p. 245.

Aprosmictus insignissimus, *Gould*, *P.Z.S.*, 1875, p. 315 ; *id. Bds. New Guin.* pt. i. (1875) pl. 9 ; *Ramsay*, *Tab. List Austr. Bds.* (1888) p. 31.

"Wellat," *Aborigines of New South Wales.* (Gould.)

King Parrot, *Residents of Queensland, New South Wales, and Victoria.*

Adult male. The whole of the head, neck, chest, and all the under surface of the body rich crimson; under wing-coverts bluish-green, rich grass-green on the margins; under tail-coverts crimson on their margins and tips, their central portions black, under surface of the tail and of the wings black, upper surface of the tail feathers black, a greenish shade on the centre two, and a dark bluish tint on the outer webs of the lateral feathers; outer series of the upper tail-coverts blue tinged with green, the remainder with the rump and the whole of the back, deep dark blue, a narrow line of the same blue colour separates the crimson of the hind neck from the interscapular region, which with the scapulars, wing-coverts, and all the upper exposed surface of the wings are dark green, with a narrow band of rich light verditer-green from the inner portion of the shoulder extending over the scapular-coverts; concealed portions of all the wing feathers black; bill coral-red; the lower mandible black; legs and feet blackish-brown.

Adult female. Head, hind neck, and all the upper surface of the body (except the rump), wings, and tail dark dull green; rump dull blue, wings dark green as in the male, but showing only a very narrow line of verdigris-green along the scapular-coverts; sides of the head and neck and the chest dull green, with a reddish tinge on the throat; breast and abdomen crimson; under tail-coverts green, broadly margined with crimson, tail feathers below black, margined at the tips with light rose, two centre feathers above green, the remainder green on the outer webs, shading into black on the inner webs and at the tips; bill horn colour, shaded with coral red.

Young males. Resemble the females, the crimson of the adults beginning to show first on the forehead, hind neck, and throat; tips of the tail feathers below pale rose as in the female; bill dark horn colour, the upper mandible becoming coral-red first; the verdigris-green mark on the scapular-coverts broader than in the females. Total length 15·4 to 15·5 inches, wing 8 3, tail 9, tarsus 0·8, bill from forehead 1·05, from nostril 0·9, height 0·5, width 0·55. Specimens occur with patches of yellow feathers on the head, nape and wings.

Habitat. Port Denison, Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length.	Wing.	Outer Tail Feathers.	Centre tail Feathers.	Bill from forehead.	Bill from Nostril.	Tarsus.	Mid Toe.
A 1 ♂	15·5	8·53	5·5	8·5	1·08	0·9	0·85	0·97
A 2 ♀	16·1	8·4	5·7	8·8	1·07	0·88	0·9	1·06
A 3 ♂	14·2	7·8	5·6	8·8	1·1	0·85	0·82	1
A 4 ♀	15·4	8·1	5·5	8·5	1·05	0·85	0·85	1
* ♂	1·55	8·12	5·6	8·5	1·08	0·85	0·82	0·97
B 1 ♂	14·5	8	5·5	8·4	1·03	0·85	0·88	0·95

A 1 ♂ ad. sk., Ulladulla, New South Wales, September, 1866. Col.
A 2 ♀ ad. sk., Ulladulla, New South Wales, September, 1866. Col.
A 3 ♂ ad. sk., Cairns, Northern Queensland, 1888. Col.
A 4 ♀ ad. sk., Cambewarra, New South Wales, October, 1887. Col.
* ♂ ad. sk. (Dob. Mus), Richmond River, N.S. Wales, 10th Octr., 1866.
B 1 ♂ semi ad. sk., Wide Bay, Queensland, October, 1867. Col.

2. Aprosmictus (Ptistes) erythropterus.

Red-winged Lory.

Psittacus erythropterus, *Gmel, Syst. Nat.* Vol. i. (1788) p. 343.

Crimson-winged Parrot, *Lath. Gen. Syn.* Vol. i. (1781) p. 299; *id. Ind. Orn.* (1790) p. 126; *id. Gen. Hist.* ii. p. 253; *Vieill. Nouv. Dict.* xxv. p. 373; *Kuhl, Consp.* p. 53; *Voigt. Cuv. Uebers.* (1831) p. 730.

Psittacus melanotus, *Shaw, Nat. Miscl.* pl. 653; *Lesson, Descr. Mamm. et Ois.* (1849) p. 184.

Platycercus erythropterus, *Vig. & Horsf. in Linn. Trans.* Vol. xv. p. 284; *Lear, Parr.* pls. 14 & 15; *Wagler, Mon.* p. 536; *G. R. Gray, List Psitt.* (1859) p. 9; *Schleg. Mus. Pays-Bas, Psitt.* (1864) p. 92; *Finsch, Die Papag.* Vol. ii. (1868) p. 262, sp. 160.

Aprosmictus erythropterus, *Gould, Proc. Zool. Soc.* (1842) p. 112; *id. Bds. Austr.* fol. Vol. v. pl. 18; *Bonap. Rev. et Mag. de Zool.* (1854); *Finsch, Nederl. Tijdschr. v. Dierk. Berigten* (1863) p. xiii.; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. iv. (1887) p. 27.

Ptistes erythropterus, *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 410, p. 37; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 255.

Aprosmictus (Ptistes) erythropterus, *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) sp. 469, p. 193; *Broadbent*, *Proc. Roy. Soc. Queensld.* Vol. ii. (1885) p. 124; *Ramsay*, *Tab. List Austr. Bds.* (1888) sp. 486, p. 16.

Adult male. Forehead, crown of the head and hind neck verditer-green; sides of the head, throat, all the under surface of the body, margins of the shoulders, under wing-coverts, except the outer series, and the under tail-coverts, bright light green, the central portions of the feathers washed with light yellowish-green; outer series of the under wing-coverts, and the under surface of the primaries, secondaries and scapulars black; primaries dark green on the outer webs, black on the inner, secondaries black, slightly tinged with dark green on the outer webs; scapulars black at the base, dark green on their outer webs and at the tips; shoulders and all the upper wing-coverts except those of the primaries rich deep crimson; a lanceolate mark of black margined with yellow and in some instances tipped with green, on the concealed portions of the inner webs, a concealed spot of light yellow near the base of each of the smaller wing-coverts, increasing in extent on the larger outer coverts; rump rich deep blue, becoming light lazuline-blue on the lower portion; upper tail-coverts light yellowish-green; two centre tail feathers dark green tipped with light yellow, the rest similar but having the margins of the inner webs black; a very narrow line of pink margins the yellow spot on the inner webs at the tips of the feathers, but is not found in very old males; bill coral-red, feet dull brown, irides orange-red.

Young males. Resemble the females, and have the pink margins and tips on the inner webs more or less well defined.

Adult female. Somewhat similar to the male. The head and upper surface is of a dull green, the rump dull lazuline-blue, the upper tail-coverts greenish-yellow; wing-coverts and scapulars dull green, the median smaller coverts margined with crimson, and the secondary and greater median coverts crimson, merging into yellow at the base of the concealed portions; quills black on the inner webs, dull green on the outer; throat and all the under surface of the body, under wing and under tail-coverts yellowish-green; margins of the shoulders below and the axillaries tipped here and there with red; quills below black, the inner primaries narrowly margined with light yellow on their mesial portions; tail below black tipped with yellow, the outer feathers broadly, and the remaining margined with rose on their inner webs, increasing in extent at the tips.

Remarks. The pink margins on the inner webs of the tail feathers is scarcely noticeable in the fully adult bird, but traces may be found on the tips of the feathers, and always confined to

the inner webs ; in the females it reaches its greatest extent on the outermost feather ; some fine old males examined show no trace of pink at all ; the older the bird is, the more intense is the crimson patch on the wing-coverts, and the deeper and brighter the blue on the under surface.

Habitat. Rockingham Bay, Port Denison, Wide Bay District, Dawson River. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	12·7	7·9	5·4	6·7	0·91	0·72	0·8	1
A 2 ♂	12·3	8·05	5·4	6·4	0·9	0·7	0·8	1
A 3 ♀	12·1	7·85	5·4	6·4	0·88	0·63	0·8	0·95
* ♂	11·9	8	5·15	6·2	0·9	0·7	0·76	0·95

A 1 ♂ ad. sk., Port Denison, Queensland. Col.
A 2 ♂ ad. sk., Gayndah, Burnett River, Queensland, Aug., 1870. Col.
A 3 ♀ ad. sk., Gayndah, Burnett River, Queensland, Aug., 1870. Col.
* ♂ ad. sk. vix. (Dob. Mus.), Port Denison, Queensland, 1863.

Aprosmictus (Ptistes) erythropterus.

Var. coccineopterus.

Ptistes coccineopterus, *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 411, p. 39 ; *Masters, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 274 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. i. 2nd Ser. (1886) p. 1094, sp. 57.

Aprosmictus (Ptistes) coccineopterus, *Ramsay, Tab. List Austr. Bds.* (1888) sp. 486*a*, p. 16.

Aprosmictus erythropterus, *De Vis. Proc. Roy. Soc. Queensld.* Vol. vi. (1889) p. 236.

Adults. This is only a northern and north-western race of *P. erythropterus*, smaller, and very slightly brighter in the crimson markings of the wing and intensity of the lazuline-blue on the back and rump. The males have the narrow margin of pink bounding the yellow tips on the inner webs of the tail feathers and the yellow on the inner side of thighs slightly deeper in tint. The females and young males are similar to those of *P. erythropterus*, and show exactly the same changes in plumage.

Measurements. *P. coccineopterus*—Total length 10·5 to 11 inches, wing 7·5, tail 5·8, tarsus 0·7, bill from forehead 0·8, bill from nostril 0·7, height 0·4 to 4·5, width 0·5 to 0·53.

P. erythropterus—Total length 12·5 to 13 inches, wing 8, tail 6·8, tarsus 0·8, bill from forehead 1·05, bill from nostril 0·8, height 0·4, width 0·5.

Habitat. Derby (N.W. Australia), Port Darwin, Port Essington. Gulf of Carpentaria, Cape York. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♂	10·7	7·72	5·3	6	0·92	0·72	0 73	0·96
A 2 ♂	10·8	7·42	5·3	5·95	0·86	0·73	0·75	1·03
A 3 ♂	10·3	7·42	4·9	6·6	0·9	0·7	0·75	0·93
B 1 ♀	10	7·3	4·5	5·55	0·88	0·7	0·75	0·92

A 1 ♂ ad. sk., Derby, North-Western Australia. Pch.
A 2 ♂ ad. sk., Derby, North-Western Australia. Pch.
A 3 ♂ ad. sk., Northern Territory, 1870. Col.
B 1 ♀ semi ad. sk., Northern Territory, 1870. Col.

9. POLYTELIS.

1. Polytelis barrabandii.

Barraband's Parrakeet.

Psittacus barrabandii, *Swains. Zool. Ill.* 1st Ser. (1820-23) pl. 59.

Palaeornis barrabandi, *Vig. Zool. Journ.* Vol. ii. (1825) p. 56; *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 287.

Roseate Parrakeet, *Lear, Illust. of Psitt.* pl. 30.

Scarlet-breasted Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 121.

Palaeornis rosaceus, *Vigors, Zool. Journ.* Vol. v. (1830) p. 274 (female).

Polytelis barrabandi, *Wagl. Mon. Psitt. in Abhand* (1832) p. 519; *Gould, Bds. Austr.* fol. Vol. v. pl. 15; *Finsch, Nederl. Tijdschr. v. Dierk. Berigten* (1863) p. xi; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 406, p. 31; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193; *id. Tab. List Austr. Bds.* (1888) sp. 482, p. 16.

Psittacus sagittifer barrabandi et rosaceus, *Bourj. de St.-Hil. Supp. to Le Vaill. Hist. Nat. des Perr.* pls. 4 et 6.

Barrabandius rosaceus, *Bonap. Consp. Gen. Av.* tom. i. (1850) p. 2; *id. Rev. et Mag. de Zool.* (1854).

Platycercus rosaceus, *G. R. Gray, List Psitt.* (1859) p. 9; *Schleg. Mus. P.-B. Psitt.* (1864) p. 98.

Platycercus barrabandi *(Sws.) Finsch, Die Papag.* Vol. ii. (1868) p. 259, sp. 158.

Green-leek, *Residents of New South Wales and Victoria.*

Adult male. The forehead and front of the head, chin, cheeks, and throat, extending to the chest, rich deep yellow merging into a patch of deep crimson on the chest; occiput and upper portions of the hind neck bluish-green; ear-coverts and round the eye, sides of the neck, and the whole of the upper surface of the body, including the scapulars, upper tail and median wing-coverts, rich grass-green; under webs of the scapulars bluish-black, secondaries greenish-blue; the inner webs broadly margined with black; primaries and their coverts slightly more bluish, the tail above rich green, the tips of the two centre feathers inclining to blue, and the shafts of all the other feathers violet, the margins of the outer webs of all the feathers yellowish-green, under surface of the tail black, the tips of all except the centre pair being tinged with ashy-white; under wing-coverts green, with the exception of the outer series, and the under surface of the quills which are black; breast and all the under surface, including the under tail-coverts rich grass-green; bill coral-red, feet blackish-brown.

Female. All the upper and under surface grass-green, not so bright as in the male; forehead and face slightly shaded with bluish-green; outer webs of the primaries and their coverts tinged with bluish-green; inner webs of the quills black, with a very narrow line of white on the extreme margin of the inner webs; feathers on the thigh and tibia, crimson; under tail-coverts bright green, the three outer tail feathers on either side more or less broadly margined with pale rose, and all except the centre pair slightly tipped with white; bill coral-red, feet blackish-brown.

Habitat. New South Wales, Interior, Victoria, South Australia.

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
* ♂	15·2	7·35	4·3	10·1	0·85	0·65	0·72	0·97
* ♀	14·4	7	3·95	8·7	0·8	0·61	0·75	0·93
A 1 ♂	15·9	7·4	4·4	9·8	0·8	0·65	0·7	0·9
A 2 ♂	15·4	7·35	4·2	10·1	0·82	0·63	0·75	0·97

* ♂ ad. sk. (Dob. Mus.), Wagga Wagga, New South Wales, 1864.
* ♀ ad. sk. (Dob. Mus.), Wagga Wagga, New South Wales, 1864.
A 1 ♂ ad. sk., New South Wales. Col.
A 2 ♂ ad. mtd., Wagga Wagga, New South Wales. Col.

2. Polytelis melanura.

Black-tailed Parrakeet.

Palæornis melanura, *Vig. in Lear's Ill. Psitt.* pl. 28 (male).

Palæornis anthopeplus, *Vig. in Lear's Ill. Psitt.* pl. 29 (female).

Black-tailed Parrakeet, *Vig. in Lear's Illust. Psitt.* pl. 28.

Blossom-feathered Parrakeet, *Vig. in Lear's Illust. Psitt.* pl. 29.

Polytelis melanura, *Gould, Syn. Bds. Austr.* Part iv.; *id. Bds. Austr.* fol. Vol. v. pl. 16; *id. Handbk. Bds. Austr.* Vol. ii. (1865) sp. 408, p. 33; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 483.

Psittacus sagittifer melanura, *Bourj. de St. Hil. Perr.* tab. 5 (ad.).

Psittacus sagittifer anthopeplus, *Bourj. de St. Hil. Perr.* tab. 7 (juv.).

Platycercus melanurus, *G. R. Gray, Gen. of Bds.* Vol. ii. p. 408; *id. List Psitt.* (1859) p. 9; *Schleg. Mus. P.-B. Psitt.* (1864) p. 99; *Finsch, Die Pap.* Vol. ii. (1868) p. 256, sp. 157.

Barrabandius melanurus, *Bonap. Consp. Gen. Av.* tom. i. (1850) p. 2; *id. Rev. et Mag. de Zool.* (1854); *Finsch, Nederl. Tijdschr. voor Dierk. Berigten* (1863) p. xi.

Wouk-un-ga, *Aborigines of Western Australia.* (Gould.)

Jul-u-up, *Aborigines of King Geeorge's Sound.* (Gould.)

Mountain Parrot, *Colonists of Western Australia.* (Gould.)

Rock-Pebble, *Residents of South Australia and Victoria.*

Adult male. The crown of the head and hind neck, the whole of the upper and under surface of the body, upper and under tail-coverts bright wax-yellow; under wing-coverts and axillaries wax-yellow; outer series of the under wing-coverts and the under surface of all the quills blackish-brown; the scapulars and some of the secondary coverts broadly tipped with crimson and narrowly margined with yellow; interscapular region dull olive-yellow, the feathers blackish towards the tips; feathers of the tail dark blackish-blue, the three or four outermost with a small spot of white at the tip; primaries and secondaries blackish-brown, blackish-blue on the outer webs.

Female. Similar to the male, the body a dull olive-green, the inner webs of the outer pair of the tail feathers on either side broadly margined with rose-red on the inner webs, the remainder with the exception of the centre pair tipped and slightly shaded with rose-red; under wing-coverts wax yellow; scapulars and their coverts slightly or indistinctly shaded with dull red, similar to the male, but not so well defined; median upper wing-coverts wax yellow; primaries and secondaries similar to the male but duller; the under tail-coverts dull olive-green; bill coral-red, feet dark brown.

Habitat. New South Wales, Interior, Victoria, South Australia, West and South-west Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	15	7·75	4·6	9·6	0·95	0·75	0·8	1·02
* ♂	16·6	7·75	4·55	9·4	0·95	0·75	0·8	1
* ♀	15·3	7·3	4·5	9	0·9	0·7	0·8	1
B 1 ♂	15·1	7·7	4·25	9·1	0·85	0·72	0·8	0·98
B 2 ♀	14·3	7·4	4	7·95	0·82	0·7	0·8	0·95

A 1 ♂ ad. sk., South Australia. Col.

* ♂ ad. sk. (Dob. Mus.), South Australia.

* ♀ ad. sk. (Dob. Mus.), South Australia.

B 1 ♂ semi ad., Mongup, Salt River, Western Australia, Jan., 1869. Col.

B 2 ♀ semi ad., Mongup, Salt River, Western Australia, Jan., 1869. Col.

3. Polytelis alexandræ.

Princess of Wales' Parrakeet.

Polytelis alexandræ, *Gould, Proc. Zool. Soc.* (1863) p. 232; *id. Handbk. Bds. Austr.* Vol. ii. (1865) sp. 407, p. 32; *id. Suppl. Bds. Austr.* (1869) pl. 62; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193, sp. 466; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 484; *Clarke, South Austr. Regist.* Aug. 1890.

Platycercus alexandræ, *Finsch, Die Papag.* Vol. ii. (1868) p. 261, sp. 159.

Adult male. (?) The forehead, crown of the head, rump, and upper tail-coverts light blue, outer series of the tail-coverts washed with olive ; nape, hind neck, interscapular region, scapulars and back olive-green ; upper wing-coverts light yellowish-green or greenish-yellow ; primaries and secondaries black, their outer webs blue bordered by a very narrow line of yellow, some of the secondaries tinged with green on the outer webs, primary-coverts on the outer webs deep blue, their concealed portions black ; under wing-coverts light yellowish-green, the margins of the inner primaries and of the basal portions of the inner webs of the secondaries straw-yellow, forming an indistinct band through the wing ; cheeks, chin, throat, and a few adjacent feathers of the chest rose-red ; breast and abdomen dull olive-green, flanks dull olive-green, thighs and tibiæ and the crissum rose-red, under tail-coverts dull olive-green, with a faint shade of light blue on the outer series ; two centre tail feathers olive-green tinged with blue towards the tips, the remainder bluish-green above, black below, all broadly margined with rose-red ; bill coral-red, feet dark brown. *(Type examined.)*

Remarks. (Sex ?) The description is taken from a skin in a very bad state, and is either of a female or young male, from the bill it may be judged to be an adult, the coloring and markings are the same, but the tints are not so bright as in Mr. Gould's figure in Suppl. Bds. Austr. pl. 62.

Total length of skin (circa) 11·6 inches, wing 6·7, tail 5·6, tarsus 0·7, bill from forehead 0·8, from nostril 0·55. (*Dob. Mus.*)

Note. Two living specimens have been recently brought to Adelaide, S.A., and Mr. J. S. Clarke of that city, who has examined them, states *(in lit.)* that they were obtained from a nest in a hollow branch of a tree near a place called "Crown Point," about 50 miles beyond "Charlotte Waters," in Lat. 25° 30′ and Long. 134°, the type specimens were obtained at "Howell's Ponds," in Lat. about 17° and Long. 133°, the distance between the two places being about 600 miles. The total length of the living birds is about $15\frac{1}{2}$ inches, the tail being about 10 inches ; the sexes both immature are at present alike in plumage, the female being only slightly duller than the male. In *P. barrabandii* the tail measures 9·4 inches and that of *P. melanura* 9·2 inches in length. Two of the type specimens described by Gould appear to have been lost, if so the only remaining one would be that in the Dobroyde Collection referred to above. None of those yet obtained appear to be fully adult, but when the adult male is found it will probably prove to be a much more beautiful bird than those figured in "Gould's Supplement to the Birds of Australia."

Habitat. Interior of Australia.

10. PLATYCERCUS.

1. Platycercus barnardii.

Barnard's Parrakeet.

Barnard's Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 121.

Platycercus barnardi, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 283 ; *Lear, Parr.* pl. 18 ; *G. R. Gray, List Psitt.* (1859) p. 8 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 94 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 40, sp. 412 ; *Finsch, Die Pap.* (1868) Vol. ii. p. 207, sp. 140 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193 ; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. iii. (1886) p. 30 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 16, sp. 487 ; *North, Proc. Linn. Soc. N.S.W.* Vol. ii. 2nd Ser. (1887) p. 985 ; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 256.

Platycercus barnardii, *Gould, Bds. Austr.* fol. Vol. v. pl. 21.

Barnardius typicus, *Bp. Rev. et Mag. de Zool.* (1854) p. 153.

"Buln-Buln," *Aborigines and residents of the Interior of New South Wales.*

Adult male. A band of deep red across the forehead, crown of the head, ear-coverts, chest and breast ; abdomen, flanks, thighs, and under tail-coverts rich verditer-green, a broad band of yellow across the upper part of the abdomen ; feathers surrounding the lower mandible and the chin verditer-blue ; round the nape extending from behind the eye a band of dull brown sometimes tinged with blue, and separated from the interscapular region by a narrow band of deep yellow which extends from behind the ear-coverts ; interscapular region and back dull greenish-blue or in some bluish-green ; rump and upper tail-coverts rich light verditer-green, centre two tail feathers green becoming dark blue at the tips, the next feather on either side green, dark blue on the outer web towards the tip and with the tip light blue, the rest dark blue at the base, occasionally tinged with green and having the apical half light blue, the under surface of all the feathers black, having the apical half of each except the centre pair light blue ; primaries and the first four or five of the secondaries black, their outer webs deep blue, the remainder of the secondaries and the scapulars green upon their outer webs and tips, outer series of the secondary coverts turquoise-blue, shaded with green towards the median series, which are verditer-green with the bases blackish, the small feathers on the remaining portion of the shoulder dark cobalt-blue occasionally tinged with green ; under wing-coverts and margins of the shoulders bright

verditer-blue, the surface of the wing below and the outer series of the under primary-coverts black ; bill horn colour, bluish at the base, feet dark brown.

Remarks. Some specimens have only a faint shade of blue round the lower mandible ; the top of the head may be either bluish-green or verditer-green, tinged with yellow towards the bases of the feathers, the brown nape band has sometimes a bluish-green tinge and the narrow yellow band behind it, mixed with verditer-green ; the back and interscapular region varies from green to dark greenish-blue ; the abdominal band does not always extend across the body, but may be reduced to a central spot of either light or dark yellow. The males and females are alike in plumage.

Habitat. New South Wales, Interior, Victoria, South Australia.

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	13·3	6·3	4·1	7·8	0·85	0·68	0·8	0·87
A 2 ♂	13·2	6·5	4·3	7·6	0·81	0·7	0·78	0·8
A 3 ♀	12·5	6·65	4	7·6	0·8	0·7	0·8	0·83
A 4 ♂	12·3	6·25	3·5	7·4	0·83	0·7	0·78	0·88
* ♂	13·2	6·63	3·5	7·9	0·83	0·7	0·8	0·85

A 1 ♂ ad. sk., Victoria, 1865. Pch.
A 2 ♂ ad. sk., Moolah, New South Wales, July, 1883. Col.
A 3 ♀ ad. sk., Moolah, New South Wales, July, 1883. Col.
A 4 ♂ ad. sk., Bourke, New South Wales. Col.
* ♂ ad. sk. (Dob. Mus.), Adelaide, South Australia, 1863.

2. Platycercus semitorquatus.

Yellow-collared Parrakeet.

Psittacus semitorquatus, *Quoy et Gaim. Voy. de l'Astrol.* (1830) p. 237, pl. 23.

Platycercus semitorquatus, *Gould, Bds. Austr.* fol. Vol. v. pl. 19 ; *G. R. Gray, List Psitt.* (1859) p. 8 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 93 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 42, sp. 413 ; *Finsch, Die Papag.* Vol. ii. (1868) p. 209, sp. 141 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193 ; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 488 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 257.

Barnardius semitorquatus, *Bonap. Rev. et Mag. de Zool.* (1854) p. 153.

Dow-arn, *Aborigines of the lowland districts of Western Australia.* (Gould.)

Dum-ul-uk, *Aborigines of the mountain districts of Western Australia.* (Gould.)

Twenty-eight Parrakeet, *Colonists of Swan River.* (Gould.)

Adult male. An oblong spot of crimson behind the nostrils, the whole of the head and nape black, occasionally shaded with brown; sides of the face and ear-coverts blackish-brown, cheeks blue, tinged with green below the ear-coverts; a broad well-defined collar of bright yellow around the hind neck, the lower portion of hind neck, interscapular region, scapular-coverts, back, and the remainder of the upper surface bright green; secondaries and scapulars black on their inner webs, green on the outer; median wing-coverts light greenish-yellow, forming a band down the wing from the shoulder; primaries and their coverts black on their inner webs and at the tips, the outer webs being bright blue (the green of the upper surface when the specimen is held in certain lights has a satiny yellow tint); under wing-coverts and axillaries verditer-blue, outer series of these coverts, and the under service of all the quills black; chest dull dark green, with verditer-green reflections, across the breast a broad band of deep yellow; abdomen, flanks and under tail-coverts, light green; feathers at the end of tibia joint dull crimson; the two central tail-feathers bronzy-green, becoming bluish green at the extreme tip, which is black, and has occasionally a very narrow indistinct margin of white, the next on either side similar with a spot of white at the tip, the remaining four feathers greenish-blue at the base, merging into blue about the centre of the feather, blackish on the margin, the apical portion of each feather being light blue, which increases in extent on the outermost, under surface of all the tail feathers black, the outermost feather largely tipped with light blue, decreasing in size towards the centre pair; bill light horn colour darker at the base, feet dark brown. The females are smaller than the males, and the markings are not so well defined.

The young have only a trace of crimson on the forehead, which is sometimes tinged with yellow, head and nape dull dark brown, a narrow indistinct collar of yellow round the hind neck; cheeks and ear-coverts tinged with blue, chest dark green, with only a faint indication of the yellow band, the remainder of the under surface dull green; the tail, wings, and upper surface similar to the adult, but of duller colours.

Habitat. West and South-west Australia.

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	15·8	7·5	4·7	9·3	1·1	0·87	0·92	1·02
A 2 ♀	15	7·4	4·8	8·8	1	0·8	0·88	0·9
A 3 ♂	15·8	7·75	4·7	9·1	1·05	0·9	0·92	1·05
A 4 ♀	14·5	7·7	4·6	9·15	1·0	0·88	0·9	1·03
* ♂	14·8	7·7	3·9	9	1·06	0·88	0·91	1·08

A 1 ♂ ad. sk., Mongup, Salt River, Western Australia, Jan., 1869. Col.
A 2 ♀ ad. sk., King George's Sound, Western Australia, April, 1866. Col.
A 3 ♂ ad. sk., King George's Sound, Western Australia. Col.
A 4 ♀ ad. mtd., King George's Sound, Western Australia. Col.
* ♂ ad. sk. (Dob. Mus.), Western Australia.

3. Platycercus zonarius.

Banded Parrakeet.

Psittacus zonarius, *Shaw, Nat. Misc.* pl. 657.

Psittacus viridis, *Shaw, Gen. Zool.* Vol. viii. (1811) p. 465.

Psittacus baueri, *Temm. Linn. Trans.* Vol. xiii. (1819) p. 118.

Psittacus cyanomelas, *Kuhl. Consp. Psitt.* (1821) Vol. x. p. 53.

Bauer's Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 120; *Lear, Parr.* pl. 17.

Platycercus baueri, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 283; *Gould, Bds. Austr.* fol. Vol. v. pl. 20; *Reichenb. Neuentd. Vög. N. Holl.* No. 181; *Thienem. Fortpfl. d. ges. Vög.* (1852) p. 75.

Platycercus zonarius, *Wagler, Mon. Psitt. in Abhand.* p. 538; *G. R. Gray, List Psitt.* (1859) p. 8; *Schleg. Mus. P.-B. Psitt.* (1864) p. 94; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 43, sp. 414; *Finsch, Die Papag.* Vol. ii. (1868) p. 212, sp. 142; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 489; *North, Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 1025.

Barnardius zonarius, *Bonap. Rev. et Mag. de Zool.* (1854) p. 153; *Finsch, Nederl. Tijdschr. v. Dierk. Berigten* (1863) p. xi.

Adult male. Whole of the head, nape and hind neck brownish-black, cheek feathers tipped with dark blue, chest dark green tinged with bluish-green nearest the throat; a narrow band round the back of the neck, and a broad band across the breast and upper part of the abdomen bright gamboge-yellow, lower part of abdomen and under tail-coverts light green; interscapular region, wing-coverts, and remainder of the upper surface dark green, with a bluish-green sheen in certain lights, median wing-coverts verditer blue; primaries and their coverts black, the basal portion of the outer webs deep dark blue; secondaries black on the inner webs, bluish-green on the outer; scapulars and their coverts green, the inner webs and concealed portion of the feathers black; under wing-coverts bright blue, the outer series and under surface of the quills black, centre tail feathers bronzy-green at the base, becoming dark blue on the outer webs towards the tip which is black, the next on either side similar, but having a small spot of white on the extreme tip, the remainder all more or less green or bluish-green at the base, merging into deep blue towards the ends of the feathers which are largely tipped with light blue or bluish-white, decreasing in extent towards the centre feathers, under surface of the feathers black at the base, light blue on the apical portion; bill horn colour, darker at the base, feet dull brown.

Female and Young. The female differs only in being slightly smaller and duller in colour. The young are similar, showing only a trace of the yellow on the hind neck, and have the yellow of the abdomen tinged with light green.

Remark. Mr. Gould states in his Handbook (Vol. ii. p. 44) that very adult males occasionally have an indication of scarlet on the forehead.

Habitat. Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of averaged sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♂	14·5	7	4·5	8·8	0·95	0·8	0·8	0·95
A 2 ♀	13·5	6·6	4·15	8·2	0·96	0·82	0·83	0·9
A 3 ♂	13·8	6·9	4·2	8·45	0·92	0·75	0·8	0·9
A 4 ♀	15·2	6·8	4·3	8·45	0·9	0·7	0·8	0·93
A 5 ♀	14·6	6·5	4·1	8·5	0·9	0·72	0·8	0·95
* ♀	13·8	6·5	4·2	8·5	0·93	0·8	0·8	0·92

A 1 ♂ ad. sk., Port Lincoln, South Australia. Col.
A 2 ♀ ad. sk., Port Lincoln, South Australia. Col.
A 3 ♂ ad. mtd., Port Lincoln, South Australia. Col.
A 4 ♀ ad. sk., Roeburne, North-Western Australia, July, 1889. Col.
A 5 ♀ ad. sk., Roeburne, North-Western Australia, July, 1889. Col.
* ♀ ad. sk. (Dob. Mus.), Port Lincoln, South Australia, Septr., 1865.

4. Platycercus pennantii.

Pennant's Parrakeet.

Psittacus pennantii, *Lath. Ind. Orn.* Vol. i. (1790) p. 90; *Bechst. Kurze Ueb.* p. 70; *Vieill. Nouv. Dict.* tom. xxv. p. 339.

Pennantian Parrot, *Lath. Gen. Syn. Suppl.* Vol. i. p. 61; *id. Suppl.* ii. (1802) p. 83; *Phillip, Voy. Bot. Bay*, pl. opp. p. 143; *White, Journ. of a Voy. to N.S.W.* pl. opp. p. 174; *Shaw, Gen. Zool.* viii. p. 410, pl. 56; *Lath. Gen. Hist.* Vol. ii. p. 131.

Psittacus gloriosus, *Shaw, Nat. Miscl.* pl. 53.

Psittacus splendidus, *Shaw, Mus. Lev.* (1792) pl. 27.

Psittacus elegans, *Gmel. Edit. Linn. Syst. Nat.* Vol. i. p. 318.

Platycercus pennantii, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 280; *Wagler, Mon. Psitt.* p. 535; *Less. Traité d'Orn.* ii. p. 146; *Jard. & Selb. Nat. Libr.* Vol. vi. p. 173, pl. 25; *Gould, Bds. Austr.* fol. Vol. v. pl. 23; *Bonap. Rev. et Mag. de Zool.* (1854); *G. R. Gray, List Psitt.* (1859) p. 3; *id. Ibis* (1866) p. 227; *Finsch, Nederl. Tijdschr. v. Dierk. Berigten* (1863) p. 11; *Schleg. Mus. P.-B. Psitt.* (1864) p. 96; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 44, sp. 415; *Finsch, Die Pap.* Vol. ii. (1868) p. 180, No. 129, sp. 1; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 490; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Ser. (1888) p. 1777; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 257; *Cox & Ham, Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 417; *De Vis. Rep. Sci. Exp. N. Queensld.* (1889) p. 33.

Perruche à large queue, *Levaill. Hist. Nat. des Perr.* pls. 78, 79.

Lory, *Residents of New South Wales and Victoria.*

Dulang and Julang, *Aborigines of New South Wales* (Gould.)

Adult male. The whole of the head, neck, back, rump, and upper and under tail-coverts rich crimson; interscapular region, scapulars, and their coverts black, broadly margined with crimson, smaller inner wing-coverts above black, median wing-coverts light blue; cheeks, throat, margins of the shoulders and of the wings, the under wing-coverts and the axillaries deep blue; Primaries and secondaries black, having the outer webs of the feathers deep blue, the secondaries with a narrow margin of lighter blue on the outer webs; outer two tail feathers blue, washed with green on the inner webs, the next pair similar, shaded with blackish on the inner webs and of a lighter blue towards the tip, the remainder of the tail feathers deep blue on the outer webs, the apical portion light blue tipped with white, and the basal portion of the inner webs blackish; the under surface of the feathers black, all except the centre two feathers having the apical portion light blue more or less tipped with white; bill lead-blue at the base, straw colour at the tip and on the under mandible, legs and feet dark brown.

In young birds the general colour above and below is of a dull olive-green, the crimson markings first showing upon the forehead, chest, abdomen, under and upper tail-coverts; the basal portion of the feathers of the nape is pure white, tipped with green, the feathers surrounding the lower mandible and the chin, shoulders, and outer webs of the primaries, and the outer webs of the tail feathers, except the centre pair, deep blue, apical portion of the tail feathers light blue tipped with white, the usual white band through the wing, formed by white spots on the inner webs of the feathers is conspicuous. The sexes when adult are alike in plumage, the male however attains its full livery before the female.

Remarks. Some very beautiful *lusus naturæ* of this species have been shot from time to time in various parts of the Colonies, these are parti-coloured birds largely blotched with white or yellow, one at present under consideration has the outer margins of the shoulders, the whole of the primaries and their coverts white, the three adjacent secondaries blue, the next two feathers yellow, and the remainder black washed with yellowish-green; the smaller wing-coverts variegated with green and crimson, the median series with black, blue and white, interscapular region green, with narrow bluish-green margins to the feathers; upper tail-coverts crimson with very narrow yellow margins; the remainder of the plumage above and below as in the adult of the species.

Habitat. Rockingham Bay, Richmond and Clarence Rivers Districts, New South Wales, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	14·1	7	4·45	8·4	0·85	0·67	0·8	0·84
A 2 ♀	13·5	7	3·9	8	0·82	0·63	0·8	0·88
A 3 ♀	13·9	7·1	3·8	8·1	0·8	0·7	0·8	0·85
* ♂	13·8	7·2	4·1	8·3	0·85	0·72	0·78	0·86
* ♂	11·9	6·6	3·8	6·5	0·84	0·68	0·82	0·85

A 1 ♂ ad. sk., Ulladulla, New South Wales, July, 1866. Col.
A 2 ♀ ad. sk., Ulladulla, New South Wales, July, 1866. Col.
A 3 ♀ ad. sk., New South Wales. Pres.
* ♂ ad. sk. (Dob. Mus.), Victoria.
* ♂ juv. sk. (Dob. Mus.), New South Wales.

Platycercus pennantii.
Var. nigrescens.

Platycercus pennantii *var.* nigrescens, *Ramsay, Tab. List Austr. Bds.* (1888) p. 34.

"This northern variety may be distinguished by its smaller size, thicker and more robust bill, and the deeper tint of crimson in its plumage ; in some a few violet feathers appear on the chest ; those on the head, hind neck and back are almost black, which colour extends also on to the cheeks in one specimen."

"*Habitat.* Bellender-Ker Range, Queensland."*

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Height at nostril.	Width at nostril.	Tarsus.	Mid toe.
A 1 ♂	12	6·2	7	3·1	0·8	0·5	0·6	0·7	0·72
A 2 ♀	12·3	6·3	7	3·05	0·8	0·5	0·6	0·75	0·78
A 3 ♂	11·5	6·3	7	2·95	0·8	0·5	0·6	0·73	0·75

A 1 ♂ ad. sk., Bellender-Ker Range, North-Eastern Queensland. Col.
A 2 ♀ ad. sk., Bellender-Ker Range, North-Eastern Queensland. Col.
A 3 ♂ ad. sk., Bellender-Ker Range, North-Eastern Queensland. Col.

* Ramsay, Tab. List Austr. Bds. (1888) p. 34.

5. Platycercus adelaidensis.

Adelaide Parrakeet.

Platycercus adelaidiæ, *Gould*, *Proc. Zool. Soc.* (1846) pt. viii. p. 161 ; *id. Bds. Austr.* fol. Vol. v. pl. 22 ; *Sturt*, *Exped. Cent. Austr.* Vol. ii. (1849) App. p. 38, No. 87 ; *Licht*, *Nomencl.* (1854) p. 72 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *id. Naum.* 1856 ; *G. R. Gray*, *List of Psitt.* (1859) p. 3 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 97.

Platycercus adelaidensis, *Gould*, *Handbk. Bds. Austr.* Vol. ii. (1865), p. 46, sp. 416 ; *Finsch*, *Die Papag.* Vol. ii. (1868) p. 183, sp. 130 ; *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193 ; *id. Tab. List Austr. Bds.* (1888) sp. 491, p. 16.

Pheasant Parrot, *Colonists of South Australia.* (Gould.)

Adult male. Forehead, crown, and sides of the head, chest, breast, and all the under surface of the body and under tail-coverts dull crimson ; cheeks deep blue, ear-coverts dull yellow, hind neck and nape dull yellow, the feathers centred with black ; mantle, the interscapular region, and the scapulars black, margined with yellow, occasionally tinged with red on the tips and outer margins of the scapular coverts ; rump dull yellow, the feathers margined with dull crimson ; upper tail-coverts broadly tipped with dull crimson ; centre tail-feathers greenish-blue at the base, becoming blue towards the tip, the next pair similar, blue on the outer webs, shaded with black on the inner webs, the remaining feathers more distinctly blue at the base, the apical portion light blue with the extreme tip white ; margins of the shoulders blue, median and secondary coverts light blue, secondaries black, the outer webs deep blue, narrowly margined with light blue like their coverts ; primaries and their coverts black, the outer webs except at the extreme tips deep blue, outer series of the under-coverts and the under surface of the quills black, under wing-coverts blue.

The females and immature birds are much duller in colour, the margins of the feathers of the hind neck and interscapular region dull or straw-yellow ; the feathers on the under surface of the body dull yellow, washed with red at their tips.

Habitat. Interior and South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♀	13·2	6 7	4·12	8·3	0·82	0·65	0·85	0·95
A 2 ♂	13	6·5	4·1	7·8	0·84	0·68	0·8	0·88
A 3 ♀	13·3	6·8	4·1	8·3	0·82	0·67	0·82	0·87
* ♂	12·9	6·7	4·1	8·1	0·82	0·69	0·82	0·86
* ♀	13·5	7	4·1	8·4	0·83	0·66	0·82	0·85

A 1 ♀ ad. sk., South Australia, September, 1866. Col.
A 2 ♂ ad. sk., South Australia, 1861. Exch.
A 3 ♀ ad. mtd., South Australia. Exch.
* ♂ ad. sk. (Dob. Mus.), Adelaide, South Australia, 1873.
* ♀ ad. sk. (Dob. Mus.), Adelaide, South Australia, 1873.

6. Platycercus flaviventris.

Yellow-bellied Parrakeet.

Psittacus flavigaster, *Temm. Linn. Trans.* Vol. xiii. (1819) p. 116.

Psittacus flaviventris, *Temm. Linn. Trans.* Vol. xiii. p. 118.

Psittacus brownii, *Kuhl (nec Temin.), Consp. Psitt.* (1820) p. 56.

Van Diemen's Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 130.

Platycercus flavigaster, *Less. Traite d'Orn.* p. 208.

Platycercus flaviventris, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 281; *Gould, Bds. Austr.* fol. Vol. v. pl. 24; *Bonap. Rev. et Mag. de Zool.* (1854); *G. R. Gray, List Psitt.* (1859) p. 4; *Finsch, Nederl. Tijdschr. v. Dierk. Berigten,* (1863) p. xii.; *Schleg, Mus. P.-B. Psitt.* (1864) p. 98; *Gould. Handbk. Bds. Austr.* Vol. ii. (1865) p. 48, sp. 417; *Finsch, Die Papag.* Vol. ii. (1868) p. 204, No. 139, sp. 11; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238; *Ramsay, Tab. List Austr. Bds.* (1888) p. 16, sp. 492; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 258.

Perruche à large queue, *Le Vaill. Hist. Nat. des Perr.* pl. 80.

Platycercus caledonicus, *Wagl. Mon. Psitt.* p. 532.

Platycercus xanthogaster, *Steph. Cont. of Shaw's Gen. Zool.* Vol. xiv. p. 120.

Green Parrot, *Colonists of Tasmania.* (Gould.)

Adult male. Forehead and an ill-defined mark under the eye and over the cheeks crimson; cheeks, under wing-coverts, shoulders, basal portion of the outer webs of the primaries, and of the four or five adjacent secondaries of the outer webs of the primary-coverts deep blue, secondary-coverts and median upper wing-coverts light blue, forming a band down the wing; the inner secondaries, scapulars, and their coverts, black, more or less margined with green on their outer webs; the apical portion and inner webs of the tips, black above and below; outer series of under wing-coverts black, crown of the head and sides of the face yellow, feathers of the nape and hind neck white at the base, black upon their apical half and broadly margined with greenish-yellow; hind neck, interscapular region, black, more or less broadly margined with dull green, back similar, but the greenish margins becoming olive-yellow on the rump and upper tail-coverts; two central tail feathers bronzy-green, bluish towards the tips, the next on either side similar, blackish on the margins of the inner web; the tip and apical portion of the outer web blue, the next similar, apical portion with light blue, with a narrow margin of yellow, the remaining feathers blue on the outer webs, blackish on the base of the inner webs, apical portion light blue margined with yellow; under surface of the feathers of the tail black, apical portion of all except the two centre feathers, light blue; chest and adjacent sides of the neck, on all the under surface, light yellow; under tail-coverts tinged with orange at the tips, blackish towards the base; bill bluish at the base, horn colour at the tip, feet blackish-brown.

The female is similar but slightly smaller, has margins of the feathers of interscapular region and back broadly margined with green; tips of the under tail-coverts, and frequently a patch of feathers immediately under the cheeks, orange-crimson.

Remarks. The young somewhat similar but duller than the females, the markings not so well defined, the whole of the upper surface of the body from the nape, grass-green, becoming olive-yellow on the rump, and on the upper and under tail-coverts; under surface of the body olive-green, narrowly margined or shaded with olive-yellow, especially on the chest, where may be found a few spots of orange-red, the usual white markings are also found through the centre of the wing.

Habitat. Tasmania, Victoria, South Australia.(?) (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	14	7·5	4·6	8·1	0·89	0·75	0·88	0·88
A 2 ♂	14·2	7·5	4·6	8·6	0·88	0·7	0·8	0·84
B 1 ♀	13	7	4·15	7·8	0·7	0·6	0·73	0·85
B 2 ♀	12·5	6·9	4·35	7·6	0·8	0·75	0·75	0·85
C 1 ♀	11·8	6·4	4	7·1	0·73	0·6	0·73	0·8

A 1 ♂ ad. sk., Lachlan Vale, Tasmania, April, 1867. Col.
A 2 ♂ ad. sk., Ouse River, Tasmania, April, 1867. Col.
B 1 ♀ semi ad. sk., Tasmania. Col.
B 2 ♀ semi ad. sk., Ouse River, Tasmania, April, 1867. Col.
C 1 ♀ juv. sk., Tasmania. Pch.

7. Platycercus flaveolus.

Yellow-rumped Parrakeet.

Platycercus flaveolus, *Gould, Proc. Zool. Soc.* (1837) pt. v. p. 26; *id. Bds. Austr.* fol. Vol. v. pl. 25; *Bonap. Rev. et Mag. de Zool.* (1854); *G. R. Gray, List Psitt.* (1859) p. 4; *Schleg. Mus. P.-B. Psitt.* (1864) p. 95; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 50; *Finsch, Die Pap.* (1868) Vol. ii. p. 185, No. 131, sp. 5; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193; *id. Tab. List Austr. Bds.* (1888) sp. 493, p. 16.

Adult male. A narrow band of crimson across the forehead; crown, sides of the head, ear-coverts, dull yellow, in the females and young tinged with green; feathers of the nape white at the base, blackish at the tips, broadly margined with dull yellow; hind neck, interscapular region, and scapulars, blackish-brown, broadly margined with dull yellow, in the females and young with greenish-yellow; feathers round the lower mandible, cheeks, margins of the shoulders, and under wing-coverts, and basal portion of the outer webs of the primaries deep blue, spotted black on the smaller wing-coverts of the shoulders, median-coverts of the wing light blue, first four secondaries blue on their outer webs, margined with light blue, the remainder washed with greenish-blue on their outer webs, margined with straw colour; scapulars similar, their outer webs paler, the remaining and

concealed portion of the primaries, secondaries, and scapulars, black ; the rump and upper tail-coverts olive-yellow, the two central tail feathers bronzy-green, becoming blue on their outer webs towards the tips, the next on either side with a larger extent of blue on their webs, and a very narrow margin of pale yellow, the next pair similar, shaded with black on their inner webs, becoming light blue on the tips which are margined with pale yellow, the outer three feathers blue on the outer webs of the base and blackish on the inner, apical portion light blue, tipped with pale yellow, the under surface of the tail feathers all with the exception of the centre pair, blue on the apical portion, and tipped with pale yellow ; the chest, all the under surface of the body and under tail-coverts dull light yellow, a few spots of crimson occasionally appearing on the chest ; bill lead colour at the base, straw colour at the tips and on the lower mandible, feet blackish-brown.

The female is similar but slightly smaller.

Remarks. Young birds show the characteristic white mark over the under surface of the wing, and the upper surface having a greenish instead of a yellowish tinge.

Habitat. New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from Nostril.	Tarsus.	Mid Toe.
A 1 ♂	12·6	6·5	4·05	7·3	0·8	0·65	0·76	0·85
A 2 ♂	13	6·5	4	7·2	0·81	0·65	0·77	0·9
A 3 ♀	12·3	6·25	4	7·25	0·78	0·6	0·77	0·8
A 4 ♂	12·5	6·05	4	7	0·76	0·6	0·74	0·8
A 5 ♀	12·4	6·35	4	7·25	0·77	0·61	0·76	0·8

A 1 ♂ ad. sk., Wagga Wagga, New South Wales. Col.
A 2 ♂ ad. sk., Wagga Wagga, New South Wales. Col.
A 3 ♀ ad. sk., New South Wales. Col.
A 4 ♂ ad. sk., Murrumbidgee River, New South Wales. Col.
A 5 ♀ ad. sk., Murrumbidgee River, New South Wales. Col.

8. Platycercus pallidiceps.

Pale-headed Parrakeet.

Platycercus palliceps, *Vig. in Lear's Ill. Psitt.* pl. 19 ; *Jard. & Selb. Nat. Libr.* Vol. vi. p. 176, pl. 26 ; *Lesson, Descr. Mammif. et Ois* (1847) p. 185 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 26 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *G. R. Gray, List Psitt.* (1859) p. 4 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 98 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 51, sp. 419 ; *Finsch, Die Papag.* Vol. ii. (1868) p. 195, No. 135, sp. 7 ; *Broadbent, Proc. Roy. Soc. Queensld.* Vol. ii. (1885) p. 124.

Platycercus coelestis, *Less. Echo du Monde sav ; G. R. Gray, Gen. of Bds.* Vol. iii. App. p. xix.

Platycercus pallidiceps, *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193 ; *J. C. Cox, Proc. Linn. Soc. N.S.W.* Vol. vi. (1882) p. 729 ; *Ramsay, Tab. List Austr. Bds.* (1888) sp. 494, p. 16 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 258.

Moreton Bay Rose-Hill, *Colonists of New South Wales.* (Gould.)

Adult male. Head and nape white, washed with pale yellow on the margins of the feathers ; cheeks and throat white, hind neck, mantle and interscapular region, black, the feathers very broadly margined with bright yellow ; median upper wing-coverts light blue, the inner coverts adjacent to the scapulars black, with deep blue margins ; scapulars black, margined and tipped with dull yellow and blue, secondaries somewhat similar, but of a deeper blue upon the outer web, which is narrowly margined with light blue, inner webs black, outer secondaries and primaries black, outer webs deep blue, the second, third, fourth, and fifth primary being margined with ashy-white towards the tip, primary-coverts blue on the outer web, under wing-coverts blue, the outer series and under surface of all the quills blackish-brown ; back, rump, and upper tail-coverts, very light blue, occasionally tinged with very light green ; the centre two tail feathers bronzy-green above, becoming blue towards the tips, the next pair similar, the apical portion being deep blue on the outer webs and slightly tipped with white, the remaining four feathers on either side deep blue, blackish on the inner web towards the base, having the apical portion pale blue, and tipped with white, their under surface blackish at the base, light blue on the apical portion, and more or less tipped with white ; under tail-coverts dull crimson, abdomen, flanks and breast, light blue, with a greenish shade in

young birds, the young birds have also the characteristic white band through the wing ; bill bluish at the base, white at the tip, legs brown.

Remark. The sexes are alike in plumage.

Habitat. Rockingham Bay (?), Port Denison, Dawson River, New South Wales, Interior. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	12	6·05	3·5	6·8	0·75	0·58	0·72	0·75
A 2 ♂	12	6·4	3·6	7·1	0·9	0·65	0·75	0·76
* ♂	12·3	6·3	3·5	7·15	0·8	0·62	0·73	0·77

A 1 ♂ ad. sk., Moreton Bay, Queensland, 1867. Col.

A 2 ♂ ad. mtd., Moreton Bay, Queensland.

* ♂ ad. sk. (Dob. Mus.), Queensland, October, 1864.

Platycercus pallidiceps.

Var. amathusiæ.

Platycercus amathusiæ *(Gould) Bonap. Compt. Rend.* (1850) p. 133 ; *id. Rev. et Mag. de Zool.* (1854) ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194, sp. 479 ; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 495.

Platycercus cyanogenys, *Gould, Proc. Zool. Soc.* (1855) pt. xxiii. pp. 165-166 ; *G. R. Gray, List Psitt.* (1859) p. 4 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 52, sp. 420 ; *id. Suppl. Bds. Austr.* (1869) pl. 63.

Platycercus amathusia, *Finsch, Die Papag.* Vol. ii. (1868) p. 197, No. 136, sp. 8.

This bird can only be considered a northern variety of the former, it may be distinguished by being slightly smaller, and having the margins of the feathers of the hind-neck and inter-scapular region of a much paler yellow, the lower portion of the cheeks are blue, occasionally a few crimson feathers may be found upon the nape of the neck, and in one specimen examined the chest is strongly tinged with yellow, instead of blue, but this may be an accidental variety.

Habitat. Port Darwin, Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	11·3	6·3	3·6	6·7	0·91	0·65	0·72	0·8
* ♀	11·8	6·2	3·65	7	0·9	0·55	0·66	0·74
* ♂	11·3	5·95	3·5	6·6	0·88	0·6	0·71	0·73

A 1 ♂ ad. sk., Cape York, Queensland. Pres.

* ♀ ad. sk. (Dob. Mus.), Queensland.

* ♂ ad. sk. (Dob. Mus.), Cape York, Queensland, 1866.

9. Platycercus brownii.

Brown's Parrakeet.

Psittacus brownii, *Temm. Linn. Trans.* (1819) Vol. xiii. p. 119.

Psittacus venustus, *Kuhl, Nov. Acta.* Vol. x. (1820) p. 52.

Brown's Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 139.

Platycercus brownii, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 282 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 31 ; *id. in Stokes' Voy. of the Beagle*, Vol. i. (1846) App. p. 431 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *Finsch, Die Papag.* Vol. ii. (1868) p. 198, No. 137, sp. 9 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) p. 16, sp. 496.

Platycercus venustus, *Wagler, Mon. Psitt.* p. 529 ; *Lear, Parr.* pl. 20 ; *G. R. Gray, List Psitt.* (1859) p. 5 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 96 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 53, sp. 421 ; *Masters, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 274.

Moon-dark, *Aborigines of Port Essington.* (Gould.)

Smutty Parrot, *Residents of Port Essington.* (Gould.)

Lores, crown of the head, a line below the eye, ear-coverts and nape, black ; cheeks white, bounded by a line of blue broadest on the lower portion ; hind neck and interscapular region black, each feather margined with straw-yellow ; scapulars and one or two of the adjacent secondaries black, broadly

margined with light yellow ; feathers of the back and upper tail-coverts light straw-yellow, narrowly margined with a black line, blackish-brown at their base, the black more conspicuous on the central portion of the upper tail-coverts, tail feathers deep greenish-blue, the four outermost deep blue largely tipped with light blue ; under tail-coverts crimson ; chest, breast, and under surface of the body light straw-yellow, each feather narrowly margined with black, the basal portions blackish-brown ; under wing-coverts, shoulders, and upper coverts bright blue, lighter on the greater upper coverts, small inner coverts of the shoulders black ; outer webs of the primaries and of their coverts deep blue, the remaining portions black, secondaries black, three or four of the innermost broadly margined with straw-yellow on their outer webs ; in very adult specimens a deep claret colour appears on the crown of the head.

Habitat. Port Darwin, Port Essington. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♂	11·3	5·5	3·15	6·1	0·72	0·62	0·68	0·73
A 2 ♂	11·1	5·75	3·65	6·2	0·73	0·68	0·68	0·7
C 1 ♀	10·6	5·72	3·5	6	0·73	0·6	0·7	0·72
† ♂	11·2	5·7	3·65	6·25	0·7	0·6	0·66	0 8
† ♀	11	5·7	3·5	6	0·73	0·57	0·67	0·74

A 1 ♂ ad. sk., Northern Territory, 1870. Col.
A 2 ♂ ad. sk., Northern Territory, 1870. Col.
C 1 ♀ juv. sk., Northern Territory, 1870. Col.
† ♂ ad. sk. (Macl. Mus.), Port Darwin.
† ♀ semi ad. sk. (Macl. Mus.), Port Darwin.

10. Platycercus eximius.

Rose-hill Parrakeet, Rosella, &c.

Psittacus eximius, *Shaw, Nat. Misc.* pl. 96 ; *id. Zool. New Holl.* (1794) pl. 1.

Nonpareil Parrot, *Lath. Syn. Suppl.* 1 (1802) p. 85.

Psittacus omnicolor, *Bechst. Lath. Ueb.* p. 68, pl. 2.

Psittacus capitatus, *Shaw, Gen. Zool.* Vol. viii. p. 466.

Perruche omnicolore, *Le Vaill. Hist. Nat. des Perr.* p. 29, pl. 28.

Platycercus eximius, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 281 ; *Less. Traite d'Orn.* p. 209 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 27 ; *G. R. Gray, List Psitt.* (1859) p. 5 ; *G. Bennett, Gath. Nat. in Austr.* (1860) p. 227 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 96 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 422, p. 55 ; *Finsch, Die Papag.* Vol. ii. (1868) p. 190, No. 134 sp. 6 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 193 ; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238 ; *Ramsay, Tab. List Austr. Bds.* (1888) sp. 497, p. 16 ; *North, Proc. Linn. Soc. N.S.W.* 2nd Ser. Vol. iii. (1888) p. 1777 ; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 258.

Rose-hill Parrakeet, *Colonists of New South Wales.* (Gould.)

Platycercus splendidus, *Gould, Proc. Zool. Soc.* pt. xiii. (1845) p. 105 ; *id. Bds. Austr.* fol. Vol. v. pl. 28 ; *id. Handbk. Bds. Austr.* Vol. ii. (1865) sp. 423, p. 57 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 16, sp. 497*a*.

Platycercus ignitus, *Leadbeater, Proc. Zool. Soc.* (1837) p. 8; *Gould, Bds. Austr.* fol. Vol. v. pl. 30.

Rosella, *Residents of New South Wales, Victoria., and Tasmania.*

Adult male. The whole of the head, neck, chest and breast, bright crimson ; the lower portion of the breast and upper part of the abdomen bright yellow, becoming pale yellowish-green on the lower portion ; thighs, flanks, rump, upper tail-coverts, and the outer series of the upper tail-coverts black at the base, two central tail feathers bluish-green at the extreme base and towards the tips, bronzy-green on the mesial portions, extreme tips black, the next pair on either side green, becoming blue at the tips especially on the outer web, and occasionally tipped with white, the next green, shaded with blue on the basal half, blackish on the margin of the inner web, the whole of the apical half light blue, tipped with white, the next three feathers similar, but having a larger amount of lilac on their outer webs, the outer four feathers on the under surface black, the apical half light blue, the hind neck, interscapular region, and the scapulars and back, deep black, all more or less margined all round with bright gamboge-yellow, under wing-coverts, margins of the wings, and shoulders above, bright indigo-blue, secondary-coverts pale blue, primary-coverts and the outer webs of all the quills indigo-blue, on some of the inner secondaries, and towards the tips of the larger primaries, a narrow line of ashy-white across the inner portions of the shoulder, and extending in a line towards the scapulars is a deep black band ; bill bluish at the base, whitish horn colour at the tip.

Remarks. In some specimens apparently perfectly adult, the green on the rump is slightly darker, and the margins of the feathers on the interscapular region and back are of a paler yellow, there is also a bright yellow spot on the nape of the neck, with a narrow black shaft-line, all have the bases of these feathers snow-white, and the crimson from the head in some extends entirely over the nape and neck, tinging the adjacent feathers. The females are similar to the males but are duller in colour. The young show the same disposition of colours, even to the deep black spot on the shoulders, the margins of the feathers on the upper surface of the hind neck and interscapular region being margined with green instead of yellow.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, Tasmania.

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♂	12·3	6·25	3·75	7·3	0·78	0·62	0·82	0·82
A 2 ♀	11·3	6·15	3·6	7·1	0·75	0·6	0·75	0·76
A 3 ♂	12·5	6·5	3·75	7·75	0·83	0·72	0·82	0·88
A 4 ♂	12	6·25	3·7	7·3	0·75	0·6	0·8	0·8
A 5 ♀	11·75	6·2	3·6	7·25	0·75	0·62	0·78	0·82

A 1 ♂ ad. sk., Blue Mountains, New South Wales. Exch.
A 2 ♀ ad. sk., New South Wales. Col.
A 3 ♂ ad. sk., Ouse River, Tasmania. Col.
A 4 ♂ ad. sk., Victoria. Pch.
A 5 ♀ ad. sk., Clarence River, New South Wales. Col.

11. Platycercus mastersianus.

Masters' Parrakeet.

Platycercus mastersianus, *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 27 ; *id. l.c.* p. 104 ; *id. Tab. List Austr. Bds.* (1889) p. 16, sp. 489.

"*Adult.* Total length about 11 inches, wing 5·8, tail 6·3, tarsus 0·8, bill 0·7. The front, top of the head, nape and ear-coverts, crimson, mottled with yellow on the sides of the head, ear-coverts and nape ; feathers of the hind neck and back yellowish at the tips, blackish on concealed portions, those on the neck washed with red and tinged on the sides with bluish-green ; rump and upper tail-coverts crimson, the outer series of

the latter greenish; scapulars black, broadly margined with yellowish, mingled with red and blue, shoulders deep blue, smaller coverts deep blue centred with black or black margined with blue, median-coverts light blue; outer webs of primaries and secondaries blue, the inner webs and the tips of the primaries black; underside of the wing black, traversed about the middle of the quills with an indistinct broken white band *(in a young specimen this white band is complete)*; under wing-coverts blue; cheeks blue, palest near the mandible, under tail-coverts crimson, chest bluish-green, margined with yellow, many of the feathers centred with a large crimson spot; abdomen and flanks bluish-green, the tips of the lower flank feathers crimson; tail black below, the apical third of all, except the two centre feathers blue, and tipped with white more largely on the inner than on the outer feathers; centre tail feathers above, greenish on the inner webs, blue on the outer; the rest blackish at the base, blue on the outer webs, the anterior third of each feather light blue and tipped with white, the spot increasing in size as the feather is more internal; bill bluish at the base, whitish at the tip (probably faded), feet dark brown, iris in a young living example dark hazel.

Hab. Interior of New South Wales.

My attention was drawn to this species some two years ago by Mr. George Masters, the late Assistant Curator of the Australian Museum, and although the bird could not in any way be referred to any known member of the genus, I had great doubts of its proving to be a good species, being rather inclined, from the great variegation and nonuniformity of its markings, to consider it a hybrid, or cross between some of the smaller species. However, having lately found another, although immature but having the same characteristic *red front and upper tail-coverts*, blue wings and yellowish-green under surface, I have hesitated no longer to describe it as new, and in compliment to Mr. George Masters, who first drew my attention to it, have named it after that gentlemen. The adult specimen above described is one of the few relics of our early explorers that I found left in the Museum. The young bird referred to has been recently obtained in the interior northern portion of New South Wales."*

Remarks. At various times during the last ten years some remarkable and beautifully coloured specimens of a small Platycercus have been met with, which appear to be hybrid between the Rosella and Pennantian Lories, but are very much smaller in all their measurements, and it is quite possible that the *P. ignitus*, Lead.,† figured by Gould, in his fol. Edition of the Birds of

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* Proc. Linn. Soc. N.S.W., Vol. ii., p. 27.

† *P. ignitus*, Leadbeater, P.Z.S. pl. v. p. 8 (1837).

Australia (Vol. v. pl. 30), is also a hybrid taking more after the Pennantian Lory than the Rosella. The bird which some years ago, in Proc. Linn. Soc. N.S.W. Vol. ii. (1877) p. 27, was distinguished under the name of *P. mastersianus*, takes more after the Moreton Bay Rosella *P. pallidiceps*, having a bluish tinge on the abdomen and blue cheeks as in *P. cyanogenys*, deep blue on the wings, and scarlet rump, and under and upper tail coverts. The bird at present under consideration is far more beautifully variegated. The head, nape, hind neck, chest, breast, under tail-coverts crimson, the bases of the feathers being white, and mesially shaded with yellow on the sides of the neck the feathers are centred with an oval black spot tinged and margined with yellow; flanks and abdomen yellow, all more or less tipped with crimson; hind neck, interscapular region and back, black, distinctly margined with deep yellow streaked here and there with crimson, the bases of the feathers being white; feathers of the rump and upper tail-coverts white at the base, mesially shaded with yellow and broadly tipped with crimson, centre tail feathers bluish-green narrowly margined with yellow, the next pair similar, becoming blue on the outer webs towards the tip which is white, the rest of the tail feathers white at the base and on the inner webs, shaded with black mesially, becoming light blue on the outer webs, the outermost blue on both webs, and all tipped with white; scapulars and secondaries black, margined with greenish-yellow on the outer webs, a white spot on the median portion; primaries blackish-brown at the tips and on the inner webs, blue on the outer, a large elongated blotch of pure white on the median portion of all the quills, slightly smaller in extent on the secondaries; greater series of under wing-coverts white with the tips blackish-brown, small under and upper wing-coverts and margins of the shoulders above and below deep blue, median-coverts above from the margin of the wing to the scapulars, jet black; bill light horn color, dull bluish horn colour at the base, legs and feet light brown. Total length 12 inches, wing 5·6, tail 6, tarsus 0·7, bill from forehead 0·7, from nostril 0·6, culmen 0·65.

12. Platycercus icterotis.

Yellow-cheeked Parrakeet.

Psittacus icterotis, *Temm. Linn. Trans.* Vol. xiii. (1819) p. 120; *Kuhl, Consp.* (1820) p. 54.

Yellow-cheeked Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 183.

Platycercus stanleyi, *Vig. Zool. Journ.* Vol. v. (1830) p. 273; *Jard. & Selb. Ill. Orn.* Vol. iii. pl. 108.

Platycercus icterotis, *Less. Traite d'Orn.* p. 209; *Wagler, Mon. Psitt. in Abhand.* p. 530; *Gould, Bds. Austr.* fol. Vol. v. pl. 29; *id. Handbk. Bds. Austr.* Vol. ii. (1865) sp. 424, p. 58; *G. R. Gray, List Psitt.* (1859) p. 6; *Bonap. Rev. et Mag. de Zool.* (1854); *Schleg. Mus. P.-B. Psitt.* (1864) p. 97; *Finsch, Die Papag.* Vol. ii. (1868) p. 168, No. 132, sp. 4; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 500; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 259.

"Gootd-un-gootd, *Aborigines of the lowland districts of Western Australia* (Gould.)

"Moy-a-duk, *Aborigines of the mountain districts of Western Australia.* (Gould.)

Rose-hill, *Colonists of Swan River.* (Gould.)

Adult male. Crown of the head, nape, sides of the neck, chest, the whole of the under surface of the body, and under tail-coverts, rich scarlet; ear-coverts, cheeks and chin, bright yellow; under wing-coverts, shoulders, upper wing-coverts, and the basal portions of the primaries on their outer webs, with the exception of the first, deep blue; secondaries and scapulars black, broadly margined with green, median upper wing-coverts black, broadly margined with green, spotted black on the smaller wing-coverts of the shoulder; hind neck and interscapular region, black, broadly margined with green; rump and upper tail-coverts green, two central tail feathers bronzy-green, next pair on either side similar, becoming deep blue on the outer web towards the tip, which is white, the next pair similar, shaded with black on the margin of the inner web, pale blue on the apical portion, which is largely tipped with white, the outer three tail feathers somewhat similar, apical portion light blue, more or less largely tipped with white; bill lead colour at the base, whitish at the tip, feet brown.

The female similar, slightly duller in colour.

The young have only an indication of the yellow on the ear-coverts and cheeks, the under surface green, with a margin of dull red; the feathers, flanks, and under tail-coverts, dull red, all the upper surface dull green, with a blackish centre to the feathers, occasionally the feathers on the rump and upper tail-coverts are broadly margined with dull red. (Dob. Mus.)

Remarks. In one apparently very adult specimen marked as a ♀, the feathers of the hind neck, interscapular region, and scapular-coverts have sub-terminal margins of crimson and yellow,

and a few feathers on the rump are margined with dull red. (Dob. Mus.)

Habitat. South Australia, (?) West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	10·2	5·5	3·15	6·15	0·65	0·5	0·62	0·64
A 2 ♀	10·3	5·4	3·1	6·45	0·68	0·5	0·62	0·66
C 1 ♂	10·4	5·2	3·15	6·1	0·65	0·5	0·64	0·68
C 2 ♂	10·05	5·2	3·05	5·95	0·61	0·48	0·65	0·68
* ♂	10·4	5·45	3·3	6·3	0·66	0·5	0·63	0·68

A 1 ♂ ad. sk., King George's Sound, Western Australia, March, 1890. Col.

A 2 ♀ ad. sk., Western Australia, December, 1879. Col.

C 1 ♂ juv. sk., King George's Sound, Western Australia, 30th March, 1869. Col.

C 2 ♂ juv. sk., King George's Sound, Western Australia, 28th March, 1869. Col.

* ♂ ad. sk. (Dob. Mus.), Western Australia, April, 1866.

13. Platycercus spurius.

Red-capped Parrakeet.

Psittacus spurius, *Kuhl. Consp.* (1821) p. 52.

Platycercus pileatus, *Vigors, Zool. Journ.* Vol. v. (1830) p. 274; *Lear, Parr.* pls. 21 et 22; *Jard. & Selby, Ill. of Orn.* pl. 102; *Gould, Bds. Austr.* fol. Vol. v. pl. 32; *Reichenb. Neuentd. Vög. N.-Holl.* No. 451; *G. R. Gray, List Psitt.* (1859) p. 8; *Schleg. Mus. P.-B. Psitt.* (1864).

Psittacus (Platycercus) purpureocephalus, *Quoy et Gaim. Voy. de l'Astrol.* (1830) p. 235, pl. 22; *Bourj. de St.-Hil. Perr.* t. 39.

Platycercus rufifrons, *Less. Traite d'Orn.* (1831) p. 208; *id. Rev. et Mag. de Zool.* (1853) p. 157.

Pezoporus rufifrons, *Bourj. de St. Hil. Perr.* tab. 9.

Purpureicephalus pileatus, *Bonap. Rev. et Mag. de Zool.* (1854) p. 153 ; *Finsch, Nederl. Tijdschr. Berigten* (1863) p. xi. ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 60, sp. 425 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 259.

Platycercus spurius, *Finsch, Die Papag.* Vol. ii. (1868) p. 201, No. 138, sp. 10 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 195 ; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 501.

Djar"-rail-bur"-tong, *Aborigines of the lowland districts of Western Australia.* (Gould.)

Blue Parrot, *Colonists.* (Gould.)

Adult male. Forehead, crown of the head and nape, deep bright porphyry-red ; chin, cheeks, and ear-coverts light green, becoming yellowish-green behind the ear-coverts and on the sides of the neck ; rump and upper tail-coverts light jonquil-yellow, the outer series of the feathers washed with green, centre two tail feathers green, washed with blue on the outer webs towards the tips, the remainder bluish-green, all with a more or less broad black band across the median portion, and shaded with blue on their outer webs, which becomes light blue towards the ends ; all the feathers except the centre two more or less tipped with white, under tail-coverts and lower parts of the flanks crimson at the ends, yellowish-green at the base ; chest and remainder of the under surface of the body and the under wing-coverts blue, margins of the wings, and the outer webs of the upper coverts and of the primaries, deep blue, the rest of the feather black ; secondaries black, the outer webs bluish along the shafts and green on their margins ; upper wing-coverts and scapulars, back, interscapular region and hind neck, green ; bill bluish-horn colour at the base, the lower mandible and tip whitish, feet brown.

Female. Similar to the male, a very little smaller, but slightly duller in colour.

Young. Similar to the adult, but having all the colours of duller tints ; the cheeks green, with only a slight wash of yellow on the sides of the neck below and behind the ear-coverts ; the chest brown, tinged with rose-brown and distinctly margined with blue ; the porphyry-red of the head of a duller tint.

Remarks. Albinism occasionally occurs in this species as well as in others of the Family, and sometimes specimens are procured showing a large amount of canary-yellow on the wings and tail, with a few scattered feathers of the same tint on the head.

Habitat. West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♀	13	6·2	4	8·2	1·05	0·85	0·8	0·85
A 2 ♀	13	6	3·7	8·15	1	0·8	0·8	0·85
* ♂	14·2	6·5	3·95	8·8	1·03	0·85	0·9	0·9
* ♂	13·55	6·4	3·75	8·3	1·08	0·9	0·88	0·9
* ♂	11·6	5·72	3·3	7·95	1	0·85	0·8	0·85

A 1 ♀ ad. sk., King George's Sound, Western Australia, April, 1866. Col.
A 2 ♀ ad. sk., King George's Sound, Western Australia, Sept., 1868. Col.
* ♂ ad. sk. (Dob. Mus.), Western Australia, May, 1866.
* ♂ ad. sk. (Dob. Mus.), Western Australia, May, 1866.
* ♂ juv. sk., Western Australia.

11. PSEPHOTUS.

1. Psephotus hæmatogaster.

Red-vented Parrakeet.

Platycercus hæmatogaster, *Gould*, *Proc. Zool. Soc.* (1837) p. 89 ; *Mitchell*, *Exped. Int. Austr.* Vol. i. (1838) p. xviii. ; *G. R. Gray*, *List Psitt.* (1859) p. 7 ; *Finsch*, *Die Papag.* Vol. ii. (1868) p. 215, No. 143, sp. 15.

Psephotus hæmatogaster, *Gould*, *Bds. Austr.* fol. Vol. v. pl. 33 ; *Sturt*, *Exp. Centr. Austr.* Vol. ii. (1849) App. p. 38, No. 88 ; *Finsch*, *Nederl. Tijdschr. v. Dierk. Berigten* (1863) p. x. ; *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *Forbes*, *Proc. Zool. Soc.* (1879) p. 169 ; *Ramsay*, *Tab. List Austr. Bds.* (1888) sp. 502, p. 17 ; *North*, *Proc. Linn. Soc. N.S.W.* Vol. ii. 2nd Ser. (1887) p. 986 ; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 260.

Crimson-bellied Parroquet, *Sturt*, *Exp. Centr. Austr.* Vol. ii. (1849) App. p. 38.

Psephotus haematorrhous, *Bonap. Rev. et Mag. de Zool.* (1854) p. 154 ; *Gould*, *Handbk. Bds. Austr.* Vol. ii. (1865) p. 62, sp. 426.

Euphema haematogastra, *Schlegel*, *Dierentuin* (1864) p. 57.

Euphema haematogaster, *Schleg. Mus. P.-B. Psitt.* (1864) p. 102.

Blue-bonnet, *Colonists of New South Wales.* (Gould.)

Var. P. XANTHORRHOUS.

Platycercus hæmatogaster, *(Part.) Gould, Proc. Zool. Soc.* (1837) p. 89.

Psephotus xanthorrhous *(Gould), Bonap. Rev. et Mag. de Zool.* (1854) p. 154 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 63, sp. 427 ; *Ramsay, Tab. List Austr. Bds.* (1888) (var.) sp. 502*a*, p. 17 ; *North, Austr Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) (var.) p. 260.

Platycercus xanthorrhous, *G. R. Gray, List Psitt.* (1859) p. 7 ; *Finsch, Die Papag.* Vol. ii. (1868) p. 217, No. ?144, sp. 16.

Adult male. A band across the forehead, face and cheeks, a narrow line encircling the eye, the shoulders, and the under wing-coverts, bright blue ; crown of the head, hind neck, ear-coverts, interscapular region, and the back, light brown ; upper tail-coverts light brown, tinged with yellow, two central tail feathers dull brown above, blackish below, the next pair tinged with green towards the base, blue on the outer webs toward the tip which is white, the remainder of the feathers similar, but having a larger extent of white on the tips, and the basal portion of the feathers being blue, merging into black on the inner webs, the under surface of the three outer feathers upon either side of the tail largely tipped with and having a distinct band of black through the centre ; the extreme base white, under tail-coverts primrose-yellow, occasionally streaked towards the tip with a narrow line of crimson ; wings black, the outer webs and their coverts blue, a narrow line of ashy-white towards the tip, secondary coverts and scapulars dull saffron-yellow, inner webs of the secondaries black, outer webs more or less tinged with blue ; bill horn colour, blackish at the base, white at the tip, feet dull brown.

Remarks. Some specimens have the mesial wing-coverts crimson instead of yellow, or occasionally mottled with crimson and yellow, and the shoulders yellowish or bluish-green, there is also the remains of a white band through the wing, as in many others of the species. The white wing patch is more conspicuous upon the females and young males which have also their markings much duller.

Habitat. New South Wales, Interior, Victoria, South Australia, West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from Nostril.	Tarsus.	Mid Toe.
A 1 ♂	11·3	5·05	3·25	7	0·75	0·6	0·78	0·7
A 2 ♀	11	4·75	3·32	6·7	0·7	0·52	0·72	0·7
A 3 ♂	11·5	5·2	3·4	7·15	0·72	0·6	0·75	0·8
A 4 ♂	12·6	5·25	3·37	8	0·8	0·6	0·72	0·72
A 5 ♀	11·9	5·25	3·35	7·2	0·8	0·6	0·75	0·78

A 1 ♂ ad. sk., Lachlan River, New South Wales, 9th June, 1883. Col.
A 2 ♀ ad. sk., Lachlan River, New South Wales, 9th June, 1883. Col.
A 3 ♂ ad. sk., New South Wales. Col.
A 4 ♂ ad. sk., Victoria. Pch.
A 5 ♀ ad. sk., New South Wales. Col.

2. Psephotus chrysopterygius.

Golden-shouldered Parrakeet.

Psephotus chrysopterygius, *Gould, Proc. Zool. Soc.* (1857) pt. xxv. p. 220 ; *id. Supp. Bds. Austr.* pl. 64 ; *id. Handbk. Bds. Austr.* (1865) Vol. ii. p. 65, sp. 428 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 503.

Platycercus chrysopterygius, *G. R. Gray, List Psitt.* (1859) p. 6.

Platycercus chrysopterygus, *Finsch, Die Papag.* (1868) Vol. ii. p. 224, No. 147, sp. 19.

"The male has a band across the forehead, extending above the eye to its posterior angle, of a very pale yellow ; on the centre of the crown a patch of black ; sides of the head, cheeks, neck, throat, upper portion of the abdomen, lower part of the back, rump, and upper tail-coverts verditer-blue, tinged with green on the cheeks and upper tail-coverts ; immediately below the eye a wash of yellow ; back of the neck, back, and scapulars light greyish-brown, slightly tinted with green ; shoulder and lesser wing-coverts fine yellow ; primaries and secondaries black, margined externally with blue ; feathers of the lower part of the abdomen, vent, and under tail-coverts light scarlet, margined with greyish-green ; two centre tail feathers dark green at the base, passing into deep blue towards the extremity, and tipped with dull black ; the remaining tail feathers light green crossed by an irregular oblique band of dull bluish-black, beyond which

they become of a paler glaucous green, until they end in white; but each has a dark stain of bluish-green on the outer margin near the tip; irides brown, bill and nostrils bluish horn colour, feet mealy-grey. Total length 11 inches, bill $\frac{3}{8}$, wing $4\frac{1}{4}$, tail 7, tarsi $\frac{1}{2}$."

"The female is similar to the male in colour, but all the hues much paler, and the markings much less strongly defined."

"In the young state the whole of the head, all the upper surface, wing-coverts, throat, and breast are of a pale glaucous-green; the rump and upper tail-coverts and the tail similar to the same parts in the male, but not so bright, and the lower part of the abdomen is greyish-white with faint stains of scarlet."*

Habitat. Port Darwin, Port Essington, Gulf of Carpentaria. (*Ramsay.*)

3. Psephotus pulcherrimus.

Beautiful Parrakeet.

Platycercus pulcherrimus, *Gould*, *Ann. & Mag. Nat. Hist.* Vol. xv. p. 114; *G. R. Gray*, *List Psitt.* (1859) p. 6; *Finsch*, *Die Papag.* Vol. ii. (1868) p. 226, No. 148, sp. 20.

Psephotus pulcherrimus, *Gould*, *Bds. Austr.* fol. Vol. v. pl. 34; *id. Handbk. Bds. Austr.* Vol. ii. (1865) p. 67, sp. 429; *Bonap. Rev. et Mag. de Zool.* (1854); *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 504; *North*, *Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 261.

Euphema pulcherrima, *Schleg. Mus. P.-B. Psitt.* (1864) p. 75.

Adult male. A band across the forehead, the upper margins of the shoulders and mesial coverts of the wing, the abdomen, and under tail-coverts, bright crimson, the latter with white margins to the feathers; crown of the head extending on to the hind neck black; a yellowish tinge around the eyes, ear-coverts, sides of the neck, chin, throat and chest, green, tinged or margined with turquoise-blue on the lower part of the neck and chest; smaller inner-coverts, the primary-coverts and primaries, black, a bluish margin on the outer webs, which becomes ashy towards the tip; inner webs, and the whole of the secondaries and their coverts, black; scapulars brown tinged with black, with whitish margins to their outer webs; interscapular region dull brown, a narrow band of black across the rump, the lower portion of the rump bright turquoise-blue, upper tail-coverts similar, with a greenish tinge, the basal portions and their tips black; sides of the body and flanks bright turquoise-blue, under wing-coverts

* Gould, Proc. Zool. Soc. pt. xxv. p. 220.

bright blue, the outer series at the base of the primaries, and the whole of the under surface of the wing, black ; the two centre tail feathers above brownish-green on the basal half, becoming black towards the apical portion, which has a narrow margin of dull blue on the outer web, under surface of the feathers black, the outer three feathers above bluish-green, with a broad band of black through the centre, below similar but not so strongly marked, the fourth and fifth feathers on either side similar, bluish-green towards the tip, which is white ; bill bluish-black at the base, horn colour at the tip, feet brown.

Remarks. The females and young males are of a dull greenish-grey, and show only indications of the crimson, blue, and black markings. In a specimen shot in the Maryborough district, the crimson patch across the ear-coverts is mixed with bright yellow.

Habitat. Port Denison, Wide Bay District, Dawson River, New South Wales. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♂	10·2	5	2·7	6·7	0·65	0·51	0·53	0·67
A 2 ♂	11	5·1	2·85	6.8	0·68	0·52	0·55	0·68
C 1 ♂	10·7	5	2·62	7·1	0·65	0·49	0·58	0·62
* ♂	10·5	4·95	2·68	7	0·65	0·5	0·52	0·68
* ♂	10·4	5·05	2·62	6·65	0·63	0·5	0·58	0·65

A 1 ♂ ad. sk., New South Wales. Col.

A 2 ♂ ad. mtd., New South Wales. Col.

C 1 ♂ juv. sk., New South Wales. Col.

* ♂ ad. sk. (Dob. Mus.), Central Queensland.

* ♂ not quite ad. sk. (Dob. Mus.), Brisbane, 18th August, 1865.

4. Psephotus multicolor.

Varied Parrakeet.

Psittacus multicolor, *Temm. Linn. Trans.* Vol. xii. (1819) p. 119 ; *Kuhl, Consp.* (1820) p. 55.

Varied Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 182.

Platycercus multicolor, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 283 ; *Mitchell, Exped. Inter. Austr.* Vol. i. (1838) p. xviii. ; *Finsch, Die Papag.* Vol. ii. (1868) p. 222, No. 146, sp. 8.

Psephotus multicolor, *Gould, Bds. Austr.* fol. Vol. v. pl. 35 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *G. R. Gray, List Psitt.* (1859) p. 6 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 430, p. 68 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 505 ; *North, Austr. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* (1889) p. 261 ; Sym. *Clark, Proc. Roy. Soc. South Austr.* F.N. Sect. (1889) p. 38, No. 24.

Euphema multicolor, *Schleg, Mus. P.-B. Psitt.* (1864) p. 100.

Adult male. A broad band across the forehead not quite reaching to the eyes, and a well defined band or oblong blotch across the shoulders, rich golden yellow ; crown of the head, hind neck, interscapular region, and outer webs of the scapularies, grass-green ; occiput and nape of the neck dull red, feathers being white at the base ; the lores, ear-coverts, sides of the head and neck, chest, breast, green ; feathers of the flanks, abdomen and thighs, yellow at the base, broadly tipped with crimson ; under tail-coverts greenish-yellow, tipped with crimson, occasionally in the form of narrow bars ; margins of the shoulders, under wing-coverts and axillaries bright blue, quills black, primaries and their coverts rich blue on their outer web except towards the tip, where there is a line of ashy-white on the first five primaries, secondaries black, rich blue on their outer webs, merging into green on the scapulars, which are black, with the outer webs and tip green, secondary-coverts and scapular-coverts green ; the lower portion of the back and the rump crossed by two blackish bands, separated by a band of light green, upper tail-coverts green, with a blotch of dull red on the smaller coverts, two central tail feathers blue, bronzy-green at the base and black at the tip, shafts black, the next pair green at the base, the remainder of the feather rich blue, white at the tips, and a margin of deep black upon the inner web, the next pair similar but not so largely tipped with white, and having a larger extent of green at the base shaded with black on their inner webs, the three outer tail feathers green, bluish towards the tip, with a distinct oblique black band about the centre of the feather.

Remarks. There is a very narrow marginal line of black on all the body feathers, which gives a scaly appearance, especially noticeable on the breast. The females have all the markings very much duller in colour, the under surface tinged with yellowish-green instead of bright green, certain specimens marked as females have the shoulder band dull red instead of bright yellow.

Habitat. New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of averaged sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♀	10·8	5·3	2·73	7·3	0·63	0·5	0·62	0·62
A 2 ♂	11	5·4	2·75	7·3	0·63	0·5	0·63	0·68
A 3 ♂	10·9	5·3	2·7	7	0·62	0·5	0·62	0·65
* ♂	11·3	5·25	2·78	7	0·64	0·48	0·62	0·7
* ♂	11·05	5·2	2·75	6·75	0·62	0·48	0·62	0·68
* ♀	10·95	5·3	2·7	6·95	0·65	0·5	0·62	0·65
* ♀	10·85	5·1	2·75	6·7	0·62	0·5	0·6	0·67

A 1 ♀ ad. sk., Moolah, New South Wales, June, 1883. Col.
A 2 ♂ ad. sk., Moolah, New South Wales, June, 1883. Col.
A 3 ♂ ad. sk., Moolah, New South Wales, June, 1883. Col.
* ♂ ad. sk. (Dob. Mus.), Murray River, Victoria, 1866.
* ♂ ad. sk. (Dob. Mus.), Murray River, Victoria, 1866.
* ♀ ad. sk. (Dob. Mus.), Murray River, Victoria, 1866.
* ♀ ad. sk. (Dob. Mus.), Murray River, Victoria, 1866.

5. Psephotus hæmatonotus.

Red-rumped Parrakeet.

Platycercus hæmatonotus, *Gould, Proc. Zool. Soc.* pt. v. (1837) p. 151 ; *G. R. Gray, List Psitt.* (1859) p. 6 ; *Finsch, Die Papag.* Vol. ii. (1868) p. 219, No. 145, sp. 17.

Psephotus hæmatonotus, *Gould, Bds. Austr.* fol. Vol. v. pl. 36 ; *Sturt, Exped. Centr. Austr.* Vol. ii. (1849) App. p. 39, No. 89 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *Gould, Handbk. Bds. Austr.* Vol. ii. sp. 431, p. 69 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *Forbes, Proc. Zool. Soc.* (1879) p. 169 ; *Broad. Proc. Roy. Soc. Qnsld.* Vol. iii. (1886) p. 30; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17, sp. 506 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 262 ; *Cox & Ham, Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 417 ; Sym. *Clark, Proc. Roy. Soc. South Austr.* F. N. Sect. (1889) p. 38. No. 25.

Nanodes hæmatonotis, *Mitchell, Exped. Inter. Austr.* Vol. i. (1838) p. xviii.

Euphemia hæmatonota, *Schleg. Dierentuin* (1864), p. 75 ; *id. Mus. P.-B. Psitt.* (1864) p. 101.

Adult male. Head, neck and chest green, basal portion of the feathers on the hind neck snow white, interscapular region dull greyish-green, rump dull crimson, the feathers adjacent to the flanks occasionally tinged or spotted with yellow on their outer

webs, upper tail-coverts green, tinged with bluish-green towards the tips of the feathers, with indications of narrow faint cross lines and a narrow line of black (this narrow black line is noticeable on worn feathers), central two feathers green, shaded with blue towards the tip which is black on the extreme tip, tail feathers green, bluish-green on the outer webs, margined with black on the inner webs at the base, and largely tipped with white, diminishing in size towards the two central tail feathers the tips of which are black, under tail-coverts white, those adjacent to the abdomen occasionally shaded with yellow, lower portion of the breast and abdomen yellow, with a very narrow marginal dark line at the tips of the feathers; axillaries and under wing-coverts and margins of the shoulders rich blue, outer series of the under wing-coverts dark blackish-brown, shoulders and lesser wing-coverts light green tinged with blue, the outer feathers adjacent to the primary-coverts largely tipped with yellow, forming a conspicuous yellow spot, the primaries and their coverts blue, with the inner webs and tips of the feathers black, secondaries black, the outer webs except at the tips bluish-green, a very narrow line of ashy-white on the margins of the outer webs of all the quills; bill and legs blackish horn colour.

Remarks. The colour of the female is much duller, it has no yellow spot on the wing-coverts, nor crimson on the rump, the abdomen has only a tint of yellow. Both sexes of this species may be easily recognised by the snow-white bases of the feathers of the nape and hind neck.

Habitat. Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	9·8	5·05	2·97	6·3	0·64	0·52	0·58	0·7
A 2 ♂	10·2	5·25	2·97	6·4	0·68	0·52	0·62	0·72
B 1 ♀	9·6	4·8	2·85	6·3	0·6	0·46	0·55	0·62
C 1 ♂	9·3	4·85	2·65	6	0·6	0·49	0·55	0·62
C 2 ♀	9·15	4·8	2·55	5·9	0·6	0·46	0·56	0·65

A 1 ♂ ad. sk., Dubbo, New South Wales. Pres.
A 2 ♂ ad. sk., Flinders' Range, South Australia, November, 1865. Col.
B 1 ♀ semi ad. sk., Dubbo, New South Wales. Pres.
C 1 ♂ juv. sk., Hay, New South Wales, August, 1883. Col.
C 2 ♀ juv. sk., Hay, New South Wales, August, 1883. Col.

12. EUPHEMA.

1. Euphema venusta.

Blue-banded Grass Parrakeet.

Psittacus venustus, *Temm. Linn. Trans.* Vol. xiii. (1819) p. 121.

Psittacus chrysostomus, *Kuhl, Consp. Psitt.* Vol. x. (1820) p. 58, pl. 1.

Blue-banded Parrakeet, *Lath. Gen. Hist.* Vol. ii. (1822) p. 188.

Nanodes venustus, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 274; *Jard. & Selb. Nat. Libr.* Vol. vi. p. 179, pl. 27.

Euphema chrysostoma, *Wagl. Mon. Psitt. in Abhand.* Vol. i. (1832) p. 544; *Gould, Bds. Austr.* fol. Vol. v. pl. 37; *Bonap. Rev. et Mag. de Zool.* (1854); *G. R. Gray, List Psitt.* (1859) p. 15; *Schleg. Mus. P.-B. Psitt.* (1864) p. 103; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 71, sp. 432.

Conurus chrysostomus, *Bourjot, de St. Hil. Perr.* tab. 10.

Euphema venusta, *Finsch, Die Papag.* Vol. ii. (1868) p. 163, sp. 125; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17, sp. 507; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 262.

Adult male. A rich band of deep blue across the forehead not encircling the eyes, bounded by a very narrow line of verditer-blue, lores bright yellow, a tinge of yellow around the eye, crown of the head olive-yellow, the remainder of the upper surface of the body, scapulars, and upper tail-coverts dull olive-green, the whole of the shoulders and upper wing-coverts, including the outer webs of some of the adjacent scapulars, and the under wing-coverts, deep rich blue, quills black, the outer margins of the first four primaries towards the tip margined with bluish-green, centre tail feathers bluish-grey, the outer tail feathers deep yellow, pale toward the tips, with a bluish spot on the inner webs near the base, the remaining feathers more or less largely tipped with yellow, bluish on the outer webs and on the shaft-line, the margins of the inner webs shaded with black; bill and feet dull brown.

Habitat. Tasmania, New South Wales, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	8	4·2	4·75	0·57	0·42	0·63	0·63
A 2 ♂	7·9	4·3	4·72	0·58	0·43	0·58	0·65
† ♂	8	4·35	4·55	0·6	0·43	0·57	0·62
† ♀	7·8	4·3	4·5	0·52	0·45	0·52	0·6
‡ ♂	8	4·37	4·55	0·6	0·43	0·57	0·62

A 1 ♂ ad. mtd., Tasmania. Col.

A 2 ♂ ad. sk., Ouse River, Tasmania, March, 1867. Col.

† ♂ ad. sk. (Macl. Mus.), Tasmania.

† ♀ ad. sk. (Macl. Mus.), Tasmania.

‡ ♂ ad. sk. (Coll. Masters), Tasmania.

2. Euphema pulchella.

Chestnut-shouldered Grass Parrakeet.

Psittacus pulchellus, *Shaw, Nat. Miscl.* (1790) pl. 96 ; *Lath. Ind. Orn. Suppl.* p. xxi. ; *Vieill. Nouv. Dict.* xxv. p. 358 ; *Kuhl, Consp. Psitt.* p. 50.

Turquoisine Parrot, *Lath. Syn. Suppl.* (1802) p. 89.

Psittacus edwardsii, *Bechst. Kurze Ueb.* (1812) p. 74, pl. 6.

Nanodes pulchellus, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 277.

Lathamus azureus, *Less. Traité d'Orn.* (1831) p. 205.

Euphema pulchella, *Wagl. Mon. Psitt. in Abhand.* p. 542 ; *Swains. Zool. Ill.* pl. 73 ; *G. R. Gray, List Psitt.* (1859) p. 15 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 41 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 105 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 77, sp. 436 ; *Finsch, Die Papag.* Vol. ii. (1868) p. 161, No. 124, sp. 2 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 508 ; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Ser. (1888) p. 1777 ; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 263 ; *Cox & Ham, Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 417.

La Perruche, *Edwards, Levaill. Hist. des Perr.* p. 68.

Adult male. A broad band across the forehead extending over the eye, and the cheeks, rich bright metallic-blue, deepest in tint at the base of the cere ; crown of the head, hind neck and adjacent portions of the ear-coverts, interscapular region, back, scapulars, rump, upper tail-coverts, and the two central tail feathers above, olive-green, second pair of tail feathers on either side tipped and broadly margined with yellow on the inner webs, the next two pair similar, margined and largely tipped with bright yellow which increases in extent until it occupies nearly the whole of the outer tail feathers, leaving only a small black blotch at the base ; throat, the whole of the under surface of the body, and under tail-coverts bright yellow, shoulders and the secondary-coverts bright metallic-blue, similar to the forehead, a bar of crimson across the smaller feathers adjacent to the interscapular region, outer webs of the primaries and secondaries deep indigo-blue, becoming greenish-blue towards the end of the feathers, the extreme tip and the whole of the inner web deep black, some of the scapulars adjacent to the secondaries black on the inner webs, green or bluish-green on the outer ; under surface of the wings black, under coverts and axillaries deep indigo-blue ; bill black, feet blackish-brown.

The females of this species resemble the males, but have not the red bar on the shoulder, and only a slight wash of blue on the forehead and face, and a narrow line of the same tint over and behind the eye ; the chest is dull greenish-yellow ; in one very adult specimen under consideration the abdomen has a rich patch of orange, resembling that of *E. chrysogastra*, but duller, the white band through the wing does not extend to the first two primaries and only occasionally appears as a trace on the third.

The young males are similar to the females, but show more or less traces of the red shoulder bar, and the white bar through the wing is always conspicuous and occasionally appears on the second primary quill.

Remarks. In one adult male, dated Sydney, October, 1876, the crimson band across the upper wing-coverts and some of the blue feathers adjacent thereto, are mesially spotted with bright yellow, the scapulars also are tinged with yellowish-green. Occasionally in younger specimens the green is duller above, and the yellow of the under surface not so bright. Sometimes in adult specimens one or two feathers of deep orange inclining to crimson may be detected on the abdomen, but this is a very rare occurrence. The sexes are alike in plumage, but the young and semi adults may be distinguished by having a white bar across the wing, formed by spots of more or less extent confined to the inner webs of the secondaries and some of the adjacent primaries, the chest and breast being green instead of bright yellow.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	8·3	4·32	4·7	0·55	0·42	0·52	0·54
A 2 ♀	7·6	4·2	4	0·53	0·4	0·5	0·53
A 3 ♂	7·5	4·42	4·3	0·52	0·4	0·52	0·52
A 4 ♂	7·5	4·3	4·4	0·53	0·42	0·52	0·53
* ♂	8·3	4·3	4·45	0·54	0·4	0·52	0·55
* ♀	7·6	4·2	4·1	0·52	0·4	0·54	0·54

A 1 ♂ ad. mtd., Ropes' Creek, New South Wales. Col.
A 2 ♀ ad. mtd., Ropes' Creek, New South Wales. Col.
A 3 ♂ ad. sk., Sydney, New South Wales, October, 1876. Pch.
A 4 ♂ ad. sk., Sydney, New South Wales, October, 1876. Pch.
* ♂ ad. sk. (Dob. Mus.), Dobroyde, New South Wales, 29th May, 1865.
* ♀ ad. sk. (Dob. Mus.), Buldery, New South Wales, November, 1860.

3. Euphema elegans.

Elegant Grass-Parrakeet.

Nanodes elegans, *Gould, Proc. Zool. Soc.* (1837) pt. v. p. 25.

Euphema elegans, *Gould, Bds. Austr.* fol. Vol. v. pl. 38; *Sturt, Exp. Centr. Austr.* Vol. ii. (1849) App. p. 39, No. 90; *Bonap. Rev. et Mag. de Zool.* (1854); *G. R. Gray, List Psitt.* (1859) p. 16; *Schleg. Mus. P.-B. Psitt.* (1864) p. 103; *Gould Handbk. Bds. Austr.* Vol. ii. (1865) p. 73, sp. 433; *Finsch, Die Papag.* Vol. ii. (1868) p. 165, No. 126, sp. 4; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 509; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 263; Sym. *Clark, Proc. Roy. Soc. South Austr.* F.N. Sect. (1889) p. 39, No. 26.

Ground Parrakeet, *Colonists of Western Australia.*

Adult male. A band of deep cobalt-blue across the forehead, distinctly margined with turquoise-blue extending over the eye-lid; lores, space between the eye and the bill bright yellow;

crown of the head, neck, chest, interscapular region, scapulars, rump, and upper tail-coverts olive-green, slightly brighter on the upper tail-coverts; wings rich deep indigo-blue, black on the inner webs of the quills and under surface of the feathers; the outer margins of the primaries shaded bluish-green; shoulders and secondary-coverts rich light blue, and adjacent margins of the under-wing coverts rich dark blue; extreme bases of the primaries snow-white, primary-coverts blue-black, shoulders tinged with cobalt-blue; coverts verging into olive-green, secondary-coverts rich blue, tinged with olive-green on their outer webs; scapulars like the back on their outer webs, their bases and inner webs black; the breast and abdomen light greenish-yellow, becoming brighter yellow on the centre of the abdomen; under tail-coverts bright yellow, the two outer tail feathers yellow, blackish at the base, with white shafts, the remainder blackish on the base of the under surface, blue on the upper, which colour extends to the outer webs, increasing in extent towards the central feathers, which have no yellow tips and are entirely blue upon their upper surface; bill black, feet reddish-brown.

Remarks. The females are duller in colour above, and have a less extent of blue on the wings and less yellow on the abdomen. In young birds there are remains of a white band on the primaries and secondaries.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♀	8·2	4·5	4·9	0·53	0·4	0·5	0·62
A 2 ♂	8·5	4·2	4·9	0·53	0·4	0·5	0·63
A 3 ♂	8·5	4·3	5	0·52	0·4	0·5	0·65
A 4 ♀	8·4	4·5	5·05	0·52	0·4	0·5	0·65
C 1 ♀	7·8	4·3	4·4	0·52	0·4	0·5	0·61

A 1 ♀ ad. sk., King George's Sound, Western Australia, Oct., 1868. Col.
A 2 ♂ ad. sk., King George's Sound, Western Australia, Oct., 1868. Col.
A 3 ♂ ad. sk., King George's Sound, Western Australia, Oct., 1868. Col.
A 4 ♀ ad. sk., Port Lincoln, South Australia, November, 1865. Col.
C 1 ♀ juv. sk., Mongup, Salt River, Western Australia, Jan., 1869. Col.

4. Euphema chrysogastra.

Orange-bellied Grass Parrakeet.

Psittacus chrysogaster, *Lath. Ind. Orn.* Vol. i. (1790) p. 97 ; *Bechst, Kurze, Uebers,* p. 74 ; *Vieill. Nouv. Dict.* xxv. p. 359 ; *id. Enc. Méth,* p. 194.

Euphema pulchella, *Wagl. Mon. Psitt.* p. 543.

Euphema aurantia, *Gould, Proc. Zool. Soc.* pt. viii. (1840) p. 148 ; *id. Bds. Austr.* fol. Vol. v. pl 39 ; *Reichb. Vög. N. Holl.* No. 165 ; *G. R. Gray, Gen. Bds.* Vol. ii. No. 5 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 75, sp. 434 ; Sym. *Clark, Proc. Roy. Soc. South Austr.* F.N. Sect. p. 39, No. 27.

Euphema aurantia et chrysogaster, *Bonap. Rev. et Mag. de Zool.* (1854).

Euphema chrysogastra, *Bonap. Naum.* (1856) ; *Schleg. Mus. P-B. Psitt.* (1864) p. 104 ; *Finsch, Die Papag.* Vol. ii. (1868) p. 168, No. 127, sp. 5 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17, sp. 510.

Adult male. A narrow line round the eye, a blue band across the forehead narrowly margined with a greenish tint ; lores, head, neck and all the upper surface of the body grass-green ; cheeks, throat, and all the under surface of the body yellowish-green, becoming more yellow on the flanks and under tail-coverts ; centre of the abdomen with a large spot of rich orange-yellow ; wing-coverts and scapulars like the body, shoulders and margins of the wing deep blue, the inner webs black, the outer webs of the quills towards the tips tinged with greenish-blue, under wing-coverts deep blue, centre tail feathers green, the next on either side blackish at the base and on the inner webs, green on the outer, the remainder similar but having the apical half bright yellow, the outermost pair rich blue at the base of the outer web ; bill dark brown, the under mandible becoming lighter and of a dull horn colour at the tip, legs and feet brown.

Remark. The female is similar to the male, but the markings on the forehead and breast are duller.

The specimens from which the above description is taken were shot at Long Bay, New South Wales, by Mr. George Masters, Curator of the Macleayan Museum, at the Sydney University.

Habitat. New South Wales, Victoria, South Australia, Tasmania. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
† ♂	8	4·1	4·3	0·6	0·4	0·57	0·65
‡ ♀	8·1	4·35	4·4	0·62	0·4	0·52	0·63

† ♂ ad. sk., (Macl. Mus.), Long Bay, New South Wales.

‡ ♀ ad. sk., (Coll. Masters), Long Bay, New South Wales.

5. Euphema petrophila.

Rock Parrakeet.

Euphema petrophila, *Gould, Proc. Zool. Soc.* pt. viii. (1840) p. 148 ; *id. Bds. Austr.* fol. Vol. v. pl. 40 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *G. R. Gray, List Psitt.* (1859) p. 16; *Schleg. Mus. P.-B. Psitt.* (1864) p. 104 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 76, sp. 435 ; *Finsch, Die Pap.* (1868) Vol. ii. p. 170, No. 128, sp. 6 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) sp. 511, p. 17.

Rock Parrakeet, *Colonists of Swan River.* (Gould.)

Adult male. A band across the forehead extending in a narrow line around the eye and the lores, rich blue ; the whole of the upper surface, sides of the face, the neck and chest, dull olive-green ; the shoulders and primary-coverts blue, quills black, the outer webs blue, greenish towards the tip ; the secondaries and inner primaries with a white spot near the base, scapulars olive-green, like the back, in some shaded with blue on the outer webs adjacent to the primaries and greater wing-coverts ; two central tail feathers greenish-grey, slightly tinged with bluish-green on their outer webs, the outer webs of the remainder of the feathers similar, more or less tinged with bluish-green along the shaft, largely tipped with yellow, and blackish on the inner webs to the base, the outermost feathers of the tail have the apical half yellow, the basal portion of the outer web blue, and of the inner web black ; under wing-coverts blue, the greater series black like the under surface of the wing ; lower portion of the breast and abdomen dull yellow, becoming slightly brighter upon the centre of the abdomen and under tail-coverts ; bill black, legs blackish-brown.

Adult female. Similar to the male, but the band across the forehead not so well defined; all the upper surface, head, neck and chest, upper wing- and tail-coverts dull olive-green, slightly lighter on the wing-coverts; under wing-coverts dull blue, the yellow on the abdomen, under tail-coverts, and tail similar to that of the male but slightly duller, no orange spot on the abdomen.

Habitat. South Australia, West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♀	7·9	4·4	4·55	0·55	0·42	0·63	0·65
A 2 ♀	7·8	4·35	4·55	0·57	0·43	0·58	0·64
‡ ♂	8·3	4·3	4·5	0·6	0·42	0·59	0·63
‡ ♀	8·5	4·3	4·7	0·53	0·4	0·58	0·62

A 1 ♀ ad. sk., Port Lincoln, South Australia. Col.

A 2 ♀ ad. mtd., Port Lincoln, South Australia. Col.

‡ ♂ ad. sk. (Adel. Mus.), Mare Island, Sir Joseph Banks Group, Spencer's Gulf, South Australia, September, 1890.

‡ ♀ ad. sk. (Adel. Mus.), Mare Island, Sir Joseph Banks Group, Spencer's Gulf, South Australia, September, 1890.

6. Euphema splendida.

Splendid Grass Parrakeet.

Euphema splendida, *Gould, Proc. Zool. Soc.* (1840) pt. viii. p. 147; *id. Bds. Austr.* fol. Vol. v. pl. 42; *Bonap. Rev. et Mag. de Zool.* (1854); *G. R. Gray, List of Psitt.* (1859) p. 16; *Schleg. Mus. P.-B. Psitt.* (1864) p. 103; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865), p. 79, sp. 437; *Finsch, Die Papag.* Vol. ii. (1868) p. 159, No. 123, sp. 1; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 512; Sym. *Clark, Proc. Roy. Soc. South Austr.* (1889) (F. N. Sect.) p. 39.

Adult male. The forehead and cheeks deep indigo-blue, becoming much lighter on the sides of the head and ear-coverts; shoulders and upper wing-coverts light silvery-blue; quills above and the primary coverts dark indigo-blue on the outer webs inclining to green towards the tips, which with the inner webs and the under surface of the wing are entirely black; secondaries black, shaded with bluish-green on the outer webs; occiput, hind

neck, scapulars, and the remainder of the upper surface of the body and upper tail-coverts bright olive-green; central tail feathers bluish-green, the adjacent pair on either side black, outer webs green, the others similar, largely tipped with bright yellow, the outermost pair being bright yellow, with a lanceolate stripe of black on their inner web towards the base; chest and breast bright crimson, the sides and flanks green, abdomen and under tail-coverts bright yellow, under wing-coverts and axillaries deep indigo-blue, the margins of the shoulders slightly lighter, bill black horn colour towards the tip, feet dark brown.

Remark. The female differs in being slightly duller in plumage and having no crimson on the breast.

Habitat. Interior, South Australia, West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	7·4	4·5	4·25	0·53	0·45	0·52	0·57
A 2 ♂	7·2	4·45	4·2	0·55	0·42	0·5	0·58
A 3 ♀	6·9	4·1	3·9	0·52	0·4	0·5	0·55
† ♀	6·6	4·2	3·5	0·52	0·41	0·53	0·55
† ♂	7·2	4·5	4	0·5	0·46	0·5	0·53
† ♂	7·9	4·52	4·5	0·5	0·43	0·53	0·57
* ♂	7·4	4·45	4·1	0·55	0·42	0·5	0·55
* ♂	7·5	4·3	4·25	0·52	0·45	0·5	0·55

A 1 ♂ ad. ak., Gawler Ranges, South Australia. Col.
A 2 ♂ mtd., South Australia. Col.
A 3 ♀ mtd., South Australia. Col.
† ♀ semi ad. sk. (Macl. Mus.), South Australia.
† ♂ ad. sk. (Macl. Mus.), South Australia.
† ♂ ad. sk. (Macl. Mus.), South Australia.
* ♂ ad. sk. (Dob. Mus.), Darling River, 1863.
* ♂ ad. sk. (Dob. Mus.), Darling River, 1863.

7. Euphema bourkii.

Bourke's Grass Parrakeet.

Nanodes bourkii, *Mitch. Exped. Inter Austr.* Vol. i. (1838) p. xviii.

Euphema bourkii, *Gould, Bds. Austr.* fol. Vol. v. pl. 43 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *G. R. Gray, List Psitt.* (1859) p. 17 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 102 ; *Gould, Handbk. Bds. Austr.* Vol. ii. p. 80, sp. 438 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 513 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 264.

Platycercus bourki, *Finsch, Die Papag.* Vol. ii. (1868) p. 227, No. 149, sp. 21.

Adult male. An indistinct band across the forehead, shoulders, under wing-coverts, flanks, under tail-coverts, and the side feathers of the upper tail-coverts torquoise-blue ; an indistinct whitish ring around the eye, sides of the head, chin and ear-coverts, dull brown tinged with ashy-white ; crown of the head and all the upper surface dark brown ; chest brown, slightly tinged with rose, breast and abdomen salmon-red, deepest on the central portions ; tail feathers below black, largely marked with white at the tips and margins of the outer webs, occasionally tinged with blue on the upper surface of the outer webs, the four central feathers being blackish-brown above ; upper wing-coverts and scapulars dark brown margined with ashy-white, primary-coverts and the quills blackish-brown, shaded with blue on the outer webs ; bill blackish horn colour, feet brown.

Remark. The females examined differ only in being slightly duller in plumage, and having the markings not so well defined.

Habitat. New South Wales, Interior, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

	Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1	♂	7·95	4·6	4·85	0·56	0·45	0·5	0·55
A 2	♀	7·85	4·62	4·48	0·56	0·42	0·5	0·55
A 3	♀	7·4	4·53	4·35	0·56	0·42	0·5	0·57
*	♂	7·5	4·7	4·3	0·58	0·48	0·5	0·55

A 1 ♂ ad. sk., Interior, New South Wales. Pres.
A 2 ♀ ad. sk., Interior, New South Wales. Pres.
A 3 ♀ ad. sk., Interior, New South Wales. Pres.
* ♂ ad. sk. (Dob. Mus.), Bourke, New South Wales.

13. MELOPSITTACUS.

1. Melopsittacus undulatus.

Warbling Grass Parrakeet.

Psittacus undulatus, *Shaw, Nat. Misc.* pl. 673 (1789-1813).

Undulated Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 179, pl. 26.

Nanodes undulatus, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 277.

Euphema undulata, *Wagl. Mon. Psitt. in Abhand.* (1832) p. 545 ; *Schleg. Mus. P.-B. Psitt.* p. 105.

Sagittifer minor undulatus, *Bourjot de St. Hil. Perr.* tab. 8.

Melopsittacus undulatus, *Gould, Bds. Austr.* fol. Vol. v. pl. 44 ; *id. in Stokes' Voy. Beagle* Vol. i. (1846) App. p. 481 ; *Leich. Journ. Overl. Exp. to Port Essing.* (1847) p. 441 ; *Sturt, Exp. Centr. Austr.* Vol. ii. (1849) App. p. 40, No. 92 ; *G. R. Gray, List Psitt.* (1859) p. 14 ; *G. Bennett, Gath. Nat. in Austr.* (1860) p. 228 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) sp. 439, p. 81 ; *Finsch, Die Papay.* Vol. ii. (1868) p. 137, No 120, sp. 1 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) sp. 514, p. 17 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 264 ; *Cox & Ham. Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 417.

Canary Parrot, *Colonists of New South Wales.* (Gould.)

Betcherrygah, *Natives of the Liverpool Plains.* (Gould.)

Budgerigar, *Residents of New South Wales.* (Probably derived from the preceding native name.)

Adult male. The forehead, lores and cheeks, bright yellow ; ear-coverts yellow, minutely barred with black, immediately below their anterior portion a triangular spot of bright blue ; from three to five roundish black spots on the sides of the cheeks; the throat, under wing-coverts, and all the under surface of the body, the back, rump, upper and under tail-coverts, bright grass-green, the centre tail feathers bluish-green, with a small black tip, the others green, with a broad yellow band through their centre below which is a blackish spot on the inner web, on the under surface they are black at the base, bright yellow on the central portion, and with black tips tinged with green on the margins ; under surface of the central tail feathers, black, with a bluish-green tinge at the base ; primaries below blackish, with an oblong whitish band through the centre of the wing, which becomes broader and of a clear yellow on the central portions of the secondaries, which are all more or less tipped with black,

under primary-coverts black, with greenish-yellow margins and tips; crown and sides of the head green, alternately barred with pale yellow and black; hind-neck, interscapular region, upper wing-coverts, similar, but the bars much broader, and a broader yellow margin to the feathers; scapulars blackish-brown, with a black bar towards the tip, and broadly margined with yellow; secondaries blackish-brown, a broad yellow spot on the central portion of the inner webs, outer webs green; upper wing-coverts of the secondaries green, broadly margined with yellow, primary-coverts green, narrowly tipped with yellow; primaries blackish-brown, all except the first feather greenish on the outer web, a narrow pale green line, formed by spots on the outer webs, extends through the wing, the inner webs with an oblique white concealed spot on their central portion, when the wing is closed the broad yellow tips of the coverts forms a distinct yellow band across the wing; cere bright blue, bill bluish-black, feet dark brown: in females and young males the ceres have a yellowish tinge.

Habitat. Gulf of Carpentaria, New South Wales, Interior, Victoria, South Australia, West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from Nostril.	Tarsus.	Mid Toe.
A 1 ♂	7	3·9	4	0·56	0·49	0·46	0·51
A 2 ♂	7·3	3·85	4·5	0·56	0·48	0·48	0·57
A 3 ♀	6·8	3·65	3·5	0·55	0·48	0·5	0·56
* ♂	7·6	3·85	4·35	0·52	0·41	0·5	0·53
* ♂	7·5	3·9	4·3	0·56	0·5	0·5	0·52

A 1 ♂ ad. sk., New South Wales. Col.
A 2 ♂ ad. sk., New South Wales. Col.
A 3 ♀ ad. sk., South Australia. Pres.
* ♂ ad. sk. (Dob. Mus.), Murray River, Victoria, November, 1866.
* ♂ ad. sk. (Dob. Mus.), Murray River, Victoria, November, 1866.

14. PEZOPORUS.

1. Pezoporus formosus.

Swamp Parrakeet.

Psittacus formosus, *Lath. Ind. Orn.* (1790) Vol. i. p. 103; *Bechst. Lath. Ueb.* p. 86; *Kuhl, Consp. Psitt.* p. 43; *Vieill. Nouv. Dict.* xxv. p. 350.

Psittacus terrestris, *Shaw, Mus. Lev.* (1792) p. 217, pl. 53 ; *id. Nat. Misc.* pl. 228 ; *Less. Traite d'Orn.* (1831) p. 206.

Ground Parrot, *Lath. Syn. Suppl.* ii. (1802) p. 86.

Black Spotted Parrakeet, *Labill. Voy. Search La Perouse*, Vol. ii. (1800) p. 53, pl. x.

Pezoporus formosus, *Illiger, Prod. Syst.* (1811) p. 201 ; *Wagl. Mon. Psitt. in Abhand.* p. 490 ; *Swains. Class. of Bds.* ii. p. 305 ; *G. R. Gray, Gen. Bds.* Vol. ii. (1846) ; *Jard. & Selby, Nat. Libr.* Vol. vi. p. 183, pl. 29 ; *Gould, Bds. Austr.* fol. edit. Vol. v. pl. 46 ; *id. in Stokes' Voy. Beagle*, Vol. i. (1846) App. p. 481 ; *Sturt, Exped. Centr. Austr.* Vol. ii. (1849) App. p. 41, No. 95 ; *Schlegel. Dierentuin* (1864), p. 76 ; *Gould, Handbk. Bds. Austr.* (1865) Vol. ii. p. 86, sp. 441 ; *Finsch, Die Papag.* (1868) Vol. ii. p. 148, No. 121, sp. 1 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17, sp. 515 ; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Ser. (1888) p. 1777 ; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 265.

Swamp Parrakeet, *Colonists of Tasmania.* (Gould.)

Ground Parrakeet, *Residents of New South Wales and Victoria.*

Adult male. General colour above dark rich grass-green, streaked or alternately barred with black and yellow, feathers on the head and hind neck, with a broad black shaft-stripe, the sides of the face, ear-coverts, and chin, without any distinct shaft-line, a very narrow yellow line over the eyelid, across the forehead a narrow band of crimson—in the females and in immature individuals inclining to orange-red—lower part of the hind neck, upper wing-coverts, scapulars, back and remainder of the upper surface strongly barred with oblique bars of black and bright yellow on the central portions of the feathers, the margins being green—centre two tail feathers green above, black below, crossed on both webs with narrow yellow oblique bars, the next on either side black with the outer web green and similarly barred, the outer four feathers light yellow, crossed with curved black bars on the inner webs, which take a dark greenish shade on the outer ; the tips of the feathers whitish, under tail-coverts yellow, tinged with green on the margins and crossed with rather broad black bars ; chest grass-green, with narrow black shaft-lines ; breast, flanks, and sides tinged with green, the greater portion of the feather rich yellow broadly banded with black, the yellow predominating on the abdomen, the lower part of which and the thighs altogether rich yellow, with scarcely a trace of the black

bars; under surface of the wing and coverts dark brown, crossed with an oblique band of pale yellow, formed by a series of large yellow blotches on the inner webs of all the quills; upper wing-coverts of the primaries green on the outer webs, black at the tips and on the inner webs; quills black at the tips and on the inner webs, green on the outer webs, the fourth and remaining inner primaries and secondaries with an oblique spot of light yellow on the outer webs, some of the innermost secondaries with narrow yellow bars on the concealed portion of the outer webs; margins of the shoulders above and below tinged with bluish-green; bill, legs and feet, dark brown.

Remarks. The female does not differ materially in plumage, the band across the forehead is narrower and not so well defined, the yellow cross-bars on the black central portions of the feathers above are narrower and the green margins broader, the chest is also often barred with black. In the young the frontal band is wanting, or indicated only by a yellowish tinge behind the cere, and the general colour above and below is of a more yellowish-green, the bars being not so well defined as in the adults.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Victoria, South Australia, Tasmania, West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	12·3	5·2	3	7·3	0·77	0·52	1	0·87
A 2 ♀	11·3	5·1	2·87	7	0·7	0·5	0·98	0·82
A 3 ♂	14·5	5·5	3	8	0·7	0·5	1	0·85
A 4 ♂	12·45	5·22	2·95	8·4	0·75	0·55	1	0·8
* ♂	11·65	5·1	2·75	7·4	0·78	0·55	0·97	0·86
* ♂	10·6	4·9	2·6	6·3	0·6	0·5	0·9	0·8

A 1 ♂ ad. sk., King George's Sound, Western Australia, 20th March, 1868. Col.

A 2 ♀ ad. sk., King George's Sound, Western Australia, April, 1866. Col.

A 3 ♂ ad. sk., Madden's Plains, New South Wales. Col.

A 4 ♂ ad. sk., Madden's Plains, New South Wales. Col.

* ♂ ad. sk. (Dob. Mus.), Appin, New South Wales.

* ♂ juv. sk., about 6 months old (Dob. Mus.), Appin, New South Wales.

15. GEOPSITTACUS.

1. Geopsittacus occidentalis.

Western Swamp Parrakeet.

Geopsittacus occidentalis, *Gould, Proc. Zool. Soc.* (1861) p. 100 ; *id. Handbk. Bds. Austr.* Vol. ii. (1865) p. 88, sp. 442 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 516.

Pezoporus occidentalis, *Finsch, Die Papag.* Vol. ii. (1868) p. 151, No. 122, sp. 2.

Adult male. All the upper surface dull grass-green ; feathers of the head broadly streaked down the centre with black, ear-coverts grass-green ; central portion of feathers on the hind neck and interscapular region black, with a lanceolate stripe of yellow along the shaft-line, feathers of the rump and upper tail-coverts similar, the yellow taking the form of broken transverse bars across the black central portion, leaving a broad green margin on all the feathers, scapulars and smaller wing-coverts similar, the bars being not so well defined or reduced into roundish spots, and the green margins of the feathers being broader, quills dark brown shaded with green on the outer webs ; primaries (with the exception of the first three or four feathers) and the secondaries with a large yellow blotch on the inner web, and a smaller one on the outer, forming a yellow band across the wing visible on both surfaces ; the primary-coverts in some specimens are altogether brown, with an ashy-white margin, under wing-coverts ashy-brown, occasionally tinged with green ; feathers around the chin and lower mandible yellow, those on the chest banded alternately with saggitate markings of black and yellow, the margins of the feathers being green ; sides of the body and flanks yellow, margined with green and banded with black ; the centre of the abdomen, thighs, and under tail-coverts bright yellow, with only here and there indications of the black cross bands ; outer tail feathers alternately banded with irregular markings of black and yellow, the black markings confluent on the shaft, the yellow markings becoming gradually less in extent towards the central tail feathers, which have only indications of narrow yellow lines, which in some instances disappear entirely on the inner web ; bill horn colour, legs varying from flesh colour to reddish-brown.

Remarks. The female is similar to the male. In some specimens the green margins of the feathers are much wider, in others the yellow and black bands occupy the whole of the feather. In one very old specimen examined, the whole of the abdomen and under tail-coverts are bright yellow, but they usually show traces of narrow black bands.

Habitat. South Australia, West and South-West Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Outer Tail Feathers.	Central Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♀	8·4	5·7	2·65	4·6	0·7	0·5	0·85	0·7
A 2 ♂	8·5	5·75	2·65	4·5	0·7	0·5	0·8	0·7
A 3 ♂	8·4	5·6	2·6	4·5	0·7	0·5	0·88	0·72
* ♀	9·1	5·8	2·75	4·55	0·72	0·55	0·87	0·8
* ♂	9	5·9	2·55	4·4	0·7	0·55	0·86	0·8

A 1 ♀ ad. sk., Gawler Ranges, South Australia, 1880. Pres.
A 2 ♂ ad. sk., Gawler Ranges, South Australia, 1880.
A 3 ♂ ad. sk., Gawler Ranges, South Australia, 1880.
* ♀ ad. sk. (Dob. Mus.), South Australia, 12th November, 1872.
* ♂ ad. sk. (Dob. Mus.), South Australia, 12th November, 1872.

Fam. TRICHOGLOSSIDÆ.

16. LATHAMUS.

1. Lathamus discolor.

Swift Lorikeet.

Psittacus discolor, *Shaw, in White's Voy. to N.S.W.* (1790) pl. opp. p. 263 ; *id. Gen. Zool.* viii. p. 466 ; *Vieill. Nouv. Dict.* xxv. p. 346 ; *Lesson, Voy. Coq.* (1826) pp. 401-630 ; *Kuhl, Consp. in Nov. Acta,* Vol. x. p. 48 (juv.).

Red-shouldered Parrakeet, *Phill. Voy. Botany Bay* (1790) pl. opp. p. 146 ; *Lath. Gen. Syn. Suppl.* ii. (1802) p. 90 ; *id. Gen. Hist.* ii. (1822) p. 176.

Psittacus humeralis, *Kuhl. Consp. Psitt. in Nova Acta,* Vol. x. p. 47.

Psittacus australis, *Kuhl. Consp. Psitt. in Nova Acta,* Vol. x. p. 48.

Psittacus banksianus, *Vieill. Nouv. Dict. d'Hist. Nat.* tom. xxv. p. 342.

Lathamus rubrifrons, *Less. Traité d'Orn.* (1831) p. 205.

Psittacus lathami, *Bechst. Lath. Uebers der Vög.* p. 81, pl. 8.

Euphema discolor, *Wagl. Mon. Psitt. in Abhand.* Vol. i. p. 545.

Trichoglossus discolor, *Gray, List Psitt.* (1859) p. 63; *Finsch, Die Papag.* Vol. iii. (1868) p. 863, No. 338, sp. 19.

Nanodes discolor, *Vig. & Horsf. in Linn. Trans.* Vol. xv. (1826) p. 276; *Mitchell, Exped. Inter. Austr.* Vol. i. (1838) p. xviii.; *Schleg. Mus. P.-B. Psitt.* (1864) p. 114.

Lathamus discolor, *Gould, Bds. Austr.* fol. Vol. v. pl. 47; *id. Handbk. Bds. Austr.* Vol. ii. (1865) p. 90, sp. 443; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194; *Forbes, Proc. Zool. Soc.* (1879) pp. 167-174, pl. xvi.; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17, sp. 517; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 266; *Cox & Ham. Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 418.

Swift Parrakeet, *Colonists of Tasmania.* (Gould.)

Adult male. General colour above dark rich green, below of a lighter green, inclining to yellowish-green on the abdomen (in young specimens dull green above, yellowish-green below); across the forehead a narrow band of crimson, in front of the eye a spot of bright yellow; crown of the head blue, sides of the face, neck, ear-coverts, and all the upper surface rich deep green; chin from the sides of the lower mandible, and the throat crimson, tinged with yellowish-green next the chest; chest and all the under surface rich bright green, tinged with yellowish-green on the flanks and thighs, and occasionally having a few small spots of crimson; under wing-coverts (with the exception of the outer series of the primary-coverts) and the axillaries and a few spots on the sides adjacent thereto, rich deep crimson; under tail-coverts mesially light dull crimson, tipped and margined with green or yellowish-green, tail feathers below dull brown, the centre two feathers, and the outer margins towards the base of the remainder, except the outer two, dull red, the shafts blackish, and the tips of the feathers violet-blue; basal portion of the inner webs brown, the outer two brown with the outer webs and tips of the feathers blue, shaded with a narrow line of greenish-yellow on their inner webs towards the tip; shoulders and a patch on the lesser upper wing-coverts crimson, margins of the wing, primary-coverts, and the outer webs of the adjacent secondary-coverts rich deep blue, remainder of the secondary-coverts and the scapulars rich green like the back; the smaller scapulars with a spot of crimson at the tip of the inner web; primaries black, all except the first quill with a narrow line of yellow on the outer web, shaded on the margins of the inner webs with a lighter tint; secondaries black, with a slightly wider margin of green on the outer web, but not quite reaching to the tips of the feathers.

Remarks. In the females and semi-adult males, the markings although similar are duller and not so well defined, the upper surface is of a duller green, and the under surface has a yellowish tinge. In some very old examples there is a bluish shade on the sides of the face, and a narrow line of yellow round the throat.

Habitat. Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, Tasmania. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail Feathers.	Tail Feathers.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid Toe.
A 1 ♂	9	4·8	2·5	5·1	0·68	0·47	0·58	0·68
A 2 ♂	9	4·8	2·37	5·2	0·67	0·46	0·57	0·68
A 3 ♀	9	4·7	2·3	5	0·62	0·46	0·56	0·65
* ♂	9·3	4·8	2·5	5·35	0·65	0·48	0·58	0·65
* ♀	9·4	4·85	2·5	5·1	0·65	0·48	0·58	0·65

A 1 ♂ ad. sk., Tasmania, April, 1867. Col.
A 2 ♂ ad. sk., Tasmania. Pch.
A 3 ♀ ad. sk., Tasmania. Col.
* ♂ ad. sk. (Dob. Mus.), Dobroyde, New South Wales, 1865.
* ♀ ad. sk. (Dob. Mus.), Dobroyde, New South Wales, 1865.

17. TRICHOGLOSSUS.

1. Trichoglossus novæ-hollandiæ.

Blue-bellied Lorikeet, Blue Mountain Parrot, &c.

Psittacus novæ-hollandiæ, *Gmel. Edit. Linn. Syst. Nat.* (1788) tom. i. p. 316.

Blue-bellied Parrot, *White, Journ. Voy. to N.S.W.* (1790) pl. opp. p. 140 ; *Phill. Voy. Bot. Bay*, pl. opp. p. 140.

Red-breasted Parrot, *Lath. Gen. Hist.* ii. (1822) p. 122-3.

Psittacus haematodus, *Vieill. Enc. Méth.* p. 1386.

Psittacus cyanogaster, *Shaw, Gen. Zool.* Vol. viii. p. 413, pl. 59.

Trichoglossus haematodus, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 289 ; *Licht, Nomencl.* (1854) p. 72.

Trichoglossus multicolor, *Wagl. Mon. Psitt.* p. 553 ; *G. R. Gray, Gen. Bds.* Vol. ii. p. 411 ; *Bonap. Rev. et Mag. de Zool.* (1854) p. 157 ; *G. R. Gray, List Psitt.* (1859) p. 60 ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 108 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 93, sp. 444.

Australasia novæ-hollandiæ, *Less. Traité d'Orn.* (1831) p. 209.

Trichoglossus hæmatopus, *Steph. Cont. of Shaw's Gen. Zool.* Vol. xiv. p. 129.

Trichoglossus swainsonii, *Jard. & Selb. Ill. Orn.* Vol. iii. pl. 112 ; *Swains. Zool. Ill.* iii. pl. 92 ; *Gould, Bds. Austr.* fol. edit. Vol. v. pl. 48 ; *id. in Stokes' Voy. of the Beagle,* Vol. i. (1846) App. p. 481 ; *G. Bennett, Gath. of a Nat. in Austr.* (1860) p. 227.

Trichoglossus novæ-hollandiæ, *Blyth, Cat. Bds. As. Soc.* (1849) p. 11 ; *Finsch, Die Papag.* Vol. iii. (1868) p. 820, No. 320, sp. 1 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 194 ; *Coppinger, Cruise of the Alert* (1883) pp. 183, 208 ; *Sharpe, Voy. Alert,* (1884) p. 25 ; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17, sp. 518 ; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Ser. (1888) p. 1777 ; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 266 ; *Cox & Ham. Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 419 ; *De Vis, Rep. Sci. Exped. N. Queensld.* (1889) p. 53.

War-rín, *Aborigines of New South Wales.* (Gould.)

Adult male. Head, face and throat, and the abdomen, rich cobalt-blue, the feathers on the nape inclining to purple, and being ashy-white at the base ; the exposed portions of all the feathers of the upper surface of the body, wings and tail, bright grass-green, a narrow band of pale green round the hind neck, the feathers of the mantle marbled or mottled with bright yellow and crimson, the tips and margins of the feathers being green ; upper tail-coverts narrowly margined with yellow in very old specimens, and having a shade of purplish-brown at the base, shafts of the tail feathers and the basal portion of the inner webs of the central four feathers on their upper surface purplish-brown, the remainder of the feathers above grass-green, yellowish-brown below on the central four feathers ; the remainder of the feathers broadly margined with yellow, on the outer series the yellow extends over the whole surface of the inner web, under tail-coverts yellow, tipped with green, mottled with red at the base,

the adjacent flank feathers in very old specimens similar, the feathers on the legs mottled with red and orange, on the outer portions of the thighs broadly tipped with green, those on the abdomen bright blue, but on the sides of the abdomen broadly barred with crimson and yellow, tipped with green ; the concealed portions of the feathers between the thighs and on the abdomen in some specimens, crimson ; under wing-coverts crimson, axillaries narrowly margined at the tip with yellow or green ; the margins of the shoulders green, primaries and secondaries more or less green on the outer webs, having a large blotch of yellow on the inner webs, and becoming blackish towards the tips ; the chest and breast are crimson, more or less mottled with yellow on the sides, occasionally feathers on the lower portions of the throat are mottled with the same colours ; bill orange-red, yellow at the tip, legs and feet olive-brown.

Remark. The sexes are alike in plumage.

Habitat. Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, Tasmania. (*Ramsay.*)

Measurements of averaged sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid toe.
A 1 ♂	11·95	6·5	6·3	0·97	0·8	1·02	0·7	0·87
A 2 ♂	11·95	6·4	6·4	0·9	0·75	1·03	0·75	0·85
A 3 ♀	11	6·1	6	0·92	0·8	1·03	0·72	0·32
A 4 ♀	11	5·95	5·65	0·85	0·7	0·98	0·72	0·82
* ♀	11·45	5·95	6·1	0·9	0·75	1·03	0·72	0·81
* ♂	12·2	6·3	6·75	0·92	0·75	1·05	0·72	0·82

A 1 ♂ ad. sk., Gayndah, Burnett River, Queensland, Sept., 1870. Col.
A 2 ♂ ad. sk., Ashfield, Sydney, New South Wales, June, 1865. Col.
A 3 ♀ ad. sk., Ballina, Richmond River, New South Wales. Pres.
A 4 ♀ ad. sk., Ballina, Richmond River, New South Wales. Pres.
* ♀ ad. sk. (Dob. Mus.), Dobroyde, New South Wales, May, 1860.
* ♂ ad. sk. (Dob. Mus.), Dobroyde, New South Wales, April, 1865.

2. Trichoglossus rubritorquatus.

Red-collared Lorikeet.

Trichoglossus rubritorquis, *Vig. & Horsf. Linn. Trans.* xv. (1826) p. 291 ; *Wagl. Mon. Psitt.* p. 552 ; *Gould, Bds. Austr.* Vol. v. pl. 49 ; *id. in Stokes' Voy. of the Beagle,* (1846) App. p. 481 ; *G. R. Gray, List Psitt.* (1859) p. 60 ; *Bonap. Rev. et Mag. de Zool.* (1854) ; *Schleg. Mus. P.-B. Psitt.* (1864) p. 108 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 95, sp. 445 ; *Masters, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 274 ; *Coppinger, Cruise of the Alert* (1883) p. 183 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17.

Trichoglossus rubritorquatus, *Finsch, Die Papag.* Vol. iii. (1868) p. 824, No. 311, sp. 2.

Adult male. Wings, back and tail above, bright grass-green ; the whole of the head and throat rich blue ; chest, breast, and a more or less broad band encircling the nape rich orange, the central portions of the feathers crimson ; hind neck rich blue, feathers adjacent to the interscapular region crimson, tipped with blue, those on the upper part tipped with green ; under wing-coverts and axillaries rich crimson, the lower part of the breast and the abdomen green in young birds, but becoming a dark bluish-green, almost black, in the adults ; upper part of the flanks yellowish, tinged with green, thighs green, washed with yellow on the inner side ; under tail-coverts yellow at the base, broadly tipped with green ; under surface of the tail, yellowish, inclined to orange on the basal portions of the web ; primaries below yellow, with a broad tip and margin of black, secondaries black, with a large oval yellow spot, which occupies nearly the whole of the inner web except at the tip, decreasing in size on the scapulars, which are otherwise similar ; bill orange-yellow, feet and claws black.

Young. Similar to the adult, but of a more yellowish-green above, held in certain lights the feathers appear to be washed with pale satiny-yellow, the collar round the nape crimson, tipped with yellow ; the hind neck feathers are light green, broadly tipped with blue, those adjacent to the interscapular region crimson, broadly tipped with green ; head, ear-coverts, cheeks and throat as in the adult ; breast lighter, abdomen dull green, washed with bluish-green ; flank-feathers and under tail-coverts yellow, tipped with green ; bill blackish-horn colour, feet black.

Habitat. Derby (N.W. Australia), Port Darwin, Port Essington, Cape York. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid Toe.
A 1 ♂	10	5·8	5·5	0·92	0·75	1·15	0·67	0·8
A 2 ♂	11	6	6	1·05	0·87	1·2	0·65	0·85
A 3 ♂	10·75	6	6	1	0·8	1·15	0·65	0·88
A 4 ♂	10·75	6	5·75	0·98	0·8	1·15	0·7	0·85
A 5 ♀	10·5	5·4	5·3	0·9	0·73	1·02	0·7	0·8

A 1 ♂ ad. sk., Northern Territory, 1870. Col.
A 2 ♂ ad. sk., Derby, North-Western Australia. Pch.
A 3 ♂ ad. sk., Derby, North-Western Australia. Pch.
A 4 ♂ ad. sk., Yam Creek, North Australia. Col.
A 5 ♀ ad. sk., Port Essington. Col.

3. Trichoglossus versicolor.

Varied Lorikeet.

Trichoglossus versicolor, *Vig. in Lear's Ill. Psitt.* pl. 36; *Gould, Bds Austr.* fol. Vol. v. pl. 51; *Hombr. et Jacq. Voy. au Pole Sud.* tom. iii. pl. 24; *Gould, in Stokes' Voy. of the Beagle* (1846) Vol. i. App. p. 481; *Leich. Journ. Overl. Exp. to Port Essington* (1847) p. 441; *Finsch, Die Papag.* Vol. iii. (1868) p. 853, No. 334, sp. 15; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 195; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 521.

Conurus lori scintillatus, *Bourj. de St. Hil. Perr.* tab. 52.

Psitteuteles versicolor, *Bonap. Rev. et Mag. de Zool.* (1854) p. 157.

Ptilosclera versicolor, *Bonap. Comp. Rend.* (1857); *Gould, Handbk. Bds. Austr.* Vol. ii. p. 98, sp. 447; *Masters, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 274.

Coriphilus versicolor, *G. R. Gray, List of Spec. Bds. Brit. Mus. Coll.* pt. iii. sec. ii. p. 59.

Nanodes versicolor, *Schleg. Mus. P.-B. Psitt.* (1864) p. 116.

We̋-ro-ole, *Aborigines of Port Essington.* (Gould.)

Adult male. Forehead, crown of the head, and a small spot in front of the eye, rich red; mesial portion of the feathers on the hind neck and throat, dull blue, with a narrow shaft-line of bright yellow at their tips; the breast dull purplish-red, inclining to cinnabar-red nearest the wings, with a narrow lanceolate shaft-stripe of bright yellow at the tip of each feather; ear-coverts

bright yellow, blue at the base; all the under surface light grass-green, with a narrow lanceolate stripe of yellow at the tip, fading into greenish-yellow on the flanks and abdomen; under tail-coverts bright green, tail below light yellowish-green, slightly more yellow on the inner webs of the feathers, above yellowish-green, shafts of feathers dark brown; the back, upper wing-coverts, scapulars, rump and upper tail-coverts light grass-green, with a stripe of light yellowish-green at the end of the feathers; primaries and secondaries dark brown on the inner webs, the exposed portions above bright green, the inner margins of some of the scapulars and secondary-coverts on the under surface occasionally tinged with yellow, the under surface of the quills and the outer series of the primary wing-coverts below dark brown; bill yellow, feet blackish-brown.

The female is similar to the male, but in the specimens examined the colours are paler and not so well defined.

Remarks. In some specimens the yellow tips to the feathers on the hind neck and the ear-coverts occupy a larger portion of the feathers, and the blue mesial portion is almost hidden. In others the rosy- or cinnabar-red of the chest feathers predominates, and forms a reddish patch near the wing, on the margin of which it sometimes forms a red spot. In a very old specimen the whole of the chest and flanks, under wing-coverts and interscapular region, is mesially suffused with cinnabar-red, the feathers having the normal lanceolate stripe of yellow at the tip; the scapulars below and some of the adjacent under wing-coverts are tinged with cinnabar-red. In other specimens the cinnabar-red has a violet tinge, more defined on the upper portion adjoining the throat.

Habitat. Derby (N. W. Australia), Port Darwin, Port Essington, Gulf of Carpentaria, Cape York (*Ramsay.*)

Measurements of average sized specimens from different localities.

	Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1	♂	6·75	4·8	3	0·7	0·5	0·52	0·65
A 2	♀	6·2	4·62	2·95	0·68	0·5	0·5	0·63
A 3	♂	6·5	4·58	2·75	0·7	0·52	0·5	0·6
A 4	♂	7	4·7	3	0·67	0·53	0·48	0·6
B 1	♀	6·2	4·5	2·8	0·66	0·5	0·5	0·6

A 1 ♂ ad. sk., Derby, North-Western Australia. Pch.
A 2 ♀ ad. sk., Derby, North-Western Australia. Pch.
A 3 ♂ ad. sk., Cape York, Northern Queensland. Pch.
A 4 ♂ ad. sk., Northern Territory, 1870. Col.
B 1 ♀ semi ad. sk., Northern Territory, 1870. Col.

4. Trichoglossus chlorolepidotus.

Scaly-breasted Lorikeet.

Psittacus chlorolepidotus, *Kuhl, Consp. Psitt.* Vol. x. (1820) p. 48.

Spotted Parrot, *Lath. Gen. Hist.* Vol. ii. (1822) p. 197.

Trichoglossus matoni, *(Lath. M.S.) Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 291.

Australasia viridis, *Less. Traité d'Orn.* p. 210.

Trichoglossus chlorolepidotus, *Wagl. Mon. Psitt.* p. 550; *Jard. & Selb. Ill. Orn.* pl. 110; *Gould, Bds. Austr.* fol. Vol. v. pl. 50; *G. R. Gray, List Psitt.* (1859) p. 62; *Bonap. Rev. et Mag. de Zool.* (1854); *Schleg, Mus. P.-B. Psitt.* (1864) p. 111; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 96; *Finsch, Die Papag.* Vol. iii. (1868) p. 847; *Broadb. Proc. Roy. Soc. Queensld.* Vol. iv. (1877) p. 27; *Sharpe, Voy. Alert,* (1884) p. 25, No. 55; *Broadb. Proc. Roy. Soc. Queensld.* Vol. ii. (1885) p. 124; *Ramsay, Proc. Linn. Soc.* Vol. ii. (1887) p. 195; *id. Tab. List Austr. Bds.* (1888) p. 17; *North, Proc. Linn. Soc. N.S.W.* Vol. ii. (1887) 2nd Ser. p. 986; *id.* Vol. iii. (1888) p. 1777; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 267; *De Vis, Rep. Sci. Exp. N. Queensld.* (1889) p. 33.

Adult. The whole of the head and all the upper surface of the body, wings, and tail, bright grass-green, the mesial portions of the feathers of the neck and mantle bright yellow, occasionally spotted on the side with crimson, all broadly tipped with green; all the under surface from the throat yellow, margined with green, giving these portions a scaly appearance; the bases of the feathers are ashy-brown on the sides of the abdomen, the yellow portion of the feathers are spotted with crimson; under wing-coverts and axillaries crimson; feathers on the margins of the wing tipped with green; primaries and secondaries blackish below, with a large spot of lighter crimson on their inner webs, on the upper surface of the feathers these spots are narrowly washed with yellow on the primaries and secondaries; thighs bright green, under tail-coverts yellowish at the base green at the tips, tail yellowish-green below, basal portion margined or washed with dull red. In very adult birds the yellow bars on the breast feathers become in some instances more or less blotched with crimson, and the crown of the head has a bluish-green tinge; bill bright orange, feet blackish-brown.

Habitat. Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid Toe.
A 1 ♂	8·6	5·25	4·3	0·85	0·7	1	0·65	0·7
A 2 ♀	8·5	5·3	4·2	0·8	0·65	0·95	0·68	0·75
A 3 ♂	8·5	5·3	4·5	0·8	0·65	1	0·6	0·7
A 4 ♂	8·3	5·4	4·15	0·8	0·67	0·97	0·67	0·75
* ♂	8·4	5·2	4	0·82	0·65	0·93	0·65	0·8

A 1 ♂ ad. sk., New South Wales. Pch.
A 2 ♀ ad. sk., Maryborough, Queensland, July, 1870. Col.
A 3 ♂ ad. sk., Cairns, Queensland, January, 1888. Col.
A 4 ♂ ad. sk., Wide Bay, Queensland, January, 1868. Col.
* ♂ ad. sk. (Dob. Mus.), Hawkesbury River, New South Wales.

5. Trichoglossus porphyrocephalus.

Porphyry-crowned Lorikeet.

Trichoglossus porphyreocephalus, *Dietrichsen, Linn. Trans.* Vol. xvii. p. 553 ; *G. R. Gray, Gen. Bds.* ii. No. 12 ; *id. List Psitt.* (1859) p. 64.

Psittacus purpurea, *Dict. Phil. Mag.* (1832) Vol. xi. p. 387.

Psittacus purpureus, *Wagl. Mon. Psitt. in Abhand.* Vol. x. p. 747.

Psittacula florentis, *Bourj. de St. Hil. Supp. Le Vaill. Hist. des Perr.* pl. 84.

Trichoglossus purpureus, *Licht. Nomencl. Av.* (1854) p. 72.

Glossopsitta porphyrocephalus, *Bonap. Rev et Mag. de Zool.* (1854) p. 157 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 102, sp. 449.

Nanodes porphyreocephalus, *Schleg. Mus. P.-B. Psitt.* (1864) p. 115.

Trichoglossus porphyrocephalus, *Gould, Bds. Austr.* fol. Vol. v. pl. 53 ; *Sturt, Exped. Centr. Austr.* Vol. ii. (1849) App. p. 41, No. 94 ; *Finsch, Die Papag.* (1868) Vol. iii. p. 862 ; *Ramsay, Proc. Linn. Soc.* Vol. ii. (1877) p. 195 ; *id. Tab. List Austr. Bds.* (1888) p. 17, sp. 523.

Kow″-ar, *Aborigines of Western Australia.* (Gould.)

Adult male. Forehead orange tinged with red, with a small spot of crimson on either side in front of the eye ; crown of the head purplish-blue or deep violet, hind portion of the head and

nape light grass-green, becoming olive on the mantle; ear-coverts orange-red, tinged with yellow, in some specimens the yellow predominating; the shoulders, margins of the wing above and below, bright blue; wing-coverts and scapulars green, blackish on their inner webs; first primary and the remainder of the quill feathers blackish above, narrowly margined with green on the outer webs, which have also externally a very narrow line of yellow, some of the scapulars also narrowly margined with yellow on the outer webs; interscapular region, back, upper tail-coverts, and tail above bright grass-green; chin, breast, chest and abdomen, ashy, washed with very pale blue, becoming green on the flank feathers, which are mesially yellow, and occasionally mottled with crimson, feathers on the thighs and under tail-coverts light green, yellowish towards the base, tail feathers below yellowish, dark brown at the extreme tips, the outermost four feathers on either side with an indistinct spot of orange-red; axillaries and under coverts of the secondaries rich crimson; outer series of the primary-coverts, and all the under surface of the wing-coverts, silvery-brown; bill black, feet blackish-brown.

Females and young males. The females and young males can scarcely be distinguished by their plumage, which is only a little less bright than in the adult males, the olive tint on the hind neck is less defined, and the orange and red tints of the forehead and ear-coverts incline more to yellow.

Remarks. In some specimens the axillaries and adjacent under coverts of the secondaries are tinged or tipped with orange, and a broad margin of blue extends from the shoulder to the outer series of the under-coverts of the primaries. Some specimens in the Museum Collection sexed as females are almost as bright in their colours as the adult males described above.

Habitat. New South Wales, South Australia, West and South-West Australia. (*Ramsay.*)

Measurements of averaged sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♀	6·1	4	2·7	0·6	0·48	0·5	0·6
A 2 ♂	6·25	4·2	2·8	0·6	0·5	0·48	0·57
A 3 ♂	5.9	4	2·6	0·6	0·45	0·5	0·58
A 4 ♀	7·3	4·2	3	0·6	0·43	0·58	0·67
A 5 ♀	7·5	4·3	3·01	0·6	0·43	0·58	0·63
A 6 ♂	7·4	4·3	3·02	0·61	0·42	0·57	0·65

A 1 ♀ ad. sk., King George's Sound, Western Australia, April, 1866. Col.

A 2 ♂ ad. sk., Mongup, Salt River, Western Australia, Jan., 1867. Col.

A 3 ♂ ad. sk., South Australia. Pch.

A 4 ♀ (measurements in the flesh) ad. mtd., Adelaide, South Australia. July, 1887. Col.

A 5 ♀ (measurements in the flesh) ad. mtd., Adelaide, South Australia. July, 1887. Col.

A 6 ♂ (measurements in the flesh) ad. mtd., Adelaide, South Australia. July, 1887. Col.

6. Trichoglossus concinnus.

Musk Lorikeet.

Psittacus concinnus, *Shaw, Nat. Miscl.* (1789) pl. 87.

Psittacus australis, *Lath. Ind. Orn.* (1790) Vol. i. p. 104.

Pacific Parrakeet, *Phill. Voy. Bot. Bay* (1790) pl. opp. p. 142.

Crimson-fronted Parrot, *Lath. Gen. Syn. Suppl.* ii. (1802) p. 87 ; *id. Gen. Hist.* Vol. ii. (1822) p. 181.

Psittacus pacificus, *Shaw, Gen. Zool.* Vol. viii. p. 419.

Psittacus rubrifrons, *Bechst. Uebers. der Vög. Lath.* p. 84, pl. 11.

Lathamus concinnus, *Less. Traité d'Orn.* p. 206.

Trichoglossus concinnus, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 292 ; *Jard. & Selb. Illustr. of Orn.* Vol. i. pl. 34 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 52 ; *Finsch, Die Pap.* Vol. iii. (1868) p. 857 ; *Forbes, Proc. Zool. Soc.* (1879) p. 172, pl. xvi. ; *Legge, Proc. Roy. Soc.* (1886) p. 238 ; *Ramsay, Tab. List Austr. Bds.* (1888) p. 17 ; *Cox & Ham. Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 418.

Nanodes australis, *Schleg. Mus. P.-B. Psitt.* (1864) p. 114.

Trichoglossus australis, *Wagl. Mon. Psitt.* tom. i. p. 549.

Glossopsitta australis, *Bonap. Rev. et Mag. de Zool.* (1854) p. 157 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 100 ; *North, Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 268.

La Perruche á bandeau rouge, *Lev. Perr.* t. 48.

Glossopsitta concinnus, *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Ser. (1888) p. 1778.

Coolich, *Aborigines of New South Wales.* (Gould.)

Adult male. Forehead and ear-coverts bright crimson, head green, washed with blue, which is more conspicuous on the sides ;

hind neck olive, all the rest of the upper surface of the body, wings and tail, bright grass-green ; first primaries and the inner webs of all the rest of the wing feathers, except at the tip which are green, blackish-brown ; all the under surface from the chin bright grass-green, a patch of bright yellow on the side of the breast, sometimes extending towards the flanks ; under wing-coverts bright green, the outer series and the under surface of the wing dark brown ; under tail-coverts green, yellowish towards the base, tail feathers yellowish-green below, with a red oblong spot on the inner webs above and below of the four outermost feathers, which is almost lost on the fourth, central two feathers without any indication of this red spot ; bill blackish horn colour, orange at the tip, feet blackish-brown.

Female. Somewhat similar to the male, but the crimson on the forehead and cheeks lighter and not so well defined, the hind neck green like the back or with only a trace of olive. Young birds are similar to the female but duller.

Remarks. Some specimens show a much larger yellow patch on the sides of the breast, probably abnormal ; the feathers of the throat, chest, hind neck, and the tips of the ear-coverts mottled with yellow. Others have a few yellow spots on the breast, and the crown of the head inclining to blue.

A ♂ specimen of *Trichoglossus concinnus* in the flesh, just received from Germanton, New South Wales, measures as follows :—total length 9 inches, wing 5, tail 3·9, bill from forehead 0·68, from nostril 0·52, tarsus 0·55, mid toe 0·68. Feet pale yellowish-brown.

Habitat. Rockingham Bay, Port Denison; Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, Tasmania. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Culmen.	Tarsus.	Mid Toe.
A 1 ♀	8·4	5·25	4	0·75	0·55	0·9	0·55	0·65
A 2 ♀	8	5·1	3·7	0·68	0·5	0·85	0·55	0·7
A 3 ♂	8·7	5·17	4·2	0·7	0·53	0·8	0·6	0·65
A 4 ♂	9	5·2	4·1	0·68	0·57	0·85	0·55	0·65
A 5 ♀	8·8	5	3·8	0·7	0·52	0·8	0·6	0·67
A 6 ♂	9	5·1	4	0·67	0·5	0·82	0·57	0·65
B 1 ♀	7·8	4·7	3·7	0·7	0·5	0·8	0·57	0·65
* ♂	8	5	3·8	0·7	0·55	0·8	0·55	0·65

A 1 ♀ ad. sk., Lithgow, New South Wales. Exch.
A 2 ♀ ad. sk., Ashfield, Sydney, New South Wales, 1865. Col.
A 3 ♂ ad. sk., Ouse River, Tasmania, April, 1867. Col.
A 4 ♂ (In the flesh), New South Wales, 1890. Pres.
A 5 ♀ (In the flesh), New South Wales, 1890. Pres.
A 6 ♂ (In the flesh), New South Wales, 1890. Pres.
B 1 ♀ semi ad., New South Wales. Col.
* ♂ ad. sk. (Dob. Mus.), Dobroyde, New South Wales, April, 1865.

7. Trichoglossus pusillus.

Little Lorikeet.

Psittacus pusillus, *Shaw, in White's Journ. of a Voy. to N.S.W.* (1790) p. 262 and pl. opp. p. 262 ; *Lath. Ind. Orn.* (1790) p. 106 ; *Kuhl, Consp.* p. 47 ; *Voigt, Cuv. Uebers* (1831) p. 735 ; *Lesson, Voy. Coq.* (1826) p. 630 ; *Vieill. Nouv. Dict.* p. 376.

Small Parrakeet, *Lath. Gen. Syn.* Vol. ii. p. 88 ; *id. Gen. Hist.* Vol. ii. (1822) p. 194.

Psittacus nuchalis, *Bechst, Lath. Ueb.* p. 81, pl. 9, fig. 1.

Trichoglossus pusillus, *Vig. & Horsf. Linn. Trans.* Vol. xv. (1826) p. 293 ; *Gould, Bds. Austr.* fol. Vol. v. pl. 54 ; *G. R. Gray, List Psitt.* (1859) p. 64 ; *Finsch, Die Papag.* Vol. iii. (1868) p. 860, No. 336, sp. 17 ; *Legge, Proc. Roy. Soc. Tas.* (1886) p. 238 ; *Ramsay, Tab. List Austr. Bds.* (1888) sp. 524, p. 17 ; *Cox & Ham. Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Ser. (1889) p. 418.

Lathamus pusillus, *Less. Traité d'Orn.* p. 206.

Glossopsitta pusilla, *Bonap. Rev. et Mag. de Zool.* (1854) p. 157 ; *Gould, Handbk. Bds. Austr.* Vol. ii. (1865) p. 103, sp. 450.

Coriphilus pusillus, *Schleg. Dierentuin* (1864) p. 78.

Nanodes pusillus, *Schleg. Mus. P.-B. Psitt.* (1864) p. 115.

La Perruche à face rouge, *Levaill. Perr.* tom. i. p. 124, pl. 62.

Glossopsitta pusillus, *North, Proc. Linn. Soc. N.S.W.* Vol. iii. (1888) p. 1778 ; *id. Austr. Mus. Cat.* No. 12, *Nests & Eggs Austr. Bds.* (1889) p. 268.

Jerryang, *Aborigines of New South Wales.* (Gould.)

Adult male. Forehead and the whole of the face crimson, crown of the head, ear-coverts and nape, grass-green, hind neck olive, the remainder of the upper surface of the body, wings and tail, grass-green ; outer primaries, their tips and inner webs, and all the quill feathers and scapulars blackish-brown, primary-coverts similar, under wing-coverts and axillaries green, all the under

surface of the wing dark brown ; the under surface of the body and the under tail-coverts grass-green, becoming paler on the abdomen ; under surface of the tail feathers yellowish, with a spot of bright crimson on the basal portion of the inner webs of all except the central four feathers ; bill and legs blackish-brown.

Female. Similar to the male, the back of the neck only slightly tinged with olive, the crimson on the forehead and face lighter, and not so well defined.

Remark. The ear-coverts are lighter in some, and inclined to yellowish-green, and occasionally the feathers immediately below them are mottled with orange or red mesially.

Habitat. Rockingham Bay, Port Denison, Wide Bay District. Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria, South Australia, Tasmania, (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Tarsus.	Mid toe.
A 1 ♂	5·5	3·87	2·5	0·58	0·48	0·4	0·55
A 2 ♀	5·65	3·8	2·3	0·6	0·43	0·45	0·57
A 3 ♂	6	4	2·7	0·6	0·43	0·45	0·57
A 4 ♀	5·8	3·9	2·5	0·58	0·45	0·45	0 55
A 5 ♀	6	4·2	2·8	0·6	0·45	0·43	0·58

A 1 ♂ ad. ak., Gayndah, Burnett River, Queensland, Sept., 1870. Col.
A 2 ♀ ad. sk., Ashfield, Sydney, New South Wales, August, 1865. Col.
A 3 ♂ ad. sk., New South Wales. Col.
A 4 ♀ ad. sk., New South Wales. Exch.
A 5 ♀ ad. sk., Bankstown, New South Wales, July, 1887. Pres.

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F. W. White, Printer, 39 Market Street, Sydney.

3

CATALOGUE

OF THE

AUSTRALIAN BIRDS

IN THE

AUSTRALIAN MUSEUM,

AT

SYDNEY, N. S. W.

PART IV.

PICARIÆ.

Suborder HALCYONES.

BY

E. P. RAMSAY, L.L.D., F.R.S.E., &c.,

CURATOR.

SYDNEY:

PRINTED BY ORDER OF THE TRUSTEES.

1894.

INTRODUCTION.

This Part IV. of the Catalogue of Australian Birds, contains a description of all the species of the Sub-order Halcyones or Kingfishers known to inhabit Australia, in all—including varieties—thirteen species, with a list of such specimens as are contained in the Museum; in addition others have been examined in the Macleayan Museum at the University and the Dobroyde Collection at Ashfield, in all about 200 examples coming from various parts of Australia. We trust that our correspondents throughout the Colonies will, by forwarding specimens in various stages of plumage from the nestling to the adult, render our National Collection as complete as possible.

I have much pleasure in acknowledging the care and assiduity bestowed by my Assistant, Mr. A. J. North, in the preparation of this work.

E. P. RAMSAY.

"*Pres.*" stands for Presented.

"*Col.*" „ Collected by Museum employees

"*Pch.*" „ Purchased.

"*Exch.*" „ Exchanged.

"*ad.*" „ adult or full grown.

"*juv.*" „ young.

"*sk.*" „ skin—not "set up."

"*O.C.*" „ Old Collection.

"♂" „ male.

"♀" „ female.

SYSTEMATIC INDEX.

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SUBORDER HALCYONES.

Subfam. DACELONINÆ.

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Order PICARIÆ.

Suborder HALCYONES.

Subfamily DACELONINÆ.

1. DACELO.

1. Dacelo gigas.

Great Brown Kingfisher, Laughing Jackass.

Grand Martin-pêcheur de la Nouvelle Guinée, *Sonn., Voy. Nouv. Guin.*, p. 171, t. cvi. (1776).

Martin-pêcheur de la Nouvelle Guinée, *Daubent, Pl. Enl.* 663 (1780).

Great Brown Kingfisher, *Lath., Gen. Syn.* i part 2, p. 609, (1782); *Shaw in White's Journ. Voy. N.S.W.* pl. opp. p. 137 (1790); *Phill. Voy. Bot. Bay, 2nd edit.* pl. opp. p. 150 (1790).

Alcedo gigas, *Bodd., Tabl. des Pl. Enl.* p. 40 (1783).

Alcedo fusca, *Gmel. edit. Linn. Syst. Nat.* Vol. i. p, 454 (1788 *ex Lath.*).

Alcedo gigantea, *Lath. Ind. Orn.* i. p. 245 (1790); *Bonn. et Vieill. Enc. Meth.* i. p. 282 (1823); *Shaw, Gen. Zool.* Vol. viii. p. 53 (1811).

Dacelo gigantea, *Leach, Zool. Miscl.* Vol. ii. p. 126, pl. cvi. (1815); *Vig. & Horsf., Linn. Trans.* Vol. xv. (1826) p. 204; *Steph., Gen. Zool.* ii. p. 101 (1826); *Bennett, Bush Wander. in N.S.W.* (1834) p. 221; *Gould, Birds Austr.* fol. Vol. ii. pl. 18 (1848); *Sclat., List. Vertebr. An. Zool. Soc.* (1866) p. 90; *Huxley, Proc. Zool. Soc.* 1867, p. 447; *Diggles, Orn. Austr.* pl. 23 (1870); *Schmidt, Proc. Zool. Soc.* 1880, p. 313; *Forbes, Ibis*, 1881 p. 8; *Broadb., Proc. Roy. Soc. Queensld.* Vol. i. 1884, p. 94; *id.* Vol. ii. 1885, p. 120.

Dacelo gigas, *Gray, Gen. Bds.* Vol. i. p. 78 (1846); *id. Cat. Fiss. Brit. Mus.* p. 51 (1848); *Reichb., Handbk. Alced.* p. 40 t. ccccxxvii. fig. 3161–63 (1851); *Cass., Cat. Hal. Phil. Mus.* p. 14 (1852); *Gould, Handbk. Bds. Austr.* Vol. i. (1865) sp. 60, p. 122; *Gray, Hand-l. Bds.* Vol. i. p. 82 (1869); *Sharpe, Mon. Alced.* pl. 112, p. 285 (1868-71);

Schl., *Mus. Pays-Bas*, *Alced. Revue*, p. 11 (1874); *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 179, sp. 61; *Salvad.*, *Orn. Pap. et Molucc.* Vol. i. (1880) p. 499; *Broadb.*, *P.R.S. Queensld.* Vol. ii. 1885, p. 120; *Ramsay*, *Tab. List Austr. Bds.* sp. 67, p. 3 (1888); *North*, *Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, 1888, p. 1774; *Cox & Ham.*, *Proc. Linn. Soc. N.S.W.* 2nd Series, Vol. iv. (1889) p. 401; *North*, *Aus. Mus. Cat.* No. 12, *Nest and Eggs Austr. Bds.* p. 36 (1889); *De Vis*, *Offic. Rep. Sci. Exp. N. Queensld.* p. 33 (1889); *Sharpe*, *Brit. Mus. Cat.* Vol. xvii. p. 204 (1892).

Paralcyon gigas, *Cab. & Heine*, *Mus. Hein Theil* ii. p. 165 (1860).

Gogobera, *Aborigines of New South Wales.*

Kong-ga-ka, *Aborigines of Cairns District, N. Queensland.*

Adult male. Forehead brown, extending in a blackish-brown stripe down the centre of the head reaching to the nape; lores, a narrow ring round the eye, a broad band extending below the eye, and the whole of ear-coverts blackish-brown; nape spot blackish-brown sometimes almost extending round to the ear-coverts; sides of the head from above the eyes and extending round the back of the head white, freckled here and there with brown; the whole of the hindneck, throat, chest and the remainder of the under surface white, with irregular narrow brown crossbars on the concealed portions of the feathers, these crossbars showing on the sides of the body and flanks silky white, with well defined irregular and slightly broader crossbars of dark brown; under wing-coverts and axillaries white, strongly barred with brown, inner series of the under primary-coverts blackish-brown, the outer marginal series edged with white; under tail-coverts with narrow brown bars on concealed portions; primaries dark brown, white at the base, the white forming a blotch on the outer webs of the second to sixth quill, all the quills dark brown tinged with bluish-green on the outer webs except at the tips, and more or less broadly margined on their inner webs towards the base with white; the white extending in a narrow line round the tips of the secondaries; interscapular region, and shoulders brown, median wing-coverts dark brown largely tipped with light silvery-blue, outer series and primary-coverts blackish-brown; feathers of the back almost white with narrow crossbars of brown, the tips white; concealed parts of the rump and median upper tail-coverts dark brown, tips of the feathers light silvery-blue, a more or less distinct spot of white on the webs on the median portion of the feathers; outer and terminal series of the upper tail-coverts barred alternately with rufous and black—two centre tail feathers similarly barred, the tips white, all the other feathers similarly barred the rufous

decreasing, and the white increasing in extent until it occupies nearly the whole of the outermost surface on either side, on two the rufous almost altogether disappearing—the black bars becoming narrow zigzag lines on the tips; under tail-coverts white, under surface of tail white with broad bars of black across the basal half and narrow zigzag lines towards the tips, the rufous showing through on the basal portions where the black bands are broadest. Bill black, lower mandible yellowish-white; iris dark rich brown, legs and feet yellowish.

Female. Similar in plumage to the male, but having less of the silvery-blue tint on the wings and rump, the lower portion of the rump and upper tail-coverts of a deeper rufous with black bars.

Remarks. The young have the frontal feathers barred, and frequently have a tinge of rufous on the ear-coverts and front of the head, but this also occurs in very old females. The feathers on the whole of the under surface of the body are crossed with narrow wavy lines of blackish-brown.

Hab. Rockingham Bay, Wide Bay District, Dawson River, Richmond and Clarence Rivers District, New South Wales, Interior, Victoria, and South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe (s.u.)	Hind toe (s.u.)
A 1 ♀	16	8·8	6	2·85	2·2	3·5	1·05	1·05	1	1·45	0·65
A 2 ♂	16·8	8·4	6·5	2·7	2·1	3	0·9	0·9	0·9	1·5	0·6
A 3 ♀	17	8·8	6·8	2·8	2·1	3·35	1·05	1·05	0·95	1·4	0·6
A 4 ♀	17	9	6·5	3	2·45	3·6	1	0·9	1	1·5	0·6
A 5 ♀	17	9·2	6·8	2·75	2·1	3·35	1·1	1·08	1·1	1·45	0·7
A 6 ♂	17	8·4	6·8	2·7	2	3·2	1	1	1	1·35	0·6
A 7 ♀	16·5	8·3	6·9	2·75	2·25	3·25	1·1	1·03	1	1·4	0·6
B 1 ♂	16·5	8·7	6·3	2·6	2	3·1	1	1	0·9	1·4	0·5

A 1 ♀ ad. sk., Dubbo, New South Wales, July, 1876. Pres.
A 2 ♂ ad. sk., Wide Bay, Queensland, 1867. Col.
A 3 ♀ ad. sk., Clyde River, New South Wales, 27th Aug., 1864. Col.
A 4 ♀ ad. sk., Hay, New South Wales, 1883. Col.
A 5 ♀ ad. sk., St. Leonards, New South Wales, May, 1867. Col.
A 6 ♂ ad. sk., Cairns, Northern Queensland, 1889. Col.
A 7 ♀ ad. sk., Cairns, Northern Queensland, 1889. Col.
B 1 ♂ not quite ad. sk., Narrabeen Lagoon, N. S. W., June, 1876. Col.

2. Dacelo leachii.

Leach's Kingfisher.

Dacelo leachii, *Vig. & Horsf. in Linn. Trans.* Vol. xv. p. 205 (*ex. Lath., MSS.* 1827); *Gray, Gen. Bds.* Vol. i. p. 78 (1846); *Gould, in Stokes Voy. Beagle,* Vol. i. App. p. 479 (1846); *id. Bds. Austr.* fol. Vol. ii. pl. 19 (1848); *id. Introd. Bds. Austr.* p. 29 (1848); *Gray, Cat. Fiss. Brit. Mus.* p. 51 (1848); *Bonap., Consp. Av.* tom. i. p. 154 (1850); *Reichb., Vög. Neuholl.* p. 210 (1850); *id. Handb. Alced.* p. 41, t. ccccxxvi. fig. 3159-60 (1851); *Macgill., Voy. Rattl.* Vol. ii. p. 356 (1852); *Gray, Proc. Zool. Soc.* 1858, p. 189; *Schl., Mus. Pay-bas. Alced.* p. 20 (1863); *Ramsay, Ibis* 1865, p. 84; *Gould, Handb. Bds. Austr.* Vol i. p. 124, sp. 61 (1865); *Diggles, Orn. Austr.* pl. 24 (1870); *Gray, Hand-l. Bds.* p. 89 (1869); *Sharpe, Mon. Alced.* p. 289, pl. 113 (1868-71); *Castl. & Rams., Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 379; *Sharpe, Rep. Voy. Alert,* p. 23 (1884); *Ramsay, Tab. List Austr. Bds.* p. 3 (1888); *Broadb., Proc. Roy. Soc. Queensld.* Vol. v. 1888, p. 17; *De Vis, Off. Rep. Sci. Exp. N. Queensld.* p. 32 (1889); *North, Austr. Mus. Cat.* No. 12, *Nest and Eggs Austr. Bds.* p. 36 (1889); *Sharpe, Brit. Mus. Cat.* Vol. xvii. p. 206 (1892).

Adult male. The whole of the head, ear-coverts and nape streaked with brown and white, the white occupying the median portion of the feathers, the apical portion with a narrow shaft line widening into a broad tip of brown, feathers elongated lanceolate; collar, hindneck, side of the neck, throat and all the under surface white, crossed with a wavy zigzag or sagittal line of brown, the under wing-coverts, flanks and under tail-coverts with slightly broader bars; shoulders, lesser wing-coverts above, and interscapular region dark brown, whitish towards the base, scapulars dark brown, with a narrow line of silvery-white round the tips, white mesially towards the base; median wing-coverts, lower part of the back, rump and upper tail-coverts rich silvery verditer-blue; outer series of the tail-coverts black tinged with bluish-green, two central tail feathers and the outer webs of all except the outermost one on either side—which are mottled with white—deep blue, inner webs of the outer two on either side blackish-brown with large blotches and the remains of seven to eight bands of white, tips white; the remaining feathers largely blotched towards the end and tipped with white, the centre pair margined at the tip with a narrow line of white only. Outer webs of the primary-coverts and of all the quills deep blue, the second to sixth quill white at the base, their outer webs freckled with blue, all the quills white on their inner webs, mesially black towards the tips; the secondaries margined with white at the tips.

Adult female. Similar to the adult male but with less extent of blue on the wing ; the outer series of the upper tail coverts rich rufous banded with black, the tail feathers with deep steel-blue bands on both webs of centre pair, and on the outer webs of the remaining feathers, bands on the inner webs black, all tipped more or less with white, more largely on the outer feathers.

Hab. Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe.	Mid toe.
A 1 ♂	16·5	8·5	6	3·25	2·6	3·9	1·1	1·1	1	1·6	0·7
A 2 ♀	17·2	8·5	6	3·5	2·9	4·2	1·15	1·2	1	1·6	0·7
A 3 ♂	16	7·9	5·9	3·15	2·6	3·7	1·08	1·1	1	1·4	0·65

A 1 ♂ ad. sk., Brisbane River, Queensland, April, 1865. Col.
A 2 ♀ ad. sk., Brisbane River, Queensland, 29th Sept., 1864. Col.
A 3 ♂ ad. sk., Cairns, Northern Queensland, August, 1889. Col.

3. Dacelo cervina.

Fawn-breasted Kingfisher.

Dacelo cervina, *Gould, Bds. Austr.* Vol. ii. pl. 20 (1846); *id. in Stokes Voy. Beagle*, Vol. i. (1846); *Gray, Gen. Bds.* Vol. i. p. 78 (1846); *id. Cat. Fiss. Brit. Mus.* p. 51 (1848); *Leichhardt, Overl. Exp.* pp. 326, 461 (1847); *Bonap., Consp. Av.* tom. i. p. 154 (1850); *Reichb., Vög. Neuholl.* p. 38 (1850); *id Handb. Alced.* p 40, t. cccxxviii. fig.s 3164-65 (1851); *Cass., Cat. Halcy. Phil. Mus.* p. 16 (1852); *Gray, Proc. Zool. Soc.* 1858, p. 189 ; *Schl., Mus. Pay-bas. Alced.* p. 19 (1863); *Gould, Handb. Bds. Austr.* p. 125, sp. 62 (1865) ; *Gray, Hand-l. Bds.* p. 89 (1869) ; *Sharpe, Mon. Alced.* p. 291, pl. 114 (1868-71); *Masters, Proc. Linn. Soc. N.S. W.* Vol. i. 1876, p. 47, sp. 13 ; *Ramsay*, Vol.ii. 1877, p. 179, sp. 62 ; *Masters, l.c.*, p. 270, sp. 13 ; *Forbes, Ibis*, 1881, p, 8 ; *Ramsay*, Vol. i. 2nd Series, 1886, p. 1086 sp. 5 ; *id. Tab. List Austr. Bds.* p. 3 (1888); *North, Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Series, 1889, p. 1024 ; *Sharpe, Brit. Mus. Cat.* Vol. xvii. p. 207 (1892) (subsp.).

Dacelo cervinus, *Salvad., Ann. Mus. Civ. Gen.* Vol. ix. (xxix.) p. 20, 1890.

Dacelo cervicalis, *Kaup., Fam. Eisv.* p. 8 (1848).

Paralcyon cervina, *Cab. & Heine, Mus. Hein. Theil* ii. p. 164 (1860).

Dacelo salusii, *Homb. et Jacq. Voy. au Pôle Sud.* iii. p. 100, pl. 23 (1853).

Dacelo occidentalis, *Gould, Proc. Zool. Soc.* 1869, p. 602; *Sharpe, Mon. Alced.* p. 293, pl. 115 (1870); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. iii. 1878, p. 179; *Sharpe, Rep. Voy. Alert*, p. 23 (1884).

Lā-rool, *Aborigines of Port Essington*, (Gould).

This is a smaller race of *D. leachii* of Eastern Australia. Specimens from Roeburne, North-west Australia, are similar in plumage to the North Queensland birds, but are slightly larger and have more white on the head and nape feathers from the blackish-brown shaft lines being very much narrower; the centre of the back and sides of the rump also white, the feathers of the latter parts being slightly tipped with blue; the outer series of upper tail-coverts in one specimen (♂) are largely tipped with white; the chin and upper part of the throat white without the narrow wavy lines; the collar, sides of the neck, breast, under tail-coverts, and rest of the body washed with buff. These I take to be a pair of very old birds.

The specimens from Cape York are all more or less tinged with buff on the under surface, sides of the head and neck, but are smaller, while those from Port Essington and Port Darwin are smaller still.

Immature birds of all the varieties of *D. leachii* and *D. cervina* have well defined wavy lines of dark brown on the under surface, with age the striations of the head become narrower, and the throat finally white.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe.	Hind toe.
A 1 ♂	18	8	6·2	3·3	2·2	3·8	1·05	1·05	1·15	1·65	0·75
A 2 ♀	17·5	7·8	5 5	3·35	2·6	3·6	1	1·05	1·1	1·6	0·65
A 3 ♀	14·5	7·6	5·5	3·2	2·6	3·65	1	1·05	1·1	1·6	0·7
A 4 ♂	15·5	7·6	5·5	3·1	2·5	3·72	1·05	1·05	1·1	1·5	0·7
A5 ♂	15	7·5	5·3	2·8	2·3	3·45	1	1·05	1·1	1·5	0·65

A 1 ♂ ad. sk., Roeburne, N.W. Australia, 24th April, 1889. Pch.
A 2 ♀ ad. sk., Roeburne, N.W. Australia, 24th April, 1889. Pch.
A 3 ♀ ad. sk., Derby N.W. Australia, 1886. Col.
A 4 ♂ ad. sk., Cape York. Pch.
A 5 ♂ ad. sk., Port Essington. Col.

2. HALCYON.

1. Halcyon sanctus.

Sacred Kingfisher.

Sacred Kingfisher, *Phillip, Voy. Bot. Bay*, 2nd Edit. pl. opp. p. 156 (1790) ; *White, Journ. Voy. N.S.W.* pl. opp. p. 193 (1790).

Alcedo sacra, var. *Shaw, Gen. Zool.* viii. p. 79 (1811).

Halcyon sacra, *Steph., (nec Gmel.) Gen. Zool.* Vol. xiii. p. 98 (1826); *Jard. & Selb., Ill. of Orn.* ii. pl. 96 ; *Vigors, in King's Surv. Intertrop. Austr.* Vol. ii. p. 416 (1827).

Halcyon collaris, (err.) *Vig. & Horsf., Trans. Linn. Soc.* Vol. xv. p. 206 (1826) ; *Gould, Syn. Bds. Austr.* pt. iii. (1838).

Halcyon sanctus, *Vig. & Horsf., Trans. Linn. Soc.* Vol. xv. p. 206 (1826) ; *Gould, in Eyre's Disc. Centr. Austr.* Vol. i. app. p. 441 (1845) ; *G. R. Gray, Gen. Bds.* Vol. i. p. 79, sp. 31 (1846); *Gould, Bds. Austr.* fol. Vol. ii. pl. 21 (1848) *id. Introd. Bds. Austr.* p. 30 (1848); *G. R. Gray, Cat. Fiss. Bds. Brit. Mus.* p. 56 (1848); *Reichb., Vög. Neuholl.* p. 33 (1850); *Elsey, Proc. Zool. Soc.* 1857, p. 25 ; *G. R. Gray, Proc. Zool. Soc.* 1858, pp. 172, 190 ; *id. Cat. Bds. New Guin.* pp. 20, 55 (1859); *id. Cat. Bds. Trop. Isl.* p. 6 (1859); *Wall., Proc. Zool. Soc.* 1863, p. 484 ; *Finsch., & Hartl., Proc. Zool. Soc.* 1868, pp. 116, 118 ; *Sclat., Proc. Zool. Soc.* 1869, p. 119 ; *Diggles, Orn. Austr.* pt. 2 (1869) ; *Sharpe, Mon. Alced.* pl. 91 (1868-71); *Hartl., Proc. Zool. Soc.* 1872, p. 89 ; *Sclat., Proc. Zool. Soc.* 1877, p. 105 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. 1877, p. 179, sp. 64 ; *Finsch, Proc. Zool. Soc.* 1879, p. 40 ; *Sharpe, Journ. Proc. Linn. Soc.* Vol. xiv. p. 686 (1879) ; *id. Rep. Voy. Alert*, p. 24, No. 49 (1884); *Broadb., Proc. Roy. Soc. Queensld.* Vol. ii. 1885 ; *Legge, Proc. Roy. Soc. Tas.* 1886, p. 238 ; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. i. 2nd Series, 1886, p. 1086 ; *id. Tab. List Austr. Bds.* p. 3, sp. 71 (1888) ; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, 1888, p. 1774 ; *De Vis, Off. Rep. Sci. Exp. N. Queensld.* p. 32 (1889); *Cox & Ham., Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Series, 1889, p. 401 ; *North, Aus. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* p. 37 (1889) ; *Sharpe, Brit. Mus. Cat.* Vol. xvii. pp. 267, 500 (1892).

Dacelo chlorocephala, var. B., *Less., Traité d' Orn.*, p. 246 (1831).

Todirhamphus sanctus, *Bonap., Consp. Av.* tom. i. p. 156 (1850) ; *Reichb., Handbk. Alced.* p. 33, sp. 80 (1851); *Bonap, Consp. Vol. Anis.* p. 9, sp. 300 (1854); *Cass., Unit. Stat. Expl. Exp.* p. 214 (1858); *Wall, Proc. Zool. Soc.* 1862, p. 338 ; *Gould, Handbk. Bds. Aust.* Vol. i. p. 128 (1865); *Ramsay, Ibis* 1866, p. 327 ; *id. Proc. Zool. Soc.*

1875, p. 582, sp. 40; *Masters, Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 47, No. 14.

Todirhamphus australasiæ, *Cass., (nec Vieill.) Cat. Halc. Phil. Mus.* p. 12 (1852).

Sauropatis sancta, *Cab. et Hein., Mus. Hein.* ii. p. 158 (1860); *G. R. Gray, Hand-l. Bds.* Vol. i. p. 27, sp. 1112 (1869); *Wald., Trans. Zool. Soc.* Vol. viii. p. 44 (1872); *Salvad., Cat. Ucc. di Born.* p. 104 (1874); *id. Ann. Mus. Civ. Gen.* ix. p. 19 (1876); *id. Proc. Zool. Soc.* 1874, p. 94; *id. Ann. Mus. Civ. Gen.* xiv. p. 52 (1879); *id. Orn. Pap. et Molucc.* Vol. i. p. 476, sp. 222 (1880); *id. Voy. Chall.* p. 76 (1881); *Forbes, Proc. Zool. Soc.* 1884, pp. 426, 432; *Meyer, Zeitschr. f. ges. Orn.* i., p. 276 (1884); *Guillem., Proc. Zool. Soc.* 1885, p. 568; *Salvad., Aggiu. Orn. Pap. et Molucc.* i., p. 58 (1889); *id. Mem. R. Acc. Sci. Tor.* (2) xl. p. 186 (1889).

Dacelo sancta, *Schleg., Mus. Pay-bas. Alced.* p. 35 (1863); *Finsch., Neu-Guin.* p. 161 (1865); *Schleg., Mus. Pay-bas. Alced. Revue*, p. 26 (1874).

Kun-yee-nuk, *Aborigines of Western Australia*, (Gould)

Adult male Head, interscapular region, and scapulars dull bluish-green, a spot in front of the nostrils and a narrow line over the eye, light buff; from the rictus, below the eye, extending over the whole of the ear-coverts and round the nape, black tinged laterally with bluish-green; along the sides of the head and nape washed with dull cobalt-blue; nape spot white, almost concealed; the throat and collar round the neck white, the latter occasionally tinged with buff, and in not quite adult birds sometimes freckled with black; wing-coverts and outer webs of all the quills except that of the first primary, blue, the inner webs blackish with a narrow line of buffy-white towards the base; back, rump, and upper tail-coverts bright blue; under surface of the wings and tail feathers blackish-brown; chest, all the under surface of the body, under wing- and tail-coverts buff, lightest on the abdomen, slightly darker on the under wing-coverts and flanks. Bill black, the basal portion of the lower mandible white; legs dark brown, feet blackish-brown, iris brownish-black. Total length 7·7 inches, wing 3·8, tail 2·6, tarsus 0·46.

Adult female. In plumage similar to the male, but slightly duller in colour.

Young. The young have the front of the head mottled or striated with buff, and the upper coverts of the wings margined with white or fluffy-white; feathers of the chest with a short median shaft stripe and margined with blackish-brown; under wing-coverts sides and flanks washed with buff, collar round the hind neck white; length 7 inches, wing 3·5, tail 2·3, tarsus 0·45.

Remarks. In some specimens the white collar round the neck is very much wider than in others, and the black line which

separates it from the nape, washed with bluish-green like the head, the white nape patch is occasionally visible, but is usually on the concealed portion of the feathers; feathers on legs dark brown in some specimens.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria and South Australia, Tasmania, West and S.W. Australia, Tasmania. (*Ramsay*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at ostril.	Tarsus	Mid Toe (s. u.)	Hind toe (s. u.)
A 1 ♂	7·8	3·65	2·7	1·72	1·35	1·95	0·5	0·5	0·5	0·68	0·35
A 2 ♂	7·6	3·7	2·65	1·8	1·43	1·97	0·48	0·48	0·48	0·63	0·33
A 3 ♂	7·7	3·6	2·45	1·67	1·3	1·85	0·45	0·46	0·52	0·6	0·35
A 4 ♀	8·2	3·9	2·5	1·9	1·47	2·01	0·5	0·5	0·52	0·65	0·3
A 5 ♀	8	3·95	2·65	1·75	1·35	1·92	0·45	0·5	0·5	0·63	0·33
A 6 ♀	7·5	3·6	2·63	1·68	1·33	1·9	0·4	0·45	0·5	0·65	0·33

A 1 ♂	ad. sk., Homebush, Sydney, New South Wales, Nov., 1874.	Pres.
A 2 ♂	ad. sk., Derby, North-western Australia, 1886.	Pch.
A 3 ♂	ad. sk., Liverpool, New South Wales, 1876.	Pres.
A 4 ♀	not quite ad. sk., King George's Sound, W. A., April, 1866.	Col.
A 5 ♀	not quite ad. sk., Parramatta, N. S. Wales, Nov., 1883.	Pres.
A 6 ♀	not quite ad. sk., Rockingham Bay, Queensland.	Pch.

2. Halcyon pyrrhopygia.

Red-backed Kingfisher.

Halcyon pyrrhopygia, *Gould, Proc. Zool. Soc.*, 1840, p. 113; *id. in Eyre's Disc. Cent. Austr.* Vol. i. App. p. 441 (1846); *Gray, Gen. Bds.* Vol. i. p. 79 (1846); *Gould, Bds. Austr.* fol. Vol. ii. pl. 22 (1848); *id. Intr. Bds. Austr.* p. 30 (1848); *Gray, Cat. Fiss. Brit. Mus.* p. 57 (1848); *Sturt, Exp. Cent. Austr.* Vol. ii. App. p. 20 no 21 (1849); *Reichb. Vög. Neuholl.* p. 277 (1850); *Gray, Hand-l. of Bds.* Vol. i. p. 92 (1869); *Sharpe, Mon. Alced.* p. 211, pl. 79 (1868-71); *Castl. & Ramsay, Proc. Linn. Soc. N.S.W.* Vol. i. 1876. p. 380, No. 10; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. i. 2nd Series, 1886, p. 1086, sp. 7; *id. Tab. List Austr. Bds.* p. 3, sp. 73 (1888); *Broadb., Proc. Roy. Soc. Queensld.* Vol. v. 1888, p. 17; *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, 1888, p. 1774; *id. Austr. Mus. Cat. Nest and Eggs Austr. Bds.* p. 38 (1889).

Todiramphus pyrrhopygius, *Bonap.*, *Consp. Gen. Av.* i. p. 157 (1850); *Reichb.*, *Handbk. Alced.* i. p. 33 (1850); *Cass.*, *Cat. Halc. Phil. Mus.* p. 4 (1852); *id. U.S. Expl. Exp.* p. 218 (1858); *Gould*, *Handbk. Bds. Austr.* Vol. i. p. 130, sp. 64 (1865); *Ramsay*, *Proc. Zool. Soc.* 1875, p. 582 ; *Masters*, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 270, sp. 15.

Cyanalcyon pyrrhopygia, *Bonap.*, *Consp. Vol. Anis.* p. 9 (1854).

Sauropatis pyrrhopygia, *Cab. & Heine*, *Mus. Hein. Theil*, ii. p. 161 (1860).

Dacelo pyrrhopygia, *Schl.*, *Mus. Pay-bas Alced.* p. 39 (1863).

Halcyon pyrrhopygius, *Sharpe*, *Brit. Mus. Cat.* Vol. xvii. p. 258 (1892).

Adult male. Head, interscapular region and scapulars green, narrowly margined with white ; nape feathers white, tipped with green, the whole head having a striated appearance, with more white showing over the eyes and ear-coverts ; ear-coverts and a narrow collar round the hind neck black, tinged with bluish-green near the orbits, wing-coverts and the upper surface of the wings blue on the outer webs of all the quills, blackish on their median portion ; the inner webs margined with white ; secondaries margined with white at the tips of the outer webs also ; under wing-coverts white, the quills brown broadly margined with white on the inner webs, a blackish mark down the side of the body under the wings to the flanks ; axillaries, and a few adjacent feathers of the sides tinged with greenish-blue ; throat, all the under surface of the body and a broad collar round the neck white ; back, rump and upper tail-coverts rufous, outermost series of the upper tail-coverts and the tail above bluish-green ; outer tail feathers on either side margined with white, all round the other feathers except the centre pair, more or less margined with white on their inner webs ; tail below dark brown, margined as on the upper surface with white, under tail-coverts white or occasionally tinged with buff. Bill, upper mandible and tip of lower, black, basal half of lower mandible except on the edges yellowish-white, irides dark brown, legs and feet dark brown. Total length 8·6 inches, wing 4·2, tail 2·9, tarsus 0·5, mid-toe 0·7, bill from forehead 1·8, from nostril 1·45, from gape 2·1, height at nostril 0·5 breadth 0·5. The sexes are alike in plumage.

Young. The young have the head striated with brown and white, and a white line extending from the lores over the eye to the end of the black ear-coverts, the broad white collar is tinged with buff, the upper and under wing-coverts and margins of the wing, the sides and flanks washed with chestnut-buff ; there is also a bluish-grey shade on the quills and tail ; under tail-coverts buff ; a band of feathers across the chest very narrowly margined on the tips with dark brown ; bill blackish horn-colour, extreme

tip white. Total length 7 inches, wing 3·8, tail 2·6, bill 1·3, tarsus 0·45.

Remarks. In some bleached specimens from Queensland the green of the head has become almost dull brown, they show also more white on the nape, the ear-coverts and a narrow line round the hind neck, jet black.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, New South Wales, Interior, Victoria and South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril	Breadth of bill at nostril.	Tarsus	Mid toe (s. u.)	Hind toe (s. u.)
A 1 ♀	8·5	4·1	2·9	1·7	1·32	2·05	0·44	0·47	0·55	0·7	0·35
A 2 ♂	8·6	4·2	3·1	1·8	1·5	2·15	0·45	0·48	0·52	0·7	0·35
A 3 ♀	8·5	4·1	3	1·75	1·35	2·1	0·48	0·48	0·5	0·7	0·35
A 4 ♀	8·2	4·2	3	1·9	1·55	2·25	0·45	0·48	0·55	0·7	0·35
A 5 ♂	8	4·1	2·85	1·9	1·55	2·2	0·45	0·47	0·53	0·7	0·33

A 1 ♀ ad. sk., South Australia, 1864. Col.
A 2 ♂ ad. sk., Rockingham Bay. Pch.
A 3 ♀ ad. sk., Bourke, Interior of New South Wales, 1888. Col.
A 4 ♀ ad. sk., Derby, North-western Australia, 1886. Col.
A 5 ♂ ad. sk., Derby, North-western Australia. Col.

3. Halcyon sordidus.

Sordid Kingfisher, Mangrove Kingfisher, &c.

Halcyon sordidus, *Gould, Proc. Zool. Soc.* 1842, p. 72; *Gray, Gen. Bds.* Vol. i. p. 79 (1846); *Gould, Bds. Austr.* fol. Vol. ii. pl. 23 (1848); *id. Intr. Bds. Austr.* p. 30 (1848); *Reichb., Voy. Neuholl.* p. 239 (1850); *Gray, Hand-l. Bds.* Vol. i. p. 92 (1869); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 179, sp. 66; *id. Tab. List Austr. Bds.* p. 3, sp. 73 (1888); *Broadb., Proc. Roy. Soc. Queensld.* Vol. v. p. 17 (1888); *Sharpe, Voy. Alert*, p. 24, No. 51 (1884); *id. Brit. Mus. Cat.* Vol. xvii. p. 278 (1892); *North, Proc. Linn. Soc. N.S.W.* 2nd Series, Vol. vii. 1892, p. 395.

Todiramphus sordidus, *Bonap., Consp. Gen. Av.* tom. i. p. 157 (1850); *Reichb., Handb. Alced.* p. 32. (1851); *Cass., Cat. Halc. Phil. Mus.* p. 12 (1852); *Bonap., Consp. Vol. Anis.* p. 9 (1854); *Cass., U.S. Expl. Exp.*, p. 212 (1858); *Gould, Handbk. Bds. Austr.* Vol. i., p. 132, sp. 65 (1865); *Rams., Proc. Zool. Soc.* 1875, p. 582, No. 42; *Masters,*

Proc. Linn. Soc. N.S.W. Vol. i. 1876, p. 47, sp. 15; *id. op. cit.* Vol. ii. 1877, p. 270, sp. 14.

Halcyon sordida, *Macgill., Voy. Rattles.*, Vol. ii. App. 356 (1852); *Sharpe, Mon. Alced.* p. 233, (1868-1871).

Sauropatis sordida, *Cab. & Hein., Mus. Hein. Theil* ii. p. 59 (1860).

Sauropatis grayi, *Cab. & Hein, Mus. Hein. Theil* ii. p. 59 (1860)

Halcyon grayi, *Gray, Hand-l. Bds.* Vol. i. p. 92, (1869).

Tchoon-gun-gun, *Aborigines of Hinchinbrook Island* (North).

Adult male. An oblong loreal spot of white from the nostril to the eye; forehead dull olive-brown, becoming oil green on the head and nape; interscapular region, upper wing-coverts and back dull green; rump and upper tail-coverts greenish-blue; quills and primary-coverts black, the outer webs rich blue; the scapulars and outer webs of the secondaries tinged with greenish-blue; tail deep blue above, the margins of the inner webs and the under surface of the feathers black; under surface of the wings black, the under coverts white; ear-coverts and the narrow band round the nape black; an indistinct nape spot of white; the throat, a collar round the neck, and the whole of the under surface of the body, and the under tail-coverts white; feathers on knee-joint brown; axillaries white, freckled or streaked with black; occasionally remains of blackish bars on the sides of the neck and across the chest. Bill black, base of lower mandible white; legs and feet dark brown. Total length 9 inches, wing 4·1, tail 2·7, tarsus 0·65, mid-toe 0·85, bill from forehead 1·9, from nostril 1·5, from gape 2 in., height at nostril 0·5, breadth 0·6.

Adult female. Similar to the male in plumage.

Remarks. A fully adult specimen from the Northern Territory has the head, interscapular region and scapulars dark blackish-brown without any shade of green.

Hab. Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. u.)	Hind Toe (s. u.)
A 1 ♂	9·4	4·1	3·25	2·2	1·85	2·5	0·55	0·57	0·55	0·85	0·4
A 2 ♂	9·1	4	3·2	0·05	1·65	2·35	0·55	0·6	0·6	0·8	0·35
A 3 ♂	9·4	4·1	3	1·95	1·55	2·2	0·55	0·6	0·62	0·82	0·4
A 4 ♀	8·5	4	3	2·2	1·85	2·47	0·55	0·55	0·58	0·8	0·38
A 5 ♂	9·2	4·1	3·15	2·2	1·82	2·37	0·55	0·57	0·6	0·8	0·4

A 1 ♂ ad. sk., Brisbane River, Queensland. Pch.
A 2 ♂ not quite ad. sk., Brisbane River, Queensland. Pch.
A 3 ♂ not quite ad. sk., Moreton Bay, Queensland. Col.
A 4 ♀ ad. sk., Northern Australia, 1870. Pch.
A 5 ♂ ad. sk., Wide Bay, Queensland. Col.

4. Halcyon macleayi.

Macleay's Kingfisher.

Halcyon macleayi, *Jard. & Selb., Ill. Orn.* pl. 101 (1825-39); *G. R. Gray, Gen. Bds.* Vol. i. p. 79 No. 34 (1846); *Gould, in Stokes, Voy. Beagle*, Vol. i. App. p. 479 (1846); *Gould, Bds. Austr.* fol. Vol. ii. pl. 24 (1848); *id. Intr. Bds. Austr.* p. 29 (1848); *G. R. Gray, Cat. Fiss. Bds. Brit. Mus.* p. 58 (1848); *Reichb., Vög. Neuholl.* p. 34 (1850); *Cass., Cat. Halc. Phil. Mus.* p. 6 (1852); *Macgill., Voy. Rattles.* Vol. ii. App. p. 356 (1852); *G. R. Gray, Proc. Zool. Soc.* 1858 p. 190; *Ramsay, Ibis*, 1865, p. 84; *Diggles, Orn. Austr.* pt. 2 (1868); *Sharpe, Mon. Alced.* p. 207, pl. 78 (1868-71); *Castl. & Rams., Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 380; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 67; *Sharpe, Rep. Voy. Alert*, p. 24, No. 50 (1884); *Broadb., Proc. Roy. Soc. Queensld.* Vol. ii. 1885, p. 120; *id.* Vol. v. (1888) p. 17; *Ramsay, Proc. Linn. Soc.* Vol. ii. 2nd Series (1887) p. 24; *id. Tab. List Austr. Bds.* p. 3, sp. 74 (1888); *De Vis, Rep. Sci. Exp. N. Queensld.* p. 32 (1889); *Sharpe, Brit. Mus. Cat.*, Vol. viii. p. 254 (1892).

Todiramphus macleayi, *Bonap., Consp. Gen. Av.* tom. i., p. 157 (1850); *Reichb., Handb. Alced.* p. 29.

Halcyon incinctus, *Gould, Proc. Zool. Soc.* 1837, p. 142.

Cyanalcyon macleayi, *Bonap., Consp. Vol. Anis.* p. 9 (1854); *Cab. & Heine, Mus. Hein. Th.* ii. p. 158 (1860); *Gould, Handbk. Bds. Austr.* Vol. i. p. 133, sp. 66 (1865); *Ramsay, Proc. Zool. Soc.* 1875; *Masters, Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 47, sp. 16; *id.* Vol. ii. 1877, p. 270; *D'Alb. Ann. Mus. Civ. Gen.* x. p. 19 (1877); *Salvad., Orn. Pap. et Molucc.* Vol. i. p. 465 (1880); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ix. (1885) p. 864; *Salvad., Aggiun. Orn. Pap. et Molucc. p.* 57 (1889).

Dacelo macleayi, *Schl., Mus. Pay-bas., Alced.* p. 41 (1863); *Finsch., New Guin.* p. 161 (1865); *Schl., Mus. Pay-bas, Alced. Revue*, p. 30 (1874).

Halcyon jacquinoti, *Hartl., & Finch, Faun. Central Polyn.* p. 269 (1867).

Halcyon sancta, *Diggles, Orn. of Austr.* (pl. only) 1868.

Dacelo lazulina, *Giebel, Thes. Orn.* ii. p. 6 (1874).

Adult male. Lores, nuchal spot, a broad collar round the neck and all the under surface, (except the flanks) under wing- and tail-coverts white; the flanks and occasionally the sides of the body washed with orange-buff; head, wings and tail deep ultramarine, a line below the eye and the ear-coverts almost black; quills black, the outer webs blue, the inner webs white, a large spot of white on both webs from the fifth to tenth primary; wing-coverts bright blue; scapulars, rump, and back light cobalt-blue, the former slightly tinged with green; upper tail-coverts cobalt, the outer series deep blue like the tail; tail below and the concealed portions of all the feathers except the centre pair blackish.

Adult female. The female differs in plumage only in having the whole of the hindneck deep blue, being destitute of the white collar.

Young. The young have a tinge of buff on the lores and under surface of the body.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers District, New South Wales. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. u.)	Hind Toe (s. u.)
A 1 ♂	7·5	3·5	2·5	1·63	1·28	1·8	0·43	0·42	0·5	0·7	0·33
A 2 ♂	7	3·5	2·5	1·65	1·3	1·85	0·42	0·47	0·5	0·62	0·3
A 3 ♂	7·4	3·6	2·48	1·68	1·32	1·9	0·42	0·5	0·5	0·65	0·35
A 4 ♀	7·8	3·7	2·55	1·75	1·45	2	0·48	0·5	0·52	0·72	0·35
A 5 ♀	7·3	3·6	2·6	1·62	1·25	1·88	0·42	0·42	0·48	0·62	0·32
A 6 ♀	7·6	3·8	2·7	1·73	1·35	2	0·45	0·47	0·53	0·65	0·37
A 7 ♂	7·5	3·6	2·5	1·65	1·34	1·85	0·43	0·43	0·5	0·62	0·33
A 8 ♀	7·5	3·8	2·7	1·75	1·4	1·95	0·45	0·43	0·52	0·68	0·33

A 1 ♂	ad. sk., Wide Bay, Queensland, September 1867.	Col.
A 2 ♂	ad. sk., Cairns, Northern Queensland, 1888.	Col.
A 3 ♂	ad. sk., Richmond River, N. S. Wales, April 1888.	Pres.
A 4 ♀	ad. sk., Richmond River, N. S. Wales, 1889.	Pch.
A 5 ♀	ad. sk., Cairns, Northern Queensland, 1888.	Col.
A 6 ♀	ad. sk., Rockingham Bay, Queensland.	Pch.
A 7 ♂	ad. sk., Cairns, Northern Queensland, 1888.	Col.
A 8 ♀	ad. sk., Cairns, Northern Queensland, 1888.	Col.

3. SYMA.

8. Syma flavirostris.

Australian Saw-billed Kingfisher.

Halcyon (Syma?) flavirostris, *Gould*, *Proc. Zool. Soc.* pt. xviii. 1850, p. 200 ; *id. Contr. to Orn.* 1850, p. 105.

Halcyon flavirostris, *Gould*, *Bds. Austr.* Suppl. pt. i. pl. 7 (1851).

Halcyon torotoro, *(nec. Less.) Macgill.*, *Voy. Rattles.* Vol. ii. App. p. 356 (1852).

Syma flavirostris, *Reichb.*, *Handbk. Alced.* p. 44, sp. 106, t. ccccxxx. figs. 3171-72 (1851) ; *Gould*, *Handbk. Bds. Austr.* Vol. i. p. 135, sp. 67 (1865); *Sharpe*, *Mon. Alced.* pl. 56, p. 153 (1868-71); *Gray*, *Hand-l. Bds.* i. p. 94, No. 1141 (1869); *Masters*, *Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 47 ; *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. 1877, p. 179, sp. 68 ; *id. Tab. List Austr. Bds.* p. 3, sp. 75 (1888); *Sharpe*, *Brit. Mus. Cat.* Vol. xvii. p. 197 (1892).

Adult male. Head, neck, ear-coverts, and upper part of the interscapular region, orange-rufous ; a small spot in front of the eye, an oblong spot on either side of the neck behind the ear-coverts, black ; sides of the chest washed with orange-rufous, in some specimens forming an indistinct band across it ; throat white ; remainder of the under surface white, tinged with orange-buff on the flanks and under tail-coverts ; under wing-coverts and the inner webs, except at the tips of all the quills, pale buff; basal quills above dull brown ; wing-coverts and interscapular region washed with dull olive-green ; back and upper tail-coverts tinged with dull blue ; tail above dull bluish-green, the inner margins of all except the centre two feathers dull blackish-brown ; under surface of the feathers dark brown. Bill orange, blackish on the culmen near the tip ; legs and feet orange, claws black. Total length 7·5 inches, wing 3·05, tail 2·5, tarsus 0·55, mid-toe 0·56.

Female. The female differs from the male in having the crown of the head black, and the oblong mark on the side of the hind neck slightly larger. Total length 7·5 inches, wing 3·1, tail 2·45, tarsus 0·5, mid-toe 0·57, bill from forehead 1·45, from nostril 1·2, height 0·45, breadth 0·45.

Remarks. This species must not be confounded with *S. torotoro* of New Guinea, although very much alike, the New Guinea birds differ in being slightly smaller and in having the whole of the bill orange ; and in the female, the whole of the top of the head from the base of the bill to the nape is black ; while the female of *S. flavirostris* has the forehead orange-rufous and only the top of the head black.

A specimen of *S. torotoro* from near Port Moresby, New Guinea, measures, total length 7·4 inches, wing 2·95, tail 2·4, tarsus 0·55.

Hab. Port Darwin and Port Essington, Cape York. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Tail,	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. u.)	Hind Toe (s. u.)
A 1 ♀	7·5	3·1	2·5	1·52	1·22	1·82	0·45	0·45	0·55	0·57	0·3
A 2 ♀	7·5	3·05	2·42	1·55	1·3	1·9	0·41	0·42	0·53	0·57	0·3

A 1 ♀ ad. sk., Cape York. Pch.
A 2 ♀ ad. sk., Cape York. Pch.

4. TANYSIPTERA.

1. Tanysiptera sylvia.

Cinnamon-breasted Kingfisher, White-tailed Kingfisher.

Tanysiptera sylvia, *Gould, Proc. Zool. Soc.* pt. xviii. 1850, p. 200 ; *id. Bds. Austr.* fol. suppl. pl. 6 (1869) ; *Reichb., Handb. Alced.* p. 43 t. ccccvii., fig. 3095-96 (1851); *Macgill., Voy. Rattles.* Vol. ii. App. p. 456 (1852); *Gray, Proc. Zool. Soc.* 1858, p. 190, *id. P.Z.S.* 1860, p. 347, *id. P.Z.S.* 1861 p. 433 ; *Wall, Proc. Zool. Soc.* 1863, p. 24 ; *Ramsay, Ibis,* 1865, pp. 325-6 ; *id. P.Z.S.* 1868, p. 383 ; *Diggles, Orn. Austr.* pl. 27 (1870); *Sharpe, Mon. Alced.* p. 259, pl. 100 (1868-1871); *Ramsay, Proc. Zool. Soc.*, 1875, p. 583 ; *Broadb., Proc. Roy. Soc. Queensld.* Vol. i. 1884, p. 94 ; *Ramsay, Tab. List Austr. Bds.* p. 3 (1888) ; *North, Austr. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* p. 39 (1889-90).
Dacelo sylvia, *Schl., Mus. Pay-bas, Alced.* p. 47 (1863).
Uralcyon sylvia, *Heine, Journ. f. Orn.* 1859, p. 406.
Quatawur, *Aborigines of Cape York* (Gould).

Adult male. Forehead and crown of the head rich dark blue, brighter and lighter on the sides of the head and nape; ear-coverts and hind neck black ; interscapular region black, with an oblong spot of white down the central portion ; back, rump, and upper tail-coverts and the centre two tail feathers white, some of the lateral upper coverts black tipped with blue, the remaining tail feathers black, the outer webs above blue ; wing-coverts deep blue, scapulars and quills except the first primary, black margined with deep blue, remaining portion of the quills black above and below, the base of the inner webs washed with white, or slightly tinged with buff, the under wing-coverts, axillaries, throat, and the whole

of the under surface of the body, and the under tail-coverts rich cinnamon. Bill, legs, and feet orange-red. Total length 12·9 inches, wing 3·9, tail to end of centre feathers 8 inches, to end of second pair 3 inches; tarsus 0·55, mid. toe 0·6 inch, bill from forehead 1·45, from the nostril 1·1, from gape 1·6.

Female. The female is slightly duller in tint than the male, has the centre feathers of the tail much shorter and their basal half margined with blue. Length of tail (except the centre feathers) 2·8 inch, centre pair of feathers 5·5 to 6 inches.

Young. The young are mottled with black on the under surface which is chiefly buff, or a light cinnamon colour; the white spot on the interscapular region is washed with buff, the upper wing-coverts tipped with buff; back, rump, and upper tail-coverts white, mottled with black, some of the feathers tipped with blue.

Hab. Cape York, Rockingham Bay, Port Denison. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Two central tail feathers	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. u.)
A 1 ♂	12·9	4·03	3·3	8	1·65	1·2	1·8	0·45	0·48	0·6	0·63
A 2 ♂	12·2	4	3·2	7·5	1·5	1·25	1·9	0·42	0·47	0·6	0·62
A 3 ♀	11	4	3·1	6	1·6	1·23	1·86	0·46	0·5	0·58	0·6
A 4 ♂	12·8	3·9	3	7·95	1·5	1·15	1·7	0·44	0·48	0·55	0·58
A 5 ♀	11	3·85	3	5·7	1·5	1·1	1·7	0·45	0·47	0·58	0·62

A 1 ♂ ad. sk., Cairns, North Eastern Queensld. Feb. 28th 1880. Pch.
A 2 ♂ ad. sk., Cairns, North Eastern Queensld. Feb. 28th 1880. Pch.
A 3 ♀ not quite ad. sk., Cairns, North Eastern Queensld. 1887. Col.
A 4 ♂ ad. sk., Cape York, North Australia. Pres.
A 5 ♀ ad. sk., Cape York, North Australia. Pres

5. ALCYONE.

1. Alcyone azurea.

Azure Kingfisher.

Azure Kingfisher, *Lath. Syn. Suppl.* p. 372 (1801).

Alcedo azurea, *Lath., Ind. Orn. Suppl.* ii. p. 32 (1801); *Swains., Zool. Illust.* 1st Ser. pl. 26 (1820); *Schl., Mus. Pay-bas. Alced.* (1863).

Ceyx azurea, *Steph.*, *Gen. Zool.* xiii. p. 106 (1826); *Jard. & Selby*, *Ill. Orn.* ii. pl. 55, fig. 1 (1839).

Alcyone azurea, *Gould, in Eyre's Disc. Cent. Austr.* Vol. i. App. p. 441 (1845); *id. in Stokes Voy. Beagle*, Vol. i. App. p. 479 (1846); *Gray*, *Gen. Bds.* Vol. i. p. 82 (1846); *Gould*, *Bds. Austr.* fol. Vol. ii pl. 25 (1848); *id. Intr. Bds. Austr.* p. 31 (1848); *Gray*, *Cat. Fiss. Brit. Mus.* p. 65 (1848); *Bonap.*, *Consp. Gen. Av.* tom. i. p. 158 (1850); *Reichb.*, *Vög. Neuholl.* p. 278 (1850); *id. Handb. Alced.* p. 7, (1851); *Cass.*, *Cat. Halc. Phil. Mus.* p. 5 (1852); *Macgill*, *Voy. Rattlesn.* Vol. ii. App. p. 356 (1852); *Bonap.*, *Consp. Vol. Anis.* p. 10 (1854); *Pelz. Voy. Novara*, p. 58, (1865); *Gould*, *Handbk. Bds. Austr.* Vol. i. p. 139, sp. 69 (1865); *Sharpe*, *Proc. Zool. Soc.* p. 355 (1869); *id. Mon. Alced.* p. 41, pl. 13 (1868-71); *Ramsay*, *Proc. Linn. Soc. N.S.W.* Vol. ii. p. 179, sp. 70 (1877); *Broadb.*, *Proc. Roy. Soc. Queensld.* Vol. v. p. 17 (1888); *Ramsay*, *Tab. List Austr. Bds.* p. 3, sp. 77 (1888); *North*, *Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, p. 1774, (1888); *id. Descr. Cat. Nest and Eggs Austr. Bds.* p. 40 (1889); *Sharpe*, *Brit. Mus. Cat.* Vol. xvii. p. 168 (1892).

Alcedo tribrachys, *Shaw*, *Nat. Miscl.* pl. 281 (1804).

Ceyx tribrachys, *Cuv.*, *Regn. Anim.* i. p. 417 (1817).

Ceyx cyanea, *Less.*, *Traité d'Orn.* p. 241 (1831).

Alcedo australis, *Swains.*, *Classif. of Bds.* Vol. ii. p. 336 (1837).

Adult male. Crown and sides of the head, the neck above, and the whole of the upper surface of the body, upper wing- and upper tail-coverts rich azure-blue; tail above blue, black below and on the inner webs; primaries and secondaries black, the outer webs of the latter margined with blue, and narrowly margined with rufous at the base on both surfaces; lores rufous, an oblong spot on the sides of the neck white, occasionally washed with rufous; cheeks, ear-coverts, sides of the neck, and extending on to the sides of the chest, deep blue; throat buff, the chest and all the under surface of the body rich rufous; sides, flanks, and under tail-coverts rufous, washed with rose-lilac; under wing-coverts rich rufous. Bill black; legs and feet orange-red; tuft of oil-gland white, tipped with black. Total length 6·9 to 7 inches, wing 3·05, tail 1·5, tarsus 0·38, mid-toe 0·6, bill from forehead 2, from nostril 1·6, from gape 2.15, width 0·26, height 0·31.

Adult female. Similar to the male in plumage.

Young. In the young and immature birds the head is crossed with wavy markings of blue and black, the lores and neck spot rufous or deep buff, throat buff, the sides of the chest black, all the remainder of the under surface deep rufous without the rosy-lilac tint on the sides and flanks; legs pale orange, bill black, the tip white.

Hab. Rockingham Bay, Port Denison, Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Victoria and South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe. (s. u.)	Hind toe. (s. u.)
A 1 ♂	7·2	3	1·75	2·1	1·72	2·4	0·35	0·28	0·4	0·6	0·28
A 2 ♀	6·8	3	1 56	1·8	1·45	2·1	0·35	0·25	0·4	0·55	0·25
A 3 ♀	7·1	3·1	1·75	2	1·65	2·38	0·35	0·3	0·4	0·55	0·27
A 4 ♂	7·3	3	1·6	2·15	1·72	2·4	0·35	0·3	0·42	0·55	0·25
B 1 ♀	6·4	2·95	1·46	1·4	1	1·63	0·28	0·28	0·37	0·5	0·25

A 1 ♂ ad. sk., Wide Bay, Queensland, November, 1867. Col.
A 2 ♀ ad. sk., Brisbane River, Queensland, 5th October, 1864. Col.
A 3 ♀ ad. sk., Middle Harbour, Sydney, N.S. Wales, Septr., 1878. Pch.
A 4 ♂ ad. sk., Lithgow, N. S. Wales. Exch.
B 1 ♀ juv. sk., New South Wales. Col.

Alcyone azurea.

Var. diemenensis.

Tasmanian Kingfisher.

Alcyone diemenensis, *Gould, Proc. Zool. Soc.* pt. xiv. p. 19 (1846); *id. Intr. Bds. Austr.* p. 31 (1848); *Gray, Gen. Bds.* Vol. i. p. 82 (1888); *Kaup, Fam. Alced.* p. 18 (1848); *Reichb., Vög. Neuholl.* p. 278 (1850); *Cab. et Hein., Mus. Hein. Theil.* ii. p. 143 (1860); *Gould, Handbk. Bds. Austr.* Vol. i. p. 141 sp. 70 (1865); *Sharpe, Proc. Zool. Soc.* p. 355 (1869); *id. Mon. Alced.* p. 47 (1871); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. p. 179, sp. 71 (1877); *Legge, Proc. Roy. Soc. Tas.* p. 238 (1886); *Ramsay, Tab. List Austr. Bds.* p. 3, sp. 78 (1888); *North, Austr. Mus. Cat. Nests and Eggs Austr. Bds.* pp. 40–383 (1889).

Alcyone azurea.

Var. diemenensis.

The Tasmanian variety, known as *Alcyone diemenensis*, cannot be considered as a distinct species, indeed scarcely as a variety. Bill black, whitish at the extreme tip; legs and feet orange. Total length 7 inches, wing 3·1, tail 1·65, tarsus 0·4, mid-toe 0·55, bill from forehead 2, from nostril 1·5, height 0·4, width 0·3.

Hab. Tasmania.

A 1 ♂ ad. sk., Tasmania. O.C.

2. Alcyone pulchra.

Resplendent Kingfisher.

Alcyone pulchra, *Gould, Proc. Zool, Soc.* p. 19, (1846); *Gray, Gen. Bds.* Vol. i. p. 82 (1846); *Gould, Intr. Bds. Austr.* fol. Vol. i. p. 32 (1848); *Reichb., Vög. Neuholl.* p. 278 (1850); *id. Handbk. Alced.* p. 7 (1851); *Cass., Cat. Halc. Phil. Mus.* p. 5 (1852); *Elsey, Proc. Zool. Soc.* p. 25 (1857); *Gould, Handb. Bds. Austr.* Vol i. p. 141, sp. 71 (1865); *Sharpe, Proc. Zool. Soc.* p. 356 (1869); *Gray, Hand-l. Bds.* p. 96, (1869); *Sharpe, Mon. Alced.* p. 45, pl. 14 (1868-71); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. p. 179, sp. 72 (1877); *Masters, Proc. Linn. Soc. N.S.W.* Vol. ii. p. 270, sp. 17 (1877); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. i. 2nd Series p. 1086 (1886); *id.* Vol. iii. 2nd Series, p. 269 (1888); *id. Tab. List Austr. Bds.* p. 3 sp. 79 (1888); *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, p. 269, (1888); *id. Austr. Mus. Cat. Nests and Eggs Austr. Bds.* p. 41 (1889); *Sharpe, Brit. Mus. Cat.* Vol. xvii. p. 169 (subsp.) (1892).

Adult male. Head and all the upper surface rich deep ultramarine, deeper on the upper wing-coverts and scapulars; lores and oblong neck spot rufous, quills blackish-brown, the inner webs towards the base margined with rufous, the outer webs of the secondaries blue; sides of the head and ear-coverts dark ultramarine, sides of the neck and a large patch extending down the sides of the body to the flanks deep ultramarine, throat buff; chest, centre of the breast, the abdomen and under tail-coverts, deep coppery-rufous; tail blue above like the back, black below; the flanks and under tail-coverts strongly washed with rose-lilac, under wing-coverts and axillaries deep coppery-rufous, the inner webs of the quills margined towards the base with a lighter tint of rufous; bill black, whitish at the tip; legs and feet orange. Total length 5·7 to 6 inches, wing 2·9, tail 1·4, tarsus 0·31, mid-toe 0·6, hind-toe 0·4, bill from forehead 1·7, from nostril 1·3, from gape 1·76.

Remarks. The females resemble the males in plumage. The young have the same barred appearance on the head as described in the previous species, *A. azurea*, from which this species chiefly differs in the intensity of the blue and deep rufous colors, it has also more of the rosy-lilac tint on the flanks and under tail-coverts.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York. (*Ramsay*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. u.)	Hind toe (s. u.)
A 1 ♂	6·8	3	1·62	2·05	1·7	2·25	0·35	0·32	0·4	0·55	0·25
A 2 ♂	6·5	3·1	1·65	2·07	1·75	2·3	0·4	0·32	0·4	0·53	0·3
A 3 ♂	5·5	3·1	1·5	1·9	1·4	2·05	0·38	0·3	0·4	0·52	0·28
A 4 ♀	5·5	2·9	1·45	1·75	1·35	2	0·35	0·29	0 4	0·52	0·3
A 5 ♀	6	3	1·5	1·75	1·35	2	0·35	0·3	0·4	0·52	0·23
A 6 ♂	6·15	2·9	1·5	1·85	1·5	2·15	0·37	0·3	0·4	0·53	0·25

A 1 ♂ ad. sk., Barron River, Northern Queensland, 1887. Col.

A 2 ♂ ad. sk., Riverstone, Cairns District, Northern Queensland (captured on the nest, 26th December, 1887). Col.

A 3 ♂ ad. sk., Derby, North-western Australia, 1886. Col.

A 4 ♀ ad. sk., Derby, North-western Australia, 1886. Col.

A 5 ♀ ad. sk., Port Essington, February, 1879. Col.

A 6 ♂ ad. sk., Port Essington, February, 1879. Col.

3. Alcyone pusilla.

Little Kingfisher.

Ceyx pusilla, *Temm. Pl. Col.* 595, fig. 3 (1836).

Alcyone pusilla, *Reichb., Handbk. Alced.* p. 7 (1851); *Cass. Cat. Halc. Phil. Mus.* p. 5 (1852); *Macgill., Voy. Rattles.* Vol. ii. p. 356 (1852); *Sclat., Proc. Linn. Soc.* p. 172 (1858); *Rosenb., Journ. of Orn.* p. 118 (1864); *Gould, Bds. Austr.* fol. Vol. ii. pl. 26 (1848); *id. Handb. Bds. Austr.* Vol. i. p. 142, sp. 72 (1865); *Ramsay, Proc. Zool. Soc.* p. 383 (1868); *Sharpe, Mon. Alced.* p. 53, pl. 16 (1868-71); *Masters, Proc. Linn. Soc. N.S.W.* Vol. i. p. 48, sp. 18 (1876); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. i. p. 179, sp. 73 (1876); *Salvad., Ann. Mus. Civ. Gen.* x. p. 301 (1877); *Sharpe, Journ. Proc. Linn. Soc.* p. 311 (1878); *D'Alb. & Salvad., Ann. Mus. Civ. Gen.* xiv. p. 48

(1879); *Sclat.*, *Proc. Zool. Soc.* pp. 447, 450 (1879); *Salvad.*, *Orn. Pap. et Molucc.* Vol. i. p. 414, sp 194 (1880); *Ramsay*, *Tab. List Austr. Bds.* p. 3, sp. 80 (1888); *Sharpe*, *Brit. Mus. Cat.* Vol. xvii. p. 171 (1892).

Alcedo pusilla, *Schl.*, *Mus. Pays-Bas*, *Alced.* p. 18 (1863); *Schl.*, *Vög. Ned. Ind. Alced.* pp. 12, 48, pl. 3 (1864).

Nu-rea-bin-mo, *Aborigines of the Coburg Peninsula* (Gould).

Adult male. Lores, and an oblong patch on the side of the neck behind the ear-coverts white; the whole of the head, neck, scapulars, back, rump, and upper tail-coverts, and tail above, rich ultramarine deep blue; tail feathers below, blackish-brown, the outermost pair without the blue on the outer webs above; wings black above, some of the secondaries narrowly margined with blue; all the quills blackish, with a narrow line of white on the base of the inner web, under surface of the quills similar but lighter; under wing-coverts white, a blackish spot on the small feathers of the under surface at the angle of the wing; ear-coverts and a stripe extending from below the lower mandible blue; a large blotch of the same color on the sides of the chest, but not extending across it; throat and remainder of the under surface and under tail-coverts white. Some specimens have a slight tinge of green on the forehead and wings. Bill black, feet orange. Total length 4·7, in wing 2·1, tail 0·95, bill 1·2, from the nostril 0·95, height at nostril 0·27, width 0 27, tarsus 0·3, mid toe 0·4.

The sexes are alike in plumage, the young have a greenish shade on the head and sides of the neck and of the breast, and on the upper wing-coverts and scapulars. The bluish-green of the forehead margins the tips of the feathers and gives that part a banded appearance.

Remarks. A fully adult specimen shot inland from Port Essington resembles the preceding, but is of a much lighter and brighter blue; there is a decided shade of green on the outer webs of the secondaries, contrasting with the blue of the scapulars; the ear-coverts, sides of the neck from below the base of the lower mandible extending to the chest and reaching down the flanks of the same rich bright blue as on the upper surface, from the flanks a very narrow streak of blue reaches to the under tail-coverts, which are also tipped with the same color; the blue from the sides of the chest almost join across the breast, leaving only a narrow broken band of white down the centre; a narrow line of blue extends from the angle of the wing on the under side to the base of the primaries, leaving a narrow white margin on the edge of the wing, remainder of the under wing-coverts white; the difference of the tint of blue, the greater extent of the color on the chest and sides of the body, and the blue margins on the

flank feathers and tips of the undertail coverts, tend to prove this to be a distinct species. The specimens of *A. pusilla*, from Rockingham Bay, Cairns, and New Guinea, are for the most part identical in coloration, and agree with Gould's and Sharpe's figures.

Hab. Port Darwin and Port Essington, Cape York, Rockingham Bay, South Coast of New Guinea. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril	Breadth of bill at nostril.	Tarsus	Mid toe (s. u.)	Hind toe (s. u.)
A 1 ♀	4·4	2·05	1	1·3	1·05	1·45	0·26	0·22	0·3	0·43	0·2
A 2 ♀	4·4	2·15	1	1·3	1·05	1·45	0·26	0·22	0·3	0·47	0·21
A 3 ♂	4·3	2·15	1	1·3	1	1·43	0·25	0·2	0·3	0·42	0·21
A 4 ♂	4·7	2·1	1	1·25	1	1·4	0·25	0·22	0·3	0·46	0·2
A 5 ♂	4·2	2·1	1	1·2	0·98	1·38	0·25	0·22	0·32	0·42	0·2

A 1 ♀ ad. sk., Cairns, Northern Queensland, 1887. Pch.
A 2 ♀ ad. sk., Cairns, Northern Queensland, 1887. Pch.
A 3 ♂ ad. sk., Cairns, Northern Queensland, 1888. Col.
A 4 ♂ ad. sk., Cairns, Northern Queensland, 1888. Col.
A 5 ♂ ad. sk., Port Essington, February, 1879 (lighter phase). Col.

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