

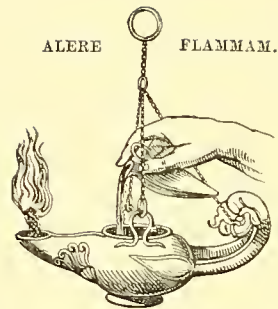
THE LORIIDÆ

A MONOGRAPH
OF THE
L O R I E S,
OR
BRUSH-TONGUED PARROTS,
COMPOSING THE
FAMILY LORIIDÆ.

BY
ST. GEORGE MIVART, F.R.S.



LONDON:
R. H. PORTER, 7 PRINCES STREET, CAVENDISH SQUARE, W.
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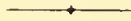


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To FRANK CRISP,
TREASURER OF THE LINNEAN SOCIETY,
THIS WORK IS DEDICATED
AS A TESTIMONY TO THE LONG-CONTINUED
ZEAL AND MUNIFICENCE
WITH WHICH HE HAS FURTHERED THE CAUSE OF SCIENCE,
AS WELL AS A
SMALL TRIBUTE OF PRIVATE FRIENDSHIP AND GRATITUDE
FOR THE UNVARYING KINDNESS
SHOWN BY HIM TO THE
AUTHOR
OF THE PRESENT WORK.

P R E F A C E.



It has long been our desire to write a Monograph of one group of the PSITTACI which we have always regarded as being an order of special scientific interest; but a knowledge of our very limited ornithological powers would ever have forbidden us to gratify that desire had not Count T. Salvadori completed the admirable work on the Parrots which constitutes the twentieth volume of the 'Catalogue of the Birds in the British Museum.' Therein this accomplished ornithologist (who is so great an authority on Parrots) has furnished us, ready to hand, with a careful classification, excellent though short descriptions, careful statements as to geographical distribution, and an exhaustive bibliography. The working-out of such a bibliography would have been an effort we could not have undertaken, but at least every reference therein to be found has been carefully verified and a few misprints corrected.

Yet, in spite of the very great assistance provided for us by this Catalogue, we should still have shrunk from undertaking a Monograph of the *Loriidæ* had it not been that we knew we could count on the kind aid of our accomplished friend Dr. Bowdler Sharpe, F.L.S., and on help and assistance from Continental naturalists. As to the latter, we must, in the first place, express our deep obligation to Professor Alphonse Milne-Edwards. It is now nearly thirty years since we first received valuable assistance from his kindness, nor in the course of that long period has he ever failed most graciously to respond to any request of ours for help or information. In the present case we have

had to thank him for the loan of most valuable unique specimens (types of species), as will be duly acknowledged in our descriptions of the species concerned. To another distinguished naturalist of the Natural History Museum of Paris, Dr. Emile Oustalet, we have also to express our thanks for information kindly given.

Count Salvadori, though we have not been supplied with specimens from Turin, has given us personally very valuable aid and advice, in addition to the inestimable assistance of his Catalogue above referred to. Dr. R. Gestro, of Genoa, has merited our special thanks for the amiable readiness with which he has, on two occasions, sent us precious specimens for study and delineation, including a very beautiful as well as unique typical specimen. Dr. Martorelli, of Milan, Dr. Büttikofer, of Leyden, and Dr. A. B. Meyer, of Dresden, have been so good as to have figures drawn and coloured, under their personal supervision, so as to furnish us with accurate representations of specimens which the rules of the Institutions to which they are severally attached did not allow them actually to lend.

To Dr. A. B. Meyer we have also to give our thanks for forwarding us three specimens, and similar acknowledgments are due to Dr. Kraepelin, of Hamburg, and especially to Dr. Ludwig Lorenz, of the Imperial Museum of Natural History at Vienna, for the most valuable typical specimen of an otherwise unknown species.

In our own country we have also met with similar kindness, and we have especially to express our gratitude to the Rev. Canon Tristram and to the Hon. Walter Rothschild for the very ready kindness with which very valuable specimens (not otherwise to be obtained by us) have been by them confided to our care.

To Dr. R. Bowdler Sharpe we have to avow singular obligations. In spite of his multitudinous and onerous duties, and the almost incessant calls upon his time, not only have the fruits of his ripe knowledge and vast experience been placed at our disposition, but each one of our Plates has been carefully compared by him with the specimen represented, so as to ensure its fidelity to nature.

Everyone who is familiar with the Zoological Society's Library must be aware of the great courtesy and ability of its Librarian, Mr. Waterhouse. To him, and also to his excellent assistant, Mr. Doubleday, we feel specially indebted for valuable assistance most readily afforded—assistance without which we should have found the business of verifying Count Salvadori's bibliography a task altogether beyond our strength. Assisted as we have been, we venture to hope that our modest efforts may not be found devoid of utility by ornithologists—especially on account of the types and first representations of species it contains. But the skilful pencil of our artist, Mr. J. G. Keulemans, and the information as to the habits and geographical relations of the birds described which we have been able to obtain, will, we trust, render our work one not unwelcome to the general reader who loves the beauties of Nature and feels the charms and attractions of Bird Life.

We have had carefully prepared, by Messrs. George Philip and Son, special Maps to show the distribution of the family LORIIDÆ and of all its component genera, together with a Map of the islands between Celebes and New Guinea, on a scale which we believe is not to be met with in any English atlas.

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Thus 22 types are depicted and 16 species represented
for the first time.

LIST OF ANATOMICAL FIGURES AND MAPS.



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MAP II. Showing the distribution of the genera 1. *Chalcopsittacus*, 4. *Calliptitus*, 5. *Vini*, 6. *Coriphitus*, and 7. *Trichoglossus*.

MAP III. Showing the distribution of the genera 2. *Eos*, 3. *Lorius*, 8. *Psittenteles*, 9. *Ptilosclera*, and 13. *Charmosyna*.

MAP IV. Representing the Islands between Celebes and New Guinea.

INTRODUCTION.



THE Parrots which constitute the family *Loriidæ* are a very attractive group of rather small birds. None of them are nearly so large as the Macaws, or even as the common Grey Parrot (*Psittacus erithacus*), but vary in dimension, from the size of a Turtle-Dove to about that of a Sparrow. They consist of 75 more or less distinct species, and thus very largely exceed in number not only the nearly extinct family of *Nestoridæ* (with only 3 living species), but also the families *Cyclopsittacidæ* (19 species) and *Cacatuidæ* (27 species), even taken together. On the other hand, they are enormously exceeded by the immense family of the *Psittacidæ*. This last-named group is divided into six subfamilies as follows: the *Nasiterninæ*, with 9 species; the *Conurinaæ*, with 102 species; the *Pioninaæ*, with 91 species; the *Psittacinaæ*, with 8 species; the *Palæornithinæ*, with 112 species; and, lastly, *Platyccrcinæ*, with 50 species. Finally the aberrant family *Stringopidæ* contains only 2 species.

Therefore the Lories form less than one-sixth part ($\frac{3}{20}$) of the whole Order PSITTACI. The family is remarkable for its brilliancy and gay coloration; but it is not only the appearance of these birds which makes them so attractive. Some of them, as those of the genus *Chalcopsittacus*, will spontaneously approach human dwellings, and most of them make excellent pets, except for those persons who cannot tolerate the shrill cries they frequently emit. Some caged individuals have been let free, in suitable weather, and found to return voluntarily to their habitual dwelling-place. They appear, however, to be very indifferent talkers, and of several species kept in captivity it is recorded that they never spoke at all. The Lories are very choice feeders, living as they do on the nectar and pollen of flowers, and mainly on the blossoms of the *Eucalypti* and coral trees.

When such trees are in flower, Lories may be seen in large flocks clinging to the smaller branches in every attitude possible to them, and when they have exhausted the supply to be obtained at one spot they will fly off rapidly with shrill screams to other trees as yet unrifled of their nectar. So intent are they, while feeding, on their occupation, that they may then be closely approached, and even the firing of a gun from beneath, though fatal to individuals, has been known not to disturb their uninjured neighbours.

The plumage of the *Loriidæ* is almost always a mixture of green or purple (or blue) and red, often of all three, while yellow is frequently also present; sometimes the whole body is green of one or more shades; while the plumage may be all red or, in very rare instances, blue or blue and white, and sometimes the upper parts may be dusky brown or almost entirely black. Commonly there is some black or dusky colour present here or there, very frequently on the quills. In many species the head is blue, and it is a common thing for the head to have bright shaft-streaks of that tint, and there may be yellow, or green, shaft-streaks on other parts of the body. Very commonly the inner webs of the quills have a yellow or red patch, so that when the wing is opened a transverse band of yellow or red appears on its under surface. The two middle tail-feathers often differ in their tints from the lateral ones. The latter are generally party-coloured, and the whole often become yellow or red towards the tips. The bill is sometimes black, very often more or less orange or red. The feet may be blackish or reddish or yellowish, and they are very often grey. The cere is broadest over the culmen, gradually narrowing along either side of the bill, as in the *Psittacinae*, and so contrasting with its condition in the *Nasiterninae*. It is never covered with hairy feathers, as in the Nestors. The bill is elongated, and in its delicacy and weakness offers a strong contrast to that of the typical Parrots, and still more to that of the Cockatoos—especially of *Microglossus*—and those of the Macaws. It is nearly smooth underneath, and is destitute of the transverse ridges which are present in the greater majority of Parrots on the under surface of the apical portion of the upper mandible. The latter is much compressed, generally longer than deep, smooth, and without a notch. The culmen is rounded and narrow, while the lower mandible, which is rather long, has the gonyes straight and narrow, slanting obliquely upwards, not flattened in front, and with no keel-like ridge.

Fig. 1.

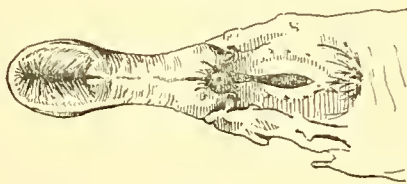


Fig. 2.

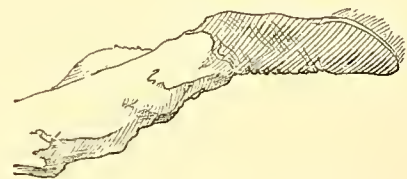
Fig. 1. Dorsal view of tongue of *Eos cardinalis*.

Fig. 2. Lateral view of the same.

The tongue is very remarkable, the papillæ at the sides of the dorsal surface and towards its apex being much elongated and bent inwards and more or less backwards* so as to form a kind of brush, which is no doubt destined to extract the nectar and the pollen of flowers. The tongue of all the genera of Lories has not, so far as we know, been yet examined; but this brush-like condition of it is so generally present that it may be provisionally assumed to be so in all species of the family. In Parrots generally the tongue is smooth and simple, and is

* See the late Professor Garrod's paper, P. Z. S. 1872, pp. 787-789.

devoid of such appendages, yet in the Nestors there is a delicate fringe of hairs at the tip, but these are quite different* from the elongated lateral papillæ of the *Loriidæ*. In *Nanodes discolor*, however, the tongue is again brush-like in structure†, yet not like that of the Lories. *Nanodes* is a Parrot from Australia and Tasmania which belongs to the subfamily *Platyercinæ* of the *Psittacidæ*—a subfamily in all the other species of which the tongue is, in all known instances, simple.

The head of no Lory is decorated with a crest such as characterizes the family *Cacatuidæ*, though sometimes the feathers of the crown, or of the hinder part of the head, or of the nape, are more or less elongated.

The wing is acute in shape and almost always longer than the tail, though it may but equal it or may even be but half the length of the tail's longest feathers.

It is the first three quills which are generally the longest, and sometimes the first is the longest of all. Often the first four or five primaries are distinctly attenuated towards their tips, and they may be abruptly so, or they may be notched at the tip.

The tail has but twelve feathers, which is the number in all Parrots which are not Lories. In one genus of the *Loriidæ*, however (*Orcopsittacus*), there are fourteen tail-feathers.

As to its shape, it may be rather short and nearly square, with the two middle feathers shorter than the lateral ones. It may, on the contrary, though very rarely, have the two middle feathers very much longer than the lateral ones, but they are almost always somewhat longer than are the latter. The feathers of the tail may be broad and rounded at the tip, or they may taper to a more or less acute point; they are very often graduated and tapering, but the tail may be rounded.

The shafts of the feathers are never pointed and projecting beyond the web as in the Nestors. The tail is almost always shorter than the wing, but in very rare instances it attains about twice the length of the latter. An oil-gland is present.

As to internal structure, little can be predicated of the family *Loriidæ* as distinctive from other families of the PSITTACI.

As regards the skeleton, what appears to be (so far as yet ascertained) their most interesting character concerns the bones of the tongue—the *os hyoides*.

The Lories, of course, present marked skeletal differences from various exceptional forms of *Psittaci* (such, *e. g.*, as *Microglossus aterrimus*, Macaws, and others), but from the more typical forms the divergences are small.

We have compared, as carefully as we could, the skeleton of a typical Lory—that of *Lorius flavopatliatus*—with that of the type of all the other Parrots, namely *Psittacus erithacus*‡.

Photographic reproductions of the skeletons of *Eos cyanogenys*, *Lorius lory*, *Lorius*

* See Garrod, *loc. cit.* p. 115, figs. 2 & 3.

† Its papillæ are blunter and shorter. That this bird is not one of the *Loriidæ* has been well shown by the late Mr. Forbes: see P. Z. S. 1879, pp. 166–174, pl. xvi.

‡ See Proc. Zool. Soc. for 1895, pp. 162, 312, & 363. It is from the illustrations therein given that those in our present Introduction have, by kind permission, been reproduced.

cyanauchen, *Trichoglossus meyeri*, *Trichoglossus ornatus*, and *Charmosyna josephinae* have been given by Dr. A. B. Meyer in plates xlvi., lxix., lxviii., xxiv., lxx., and ii. respectively, in his work 'Abbildungen von Vogel-Skeletten,' 1879 (Dresden).

We have been enabled to study the skeletons of only nine species. These are preserved in the British Museum, in that of the Royal College of Surgeons, and in the Prosector's Cabinet at the Zoological Gardens of London. So slight have we found the differences to be amongst the specimens we have been able to examine of the genera *Eos*, *Lorius*, *Vini*, *Glossopsittacus*, and *Trichoglossus* that we conceive a representation of some of the bones of *Lorius flavopalliatus* will supply all the information it is desirable to give here, seeing that it is impossible for us to give information respecting the skeleton of other genera.

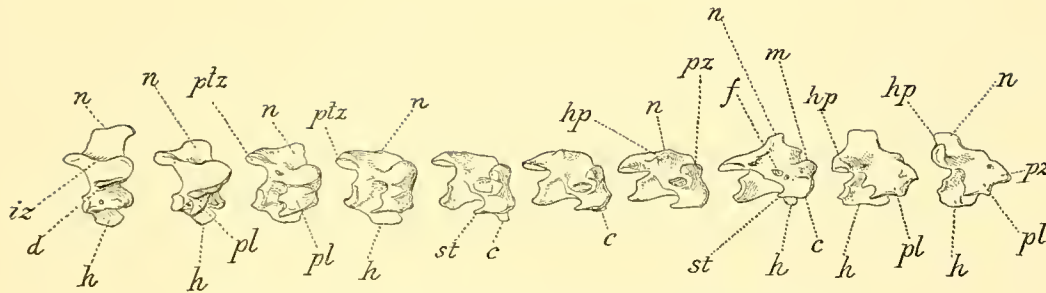
The species the skeletons of which we have been able to examine are:—

Eos cardinalis,
E. rubra,
Lorius flavopalliatus,
L. garrulus,
L. domicella,
Vini australis,
Trichoglossus novæ-hollandiæ,
T. ornatus,
Glossopsittacus porphyrocephalus.

The admirable works of Professor Milne-Edwards on the Fossil Birds of France and on the Osteology of the PSITTACI do not, unfortunately, contain figures or descriptions of any species of *Loriidæ*, and the same must be said of Bronn's 'Thierreich' and (with a quite insignificant exception) of Fürbringer's magnificent folio volumes.

We have selected certain portions of the skeleton of *Lorius flavopalliatus* (figs. 3-15, 17) to serve as a type of the skeletal structure of the Lories.

Fig. 3.



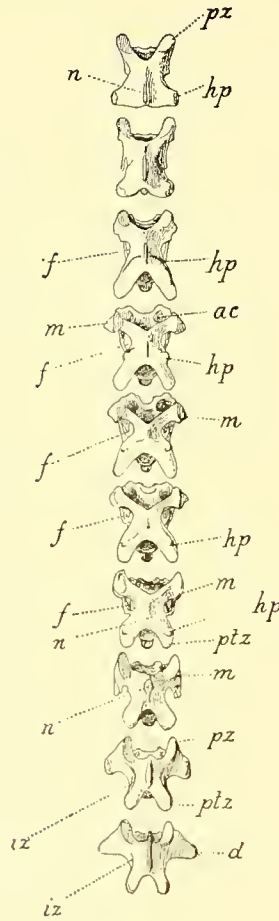
Lateral aspect of 3rd to 12th vertebrae of *Lorius flavopalliatu*.

- c. Catapophysis.
- d. Diapophysis.
- f. Foramen.
- h. Hypapophysis.
- hp. Hyperapophysis.
- iz. Interzygapophysial ridge.

- m. Metapophysis.
- n. Neural spine.
- pl. Pleurapophysial lamella.
- ptz. Postzygapophysis.
- pz. Prezygapophysis.
- st. Styliiform process.

Fig. 4.

(From P. Z. S. 1895, p. 317, fig. 7.)



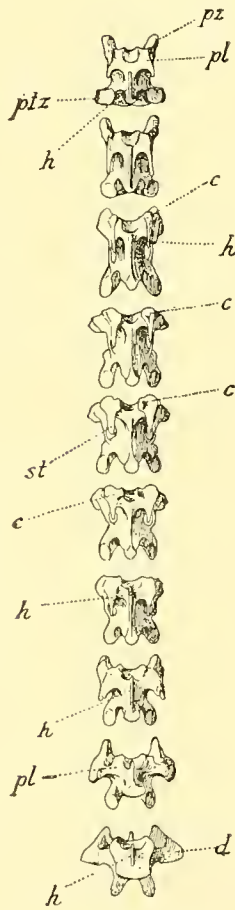
Dorsal aspect of the same.

ac. Arterial canal.
d. Diapophysis.
f. Foramen.
hp. Hyperapophysis.
iz. Interzygapophysial ridge.

m. Metapophysis.
n. Neural spine.
ptz. Postzygapophysis
pz. Prezygapophysis.

Fig. 5.

(From P. Z. S. 1895, p. 320, fig. 9.)



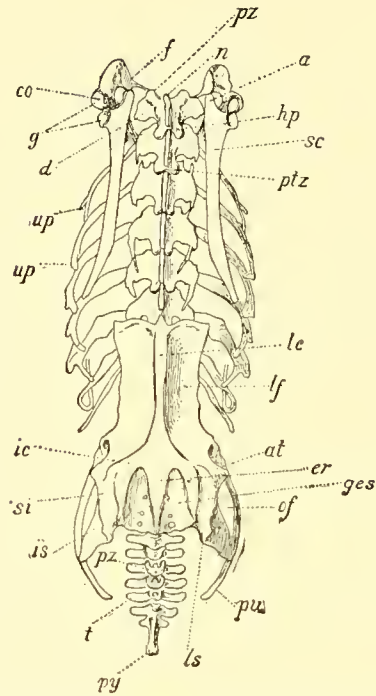
Ventral aspect of the same.

c. Catapophysis.
d. Diapophysis.
h. Hypapophysis.
pl. Pleurapophysial lamella.

ptz. Postzygapophysis.
pz. Prezygapophysis.
st. Styliform process.

Fig. 6.

(From P. Z. S. 1895, p. 323, fig. 11.)



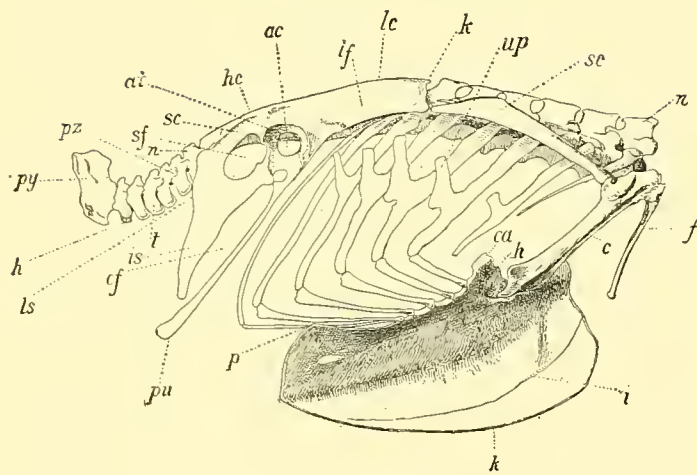
Dorsal aspect of the thorax, pelvis, and tail.

a. Acromion.
at. Antitrochanteric process.
co. Coracoid.
d. Diapophysis.
er. Sacral escutcheon.
f. Furculum.
g. Glenoid surfaces.
ges. Groove beside the sacral escutcheon.
hp. Hyperapophysis.
ic. Lateral iliac ridge.
is. Ischium.
lc. Crest of ilium.

lf. Iliac fossa.
ls. Ilio-caudal spine.
n. Neural spine.
of. Obturator foramen.
ptz. Postzygapophysis.
pu. Pubis.
pz. Prezygapophysis.
py. Pygostyle.
sc. Scapula.
si. Sacro-ischiatic ridge.
t. Transverse process.
up. Uncinate process.

Fig. 7.

(From P. Z. S. 1895, p. 324, fig. 12.)

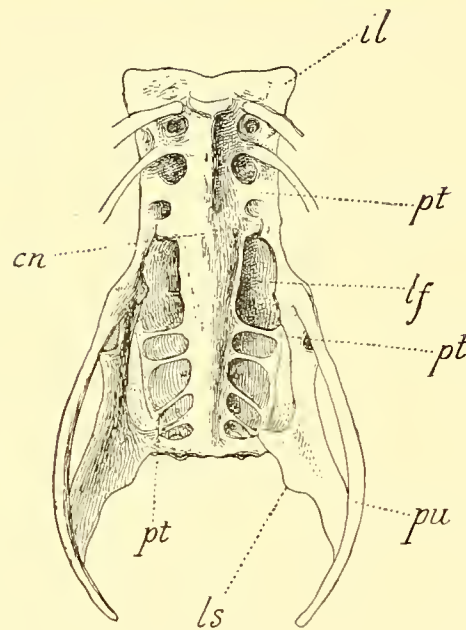


Lateral aspect of the same.

- | | |
|---|-----------------------------------|
| <i>ac.</i> Acetabulum. | <i>lc.</i> Dorsal crest. |
| <i>at.</i> Antitrochanteric process. | <i>lf.</i> Iliac fossa. |
| <i>c.</i> Coracoid. | <i>ls.</i> Ilio-caudal spine. |
| <i>ca.</i> Costal angle. | <i>n.</i> Neural spine. |
| <i>f.</i> Furculum. | <i>of.</i> Obturator foramen. |
| <i>h</i> (of tail). Hypapophysis. | <i>p.</i> Angle of sternum. |
| <i>h</i> (of sternum). Muscular impression. | <i>pu.</i> Pubis. |
| <i>hc.</i> Lateral crest. | <i>pz.</i> Prezygapophysis. |
| <i>i.</i> Intermuscular ridge. | <i>py.</i> Pygostyle. |
| <i>is.</i> Ischium. | <i>sc.</i> Scapula. |
| <i>k</i> (of sternum). Keel. | <i>sf.</i> Sacro-sciatic foramen. |
| <i>k</i> (of ilium). Anterior margin. | <i>up.</i> Uncinate process. |

Fig. 8.

(From P. Z. S. 1895, p. 329, fig. 18.)



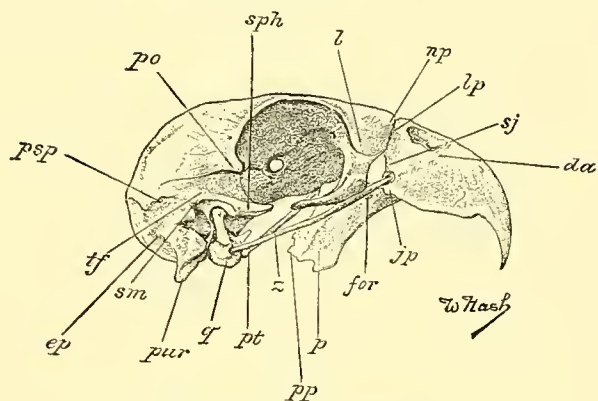
Ventral aspect of sacrum.

cn. Fused sacral vertebrae.
il. Ilium.
lf. Lateral fossa.

ls. Ilio-caudal spine.
pt. Parapophysial process.
pu. Pubis.

Fig. 9.

(From P. Z. S. 1895, p. 363, fig. 1.)

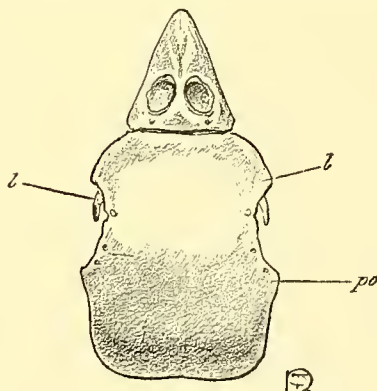


Lateral aspect of the skull.

- | | |
|---|---|
| <p><i>da</i>. Prenasal surface.
 <i>ep</i>. Exoccipital prominence.
 <i>for</i>. Foramen in palatine.
 <i>jp</i>. Jugal process.
 <i>l</i>. Lachrymal.
 <i>lp</i>. Lachrymal process of bony beak.
 <i>np</i>. Nasal process of frontal.
 <i>p</i>. Inferior palatine ridge.
 <i>po</i>. Postorbital process.
 <i>pp</i>. Posterior palatine process.</p> | <p><i>psp</i>. Postsquamosal prominence.
 <i>pt</i>. Pterygoid.
 <i>pur</i>. Paroccipital process.
 <i>q</i>. Quadrate.
 <i>sj</i>. Suprajugal process.
 <i>sm</i>. Supramcatal process.
 <i>sph</i>. Sphenotic process.
 <i>tf</i>. Temporal fossa.
 <i>z</i>. Zygoma.</p> |
|---|---|

Fig. 10.

(From P. Z. S. 1895, p. 367, fig. 3.)

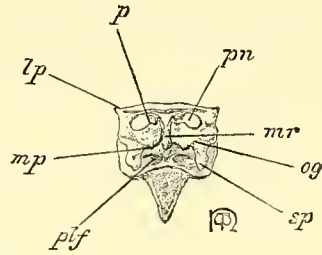


Dorsal aspect of skull.

- | | |
|--|--|
| <p><i>l</i>. Lachrymal (constituting the pre-orbital process).</p> | <p><i>po</i>. Postorbital process.</p> |
|--|--|

Fig. 11.

(From P. Z. S. 1895, p. 370, fig. 5.)



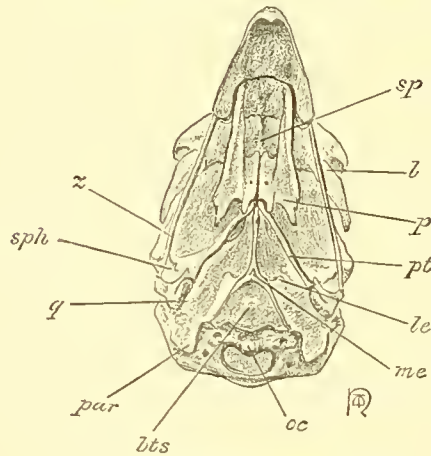
Posterior aspect of prosopium*.

lp. Lachrymal process.
mp. Median process.
mr. Median ridge.
og. Oblique groove.

p. Dorsal process.
plf. Fossa for the reception of palatine.
pn. Posterior prosopial nares.
sp. Lateral process.

Fig. 12.

(From P. Z. S. 1895, p. 378, fig. 6.)



Ventral aspect of the skull.

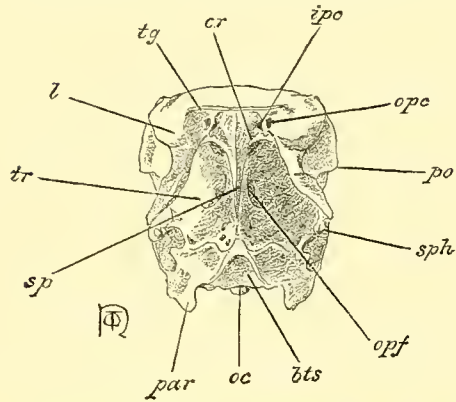
lts. Basi-temporal shield.
l. Lachrymal.
le. Lateral eustachian process.
me. Median eustachian process.
oc. Occipital condyle.
p. Palatine.

par. Paroccipital process.
pt. Pterygoid.
q. Quadrate.
sp. Septal process.
sph. Sphenotic process.
z. Zygoma.

* By "prosopium" we intend to denote the whole ossified mass in front of the cranio-facial articulation. It includes the premaxilla, maxillæ, maxillo-palatine processes, the nasals, and the ethmoidal and turbinal ossifications of the beak. This term was proposed by us (see P. Z. S. 1895, p. 365, note, and for descriptions see also pp. 369-371).

Fig. 13.

(From P. Z. S. 1895, p. 384, fig. 10.)



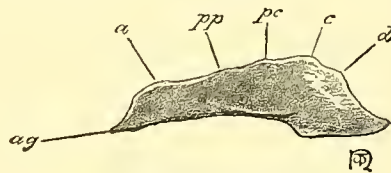
Anterior aspect of the skull, the prosopium being removed.

- bts.* Basi-temporal shield.
- cr.* Crucial ridge.
- ipo.* Inner precranial foramen.
- l.* Lachrymal, forming the pre-orbital prominence.
- oc.* Occipital condyle.
- ope.* Outer precranial foramen.

- opf.* Optic foramen.
- par.* Paroccipital process.
- po.* Postorbital process.
- sp.* Septal process.
- sph.* Sphenotic process.
- tg.* Transverse groove.
- tr.* Transverse ridge.

Fig. 14.

(From P. Z. S. 1895, p. 389, fig. 13.)



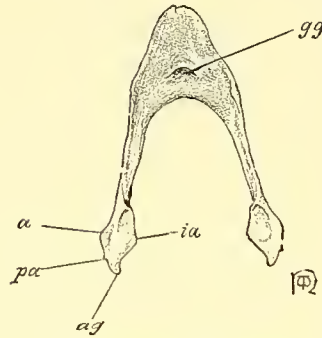
Lateral aspect of mandible.

- a.* Articular prominence.
- ag.* Angular process.
- c.* Coronoid process.

- d.* Dentary process.
- pc.* Postcoronoid process.
- pp.* Prearticular process.

Fig. 15.

(From P. Z. S. 1895, p. 392, fig. 16.)



Dorsal aspect of mandible.

a. Articular prominence.
ag. Angular process.
gg. Fossa for genioglossus.

ia. Internal articular process.
pa. Minute rudimentary prominence representing
 a postarticular process.

The hyoid of the PSITTACI from *Psittacus erithacus* to *Stringops habroptilus* (inclusive), so far as I have been able to ascertain, presents characters which separate off the Parrots from every other Order of Birds.

The common but distinctive characters of the PSITTACI consist in their possession of:—

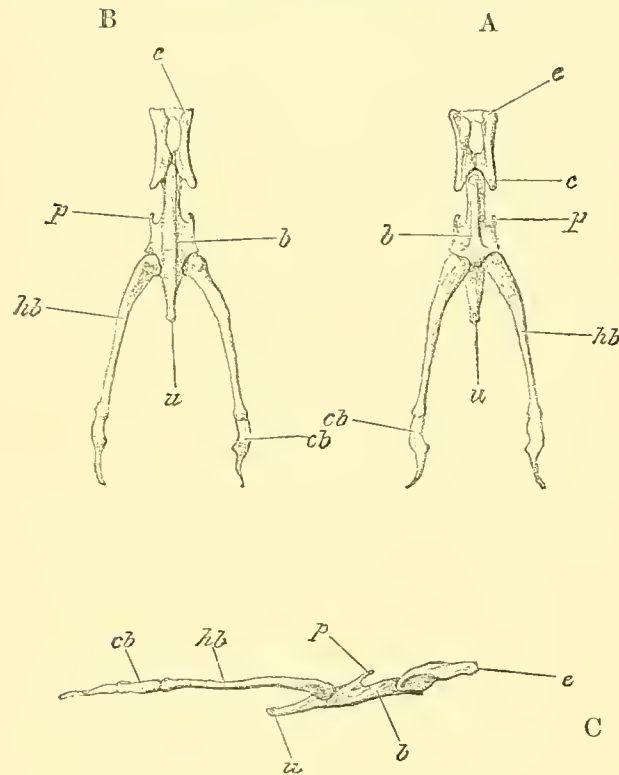
- (1) A *basihyal* which is much broadened out posteriorly (*b*).
- (2) A process, named * *parahyal* process (*p*), which projects forwards and upwards from either side of the *basihyal*.
- (3) An *os entoglossum* in the form of a single broad bone with a considerable central foramen or, more commonly, in the form of two lateral parts, entoglossals, medianly united in front by cartilage, and leaving a vacant space between this and their attachment behind to the *basihyal*.

In the *Loriidæ* which I have been able to examine, so far as I know, the three *parahyal* processes are very long and slender, and pass forwards, curving gently mesiad, till they meet in a symphysis and so constitute a *parahyal arch* (figs. 17, 18, & 19, *p*).

* See P. Z. S. 1895, p. 162.

Fig. 16.

(From P. Z. S. 1895, p. 164, fig. 1.)



Hyoid of *Psittacus erithacus*.

A. Dorsal aspect ; B. Ventral aspect : C. Lateral aspect.

- | | | |
|---|--|--|
| <p>b. Basihyal.
 c. Concavity or cup-like elevation.
 cb. Ceratobranchial.
 e. Entoglossum.</p> | | <p>hb. Hypobranchial.
 p. Parahyal process.
 u. Urohyal.</p> |
|---|--|--|

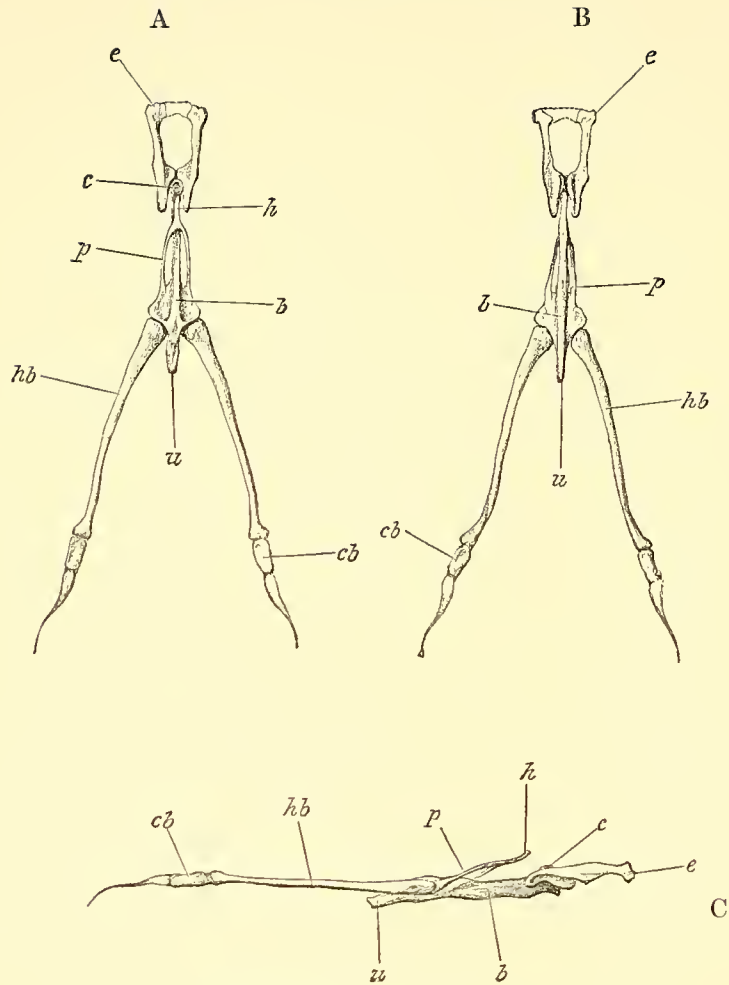
This arch bears a singular resemblance to an *os furculum*, its symphysis (figs. 17 & 19, *h*, & fig. 18, *s*) calling to mind the "hypocleidium."

It would seem to be probable, then, that the *Loriidæ* may be distinguished from the other PSITTACI by the possession of a parahyal arch.

It would be rash to assume that no such arch exists in any one of the other families, subfamilies, and genera of PSITTACI; nevertheless, as hardly any of them possess a brush-tongue, we may well suspect a parahyal arch to be peculiar, or almost peculiar, to the *Loriidæ*. Only in the *Nestor* and in *Nanodes* is any structure at all comparable to the tongue of the Lories known to exist. It becomes therefore a matter of much interest to find out what is the hyoidcan structure of those two genera: this we have been enabled to ascertain.

Fig. 17.

(From P. Z. S. 1895, p. 168, fig. 3.)

Hyoid of *Lorius flavopalliatum*.

Lettering the same as before, with the addition of *h*, symphysis of the two elongato parahyal processes.

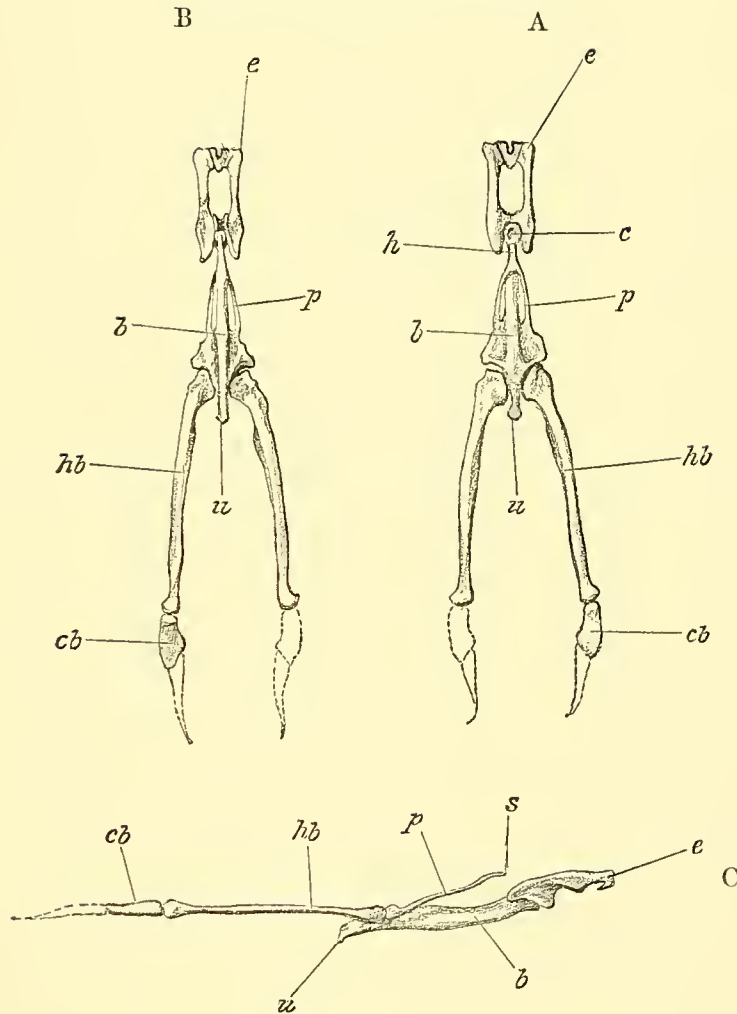
It turns out that *Nestor meridionalis* has a well-developed parahyal arch which coalesces medianly and preaxially with the basi-hyal close to the entoglossum; we can hardly, therefore, think otherwise than that the *Loriidae* have the *Nestors* for very near allies, and indeed they have been placed next them by Count Salvadori.

With respect to *Nanodes discolor*, which undeniably has a tongue with a brush-like modification, the interest is yet greater. Mr. W. A. Forbes (late Professor to the Zoological Society) gave special attention to the question concerning the true position of *Nanodes*, which he called *Lathamus**, and decided that it did not belong to the family of *Lories*. This we

* See P. Z. S. 1879, p. 166.

Fig. 18.

(From P. Z. S. 1895, p. 170, fig. 4.)



Hyoid of *Eos reticulata*.

Lettering as before, except that the symphysis is marked *s*.

can now confirm from the structure of its hyoid, as although the parahyal processes are elongated they do not converge to form an arch but remain widely separated*.

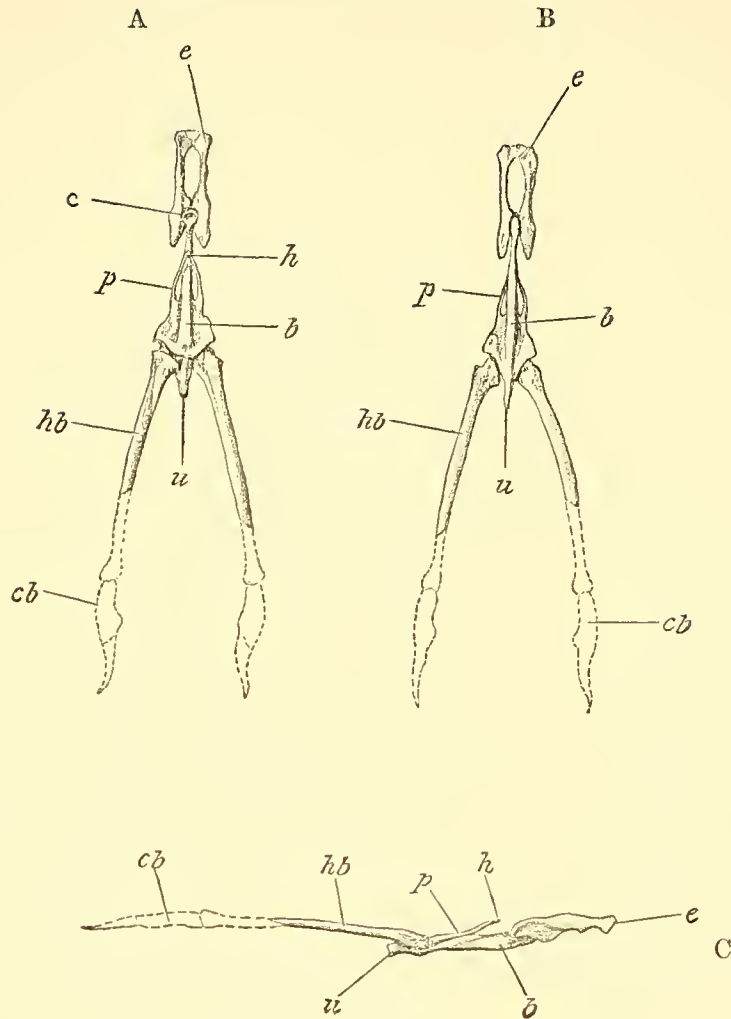
As to the other portions of the skeleton in the *Loriidæ*, the bones of the limbs so closely resemble those of *Psittacus erithacus* that we have not deemed it necessary to figure them.

The scapula of *Lorius flavopalliatu*s differs from that of *Psittacus erithacus* in that it broadens more postaxially and then more suddenly tapers to its apex, while the acromion is relatively, as well as absolutely, shorter, and the *os furculum* is much more slender in *Lorius*.

* For figures and descriptions of the hyoid of *Nestor* and *Nanodes*, see P. Z. S. 1896, the Meeting of February 4th.

Fig. 19.

(From P. Z. S. 1895, p. 171, fig. 5.)

Hyoid of *Trichoglossus ornatus*. Lettering as before.

The *humerus* more nearly approaches the length of the *ulna*, while the latter is more exceeded in length by the *manus* than in *Psittacus*; but in the details of their structure the bones of the wings offer no noteworthy differences in the two genera.

The *pelvis*, seen dorsally, shows that the anterior ends of the *ilia* do not project outwards so much in *Lorius*. Viewed laterally, the obturator foramen may be seen to be completed by the junction of a small ventral sweep of the ischium with a small process of the pubis ascending to meet it. Of the former there is but a rudiment in *Psittacus erithacus*. The ischium is relatively, as well as absolutely, shorter in *Lorius flavopalliatu*s and descends more postaxiad, so that its ventral margin forms a more decided angle with that of the *ilium*.

The dorsal portion of the hinder margin of the ischium is gently convex, but develops no ilio-caudal spine, which forms a marked prominence in *Psittacus erithacus*.

The *femur* and *tibia* are both shorter in proportion to the length of the *tarso-metatarsus* in *Lorius*, while the third digit of the *pes* is not, as in *Psittacus*, nearly so long as the femur:—

	<i>Lorius.</i>	<i>Psittacus.</i>
Length of the humerus	3·4	5·5
„ „ ulna	3·8	6·4
„ „ manus	4·7	7·0
Length of the femur	3·5	4·5
„ „ tibia	4·9	6·4
„ „ tarso-metatarsus	1·9	2·1
„ „ third digit	2·9	4·1

The only muscle which seems to require notice here is the *ambiens*—a small, but long, fusiform muscle running from above the acetabulum to the inner side of the knee, which it crosses in front to unite with a muscle of the calf flexing the toes. Though present in the typical Parrot (*Psittacus erithacus*), in the Macaws, the Nestors, *Stringops*, and a few other genera, it is absent in most Parrots, and it is also absent in the *Loriidæ* so far as they have been examined*. We have had no opportunity of examining genera in addition to those previously examined by the late Professor Garrod, F.R.S.

The same is the case as regards the earotid arteries, which were found by Professor Garrod† to be, in the genera *Chalcopsittacus*, *Eos*, *Lorius*, *Coriphilus*, and *Trichoglossus*, normally disposed—that is to say, there were two earotids of equal, or nearly equal, size running up the front of the neck. This is not by any means an exclusive character of the *Loriidæ*, as the same condition obtains in many *Palæornithinæ*‡; such, however, is not the case in the Nestors, in *Psittacus*, and in many *Conurinae*, *Pioninae*, and *Platycercinae*.

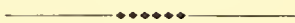
We have not been able to ascertain any facts tending to throw light on the relations of the *Loriidæ* to past time; their relations to space, however, are very interesting, and the extent and nature of the divergences existing between inhabitants of different islands may hereafter help to throw light on the former union of portions of land now separated, as is the case in the Galapagos Archipelago and the West Indian Islands.

* See Prof. Garrod's paper on Parrots, P. Z. S. 1874, pp. 586–598.

† P. Z. S. 1874, pp. 588, 589; and 1876, pp. 691, 692.

‡ But not in *Pyrhulopsis*.

GEOGRAPHICAL DISTRIBUTION.



THE *Loriidæ* do not extend beyond 10° N. and 45° S. latitude, or west of 115° E. longitude or east of 145° W. longitude.

Their extreme northern habitats consist of the Caroline, Washington, and Fanning Islands, their furthest extension south is to Tasmania; their most western dwelling-place is the island of Sumbawa, while their extreme limit eastwards is formed by the Marquesas Islands.

They thus range over what is generally known as “the Australian region” (save New Zealand, Lord Howe’s, Norfolk, Macquarie, Kermadec, and Norfolk Islands) and over a very large part of Polynesia.

As all the Parrots, except a few species, are tropical birds, we may divide the world’s surface with respect to them into nine regions:—(1) *Asiatic, i. e.* Hindostan, China, Ceylon, the Andaman and Nicobar Islands, and the Malay Archipelago as far as Bali and Lombok. (2) *African, i. e.* Africa south of the Sahara, with Madagascar, the Seychelles, Mauritius, Réunion, Rodriguez, and the Comoro Islands. (3) *South American*, that is America south of the Isthmus of Panama. (4) *North American*, the land north of Panama. (5) *Moluccan*, by which we mean not only the Moluccas but also Celebes, Halmahera, the islands between, north, east, and south of them to the Sunda Islands, Timor, the Tenimber, Aru and Ké Islands, and thence northwards to Salwatty, Batanta, and Waigiou. (6) *Papuan*, or New Guinea, with the islands in Geelvink Bay. (7) *Austro-Tasmanian*, or Australia and Tasmania. (8) *Polynesian*, in which we include the Caroline, Echiquier, New Britain, Louisiade, and New Caledonian Islands, and thence eastwards to, and including, the Washington and Fanning Islands, Samoa, the Society and the Marquesas Islands. (9) *Zealandian*, or New Zealand, with Lord Howe’s, Norfolk, Macquarie, Kermadec, and Auckland Islands.

Thus considered, the seventy-five species of *Loriidæ* are only inhabitants of the Moluccan, Papuan, Australian, and Polynesian regions. But they do not by any means constitute the only, or always the most numerous, Psittacine birds thereof. Thus the Moluccan region contains 26 species of Lories, but it is also inhabited by about 46 kinds of Parrots which are not Lories. The Austro-Tasmanian region has 8 species of *Loriidæ*, but this is but a very small proportion (but a seventh part) of the total number of kinds of Parrots there found, for there are not less than 56 Australian species which do not belong to that family.

New Guinea, with the islands in Geelvink Bay (the *Papuan* region), is the region richest in Lories, for no less than 31 species at least inhabit it, but fully 34 species of Parrots which are not Lories inhabit it also.

The Polynesian region can boast of 17 species of *Loriidæ*, but there are almost, if not quite, twice that number in it of kinds which pertain to other families.

As might be expected, there are species of *Loriidæ* which are not confined to one region. Thus *Chalcopsittacus ater* and *C. scintillatus*, *Eos fuscata*, *Lorius lory*, *Trichoglossus cyanogrammus*, *T. nigrogularis*, and *Hypocharmosyna placens* are common to both the Papuan and Moluccan regions. *Lorius hypoenochrous* and *Trichoglossus massena* are found both in New Guinea and in Polynesia, while *Hypocharmosyna subplacens* inhabits both the Papuan and the Polynesian regions.

No Lory, however, which inhabits Australia appears to be found in any other of the four Lorine regions.

But the tract of the earth's surface wherein the Lories find their home is the absolutely richest one in Parrot species; it contains altogether nearly 250 species. While the next richest Parrot region, that of South America, contains but 144 kinds; and if we add to them the 15 of the West Indies and the 28 found north of Panama, we have but a total of 187 species.

Africa and Madagasear, with all the islands which can be reckoned with them, contain only about 37 species, while Asia (including Hindostan, Ceylon, China, the Andaman and Nicobar Islands, and those of the Indian Archipelago) has but about 32 different kinds. The Zealandian region, though without any Lories, contains at least sixteen other species of Parrots, including fully three Nestors, which are species (as we have seen) that show much affinity to the *Loriidæ*.

In the geographical region of Lories, which contains the great number of nearly 250 species in all, the *Loriidæ* constitute one-third, plus one-third of such third of the whole number.

The most remote outlying parts of the area inhabited by Lories contain but very few of them, and in hardly any are they unaccompanied by other kinds of Parrot. Such, however, is the case, we believe, with (1) Fanning and Washington Islands, which contain one kind of Lory; (2) Samoa and the Friendly Islands, which have a closely allied kind of Lory; (3) Fead Island, which is inhabited by another; (4) the Marquesas, that has yet another solitary form; (5) New Hanover, and, finally, (6) the New Hebrides, which each possess two species.

New Caledonia, which has two kinds of Lory, is also inhabited by two species of Parrots which are not Lories.

The Society Islands, which have but one very exceptional Lory, have two Parrots belonging to another family.

The Fiji Islands have two Lories, but they are also the home of five species which are not Lories, and which belong to one genus found nowhere else in the world.

The Louisiade Archipelago is inhabited by one Lory and one Parrot not a Lory. The same is the case with the Loyalty Islands.

The Solomon Islands contain four species of Lory and five Parrots of other kinds.

Celebes has two Lories and eight other kinds of Parrots.

New Ireland has two, and New Britain four species of Lory, while the former has two and the latter four Parrots of other kinds.

The Duke of York's Island has two species of *Loriidæ*, but twice that number of kinds belonging to other families.

With respect to the geographical distribution of the fourteen genera (and seventy-five species) of the Lories exclusively, we find that their range varies greatly.

Chalcopsittacus, with six species, is almost confined to the Papuan region, not having as yet been found beyond New Guinea and the islets of its great bay of Geelvink, save in Salwatty, Mysol, and the Aru Islands :—

	New Guinea.	Geelvink Bay.	Salwatty and Batanta.	Mysol.	Aru Islands.
<i>C. ater</i>	*	*		
<i>C. bernsteini</i>	*	
<i>C. insignis</i>	*			
<i>C. duyvenbodei</i>	*				
<i>C. scintillatus</i>	*	*
<i>C. chloropterus</i>	*				

Eos (12 species) extends much further, reaching northwards to Meangis Island and to Puynipet, in the Caroline Islands, westwards to Bouru and the Tenimber Islands, and south-east to the Solomon Islands :—

	New Guinea.	Isles in Geelvink Bay.	Waigiu.	Guebé and Batanta.	Weeda Islands.	Halmahera.	Ternate.	Motir.	Tidore.	Bachian.	Morocai, Mortai, or Morty.	Moor.	Danmar.	Makian.	Obi.	Salwatty.	Ceram and Ceram-laut.	Bouru.	Haruko.	Sanghir Is.	Talaut Is.	Meangis Is.	Caroline Is. (Puynipet).	Tenimber Is. and Timor-laut.	Tejor.	Kboor.	Banda.	Kó Is.	Timor-laut.	Goran.	Monawolka and Matabello.	Solomon Islands.
<i>E. cyanogenys</i>	*																															
<i>E. reticulata</i>																								*								
<i>E. histrio</i>																					*	*										
<i>E. challengerii</i>																							*									
<i>E. cardinalis</i>																									*							*
<i>E. rubra</i>																	*	*	*					*	*	*	*		*	*	*	*
<i>E. semilarvata</i>																									*							
<i>E. wallacei</i>			*	*																												
<i>E. insularis</i>					*																											
<i>E. riciniata</i>						*	*	*	*	*	*	*	*	*	*	*																
<i>E. rubiginosa</i>																							*									
<i>E. fuscata</i>	*															*																

Lorius (12 species) has also a wide range, extending north to Morotai and Raou Islands, westwards to Batchian and Amboyna, southwards to the Louisiade Archipelago, and westwards to New Ireland and the Solomon Islands :—

	New Guinea.	New Ireland, New Britain, and New Hanover.	Ceram and Amboyna.	Salwatty.	Waigiou.	Mysol.	Solomon Islands.	Halmahera.	Obi.	Batchian.	Morotai.	Raou.	Louisiade Archipelago.	Mysore.	Batanta.
<i>L. hypoenochrous</i>	*	*	*		
<i>L. lory</i>	*	*	*	*	*
<i>L. erythrothorax</i>	*														
<i>L. jobiensis</i>	*														
<i>L. rubiensis</i>	*														
<i>L. salvadori</i>	*														
<i>L. cyanauchen</i>	*	
<i>L. uomicella</i>	*												
<i>L. chlorocercus</i>	*								
<i>L. tibialis?</i>															
<i>L. garrulus</i>	*							
<i>L. flavopalliatius</i>	*	*	*	*			

Calliptilus (1 species) is confined to the Fiji Islands ; but *Vini* (2 species) ranges from the Washington to the Friendly Islands :—

	Washington and Fanning Islands.	Friendly Islands.	Samoa.
<i>V. australis</i>	*	*
<i>V. kuhli</i>	*		

Coriphilus (2 species, very exceptionally coloured) occupies the extreme eastern part of the range of the whole family :—

	Society Islands.	Marquesas Islands.
<i>C. taitianus</i>	*	
<i>C. ultramarinus</i>	*

The genus *Trichoglossus* (14 species) is the most widely disseminated of all the genera of the family, as it extends westwards to Celebes and Sumbawa and southwards to Australia and Tasmania, while in the Polynesian region it is present in New Britain, New Ireland, New Hanover, the Duke of York's Island, the Admiralty and Echiquier Islands, the Solomon Islands, the Loyalty Islands, and New Caledonia :—

	New Guinea.	Mysore.	Bouru, Amboyna, Ceram, Goram, Salwatty, Batanta, Waigiou.	Aru Islands.	Ké Islands.	New Britain, New Ireland, and Duke of York's Is.	Solomon Islands and New Hebrides.	New Caledonia and Loyalty Islands.	Timor.	Sumbawa.	New Hanover.	Admiralty and Echiquier Islands.	Australia.	Tasmania.	Celebes.	Buron and Togan Islands.
<i>T. hæmatodes</i>	*							
<i>T. forsteni</i>	*						
<i>T. cyanogrammus</i>	*	..	*													
<i>T. nigrogularis</i>	*	*	*											
<i>T. massena</i>	*	*	*	*								
<i>T. coccineifrons</i>	*												
<i>T. flavicans</i>	*	*				
<i>T. mitchelli?</i>																
<i>T. cæruleiceps</i>	*															
<i>T. novæ-hollandiæ</i>	*	*		
<i>T. verreauxius?</i>	*	*		
<i>T. rubritorques</i>	*	*		
<i>T. rosenbergi</i>	*
<i>T. ornatus</i>	*	*

The genus *Psittuteles* (4 species) is the first one on our list which has no representative in the vast island of New Guinea, and it has none in Halmahera, Salwatty, Waigiou, Ceram, or Bouru ; but it extends from Celebes through Flores to Timor, to Timor-laut, and on to Southern and Eastern Australia. Celebes is the most northern portion of its range and Southern Australia its southern limit, while Flores and Southern Australia constitute its eastern and western boundaries :—

	Celebes.	Sula Islands.	Timor.	Flores.	Wetter.	Lettie.	Babbar.	Timor-laut.	Australia.
<i>P. flavoviridis</i>	*							
<i>P. meyeri</i>	*								
<i>P. euteles</i>	*	*	*	*	*	*	
<i>P. chlorolepidotus</i>	*

The genus *Charmosynopsis* (2 species) is found only in New Guinea and the Solomon Islands :—

	New Guinea.	Solomon Islands.
<i>C. pulchella</i>	*	
<i>C. margarite</i>	*

Charmosyna (3 species) and *Oreopsittacus* (2 species) are both confined to New Guinea only, so far as we have been able to ascertain.

Considering the Lories as a whole, the species are thus divided amongst their four geographical regions (those marked with an asterisk inhabit more than one region) :—

1. Moluccan Region.

- | | |
|-----------------------------------|--|
| *1. <i>Chalcopsittacus ater</i> . | 14. <i>Lorius garrulus</i> . |
| 2. — <i>bernsteini</i> . | 15. — <i>flavopalliatu</i> s. |
| *3. — <i>scintillatus</i> . | 16. <i>Trichoglossus hamatodes</i> . |
| 4. <i>Eos reticulata</i> . | 17. — <i>forsteni</i> . |
| 5. — <i>histrio</i> . | *18. — <i>cyanogrammus</i> . |
| 6. — <i>challengeri</i> . | *19. — <i>nigrogularis</i> . |
| 7. — <i>rubra</i> . | 20. — <i>coccineifrons</i> . |
| 8. — <i>wallacei</i> . | 21. — <i>ornatus</i> . |
| 9. — <i>insularis</i> . | 22. <i>Psitteuteles flavoviridis</i> . |
| 10. — <i>riciniata</i> . | 23. — <i>meyeri</i> . |
| *11. — <i>fuscata</i> . | 24. — <i>euteles</i> . |
| *12. <i>Lorius lory</i> . | *25. <i>Hypocharmosyna placens</i> . |
| 13. — <i>domicella</i> . | *26. — <i>rubronotata</i> . |

2. *Papuan Region.*

- | | |
|---|---|
| *1. <i>Chalcopsittacus ater.</i> | *17. <i>Trichoglossus nigrogularis.</i> |
| 2. — <i>insignis.</i> | 18. — <i>cæruleiceps.</i> |
| 3. — <i>duyvenbodei.</i> | 19. — <i>rosenbergi.</i> |
| *4. — <i>scintillatus.</i> | 20. <i>Glossopsittacus goldiei.</i> |
| 5. — <i>chloropterus.</i> | 21. <i>Hypocharmosyna wilhelminæ.</i> |
| 6. <i>Eos cyanogenys.</i> | *22. — <i>placens.</i> |
| *7. — <i>fuscata.</i> | *23. — <i>subplacens.</i> |
| *8. <i>Lorius hypoenochrous.</i> | 24. — <i>kordoana.</i> |
| *9. — <i>lory.</i> | *25. — <i>rubronotata.</i> |
| 10. — <i>erythrothorax.</i> | 26. <i>Charmosynopsis pulchella.</i> |
| 11. — <i>salvadori.</i> | 27. <i>Charmosyna papuensis.</i> |
| 12. — <i>jobiensis.</i> | 28. — <i>stellæ.</i> |
| 13. — <i>rubiensis.</i> | 29. — <i>josephinæ.</i> |
| 14. — <i>cynauchen.</i> | 30. <i>Oreopsittacus arfaki.</i> |
| *15. <i>Trichoglossus cyanogrammus.</i> | 31. — <i>grandis.</i> |
| *16. — <i>massena.</i> | |

3. *Australian Region.*

- | | |
|---|--------------------------------------|
| 1. <i>Trichoglossus novæ-hollandiæ.</i> | 5. <i>Ptilosclera versicolor.</i> |
| 2. — <i>verreauxius.</i> | 6. <i>Glossopsittacus concinnus.</i> |
| 3. — <i>rubitorques.</i> | 7. — <i>porphyrocephalus.</i> |
| 4. <i>Psittenteles chlorolepidotus.</i> | 8. — <i>pusillus.</i> |

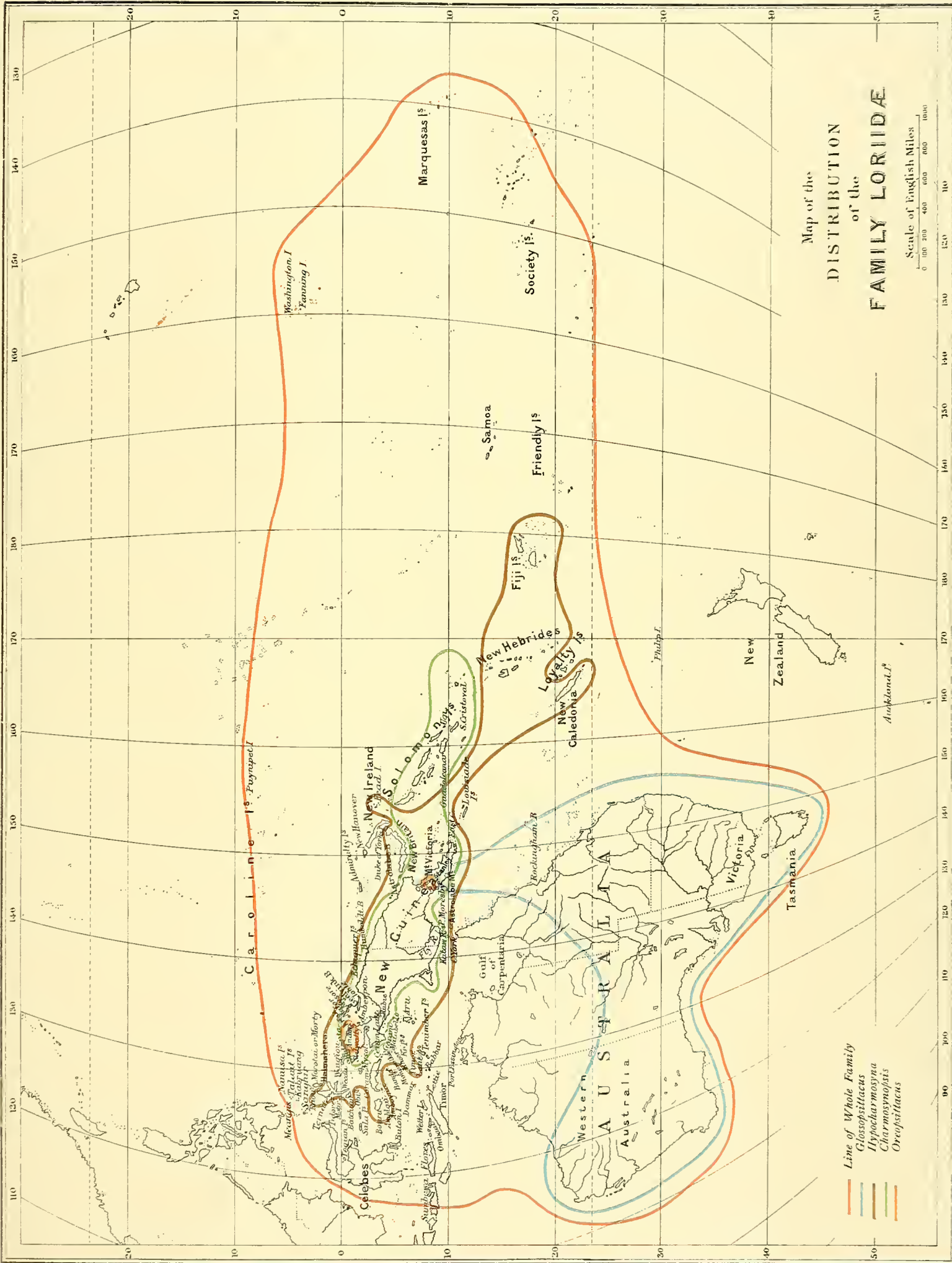
4. *Polynesian Region.*

- | | |
|-----------------------------------|--|
| 1. <i>Eos cardinalis.</i> | *10. <i>Trichoglossus massena.</i> |
| 2. — <i>rubiginosa.</i> | 11. — <i>flavicans.</i> |
| *3. <i>Lorius hypoenochrous.</i> | *12. <i>Hypocharmosyna subplacens.</i> |
| 4. — <i>chlorocercus.</i> | 13. — <i>rubrigularis.</i> |
| 5. <i>Calliptilus solitarius.</i> | 14. — <i>aureocincta.</i> |
| 6. <i>Vini australis.</i> | 15. — <i>palmarum.</i> |
| 7. — <i>kuhli.</i> | 16. — <i>diademata.</i> |
| 8. <i>Coriphilus taitianus.</i> | 17. <i>Charmosynopsis margaritæ.</i> |
| 9. — <i>ultramarinus.</i> | |

As to the various islands of the Moluccan and Polynesian regions and Tasmania, they are said to be severally inhabited by the following species of *Loriidæ* :—

Admiralty Islands	<i>Trichoglossus flavicans.</i>
Amblau	<i>Hypocharmosyna placens.</i>
Amberpon Island	<i>Chalcopsittacus insignis.</i>
Amboyna	(1) <i>Eos rubra</i> , (2) <i>Lorius domicella</i> , (3) <i>Trichoglossus cyanogrammus</i> , and (4) <i>Hypocharmosyna placens.</i>
Aru Islands	(1) <i>Chalcopsittacus scintillatus</i> , (2) <i>Trichoglossus nigrogularis</i> , (3) <i>Trichoglossus coccineifrons</i> , and (4) <i>Hypocharmosyna placens.</i>
Babbar	<i>Psittenteles euteles.</i>
Banda	<i>Eos rubra.</i>
Batanta	(1) <i>Chalcopsittacus ater</i> , (2) <i>Eos wallacei</i> , (3) <i>Lorius lory</i> , and (4) <i>Trichoglossus cyanogrammus.</i>
Batchian	(1) <i>Eos riciniata</i> , (2) <i>Lorius flavopalliatu</i> s, and (3) <i>Hypocharmosyna placens.</i>
Bouru	(1) <i>Eos rubra</i> , (2) <i>Trichoglossus cyanogrammus</i> , and (3) <i>Hypocharmosyna placens</i> (?).
Buton I.	<i>Trichoglossus ornatus.</i>
Caroline Islands (Puynipet).	<i>Eos rubiginosa.</i>
Celebes	(1) <i>Trichoglossus ornatus</i> and (2) <i>Psittenteles meyeri.</i>
Ceram	(1) <i>Eos rubra</i> , (2) <i>Lorius domicella</i> , (3) <i>Trichoglossus cyanogrammus</i> , and (4) <i>Hypocharmosyna placens.</i>
Ceram-laut	<i>Eos rubra.</i>
Dammar I.	<i>Eos riciniata.</i>
Duke of York's I.	(1) <i>Trichoglossus masseua</i> and (2) <i>Hypocharmosyna subplacens.</i>
Echiquier Islands	<i>Trichoglossus flavicans.</i>
Fanning I.	<i>Vini kuhli.</i>
Fead I.	<i>Hypocharmosyna subplacens.</i>
Fiji Islands	(1) <i>Calliptilus solitarius</i> and (2) <i>Hypocharmosyna aureocincta.</i>
Flores	<i>Psittenteles euteles.</i>
Friendly Islands	<i>Vini australis.</i>
Goram	(1) <i>Eos rubra</i> , (2) <i>Trichoglossus cyanogrammus</i> , and (3) <i>Hypocharmosyna placens.</i>
Guebé	(1) <i>Eos wallacei</i> and (2) <i>Hypocharmosyna placens.</i>
Halmahera	(1) <i>Eos riciniata</i> , (2) <i>Lorius garrulus</i> , and (3) <i>Hypocharmosyna placens.</i>
Harouko	<i>Eos rubra.</i>
Ké Islands	(1) <i>Eos rubra</i> , (2) <i>Trichoglossus nigrogularis</i> , and (3) <i>Hypocharmosyna placens.</i>
Khoor I.	(1) <i>Eos rubra</i> and (2) <i>Hypocharmosyna placens.</i>
Lettie I.	<i>Psittenteles euteles.</i>
Louisiade Archipelago	<i>Lorius hypoenochrous.</i>
Loyalty Islands	<i>Trichoglossus massena.</i>
Mafor I.	<i>Eos cyanogenys.</i>
Makian I.	<i>Eos riciniata.</i>
Marquesas Islands	<i>Coriphilus ultramarinus.</i>
Matabello I.	<i>Eos rubra.</i>
Meangis I.	<i>Eos challengerii.</i>
Miosnom I.	(1) <i>Lorius jobiensis</i> and (2) <i>Trichoglossus cyanogrammus.</i>

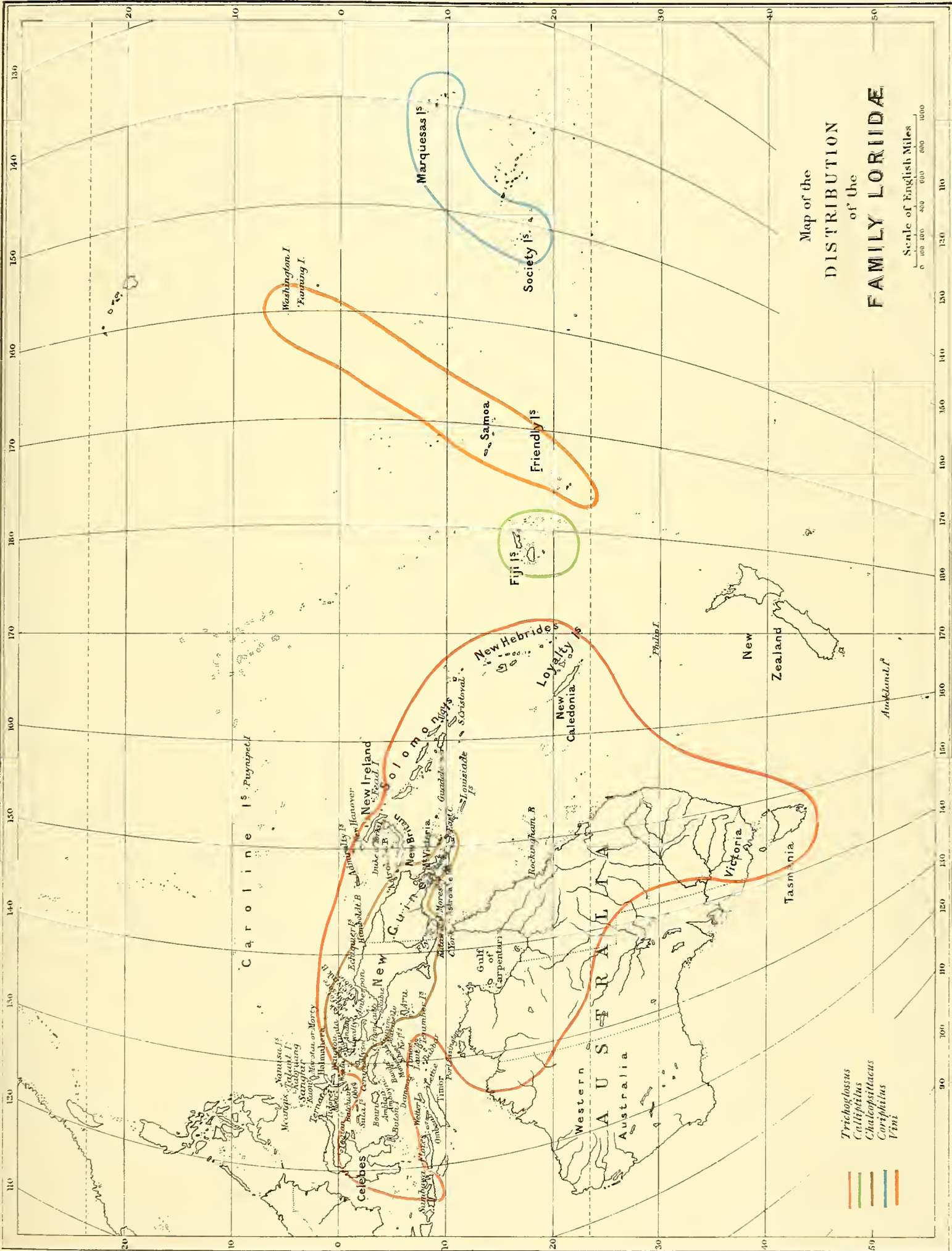
Monawolka I.	<i>Eos rubra</i> .
Moor I.	<i>Eos riciniata</i> .
Morotai (or Morty) I.	(1) <i>Eos riciniata</i> and (2) <i>Lorius flavopalliatu</i> s.
Motir	<i>Eos riciniatu</i> .
Mysol I.	(1) <i>Chalcopsittacus bernsteini</i> , (2) <i>Lorius lory</i> , (3) <i>Trichoglossus cyanogrammus</i> , and (4) <i>Hypocharmosyna placens</i> .
Mysore I.	(1) <i>Eos cyanogenys</i> , (2) <i>Lorius cyanauchen</i> , (3) <i>Trichoglossus rosenbergi</i> , and (4) <i>Hypocharmosyna kordoana</i> .
New Britain	(1) <i>Lorius hypoenochrous</i> , (2) <i>Trichoglossus massena</i> , (3) <i>Hypocharmosyna subplacens</i> , and (4) <i>Hypocharmosyna rubrigularis</i> .
New Caledonia	(1) <i>Trichoglossus massena</i> and (2) <i>Hypocharmosyna diademata</i> .
New Hanover	(1) <i>Lorius hypoenochrous</i> and (2) <i>Trichoglossus flavicans</i> .
New Hebrides	(1) <i>Trichoglossus massena</i> and (2) <i>Hypocharmosyna palmarum</i> .
New Ireland	(1) <i>Lorius hypoenochrous</i> and (2) <i>Trichoglossus massena</i> .
Obi I.	(1) <i>Eos riciniata</i> and (2) <i>Lorius flavopalliatu</i> s.
Poulo-padjang I.	<i>Hypocharmosyna placens</i> .
Pulo Manin I.	<i>Eos cyanogenys</i> .
Raou (or Riao) I.	<i>Lorius flavopalliatu</i> s.
Salwatty I.	(1) <i>Chalcopsittacus ater</i> , (2) <i>Eos fuscata</i> , (3) <i>Lorius lory</i> , (4) <i>Trichoglossus cyanogrammus</i> , (5) <i>Hypocharmosyna rubronotata</i> , and (6) <i>Hypocharmosyna placens</i> (?).
Samoa	<i>Vini australis</i> .
Sanghir Islands	<i>Eos histrio</i> .
Society Islands	<i>Coriphilus taitianus</i> .
Solomon Islands	(1) <i>Eos cardinalis</i> , (2) <i>Lorius chlorocercus</i> , (3) <i>Trichoglossus massena</i> , and (4) <i>Charmosynopsis margarita</i> .
Sula Islands	<i>Psitteuteles flavoviridis</i> .
Sumbawa	<i>Trichoglossus forsteni</i> .
Talaut Islands	<i>Eos histrio</i> .
Tasmania	(1) <i>Trichoglossus novæ-hollandiæ</i> , (2) <i>Glossopsittacus concinnus</i> , and (3) <i>Glossopsittacus pusillus</i> .
Tejor I.	<i>Eos rubra</i> .
Tenimber Islands	(1) <i>Eos reticulata</i> and (2) <i>Psitteuteles euteles</i> .
Ternate I.	(1) <i>Eos riciniata</i> and (2) <i>Hypocharmosyna placens</i> .
Tidore	<i>Eos riciniata</i> .
Timor	(1) <i>Trichoglossus hæmatodes</i> and (2) <i>Psitteuteles euteles</i> .
Timor-laut	(1) <i>Eos reticulata</i> , (2) <i>E. semilarvata</i> (?), and (3) <i>Psitteuteles euteles</i> .
Togian Islands	<i>Trichoglossus ornatus</i> .
Waigiou	(1) <i>Chalcopsittacus ater</i> , (2) <i>Eos wallacei</i> , (3) <i>Lorius lory</i> , (4) <i>Trichoglossus cyanogrammus</i> , and (5) <i>Hypocharmosyna placens</i> .
Washington I.	<i>Vini kuhli</i> .
Weeda Islands	<i>Eos insularis</i> .
Wetter I.	<i>Psitteuteles euteles</i> .



Map of the
DISTRIBUTION
of the
FAMILY LORIIDÆ

Scale of English Miles
0 100 200 400 600 800 1000

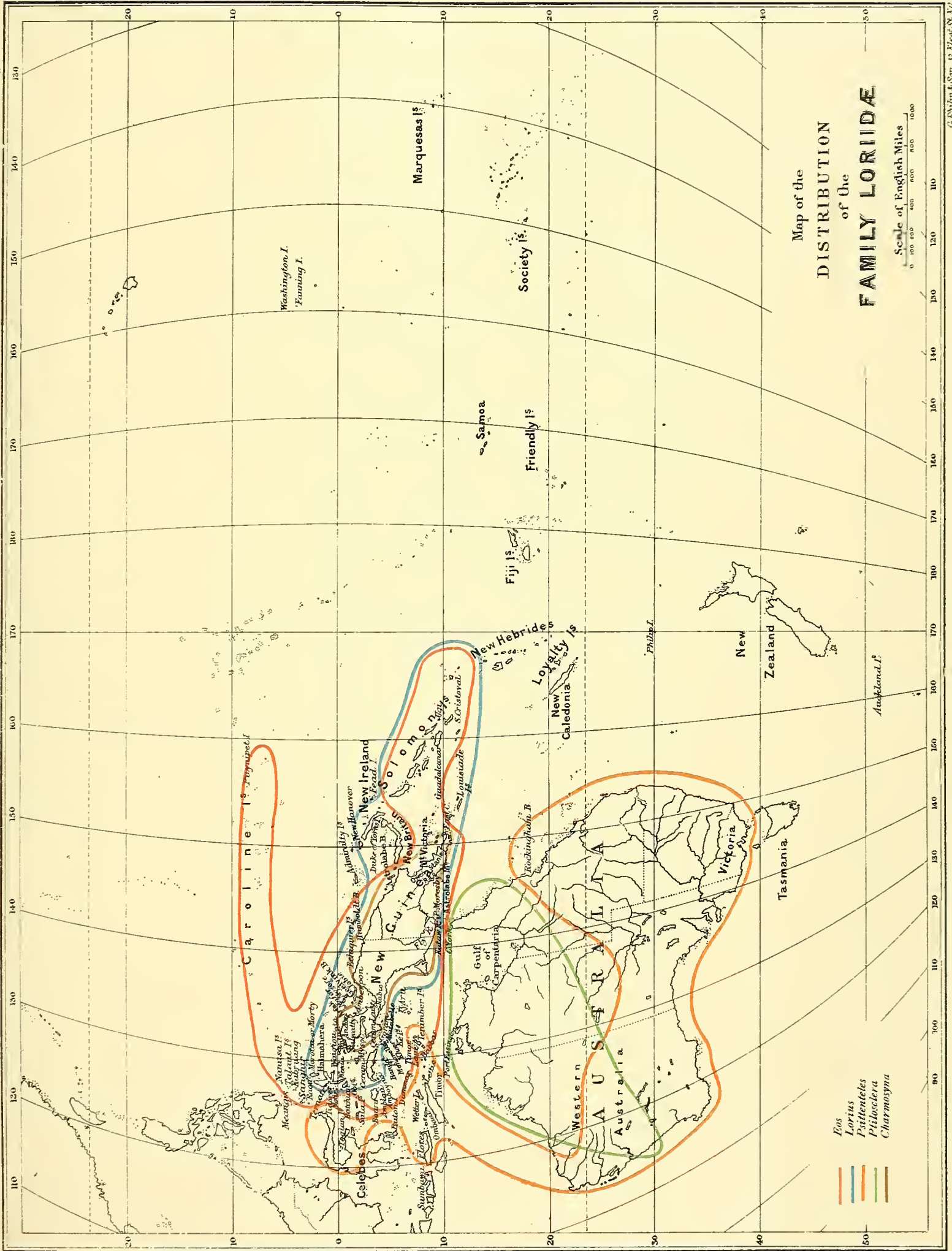
- Line of Whole Family
- Glossosittacus
- Hypocharmosyna
- Charmosynopsis
- Oreosittacus



Map of the
DISTRIBUTION
of the
FAMILY LORIIDÆ

Scale of English Miles
0 100 200 300 400 500 600 700 800 900 1000

- Trichoglossus
- Callipitula
- Chalcoptilacus
- Coripitius
- Vini



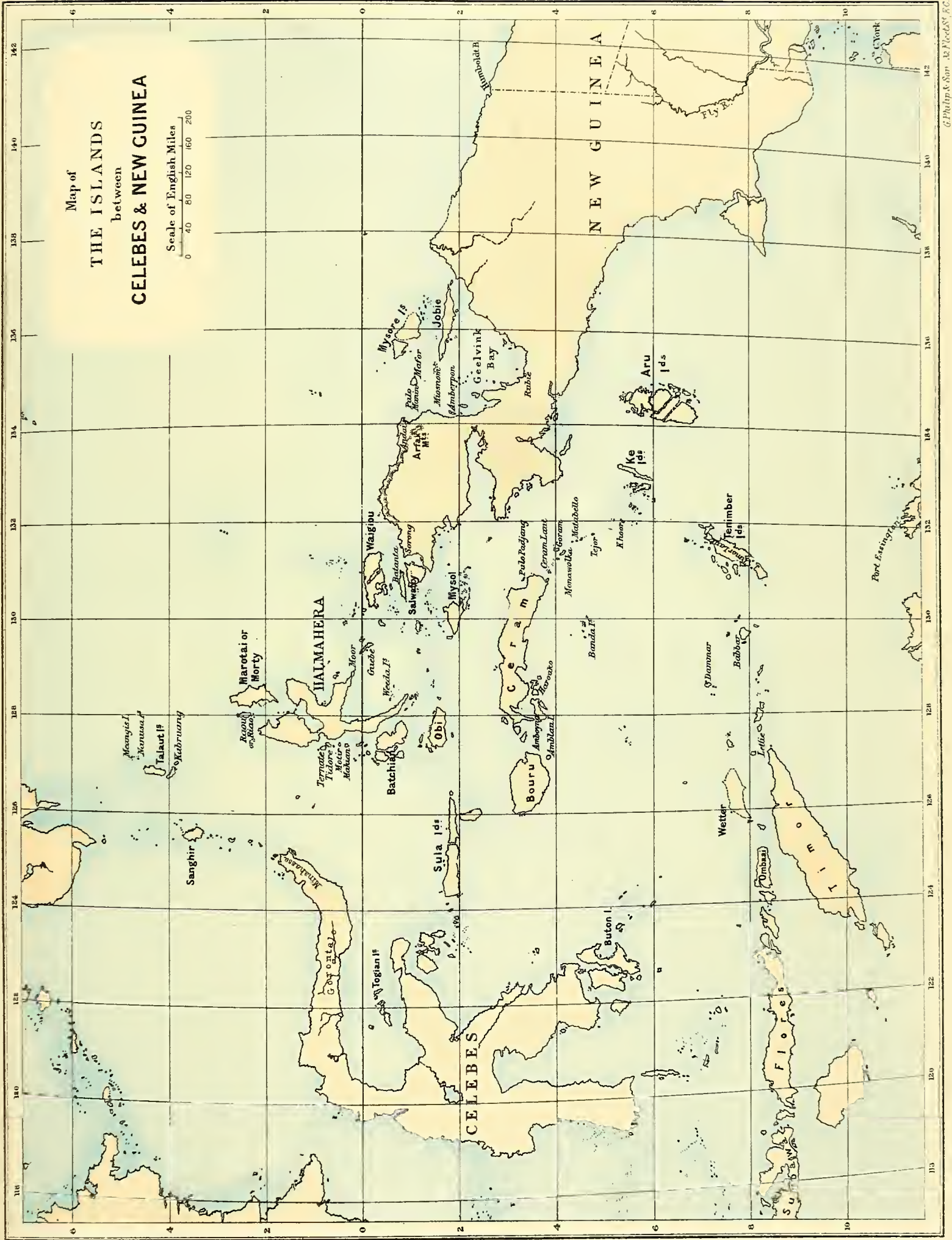
Map of the
DISTRIBUTION
of the
FAMILY LORIIDÆ

Scale of English Miles
0 100 200 300 400 500 600 700 800 900 1000

Eos
Lorius
Psittentelles
Charmosyna

Map of THE ISLANDS between CELEBES & NEW GUINEA

Scale of English Miles
0 40 80 120 160 200



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- Table des Planches enluminées d'Histoire Naturelle, de M. D'AUBENTON. Par M. BODDAERT.
- Monographie der Papageien, oder vollständige Naturgeschichte aller bis jetzt bekannten Papageien. Von C. L. BREHM.
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- Jottings during the Cruise of H.M.S. 'Curaçoa' among the South Sea Islands in 1865. By J. L. BRENCHLEY. Birds by G. R. GRAY.
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- Illustrations of the Family of Psittacidæ, or Parrots. By EDWARD LEAR.
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- Thesaurus Ornithologiae. Von Dr. C. G. GIEBEL.
- Notes by a Naturalist on the 'Challenger.' By H. N. MOSELEY, M.A.
- Beitrag zur Fauna Centralpolynesiens. Von O. FINSEH und G. HARTLAUB.
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Catalogus Rerum naturalium rarissimarum Hamburgi. Auctore A. A. H. LICHTENSTEIN.

Atti della Società Italiana di Scienze Naturali. Milano.

Bulletin of the British Ornithologists' Club.

LORIIDÆ.

BRUSH-TONGUED PARROTS.

Bill much compressed, generally longer than deep, and not notched; its hook smooth underneath, with no file-like surface; culmen rounded and narrow, smooth and not grooved along the middle; lower mandible rather long, with the gonys narrow, straight, and obliquely slanting upwards, not flattened in front and with no keel-like ridge. Tongue furnished with a kind of brush. Cere broader over the culmen and gradually becoming narrower along the sides of the bill. Tail graduated or rounded, sometimes even; it is generally shorter than the wings and rarely exceeds them in length. Wings acute, with the first three quills generally longer than the others. (*Salvadori*.)

Range. Australian region (except New Zealand), including Celebes, with various Polynesian islands.

Genera.

CHALCOPSITTACUS	Black-billed Lories.
EOS	Red-winged Lories.
LORIUS	Typical Lories.
CALLIPTILUS	Short-tailed Lories.
VINI	Notched-winged Lories.
CORIPHILUS	Blue Lories.
TRICHOGLOSSUS	Head-streaked Lories.
PSITTEUTELES	Green-headed Lories.
PTILOSCLERA	Green Lories.
GLOSSOPSITTACUS	Long-quilled Lories.
HYPOCHARMOSYNA	Green-tailed Lories.
CHARMOSYNOPSIS	Pointed-tailed Lories.
CHARMOSYNA	Long-tailed Lories.
OREOPSITTACUS	Thin-billed Lories.

CHALCOPSITTACUS.

BLACK-BILLED LORIES.

Chalcopsitta, Bonaparte, Consp. Gen. Av. i. p. 3 (1849).

Chalcopsittacus, T. Salvadori, Ann. Mus. Civ. Genova, ix. p. 15 (1876).

Type of the genus: *C. ater*.

Generic characters.—Size about that of a turtle-dove; tail-feathers twelve; point of maxilla long but not thin; tail of moderate length, the feathers broad and rounded at their ends; two middle tail-feathers longer than the others; bill and cere black; chin naked. (*Cf.* Salvadori, Cat. of Birds in Brit. Mus. xx. pp. 11 & 12.)

Range. Papuan Islands.

THE Black-billed Lories, which constitute the first genus, *Chalcopsittacus*, are amongst the largest in size of the whole family.

Though handsome birds, they are far from presenting that brilliant coloration which is found in various genera and most of the species of *Loriidæ*.

The prevailing colour of the genus is either black without streaks, or brown or green with streaks of yellow or green either on the nape only or generally over the body above or below. The uropygium is always either more or less blue or else bright green, and the under surface of the tail-feathers is always bronze with more or less of a bright green or yellow shade. The tibiæ may be black, red, or yellow. In the brightest forms the edge of the wing, the under wing-coverts, the forehead, and a band passing from beneath the eye across the throat may be yellow or red. The skin is always naked around the eye, on the checks, and from the mentum upwards on either side of the lower mandible. The feet are always black.

The sexes are alike. The birds of this genus have been called "Black-billed Lories," not because there are not other Lories with black bills, but because that character distinguishes them from the species which compose the succeeding genera *Eos* and *Lorius*.

Those species the habits of which have been observed are described as flying about in small flocks through the woods, where they are said to perch on very small branches. They frequently approach human habitations, which leads to their being often caught. Then they are easily domesticated, and at least two species of them are said to be amongst the gentlest of birds.

We have described six forms as all possibly distinct species, namely *Ch. ater*, *Ch. bernsteini*, *Ch. insignis*, *Ch. duyvenbodei*, *Ch. scintillatus*, and *Ch. chloropterus*.

A seventh species has been named *Ch. stavorini* in 1826, but the type was lost. It was

apparently only described from memory, and no such form has ever since been obtained. We think it was not improbably an individual of the kind now known as *Ch. insignis*.

Of the six species described, four—*Ch. ater*, *Ch. scintillatus*, *Ch. duyvenbodei*, and *Ch. chloropterus*—have been found in one or other part of New Guinea itself, and *Ch. insignis* in Amberpon Island in Geelvink Bay. *Ch. scintillatus* is found not only in New Guinea, but in the Aru Islands also; and *Ch. ater*, which inhabits the island of Salwatty as well as the mainland, is represented in Mysol by the very closely-allied form *Ch. bernsteini*.



1 The Black Lory
 CHALCOPSITTACUS ATER.
 2. Bernsteins Lory.
 CHALCOPSITTACUS BERNSTEINI.

Published by R.H. Porter.

1. CHALCOPSITTACUS ATER.

(THE BLACK LORY.)

[PLATE I. FIG. 1.]

- Black Lory*, Latham, Synopsis, i. p. 221, n. 23 (1781).
Le Lori noir de la Nouvelle Guinée, Sonnerat, Voyage à la Nouv. Guinée, p. 175, pl. 110 (1776).
Le Lori noir, Levaillant, Hist. Nat. des Perroquets, vol. ii. pl. 49 (1801).
Psittacus ater, Scopoli, Deliciæ Flor. et Faun. Insubricæ, pars ii. p. 87, no. 29 (1786).
Psittacus novæ guineæ, Gmelin, Syst. Nat. tom. i. p. 319, no. 63 (1788).
Lorius novæ guineæ, Stephens in Shaw's Zool. vol. xiv. part i. p. 132 (1826).
Platycercus novæ guineæ, Wagler, Monograph. Psittacorum, p. 491 and p. 534 (1832).
Platycercus ater, G. R. Gray, Genera of Birds, ii. p. 408, n. 23 (1846).
Chalcopsitta novæ guineæ, C. L. Bonaparte, Conspectus Gen. Avium, vol. i. p. 3 (1849).
Chalcopsitta atra, Selater, Journal of Proc. Linn. Soc. (Zool.), vol. ii. p. 165, sp. 110 (1858).
Eos ater, G. R. Gray, List of Birds in Brit. Mus. p. 53 (1859).
Eos atra, G. R. Gray, Cat. of Birds of New Guinea, pp. 40 & 59 (1859).
Lorius ater, H. Schlegel, Mus. d'Hist. Nat. des Pays-Bas, vol. iii. p. 129 (1864).
Domicella atra, Finsch, Papageien, vol. ii. p. 755 (1868).
Chalcopsittacus ater, T. Salvadori, Annali del Mus. Civico Genova, vol. x. p. 34 (1877);
 id. Ornitologia della Papuasias, i. p. 269 (1880); Reichenow, Vogelbild. t. xi. fig. 5 (1878-83); Salvadori, Cat. of Birds in Brit. Mus. vol. xx. p. 13 (1891).

Head, back, breast, and abdomen black; quills with no red on the inner web; tibiæ black.

Habitat. New Guinea, especially towards the west, with the islands of Salwatty, Sorong, and Batanta.

THIS most sombre of the whole family of the Lories is one of the oldest known, having been described and figured by Sonnerat in his account of his voyage to New Guinea, on which he set out in June 1771.

It is said to be common in certain localities, flying through the woods and frequenting the smaller branches and branchlets of the trees. It seems frequently to approach human habitations: hence it is often caught, when it is easily domesticated and shows itself gentle and attractive.

Its colour is almost uniform black, with a purple gloss, there being no red on the wings or abdomen; the head is also black; the uropygium dark purple; the feathers of the breast have violet-purple margins; the upper and under tail-coverts are dark purple-blue; the tail

is above violet-grey, becoming greyish olive towards the tips of the feathers; beneath it is purplish red towards the root, greenish yellow, or yellowish olive-green, towards the tip. Iris maroon-coloured, with an inner ring of white; the beak and feet black. Total length 13.50 inches, wing 7.5, tail 5.3, bill 1.05, tarsus 0.85.

The seven specimens in the National Collection are very uniform in coloration, but two specimens (one from the Tweeddale collection and the other from the Gould collection) have the uropygium a little brighter than have the others.

2. CHALCOPSITTACUS BERNSTEINI.

(BERNSTEIN'S LORY.)

[PLATE I. FIG. 2.]

Domicella atra, Finsch, Papageien, vol. ii. p. 755 (1868).

Chalcopsittacus bernsteini, G. v. Rosenberg, Journal für Ornithologie, vol. ix. p. 46 (1861); T. Salvadori, Cat. of Birds in Brit. Mus. vol. xx. p. 14 (1891).

Back, breast, and abdomen purplish black; head black, save edge of forehead, which is mostly dark red; quills with no red on the inner web; tibiae dark red.

Habitat. Mysol.

So trifling are the distinctions which separate this species from the Black Lory, that there is small wonder it has generally been confounded therewith. It is sometimes even expressly included in the same species with the kind first described.

Thus Dr. Finsch in his fine work on the Parrots expressly includes it and calls attention to Bernstein's want of persistence in maintaining the species bearing his name in lists subsequently given by him*. Count Salvadori even was evidently disinclined at first to accept it as distinct, though in the 'Ibis' † he shows that his views became subsequently modified. His words are:—"It appears to me that the specimens from Mysol with the forehead and the tibials red require comparison, as most likely they constitute a peculiar race, intermediate between *Ch. ater* and *Ch. insignis*." Dr. F. H. H. Guillemard has also called attention ‡ to the individuals from Mysol with red tibiae and forehead.

As to the present species, Rosenberg has stated it to be pretty common in Mysol, flying about in small flocks in the forests, and, like *Ch. ater*, frequently approaching human dwellings. He further says that it is also often caught and easily tamed, being one of the gentlest of birds. He found that it was on sale alive at Amboina for from fifteen to twenty gulden.

In coloration it resembles *Ch. ater*, except in the points already noted, and which are depicted in our Plate, which, we believe, gives the first representation of the bird that has ever been published. Its dimensions also are the same as in the last-named species.

The six skins preserved in the British Museum all agree save as to slight differences as to the hue of the uropygium. In the specimen from the Gould collection the tibiae are very dark.

* Journ. für Ornithologie, vol. x. (1862) pp. 63 & 67.

† For 1886, p. 155.

‡ Proc. Zool. Soc. 1885, p. 622.



The Red Quilled Lory.
CHALCOPSITTACUS INSIGNIS.

Published by R.H. Porter.

3. CHALCOPSITTACUS INSIGNIS.

(THE RED-QUILLED LORY.)

[PLATE II.]

Chalcopsitta insignis, Oustalet, Assoc. Sc. de France, Bull. no. 533, p. 247 (1878);

T. Salvadori, Atti R. Accad. Torino, vol. xiii. p. 312, note (1878).

Chalcopsittacus bruijnii, T. Salvadori, Atti R. Accad. Torino, vol. xiii. p. 310 (1878).

Chalcopsittacus insignis, T. Salvadori, Ornitologia Pap. e Mol. i. p. 272 (1880); id. Cat. of Birds in Brit. Mus. vol. xx. p. 15.

Psittacus stavorini (?), Less. Voy. Coq., Zool. i. p. 355 (1826); T. Salvadori, Cat. of Birds in Brit. Mus. vol. xx. p. 15.

Back, breast, and abdomen purplish black; head darker, forehead and cheeks tinged with red; quills with the base of the inner web red.

Habitat. Amberpon Island, Geelvink Bay.

No specimen of this fine species exists in our National Collection, and we have to thank Dr. Giacinto Martorelli of Milan for a most faithful representation of the bird, drawn and coloured by his own hands, from the specimen preserved in the Museo Civico of that city.

Count Salvadori informs us that he saw two specimens which had been sent by Mr. Bruijn to M. Laglaize of Paris, which a week after were described by M. Oustalet as *Chalcopsitta insignis*.

Our Plate is, we believe, the first figure of the species which has been published. As yet this bird has only been found in the island of Amberpon.

Count Salvadori has entertained a suspicion that this species is identical with a kind of bird a specimen of which was obtained but afterwards lost, and never since found or identified. This bird was described, apparently from memory, by Lesson, in the Zoology of the Voyage of the 'Coquille'*, where it is spoken of as "une espèce de lori noir inédite, que nous avons nommé lori de Stavorinus, *Psittacus stavorini*, parce que ce navigateur nous paraît l'avoir mentionnée dans la relation de son voyage aux Indes Orientales. Le lori de Stavorinus est de la taille du tricolore [*Lorius lory*], auquel il ressemble aussi par les formes corporelles. Son plumage est en entier d'un noir lustré uniforme, excepté sur l'abdomen, où règne un rouge vif qui s'étend jusqu'à la poitrine. Le seul individu que nous achatâmes à un Papou a été perdu dans le naufrage de M. Garnot, au Cap." It is said to have been bought at the island of Waigiou.

* 'Voyage autour du Monde sur la corvette de sa Majesté *La Coquille*, pendant les années 1822-25,' Paris, 1826, pp. 355 and 623.

As this species has never again been met with in the course of seventy years, we think that it may (at least provisionally) cease to be enumerated as a distinct species of Lory.

A description in Italian of the fine and undoubtedly distinct species *Ch. insignis* has been most kindly sent me by Dr. Giacinto Martorelli. It is of course taken from the type preserved at Milan and may be translated as follows:—"Dominant colour of the anterior parts, chest, and neck dull reddish and purple; greenish for a small space on the flanks in front of the tibiæ. The violet becomes darker, indeed almost black, on the hindermost part of the abdomen; about the anal aperture there are some crimson feathers and the tibiæ are crimson in front and on either side. The inferior tail-coverts are fundamentally violet, but shot with green. The forehead is dark red. The sides of the head and the chin are of a shining very dark violet with crimson markings. The nape and the base of the neck are also violet fundamentally, but the middle and terminal margins of the feathers are of a clear brownish grey, which appears lilac in certain lights. Such greyish-lilac shades may extend themselves to the scapulars, the hinder parts of which become of an intense maroon colour, as also the posterior part of the back. The lesser upper wing-coverts are of a uniform dark brown, but the median and the larger wing-coverts become maroon-coloured, especially the more internal ones. A shade of dark green shows itself in certain lights on some of these, and extends to the more external secondaries, to the primary-coverts, and to the primaries themselves. The more internal secondaries have their apices tinted with a dull yellowish olive, especially upon the internal webs. The rump is of a clear violet-blue, bordered by dark violet, passing into a greenish tint. The rectrices are, above, of a dark purple-red towards their base and of a violet-lilac colour for the rest, except their apices, which are yellowish green. The three external tail-feathers have their internal webs, towards the base of each, of a bright carmine-red, but this colour extends but a short way. The under surface of the tail is bright carmine-red at the bases of the feathers, and then a darker red, but greenish yellow towards the ends of the feathers. The under surface of the tail, so looked at that the rays of light fall at a very acute angle, shows vivid shades of gold colour and purple-red. The inferior wing-coverts are of the same carmine-red as the tibiæ; the more external ones, towards the margin of the wing, are more violet. The larger remiges are brownish black, with the basal half of the internal web of a red colour, but less intense than that of the coverts."

Dr. Martorelli assures me that though at first somewhat inclined to regard this species as a hybrid between two others, yet having compared it with all the specimens within his reach, and notably with a series of skins of *Ch. ater* and *Ch. scintillatus*, he has arrived at the conclusion that it is a truly distinct form, in spite of the apparently intermediate characters it presents, a condition which Dr. Martorelli has observed in other instances not less remarkable.

Count Salvadori's description is as follows:—"Purple-black; pileum darker, nearly black; forehead and cheeks tinged with red; concealed part of the feathers of the neck and of the breast red; tibiæ red; uropygium dark blue; scapulars purple-brown; the edge of the wing and the under wing-coverts red; quills with the base of the inner web red; tail above violet, with the base brown, and towards the tip greyish, beneath purple-red, towards the tip golden olive-yellow: bill, cere, naked skin of the chin, and feet black. Total length 11 inches, wing 7, tail 4.87, bill 0.94, tarsus 0.78."



3
I

Luyvenbode's Lory.
CHALCOPSITTACUS DUYVENBODEL.

Published by R. H. Porter.

4. CHALCOPSITTACUS DUYVENBODEI.

(DUYVENBODE'S LORY.)

[PLATE III.]

Chalcopsittacus duyvenbodei, Dubois, Bull. Mus. d'Hist. Nat. Belgique, vol. iii. p. 113, plate v. (1884); T. Salvadori, Mem. R. Accad. Sc. Torino, ser. 2, vol. xl. p. 170 (1889); id. Cat. of Birds in Brit. Mus. vol. xx. p. 16; Hon. Walter Rothschild, Novitates Zoologicæ, vol. i. Sept. 1894, p. 677.

Olive-brown; forehead yellow; a yellow band on cheeks and throat; tibiæ orange-yellow. "Eyes red and black, bare skin round the eyes blue." *

Habitat. Humboldt Bay, North New Guinea.

THE type of this very distinct species is preserved in the Museum of Brussels, whither it was sent from New Guinea by Mr. C. W. K. van Duyvenbode, after whom it was named by its first describer M. Alph. Dubois. There is no specimen of this Lory in the British Museum, but the Hon. Walter Rothschild has been fortunate enough to obtain no less than four examples of it, and it is to his great kindness that we are indebted for being able to supply the accompanying figure drawn from one of them.

Nothing is known of the habits or character of this bird. Its coloration is well shown in our Plate. Its general colour is dark olive-brown; the forehead, as far backwards as above the eyes, is orange-yellow, and a band of the same colour descends from the lores, widening in its descent, and embracing the lower jaw. The vertex and occiput are dusky olive-brown, but the nape and the sides of the neck are garnished with long narrow feathers, which are ochre-yellow along the middle and towards their apices. The primaries and their coverts are black, but the internal webs of the quill-feathers of the wing towards the base are of a rich golden yellow, as are also the smaller wing-coverts towards the bend of the wing, and the under wing-coverts. The lower back and the rump are violet-blue; the ear-coverts, the hinder part of each cheek, the lower part of the throat, and all the breast are olive-brown, but the hidden parts of the feathers of the breast are yellow, and their edges are yellowish also; the tail above is dark purple, with an olive tinge towards the edges of the feathers; below the tail of a golden-olive tint; the under tail-coverts are violet-blue. The naked parts of the head round the eyes are blue. The bill, the cere, and the feet are blackish, but the tibiæ are orange-yellow.

Captains Webster and Cotton shot a specimen of this rare bird at Stephansort, in German New Guinea, on November 18, 1893 †.

Total length about 12 inches, wing 7, tail 5·3, culmen 0·95, tarsus 0·78.

Count Salvadori has no doubt about this singular black-billed Lory belonging to the genus *Chalcopsittacus*, although he finds that it bears a certain resemblance to *Eos fuscata*.

* 'Novitates Zoologicæ,' *loc. cit.*

† 'Novitates Zoologicæ,' *loc. cit.*



1 & 3. The Yellow-streaked Lory.
CHALCOPSITTACUS SCINTILLATUS.
 2. The Green-streaked Lory.
CHALCOPSITTACUS CHLOROPTERUS.

Published by R.H. Porter.

5. CHALCOPSITTACUS SCINTILLATUS.

(THE YELLOW-STREAKED LORY.)

[PLATE IV. FIGS. 1 & 3.]

- Amber Parrot*, Latham, Syst. i. Suppl. p. 65, no. 144 (1787).
Psittacus batavensis, Latham (*nec* Wagler), Index Ornithol. i. pp. 126, 128 (1790).
Psittacus scintillatus, Temminck, Planches Coloriées, pl. 569 (1835).
Psittacus scintillans, Müller, Verh. Land- en Volkenk. pp. 22, 127 (1839-44).
Lorius scintillatus, Bourjot, Perroquets, pl. 51 (1837-38).
Domicella scintillata, Finsch, Papageien, ii. p. 752 (1868); Reichenow, Vogelbild. t. xxxi fig. 2 (1878-83).
Eos scintillatus, G. R. Gray, Gen. of Birds, vol. ii. p. 417 (1845); D'Albertis, Ann. Mus. Civ. Genova, x. p. 8 (1877).
Eos rubrifrons, Gray, List of Psitt. in Brit. Mus. p. 53 (1859).
Chalcopsitta scintillata, Bonaparte, Consp. Avium, i. p. 3 (1850).
Chalcopsitta scintillans, Bonaparte, Proc. Zool. Soc. 1850, p. 26.
Chalcopsitta rubrifrons, G. R. Gray, Proc. Zool. Soc. 1858, pp. 182, 194, pl. 135.
Chalcopsitta chloropterus, Ramsay, Proc. Linn. Soc. N. S. Wales, iii. p. 254 (1878-79).
Chalcopsittacus chloropterus, Salvadori, Ann. Mus. Civ. Genova, ix. p. 15 (1876).
Chalcopsittacus scintillatus, D'Albertis, Ann. Mus. Civ. Genova, x. p. 19 (1877); T. Salvadori, tom. cit. p. 34 (1877); id. Ornith. Papuasias, i. p. 274; id. Cat. of Birds in Brit. Mus. vol. xx. p. 16 (1891); Gould & Sharpe, Birds of New Guinea, vol. v. pl. 38 (1888).

Under wing-coverts and axillaries red; feathers of head and neck with shaft-streaks mostly orange-yellow.

Habitat. Western Northern New Guinea and the Aru Islands.

THIS Lory, according to Dr. A. R. Wallace, has a very docile disposition and is easily domesticated. A specimen was living in the Gardens of the Zoological Society of London in October 1872.

Salomon Müller found this species at Lobo Bay, and Dr. A. B. Meyer obtained it at Rubie. Baron von Rosenberg met with it in Geelvink Bay, and Dr. Beccari at Mesan. D'Albertis found it on the Fly River and near Port Moresby.

The general colour is green, the middle of the back and rump being brighter and somewhat of a bluish green, ornamented with very narrow shaft-streaks of yellow. The sinciput, the lores, and the upper parts of the cheeks are red. The sides of the head and the chin are a very dark brown, almost blackish. The occiput is also dark brown, the feathers being

streaked in the middle with green. The neck, the interseapulary region, the breast, and the abdomen are green, ornamented with yellow shaft-streaks. The streaks of the breast are broader and more orange in tint than those elsewhere situated. The throat is dull green varied with red. The tibiæ are also red. The under tail-coverts are green, very narrowly streaked with yellow towards their tips. The wings are green externally, the median and lesser coverts being very narrowly streaked with light green. The lesser coverts are somewhat bluish. The under wing-coverts and axillaries are red. The quills are green on their outer webs, dusky on the inner webs, with a very broad yellow patch towards the base of the inner web. The tail-feathers are green above, with the basal half of their inner webs red. The apical parts of the tail-feathers are yellowish olive beneath. The bill, the cere, and the feet are blackish. The iris is orange-yellow. Total length 11·8 inches, wing 7·2, tail 4·5, bill 0·9, tarsus 0·85.

The twelve skins preserved in the Natural History Museum closely resemble each other, except that in the specimen from the Gould collection the shaft-streaks on the back and lower neck are fewer and less bright in colour.

6. CHALCOPSITTACUS CHLOROPTERUS.

(THE GREEN-STREAKED LORY.)

[PLATE IV. FIG. 2.]

Chalcopsittacus chloropterus, T. Salvadori, Ann. Mus. Civ. Genova, ix. p. 15 (1876); Finsch & Meyer, Zeitsch. f. ges. Orn. 1886, p. 8; T. Salvadori, Mem. R. Ac. Sc. Tor. series 2, xl. p. 171 (1889); id. Aggiunte alla Ornit. Pap. part i. p. 43 (1889); id. Cat. of Birds in Brit. Mus. vol. xx. p. 17 (1891).

Like *Ch. scintillatus*, but the under wing-coverts are green, sometimes partly red; the shaft-streaks of the feathers of the breast and neck green.

Habitat. S.E. New Guinea and Fly River region.

BESIDES the above characters, *Ch. chloropterus* is, according to Salvadori, to be distinguished by the dominant green colour being somewhat bluish, by the upper wing-coverts distinctly approaching blue, and by the longitudinal stripes of the head and abdomen being much less conspicuous. The bill and feet are black, and the eyes reddish yellow.

The specific distinctness of *Ch. scintillatus* and *Ch. chloropterus* appears to us to be very doubtful. Count Salvadori after having founded the species, as above stated, subsequently (in his magnificent work the 'Ornitologia della Papuasias e delle Molueche,' parte prima, p. 275, 1880) treated it as being a mere variety. As, however, in his British Museum Catalogue, he has given it as a distinct species, we, in deference to his authority, have similarly treated it. It was, however, also revived as a new species by MM. Finsch and Meyer (as above cited), who declared it to have the back more green and the head brown and less black than has the other species, while the yellow of the inner webs of the quills forms a less bright patch and one not so well-defined.

Of the skins preserved in our National Collection, I found two which had exceptionally bright shaft-streaks, especially on the breast and abdomen. Both of these specimens (Broadbent's and Macfarlane's) came from Port Moresby. The specimen from the Gould collection, which also came from Port Moresby, differs from all the others in the almost total absence of yellow on the underside of the wing.

EOS.

RED-WINGED LORIES.

Eos, Wagler, Mon. Psitt. p. 494 (1832).

Type of the genus: *E. histrio*.

Generic characters.—Size about that of a turtle-dove; tail-feathers twelve; point of maxilla long but not thin; tail of moderate length, the two middle feathers longer than the lateral ones; tail-feathers rather broad and more or less rounded at the tip; bill orange-red; predominant colour on the wings also red. (Salvadori, *loc. cit.*)

Range. The Moluccas to Halmahera, the Talaut, Meangis, and Caroline Islands, and to the Tenimber Islands, Southern New Guinea, and the Solomon Islands.

THE twelve more or less distinct species of birds which constitute this very attractive and brilliantly coloured genus have a total length of from a little under nine inches to thirteen inches. The prevailing colour of the plumage is, with two exceptions (*E. rubiginosa* and *E. fuscata*), bright red. There may or may not be a violet collar round the neck. The upper wing-coverts are generally red or black, but may be of a very dark red colour with a purplish tinge. The breast is in most species partially red, but may be entirely so, or entirely blue, or variegated and traversed by a red band, or wholly very dark cherry-red. The tail may be black above, or dull red, or deep purple. The scapulars are mostly blue or red, but may be dull purplish brown or dark olive-grey. With one exception (that of *E. rubiginosa*) all the species are more or less brightly, and almost always (not so, *e. g.*, in *E. cardinalis*) variously, tinted.

They are called Red-winged Lories to distinguish them from the next and closely allied genus *Lorius* (the Lories *par excellence*), in which the wings are green.

The birds of this genus are attractive in other respects besides the beauty of their colours. Several of them, at the least, are easily tamed and some have learned to speak. They are capable of a discriminating attachment even between persons with whom they are almost equally familiar. They are lively and active creatures, but the very frequent cries and screams to which some give utterance make them too trying as domestic pets for those who keenly dislike such noises. But they are said to scream much less when kept in pairs than they do when they are solitary, and two individuals will often show great attachment to each other.

Whereas the genus *Chalcopsittacus* is one the species of which are mainly inhabitants of New Guinea, only one species of *Eos* (*E. fuscata*), which is a very exceptional form, has been brought from that vast island. The other species of *Eos* inhabit islands near to or remote from New Guinea, ranging from the Moluccas to the Caroline and Solomon Islands. The range of this genus extends northwards to the Caroline Islands, eastwards to the Solomon Islands, southwards at least to Port Moresby and Guadalcanar, and westwards to the island of Bouru.



$\frac{3}{4}$

The Black-Winged Lory.
EOS CYANOGENYS.

Published by R.H. Porter.

1. EOS CYANOGENYS.

(THE BLACK-WINGED LORY.)

[PLATE V.]

Lorius cyanogenia, Schleg Mus. P.-B., Psittaci, p. 128 (1864); Rosenberg, Reist. naar de Geelvinkbaai, p. 36 (1875).

Lorius cyanogenius, Finsch, Neu-Guin. p. 157 (1865).

Domicella cyanogenys, Finsch, Papag. ii. p. 796 (1868); Meyer, Sitzb. k. Ak. Wiss. Wien, lxx. p. 234 (1874).

Domicella schlegeli, Finsch, Papag. ii. p. 792; Reichenow, Vogelbild. tab. xxxi. fig. 6 (1878-83).

Eos cyanogenia, Bp. Consp. i. p. 4 (1850); id. P. Z. S. 1850, p. 27, plate xiv.; Sclater, Ibis, 1859, p. 211; Rosenberg, Journ. f. Orn. 1864, p. 114.

Eos cyanogenys, Salvadori, Ann. Mus. Civ. Genova, x. p. 33, n. 65 (1877); id. P. Z. S. 1878, p. 86; id. Orn. Pap. e Mol. i. p. 246 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 19 (1891).

Body, including uropygium, red; tail black above; upper wing-coverts black; interscapular region red.

Habitat. Mafor Island (Pulo Manin) and Mysore Island in Geelvink Bay.

THIS beautiful bird was first named by Prince Charles Lucien Bonaparte, who described and figured it in the 'Proceedings of the Zoological Society' for 1850 as above stated. The type of the species is the skin which the Prince found in the Leyden Museum, as he himself tells us. It was that of a male.

In Count Salvadori's opinion* Finsch's *Domicella schlegeli* was established on some young birds; these have the feathers of the underparts edged with blue, a circumstance which happens in one or two other species.

Rosenberg tells us that the "Maningir" (which seems to be its native name) reveals its presence in the bush by its short, shrill cries. Individuals habitually congregate in small troops, which fly about hither and thither in the woods in company.

The prevailing colour is red, which, in some lights, may show a purplish gloss. From the forehead to, and including, the uropygium, and from the chin to the under tail-coverts, the colour is red, save that a narrow black band may cross the back between the scapulars, and that there is a black spot on the flanks above the thighs, which latter are also red. There is a very conspicuous bright purple-blue patch on either side of the head, formed by

* P. Z. S. 1878, p. 86.

the feathers just in front of, above, and below the eye, and by the ear-coverts. The upper wing-coverts and scapulars are black; the remiges and the greater and primary wing-coverts are red, with black spots at their apices, which produce the appearance of an oblique black band when the wing is closed. The under wing-coverts are red, with a few black marks towards their apices. The remiges have tips which are black for a considerable extent. Above the black they are, on their inner webs, more or less yellow, the rest being red. The tail is black above, the two middle feathers being entirely black, as are the outer webs of the lateral ones; their inner webs are red. The under surface of the tail is red save for the outer web of the outer tail-feathers. The cere and naked skin round the eyes are black. The bill is orange-red, the feet black, and the iris red. Total length 11.5 inches, wing 6.3, tail 4.2, bill 0.85, tarsus 0.7.

We learn from Count Salvadori that in the young bird irregular purple-black transverse lines show themselves on the head, neck, lower back, and underparts of the body.

The most striking features of this bird are the large black patch on the shoulders, the black tail, and the bright purple-blue patch on the side of the head.

A female specimen in our National Collection (labelled from the Moluccas) has no yellow on the quills, but there is much yellow in another skin which came from the Tweeddale collection.



The Blue streaked Lory.
EOS RETICULATA.

Published by R.H. Porter.

2. EOS RETICULATA.

(THE BLUE-STREAKED LORY.)

[PLATE VI.]

The Blue-necked Lory, Latham, Gen. Hist. ii. p. 136 (1822).

The Reticulated or Blue-streaked Lory, Greene & Dutton, Parrots in Captivity, vol. iv. pl. iii. p. 13 (1887).

Psittacus reticulatus, S. Müll. Verh. Land- en Volkenk. pp. 107, 108 (1839-1844).

Psittacus cyanostictus, Schleg. Handl. i. p. 184 (1857).

Lorius borneus, Less. (nec Steph.), Tr. d'Orn. p. 192 (1831).

Lorius reticulatus, Schleg. Mus. P.-B., Psittaci, p. 128 (1862).

Domicella reticulata, Finsch, Papag. ii. p. 797 (1868).

Eos cyanostriata, G. R. Gray, Gen. B. ii. p. 417, n. 9, pl. 103 (1845).

Eos bornea, Souancé, Rev. et Mag. de Zool. 1856, p. 226.

Eos reticulatus, G. R. Gray, Hand-list, ii. p. 154 (1870).

Eos reticulata, Sclater, P. Z. S. 1860, p. 226; Salvadori, Ornitologia Papuasias e delle Molucche, parte i. p. 345 (1880); Sharpe, Gould's B. New Guin. vol. v. pl. xxxv. (1883); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 20 (1891).

Body, including uropygium, red; tail black above; upper wing-coverts red; hind neck and interscapular region with blue shaft-streaks.

Habitat. Timor-laut and Tenimber Islands.

THIS beautiful bird has been known more than seventy years, but its native habitat was long mistaken. As early as 1822 Lord Stanley (afterwards Earl of Derby and President of the Zoological Society) had a specimen in his collection. Mr. H. O. Forbes, who himself shot several specimens, tells us that it is common in all the Tenimber Islands visited by him, and that he found it everywhere a favourite cage-bird with the natives. We have had six individuals of this species in the Parrot-house of the Zoological Gardens, Regent's Park. The Hon. and Rev. F. G. Dutton tells us that the bird is tolerably hardy and long-lived, if carefully and rationally treated. He is not certain, but he is inclined to think that he has heard it repeat simple words.

This species differs strikingly from the preceding one in that it has bright blue shaft-streaks on the upper part of the back, in the absence of the black patch (so conspicuous in *E. cyanogenys*) on the upper part of the wing, and in the less intense black of the tail.

The body is red, its underparts mottled with darker red. The head and neck are also

red and uniform in colour. The interscapular region is streaked with beautiful blue in the centre of the feathers. The ear-coverts have their feathers, which are blackish, also conspicuously streaked with blue; cheeks and throat bright red. The feathers of the uropygium and the upper tail-coverts are obscurely marked with dusky blackish, sometimes purplish, tips. The scapulars are black, but both their outer webs and their tips are red. The smaller and median wing-coverts are red with the hidden bases of the feathers black, at least on the inner webs. The greater wing-coverts are black with red tips; the primaries and primary-coverts are black, edged with red, and the base of the inner web is red. The secondaries are red with black shafts and black tips, the extent of black towards the tip becoming broader from without inwards, while the innermost is entirely black. The under wing-coverts and axillaries are red.

The tail is black above, with a bronzy, or greenish, tinge, red underneath. The centre tail-feathers are entirely black above, the others have their inner webs red.

The thighs are red, but their plumes, and those of the lower flanks, have black bases. There are blue ends to some of the feathers of the flanks.

The upper and lower mandibles are said by Forbes to be scarlet with orange tips. The cere, naked skin round the eyes, and the feet are black. The iris is rich brown.

Total length 11·5 inches, wing 6·3, tail 6·2, bill 0·8, tarsus 0·7.

The eight specimens in the British Museum are all very much alike, save one, which is a very imperfect skin.



1 & 3. The Red and Blue Lory.
EOS HISTRIO
2. The Challenger Lory.
EOS CHALLENGERI.

Published by R.H. Porter.

3. EOS HISTRIO.

(THE RED-AND-BLUE LORY.)

[PLATE VII. FIGS. 1 & 3.]

- The Indian Lory*, Latham, Syn. i. p. 217, n. 19 (1781); id. Gen. Hist. ii. p. 128 (1822).
The Blue-breasted Lory, Greene & Dutton, Parrots in Captivity, vol. iii. pl. xii. p. 53 (1887).
Perruche violet et rouge, Buffon, Hist. Nat. Ois. vi. p. 138 (1779); Levaillant, Perroquets, pl. 53 (1801-1805).
Perruche des Indes Orientales, D'Aubent. Pl. Enl. 143 (1783).
Psittaca indica coccinea, Brisson, Orn. iv. p. 376, pl. xxv. (1760).
Psittacus histrio, Müll. S. N., Suppl. p. 76 (1771).
Psittacus indicus, Gm. S. N. i. p. 318, n. 58 (1788).
Psittacus coccineus, Lath. Index Orn. i. p. 89, n. 22 (1890).
Lorius coccineus, Steph. in Shaw's Zool. xiv. 2, p. 132 (1826).
Lorius indicus, Finsch, Neu-Guin. p. 157 (1865).
Lorius histrio, Koch, Verz. Samml. Vogelb. aus Celebes u. Sanghir, p. 1 (Febr. 1876).
Domicella coccinea, Finsch, Papag. ii. p. 800 (1868).
Domicella histrio, Reichnw. Vogelbild. t. xxxi. fig. 1 (1883).
Eos indica, Wagl. Mon. Psitt. p. 557 (1832); Hickson, Natural. in N. Celebes, p. 155 (1889).
Eos coccinea, Selater, P. Z. S. 1860, p. 227; Salvadori, Orn. Pap. e Mol. i. p. 268 (1880).
Eos histrio, G. R. Gray, Hand-list, ii. p. 154, no. 8190 (1870); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 21 (1891).

Body, including uropygium, red; interscapular region and nape blue; the upper part of the breast entirely blue.

Habitat. Sanghir and Talaut Islands.

THE Red-and-Blue Lory is the type of the genus, and has been known ever since 1760. It was long erroneously supposed to form part of the fauna of Celebes. Mr. Sydney J. Hickson, a naturalist who made an expedition to Celebes and the Sanghir and Talaut Islands, gives us his experiences as to this Lory as follows:—"We arrived at the Talaut Islands on Monday morning, and let go our anchor off the little village of Lirung in Salibabu. I went ashore immediately with the *contrôleur* and my boy, and strolled along the beach for some distance in search of birds, insects, and plants, hoping that, as it was still early, there might be a few living things about. I saw a few birds of the same species as those I was accustomed to see in Tulisse, such as the Sandpipers, the Starlings, the Green Parrots, the Nectar Birds, and so

forth; but a very brilliant little red-and-blue Lory, which I had never seen before, was very abundant. Before we left Lirung, the natives had sold and presented to members of our staff and crew at least three score of these pretty little creatures; but the mortality among them on our voyage was tremendous, and I believe that not a half-dozen reached Monado alive. Three specimens were presented to me, but they all died, apparently of cramp, before we reached Sanghir. It is very curious that this bird should be so abundant in these islands, comparatively rare in the neighbouring islands of Sanghir, and unknown in the great continent of Celebes." Being thus common it is quite possible it may have been carried to Monado, in North Celebes, so might have escaped into the forests of Minahassa. Mr. Hickson, however, declares (as above quoted) that it is "unknown" in Celebes.

That this species should ever have been called the Indian Lory is a mistake comparable with that which caused a familiar small American Rodent to have been named the "Guinea" Pig, or led the domestic species of an exclusively American genus of Gallinaceous birds to be designated the "Turkey."

Individuals of this species have been exhibited in our Zoological Gardens. The Hon. and Rev. Mr. Dutton tells us that a specimen observed by him and Mr. Greene was by no means timid, but rather forward, "greeting a new comer with a series of shrill outcries as it clung to the side of its cage which was nearest to the intruder. The bird was extremely tame and would take food, a piece of fig or a grape, from anyone's fingers. It was fed on rice boiled and well sweetened, also bread and milk and ripe fruit. It never seemed to ail anything; yet one morning it was found dead in its cage."

In a few instances, individuals of this species have been induced to eat seed—hemp, millet, or canary.

It may be very definite in its likes and dislikes, for Mr. Dutton quotes a letter from Dr. Meyer in which he says that it was very affectionate towards his wife and liked to be near her, but that it was always unfriendly to him.

This species is readily distinguishable from every other of the genus, save the following one, which resembles it closely, by its blue and red coloration and especially by the extent of the blue in its plumage.

The vertex, the ear-coverts, more or less of the nape, the interseapular region, and the whole of the breast are of a rich dark blue. The flanks and the vent are purplish blue, the uropygium and upper tail-coverts are red. The under tail-coverts are red, with purple-blue tips. The scapulars are black. The upper wing-coverts are red, with black tips. The quills are black, except the bases of the inner webs, which are red. The secondaries are red, with black tips. The tail is dull chocolate-brown above (with dull purplish reflections in some lights) and red beneath; the inner webs of the lateral feathers are red above. The bill is orange-red; the feet are blackish. Total length 12·6 inches, wing 6·6, tail 5·3, bill 0·9, tarsus 0·75.

Of the skins in the Natural History Museum, two from the Wallace collection, both collected by him in Sanghir, are noteworthy, because while one of them has a specially large and uniform patch of blue on the breast (as delineated in our Plate), in the other the blue is mixed with red.

VARIETY TALAUTENSIS.

(THE TALAUT VARIETY.)

Eos histrio talautensis, A. B. Meyer and L. W. Wigglesworth, Journal für Ornithologie, 1894, p. 240.

DR. MEYER and Mr. Wigglesworth have found certain differences between their specimens of *Eos histrio* from the Talaut and those from the Sanghir Islands, which have induced them to erect the former into a subspecies *talautensis*.

We do not like "subspecies," and have very carefully done our best to see whether this Talaut form could be ranked as a species; but it is impossible for us to regard it as more than a variety. Its distinction, even as a subspecies, from *Eos histrio* is made to depend on the greater extent of red on the wing and on the black marks of the secondaries being narrower.

The Hon. Walter Rothschild has been so kind as to lend us two fine specimens of Meyer's *Eos histrio talautensis*, and these we have carefully compared with the skins, both of *Eos histrio* and *Eos challengerii*, which are preserved in the National Collection. We have found a considerable amount of variation as to the extent of red on the wings and the dimensions of the black markings in the specimens of *Eos histrio*; and, as we have already noted, the two specimens of this species collected by Dr. Wallace in the Sanghir Islands differ notably as to the extent of blue on the breast. As this character (the blue being, or not being, mixed with red on the breast)* is that which is given as distinctive of *Eos challengerii*, it is with reluctance that we enumerate the latter as a distinct species.

The single specimen of *Eos histrio* which was collected by Mr. S. J. Hiebson in the Talaut Islands does not, in our eyes, differ more from the Sanghir Island skins than these do from one another. Mr. Rothschild's two specimens have blue on the breast to the extent found normally in *Eos histrio*.

The outer margin of the outer primaries is entirely black in one specimen of *E. challengerii*; in the second there is a minute trace of red on the outer border of the first primary, and this is more visible in the third skin. Of the skins of *E. histrio* only one shows a trace of this tint, which is rather more marked in the Talaut Island specimen and in those lent us by Mr. Rothschild; but this difference is very minute, and if the forms from Sanghir and the more distant Meangis Islands can hardly be separated, it does not seem probable that those from the much nearer Talaut Islands can really be distinct.

* In our description of *Eos challengerii* (on the next page but one) the word "head" has unfortunately been printed instead of "breast." It should read: "upper part of the breast red, mixed with blue," and "the breast is not blue only but a mixture of red and blue," &c., p. 25, lines 7 and 10.

4. EOS CHALLENGERI.

(THE CHALLENGER LORY.)

[PLATE VII. FIG. 2.]

Eos indica, Selater, P. Z. S. 1878, p. 578; id. Voy. Chall., Birds, p. 115 (1881); Murray, Voy. Chall., Narr. i. pt. 2, p. 669 (1885).

Eos challengeri, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 22 (1891).

Body, including uropygium, red; interscapular region and nape blue; the upper part of the head red, mixed with blue.

Habitat. Meangis (or Nanusa) Islands.

THIS species is very like *E. histrio*, but it is smaller, and the head is not blue only but a mixture of red and blue. Its habitat is the most northerly of all the species of the genus save one, and of the whole family of Lories save two.

Dr. Murray tells us that whilst he was occupied in dredging, a native canoe came alongside from the Meangis Islands. It contained twenty-two men wearing turbans and very dirty-looking. "They brought mats and very pretty blue-and-red Lories (*Eos indica*) alive for sale, secured to stieks by means of rings made of cocoanut-shell at Amboina."

Dr. Selater, quoting Dr. Murray's MS., says that four specimens were purchased for some tobacco. Of the specimens obtained, the skins of two females and one male are preserved in the National Collection; and these form the types of the species.

Dr. Murray kept the male alive for several days. He used to fly about the ship and return to the house on deck when shown his food, but died (as was supposed) from eating green-stuff, though he might have received some injury when aloft.

This species is extremely like that last described; indeed it only differs therefrom in that it is smaller and that there is less blue on the breast, and this is more or less mingled with red. This character, however, is (as we mentioned at the end of our description of *E. histrio*) sometimes present in the Red-and-Blue Lory, so that we can, perhaps, hardly regard it as more than a variety of the latter.

The bill is orange, the feet and the eyes (Dr. Murray says) red or light brown in the males. Total length 9·8 inches, wing 6, tail 4, bill 0·8, tarsus 0·68.

Our figure, which represents a type, is, we believe, the first representation of this species which has been published.

Of the three skins in the British Museum, that labelled "441, female" has the blue much less extended on the back than in the two other specimens.



The Cardinal Lory.
EOS CARDINALIS.

Published by R.H. Porter.

5. EOS CARDINALIS.

(THE CARDINAL LORY.)

[PLATE VIII.]

Lori Cardinal, Hombron et Jaquinot, Voy. Pôle Sud, Atlas, pl. 24 bis, fig. 2 (1845).

Trichoglossus cardinalis, Rehnw. Journ. f. Orn. 1881, p. 162.

Lorius cardinalis, G. R. Gray, Genera of Birds, App. p. 20 (1849); Ramsay, Pr. Linn. Soc. N. S. W. iv. p. 68 (1879).

Domicella cardinalis, Finseh, Papag. ii. p. 785 (1868); id. P. Z. S. 1869, p. 128, pl. xi.

Domicella Eos cardinalis, Rehnw. Journ. f. Orn. 1882, p. 232; id. Vogelbild. t. xxxiii. fig. 4 (1878-83).

Eos unicolor, Wall. (nee Shaw), P. Z. S. 1864, pp. 291, 295.

Eos cardinalis, Bonaparte, Comp. Rend. xlix. p. 539 (1857); Salvadori, Orn. Pap. e Mol. i. p. 249 (1880), and iii. p. 518 (1882); id. Cat. of Birds in Brit. Mus. xx. p. 22.

Almost entirely red; tail above red; no violet collar; wing-coverts along the edge of the wing edged with bluish purple; scapulars not blue.

Habitat. Solomon Islands.

THIS exceptionally one-coloured but very handsome Lory is the first one of the series here described, and the only species of *Eos*, which is an inhabitant of the Solomon Islands. Mr. E. P. Ramsay, in his notes on the zoology of those islands, tells us that one of their principal features is the abundance of this beautiful Parrot. He found that (as in the Lories hereinbefore described) the females were coloured like the males; they were, however, slightly smaller. Up to the time of Mr. Ramsay's investigation this was considered a very rare bird.

Mr. E. L. C. Layard, in his notes on a collecting-trip to the Solomon and other islands, observes that this Lory frequents old mangrove-trees, and that it is a very tough-skinned bird and will fly away after receiving a heavy charge of shot.

The colour of the whole plumage is almost entirely red. The head and nape are deep crimson. The breast and abdomen are of a lighter red, and each feather has its distal margin of a pale yellow, so that the underparts appear undulated and traversed by narrow yellowish transverse markings. The back, shoulders, and rump are brownish red. Some of the feathers of the mantle, however, have narrow faintly-marked yellow margins. The upper tail-coverts are red, and the under tail-coverts of a uniform crimson.

The primaries are brown, with their outer webs reddish brown, with an olive-yellow lustre in certain lights; their inner webs are dark reddish brown. The secondaries are brownish

red like the back. The feathers at the bend of the wing are of a dull purplish blue. The tail is brownish red above; its under surface, like that of the wings, is likewise brownish red, which in some lights shows as a much brighter red.

The bill is said by Mr. Ramsay to be horn-colour with a red tip, the lower mandible being coral-red, and the skin round its base yellow. The cere is also said to be a dark horn-brown. The considerable extent of naked skin round the eyes appears black, and the legs and claws blackish.

Total length 12 inches, wing 6·9, tail 5·9, bill 0·85, tarsus 0·69.

All the six specimens in the British Museum are very similar, but two from Guadalcanar have the breast and abdomen of a more uniform and brighter red than have the other specimens.



The Red Lory.
EOS RUBRA.

Published by R.H. Porter.

6. EOS RUBRA.

(THE RED LORY.)

[PLATE IX.]

- The Long-tailed Scarlet Lory*, Edwards, Birds, iv. p. 173 (1751).
The Molucca Lory, Latham, Syn. i. p. 274 (1781).
The Blue-fringed Lory, Latham, Gen. Hist. ii. p. 227 (1822).
The Blue-tailed Lory, id. *ibid.*
The Red Lory, Latham, Gen. Hist. ii. p. 229 (1822); Greene & Dutton, Parrots in Captivity, vol. iv. pl. ii. p. 7 (1887).
Lory de la Chine, D'Aubent. Pl. Enl. 519.
Lori de Gilolo, Sonn. Voy. Nouv. Guin. p. 177, pl. 112 (1776).
Lory rouge, Buff. Hist. Nat. Ois. vi. p. 134, pl. vi. (1779).
Perruche écarlate, Levaillant, Perr. vol. i. pl. 44 (1801).
Lori à franges bleues, Levaillant, Perr. vol. ii. pl. 93 (1805).
Perroquet Lori à queue bleu, Levaillant, Perr. vol. ii. pl. 97 (1805).
Psittaca coccinea Bonarum fortunarum insulæ, Brisson, Orn. iv. p. 373 (1760).
Psittacus borneus, Linn. S. N. i. p. 141, n. 11 (1766); Finsch, Papag. ii. p. 911 (1868); Salvadori, Cat. Ucc. Born. p. 27, note (1874).
Psittacus chinensis, Müll. Natursystem, Suppl. p. 77 (1776).
Psittacus ruber, Gmelin, Syst. Nat. i. p. 335, n. 101 (1788); Hahn, Orn. Atlas, Papag. tab. 49 (1836).
Psittacus moluccensis, Lath. Index Orn. i. p. 116, n. 101 (1790).
Psittacus cæruleatus, Shaw, Nat. Misc. pl. 937 (1789–1813).
Psittacus cyanurus, Shaw, Gen. Zool. viii. p. 538 (1811).
Psittacus cyanothus, Vieill. N. D. xxv. p. 334 (1817).
Psittacus guebuensis (part.), S. Müll. Verh. Land- en Volkenk. p. 107 (1839–1844).
Psittacus bernsteini, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 145 (1863).
Lorius ruber, Steph. in Shaw's Gen. Zool. xiv. pt. 1, p. 132 (1826); Finsch, Neu-Guin. p. 157 (1865).
Lorius borneus, Steph. *ibid.*
Lorius cyanurus, Steph. *ibid.*
Lorius cæruleatus, G. R. Gray, Gen. B. ii. p. 416, n. 4 (1845).
Lorius squamatus, Schleg. (nec Bodd.), Mus. Pays-Bas, Psittaci, p. 124 (1864).
Domicetla schlegelii, Finsch, Papag. ii. p. 792 (1868).
Domicella rubra, Finsch, Papag. ii. p. 786 (1868); Reichenow, Vogelbild. tab. xxxi. fig. 4 (1878–83).
Eos rubra, Wagl. Mon. Psitt. p. 558 (1832); Sclater, P. Z. S. 1860, p. 226; Wallace,

P. Z. S. 1863, p. 21; Salvadori, P. Z. S. 1878, p. 86; id. Orn. Pap. e Mol. i. p. 251 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 23 (1891).

Almost entirely red; tail above red; no violet collar; scapulars mostly blue; whole of the face red.

Habitat. The Southern Moluccas.

THIS brilliant Lory, which has been known since 1751, is, we learn from Mr. Greene, tamable and docile when captured young. It will learn to speak a little and to imitate a variety of domestic sounds. But it has a terrible habit of almost incessantly screaming: this habit it has in a state of nature, Müller having described how he watched it climbing among the trees, eating the luscious fruit and screaming incessantly; in captivity, however, it does not scream so much when kept in pairs as when kept singly. These birds are very affectionate and caressing to each other.

Several individuals have lived in the Zoological Gardens of London.

Messrs. Greene and Dutton had a couple of Red Lories under observation for a short time, and formed a very high opinion of them as domestic pets; they were almost continually in motion, often putting themselves in the drollest attitudes. They seem very rarely to come to the ground, as their short tarsi and long claws cause them to be, like many other Lories, ill-fitted for terrestrial locomotion. They are said to be strong fliers, though they only take short flights. The Rev. Mr. Dutton had a single specimen, which was some years old when he received it: he tells us it was fearless, and would give one a pretty good nip at times; he parted with it because he found it too noisy. He never heard this individual, however, speak one word.

Mr. Wallace assigns for its habitat Bonru, Amboyna, Ceram, and the Matabello Islands. Those from Amboyna are said to have been relatively larger and with less blue on the wing-coverts. It also appears to inhabit Harouko, Ceram-Laut, Goram, Monawolka, Tejor, Koor, Banda, and the Ké Islands.

The plumage of this species is exceptionally bright; it is almost entirely red, but the longest scapulars and the under tail-coverts are blue. The wings are very predominantly red. The first three or four primaries are black, except the base of the inner web of each, which is red; the other quills are red with black tips, but the innermost ones are tinged with blue towards their extremities. The neck, throat, interscapular region, breast, abdomen, and uropygium are all red, and there is no shade of blue upon any portion of the head. The tail is dull red above, but of a golden red, especially in certain lights, beneath. The base of the inner web of the tail-feathers is bright red. The bill is reddish, and the feet are dusky black.

Total length 12·5 inches, wing 6·5, tail 4·4, bill 0·95, tarsus 0·8.

The young, we learn from Salvadori, have the feathers of the underparts more or less edged with blue, and the under tail-coverts red, tinged with purple.



The Half-masked Lory.
EOS SEMILARVATA .

Published by R. H. Porter

7. EOS SEMILARVATA.

(THE BLUE-CHEEKED LORY.)

[PLATE X.]

Lorius semilarvatus, Schleg. Mus. Pays-Bas, Psittaci, p. 124 (1864).

Domicella semilarva, Finseh, Papag. ii. p. 794 (1868).

Eos semilarvata, Bonaparte, Consp. i. p. 4 (1850); id. Compt. Rend. xxx. p. 135 (1850); id. P. Z. S. 1850, p. 27, pl. xv.; Schleg. Dierent. p. 18, with figure (1864); Salvadori, Orn. Pap. e Mol. i. p. 250 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 25.

General colour red; no violet collar; vent, scapulars, a band through the subocular region, and a spot on the vent blue.

Habitat. Unknown. Timor-laut?

THIS Blue-cheeked Lory was first described (1850) by Prince Lucien Bonaparte. No specimen of this bird exists in our National Collection. There is a young one in the Darmstadt Museum and an adult skin at Leyden, which was most generously presented to that Museum by Mr. Westermann. Heer Büttikofer of Leyden (Conservator to its Museum of Natural History) has been so extremely kind as to have a coloured figure of the specimen there preserved drawn for us, under his careful inspection, and this has been copied by our artist on Plate X.; it represents the type of the species.

The Blue-cheeked Lory was never met with by Dr. Wallace in his extensive and successful explorations, but he suspected that its home was in Timor-laut; this, however, Count Salvadori considers to be doubtful, because *E. reticulata* is an inhabitant of that island.

Eos semilarvata has a certain resemblance to the species last described on account of its general red coloration and the blue patch on the scapulars, but that patch is smaller and of a paler blue, while there is a conspicuous blue patch below the eye. The last-mentioned character reminds us of *E. cyanogenys* and *E. reticulata*; but in them the subocular, or circumocular, patch is of a deeper blue, while the absence of the black shoulders distinguishes it from the former species, and the non-existence of blue in the interscapular region differentiates it from *E. reticulata*.

The entire body—from the head to the uropygium and upper tail-coverts, and from the throat to the under tail-coverts, and also the thigh—is red; but there is a band of blue on each cheek extending from the base of the lower mandible to, and including, the ear-coverts. The wings are red; the primaries, however, and their coverts are black, save their inner webs, which are also red; the secondaries are red with black tips, and the under wing-coverts and under surface of the wing are red, save for the marginal black border formed by the black

ends of the quills. The tail is a dull very dark red above, the inner webs of the tail-feathers are also red; it is likewise red underneath, becoming dusky towards its tip. The feet are black, and the bill is probably of a more or less reddish yellow.

Total length 8.92 inches, wing 5.18, tail 3.94, bill 0.82, tarsus 0.59.

The specimen in the Darmstadt Museum seems to show that in the young the blue on the cheeks is less extended. The feathers of the abdomen have also narrow blue edges. There is also a blue spot on the abdomen, and the under tail-coverts are of that colour. The primary-coverts are also dusky and edged with blue externally.



Wallace's Lory
EOS WALLACII.

Published by R. H. Porter.

8. EOS WALLACEI.

(WALLACE'S LORY.)

[PLATE XI.]

- Gueby Lory*, Lath. Gen. Hist. ii. p. 134 (1822).
Lory de Gueby, D'Aubent. Pl. Enl. 684 (jun.) (1783).
Lory rouge et violet, Buff. Hist. Nat. Ois. vi. p. 135 (1779).
Lory écaillé, Levaillant, Perr. vol. i. pl. 51 (1801).
Psittacus squamatus, Boddaert, Tabl. Pl. Enl. p. 42 (ex Pl. Enl. 684) (1783).
Psittacus squameus, Shaw, Gen. Zool. viii. p. 463 (ex Pl. Enl. 684) (1811).
Psittacus guebiensis (part.), Gmel. S. N. i. p. 318 (1788); Brehm, Monog. Papag. t. 69 (1855).
Psittacus guebuensis (part.), Vieill. Enc. Méth. p. 1380 (1823).
Lorius guebiensis, Steph. in Shaw's Gen. Zool. xiv. p. 132 (1826).
Lorius (Eos) wallacei, Finsch, Journ. f. Orn. 1864, p. 411.
Lorius riciniatus, var. *wallacei*, Brüggem. Abh. naturw. Ver. Brem. v. p. 42 (1876).
Domicella wallacei, Rehnw. Journ. f. Orn. 1881, p. 167.
Domicella riciniata, Finsch, Papag. ii. p. 803 (1868).
Eos guebiensis, Wagl. Mon. Psitt. p. 559 (1832).
Eos squamata, G. R. Gray, Gen. B. ii. p. 417, n. 3 (1845).
Eos cochinsinensis, G. R. Gray, P. Z. S. 1861, p. 431.
Eos wallacei, Newton, Ibis, 1865, p. 340; Salvadori, Orn. Pap. e Mol. i. p. 225 (1880);
 id. Cat. of Birds in Brit. Mus. xx. p. 26 (1891).

Red, including upper surface of tail; head red; a purple collar round the neck; no red spot on the occiput in the adult.

Habitat. Islands immediately north of Salwatty.

SPECIMENS of Wallace's Lory have been seen in, or obtained from, the islands of Waigiou, Guebé, Batanta, and a small island near Mysol.

This species differs from all the others of the genus which we have described in that it has a purple collar round the neck; besides this collar, the abdomen is also purple, and there is much purple, with red, on the under tail-coverts. The longest scapulars are also dull purple. The tail above is reddish brown, with purplish reflections in some lights; the tail-feathers beneath are red at the base of the inner web, and yellowish with golden reflections towards the tip. The wings are red generally, but the primaries are black, save that the base of the inner web is red. The secondaries and greater wing-coverts are red

with black tips; some of the inner quills, like the longest scapulars, are dull purple. The bill is orange-red, and the feet dusky black.

Total length 10·50 inches, wing 6, tail 4·10, bill 0·80, tarsus 0·7.

In the young the feathers of the head, neck, back, breast, and sides are said to have purple edges, and also that the ear-coverts are tinged with purple, while the interscapular region, as well as the scapulars, are dusky purple. The under tail-coverts are also described as purplish red.

Of the specimens in the British Museum, one has the purple collar very largely developed, while in another it is very slightly marked; both these divergent conditions have been delineated by our artist on Plate XI. This, we believe, is the first representation of the species which has appeared since that of Brehm in 1855, which seems to have been copied from Levaillant's figure of 1801.



The Insular Lory.
EOS INSULARIS.

Published by R. H. Porter.

9. EOS INSULARIS.

(THE INSULAR LORY.)

[PLATE XII.]

Eos insularis, Guillemard, P. Z. S. 1885, p. 565, pl. xxxiv.; Salvadori, Ibis, 1886, p. 154; id. Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 169 (1889); id. Cat. of Birds in Brit. Mus. xx. p. 27.

Red, including upper surface of tail; head red; a purple collar round the neck; a purple spot on the occiput.

Habitat. Weeda Islands to the S.E. of Halmahera.

No specimen of this beautiful bird exists in the British Museum. We have again, therefore, to thank the Hon. Walter Rothschild for his kindness in lending us the fine specimen which Mr. Keulemans has represented on Plate XII.

Count Salvadori considers this species as one intermediate between *E. riciniata* (from the Halmahera group) and *E. wallacei* (from Waigiou, Guebé, and Batanta), and in this he is plainly right.

This species certainly much resembles *E. wallacei*, but the black on the wings is less marked, the great dull violet patch formed by the scapulars is absent, and there is a small violet patch on the head.

The general colour is red, including the upper and under surfaces of the tail, the upper tail-coverts, the thighs, the neck, and the whole of the head, save the violet spot before mentioned, the breast, and towards the vent. A purple collar surrounds the neck, and feathers more or less purple, or, at least, with purple ends, form a purple patch on the lower breast. The under tail-coverts are purplish. The scapulars are red, the longest ones more or less dull reddish purple. The wings are red generally, but the primaries have one web red at the base; the secondaries and greater wing-coverts are red with black tips. The under surface of the wing is red, save the black band formed by the apices of the quill-feathers. The bill is orange, yellow at the tip. The iris is red, and the feet black.

Total length 10·6 inches, wing 5·5.

Dr. F. H. H. Guillemard describes both the nuchal and pre-pectoral violet collars as small, and the violet of the abdomen as not passing upwards on to the breast. The iris, he says, is red. He adds (*op. cit.* p. 565):—"The individuals are alike, except that in one the occipital spot is partially connected with the nuchal collar. The bird, however, is apparently moulting." He adds a caution against confounding the Weeda Islands (a coral group east of the south end of Halmahera) with "Weeda" on the mainland of Halmahera.



The Violet-necked Lory.
EOS RECINIATA, 1. AD. 2. JUV.

Published by R. H. Porter.

10. EOS RICINIATA.

(THE VIOLET-NECKED LORY.)

[PLATE XIII.]

- Variegated Lory*, Lath. Synop. i. p. 220, n. 22 (1781).
 ? *Gueby Lory*, Lath. Synop. i. p. 219, n. 21 (1781).
Cochinchina Parrot, Lath. Synop. Suppl. i. p. 65, n. 143 (1787) [bad description].
Gueby Lory, var. A, Lath. Gen. Hist. ii. p. 134 (1822).
 ? *Le petit Lori de Gueby*, Sonnerat, Voy. à la Nouv. Guin. p. 174, pl. 109 (1776).
Peruche à chaperon bleu, Levaill. Perr. pl. 54 (1801).
Psittacus guenbiensis, Scop. Del. Flor. et Faun. Insubr. p. 87, n. 28 (1786) (ex Sonnerat).
Psittacus guebiensis (part.), Gmelin, S. N. i. p. 318, n. 60 (1788).
Psittacus guebuensis (part.), Vieill. Enc. Méth. p. 1830 (1823).
Psittacus variegatus, Gmelin, S. N. i. p. 319, n. 62 (ex Latham) (1788).
Psittacus cochinsinensis, Lath. Index Orn. i. p. 116, n. 103 (1790).
Psittacus riciniatus, Bechst. Kurze Uebers. p. 69, pl. 4 (1811).
Psittacus cochinchinensis, Bechst. Kurze Uebers. p. 94 (1811).
Psittacus cucullatus, Shaw, Gen. Zool. viii. p. 461 (1811).
Lorius cucullatus, Steph. in Shaw's Gen. Zool. xiv. p. 132 (1826).
Lorius isidorii, Swainson, Zool. Ill. series 2, vol. i. pl. 8 (1829).
Lorius riciniatus, Schleg. Mus. P.-B., Psittaei, p. 125 (1864).
Lorius ricinatus, Rosenb. Reist. naar Geelvinkb. p. 6 (1875).
Domicella riciniata (part.), Finsch, Papag. ii. p. 803 (1868); Rehnw. Vogelbild. t. xxxi. fig. 3 (1878-83).
Eos variegata, Wagl. Mon. Psitt. p. 560 (1832).
Eos cochinchinensis, Wagl. loc. cit. (1832).
Eos cochinsinensis, G. R. Gray, Gen. B. ii. p. 417, n. 4 (1845).
Eos isidorii, G. R. Gray, Gen. B. ii. p. 417, n. 6 (1845).
Eos indica (var.), G. R. Gray, List Psitt. Brit. Mus. p. 51 (1859).
Eos ricinata, Rosenb. Journ. f. Orn. 1862, p. 62.
Eos riciniata, Bonaparte, P. Z. S. 1850, p. 24; Salvadori, Orn. Pap. e Mol. i. p. 259 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 28.

Red, including upper surface of tail; a purple collar; hind neck and occiput also purple.

Habitat. The Halmahera group—Halmahera, Ternate, Motir, Tidore, Batchian, Morty, Moor, Dammar, Makian, and Obi Islands.

THE Violet-necked Lory is the oldest known species of this genus bearing a purple collar, having been first described in 1776 in Sonnerat's 'Voyage to New Guinea.' It is very like *E. wallacei*, the only marked difference being that the purple of the collar extends up the nape to the top of the head—at least to the occiput. This character, however, as we shall see, is not absolutely constant, so that it seems difficult to regard *E. wallacei*, *E. insularis*, and *E. riciniata* as more than three varieties, differing as to geographical distribution and somewhat in size.

The general colour is red, which extends over the whole back, uropygium, and upper tail-coverts, and over the breast, forehead, and sides of the head. The upper surface of the tail is of a dull red; the tail-feathers are bright red at the base of the inner web, yellowish red with golden reflections towards the tip. The collar round the neck is purple, and that colour is prolonged upwards on to the hinder part of the head. There is purple on the lower breast and anterior part of the abdomen. The under tail-coverts are purple. The wings are generally red above and below, but some of the largest scapulars are of a dull purple. The primaries are black, with the base of the inner web red, and the secondaries and greater wing-coverts are red with black tips. The bill is orange-red, and the feet are dusky black. The iris is yellow. Total length 10 inches, wing 5·6, tail 4, bill 0·78, tarsus 0·6.

The young are described as profusely marked with dark olive narrow bands, only the tips of the feathers being red; the scapulars dark olive; the occiput red; a purple band across the front of the neck; and the tail-coverts red, edged with olive.

Of the specimens in the British Museum there is a young bird (from Batehian) with no collar-like mark, except in front, and this is but obscurely indicated. In another (No. 91.2.12.5 from Ternate) the head, occiput, and nape are red; but in one from Wallace's collection (73.5.12.1478) all the head, save the forehead, and all the throat, except the mentum, are dark purple. These facts confirm our suspicion as to the incomplete distinctness of these species, as does Dr. Guillemard's remark that in one specimen of *E. insularis* the nuchal collar joined the violet head-patch. Our artist has represented a much transversely banded specimen.



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The Cherry-Red Lory
EOS RUBIGINOSA

Published by R. H. Porter.

11. EOS RUBIGINOSA.

(THE CHERRY-RED LORY.)

[PLATE XIV.]

- Chalcopsitta rubiginosa*, Bonaparte, Consp. Av. i. p. 3 (1850); id. Compt. Rend. xxx p. 134 (1850); id. P. Z. S. 1850, p. 26, pl. xvi.
- Trichoglossus rubiginosus*, Finsch, Journ. Mus. Godeffr. Heft xii. pp. 17, 18 (1876); id. Ibis, 1881, pp. 110, 111, 114; Rehnw. Vogelbild. t. xxx. fig. 6 (1878-83).
- Lorius rubiginosus*, Schleg. Mus. Pays-Bas, Psittaci, p. 129 (1864).
- Domicella rubiginosa*, Finsch, Papag. ii. p. 781 (1868).
- Eos rubiginosa*, G. R. Gray, List Psitt. Brit. Mus. p. 53 (1859); Salvadori, Orn. Pap. e Mol. i. p. 267 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 29 (1891).

Very dark red, with a purplish tinge; tail above olive, yellowish towards the tip; quills dark olive.

Habitat. Puynipet, Caroline Islands.

IF the last three Lories described have been somewhat doubtful as to specific distinctness, no form could well be more distinct than is the Cherry-red Lory; and the same may be affirmed of the succeeding species (*E. fuscata*), with which ends our description of the genus *Eos*. Both also are exceptional in their geographical distribution.

The type of *E. rubiginosa* is in the Museum of Leyden. Count Salvadori informs us that Bonaparte was quite in error in assigning Guebé as the habitat of this species, and also that Waigiou is a locality given in pure error, since the real habitat of the species is the island of Puynipet, where it was found during the voyage of the 'Novara,' and where it was extremely abundant, the members of the expedition collecting eight specimens in as many hours.

Dr. Finsch, in his ornithological letters from the Pacific (published in the 'Ibis' for 1881, pp. 110, 111), tells us that this bird is most plentiful and more easily observable in the island of Puynipet, where it was discovered by the 'Danaïde' expedition. He tells us that it was "the first that attracted my attention when landing on the island, and in less than half an hour I killed four specimens myself. This Parrakeet makes itself known by its continual noise, uttered both on the wing and when resting in the foliage of high trees. It is not at all a shy bird, approaching fearlessly the neighbourhood of houses and plundering the fruit-trees, notwithstanding all the means taken to destroy them. They keep mostly in pairs, or in small companies of from three to five; and often, when I had shot one of a flock, the remainder would come down to their dying comrade and share the same fate."

Prince Bonaparte's original description (Compt. Rend. 1850, p. 134) is as follows:—

“D’un rouge marron (teinte inusitée et peut-être unique parmi les Perroquets) à reflets cuivrés; plus sombre sur la tête, et ondulée sur les parties inférieures de lunules noirâtres, qui colorent le milieu et le bout de chaque plume; les grandes pennes des ailes et de la queue verdâtres; eelles-ci passent par degrés au jaune vers la pointe.”

Its colour is very dark red with a brownish, sometimes with a slight purplish, tinge. The feathers of the breast, abdomen, and back have purple-black edges, which give the appearance of interrupted successive transverse bands of black. The head is darker than the body. The wings are dark red, but the quills are dark olive above, dusky black beneath. The tail is olive-coloured above, brighter towards the point; it is greenish yellow beneath. The lower tail-coverts are reddish or terra-cotta. The bill is reddish yellow and the feet are blackish. The iris is red. Total length 9.50 inches, wing 5.40, tail 4, bill 0.80, tarsus 0.61.

It is interesting to note that the habitat of this strange and very exceptional species of *Eos* forms the northern limit to which that genus extends; and not only is this the case, but it is actually the most northern of the whole of the *Loriidae*. The Cherry-red Lory is also separated from all its congeners by a very wide stretch of ocean.



The Dusky Lory.
EOS FUSCATA.

Published by R. H. Forter.

12. EOS FUSCATA.

(THE DUSKY LORY.)

[PLATE XV.]

- Chalcopsitta fuscata*, G. R. Gray, Hand-list, ii. p. 153, n. 8194 (1870).
Chalcopsitta leucopygialis, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 224 (1863).
Chalcopsittacus fuscatus, Salvadori, Ann. Mus. Civ. Gen. viii. p. 397 (1876).
Lorius fuscatus, Schleg. Mus. Pays-Bas, Psittaci, p. 122 (1864).
Domicella fuscata, Finsch, Papag. ii. p. 807, t. 6 (1868); Meyer, Sitz. k. Akad. Wiss. Wien, lxx. p. 236 (1874); Rehnw. Vogelbild. t. xxxi. fig. 9 (1878-83).
Eos (*Chalcopsitta*) *torrida*, G. R. Gray, List Psitt. Brit. Mus. p. 102 (1859).
Eos leucopygialis, Rosenb. Journ. f. Orn. 1862, p. 64.
Eos incondita, Meyer, Zeitschr. f. ges. Orn. 1886, p. 6, Taf. i. fig. 2; Salvadori, Mem. R. Ac. Sc. Tor. (2) xl. p. 169 (1889).
Eos fuscata, Blyth, Journ. A. S. B. xxvii. p. 279 (1885); Sharpe, Gould's B. New Guin. vol. v. pl. 34 (1886); Salvadori, Ann. Mus. Civ. Gen. vii. p. 760 (1875), x. p. 34, n. 72, p. 122 (1877); id. Orn. Pap. e Mol. i. p. 263 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 30 (1891).

Dusky, mingled with red or yellow; uropygium whitish grey, with more or less of a yellow tinge.

Habitat. New Guinea, Jobie, Salwatty.

THIS Lory is at once readily distinguishable from all other species of the genus *Eos* by its conspicuous white uropygium. Its general coloration is also very different from that of the other eleven species. One other character is more noteworthy still, for it appears possible that it may be a dimorphic bird, there being some in which the breast is very red and others in which it is light yellow, and it is not yet established that this is due to age.

Although there is a certain amount of dusky colour about it, yet *E. fuscata* must be esteemed a rather brilliant species. The forehead, sides of the head, and occiput are dusky brownish black (there may be a shade of green in some lights), while the vertex is reddish orange, extending from eye to eye, and the same colour reappears (more or less) on the nape. There is a transverse band across the throat and another lower one across the breast, both of which may be red or bright yellow, according to the variety the individual may belong to, or, possibly, its age. The middle of the lower breast and abdomen are likewise either bright yellow or red, which latter colour is also that of the tibiae. The feathers of the hind neck, of the interscapular region, and of the throat (both above and below the upper transverse band of red or yellow) are edged with greyish or reddish—sometimes even with olive. The lower

back and uropygium are white. A very dark patch is interposed between the anterior end of the white mark and the bright-margined feathers of the interscapular region. The flanks are dusky black on either side, and these dark lateral patches meet medially to bound behind the more posterior of the two yellow (or red) transverse bands which cross the throat and breast, while they bound, anteriorly, the yellow (or red) surface of the lower part of the breast and the abdomen. The upper tail-coverts are dark bluish, but the under tail-coverts are bluish purple. The tail is purplish blue above, though the central feathers are reddish towards the base; beneath orange-red, at the base of the inner web greenish, and olive towards the tips. The wings are for the most part dark, and show barely enough red to justify the bird being called one of the "Red-winged Lories." The scapulars are very dark, nearly black. The primary wing-coverts and anterior great coverts are purplish. The primaries have a tinge of olive on their outer edges, while their inner web is red towards the base; they have indeed a large ruddy-yellow spot on the inner web. The under wing-coverts are more or less red, and the under surface of the wing is yellow or red, except its dusky end and the border formed by the dark tips of the quills. The secondaries and great coverts have a tinge of chestnut, the innermost ones being reddish. The bill is red. The skin at the base of the under mandible and on the chin is naked for a noteworthy extent; and as it is of the same colour as the bill, the latter appears, at first sight, longer than it really is—as Dr. Meyer has remarked. The feet are dusky, but the soles are greenish yellow. The iris is yellowish red. Total length 10.5 inches, wing 6.3, tail 3.5, bill 0.88, tarsus 0.69.

Dr. Salvadori considers that the yellow specimens are young ones. Profound as is my respect for his opinion, I cannot feel certain of this.

Of the 17 specimens in the National Collection, Nos. 91.2.12.6 and 891.20.147 are exceptionally red. No. 73.5.12.1484, from the Wallace collection (from Dorey), is also red, while the black on the flanks extends so far mesiad that it reduces the red of the breast and abdomen to a narrow antero-posterior band.

In Nos. 59.4.8.3 and 59.4.8.38 (both also brought by Dr. Wallace from Dorey) the chest and abdomen are exceptionally bright yellow. On the other hand, the specimens Nos. 89.1.20.177 (from the Tweeddale collection) and 59.4.8.40 (brought by Dr. Wallace from Dorey) are exceptionally dull-coloured and well merit the name of the "Dusky Lory," while No. 89.1.20.177 is devoid of the whitish bands of the interscapular region.

Dr. Wallace himself says (P. Z. S. 1864, p. 291):—"The two sexes of both red and yellow varieties were obtained from one flock, which visited Dorey* for a few days only during my residence there."

Dr. R. Bowdler Sharpe, F.L.S., in his magnificent continuation of Gould's 'Birds of New Guinea,' quotes the opinion of Dr. Meyer, as to the red and yellow varieties, to the following effect:—"The Jobi specimens appear to be somewhat larger in all their dimensions and to have more intense colours than those of New Guinea, but my series is not large enough to judge with certainty. Among the ten specimens which I procured are two red-banded ones, of which I could not determine the sex with certainty; of the rest, three were

* In New Guinea.

females and five were males. The latter were all red-banded; and of the females two had yellow bands and one red. This proves that the yellow coloration is not exclusively the dress of the full-grown female; but whether it be the plumage of the young bird, or whether this species does not preserve constancy in this respect (as the two finely-coloured yellow birds do not show any special signs of immaturity), remains to be seen. It is possible, however, that the yellow plumage may be that of the immature bird; but this can only be proved when the changes of colour are observed in captivity, or when it is demonstrated that in a large series no young birds ever occur with red in their plumage."

This very distinct species differs from all the others of the genus in having the island of New Guinea (with Jobic and Salwatty) as its habitat. It and *E. cardinalis* are the species of *Eos* which extend furthest south.

LORIUS.

THE TYPICAL LORIES.

Lorius, Vigors*, Zool. Journ. ii. p. 400 (1825).

Type of the genus: *L. domicella*.

Generic characters.—Size about that of a turtle-dove; tail-feathers twelve; point of maxilla long but not thin; tail of moderate length, the feathers broad and rounded at their ends; two middle tail-feathers longer than the lateral ones; bill orange-red; wings green. (Cf. Salvadori, Brit. Mus. Cat. l. c.)

Range. From the Moluccas to the Solomon Islands and Louisiade Archipelago. Six species inhabit New Guinea.

THE typical Lories, which might also (especially in contrast to the species of the genus *Eos*) be called “the Green-winged” Lories, constitute another group of birds about the size of a turtle-dove. They differ from the species of *Chalcopsittacus* in that the bill is more or less orange-red and never black, while their green wings mark them off, as before said, from the species which constitute the genus *Eos*.

These true Lories generally have the top of the head black or purple, though it may be (as in *L. tibialis*, *L. garrulus*, and *L. flavopalliatus*) red. The colour of the body is red, generally, but not always, with more or less purple; the tail is purple, red, or green above; there may be a yellow collar beneath the neck. The thighs are mostly purple or blue, but may be green.

Of the twelve reputed species which compose the genus, four belong to New Guinea exclusively; two to New Guinea and islands east and west of it; one to Mysore; two to Amboyna with another island (Ceram in one case—*L. domicella*; Batchian in the other—*L. flavopalliatus*); another species (*L. garrulus*) to Halmahera; one (*L. chlorocercus*) to the Solomon Islands; and one to some unknown habitat, probably one or more of the Molucca islands. This genus does not reach so far north as does *Eos*; but it extends further to the south, namely to the Louisiade Archipelago, as also to islands between New Guinea and the Solomon Islands.

These bright, gay birds all go in flocks to feed on the honey of flowers. As a rule, if captured young, they make excellent pets for those who do not mind somewhat noisy birds. There is a conflict of testimony as to their speaking powers, but, on the whole, it seems to us probable that but few individuals acquire facility and variety of articulation, though some seem unquestionably to possess it. They, at least when taken young, will show affection to their owners who are kind and caressing to them, and they are affectionate and caressing to each other. They are, however, as a rule, difficult to maintain long in captivity, and sometimes, even in their own geographical region, will die suddenly from some as yet unascertained cause.

* Brisson made use of the word (Orn. iv. pp. 215, 222, & 225), but not as designating a generic group of birds.



$\frac{3}{4}$

The Purple-Bellied Lory.
LORIUS HYPOENCHROUS.

Published by R.H. Porter

1. LORIUS HYPOENOCYROUS.

(THE PURPLE-BELLIED LORY.)

[PLATE XVI.]

? *Psittacus lory*, Lesson, Voy. Coq., Zool. i. p. 342 (1826).

Domicella hypoinochroa, Finsch, Papag. ii. p. 768 (1868).

Domicella hypoenochroa, Finsch, P. Z. S. 1869, p. 127; Rehnw. Vogelbild. t. xxxi. fig. 5 (1878-83).

Lorius tricolor (part.), G. R. Gray, P. Z. S. 1858, p. 194.

Lorius hypoinochrous, G. R. Gray, List Psitt. Brit. Mus. p. 49 (1859); id. Cruise Curaçoa, Birds, p. 380, pl. 14 (1873).

Lorius hypoenochroa, Cabanis u. Rehnw. Journ. f. Orn. 1876, p. 324, n. 73.

Lorius hypoenochrous, Wallace, P. Z. S. 1864, p. 289; Salvadori, Orn. Pap. e Mol. i. p. 221 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 32 (1891).

Pileum black; no yellow band across the crop-region; under wing-coverts red; abdomen purple.

Habitat. Louisiade Archipelago, New Guinea near East Cape, New Ireland, New Britain, and New Hanover.

THIS brilliant species was met with by Macgillivray during the voyage of H.M.S. 'Rattlesnake' in an island at the south-eastern end of the Louisiade Archipelago. It usually appeared in small flocks passing over the tops of the trees, uttering a loud, sharp scream at intervals. The birds were plentiful in the woods, but, owing to the difficulty of seeing them among the thick foliage, few were shot*.

The *Psittacus lory* of Lesson may have been a bird of this kind, and, if so, it was known and noticed as early as 1826. This identity, however, is uncertain, and a male skin (taken on the 30th of June, 1849) during the voyage of the 'Rattlesnake,' and which is preserved in the British Museum, must be taken as the type of the species, and this has been represented by our artist.

Its general colour is crimson, but the pileum is black, the wings are green, having in part a bronzy tinge, and the interscapular region has a transverse band of dark purple-red. The red of the nape and sides of the throat is darker than that of the cheeks and flanks, and is somewhat longitudinally streaked with paler red. The lower abdomen, the thighs, and under tail-coverts are dark blackish purple. The quills are black or blackish towards and at their apices, but the basal half of their inner web is rich yellow. The outer margins of

* See Voyage of H.M.S. 'Rattlesnake,' vol. i. p. 211.

the quills are greenish. The scapulars, secondaries, and upper wing-coverts are green. The under wing-coverts are crimson; but the ends of the under primary-coverts are black, making a black band between the yellow and the red, as shown in our Plate. The tail is also crimson above, at its basal half; its apical half is purple tinged with greenish, but the extremities of the feathers are bronzy green; beneath, the tail is of a golden olive-yellow tinge.

The bill is orange-red, the feet blackish, and the iris is scarlet.

Total length 11 inches, wing 6·8, tail 3·6, bill 1·05, tarsus 0·8.

Of the specimens in the National Collection all, except one of the two from East Cape, are devoid of the black ends of the under primary-coverts. As the two from East Cape are both of the same sex, this black band cannot be a sexual character.

Lorius hypoenochrous is the first species of the whole series hereinbefore described which inhabits either New Britain, or New Ireland, or New Hanover, or the Louisiade Archipelago, and is the most southerly species we have yet met with.



1 The Black-Capped Lory.
LORIUS LORY.
2 The Red-Breasted Lory.
LORIUS ERYTHROTHORAX.

Published by R. H. Porter.

2. LORIUS LORY.

(THE BLACK-CAPPED LORY.)

[PLATE XVII. FIG. 1.]

- First Black-capped Lory*, Edw. Birds, iv. p. 170, pl. clxx. (1751).
Black-capped Lory, Lath. Syn. i. p. 273 (1781).
 ? *Black-crowned Parrot*, Lath. Syn. i. p. 213 (1781).
The tricoloured Lory, Greene & Dutton, Parrots in Captivity, vol. iii. pl. xi. p. 49 (1887).
Lory des Philippines, D'Aub. Pl. Enl. 168.
Lory tricolor, Buff. Hist. Nat. Ois. vi. p. 132 (1779).
 ? *Grand Perruche à bandeau noir*, Buff. Hist. Nat. Ois. vi. p. 158 (1779).
Lory à scapulaire bleu, Levaill. Perr. p. 83, pls. 123, 124 (1805).
 ? *Psittacus orientalis exquisitus Loeri dictus*, Seba, Thes. i. p. 63, pl. xxxviii. (1734).
Psittacus lory, Linn. Syst. Nat. i. p. 145 (1766).
Psittacus atricapillus, Gm. Syst. Nat. i. p. 317 (1788).
Psittacus sebanus, Shaw, Gen. Zool. viii. p. 459 (1812).
Psittacus lorius, Weinl. Journ. f. Orn. 1854, B, p. lxxv.
 ? *Ara moluccensis varia*, Brisson, Orn. iv. p. 197 (1760).
Domicella tricolor, Rehnw. Vogelbild. t. xi. fig. 2 (1878-83).
Domicella lori, Finsch, Papag. ii. p. 769 (1868).
Domicella lory, Wagl. Mon. Psitt. in Abhand. d. könig. bayer. Akad. der Wissen. p. 568 (1832).
Lorius philippensis, Briss. Orn. iv. p. 225, pl. xxiii. fig. 2 (1760).
Lorius tricolor, Steph. in Shaw's Gen. Zool. xiv. p. 132 (1826); Selater, List Vert. An. 8th ed. p. 318 (1803).
Lorius cyanauchen, Rosenb. (nec Müll.), Nat. Tijdschr. Ned. Ind. xxv. pp. 143, 225 (1863).
Lorius lori, G. R. Gray, Hand-list, ii. p. 153 (1870).
Lorius lory, Wallace, Ann. & Mag. N. H. (3) iii. p. 148 (1859); Salvadori, Orn. Pap. e Mol. i. p. 223 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 33.

Pileum black; no yellow band across the crop-region; under wing-coverts red; abdomen blue; breast dark blue.

Habitat. North-western New Guinea and the adjacent islands, Salwatty, Batanta, Waigiou, and Mysol.

THIS richly-coloured red-and-purple bird—which seems to have given its name (Lory) to all the allied species—was described by Edwards in 1751, and, if we are right in supposing that

Seba's "*Psittacus orientalis exquisitus Loeri dictus*" was the Black-capped Lory, it has been known for more than one hundred and sixty years. Linnæus gave it a place and the name *Psittacus lory* in his 'Systema Naturæ' in 1766. Dr. Wallace was the first to give it (in 1859) its now accepted appellation of *Lorius lory*.

It is not only the beauty of its plumage that makes this Lory of Lories attractive, for it manifests an affectionate disposition, few birds appearing to take more genuine pleasure in being noticed and made much of by their owners.

As to its talking-powers there seems to be a conflict of opinion. Edwards testifies in favour of its possessing this faculty, saying that it pronounced in a soft clear voice the word "Lory! Lory!" Dr. Finsch attributes to it but small capacity for talking, while Dr. Meyer says that it speaks distinctly. Messrs. Greene and Dutton came to the opinion that a preponderance of evidence existed in support of the assertion that this Lory will talk.

The species has been exhibited in the Zoological Gardens of London.

The prevailing colours of *L. lory* are blue, red, and green. The crown of the head is black, while all its lateral and inferior parts (cheeks, ear-coverts, chin, and throat) are red, and a narrow red band extends from side to side between the posterior margin of the black cap and the upper margin of a blue patch on the back. Sometimes a second narrow transverse band of red crosses the interscapular region. More or less of the sides of the breast, the abdomen, lower back, uropygium, and upper tail-coverts are also red. The hind neck, the interscapular region, and the breast are blue, the blue of the breast being prolonged upwards, on each side, so as to join that of the hind neck. The abdomen, thighs, and under tail-coverts are also of a brighter blue. The wings are green, some of the upper wing-coverts and inner quills tinged with golden olive; the quills have the base of the inner web yellow; the under wing-coverts are red.

The upper surface of the tail is dark red at its base, greenish in the middle, dark blue on its distal half; beneath it is bright red at the base and golden olive towards the tip. The bill is orange-red, the feet are black, and the iris yellow.

Total length 12 inches, wing 6.4, tail 4.1, tarsus 8.

The young is said to be very different from the adult. In it the red occipital band is wanting, the interscapular region greenish, a blue collar extends round the neck, the upper breast is red, the greater under wing-coverts yellow with black tips, the small and median ones mingled with green, blue, and red, while the middle part of the tail is greenish above.

In the immature bird the blue of the breast does not join that of the hind neck.

The eleven specimens preserved in the National Collection present considerable differences as to the extent of the red on the sides of the breast. In the specimen from the Gould collection there is almost a distinct second band (across the mantle) coloured like the band of the nape.

3. LORIUS ERYTHROTHORAX.

(THE RED-BREASTED LORY.)

[PLATE XVII. FIG. 2.]

Domicella lory (part.), Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. p. 227 (Rubi) (1874).

Domicella erythrothorax, Rehnw. Journ. f. Orn. 1881, p. 173.

Lorius hypoenochrous, Ramsay, Proc. Linn. Soc. N. S. W. vol. iii. p. 254 (1878).

Lorius hypoenochrous, var., Ramsay, l. c. p. 72.

Lorius guglielmi, Ramsay, l. c. p. 73.

Lorius hypoenochrous, var. *guglielmi*, Ramsay, l. c. p. 106.

Lorius lory, Salvadori & D'Albertis, Ann. Mus. Civ. Genova, vii. p. 812 (1877).

Lorius erythrothorax, Salvadori, Ann. Mus. Civ. Gen. x. p. 32, n. 57 (1877); D'Albertis & Salvadori, Uccelli della Nuova Guinea, Ann. Mus. Civ. Gen. xiv. p. 39 (1879); Salvadori, Orn. Pap. e Mol. i. p. 230 (1880), & iii. p. 518 (1882); Finsch & Meyer, Zeitsch. f. ges. Orn. 1886, p. 5; Salvadori, Cat. of Birds in Brit. Mus. xx. p. 35.

Pileum black; no yellow band across the crop-region; under wing-coverts red; abdomen blue; breast red.

Habitat. New Guinea, from Port Moresby, through Fly River region to south of Geelvink Bay.

THIS species very closely resembles that last described, save that the breast is red instead of blue.

Dr. Meyer obtained specimens from the district of Rubie, that is from near the southern boundary of Geelvink Bay. Individuals were there very plentiful; he took twenty-three skins, and had he not given orders that more were not to be shot, he could soon have possessed himself of a hundred.

According to D'Albertis and Salvadori seven mature specimens (3 males and 4 females) were alike in colour, save that the interscapular region was more or less red in one or two specimens, while in another the blackish-blue patch of the hind neck was continued anteriorly on either side.

The head and occiput are black, and the cheeks and upper throat and chest red, as in *L. lory*, while a narrow red band also divides the posterior margin of the black cap from the upper margin of the dark patch on the hinder neck. A second narrow transverse red band traverses the mantle. The whole of the chest (as before said), part of the abdomen, the flanks, the lower back, the uropygium, and the upper tail-coverts are also red. The hind neck and interscapular region (save for the transverse red band) are dark purple. The lower breast and abdomen are also deep purple, and the thighs and under tail-coverts violet-blue.

The wings are green above, darker at the margins of the shoulders. The scapulars are tinged with olive, chiefly at their outer webs. The primaries and secondaries are deep green on their outer webs, and become more or less black towards their tips. The quills are bright yellow on their inner webs for a long extent, so that the under surface of the wing is yellow save for the black ends of the quills and the crimson under wing-coverts. The tail above is at the root more or less red, then greenish and dark violet for its apical half; the under surface of the tail is also more or less red at the root and then golden olive to its tip. The skin round the eye is dark purple. The bill is orange-red, somewhat deepest at the base. The legs and feet are black, and the iris yellowish.

The young differ in the blue of the abdomen mixed with red.

Total length 12 inches, wing 6·4, tail 4·1, tarsus 8.

Of the eight specimens in the National Collection we have observed some considerable differences as to the extent of the purple on the lower breast and the shade, it being often very deep and dark.

As in *L. hypoenochrous*, in some a black band exists on the under surface of the wing between the red and the yellow, formed by the black ends of the inferior primary-coverts. This black mark is present in three specimens, while in four it is entirely absent.

This species has a very extended range in New Guinea, from Port Moresby to the district of Rubie.



1. The Lory of Jobie.
LORIUS JOBIENSIS.

2. The Lory of Rubie.
LORIUS RUBIENSIS.

Published by R. H. Porter.

4. LORIUS JOBIENSIS.

(THE LORY OF JOBIE.)

[PLATE XVIII. FIG. 1.]

Domicella lori, var. *jobiensis*, Meyer, Sitzb. k. Ak. Wissensch. Wien, lxx. p. 231 (1874).

Domicella jobiensis, Meyer, Sitzb. Isis Dresden, 1875, p. 78.

Lorius cyanauchen (part.), Schleg. Mus. P.-B., Psittaci, p. 54 (1874).

Lorius tricolor, Rosenberg (nec Steph.), Reist. naar Geelvinkb. p. 56 (1875).

Lorius jobiensis, Salvad. Ann. Mus. Civ. Gen. vii. p. 759 (1875); id. Orn. Pap. e Mol. i. p. 232 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 35 (1891).

Pileum black with a shade of purple; no yellow band across the crop-region; under wing-coverts blue; a red band below the occiput; nape dark blue; red of the body of a rosy tint.

Habitat. The Island of Jobie and the small island west of it called Miosnom (Miosnoem, *Dutch*).

THIS species was originally described by Dr. Meyer as a variety of *Lorius lory*. It is not represented in the British Museum, and we have to express our sincere thanks to Dr. Meyer for his great kindness in sending us a specimen from the Museum at Dresden, that we might be able to compare it with other species of *Lorius* and have it drawn from nature. Mr. Keulemans has done his best to give an accurate representation of it, which is the first one (so far as we can ascertain) that has ever been published.

This species (which appears to have a very restricted range) appears to represent in the island of Jobie the Black-capped Lory (*L. lory*) of New Guinea and Salwatty.

The type of the species is preserved in the Turati collection (Museo Civico) of Milan.

The general colour is purple and red, the wings being green and the crown of the head nearly black.

The forehead and crown of the head are black, the occiput is purplish. The upper breast, sides of the head (lores, cheeks, and ear-coverts), throat, sides of neck, fore neck and chest, flanks, suboccipital and interscapular transverse bands, lower back, and upper tail-coverts of a rather rosy red. The hind neck is dark purple and the lower breast is also dark purple, and this colour is continued upwards on either side to the root of the wing.

The abdomen is bluish black, while the under tail-coverts are blue.

The scapulars are green; the greater, median, and upper wing-coverts are almost emerald-green. The bastard-wing is purplish and the primary-coverts emerald-green. The quills have their inner webs golden yellow; their apices are black. The under wing-coverts are blue in front, black further back. The axillaries are purplish black.

The tail-feathers are purple above, while underneath they are dead-leaf green shot with golden.

The bill is orange-red, and the feet dusky.

Total length 12·75 inches, wing 5·8, tail 4·5, culmen 1·25.

In all Count Salvadori's skins the abdomen is bluish black ; Dr. Meyer has found some to be blue, while one immature specimen has some green feathers.

5. LORIUS RUBIENSIS.

(THE LORY OF RUBIE.)

[PLATE XVIII. FIG. 2.]

Lorius erythrothorax rubiensis, Meyer, Abhandl. u. Ber. königl. zool. u. anthrop. Mus. Dresden (1892-1893), no. 3, p. 10.

Pileum black with a shade of purple; no yellow band across the crop-region; under wing-coverts red and black; a red band below the occiput.

Habitat. The region of Rubie.

THIS is the newest kind of Lory yet described, and no skin of it exists amongst those preserved in our National Collection. The types are in the Museum at Dresden, and we have again to thank Dr. Meyer for most kindly sending us one so that our artist has been enabled to represent it from nature and to give what I believe to be the first figure ever published, and that of a type of this form of Lory.

Dr. Meyer only reckons it as a subspecies, and says as New Guinea gets better known it is probable that more connecting subspecific forms will be found. But as it has a distinct name and requires representation by us, and as it has not only distinctions as to colour but is also of a smaller size than *L. jobiensis*, we prefer to describe it separately. We do this the more willingly because (as we have before observed with regard to, and shall have to remark respecting, other species) we much doubt the real specific distinctness of various forms of *Loriidæ* which have been regarded as belonging to separate species.

Its coloration is very similar to that of *L. jobiensis*, and the red ends of the feathers of the back form an interscapular transverse red collar (in addition to the suboccipital one), though this does not appear in our Plate on account of the position of the right wing of the figure.

It differs from *L. jobiensis* in having the purple patch on the interscapular region extending further backwards, and in having this region, the nape, and the scapulars of a more decided cobalt-blue. The sides of the body are all red with no black band. The under wing-coverts are red and black (instead of blue and black as in *L. jobiensis*), and the axillaries are red. The yellow of the quills is also less bright. The under tail-coverts are bluish, but with a shade of green.

Total length 11·75 inches, wing 6·25, tail 3·8, culmen 1·1.



Salvadori's Lory
LORIUS SALVADORI.

Published by R. H. Porter.

6. LORIUS SALVADORI.

(SALVADORI'S LORY.)

[PLATE XIX.]

Lorius salvadori, Meyer, Abh. u. Ber. königl. zool. u. anthrop. Mus. Dresden, 1890-91, no. 4, p. 6 (1891); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 617 (1891).

Pileum bluish black; no yellow band across the crop-region; under wing-coverts blue, a red band below the occiput; hinder neck and abdomen dark violet-black; red of the body of a rather scarlet tint.

Habitat. Astrolabe Bay, N.E. New Guinea.

THIS species was founded by Dr. Meyer and the types are preserved in the Museum at Dresden. No specimen exists in our National Collection, but Dr. Meyer has been so very kind as to lend us a type of the species for delineation. A very careful drawing has been made of it for our Plate, which is the only figure yet published of the species.

L. salvadori is very like *L. jobiensis*, and agrees with it in having blue under wing-coverts. It differs, however, from that species in that its hind neck and abdomen are much darker, while the general red of the body is of a different shade, less rosy and more scarlet, and therefore more like that of *L. erythrothorax*. The under tail-coverts are also of a brighter blue than those of *L. jobiensis*, while the abdomen is somewhat green, and the tint of the bend of the wing is somewhat more extended.

Dr. Meyer assigns specific distinctness to it partly on account of geographical considerations, coming as it does from Astrolabe Bay, where it may be considered as representing the *L. rubiensis* of Rubie and the *L. jobiensis* of the island in Geelvink Bay.

It is easily distinguished from *L. lory*, *L. erythrothorax*, and *L. rubiensis* by its blue under wing-coverts, from *L. cyanauchen* by having a red occipital band, and from *L. domicella* by having no yellow band across the crop-region.

As will be seen in our Plate the wings are green, the tail blue above and a golden shade of yellow beneath. The purple patch on the lower breast sends up a prolongation on either side to beneath the wing and (as Dr. Meyer tells us) joining the under wing-coverts. Hence, as in *L. jobiensis*, the red of the breast is separated off from that of the flanks.

There is not only a bright red suboccipital collar, but also one across the interscapular region, as in *L. jobiensis*.

The thighs are purple, but have some green intermixed therewith.

Total length 12.40 inches, wing 6.5, tail 4.5, culmen 1.2.



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4

The Lory of Mysore
LORIUS CYANAUCHEN.

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7. LORIUS CYANAUCHEN.

(THE LORY OF MYSORE.)

[PLATE XX.]

- Psittacus cyanauchen*, S. Müll. Verh. Land- en Volkenk. p. 107 (1839-1844).
Domicella lori mysorensis, Meyer, Sitzb. k. Akad. Wien, lxx. p. 233 (1874).
Domicella cyanauchen, Finsch, Papag. ii. p. 773 (1868).
Lorius superbus, Fraser, P. Z. S. 1845, p. 16; id. Zoologia Typica, pl. 55 (1849).
Lorius speciosus, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. pp. 144, 225, sp. 19 (1863).
Lorius cyanocinctus, Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 145 (1863).
Lorius cyanauchen, Souancé, Rev. et Mag. de Zool. 1856, p. 225; Salvadori, Orn. Pap. e Mol. i. p. 234 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 36 (1891).

Pileum black; no yellow band across the crop-region; under wing-coverts blue; no red band below the occiput.

Habitat. Mysore.

THIS species, which was discovered and named by S. Müller, is at once distinguishable from the five last described (*L. lory*, *L. erythrothorax*, *L. jobiensis*, *L. rubiensis*, and *L. salvadori*) by its not having a suboccipital transverse band of red, from *L. hypoenochrous* by having blue under wing-coverts, and from the remaining species by having the pileum black and no yellow band across the crop-region.

For a long time the precise habitat of *L. cyanauchen* remained undetermined and it was supposed to be a native of one or other of the islands of Geelvink Bay. The first indication of its true abode is due to Dr. Wallace, and this indication was confirmed by Dr. Meyer. So far as is yet known it has a very restricted range.

It may be said to represent in Mysore the *L. lory* of New Guinea and the *L. jobiensis* of the island of Jobie.

The type of the species, Dr. Finsch tells us, is preserved in the Leyden Museum.

It greatly resembles *L. jobiensis* save, as before said, for the absence of the collar separating the black pileum from the purple nape.

Its coloration is as follows:—Crown of the head, larger under wing-coverts, and apices of the primaries on their under surface black; cheeks, ear-coverts, throat, upper breast, a band across the scapular region, uropygium, and upper tail-coverts red; nape, belly, vent, thighs, and under tail-coverts blue. Wings and scapulars green externally; the apices of the quills bluish black. Primaries with the inner web near the base and for some distance golden yellow. The under surface of the open wing is very bright, the lesser wing-coverts

and axillaries blue, the longer coverts black, a patch of bright golden yellow intervening between them and the black margin of the wing. The blue of the nape advances forwards on either side and ends pointedly, but, as in the preceding species, only to a moderate extent, not nearly forming a collar. The red of the flanks joins that of the sides of the upper breast, a narrow patch of red intervening between the blue of the abdomen and that of the axillaries. The patch of purple on the back, behind the lower transverse red collar, may be more or less black or with a transverse black band. The tail above is blue, especially towards its apex, more anteriorly it has a brownish shade. Beneath the tail is of a shade of golden yellow. The bill is deep orange, the iris deep hazel, and the feet almost black.

Total length 11.0 inches, wing 6.6, tail 3.7, culmen 1.1, tarsus 0.8.

Some of the specimens in the British Museum have the under wing-coverts much darker than those of others; in the skin which is the type of Fraser's *L. superbis* they are almost entirely black.



The Purple-naped Lory.
LORIUS DOMICELLA.

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8. LORIUS DOMICELLA.

(THE PURPLE-NAPEL LORY.)

[PLATE XXI.]

- Second Black-capped Lory*, Edwards, Birds, iv. p. 171 (1751).
Purple-capped Lory, Greene & Dutton, Parrots in Captivity, vol. i. pl. ix. p. 45 (1884).
Rajah Lory, Latham, Gen. Hist. ii. p. 226 (1822).
 ? *Lory des Indes Orientales*, D'Aub. Pl. Enl. 84 (var.) (1783).
Lory mâle des Indes Orientales, D'Aub. Pl. Enl. 119 (1783).
Lory à collier, Buffon, Hist. Nat. Ois. vi. p. 130 (1779).
Perroquet Lori Radhia, Levaill. Perr. ii. pl. 94 (var.), p. 39 (1801).
Perroquet Lori à collier jaune, Levaill. Perr. ii. pl. 95, p. 40 (1801).
Perroquet Lori à collier (var.), Levaill. Perr. ii. pl. 95 bis.
Psittacus domicella, Linn. S. N. i. p. 145 (1766); Shaw, Gen. Zool. viii. p. 535, pl. 81 (1811); Hahn, Orn. Atlas, Papag. t. 42, p. 58 (1834).
Psittacus rex, Beechst. Kurze Uebers. p. 92 (1811).
Psittacus raja, Shaw, Gen. Zool. viii. p. 537, pl. 82 (1811).
Psittacus radhea, Vieill. N. D. xxv. p. 337 (1817).
Domicella domicella, Wallae, Ann. & Mag. N. H. (3) iii. p. 148 (1859).
Domicella atricapilla, Wagl. Monog. Psitt. p. 567 (1832), in Abhandl. d. könig. bayer. Akad. Wissen. Bd. i.; Finsch, Papag. ii. p. 763 (1868); Rehnw. Vogelbild. t. iii. fig. 7 (1878-83).
Lorius domicellus, Gulliver, P. Z. S. 1875, p. 489.
Lorius domicella, Vigors, Zool. Journ. ii. p. 400 (1825); Lear, Illustr. Parr. pl. 37 (1832); Selby, Nat. Library, Orn. vi. p. 146, pl. 18 (1836); Salvadori, Orn. Pap. e Mol. i. p. 236 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 37.

Pileum black; a yellow band across the crop-region; quills with the base of the inner web yellow.

Habitat. Ceram and Amboyna.

THE Purple-naped Lory has been known since 1751, and it received its specific designation from Linnæus in 1766. Latham (in 1822), speaking of the specimen described and figured by him, says: "This bird was the property of my good patron Sir Hans Sloane, at whose house I made an original drawing of it."

Though thus familiar to ornithologists and lovers of Parrots (for it has not been rare in captivity), its native home remained for a very long time unknown, and was ultimately ascertained through Wallace, Rosenberg, and Beccari.

The species is subject to singular differences as to colour. Count Salvadori informs us that one of its most noteworthy variations is that which has the wings, tibiæ, and middle of the pileum yellow. There are two specimens of this variety in the Leyden Museum, one of which has probably been figured by Levaillant. It is this variety which seems to have received the designation *Psittacus raja* from Shaw.

Of the many individuals which have been kept in confinement, different ones seem to have given rise to very different impressions as to the powers and dispositions of this species.

As to speaking, Buffon says: "Il n'y en a point qui apprenne plus facilement à parler et qui parle aussi distinctement."

Mr. Greene tells us that they show great attachment to their owners, love to be caressed, and will themselves caress in return. This Lory has the advantage of being hardy also and more easily fed than many others, its tongue being less filamentary in appearance; though Mr. Greene thinks that all Lories are partially insectivorous (and might eat a little meat), yet it does not care for insects as does the *Trichoglossus novæ hollandiæ*. It is also preferable because it never shrieks.

On the other hand, the Hon. and Rev. F. G. Dutton expresses his opinion that this Lory is somewhat overrated. He bought a pair in 1882 and found them untamable. Some individuals talk very well, but others will not speak at all. He adds that he had never seen a talking specimen. He found his pair to be very noisy, yet not unendurably so. He notes that they smelt as much as a Hawk would smell, and their cage required cleansing twice a day. Though not so delicate as some other species, he nevertheless found them to be very sensitive to cold. He could never get them to eat seed or rice.

When let loose in a garden he found their movements to be quick, resembling those of Barbets, and they never liked to be long separated. They had a strong homing faculty, for though they would fly away to a covert a mile and a half distant and out of sight of home, they always came back at five o'clock to the cornice of the house, where they would roost. If they were exceptionally hungry, however, they would spontaneously return to their cage. "It was a pretty sight," he tells us, "to see them fly home. They were like living jewels as their bright scarlet bodies flashed through the air." Sometimes one would return twenty minutes before the other, but they were always both back by five o'clock. Their owner having got tired of them, they were assigned to the Zoological Gardens in the Regent's Park.

Mr. Greene informs us that, to his personal knowledge, solitary females would lay their eggs on the floor of their cage, evincing a strong desire to incubate. They lay three or four eggs, which hatch in about six weeks, and the young never return to the nursery after they have left it.

Thienemann says that the eggs laid in captivity were nearly equal at both extremities.

This is the most entirely red species of the genus *Lorius* we have yet met with. The back, sides of the head, breast and abdomen, under and upper tail-coverts, and scapulars are all red, but the back and the scapulars are a little darker than the other parts. The pileum is black, but the nape is purple, the whole forming one continuous black patch. A yellow band, often not very conspicuous, passes transversely across the crop-region. The wings

are green. The wing-coverts and the quills next the back are olive-green; the quills have the base of the inner web yellow. The primaries are dark green towards their extremities above, black below. The bend of the wing and the under wing-coverts are more or less blue. The tail above is red, with a transverse band at the tip claret-red; it is golden red below. The thighs are blue.

The bill is orange-red, the iris dark brown with an inner ring of yellow, and the feet are black. Skin round the eyes and the cere purplish. In the young, we learn from Salvadori that the interscapular region is partly tinged with green, and the feathers of the tibiæ mostly dull green.

The specimens in the National Collection show considerable variation as regards the yellow band under the throat. In some it is more marked than in our Plate, but in one from Ceram hardly a trace of it is to be detected.



Gould's Lory.
LORIUS CHLOROCERCUS.

Published by R. H. Porter.

9. LORIUS CHLOROCERCUS.

(GOULD'S LORY.)

[PLATE XXII.]

Domicella chlorocerca, Finsch, Papag. ii. p. 767 (1868); Rehnw. Vogelbild. t. xxxi. fig. 8 (1878-83).

Lorius chloronotus, Bonaparte, Naumannia, 1856, Consp. Psitt. list opposite p. 352, n. 293.

Lorius chlorocercus, Gould, P. Z. S. 1856, p. 137; Sclater, P. Z. S. 1867, p. 183, pl. xvi.; Layard, Ibis, 1879, p. 365; Salvadori, Orn. Pap. e Mol. i. p. 239 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 38.

Pileum black; a yellow band across the crop-region; quills with the base of the inner web red; apical half of the upper surface of the tail green.

Habitat. Solomon Islands.

THIS species was discovered by Maegillivray in the island of San Cristoval (of the Solomon group) during the voyage of H.M.S. 'Herald.' It was first described and named by our old friend John Gould, F.R.S., in 1856, and the type is now in the British Museum and has been depicted by our artist.

Mr. E. L. Layard, in a letter from Noumea (January 20, 1879), says of a pair of birds of this species obtained by him, that they were "supposed to be male and female, and were quite young birds, although fully fledged." Mr. James Marler (mate of a vessel plying to the Solomon Islands) states they were procured by the natives of Savai from a hole in a tree, both from the same nest. The one supposed to be the male, and the more masterful, uttered a sound like "Joey," piped a long shrill whistle, with numerous flute-like notes and sounds as of a hearty kiss. The other did not say Joey, and was generally more silent.

"For a long time we apprehended they would starve rather than go to the ground for their food; so I hit on the device of hanging it to a wire swinging loose in the cage. To this they instantly resorted, holding it steady with one foot, and tearing it with their bills. . . . They hang and feed in any position, holding sometimes by one foot and twisting round in every direction. Often in their play or battles they will simultaneously grasp claws and struggle to upset each other.

"The male, though allowing himself to be handled by my son, showed from the first an unbounded antipathy to a servant-girl, attacking her with bill and claws, accompanied by piercing cries, whenever she approaches the cage."

L. chlorocercus is very like the species last described (*L. domicella*), but is easily

distinguished therefrom by its having the inner web of the primaries red instead of yellow, the apical half of the tail green, and a black patch on each side of the neck.

The general colour of the body is a rather scarlet-red, but the wings are green, the pileum black, and there is a conspicuous wide yellow band across the crop-region. The top of the head, forehead, and occiput are black. The upper throat, cheeks, ear-coverts, and nape are red. The lower throat is rich yellow in the form of a transverse band—as just mentioned—of that colour antero-posteriorly, broad in the middle, and tapering as it ascends on either side, while just in front of its upper end, at the side of the neck, is a dorso-ventrally elongated patch of black, which is separated from the black on the occiput by a band of red, which passes from the ear-coverts to the nape. The back, uropygium, upper tail-coverts, breast, abdomen, and under tail-coverts are scarlet-red. The wings, including the scapulars, are green, the wing-coverts being yellowish green. The primaries and secondaries are dark grass-green; their inner webs are dull black, save the basal portion of each, which is scarlet-red. The bend of the wing is light blue or bluish white. The under wing-coverts are blue, but the tips of the under coverts of the primaries are black, so forming a more or less marked black band between the blue and the red of the under surface of the wing. The tibiae are blue. The tail is scarlet-red at its basal half, the remainder grass-green. Below the tail is golden orange.

The bill is orange-red, the feet blackish brown. The iris is bright red or pale orange. The skin round the eye and the cere are purplish.

Total length 11 inches, wing 6·7, tail 3·9, bill 0·95, tarsus 0·72.

This species has the most eastern habitat of the whole genus, and is the only typical Lory found in the Solomon Islands.



The Blue-thighed Lory.
LORIUS TIBIALIS.

Published by R.H. Porter

10. LORIUS TIBIALIS.

(THE BLUE-THIGHED LORY.)

[PLATE XXIII.]

Domicella tibialis, Rehnw. Journ. f. Orn. 1881, p. 170; id. Vogelbild. t. xxxi. fig. 7 (1878-83).

Lorius tibialis, Selater, P. Z. S. 1871, pp. 499, 544, pl. xli.; Garrod, P. Z. S. 1872, p. 788 (head showing tongue); Salvadori, Orn. Pap. e Mol. i. p. 240 (1880); Sharpe, Gould's Birds of N. Guinea, vol. v. pl. 37 (1888); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 39.

Pileum red; a more or less distinct yellow band across the crop-region; under wing-coverts light blue; tibiae dark blue; quills with the base of the inner web yellow.

Habitat. Unknown, probably from one of the Molucca Islands.

THIS beautiful species was first described by Dr. Selater from a specimen then living in the Gardens of the Zoological Society, which had been purchased by the late Mr. Jamrach in Calcutta.

In our survey of the species of the genus *Lorius* this is the first which has neither a black nor a purple cap, but a head that is red above, like the body generally.

The general colour above is bright red, the scapulars being red like the back. The top and sides of the head, the upper throat, nape, back, uropygium, and upper tail-coverts are red, also the breast, abdomen, flanks, and under tail-coverts; but the under surface of the lower throat is mottled with yellow, forming the transverse band across the crop-region. The thighs are lilac-blue. The wing-coverts are grass-green, the lesser coverts have a little crimson and lilac, and the lilac colour extends along the bend of the wing. The inner, greater, and the median coverts have a subterminal mark of dark crimson. The bastard wing is grass-green, with bluish at the ends of the feathers. The primary-coverts are grass-green and somewhat blackish internally; more than the basal half is yellow, and the basal parts are tinged with red. The innermost secondaries are, like the greater coverts, tinged near the ends with dark crimson. The under wing-coverts and axillaries are lilac-blue (somewhat duller in tint than the thighs), but they are tinged with red on the edge of the wing. The apices of the under primary-coverts are black. The quills on their under surface are black with a large yellow basal patch.

The tail is bright red above, with a purplish-brown band across its distal portion; beneath it is of a golden-olive tint.

The bill is orange, the feet pale flesh-colour, the skin round the eye and cere dark purplish. Total length 11.5 inches, wing 6.6, tail 3.75, tarsus 0.7.



1. The Chattering Lory.
LORIUS GARRULUS
 2. The Yellow-backed Lory.
LORIUS FLAVO-PALLIATUS.

Published by R.H. Porter.

11. LORIUS GARRULUS.

(THE CHATTERING LORY.)

[PLATE XXIV. FIG. 1.]

- The Scarlet Lory*, Edw. Birds, iv. p. 172 (var.), pl. 172 (1751).
Ceram Lory, Lath. Syn. i. p. 269, no. 76 (1781).
Ceram Lory, variety A (*Noira Lory*), id. l. c. p. 270.
Ceram Lory, variety B (*Scarlet Lory*), id. l. c.
The Chattering Lory, Greene & Dutton, Parrots in Captivity, vol. iv. p. 1, pl. i. (1888).
Lory des Moluques, D'Aub. Pl. Enl. 216.
Lory-noira, Buffon, Hist. Nat. Ois. xi. p. 127 (1779).
Variété I. du Noira, Buff. ibid. p. 129.
Variété II. du Noira, Buff. l. c.
Lory Nouara, Levaill. Perr. ii. pl. 96 (1801).
Psittacus garrulus, Linn. Mus. Adolp. Frid. ii. p. 14 (1764).
Psittacus garrulus, var. β . *Psittacus aurora*, Linn. S. N. i. p. 144 (1766).
Psittacus Noira, Vieill. Enc. Méth. p. 1378 (1823).
Domicella garrula, Wagl. Monog. Psitt. p. 570 (1832); Finsch, Papag. ii. p. 77;
 Rehnw. Vogelbild. t. iii. fig. 5 (1878-83).
Lorius ceramensis, Brisson, Orn. iv. (var.) p. 215 (1760).
Lorius moluccensis, Brisson, ibid. p. 219, t. xxiii. fig. 1 (1760).
Lorius garrulus, Steph. in Shaw's Gen. Zool. xiv. p. 132 (1826); Swainson, Zool. Illust.
 vol. i. 2nd series, p. 12 (var.) (1829); Weinland in Journ. f. Orn. 1854, B. p. lxxi, tab. ii.
 figs. 1-9 (tongue); Salvadori, Orn. Pap. e Mol. i. p. 241 (1880); id. Cat. of Birds in
 Brit. Mus. xx. p. 39.

Pileum red; under wing-coverts yellow; interscapular region red, but often with a few yellow feathers;
 quills with the base of the inner web red.

Habitat. Halmahera.

THIS bird is very like *L. tibialis*, but differs from it in having the under wing-coverts yellow instead of blue, and in not having yellow markings across the crop-region.

The species has been known for nearly a century and a half, and is not uncommon in captivity. Edwards, its first describer, naively tells us that his bird "was the property of Lord Duncannon, who gave me liberty to make a draught of it at his house in Cavendish Square."

Why it has received the appellation of "Chattering Lory" is by no means clear, for it

does not seem to be exceptionally talkative or noisy, though the Rev. F. G. Dutton says it is noisier than *L. lory*. He also affirms that he never personally met with one that could talk, while, at least according to Mr. Greene, it is not more loquacious than the rest. The former gentleman never knew a really tame individual which would allow itself to be handled, adding that it is a fearless bird. He never saw it eat seed, but only moist food, which gave it a soiled and dirty appearance.

It is almost entirely of a bright red colour (save the wings and end of the tail), wherefore Edwards named it "The Scarlet Lory." The interseapular region has generally, however, a few yellow spots, but sometimes none at all. The whole head and neck, the breast, abdomen, and upper and under tail-coverts are bright red. The tibiae are dark green. The wings are green, with an olive tinge on the upper wing-coverts; the bend of the wing and the under wing-coverts are yellow. The bases of the inner webs of the primaries are red. The tail is red above at its basal half, its apical half being dark purple tinged with green; beneath it is golden red.

The bill is red, the feet are dusky, and the iris is more or less dark yellow; skin round the eyes and the cere purplish black.

Total length 12 inches, wing 7·2, tail 4·5, bill 1·05, tarsus 0·8.

Of the skins in the British Museum, one (73.5.12.1477) has a decided yellow patch on the middle of the mantle.

A specimen of this species is now living in the Zoological Society's Gardens.

12. LORIUS FLAVOPALLIATUS.

(THE YELLOW-BACKED LORY.)

[PLATE XXIV. FIG. 2.]

Domicella garrula (part.), Finsch, Papag. ii. p. 776 (1868).

Domicella flavopalliata, Rehnw. Journ. f. Orn. 1881, p. 170.

Lorius garrulus, Sclater, P. Z. S. 1860, p. 226 (nec p. 227); G. R. Gray, P. Z. S. 1860, p. 356 (partim, ex Batehian).

Lorius flavopalliatus, Salvadori, Ann. Mus. Civ. Genova, x. p. 33, n. 64 (1877); id. Orn. Pap. e Mol. p. 243 (1880); Sharpe, Gould's Birds of New Guinea, vol. v. pl. 5 (1888); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 41.

Pileum red; under wing-coverts yellow; interscapular region bright yellow; quills with the base of the inner web largely crimson.

Habitat. The Islands Obi, Batchian, Morotai, and Raou.

THIS very brilliant Lory seems, in the islands above named, to replace and represent *L. garrulus* of Halmahera.

The two species are certainly very closely allied, and I should follow Dr. Finsch and others in deeming it a mere variety of the Chattering Lory, but for deference to the authority of Count Salvadori, who was the first to treat it as a distinct species. He has, moreover, been followed in this by Dr. R. Bowdler Sharpe, F.L.S., who has given an admirable description and most complete representation of it in his 'Birds of New Guinea.'

The species is said to be a good talker, and large numbers are caught by the natives. It appears (from the account of an anonymous writer quoted by Count Salvadori) that they are caught by means of some adhesive substance. A sort of bird-lime is smeared by the natives on the branches of a tree with a sunny aspect: then one of these birds, in a cage, is placed in the vicinity, when wild individuals become attracted by its cries; they come and settle on the smeared branches, from which they cannot get away. Then the bird-catcher, after putting on gloves to save his hands from their beaks, brings a ladder, mounts, and fetches them down easily enough.

The species has been exhibited living in the Zoological Society's Gardens.

The general colour is bright red, deepest on the scapulars; but the mantle is bright yellow, often with a few more or less red feathers amongst the yellow ones. The whole head and neck, the breast, abdomen, and upper and lower tail-coverts are bright red. The thighs are green.

The wing-coverts are grass-green; the inner, median, and greater coverts more olive-

green, the latter with a tinge of golden. The bastard-wing and primary-coverts are blackish with some purplish blue. The bend of the wing is yellow. The quills are blackish, externally grass-green. The under wing-coverts and axillaries are yellow. The lower greater coverts are blackish. The quills are black beneath, except that the greater part of the inner webs are bright red.

The bill is orange-red and the feet are dusky; the iris is dark yellow; the skin round the eye and the cere are bluish black.

Total length 11 inches, wing 6, tail 4, culmen 1.05, tarsus 0.75.

Of the skins in the National Collection all have the yellow patch well marked.

The distribution of this species is singular, inhabiting as it does small islands at the extreme north and the extreme south of Halmahera, as well as Batehian on its south-west. Batehian is the farthest limit westwards to which the genus *Lorius* is known to extend.

CALLIPTILUS.

THE SHORT-TAILED LORIES.

Calliptilus, Sundevall, Meth. nat. Av. disp. Tent. p. 71 (1872).

Type of the genus: *C. solitarius*.

Generic characters.—Tail-feathers twelve; point of maxilla long but not thin; tail rather short and nearly square, its two middle feathers shorter than the lateral ones; feathers of the hind neck long and covering the upper back. (Cf. Salvadori, Brit. Mus. Cat. *l. c.*)

Range. Fiji Islands.

THERE is but one species known of this short-tailed genus. It is the only form of Lory, save one other (*Hypocharmosyna aureocincta*), which inhabits the Fiji Islands.



The Solitary Lory
CALLIPTILUS SOLITARIUS

Published by P.H. Porter

1. CALLIPTILUS SOLITARIUS.

(THE SOLITARY LORY.)

[PLATE XXV.]

- Solitary Parrot*, Lath. Syn. Suppl. i. p. 65 (1787).
La Perruche Phigy, Levaill. Perr. pl. 64 (1801).
Psittacus solitarius, Lath. Index Orn. Suppl. ii. p. xxiii (1801).
Psittacus vaillanti, Shaw, Nat. Misc. pl. 909 (1809).
Psittacus coccineus, Shaw, Gen. Zool. viii. 2, p. 472 (1811).
Psittacus phigy, Bechst. Kurze Ueb. p. 81, pl. 9. fig. 2 (1811).
Brotogeris ? phigy, Steph. in Shaw's Gen. Zool. xiv. 1, p. 133 (1826).
Brotogeris coccineus, Swainson, Class. Birds, ii. p. 303 (1837).
Phigys solitarius, G. R. Gray, Hand-list, ii. p. 154, n. 8198 (1870).
Nanodes solitarius, Schleg. Mus. P.-B., Psittaci, p. 116 (1864).
Trichoglossus coccineus, Peale, U.S. Exp. p. 129 (1848) (*fide* Hartl. Wieg. Archiv, 1852, p. 106).
Trichoglossus solitarius, Gieb. Thes. Orn. iii. p. 659 (1877).
Domicella solitaria, Finsch, Papag. ii. p. 760 (1868); Moseley, Notes by a Naturalist on the 'Challenger,' p. 295 (1879).
Lorius phigy, Less. Tr. d'Orn. p. 193 (1851).
Lorius solitarius, Schleg. Dierent. p. 68 (1864); Finsch & Hartl. Orn. Centr.-Polyn. p. 25 (1862); Layard, P. Z. S. 1875, p. 426; Rowley, Ornith. Miscell. ii. p. 38, pl. 41 (1877).
Coriphilus solitarius, Wagl. Monog. Psitt. p. 565 (1832); Rehnw. Vogelbild. t. xxx. fig. 8 (1878-83).
Vini coccineus, Lesson, Compl. de Buffon, ix. p. 207 (1837).
Calliptilus solitarius, Sundevall, Meth. nat. Av. disp. Tent. p. 71 (1872); Salvadori, Orn. Pap. e Mol. i. p. 326 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 42.

Grass-green; nape and sides of neck bright green; hind neck, back, and underparts deep scarlet; pileum, tibia, and abdomen violet-black.

Habitat. Fiji Islands.

THIS singularly short-tailed Lory, known since 1787, is one of those lovely Parrots which inhabit the Fiji Islands*. Scarcely anything is known as to its habits or mode of life. A few remarks, however, may be cited from Layard and Moseley. Layard tells us that this

* Which are also the abode of the five beautiful species constituting the genus *Pyrrhulopsis*, which, however, is not a genus of *Lories*, but belongs to the typical family *Psittacidae*.

lovely little bird (called "Kula" by the natives) is found throughout the Fijian Islands. Its favourite food consists of the flowers of the *Erythrina*, or those of the cocoa-nut when others fail. The collector, if he wants these little beauties, need only seek some tree in flower on which they feed, and sooner or later every flock in the district will visit it. Layard heard of sixteen being killed off one tree in a morning's shooting. They are trapped in great numbers by the natives for sale to the Tongans and Samoans, who periodically pluck them—their crimson feathers being much used for ornamentation. Europeans find much difficulty in keeping them alive, even for a short period. He was told that the native girls would chew sugar-cane and berries, and allow the birds to feed from their lips.

The late Professor Moseley, in his 'Notes by a Naturalist,' says:—"The most conspicuous trees, except the serew pines and cocoa-nut palms, at the time of our visit were those of *Erythrina indica* *, which was in full scarlet blossom. On the honey of the flowers of this tree a most beautiful Lory (*Domicella solitaria*) was feeding, and with it some little Honey-birds (*Myzomela jugularis*). The Lory is one of the most beautiful little Parrots existing, showing a splendid contrast of the richest colours, jet-black, red, and green. It is peculiar to the Fiji Islands. It flies in flocks, and hence its name might lead to an erroneous impression." It is thus very clear that the epithet "Solitary" has been somewhat unfortunately adopted as the name of this species.

Its coloration consists mainly of red and green, with some dark purple-blue and a spot or two of orange-yellow. The pileum is dark purple-blue; the nape, back, and wings are green, save for a transverse band of red across the mantle. The cheeks, lores, throat, and breast are red. The abdomen, flanks, and tibiae are very dark purple-blue, like the pileum. The upper feathers of the hind neck are very long and of a light green colour; just behind them, the lower feathers of the hind neck are also very long but red, forming the red transverse band before mentioned. The lower back, the uropygium, and the upper and under tail-coverts are light green. The scapulars, upper wing-coverts, and quills above are rather dark green. The under wing-coverts are green, except the inner ones, which are red. The quills are dusky beneath. The tail is green, save that the two central feathers have a yellow spot towards the middle of their outer or inner webs, and that the lateral ones have the base of the inner web orange-red; the tail beneath is golden green towards its apex. The bill is orange, the feet orange or red, and the iris orange. Total length 7.5 inches, wing 5, tail 2.5, bill 0.65, tarsus 0.55.

The young, Salvadori tells us, have the feathers of the hind neck much shorter. The occiput is tinged with green; the red feathers of the lower breast are edged more or less with dark purple; there are no yellow-orange spots on the middle tail-feathers, and the lateral ones have the red marks at the base of the inner web much smaller than in the adult birds.

Amongst the specimens in the Natural History Museum some are to be found with the yellow spot on the median tail-feathers on the inner web; but such a spot may occur on both webs or be altogether absent, as these specimens show. Those without the spots are probably, however, young birds.

* It flowers in August.

VINI.

THE NOTCHED-WINGED LORIES.

Vini, Less. *Illust. de Zool.* pl. xxviii. (1831).

Type of the genus: *V. kuhli*.

Generic characters.—Tail-feathers twelve; point of maxilla long but not thin; tail-feathers rather broad and more or less rounded at the tip, two middle feathers longer than the lateral ones; size smaller than that of a turtle-dove; feathers of the crown long and shaft-streaked; the first three or four primaries notched at the tip; general colour green. (*Cf.* Salvadori, *Brit. Mus. Cat. l. c.*)

Range. Samoa, Friendly, and Fanning Islands.

THE genus consists of but two species, both small and exceedingly attractive Lories. Their range is very peculiar, no species of any other genus having yet been found in those islands which form the home of the genus *Vini*.



1 The Fringilline Lory
VINI AUSTRALIS
2 Kuhl's Lory.
VINI KUHLI.

Published by R.H. Porter

1. VINI AUSTRALIS.

(THE FRINGILLINE LORY.)

[PLATE XXVI. FIG. 1.]

- Blue-crested Parrakeet*, Lath. Syn. i. pt. 1, p. 254, n. 58 (1781).
Sparrow Parrakeet, Lath. Syn. Suppl. ii. p. 93 (1802).
La Perruche fringillaire, Levaill. Perr. pl. 71 (1801).
Psittacus australis, Gmelin, S. N. i. p. 329, n. 90 (1788) (ex Latham).
Psittacus fringillaceus, Gmelin, S. N. i. p. 337, n. 107 (1788).
Psittacus porphyreocephalus, Shaw, Nat. Misc. pl. i. (1789).
Psittacus pipilans, Lath. Index Orn. i. p. 105, n. 69 (1790); Shaw, Gen. Zool. viii. 2, p. 472, pl. 69 (1811).
Psittacus euchloris, Forster, MS. (*teste* Wagl. Mon. Psitt. p. 565); Forster, Descr. An. p. 160 (1844).
Brotogeris fringillaceus, Steph. in Shaw's Zool. xiv. p. 133 (1826).
Brotogeris porphyreocephalus, Swains. Class. B. ii. p. 303 (1836).
Nanodes fringillacea, Schlegel, Mus. P.-B., Psittaci, p. 117 (1864).
Trichoglossus pipilans, Peale, U.S. Expl. Exped. p. 129 (1848).
Trichoglossus fringillaceus, Giebel, Thes. Orn. iii. p. 657 (1877).
Domicella fringillacea, Finsch, Papag. ii. p. 747 (1868).
Lorius fringillaceus, Lesson, Traité d'Orn. p. 194 (1831).
Coriphilus euchloris, Wagler, Monog. Psitt. pp. 495, 564 (1832).
Coriphilus pipilans, G. R. Gray, Gen. B. ii. p. 417, n. 3, pl. 103. fig. 5.
Coriphilus fringillaceus, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157, n. 312; Finsch & Hartl. Orn. Centr.-Polyn. p. 25 (1862); Whitmee, Ibis, 1875, p. 436; Layard, P. Z. S. 1876, p. 491; Rehnw. Vogelbild. t. xxi. fig. 7 (1878-83).
Coriphilus australis, Cassin, U.S. Expl. Exped., Orn. p. 241 (1858).
Coriphilus fringillaceus, Sundev. Meth. nat. Av. disp. Tent. p. 71 (1872).
Vini fringillacens, Lesson, Compl. de Buffon, 2nd edit., Ois. p. 606 (1848); G. R. Gray, Hand-list, ii. p. 154, n. 8196 (1870).
Vini australis, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 43 (1891).

Forehead green, vertex and occiput bright blue.

Habitat. Samoa and Friendly Islands.

THIS beautiful little bird was discovered at Tongatabu during Captain Cook's third voyage (1776-80) to the Friendly Islands. Peale, during an exploring expedition from the United States, obtained it from Samoa, in which island no other species of the family *Loriidæ* has yet been discovered, any more than in the Friendly Islands.

The Rev. S. J. Whitmee, in an account of Samoan birds, makes the following statements with respect to *Vini australis*, which he speaks of as *Coriphilus fringillaceus*. He tells us that it is "very abundant on all the islands during a part of the year. The natives believe this bird migrates; but all I have been able to learn on the subject is, that they are seen passing in flocks from the western to the eastern islands. A few may be found all the year round; but during several months of the cooler season the cocoanut-trees swarm with them. They appear to feed chiefly on the nectar of the cocoanut-flowers; but when the *Erythrina indica* (a tree very common near the coast) flowers, about July and August, they may be seen about it in great numbers. Native boys are very expert at snaring the Sega [native name] on the cocoanut-trees. I have never heard of the bird breeding in Samoa; and the natives positively affirm that it does not. I have often obtained examples of this Parrakeet in immature plumage; but they are always nearly full-grown, and as strong on the wing as old birds. The Samoans are very clever at rearing and keeping birds; and they purchase the Fijian Shining Parrakeet (*Pyrrhulopsis splendens*) at high prices, and keep them many years; but they never succeed in keeping the Sega alive more than a few weeks."

Layard, in his paper on "Birds of the Navigator Islands" above referred to, tells us that it is "abundant in the early morning before the sun gets hot, on the flowers of the cocoanut-trees, sipping the sweetened dew caught in the freshly opened spathes. When this is dried up by the heat, they are off to the forest, and feed on some of the many-petaled flowers of the tall trees. During the time that the 'coral trees' (*Erythrinæ*) are in flower, they may be shot in dozens, as these trees form their favourite resort. I have procured specimens of this lovely little Parrakeet from the island of Futuna, and they are very abundant on Vavaw, the most northern of the Friendly Islands."

The predominant tint of the plumage is green, but the most distinguishing feature is the beautiful bright blue colour and the elongated narrow shape of the feathers which decorate the top of the head; these cover the vertex and occiput. The forehead is green, and the upper parts of the body are all green. The upper part of the back, the shoulders, and the wings are of rather an olive-green tint, but the rest of the upper parts are of a beautiful grass-green, lightest on hind neck and upper tail-coverts. The under tail-coverts are of rather a yellowish green. The lores, cheeks, and throat are red, as is also a patch at the hindmost part of the breast; this patch is separated from the red throat by the colour of the breast, which is green with a bluish shade. The abdomen is purple-blue, as are also the thighs, save that there is some green on their hinder surface. The flanks are bright green. The primaries are dusky at their apices and on the inner web; the first primary is entirely dark-coloured. The quills are dusky beneath. The under wing-coverts and axillaries are bright green. The tail is green above, save that the tips and the inner web of the tail-feathers are yellow; it is greenish yellow beneath. The bill is orange-red; the feet appear reddish, but are said to be flesh-coloured in life; the iris is reddish or brownish yellow.

Total length 7 inches, wing 4·7, tail 2·7, bill 0·5, tarsus 0·49.

Salvadori says that in the young the blue feathers of the head are shorter, the red on the throat less extended, and that of the lower breast only incipient, while there is no purple patch on the middle of the abdomen.

2. VINI KUHLI.

(K U H L ' S L O R Y .)

[PLATE XXVI. FIG. 2.]

Psittacula kuhlii, Vigors, Zool. Journ. i. p. 412, pl. 16 (1824); Lear's Psittacidae, pl. 35 (1832).

Psittacula interfringillacea, Bourj. Perr. pl. 83 (1837-38).

Psittacus kuhli, Lesson, Voy. Coq. i. p. 629 (1828).

Brotogeris kuhlii, Swainson, Class. B. ii. p. 303 (1837).

Domicella kuhli, Finseh, Papag. ii. p. 749 (1868).

Lorius kuhli, Lesson, Tr. d'Orn. p. 193 (1831).

Coriphilus kuhlii, Wagl. Monog. Psitt. pp. 495, 566 (1832); Selby, Nat. Library, Orn. vi. p. 164, pl. 23 (1836); Selater, P. Z. S. 1876, p. 421; Streets, Amer. Nat. xi. p. 68 (1877); id. Bull. U.S. Nat. Mus. p. 13 (1877); Tristram, Ibis, 1883, p. 47; Rehnw. Vogelbild. t. xxi. fig. 5 (1878-83).

Vini coccinea, Less. Ill. d. Zool. pl. xxviii. (1831).

Vini kuhlii, G. R. Gray, Hand-list, ii. p. 153, n. 8195 (1870).

Vini kuhli, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 45 (1891).

Forehead and vertex green, oeciput dark blue.

Habitat. Washington and Fanning Islands.

MORE than forty years intervened between the discovery of the last-described species and that of this second and only other known species of the genus. Much uncertainty long existed as to the habitat of this species, and there was a prevailing inclination to regard the Solomon Islands as its most probable home. We have to thank Dr. Streets for clearing up the mystery and discovering their true abode, namely, the Washington and Fanning Islands. He considers it natural that the above-mentioned mistaken opinion should have arisen, as the islands which constitute its sole abode are still, he tells us, uninhabited, though natives from more southerly placed groups visit them periodically to make cocoanut-oil. "We found," he continues, "a party of them at Washington Island at the time of our visit, and in the possession of the men were a number of the Lories that had been caught and tamed. It is evident that when these men return to their homes, they carry the birds along with them, and in this way they have probably fallen into the hands of collectors, who have sent them to Europe as coming from the Society Islands. When the islander wishes to take the Lories alive, he provides himself with two pieces of bamboo, each about a yard long. On the end of one he perches a tame bird and from the extremity of the other suspends a short running

noose made of cocoanut-fibres. The decoy bird as it is carried about among the cocoanut-trees utters a harsh, rasping sound, and wild birds fly down from the trees and alight alongside it on the bamboo stick, when, by means of the other stick, they are skilfully noosed.

“When caged aboard ship, they exhibited as pretty a picture of love as one can imagine. They sat billing and smoothing each other's feathers for hours, and as night came on two would get together and sleep with heads turned towards each other. They lived in confinement but a very short time and bore it badly. At times, even while we stood watching their lively antics, one would tumble off its perch and die, apparently in convulsions.

“The islands on which these birds are found are very small, and it would not require a very great effort to totally exterminate them.”

As in the preceding species, the predominant tint of the body is green, especially above, and this tint is not only present on the forehead, but the whole vertex is of that colour, the pileum being covered with elongated, narrow feathers which are grass-green instead of blue, but the occiput, which was green in *V. australis*, here bears long, narrow, dark blue feathers. The mantle is olive-green, but the lower back, uropygium, and upper tail-coverts are yellowish green. Not only are the lores, cheeks, and throat red, but the same colour extends uninterruptedly all over the breast, reaching to the margin of the purple of the abdomen. The flanks and under tail-coverts are yellowish green. The thighs are dark purple. The wings are green above, save that the primaries have blue on the outer web. Underneath, the quills and the under primary-coverts are black. The smaller under wing-coverts are green, and the axillaries are red.

The tail above has the appearance of being striped and marked with green, red, and purple; the feathers are green at the tip, dark purple on the outer web and red on the inner one, but these markings are somewhat irregular. The tail beneath is of a dull crimson.

The bill and feet are reddish yellow, the iris more or less red.

Total length 7.2 inches, wing 4.8, tail 2.7, bill 0.5, tarsus 0.49.

In the National Collection there is but a single specimen.

The habitat of this Lory is almost the most northern one of any species of the whole family; the single exception being Puynipet, in the Caroline Islands, which we saw was inhabited by *Eos rubiginosa*. It is also very remarkable that the two species of *Vini* should inhabit islands so widely separated as are the Friendly and Fanning Islands.

CORIPHILUS.

BLUE LORIES.

Coriphilus, Wagl. Monog. Psitt. p. 494 (1832).

Type of the genus : *C. taitianus*.

Generic characters.—Tail-feathers twelve; point of maxilla long, but not thin; tail-feathers small, broad, and more or less rounded at the tips, the two middle feathers longer than the lateral ones; size smaller than that of a turtle-dove; feathers of the crown long and shaft-streaked; general colour blue; no red or green in the plumage.

Range. Society and Marquesas Islands.

To anyone who has carefully studied the five preceding genera, the species of which are so generally adorned with vivid reds and greens, the aspect of the Blue Lories, when he first comes upon them, is singularly refreshing. The habitat of this genus is interesting, as it constitutes the extreme eastern limit of the range of the Lories, no species of any other genus of the whole family having yet been found in either the Society or Marquesas Islands.



1. The Taiti Lory
CORIPHILUS TAITIANUS
2. The Ultramarine Lory
CORIPHILUS ULTRAMARINUS .

Published by R.H. Porter

1. CORIPHILUS TAITIANUS.

(THE TAHITI LORY.)

[PLATE XXVII. FIG. 1.]

- Otaheitan Blue Parrakeet*, Lath. Syn. i. p. 255 (1781).
Otaheite Parrakeet, var. A, Lath. Gen. Hist. ii. p. 189 (1822).
Varied Parrakeet, Lath. Syn. Suppl. ii. p. 93 (1802).
Petit Perruche de l'Isle de Taïti, D'Aubenton, Pl. Enl. 455. fig. 2.
L'Arimanon, Buff. Hist. Nat. Ois. vi. p. 175 (1779).
La Perruche Arimanon, Levaill. Perr. pl. 65 (1801).
La Perruche Sparman, Levaill. Perr. pl. 66 (var.) (1801).
Psittacus peruvianus, Müll. S. N. Suppl. p. 80 (1776).
Psittacus cyaneus, Sparrm. Mus. Carl. fasc. ii. pl. 27 (var.) (1782).
Psittacus taitianus, Gmelin, S. N. i. p. 329, n. 91 (1788).
Psittacus varius, Gmelin, S. N. i. p. 337, n. 105 (1788).
Psittacus porphyrio, Shaw, Nat. Misc. pl. 7 (1789).
Psittacus taitianus, var. β , Lath. Index Orn. ii. p. 105 (1790).
Psittacus sparmanni, Bechst. Kurze Ueb. p. 80 (1812).
Psittacus sapphirinus, Forster, Deser. An. p. 201 (1844).
Brotogeris sparmanni, Steph. in Shaw's Gen. Zool. xiv. 2, p. 133 (1826).
Brotogeris sapphirinus, Swainson, Class. B. ii. p. 303 (1837).
Nanodes taitianus, Schleg. Mus. P.-B., Psittaci, p. 117 (1864).
Trichoglossus ? taitianus, Steph. in Shaw's Gen. Zool. xiv. 2, p. 130 (1826).
Domicella taitiana, Finsch, Papag. ii. p. 742 (1868).
Lorius vini, Lesson, Tr. d'Orn. p. 194 (1831).
Coriphilus sapphirinus, Wagl. Monog. Psitt. p. 563 (1832).
Coriphilus cyaneus, Wagl. Monog. Psitt. p. 564 (1832).
Coriphilus notatus, G. R. Gray, Gen. B. ii. p. 417, n. 1 (1845).
Coriphilus taitianus, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157, n. 315; Rehnw. Vogelbild. t. xxi. fig. 1 (1878-83); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 46.

Dark blue; cheeks, lores, and whole of throat white; bill red.

Habitat. Society Islands.

THIS beautiful azure Lory, the only Lory found in the Society Islands, has been known ever since 1776, and its description (under the name "L'Arimanon") was published by Buffon in his great work in 1779.

Unfortunately we have not been able to obtain any information as to its habits. Its colour is dark blue, except the lores, cheeks, and upper and lower throat, all of which are white, forming a large uninterrupted white patch.

The feathers of the head are stiff and pointed.

The wings and tail are also blue above, but the quills and the tail-feathers are black beneath. The bill is red, as are also the feet ; the iris is red.

Total length 7·5-8 inches, wing 4·3-4·45, tail 2·7-2·9, bill 0·42, tarsus 0·4.

According to Dr. Finseh, in the very young condition this bird is entirely blue. Count Salvadori, however, has never seen such a specimen, though a figure of one has been given by Sparrman.

We did not observe any noteworthy differences between the four skins in the Museum of Natural History.

2. CORIPHILUS ULTRAMARINUS.

(THE ULTRAMARINE LORY.)

[PLATE XXVII. FIG. 2.]

- Pihidi aus Nukahiva*, Krusenst. Voy. pl. 17. fig. 2 (1814).
Psittacus ultramarinus, Kuhl, Consp. Psitt. p. 49 (1820); Wagl. Monog. Psitt. p. 564 (1832).
Psittacus sapphirinus (part.), Wagl. Monog. Psitt. p. 563 (juv.) (1832).
Psittaculus smaragdinus, Hombr. & Jacq. Ann. Sc. Nat. sér. 2, xvi. p. 318 (1841).
Psittacula lessoni, Lesson, Echo du Monde Sav. p. 944 (1843).
Psittacula smaragdinis, G. R. Gray, Gen. B. ii. p. 323, n. 20 (1846).
Nanodes smaragdinus, Schleg. Mus. P.-B., Psittaci, p. 117 (1864).
Trichoglossus smaragdinus, Giebel, Thes. Orn. iii. p. 659 (1877).
Domicella smaragdina, Finsch, Papag. ii. p. 745 (1868).
Vini dryas, Lesson, Descr. des Mamm. et des Ois. p. 191 (1847).
Coryphilus dryas, Gould, P. Z. S. 1842, p. 165.
Coryphilus goupilii, Hombr. & Jacq. Voy. Pôle Sud, pl. 24 bis, fig. 3 (1846).
Coriphilus smaragdinus, G. R. Gray, List Psitt. Brit. Mus. p. 57 (1859).
Coriphilus smaragdinis, G. R. Gray, Hand-list, ii. p. 151, n. 8168 (1870).
Coriphilus ultramarinus, Salvin, Cat. B. Strickl. Coll. p. 456 (1882); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 48 (1891).

Pale blue; cheeks and throat blue, dotted with white; bill nearly black.

Habitat. Marquesas Islands.

THIS is the only Lory inhabiting the Marquesas Islands and was not discovered till 1814; of its habits nothing, so far as we know, has been recorded.

The general colour of the upper parts is pale blue with a greenish tinge, the uropygium and upper tail-coverts being paler than the rest. A band of greenish colour crosses the forehead, changing into blue towards the vertex, the feathers of which and of the occiput are lengthened and of a deep blue colour, with a narrow line of shining paler blue down the centre of each. The feathers of the cheeks and throat are deep blue at the base, white at the tip. At the junction of the breast and lower throat there is a broad transverse band of deep blue. The abdomen is blue and white, each feather being of a deep blue with white at the base, and also largely tipped with white. The middle of the lower abdomen and the thighs are deep blue. The under tail-coverts are pale blue with a greenish tinge. The quills are mainly black, but the outer web of each is blue. The tail is whitish blue above, the inner

web of the feathers being white, edged with blue towards the tip. The bill is nearly black ; the feet are very dark yellowish ; the iris is dark.

Total length 7 inches, wing 4·6, tail 2·9, bill 0·45, tarsus 0·49.

In the young, according to Salvadori, the white spots are absent, the blue has a stronger shade of green, so that the whole bird is much more dull in colour than is the adult.

The differences existing between the half-dozen skins preserved in the National Collection are probably due to difference of age.

TRICHOGLOSSUS.

HEAD-STREAKED LORIES.

Trichoglossus, Vigors & Horsfield, Trans. Linn. Soc. xv. p. 287 (1826).

Type of the genus : *T. hematodes*.

Generic characters.--Tail-feathers twelve ; point of maxilla long but not thin ; tail moderate, its feathers gradually tapering to a point more or less acute ; predominant colour underneath, as well as above, green ; tail-feathers with no red or yellow at the tip ; the two middle tail-feathers not very long ; the first four or five primaries not distinctly attenuated towards the tips ; feathers of head with shaft-streaks more or less blue on the forehead ; breast generally tinged with red. (*Cf.* Salvadori, Cat. of Birds in Brit. Mus. p. 12.)

Range. Australia, Tasmania, Timor group, Celebes, Amboyna group, Papuan Islands, New Hebrides, and New Caledonia.

THE genus *Trichoglossus* contains, we think, the most brilliant in colour of all the Lories. Most of the species are remarkable for the beautiful blue of the head, above all the lovely *T. caeruleiceps* (Plate XXXIV.) of Southern New Guinea and *T. novæ-hollandiæ* (Plate XXXV.) of Australia.

Hitherto in our survey of the Lorine family we have not met with any kind which is a native of the continent of Australia ; but species of this genus range from North-western Australia and Cape York along Eastern Australia to Melbourne, and even (according to Ramsay *) to Tasmania. There are only two other species of the family which extend so far south †. The genus has also sent a representative (*T. ornatus*) to Celebes, another to the Solomon Islands (*T. massena*), and others to New Guinea, New Britain, New Ireland, the New Hebrides, New Caledonia, and the Loyalty Islands. It is thus very widely distributed ; and if we leave Australia and Tasmania out of account, the genus not only attains the extreme western-island limit of the family, namely Sumbawa, but also shares with only one other genus (*Hypocharmosyna*) its southern limit (apart from Australia), namely New Caledonia.

As to the habits of the species of this genus, Mr. Gould tells us that "The flowers of the various species of *Eucalypti* furnish them with an abundant supply of food, nectarine juice and pollen, upon which they principally subsist. However graphically it might be described, I scarcely believe it possible to convey an idea of the appearance of a

* See P. Z. S. 1864, p. 293, and 1875, p. 602.

† *Glossopsittacus concinnus* and *G. pusillus*.

forest of flowering gums tenanted by several species of *Trichoglossi*, *Meliphagi*, &c. ; three or four species being frequently seen on the same tree, and often simultaneously attacking the pendent blossoms of the same branch. The incessant din produced by their thousand voices, and the screaming notes they emit when a flock of either species simultaneously leave the trees for some other part of the forest, baffles all description, and must be seen and heard to be fully comprehended. So intent are the *Trichoglossi* for some time after sunrise upon extracting their honey-food, that they are not easily alarmed or made to quit the trees upon which they are feeding. The report of a gun discharged immediately beneath them has no other effect than to elicit an extra scream, or cause them to move to a neighbouring branch, where they recommence feeding with all the avidity possible, creeping among the leaves and clinging beneath the branches in every variety of position."



Edward's Lory .
TRICHOGLOSSUS HÆMATODES .

Published by R.H. Porter.

1. TRICHOGLOSSUS HÆMATODES.

(EDWARDS'S LORY.)

[PLATE XXVIII.]

- The Red-breasted Parakeet*, Edwards, Nat. Hist. v. pl. 232 (1758).
Red-breasted Parrot, Lath. Gen. Hist. ii. p. 122 (excl. syn.) (1822).
La Perruch à face bleue, Levaill. Perr. pl. 47 (1801).
Psittacus hæmatodus, Linn. Mant. Plant. p. 524 (part.) (1771).
Psittacus hæmatotus (part.), Gmelin, S. N. i. p. 316, n. 50 (1788).
Psittacus hæmatodes, Shaw, Gen. Zool. viii. 2, p. 415 (1811).
Psittacus capistratus, Beechst., Lath. Ueb. p. 68, pl. 3 (1811).
Psittacus (Trichoglossus) capistratus, Müll. & Sehleg. Verh. Land- en Volkenk. p. 107 (1839-1844).
Trichoglossus capistratus, Vigors & Horsfield, Trans. Linn. Soc. xv. p. 290 (1826).
Trichoglossus cyanogrammus, Selater, P. Z. S. 1860, p. 226.
Trichoglossus hamatopus, Cab. & Rehnw. Journ. f. Orn. 1876, p. 324.
Trichoglossus hæmatodus, Wagl. Monog. Psitt. p. 550 (1832).
Trichoglossus hæmatodes, Hartl. Syst. Verz. Ges. Mus. p. 85 (1844); Finseh, Papag. ii. p. 827 (1868); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 49 (1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; middle of abdomen dark green; breast mostly yellow; occiput bright green.

Habitat. Timor.

THIS handsome bird has been exhibited in the Gardens of the Zoological Society.

The back, wings, and tail are green, as are also the occiput, ear-coverts, and throat. The forehead, cheeks, and chin are blue. There is a greenish-yellow band on the nape. The breast is orange-yellow, more or less tinged and transversely banded with green, the feathers being green at their margins. The middle of the abdomen is dark green. The lower abdomen, thighs, and under tail-coverts are greenish yellow, spotted with green. The flanks are yellow, tinged with red. The interseapular feathers have concealed yellow or reddish-yellow spots. The under wing-coverts are yellow, tinged with red; the quills are dusky beneath with a yellow band. The tail beneath is of a dirty yellow colour; the inner web of the lateral tail-feathers is yellow. The bill is orange-red and the feet dark grey; the iris is yellow or red.

Total length 11 inches, wing 4.90, tail 4.40, bill 0.80, tarsus 0.55.

There are five specimens in the British Museum, and they vary somewhat as to the extent and brightness of the yellow on the breast.



$\frac{3}{4}$

Forsten's Lory.
TRICHOGLOSSUS FORSTENI.

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2. TRICHOGLOSSUS FORSTENI.

(FORSTEN'S LORY.)

[PLATE XXIX.]

Psittacus forsteni, Temminek, in Mus. Lugd.*Psittacus (Trichoglossus) forsteni*, Rosenb. Journ. f. Orn. 1862, p. 66.*Trichoglossus immarginatus*, Blyth, Journ. A. S. B. xxvii. p. 279 (1858).*Trichoglossus forsteni*, Bonaparte, Consp. Av. i. p. 3 (1850); Finsch, Papag. ii. p. 826 (1868); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 51 (1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; middle of the abdomen dark purple; breast red, with no tinge of yellow towards the edges; head not entirely blue; no dark cross-bands on the breast.

Habitat. Sumbawa.

THIS species has not, we believe, been previously represented by any coloured plate. There is no skin in the National Collection, and it is once more only through the kindness of the Hon. Walter Rothschild, who has lent us a very fine skin, that we have been enabled to have it depicted by our artist.

The type of the species is, Finsch tells us, in the Leyden Museum.

The back, wings, and tail are green, the feathers of the upperside of the neck are dark grass-green, but with a greenish-yellow band more or less marked on the nape. The feathers of the upper back have broad violet terminal margins, nearer the base they are more or less red. The head has the forehead and lores more or less blue, with blue shaft-streaks. The chin is more violet, and the vertex greenish. The throat is purplish violet. The breast is bright red, without very dark transverse bands. The abdomen is dark purple; the flanks, vent, and under tail-coverts are yellow, save that the feathers have broad green margins. The quills are mainly black—the first entirely so, the rest yellow at the base of the inner webs, which together form a yellow oblique band on the underside of the wing, which is black beyond the yellow band, while the under wing-coverts are bright red. The tail-feathers are of a more or less dirty yellow beneath. Bill reddish, feet grey.

Total length 10 inches, wing 5·3, tail 4·2, tarsus 0·61.



1. The Green-naped Lory.
TRICHOGLOSSUS CYANOGRAMMUS .
2. The Dark-throated Lory.
TRICHOGLOSSUS NIGROGULARIS .

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3. TRICHOGLOSSUS CYANOGRAMMUS.

(THE GREEN-NAPED LORY.)

[PLATE XXX. FIG. 1.]

- Red-breasted Parrot*, Lath. Syn. i. p. 212 (1781).
Perruche d'Amboina, D'Aubenton, Pl. Enl. 61.
La Perruche à face bleue, Buffon, Hist. Nat. Ois. vi. p. 150 (1779).
La Perruche à tête bleue, Levaill. Perr. pl. 25 (1801).
Psittaca Amboinensis varia, Brisson, Orn. iv. p. 364 (1760).
Psittacus hæmatodus, Bodd. Tabl. Pl. Enl. p. 4 (1783).
Psittacus capistratus (var.), Müll. Verh. Land- en Volkenk. pp. 107, 108 (1839-44).
Australasia novæ-hollandiæ, Lesson, Tr. d'Orn. p. 210 (1831).
Trichoglossus hæmatodus, Jardine & Selby, Ill. Orn. iii. pl. 111 (1825-39).
Trichoglossus hæmatodus, Schleg. Mus. P.-B., Psittaci, p. 109 (1864).
Trichoglossus capistratus (var.), G. R. Gray, P. Z. S. 1858, p. 194.
Trichoglossus nigrogularis (var.), G. R. Gray, P. Z. S. 1859, p. 159.
Trichoglossus cyanogrammus, Wagl. Monog. Psitt. p. 554 (1832); Finsch, Papag. ii. p. 830 (partim) (1868); Salvadori, Ann. Mus. Civ. Gen. vii. p. 760 (1875), viii. p. 371 (1876), x. pp. 35 & 112 (1877); id. Orn. Pap. e Mol. i. p. 279 (1880); Rehnw. Vogelbild. t. viii. fig. 1 (1878-83); Salvadori, Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 172 (1889); id. Cat. of Birds in Brit. Mus. xx. p. 51 (1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; middle of the abdomen green; breast-feathers red, not tinged with yellow towards the edges; head not entirely blue; dark cross-bands on the breast broad and conspicuous.

Habitat. Ceram, Amboyna, Bouru, Goram, Salwatty, Batanta, Waigiou, Miosnom, Jobie, and Northern and Western New Guinea.

THIS species has a wide range, but it has not yet, so far as we can ascertain, been found in Guebé.

In various parts of its wide habitat it is very common. It frequents (we learn from Salvadori) the smaller branches of coppices and the tops of low trees, and nourishes itself on *Casuarina* seeds, fruit, and nectar. It is a quarrelsome and noisy bird.

As in the two preceding species, the back, wings, and tail are green, and, as in *T. forsteni*, the forehead is blue and the vertex greenish; the cheeks are blue and the occiput, ear-coverts, and throat blackish purple; there is a very distinctly marked yellowish-green band on the nape, but the feathers which form the collar have a red band in their middle part, as have

also the feathers of the interscapular region. The breast is red, but strongly marked by transverse, rather broad bands of blackish purple, the margins of the feathers possessing that hue; at the side of the breast they become margined with green. The middle of the abdomen is green; the lower abdomen and flanks are yellow, crossed by numerous broad transverse bands of green, because the feathers are broadly coloured green at their margins. The under tail-coverts are yellow, but these yellow feathers have green tips. The flanks and the under wing-coverts are red. The quills are dusky underneath, save for a broad band of yellow. The under wing-coverts are bright red. The tail is olive-green beneath, save that the inner webs of the feathers are yellow. The bill is orange-red and the iris is red; the feet are grey.

Total length from 12-10.6 inches, wing 5.7-5.2, tail 5.3-4.7, bill 0.95-0.85, tarsus 0.68-0.66.

According to Salvadori, some individuals have red feathers with yellow tips on the pileum, some have the green of the abdomen almost black, while others have the bases of the feathers of the collar variegated with red. He also says that the young have the occiput greenish and the interscapular feathers with concealed red spots, while the breast is of a paler red, with feathers margined with green, within which is a narrow yellowish line.

This species has been exhibited living by the Zoological Society of London.

In the skins in the National Collection there are variations as to the development of the green collar. No. 58.4.27.15 is a yellow variety.

4. TRICHOGLOSSUS NIGROGULARIS.

(THE DARK-THROATED LORY.)

[PLATE XXX. FIG. 2.]

Trichoglossus cyanogrammus (part.), Wallace, P. Z. S. 1864, p. 291; Finsch, Papag. ii. p. 830 (partim) (1868).

Trichoglossus hæmatotus (part.), Schleg. Ned. Tijdschr. Dierk. iii. p. 336 (partim).

Trichoglossus nigrogularis, G. R. Gray, P. Z. S. 1858, pp. 103, 195; Salvadori, Ann. Mus. Civ. Gen. x. p. 35, n. 80 (1877); id. P. Z. S. 1878, p. 93; D'Albertis & Salvadori, Ann. Mus. Civ. Genova, xiv. p. 40 (1879); Salvadori, Orn. Pap. e Mol. i. p. 292 (1880); id. 'Challenger' Birds, p. 75, pl. xx. (1881); id. Mem. R. Acad. Sc. Tor. series 2, xl. p. 172 (1889); id. Cat. of Birds in Brit. Mus. xx. p. 55.

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; middle of abdomen blackish green; head-feathers red, tinged with yellow towards the edges; forehead and cheeks blue.

Habitat. Aru Islands, Southern New Guinea (along the middle part of the Fly River), and Ké Islands.

OUR Plate represents a type of this species which is preserved in the British Museum, and came from the Wallace collection.

T. nigrogularis appears to represent in the Ké Islands *T. cyanogrammus*, which, in spite of its wide distribution, has not been found there up to the present time, so far as we can ascertain.

The Dark-throated Lory is, as our Plate shows, exceedingly like *T. cyanogrammus*, but the occiput is slightly less purple. The red of the breast is also less deep, and the dark transverse bands which traverse it are much narrower. The breast-feathers have a yellow or orange tinge near their dark edges. The middle of the abdomen is also darker—a blackish green. The under wing-coverts are red.

The total length is 11 inches, wing 6, tail 5.5, bill 0.9, tarsus 0.65.

Salvadori (in his 'Birds of the Challenger') says:—"Eyes red, bill red, legs slate-colour. Stomach contained small seeds. Shot at Wokan."

He also, in his 'Papuan Ornithology' (Orn. Pap. e Mol.), says that specimens from the Ké Islands do not differ sensibly from those of the Aru Islands and of New Guinea, except in being a little larger; that from Ké had the beautiful blue stripes of the head becoming greenish towards their ends.

The specimens in the British Museum are very much alike, and we find very little difference between the colour of the occiput in them and in various specimens of *T. cyanogrammus*.



1. Massena's Lory.
TRICHOGLOSSUS MASSENA.
2. Gray's Lory.
TRICHOGLOSSUS COCCINEIFRONS.

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5. TRICHOGLOSSUS MASSENA.

(MASSENA'S LORY.)

[PLATE XXXI. FIG. 1.]

Trichoglossus deplanchei, Verreaux et Des Murs, Rev. et Mag. de Zool. 1860, p. 388.

Trichoglossus hæmatotus (part.), Schlegel, Mus. P.-B., Psittaci, Revue, p. 43 (1874).

Trichoglossus massena, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157; Finsch, Papag. ii. p. 834 (1868); Wallace, P. Z. S. 1864, pp. 292, 295; G. R. Gray, Brenchley's Cruise of the 'Curaçoa,' p. 382, pl. xv. (1873); Tristram, Ibis, 1876, p. 263; Sharpe, Journ. Linn. Soc., Zool. xiii. pp. 80, 309 (1877), p. 491 (1878), xiv. p. 586 (1879); Layard, Ibis, 1878, p. 274; Salvadori, Orn. Pap. e Mol. i. p. 288 (1880); Rehnw. Vogelbild. t. viii. fig. 2 (1878-83); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 53 (1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; head partly blue; breast red, crossed by narrow dark bands, its feathers with no tinge of yellow towards the edges; upper parts grass-green; abdomen green.

Habitat. New Guinea, New Britain, New Ireland, and Duke of York Island, Solomon Islands, New Hebrides, New Caledonia, and Loyalty Islands.

OF this fine Lory, which has a somewhat widely-extended range, a specimen was obtained during the cruise of H.M.S. 'Curaçoa,' at San Cristoval. From collections made in the New Hebrides, Canon Tristram, F.R.S., reports that a pair formed part of a collection from Aneiteum, where the bird is known to the natives as "Kula." Of those collected by Messrs. E. L. and E. L. C. Layard we read (Ibis, 1878, p. 274):—"These Parrakeets are common on Vate, but difficult to procure on account of their wildness. They frequent the pawpau trees, devouring the fruit. On the little island of 'Nguna,' adjoining Vate, I found them on the cocoanut-trees. The *Erythrina* was not in flower at this season. They usually fly in small flocks, probably the members of one family. They feed very silently; and the first notice one usually has of their presence is the piercing scream they emit when they dart off from a tree to convey themselves to a safer locality." Nothing is recorded as having been observed in the stomach of the specimens obtained in the cruise of the 'Curaçoa' except honey.

Dr. Meyer tells us that they are regularly to be found when trees are shedding their leaves and fresh leaf-buds are appearing, but they are very shy and timid.

The typical specimen of Verreaux's *T. deplanchei* is in the Leyden Museum.

The forehead and lores are blue, the vertex and ear-coverts greenish. The occiput is brownish. There is a very decided greenish-yellow collar on the nape. The upper parts

(back, wings, and tail) are rather dark green. The feathers of the interscapular region have hidden tints of red. The throat is purplish black, with some blue streaks. The breast is red and streaked with dark transverse bands, which are narrower than those of *T. cyanogrammus*—a species it greatly resembles. The flanks are red, with wide green margins to the feathers; the middle of the abdomen is green, the thighs and under tail-coverts yellowish green. The quills have the internal web, towards the base, broadly yellow. The under wing-coverts are red. The tail-feathers beneath are of a dirty yellow; their inner web is yellow, and they become more or less reddish orange towards the apex. The feet are grey, and the irides reddish yellow.

Total length 10 inches, wing 5·5, tail 4·1, bill 0·85, tarsus 0·61.

Count Salvadori was unable to note local differences of colour, and we found no striking variations amidst the numerous skins preserved in the British Museum.

6. TRICHOGLOSSUS COCCINEIFRONS

(GRAY'S LORY.)

[PLATE XXXI. FIG. 2.]

Trichoglossus coccineifrons, G. R. Gray, P. Z. S. 1858, p. 183; Finsch, Papag. ii. p. 845 (1868); Salvadori, Orn. Pap. e Mol. i. p. 296 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 56 (note) (1891).

Inner webs of the quills red towards the base; a collar on the hind neck red, not greenish yellow; abdomen blue; head purple, with some red feathers on pileum.

Habitat. Aru Islands.

THIS species reposes upon a single skin which was obtained by Dr. Wallace in the Aru Islands, and constitutes the type of the species. It is preserved in the British Museum and is numbered 73.5.12.1504. Our figure of this type is, we believe, the first representation of the species, or variety, which has yet appeared.

Count Salvadori, when examining and cataloguing this skin, thought it most likely that it was a hybrid between *T. nigrogularis* and *Chalcopsittacus scintillatus*.

Not being able, however, to make up our minds to accept this way of regarding it, we rank it provisionally as distinct, and rejoice to be able, by means of our figure, to facilitate future investigations as to its nature. On comparing the specimen with *T. nigrogularis* we find the colour of the breast to be of a much deeper red and traversed by bands which are broad and purple, instead of being narrow and black, as in the last-mentioned species. The thighs are red, mottled with green. There is also a dark reddish collar, instead of a well-defined light yellowish-green one.

Finsch remarks that the specimen has rather the appearance of a variety than a species; but he expresses a suspicion that it is immature, and that with age the whole head might become red.

Salvadori elsewhere (Orn. Pap. e Mol. p. 297) observes that he should regard it as a variety of *T. nigrogularis*, save for the red on the quills, adding that he saw in Gould's collection, *Trichoglossi* from Australia which resembled it in many respects, and seemed to bear to *T. novæ-hollandiæ* the same relationship that he was disposed to regard *T. coccineifrons* as bearing to *T. nigrogularis*.

The general colour above is green, including the primary, greater, and median wing-coverts; the lesser wing-coverts are green and yellow. The quills have the inner web yellow for about the median third, their apices are olive-green. The secondaries bear yellow

on the outer as well as the inner web. The tail-feathers are green above, lighter (yellowish green) below.

The head is blue on the vertex, cheeks, ear-coverts, lores, round the eye, and on the chin. The forehead is distinctly red, and the occiput and nape are blue mottled with red. On the hind neck is a transverse red collar. The throat is purplish; the sides of the neck red, with purplish markings. The chest and breast are red, with transverse purplish, rather broad bands. The thighs are red and green, the under tail-coverts yellowish green. The axillaries and under wing-coverts are red. The bill is reddish yellow.

Total length 11.4 inches, wing 6, tail 4.4, bill 0.8.



The Olive-green Lory.
TRICHOGLOSSUS FLAVICANS.

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7. TRICHOGLOSSUS FLAVICANS.

(THE OLIVE-GREEN LORY.)

[PLATE XXXII.]

Trichoglossus massenaë, Hartl. (nec Bp.) P. Z. S. 1867, p. 828.

Trichoglossus cyanogrammus, Selat. (nec Wagl.) P. Z. S. 1877, p. 554, sp. 9.

Trichoglossus flavicans, Cabanis & Rehnw. Sitzb. Gesellsch. naturf. Freunde zu Berlin, p. 73 (1876); Stüder, Forschungsreise Gazelle, p. 237, t. x. fig. 1 (1889); Salvadori, Orn. Pap. e Mol. i. p. 290 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 55 (1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; breast red, crossed by narrow dark bands, its feathers with no tinge of yellow towards the edges; upper parts olive-green; abdomen green.

Habitat. New Hanover, Admiralty and Eehiquier Islands.

THE type of *T. flavicans* is preserved in the Museum of Berlin.

Count Salvadori was at first inclined to think this species might be a form of *T. massena*, but by 1880 he came to regard it as distinct. He notes, however, that individuals vary as to a yellowish tinge in the olive-green which bespreads its upper parts.

The upper parts are of a bright golden green, but with an olive tinge. The forehead and lores bluish, the vertex, occiput, and cheeks dark brownish purple. The throat is slightly more purple. The nape has a yellow-olive collar. The feathers of the back have concealed red spots and reddish-brown margins. The breast is bright red, crossed by narrow dark blue transverse bands, the feathers having dark margins. The flanks, lower abdomen, and under tail-coverts yellow, but the feathers of the flanks and abdomen have broad olive-green margins, which coalescing make the middle of the abdomen green, generally with a purple tinge also. The under wing-coverts are red. The quills have the inner web with a broad yellow colour towards the base, the most dorsally situated ones with some red. The tail is yellowish olive above, more yellow beneath, the internal web being largely yellow, the feathers being also more or less red towards the tip. The feet are grey, the iris reddish yellow.

Total length 10 inches, wing 6, tail 4.1, bill 0.95, tarsus 0.65.

There are seven specimens in the National Collection, and we find that the purple tinge on the abdomen is not a completely constant character.



Mitchell's Lory.
TRICHOGLOSSUS MITCHELLI.

Published by R. H. Porter.

8. TRICHOGLOSSUS MITCHELLI.

(MITCHELL'S LORY.)

[PLATE XXXIII.]

Trichoglossus mitchelli, G. R. Gray, List Psitt. Brit. Mus. p. 62 (1859); Finsch, Papag. ii. p. 838 (1868); Selater, P. Z. S. 1871, p. 499, pl. xli.; Salvadori, Ibis, 1871, p. 372; id. Cat. of Birds in Brit. Mus. xx. p. 57 (1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; head red, its feathers slightly tinged with yellow towards their edges; hardly any blue on forehead and cheeks; abdomen green.

Habitat. Unknown.

THE skin which is the type of this species is now in the British Museum, and has been represented in our Plate. A specimen was living in the Zoological Gardens of London in 1871, and another in the Gardens at Amsterdam in 1880.

There are two skins in the British Museum, but both are females, and the male is unknown. The sexes, however, do not differ in this genus, as has been before remarked.

The back, wings, and tail are grass-green, with a yellow-green band across the nape. The head is brown with a shade of purple, the vertex and cheeks having a tinge of green. The interseapular feathers have concealed red spots. The breast is red, with orange towards the tip of the feathers, which are more or less faintly edged with green. The abdomen is green, tinged with dark purplish brown. The under tail-coverts are green and yellow, the feathers being yellow at the base. The thighs are yellow. The quills are dusky black beyond the broad yellow band and the red under wing-coverts. The tail is yellowish green underneath, and its feathers are edged with yellow. The bill is reddish, the feet dark grey, and the iris red.

Total length 9 inches, wing 5·2, tail 3·5, bill 0·7, tarsus 0·51.



$\frac{3}{4}$

The Blue-headed Lory.
TRICHOGLOSSUS CÆRULEICEPS.

Published by R.H. Porter

9. TRICHOGLOSSUS CÆRULEICEPS.

(THE BLUE-HEADED LORY.)

[PLATE XXXIV.]

Trichoglossus cæruleiceps, D'Albertis & Salvadori, Ann. Mus. Civ. Gen. xiv. p. 41 (1879);
id. Orn. Pap. e Mol. i. p. 295 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 57
(1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; breast red, its feathers yellow-tipped; middle of the abdomen green; head entirely blue.

Habitat. Southern New Guinea, near the Kataw River.

THE type of this singularly beautiful species is preserved in the Museo Civico of Genoa. By the great kindness of Dr. R. Gestro, it has been lent to us and has served for our Plate XXXIV., which is the first figure of *T. cæruleiceps* that has been published, and represents the type of the species.

Count Salvadori, in 1880, thought it possible that this form might be a variety of *T. nigrogularis*, because amongst specimens of that species collected by Beccari in the Ké Islands one individual had the head almost entirely blue.

The species was discovered by Signor D'Albertis in the vicinity of the Kataw River, in Southern New Guinea. Though various individuals were observed, only a single specimen was taken; that was preserved at Genoa and is the one here represented.

The original describers were at first somewhat doubtful about founding a species upon a single specimen, but they finally determined so to do, because the species which most resembles it, *T. nigrogularis*, comes from a different habitat. All the individuals noticed were seen to agree in having the head entirely blue, as is that of the otherwise very different species, *T. novæ-hollandiæ*.

Nevertheless, it is of course possible that connecting-links may one day be discovered, since, as above mentioned, Beccari got from one of the Ké Islands a specimen of *T. nigrogularis* in which the head was almost entirely blue. It was taken in the month of August.

The upper parts are green. The head is entirely blue and ornamented with many brighter-coloured shaft-streaks. The throat is blackish. There is a nuchal band of broad yellowish green. The feathers of the interseapular region bear a hidden tint of bright red. The upper breast is yellowish red, with yellow and blackish apices to the feathers, which thus give rise to narrow transverse blackish bands. The abdomen is very dark green. The flanks are red, marked by broad green bands formed by the green margins of the feathers. The thighs and under tail-coverts are yellowish green, the apex of each feather bearing a broad

green spot. The quills are above of a darker green than the back, they have the outermost web broadly yellow towards the base. The under wing-coverts are red. The tail is green above, bright yellowish olive below; the lateral rectrices have the inner web yellow. The feet are blackish and the iris red.

Total length 10 inches, wing 5.4, tail 4, bill 0.85, tarsus 0.61.



$\frac{3}{4}$

Swainson's Lory.
TRICHOGLOSSUS NOVÆ-HOLLANDIÆ.

Published by R. H. Porter.

10. TRICHOGLOSSUS NOVÆ-HOLLANDIÆ.

(SWAINSON'S LORY.)

[PLATE XXXV.]

- White-collared Parrot*, Pennant, Gen. of B. p. 59, pl. ii. (1773).
Blue-bellied Parrot, Brown, Illustr. p. 14, pl. 7 (1776).
Orange-breasted Parrot, Lath. Syn. i. p. 212, 14 A (1781).
Blue Mountain-Lory, Greene & Dutton, Parrots in Captivity, vol. i. p. 39 (1884).
Perruche des Moluques, D'Aubenton, Pl. Enl. 743; Buffon, Hist. Nat. Ois. vi. p. 150 (1779).
Perruche à tête bleue, Levaill. Perr. pl. 24 (1801).
 ? *Perruche à tête bleue, dans son jeune âge*, Levaill. Perr. pl. 26 (1801) (variety ?).
Psittacus moluccanus, Gmelin, Syst. Nat. i. p. 316 (1788).
Psittacus novæ-hollandiæ, id. loc. cit.
Psittacus multicolor, id. op. cit. p. 328.
Psittacus hæmatodus, Latham, Index Orn. i. p. 87 (1790).
Psittacus semicollaris, Latham, op. cit. p. 103.
Psittacus cynogaster, Shaw, Gen. Zool. viii. 2, p. 413, pl. 59 (1811).
Psittacus hæmatopus, Bechst., Lath. Ueb. p. 67 (1811).
Australasia novæ-hollandiæ, Lesson, Traité d'Orn. p. 209 (1831).
Trichoglossus hæmatopus, Stephen in Shaw's Gen. Zool. xiv. p. 129 (1826).
Trichoglossus hæmatodus, Vigors & Horsfield, Trans. Linn. Soc. xv. p. 289 (1826).
Trichoglossus multicolor, Wagler, Monog. Psitt. p. 553 (1832).
Trichoglossus swainsoni, Jardine & Selby, Ill. Orn. iii. pl. 112 (1825-39); Swainson, Zool. Ill. 2nd series, iii. pl. 92 (1832-33); Selby, Nat. Library, Orn. vi. p. 153, pl. 20 (1836); Gould, Birds of Australia, v. pl. 48 (1842); Moseley, Nat. Chall. p. 352 (1879); Diggles, Synopsis of Birds of Australia, ii. plate & p. 85 (1877).
Trichoglossus novæ-hollandiæ, Blyth, Cat. B. Mus. A. S. B. p. 11 (1842); Finsch, Papag. ii. p. 820 (1868); Rehnw. Vogelbild. t. viii. fig. 4 (1878-83); Sharpe, Report 'Alert,' p. 25 (1884); North, Descr. Cat. Nests & Eggs, p. 266 (1889); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 57 (1891).

Quills underneath with a yellow band towards the base; a greenish-yellow band on the nape; middle of the abdomen blue; head entirely blue.

Habitat. Eastern Australia (from Cape York to Victoria) and Tasmania.

THIS gayest, or almost gayest, of all the *Trichoglossi* has been known ever since 1773, through Pennant's brief description.

Several specimens of this Lory are now living in the Zoological Society's Gardens. The bird has been successfully bred in Germany. Mr. Greene recommends that mignonette, groundsel-tops, dandelion-blooms, cabbage-, hawthorn-, apple-, and pear-blossoms, wallflower, and, above all, clover should be given to it; also dried figs (soaked in hot water till they can be mashed into a pulp), honey, dates, ripe fruit, ants' eggs, and a little meat. It also eats seeds. He adds: "Though cruel to their captive companions, they are amiable enough to their master or mistress. In the country they readily learn to fly out and return at the word of command, and a little liberty when the lime-trees are in blossom or the gorse, will enable them to lay in a stock of health and vigour that will stand them in good stead many days."

The Rev. F. G. Dutton says that in health "they are charming birds for an aviary. Their incessant activity and amusing ways, together with their extreme beauty, make them birds that it is always a pleasure to watch. They are also very fond of bathing. But they are not very suited to a room. Their cries, which are very ear-piercing, are pretty nearly as incessant as their movements. I never heard one speak." It is most probable, however, that some individuals could be led so to do.

Vigors and Horsfield give, on the authority of Mr. Caley, the following particulars:—"This bird is called *War'rin* by the natives, who take their young and sell them to the settlers It is a bird remarkable for its docility and attachment to some people, although a perfect scold to others, who may have teased or offended it It does not eat any kind of grain, even in a domesticated state. It is much subject to fits, which generally prove fatal; and it is rare to find an individual kept alive above a couple of years. One that I kept, on being shown a figure of a coloured plant, used to put its tongue to the flowers, as if with the intent of sucking them, and I have seen it make the same attempt with a piece of cotton furniture. The flesh of this bird is very good eating."

We read about this bird in Diggles's 'Synopsis' that "Its disposition is mild and affectionate, and it may be taught to utter articulate sounds. A fine example was kept near Brisbane, where it is especially abundant, for seven years, and was so tame and familiar that it was allowed the full range of the house, its cage door being always open. When flocks of its own species were feeding on the trees close by it would join their company, and, after associating with them for a short time, return. It exhibited great partiality for a eat, on whose back it used to climb and remain seated for hours together. This bird was fed entirely upon bread and sugar. I have been credibly informed of another instance of a specimen being kept for the long space of thirteen years It breeds in holes of trees, the mangrove not unfrequently being selected for the purpose. The eggs are five in number, white, very round, and nearly an inch in length."

Moseley, in his account of Cape York, observes that this species flies about there screaming and in small flocks, "and gathers so much honey from the flowers, that the honey fairly pours out of the bird's beak when it falls shot to the ground."

As to the nest and eggs, we learn from Mr. North, F.L.S., that "This species lays its eggs, two in number, on the decayed wood in a hole of a dead branch of a *Eucalyptus*. Two average specimens received from Mr. Geo. Barnard, of Dawson River, Queensland, are dull

white, one specimen (A) being a true oval, the other (B) inclined to be somewhat pyriform in shape The usual breeding-season of this species is during October and the three following months, but Mr. J. A. Boyd found a nest on the Herbert River, Queensland, containing young ones in the month of May 1888."

Levaillant, in describing a bird as "*Perruche à tête bleu, dans son jeune âge,*" which is probably the present species, gives the following interesting particulars:—"Ces oiseaux, d'un naturel très-doux, et fort caressans, venoient se reposer sur la main de tous ceux qui la leur présentoient. Ils se caressoient aussi beaucoup réciproquement, et leur manière étoit de frotter leurs becs l'un contre l'autre ce qui fit espérer qu'elle deviendroit prolifique. Elle pondit, en effet, un œuf sur le plancher de la volière; mais il y fut cassé. On mit alors nos deux oiseaux seuls dans un endroit plus retiré; car il y avoit dans cette volière, entre plusieurs autres oiseaux, des Perroquets dont les mœurs sauvages et les cris discordans contrastoient avec ceux de ces deux jolies Perruches. Aux approches de sa seconde ponte, la femelle s'arracha une partie des plumes du ventre, les entassa dans un coin de la grande case où on les avoit logés, et pondit enfin sur ce lit deux œufs presque ronds et entièrement blancs. Elle couva très-assidument, sans que le mâle prît aucune part à cette fonction; il étoit seulement attentif à apporter à sa femelle des alimens, qu'il lui dégorgeoit dans le bec. Les petits naquirent au bout de dix-neuf jours d'incubation, et se couvrirent, au bout de quelques autres, d'un duvet cotonneux gris cendré, qui fut remplacé peu à peu par des plumes vertes sur le corps, et bleues sur la tête, telles, en un mot, que je les ai dépeintes pour le premier âge. Ils sortirent du nid au bout de trois semaines, et se juchèrent sur les bâtons, où le père et la mère, indistinctement, leur apportoient de la nourriture, qu'ils leur dégorgeoient dans le bec, comme font les pigeons à l'égard de leurs petits; ils étoient même déjà âgés de six mois qu'ils se laissoient encore donner la becquée. Cela me rendit encore témoin d'une scène fort attendrissante entre le mâle et la femelle. Celle-ci se trouvant entre ses petits et son mâle, juchée sur le même bâton, le mâle, ne pouvant s'avancer jusqu'aux petits, dégorgeoit la nourriture à la femelle, qui la passoit ensuite aux petits; ces derniers étoient absolument semblables, quoique de différent sexe. Cette ressemblance dura même jusqu'à la première mue, à laquelle leur poitrine se revêtit de plumes rouges, bordées de vert; et ce ne fut qu'alors qu'on remarqua entr'eux quelques différences, car la tache bleue commençoit à poindre sur le ventre du mâle, et quelques plumes rouges se monstroient au bas de ses jambes. Obligé de faire une course dans l'intérieur du pays, je ne pus suivre plus longtemps les progrès de ces deux jeunes oiseaux, et à mon retour, au bout de quinze mois d'absence, la volière se trouva entièrement vide, tout ce qu'elle avoit renfermé ayant été expédié en Europe, sans doute pour la ménagerie du Prince d'Orange."

The upper parts (back, back of neck, uropygium, wings, and tail) are green. The breast is yellow, more or less marked with red, especially in the middle. The middle of the abdomen is blue. The flanks are green, but the bases of the feathers are yellow and red. The under tail-coverts are yellow, widely margined with green. The head is entirely blue, and so is the front of the throat. On the nape is a more or less marked yellowish-green collar, bounded in front by the blue of the occiput, ear-coverts, and throat, and behind by the green of the back of the neck. The quills are black save for a patch of yellow on the inner web, these

patches producing a yellow band beneath the expanded wing, bordered in front and behind with black. The tail is yellow and green beneath, the inner web of the tail-feathers being yellow. The bill is yellowish red, the feet dusky, and the iris (according to Gould) "reddish brown, with a narrow ring of brown next the pupil."

In the young the breast is almost devoid of red, and the yellowish-green band on the neck is hardly distinguishable.

Total length 12 inches, wing 6·7, tail 5·5, bill 0·7, tarsus 0·5.

The numerous specimens in the British Museum vary mainly as to the extent of red on the breast and the size and distinctness of the collar.



1. Verreaux's Lory.
TRICHOGLUSSUS VERRAUXIUS.
1. Paris Museum type. 2. British Museum type.

Published by R.H. Porter.

11. TRICHOGLOSSUS VERREAUXIUS.

(VERREAUX'S LORY.)

[PLATE XXXVI.]

Trichoglossus verreauxius, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157, n. 352;
Salvadori, Cat. of Birds in Brit. Mus. xx. p. 59 (note) (1891).

Trichoglossus verreauxi, Bonaparte, Naumannia, 1856; Finsch, Papag. ii. p. 846 (1868).

Quills underneath with a yellow band towards the base; middle of the abdomen red, with transverse light green bands; occiput blue; forehead and eyebrows red; under wing-coverts red, with more or less green; a rather faintly marked collar on the neck.

Habitat. Australia?

THE species named after Verreaux is founded upon a single specimen, described by Bonaparte, which is preserved in the Museum of the Jardin des Plantes at Paris. This precious type has been most kindly lent to us by Professor Alphonse Milne-Edwards and by M. Emile Oustalet in order that we might be able to examine and figure it. It is represented in figure 1 of our Plate, which is the first representation of it, so far as we know, which has ever been published.

There is in the British Museum the skin of an adult bird which came from Melbourne and formed part of the Gould collection. Dr. Finsch has examined this specimen and labelled it *T. verreauxius*. Its coloration is not altogether symmetrical, and Count Salvadori, after some consideration, arrived at the conclusion that it was a hybrid between *T. novæ-hollandiæ* and *Glossopsittacus concinnus*.

This British Museum skin we have also figured (Plate XXXVI. fig. 2), as we deem it a very interesting one. Its resemblance to the Paris specimen is undeniable. The great difference is in the colour of the breast, but it is not uncommon for a Parrot to become less red and more yellow in that region. We will describe first the type of the species *T. verreauxius*, and will afterwards point out the points in which the British Museum skin differs from it.

The general colour above is green, but there are yellow spots in the interscapular region due to the yellow colour of the base of the feathers. The forehead and vertex are red, the occiput and nape blue, also the lores, sides of the face, and ear-coverts. The chin is also bluish. The eyebrow is red, and a very narrow band of red extends between the blue of the occiput and of the ear-coverts. There is a faintly-marked light green collar between the blue of the nape and the dark green of the back of the neck. The lower throat is red with a little yellow. The fore neck and breast are orange-yellow, with transverse bands of pale vermilion and bands of green formed by the tinted feather-tips. The abdomen

is rather darker than the breast. The flanks, thighs, and under tail-coverts are emerald-green. The quills and central tail-feathers are olive-green above, and all the upper wing-coverts are green. The inner webs of the outer tail-feathers are greenish yellow, and the axillaries and under wing-coverts are orange-yellow, mottled like the breast. The quills beneath are yellow for part of the inner web.

Total length 10 inches, wing 6, tail 4.5, culmen 0.8, tarsus 0.6.

The British Museum specimen is also green above, and the forehead and part of the vertex are bright red; but the vertex is also partly blue, and the red band extending between the blue occiput and ear-coverts is much broader and more distinct than in the Paris specimen, and the yellowish-green collar is lighter and rather more marked. The throat is bluish, and the sides of neck and fore-neck are red, with transverse greenish bands. The chest and breast are red, with fewer transverse bands than the neck. The middle of the abdomen is red, with light transverse green bands formed by the margins of the feathers. The sides of the body are red (with greenish yellow bands), much more red than in the Paris specimen, while the green of the thighs is lighter. The under tail-coverts yellowish green. The quills have the inner web yellow for about the median third of their length. The under wing-coverts and axillaries are red, with more or less greenish yellow. The primary under-coverts are dusky. The tail is considerably longer than in the Paris specimen, owing to a single feather, the nature of which appeared open to some doubt.

Total length 12.25 inches, wing 5.8, tail 6.4, culmen 0.75.



The Red naped Lory.
TRICHOGLOSSUS RUBRITORQUES .

Published by E. H. Porter

12. TRICHOGLOSSUS RUBRITORQUES.

(THE RED-NAPE LORY.)

[PLATE XXXVII.]

? *Blue-bellied Parrot, var. C*, Lath. Syn. Suppl. i. p. 59 (1787).

? *Psittacus hæmatodus, var. δ*, Latham, Index Orn. i. p. 87 (1790).

Trichoglossus rubritorquatus, Finsch, Papag. ii. p. 824 (1868); Rehnw. Vogelbild. t. viii. fig. 5 (1878-83).

Trichoglossus rubritorquis, Vigors & Horsfield, Trans. Linn. Soc. xv. p. 291 (1826);

Gould, B. Austr. v. pl. 49 (1842); Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 195 (1878);

Salvadori, Orn. Pap. e Mol. i. p. 299 (1880).

Trichoglossus rubritorques, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 60 (1891).

Quills underneath with a yellow band towards the base; an orange-coloured band on the nape.

Habitat. North-western Australia.

THIS exceedingly beautiful Lory appears to be confined to the north and north-west of Australia.

The two specimens figured by Mr. Gould were, he tells us, "procured at Port Essington," and he adds (on the authority of Mr. Gilbert) that "this species is abundant in all parts of the Coburg Peninsula and the adjacent islands; and is an especial favourite with the natives, who carefully preserve the heads of all they kill, for the purpose of ornamenting their persons by slinging them to the arm a little above the elbow."

Diggles says it does not extend eastwards of the Gulf of Carpentaria, and Gilbert* found this species to be numerous at Port Essington.

Our Plate represents the type of the species, which passed from the Linnean Society to the British Museum.

In this species the back, with the wings and tail above, are again green. The whole of the head is blue, as is also the upper part of the throat. There is a very distinct orange-red collar on the nape, bounded below and behind by a transverse band of blue. In the interscapular region the feathers are orange-red at the base, blue or purple towards their margins. The breast is orange-red, like the band on the nape. The middle of the abdomen is dark green; the flanks are clothed with yellow feathers, the margins of which are green. The under tail-coverts are greenish yellow, the feathers having green tips. The quills have their inner web yellow towards the base, and the inner web of the tail-feathers is

* First a companion of Mr. Gould, and later a collector for him.

yellow. The under wing-coverts are red. The bill is reddish, the feet grey, and the iris (according to Gould) red, with a narrow ring of yellowish round the pupil.

Total length 12 inches, wing 6.3, tail 6, bill 0.85, tarsus 0.65.

There are fifteen specimens in the National Collection, which differ as to the extent and the shade of the blue band behind the orange collar. It may even be blackish, as in one specimen.



Rosenberg's Lory
TRICHOGLOSSUS ROSENBERGI.

Published by R.H. Porter.

13. TRICHOGLOSSUS ROSENBERGI.

(ROSENBERG'S LORY.)

[PLATE XXXVIII.]

Trichoglossus rosenbergii, Schlegel, Ned. Tijdschr. Dierk. iv. p. 9 (1871); Rosenberg, Reist. naar Geelvinkb. p. 136, t. xv. fig. 2 (1875); Salvadori, Orn. Pap. e Mol. i. p. 298 (1880); id. Mem. R. Ae. Se. Tor. ser. 2, xl. p. 173 (1889).

Trichoglossus rosenbergi, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 61 (1891).

Quills underneath with a red band towards the base.

Habitat. Mysore Island, in Geelvink Bay.

THIS species a good deal resembles *T. cyanogrammus*, but, singularly, differs as to geographical distribution, being, so far as yet known, exceedingly restricted in its range.

The upper parts (back, wings, and tail) are again green, but the interseapular feathers have more or less red. The head is entirely blue, save that the occiput is purple, bordered with a narrow band of red, behind which the back of the neck is greenish yellow, sometimes with a little red on the nape. The breast is red, but much traversed by broad dark blue bands, the margins of the feathers being of that colour. These bands are larger and more predominant than in *T. cyanogrammus*. The middle of the abdomen is of the same dark blue tint; the lower abdomen is partly red. The flanks are yellowish green, the feathers having broad green margins. The under tail-coverts are yellowish green, and the feathers have green spots at the tips. The quills have the inner web red towards the base. The under wing-coverts are also red. The inner web of the outer tail-feathers is yellowish green. The bill is reddish orange and the feet grey.

Total length 11 inches, wing 4·8, tail 4·12, bill 0·85, tarsus 0·65.



The Ornate Lory.
TRICHOGLOSSUS ORNATUS.

Published by R.H. Porter.

14. TRICHOGLOSSUS ORNATUS.

(THE ORNATE LORY.)

[PLATE XXXIX.]

- Avis paradisiaca orientalis etegantissima*, Seba, Mus. t. 60. figs. 2, 3 (1734).
The Lory Parrakcet, Edwards, Birds, iv. pl. 174 (1751).
Psittacus minor e coccinco viridis, id. op. cit. p. 247.
La Perruche variée des Indes Orientales, D'Aubent. Pl. Enl. 552.
La Perruche Lori, Levaill. Perr. pl. 52 (1801).
Psittaca indica varia, Brisson, Orn. iv. p. 366 (1760).
Psittacus ornatus, Linn. S. N. i. p. 143, n. 19 (1766).
Psittacus inquinatus, Müller, S. N. Suppl. p. 79 (1776).
Psittacus (Trichoglossus) ornatus, Müller & Schleg. Verh. Land- en Volkenk. p. 472 (1839-44).
Australasia malaisiæ, Lesson, Traité d'Orn. p. 210 (1831).
Eos ornata, Wagl. Monog. Psitt. p. 562 (1832).
Lorius ornatus, Stephens in Shaw's Gen. Zool. xiv. 2, p. 132 (1826).
Trichoglossus ornatus, G. R. Gray, Gen. B. ii. p. 411, n. 6 (1846); Finsch, Papag. ii. p. 842 (1868); Walden, Trans. Zool. Soc. viii. p. 32 (1872); Meyer, Ibis, 1879, pp. 53, 145; Salvadori, Orn. Pap. e Mol. i. p. 299 (1880); Rehnw. Vogelbild. t. viii. fig. 7 (1878-83); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 61 (1891).

Quills with no coloured-band beneath; cheeks and breast red.

Habitat. Celebes, Buton, and the Togian Islands.

DR. MEYER tells us that the native name of this species "among the Alfuros of Minahassa is 'Kerut'; besides, every one calls it 'Parkitji,' which is, I believe, a Dutch word."

It is "the most common Parrot of Celebes; I got it at all times and everywhere in the Minahassa from January till July; at the end of March 1871 it suddenly appeared in large flocks near Limbotto in August; near Gorontalo in September; on the Togian Islands in August; and in South Celebes in October and November. They live in flocks and fly very quickly, with much noise and quick strokes of the wings; they have a short and shrill cry, and do not sit quiet a long time at one spot, but climb all over the tree. At midday, in the heat, they sit in flocks in the shadow of the leaves, chattering and scratching each other's heads. In cool weather they are on the wing nearly the whole day.

"On the 27th of February I found a female, with an egg ready to be laid; it was quite white, 25 millim. long, 17 millim. broad.

“*T. ornatus* smells, as all the allied Parrots do, very agreeably of hyacinths. They feed, according to the season, on all possible fruits; in captivity they prefer bananas above everything, but also like rice; they are very wild and not easy to tame quickly; but in time they get accustomed to one person. This beautiful bird is often to be seen tame on small stands before the huts; but the natives also use them as food.

“Once I shot a specimen near Menado with quite yellow plumage, perhaps a bird escaped from captivity, or an individual variety. My hunters declared it to be from the Sangi Islands; but I do not believe that the species occurs there at all.”

This bird shares with *Charmosyna papuensis*, and probably with *Lorius lory*, the distinction of being one of the longest known species of the whole family of Loriidæ, it having been figured by Seba in 1734.

It is easily distinguished from every other species of *Trichoglossus* by having no coloured band on the underside of the wing.

The bird is green on all the upper parts, including the hind neck, except that yellow bands on the feathers of the interscapular region cause some yellow markings there to show themselves. The forehead, vertex, and ear-coverts are purple-blue, but the cheeks and chin are red. There is a transverse red band on the occiput, traversed by dark blue transverse lines. On each side of the neck there is a band, or elongated patch, of yellow interposed between the red of the cheeks and the green of the hind neck, and sometimes running upwards and forwards to a point interposed between the outermost side of the red occipital colour and the purple of the ear-coverts. The throat and breast are red, crossed by transverse bluish-black bands. The middle of the abdomen is green, the sides of the body yellow. The vent and under tail-coverts are yellowish green, the margins of the feathers being of a green tint. The quills underneath are dusky black, without any coloured band. The under wing-coverts are yellow. The lateral tail-feathers underneath are yellowish, but the base of the inner web is red.

Total length 9·8 inches, wing 5·1, tail 3·2, bill 0·8, tarsus 0·6.

The colours are said to be paler in the young, especially the red on the cheeks and breast.

We have not been able to find any noteworthy differences between the eleven specimens preserved in the British Museum.

PSITTEUTELES.

GREEN-HEADED LORIES.

Psitteuteles, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157.

Type of the genus : *P. euteles*.

Generic characters.—Tail-feathers twelve; point of maxilla long but not thin; tail moderate, its feathers gradually tapering to a point more or less acute, predominant colour underneath, as well as above, green; tail-feathers with no yellow or red colour at the tip; the two middle tail-feathers not very long; the first four or five primaries not distinctly attenuated towards the tips; no blue shaft-streaks on the forehead; no red colour on the breast; head yellowish or bluish green; bill orange-red. (*Cf.* Salvadori, Cat. of Birds in Brit. Mus. *l. c.*)

Range. From the Sula Islands and Celebes to Western and Southern Australia, and from Flores to Timor-laut.

THE species of this genus greatly resemble the *Trichoglossi*, but they differ in their tints as above stated and are very prominently green.

The present genus, like the last, extends into Australia from Rockingham Bay through the interior to South Australia, but not, we believe, into Tasmania, and it appears to be entirely absent from New Guinea. It is, like *Trichoglossus*, found in Celebes, and these are the only two genera of Lories found in that interesting island. It is absent from Sumbawa (which *Trichoglossus forsteni* inhabits), but is found in Flores and Timor and thence to Timor-laut, which last habitat is its nearest approach to New Guinea. Thus, with the exception of the extremes of distribution of these two genera (Celebes and Australia), the range of the one is singularly different from that of the other.

Psitteuteles does not extend eastwards beyond Australia, while Flores is its western limit.



The Yellow and Green Lory.
PSITTEUTELES FLAVOVIRIDIS.

Published by R.H. Porter

1. PSITTEUTELES FLAVOVIRIDIS.

(THE YELLOW-GREEN LORY.)

[PLATE XL.]

Trichoglossus flavoviridis, Wallace, P. Z. S. 1862, p. 337, pl. xxxix., 1864, pp. 292, 295 (partim); Finsch, Papag. ii. p. 849 (1868).

Psitteuteles flavoviridis, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 63 (1891).

No coloured band on the underside of the quills; breast bright yellow.

Habitat. Sula Islands.

THIS bird, which is the Lory of the Sula Islands, where it abounds, was thought by Dr. Wallace to be probably an inhabitant of Celebes. He made this conjecture because he had obtained at Menado a bird which one of his servants told him was a native of the place. His specimen, however, was unfortunately, while drying, carried away by a rat. It was never recovered, so that it was only "as far as his memory served him" that he deemed it to be *P. flavoviridis*.

The back and wings are grass-green, but the feathers of the interscapular region have bands of yellow almost wholly concealed. The forehead, vertex, and occiput are yellow, obscurely marked with dusky green, most so on the occiput. The cheeks, ear-coverts, and chin are yellow and green, the feathers being margined with the former tint. On the nape is a dusky collar, which contrasts sharply with the yellow of the occiput and ear-coverts. The throat, the breast, and the middle of the abdomen are bright yellow, with curved transverse bands of green, each feather having a rather dark green margin, so that a scaly appearance is produced. The lower abdomen, vent, and under tail-coverts are yellowish green, traversed by wider transverse bands, the green margins of the feathers being here broader. The thighs are yellow, banded with green. The quills are dusky black, with green on the outer webs, and the outermost quills have the extreme edge yellowish. The under wing-coverts are greenish yellow. The tail above is, like the uropygium, ochrish green, the inner web of the lateral tail-feathers being more yellow. Beneath, the tail is entirely of a dull ochre-yellow. The bill is orange-red, the feet grey, and the iris orange.

Total length 8·5 inches, wing 4·8, tail 3·2, bill 0·72, tarsus 0·51.

The type of the species (represented in our Plate) is in the National Collection, where there are five specimens. In two of them the collar is but little marked, and in three the pileum has more dark spots than in the other two.



1. Meyer's Lory.
PSITTEUTELES MEYER.
2.3. The Lory of Bonthain.
PSITTEUTELES BONTHAINENSIS.

Published by R.H. Porter.

2. PSITTEUTELES MEYERI.

(MEYER'S LORY.)

[PLATE XLI. FIG. 1.]

Trichoglossus meyeri, Walden, Ann. & Mag. N. H. (4) viii. p. 281 (1871); id. Trans. Z. S. viii. p. 32, pl. iv. (1872); Rehnw. Vogelbild. t. xv. fig. 3 (1878-83); Meyer, Ibis, 1879, p. 54; id. Vogel-Skelett. t. xxiv. (1879-88); Salvadori, Ann. Mus. Civ. Gen. vii. p. 646 (1875).

Psitteuteles meyeri, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 63 (1891).

No coloured band on the underside of the quills; breast greenish yellow; green bands of underparts narrow; no collar.

Habitat. North Celebes.

DR. MEYER had a bird of this species alive at Menado, from the vicinity of which town his specimens were procured.

He tells us that the natives call this species "Parkitji lolaro." "Lolaro" means the mangrove jungles near the sea-shore, especially those of *Rhizophora conjugata*.

The Doctor also tells us that the bird appeared near Menado in flocks, and could always be procured till the middle of May, and then became rarer; he adds:—"We are still far from a perfect knowledge of the movements of the birds in these regions, and shall not know much about them till we have a series of observations from different localities. It appears to me probable that the rainy season in the mountains of the Minahassa drives the birds to places where it is warmer or not so damp; at least this was the condition in 1871 near Menado, where the rainy season was very mild."

The type of the species is in the British Museum, and we have had it figured.

The general colour is green. The forehead, vertex, occiput, and nape are olive-brown tinged with golden, which tinge is most marked on the forehead. The cheeks and lores are greenish brown and yellow, each feather being yellow towards the margin. The ear-coverts are bright yellow, forming an isolated distinct yellow patch on each side of the head. The under surface of the body is of one uniform tinge of greenish yellow, transversely banded with dark green, the margins of the feathers being of that colour. The interscapular feathers are yellow towards the base, but have a broad margin of the colour of the back. The lower abdomen and under tail-coverts are more green and less yellow, but also bear dark green spots or bands. The quills are dark grey beneath. The under wing-coverts and axillaries are yellowish green. According to Dr. Meyer the bill is orange-red, the feet greyish blue, and the iris cherry-red.

The total length is 7 inches, the wing 4, the tail 2·7, the bill 0·6, and the tarsus 0·41.

The young is said by Salvadori to be of a duller tint, the pileum nearly green, and the breast less yellow and more green.

There are eight skins in the British Museum. They seem to us to only differ slightly as to the breadth of the green margins of the feathers; none of them have anything like a collar.

VARIETY BONTHAINENSIS.

(THE LORY OF BONTHAIN.)

[PLATE XLI. FIGS. 2 and 3.]

Trichoglossus meyeri, var. *bonthainensis*, Meyer, Sitz. u. Abh. Ges. Isis, 1884, Abh. i. p. 16; Salvadori, Cat. of Birds in Brit. Mus. xx. p. 64 (note) (1891).

No coloured band on the underside of the quills; breast greenish yellow; green bands of underparts broad; a slightly marked collar of brighter green on the back of the neck.

Habitat. Bonthain Mountain, South Celebes.

THIS form is regarded by Mr. Meyer as rather a variety than a species, and we quite concur in this opinion. As, however, it is a form inhabiting only the south of Celebes, and Dr. Meyer deems that named after him to be confined to the north of that island, we think it advisable to describe it separately, especially as we are able to give for the first time a figure of it, and one taken from the type of the variety.

Our ability to do this is owing to another act of kindness on the part of Dr. Meyer, who has sent us a life-sized coloured drawing of it, executed under his careful supervision expressly for this work.

Dr. Meyer tells us that Messrs. Ribbe and Kühn collected, in January 1883, a male specimen of this form on the summit of the mountain of Bonthain.

The undersides of the wings are blackish, not brownish as in *T. meyeri*. It is also described by Dr. Meyer as differing from the last-named species in the following particulars:—"The yellow colour of the head is less apparent, and not so sharply separated from the green colour of the neck. The green colour of the back of the neck is brighter and makes a kind of collar. The throat, the cheeks, and the sides of the neck are not undulated with reddish yellow, but more bluish green; the underside of the feathers of those parts is blue and not yellow. The green bands of the underparts are broad. The yellow colour on the lower back is less apparent."

Length of the wing 4.12 inches, tail 2.83, bill 0.66, tarsus 0.47.

The transverse bands of the drawing sent us by Dr. Meyer are certainly decidedly broader than those of the specimens of *P. meyeri* in the British Museum.



The Plain Lory.
PSITTEUTELES EUTELES .

Published by R.H. Porter.

3. PSITTEUTELES EUTELES.

(THE PLAIN LORY.)

[PLATE XLII.]

- La Perruehe eutèle*, Bourjot, Perr. pl. 43 (1837-38).
Perruche iris femelle, Bourjot, Perr. pl. 44 *b*, female (1837-38).
Conurus euteles, Bourjot, Perr. pl. 43, male (1837-38).
Conurus iris, Bourjot, Perr. pl. 44 *b*.
Psittacus euteles, Temm. Pl. Col. 568 (1835).
Psittaeus (Beloeereus) euteles, Rosenb. Journ. f. Orn. 1862, p. 66.
Psittaeus (Trichoglossus) euteles, S. Müll. & Sehleg. Verhand. Land- en Volkenk. p. 472 (1839-1844).
Nanodes euteles, Sehleg. Mus. P.-B., Psittaei, p. 112 (1864); id. op. eit. Revue, p. 50 (1874).
Neopsittacus euteles, Meyer, Zeitschr. f. ges. Orn. 1884, pp. 195, 196.
Coriphilus euteles, G. R. Gray, Gen. B. ii. p. 417 (1845).
Trichoglossus ochreocephalus, Blyth, Journ. A. S. B. xxvii. p. 279 (1858).
Trichoglossus euteles, Selater, P. Z. S. 1860, p. 226; Finseh, Papag. ii. p. 850 (1868); Rehnw. Vogelbild. t. xxx. fig. 5 (1878-83).
Psitteuteles euteles, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157; Salvadori, Cat. of Birds in Brit. Mus. xx. p. 64 (1891).
Psitteuteles weberi, Büttikofer in Dr. Max Weber's Zoologische Ergebnisse einer Reise in Niederländisch Ost-Indien, Band iii. p. 290, pl. xvii. fig. 1 (1894).

A yellow band on the underside of the quills.

Habitat. Timor, Flores, Wetter, Lettie, Babbar, and Timor-laut.

THE type of the species is in the Museum of Leyden.

The colour of all the upper parts is uniform grass-green. The head is yellowish olive. The breast and abdomen are yellowish green, the feathers having green margins which form more or less distinct transverse bands. The flanks, thighs, and under tail-coverts are similarly yellowish green, as are also the under wing-coverts. The quills are blackish beneath, save that their inner webs are yellow towards the base. The inner webs of the tail-feathers are yellowish green beneath. The bill is yellowish and the feet grey.

Total length 10·5 inches, wing 5·3, tail 4·2, bill 0·65, tarsus 0·54.

The young are said by Salvadori to have the head greener and less contrasted with the green of the body, and he also affirms that specimens from Flores are darker, that they

“have greener and darker heads,” and that “the underside of the body is of a darker green.”

Heer Büttikofer has erected forms found in Flores into a distinct species, *P. weberi*, and he has given an excellent coloured figure of a specimen in the memoir above quoted. His well-merited fame as a zoologist inclined us at once to accept this proposed species as distinct simply on his authority. But a careful examination of the numerous skins of *P. euteles* preserved in the British Museum has led us to believe that *P. weberi* can nevertheless be but a marked variety. Of these skins no less than four are from Flores. Amongst the distinctive characters assigned to *P. weberi*, one is the greater size of the bill; but the bill of the British-Museum specimens from Flores does not always attain the size of the bill of some from Timor. In none of the Flores skins are there blue points to the feathers of the forehead as described and represented in *P. weberi*. One striking character of this last-named variety is the bright yellow tint of the breast as contrasted with the green of the throat and abdomen. In the British-Museum skins from Flores there is no such contrast at all, but the whole of the underside of the body is of a darker green than in the Timor skins. There is, indeed, a considerable amount of variation in the specimens of *P. euteles*; among other points, they differ in that the margins of the feathers of the breast and abdomen form more distinct transverse bands in some individuals than in others.



The Scaly Breasted Lory
PSITTEUTELES CHLOROLEPIDOTUS

Published by R.H. Porter.

4. PSITTEUTELES CHLOROLEPIDOTUS.

(THE SCALY-BREADED LORY.)

[PLATE XLIII.]

- The Spotted Parrot*, Latham, Gen. Hist. ii. p. 197 (1822).
Scaly-breasted Lorikeet, Greene & Dutton, Parrots in Captivity, vol. iv. p. 19 (1887).
Psittacus chlorolepidotus, Kuhl, Consp. Psitt. p. 48 (1820).
Australasia viridis, Lesson, Traité d'Orn. p. 210 (1831).
Trichoglossus matoni, Latham MSS., Vigors & Horsfield, Trans. Linn. Soc. xv. p. 291 (1826); Lear, Illustr. Parr. pl. 35 (1832).
Trichoglossus ? chlorolepidotus, Steph. in Shaw's Gen. Zool. xiv. 2, p. 130 (1826).
Trichoglossus chlorolepidotus, Jardine & Selby, Ill. Orn. iii. pl. ex. (about 1835); Gould, Birds of Australia, v. pl. 50; Finseh. Papag. ii. p. 847 (1868); Diggles, Synopsis B. Austr. ii. pl. 86. fig. 1 (1877); Rehnw. Vogelbild. t. viii. fig. 3 (1878-83); North, Descr. Cat. Nests & Eggs, p. 267 (1889).
Psitteuteles chlorolepidotus, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 65 (1891).

A red band on the underside of the quills.

Habitat. Australia, from Rockingham Bay to Southern Australia.

THIS species, which was first described by Kuhl in 1820, has several times been exhibited in the Zoological Gardens of London.

In Australia these birds are said to feed on the large blossoms of Banksias and the sweet-scented buds of Mimosas, in the branches of which they congregate in considerable numbers. Mr. Gould, however, has affirmed that they live almost entirely on the flowers of the Eucalypti. Flies and small Coleoptera have been found in the crop, as well as grass-seeds. The specimens kept by Herr Weiner fed very readily on canary-seed and dry sponge-cake. Messrs. Greene and Dutton had a pair which they kept out of doors for a short time, and they did well; they tell us that the "Scaly-breasts did not seem to interfere with any of their companions, and partook, apparently with relish, of their diet, which consisted in the main of canary-seed." They were extravagantly fond of a piece of ripe pear and of other sweet fruits.

Mr. North informs us that this species "is plentifully dispersed over the greater part of Queensland and the northern portion of New South Wales, but is seldom found farther south than the Murray River, the natural boundary of the latter colony. Mr. George Barnard, of Coomooboolaroo, who has contributed largely towards a knowledge of the nidification of many of the birds of Central Queensland, informs me that he found this species breeding in

hollow parts of the lofty Eucalypti in the neighbourhood of the Dawson River, and that all the nests, seven in number, taken by his son, unlike those of any other member of the family, each contained but a single egg, which in several instances was in a very advanced state of incubation.

“Two eggs taken during the month of November are pure white, in form oval, slightly tapering at one end, the texture of the shell being fine and smooth, but without any lustre.”

This bird is almost entirely green, or green and yellow. The upper parts are all green, save that in the interscapular region the yellow of the feathers, below their green margins, shows more or less in the form of transverse yellow bands. The crown of the head has a more or less marked bluish-green tinge. The feathers of the throat, chest, and breast are yellow, with their margins broadly tinted with green; this produces many eurved transverse green bands, so as to give rise to a scaly appearance, whence the name of the species. The feathers of the throat and of the sides of the body have interspersed red tints, as well as yellow. The lower belly is almost entirely green; the thighs are green with some yellow; and the under tail-coverts are green with darker green spots. The quills are blackish underneath, save that their inner webs are red towards the base. The axillaries and under wing-coverts are also red. The tail beneath is of an ochre-yellow, the feathers being especially yellow towards their margins. The bill is reddish orange, the cere and orbits olive, the feet grey, and the iris red.

Total length 10 inches, wing 5·5, tail 4·2, bill 0·7, tarsus 0·5.

The specimens in the British Museum did not appear to us to present any noteworthy variations.

PTILOSCLERA.

GREEN LORIES.

Ptilosclera, Bonaparte, Compt. Rend. xliv. p. 597, gen. 66 (1857).

Type of the genus: *P. versicolor*.

Generic characters.—Tail-feathers twelve; point of maxilla long, but not thin; tail-feathers gradually tapering to a point, more or less acute; predominant colour underneath, as well as above, green, with shaft-streaks on the neck and body; tail-feathers green, with no yellow or red colour at the tip; tail moderate, the two middle feathers not very long; the first four or five primaries not distinctly attenuated towards the tips; bill orange-red. (Cf. Salvadori, Cat. of Birds in Brit. Mus. *l. c.*)

Range. North and West Australia.

THIS is the only genus of *Loriidæ* which is exclusively confined to Australia.

The distinction between it and *Psittuteles* consists mainly in the shaft-streaks on the neck and body.



The Grey-footed Lory.
PTILOSCLERA VERSICOLOR .

Published by R. H. Porter.

1. PTILOSCLERA VERSICOLOR.

(THE GREY-FOOTED LORY.)

[PLATE XLIV.]

- Le Lori versicolor*, *Conurus lori scintillatus*, Bourjot, Perr. pl. 52 (1837-38).
Nanodes versicolor, Schlegel, Mus. P.-B., Psittaci, p. 115 (1864).
Neopsittacus versicolor, Salvadori, Orn. Pap. e Mol. iii. p. 519 (1882).
Coriphilus versicolor, G. R. Gray, List Psitt. Brit. Mus. p. 59 (1859).
Trichoglosse versicolor, Hombr. et Jacq. Voy. Pôle Sud, Atlas, pl. 24 bis, fig. 1 (1845).
Trichoglossus versicolor, Vigors in Lear's Ill. Parr. pl. 36 (1832); Selby, Nat. Library, vi. p. 157, pl. 21 (1836); Gould, B. Australia, v. pl. 51 (1842); Finsch, Papag. ii. p. 853 (1868); Rehnw. Vogelbild. t. xxx. fig. 4 (1883).
Psittenteles versicolor, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157.
Trichoglossus (Ptilosclera) versicolor, Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 195 (1878).
Ptilosclera versicolor, Gould, Handb. B. Austr. ii. p. 98 (1865); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 66 (1891).

Green, with yellow streaks nearly all over the body; crown and lores red.

Habitat. Northern and Western Australia.

As to the habits of this species, Mr. Gould quotes Mr. Gilbert as follows:—"This bird congregates at times in immense flocks; when a flock is on the wing their movements are so regular and simultaneous that they might easily be mistaken for a cloud passing rapidly along, were it not for the utterance of their usual piercing scream, which is frequently so loud as to be almost deafening. They feed on the topmost branches of the *Eucalypti* and *Melaleuca*. I observed them to be extremely abundant during the month of August on all the small islands in Van Diemen's Gulf."

The light-coloured shaft-streaks, which are so widely distributed over both the upper and under surface of the body of this species, readily serve to distinguish it from all allied forms, though they recall to mind the markings of that very different species *Chalcopsittacus scintillatus*.

The general colour of the bird is green, with yellow-green longitudinal shaft-streaks, which are somewhat yellower on the underside of the body than on the back. The wings and tail are, above, mainly of a darker green, but there are yellow shaft-streaks on the upper wing-coverts, but not on the upper tail-coverts. The head is red, as also are the lores. The ear-coverts and a narrow transverse band across the occiput are yellowish green; this band borders the posterior margin of the red on the head. Behind this there is a broad bluish

collar on the back of the neck, which continues forwards on either side to meet at and beneath the chin. The cheeks also are of the same bluish tint, and the sides and back of the neck and the throat are all marked by longitudinal yellow shaft-streaks, which are particularly conspicuous by contrast with the bluish tint of those parts. The breast and sides are more or less pinkish red. The thighs, abdomen, and under tail-coverts are yellowish green. The quills are blackish underneath and not traversed by any bright band. The axillaries and under wing-coverts are green. The tail is yellowish green beneath, and that is the tint of the inner web of the tail-feathers. The bill is reddish, the feet are grey, and the iris brown.

Total length 8 inches, wing 4·8, tail 3, bill 0·6, tarsus 0·45.

We learn from Salvadori that the young is of a pale dull green, with scarcely any streaks, and that the forehead is pale red. When older, but still immature, it continues to be paler than the adult, while the red on the head remains confined to the forehead, the rest of the crown being greenish blue with yellow shaft-streaks.

The skins (which are numerous) in the British Museum differ as to the green occipital band, which may be very distinct and may be absent. The blue collar is hardly distinguishable in a young specimen.

GLOSSOPSITTACUS.

LONG-QUILLED LORIES.

Glossopsittacus, Sunde v. Meth. nat. Av. disp. Tent. p. 71 (1872).

Type of the genus: *G. concinnus*.

Generic characters.—Tail-feathers twelve; point of maxilla long, but not thin; tail-feathers gradually tapering to a point, more or less acute; predominant colour underneath, as well as above, green; tail-feathers green, with no yellow or red at the tip; tail moderate, the two middle feathers not very long; the first four or five primaries not distinctly attenuated towards the tips; first primary equal to, or a little longer than, the second and the third; bill black; dimensions rather small. (Cf. Salvadori, Cat. of Birds in Brit. Mus. *l. c.*)

Range. West and South Australia and Tasmania and South-eastern New Guinea.

THIS genus is readily distinguishable from the two preceding genera by the black bill, the elongated first primary, and the smaller dimensions.

This beautiful and interesting genus is, with the exception of one species, confined to Australia and Tasmania—the exceptional form being found in, and apparently confined to, New Guinea. Two species descend into Tasmania, and thus they extend into the most southern habitat of the whole family, which they share with only one other species, *Trichoglossus novæ-hollandiæ*. So far as we know, this genus has not yet been found in any of the islands about New Guinea.



1. Goldie's Lory
GLOSSOPSITTACUS GOLDIEI.
2. The Musky Lory.
GLOSSOPSITTACUS CONCINNUS.

Published by R.H. Porter

1. GLOSSOPSITTACUS GOLDIEI.

(GOLDIE'S LORY.)

[PLATE XLV. FIG. 1.]

Neopsittacus goldiei, Salvadori, Ann. Mus. Civ. Genova, xviii. p. 419 (1882).

Trichoglossus goldiei, Sharpe, Journ. Linn. Soc., Zool. xvi. pp. 318, 426 (1882); id.

Gould's Birds of New Guinea, vol. v. pl. 41 (1883).

Glossopsittacus goldiei, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 68 (1891).

Underparts with shaft-streaks.

Habitat. Astrolabe Mountains, S.E. New Guinea.

THIS species was discovered by Mr. Goldie during his expedition to the Astrolabe Mountains, and was named after that explorer by Dr. Bowdler Sharpe in 1882. Mr. Goldie affirms that its native name is "I-I-hawa."

The type of the species is in the British Museum, and is represented in our Plate; but its colours have been made rather more vivid, like those of the second skin, which appears a better specimen.

This species is readily distinguishable from the others of its genus by the dark shaft-streaks on its underparts. The colour of the upper parts is a rather dark green, the hind neck is somewhat mottled, the edges of the feathers being yellow. The forehead and vertex are bright red. A band extending backwards and upwards from the eye to the nape is purplish blue. The lores and cheeks are reddish, and the latter is traversed, as are the ear-coverts, by vivid blue shaft-streaks. Between the blue of the nape and the dark green of the back is a band of yellow-green, with dark green streaks, and the throat, breast, and abdomen are similarly coloured and marked with dark streaks, those on the under surface of the body being very conspicuous. The under tail-coverts and thighs are yellowish green. The quills are dusky underneath, with a yellow transverse band formed by yellow patches on much of the inner webs of all but the outer primaries. The primary-coverts are dusky; the other under wing-coverts are streaked with dark green in the same manner as is the breast. The tail-feathers are greenish brown, edged with bright green, and the tips fringed with yellow, dirty yellow beneath. The bill is black, and the feet nearly so.

Total length 7 inches, wing 4·2, tail 3·1, culmen 0·55, tarsus 0·5.

Salvadori tells us that in the female and in the immature bird only the forehead is red, while the feathers of the vertex and occiput are green at the base and purplish blue towards the tip.

2. GLOSSOPSITTACUS CONCINNUS.

(THE MUSKY LORY.)

[PLATE XLV. FIG. 2.]

- Pacific Parrot* (var.), Phillips, Voy. Bot. Bay, p. 155, pl. 21 (1789).
Crimson-fronted Lory, Latham, Gen. Syn. Suppl. ii. p. 87 (1802).
La Perruche à bandeau rouge, Levaill. Perr. pl. 48 (1801).
Psittacus australis, Lath. (nec Gm.), Ind. Orn. i. p. 104 (1790).
Psittacus concinnus, Shaw, Nat. Misc. iii. pl. 87 (1791).
Psittacus pacificus, Shaw, Gen. Zool. viii. 2, p. 419 (1811).
Psittacus rubrifrons, Bechst. Lath. Ueb. p. 84, pl. 11 (1811).
Psittacus velatus, Vieillot, N. D. xxv. p. 373 (1817).
Lathamus concinnus, Lesson, Tr. d'Orn. p. 206 (1831).
Centrourus australis, G. R. Gray, List Genera Birds, p. 51 (1840).
Nanodes australis, Schleg. Mus. P.-B., Psittaci, p. 114 (1864).
Coriphilus australis, Schleg. Dierent. p. 77 (1864).
Trichoglossus concinnus, Vigors & Horsfield, Trans. Linn. Soc. xv. p. 292 (1826); Jardine & Selby, Ill. of Orn. i. pl. 34 (1839); Gould, B. of Austr. v. pl. 52 (1843); Finsch, Papag. ii. p. 857 (1868); Diggles, Syn. B. Austr. ii. pl. 86. fig. 2 (1877); Forbes, P. Z. S. 1879, p. 170, figs. 5, 6, pl. xvi. figs. 5, 6; Rehnw. Vogelbild. t. xxx. fig. 3 (1883).
Trichoglossus australis, Wagl. Mon. Psitt. p. 549 (1832).
Trichoglossus (Glossopsitta) concinnus, Ramsay, Proc. Linn. Soc. N. S. W. ii. p. 195 (1878).
Glossopsitta australis, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157; North, Descr. Cat. Nests & Eggs, p. 268 (1889).
Glossopsitta concinnus, G. R. Gray, Hand-list, ii. p. 156 (1870); North, Proc. Linn. Soc. N. S. W. (2) iii. p. 1778 (1888).
Glossopsitta concinna, Tristram, Cat. Coll. B. p. 74 (1889).
Glossopsittacus concinnus, Sundevall, Meth. nat. Av. disp. Tent. p. 71 (1872); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 69 (1891).

Underparts with no shaft-streaks; hind neck olive; cheeks with green lines; ear-coverts and forehead red.

Habitat. Australia, from Rockingham Bay to Tasmania.

THIS species has a wide distribution in Australia. In the most southerly part of its range—Tasmania—it is known as the “Musk Parrakeet,” from the odour of the bird, as Mr. Gould

tells us; he adds:—"It is a noisy species, and with its screeching note keeps up a perpetual din around the trees in which it is located. During its search for honey it creeps among the leaves and smaller branches in the most extraordinary manner, hanging and clinging about them in every possible variety of position. It generally associates in flocks, and is so excessively tame that it is very difficult to drive it from the trees, or even from any particular branch. Although usually associated in flocks, it appears to be mated in pairs, which at all times keep together during flight, and settle side by side when the heat of the sun prompts them to shelter themselves under the shade of the more redundantly leaved branches."

Messrs. Vigors and Horsfield state, on the authority of Mr. Caley, that its native name is "*Coolich*."

We learn from Mr. North that the Musky Lory resorts to the hollow branch of a Casuarina or Eucalyptus tree for the purpose of breeding. "Four eggs taken by Mr. K. H. Bennett, during November 1885, are white; three of them are oval in form and the remaining one round: length (A) 0.98 × 0.8 inch; (B) 0.95 × 0.82 inch; (C) 0.98 × 0.82 inch; (D) 0.95 × 0.85 inch. The species breeds during the months of October, November, and December."

Three individuals of this species have lived in the Zoological Society's Gardens.

The back, back of the neck, uropygium, wings, and tail are dark green with some brown. The vertex and part of the occiput are bluish. The forehead, lores, and ear-coverts are bright red. The cheeks are more or less greenish blue. The throat, breast, abdomen, and under tail-coverts are green, with a shade of yellow. There is a yellow spot on the side of the breast. The quills are black, broadly margined on the external web with green. The under wing-coverts are yellowish green. The tail is dark green above, with a little reddish orange at the tip; the inner webs of the lateral tail-feathers are yellowish, red towards the base, but tipped with green. The bill is blackish, and the feet dusky. According to Gould the iris is buff, surrounded by a narrow circle of yellow.

Total length 8.6 inches, wing 4.9, tail 3.5, bill 0.7, tarsus 0.51.

The female is said by Salvadori to be similar to the male, except that it has much less blue on the head.

The thirteen specimens in the British Museum vary much as to the extent of the lateral yellow patch in front of the wing.



1 Dietrichsen's Lory
GLOSSOPSITTACUS PORPHYROCEPHALUS
2 The Dwarf Lory
GLOSSOPSITTACUS PUSILLUS.

Published by R. H. Porter

3. GLOSSOPSITTACUS PORPHYROCEPHALUS.

(DIETRICHSEN'S LORY.)

[PLATE XLVI. FIG. 1.]

Psittacus purpureus, Dietrichsen (nec Müll., Gm., Less.), Philos. Mag. xi. p. 387 (1832).*Psittacula florentis*, Bourj. Perr. pl. 84 (1837-38).*Nanodes porphyrocephalus*, Schleg. Mus. P.-B., Psittaci, p. 115 (1864).*Trichoglossus porphyrocephalus*, Dietrichsen, Trans. Linn. Soc. xvii. (part 4) p. 553 (1837); Gould, Birds of Austr. v. pl. 53 (1840); Finsch, Papag. ii. p. 862 (1868); Rehnw. Vogelbild. t. xxx. fig. 1 (1883).*Trichoglossus purpureus*, Fraser, P. Z. S. 1839, p. 113.*Trichoglossus (Glossopsitta) porphyrocephalus*, Ramsay, Proc. Linn. Soc. N. S. W. ii. p. 195 (1878).*Glossopsitta porphyrocephala*, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157.*Glossopsittacus porphyrocephalus*, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 70 (1891).

Underparts with no shaft-streaks; hind neck olive; cheeks yellowish green; ear-coverts yellow mixed with red, like the forehead.

Habitat. West and South Australia.

THIS species was introduced to the attention of naturalists at a meeting of the Linnean Society (held in March 1832) by Mr. Dietrichsen.

Mr. Gould tells us that he found it abundant in South Australia and the gum-forests of Swan River, and that it was the only species met with by him in Western Australia. Most of the specimens he collected were shot, during the months of June and July, in the neighbourhood of Adelaide, and some of them in the town itself. He found them all to be so remarkably tame that any number of shots could be fired amongst them without causing the slightest alarm to any but those actually wounded. Although gregarious they appear always to mate in pairs, which keep together. The whole of one species frequently leave a tree simultaneously, "rushing off with amazing quickness in search of other trees laden with newly expanded flowers, among which they dash, and commence feeding with the utmost eagerness, clinging and creeping among the branches in every possible attitude."

The general colour above is green, olive in the interscapular region. The wing-coverts and rump are grass-green. The vertex is deep purple. The forehead, lores, and ear-coverts yellow mingled with red, the lores being especially red. The back of the head and neck are yellowish green. The throat, breast, and middle of the abdomen are bluish, passing into golden green on the flanks.

The shoulder is light blue. The under tail-coverts are yellowish green, and the thighs are green. The primaries are blackish brown, margined externally with green, the extreme edge being greenish yellow. The under surface of the wing is crimson. The tail is green above, golden beneath; the feathers have the inner web yellow, but they are red towards the base. The bill is black and the feet bluish. According to Gould, the iris is dark brown in some individuals, in others light reddish brown with a narrow ring of orange round the pupil.

Total length 6.75 inches, wing 4.2, tail 2.5, tarsus 0.39.

The eleven skins in the British Museum differ as to the brightness of the yellow on the forehead. In 81.11.7.1113 it is extremely bright, but in some it is very dull.

4. GLOSSOPSITTACUS PUSILLUS.

(THE DWARF LORY.)

[PLATE XLVI. FIG. 2.]

Small Parrakeet, Latham, Gen. Syn. Suppl. ii. p. 88 (1802).

La Perruche à face rouge, Levaill. Perr. pl. 63 (1801).

Psittacus pusillus, Shaw in White's Journal of a Voy. to New South Wales, p. 262, pl. 48 (1790).

Psittacus nuchalis, Beechst. Lath. Uebers. p. 81, pl. 9. fig. 1 (1811).

Lathamus pusillus, Lesson, Tr. d'Orn. p. 206 (1831).

Nanodes pusillus, Sehleg. Mus. P.-B., Psittaci, p. 115 (1864).

Coriphilus pusillus, Sehleg. Dierent. p. 78 (1864).

Trichoglossus pusillus, Vigors & Horsfield, Trans. Linn. Soc. xv. p. 203 (1826); Gould, B. of Austr. v. pl. 54 (1843); Finsch, Papag. ii. p. 860 (1868); Rehnw. Vogelbild. t. xxx. fig. 2 (1883).

Glossopsitta pusilla, Bonaparte, Rev. et Mag. de Zool. sér. 2, vi. p. 157 (1854).

Glossopsitta pusillus, North, Deser. Cat. Nests & Eggs, p. 268 (1889).

Glossopsittacus pusillus, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 71 (1891).

Underparts with no shaft-streaks; hind neck olive; cheeks as well as forehead and chin, all round the base of the bill, red.

Habitat. Australia, from Rockingham Bay to South Australia and Tasmania.

MR. GOULD found this species tolerably abundant on Maria Island, near the entrance of Storm Bay. In Tasmania it was more sparingly diffused than *G. concinnus*. On the continent of Australia he met with it more frequently in company with the last-mentioned species than alone, with which it agreed in geographical distribution and also in habits. He found eggs in a hole on the arm of a Eucalyptus-tree on the 11th of October, 1839.

Mr. North tells us that the breeding-season lasts from October to the end of January.

Four eggs taken by Mr. Geo. Barnard in 1883 were all white, but varied in form from round to oval.

Messrs. Vigors and Horsfield say that the native name of this bird is "Jerryang."

It is one of the plainest of all the Lories. It is almost entirely green, mainly grass-green. The forehead and sides of the face, however, are bright red, and the ear-coverts have short yellowish streaks and some dark green ones. The hind neck and interseapular region are greenish olive-brown. The vertex is light green, as is the breast and middle of the abdomen. The under tail-coverts are yellowish green. The primaries, secondaries, and

greater coverts are blackish, margined externally with green. The under wing-coverts are green, like the breast. The two centre tail-feathers and the outer webs of the lateral feathers are grass-green; the inner webs of the lateral feathers are red at the base, passing into greenish yellow towards the tip. The bill is black, and, Mr. Gould tells us, "the cere and orbits are dark olive-brown," while the irides are "orange, surrounded by a narrow line of yellow."

Total length 6.6 inches, wing 4, tail 2.4, bill 0.45, tarsus 0.35.

The female is said by Salvadori to have the red on the face less extended.

We have observed no noteworthy differences between the thirteen skins preserved in the British Museum.

HYPOCHARMOSYNA.

GREEN-TAILED LORIES.

Hypocharmosyna, Salvadori, Cat. of Birds in Brit. Mus. xx. pp. 12 & 72 (1891).

Type of the genus : *H. placens*.

Generic characters.—Tail-feathers twelve; point of maxilla long but not thin; tail-feathers gradually tapering to a point, more or less acute; predominant colour underneath, as well as above, green; tail-feathers green, with the tips yellow, light green, or red; bill almost always more or less red. (Cf. Salvadori, Cat. of Birds in Brit. Mus. *l. c.*)

Range. From the Moluccas through the Papuan Islands to New Caledonia, the New Hebrides, and the Fiji Islands.

THE genus *Hypocharmosyna* has a wide distribution, though it has no place (any more than the genera of Lories which remain to be described) in the fauna of Australia. It ranges from Halmahera and Amblau, if not also Bouru (its northern and western limits), to the New Hebrides and Fiji (to its extreme east), though absent from the Solomon Islands. It also extends southwards to New Caledonia. The species there found is an exceptional one, which we place in the genus with some hesitation. As, however, an undoubted species of the genus is found in the New Hébrides, it is not wonderful that it should be found in New Caledonia also. We have already found *Trichoglossus massena* to be an inhabitant of New Caledonia (the only other species of Lory which is so), and it likewise extends to the New Hebrides.

The Lories of the genus *Hypocharmosyna* are small birds, and include the absolutely smallest (*H. pygmæa*) of the whole family.

In all the preceding genera the sexes are absolutely or nearly alike in colour; but in the present genus they are markedly different, as is also the case with the remaining three genera of *Loriidæ*.

The Green-tailed Lories are less resplendent in colour than are most of the Lories before described, and contain two or three very dull-coloured species.



Wilhelmina's Lory
HYPOCHARMOSYNA WILHELMINÆ.
1,2, Male. 3. Female.

Published by R. H. Porter

1. HYPOCHARMOSYNA WILHELMINÆ.

(WILHELMINA'S LORY.)

[PLATE XLVII. FIGS. 1 & 2, male; FIG. 3, female.]

Trichoglossus wilhelminæ, Meyer, Journ. f. Orn. 1874, p. 56; Rehnw. Vogelbild. t. xxix. fig. 4 (1878-83).

Psittenteles wilhelminæ, Sharpe, Gould's B. New Guin. v. pl. xix. (1876).

Coriphilus wilhelminæ, Salvadori, Ann. Mus. Civ. Gen. x. p. 36 (1872); id. Orn. Pap. e Mol. i. p. 302 (1880); id. op. cit. iii. p. 519 (1882); Rehnw. Vogelbild. t. xxix. fig. 4 (1878-83); Sharpe on the Birds of New Guinea, Journ. Linn. Soc., Zool. xvi. p. 427 (1882); Salvadori, Mem. R. Ac. Sc. Tor. ser. 2, xl. p. 174 (1889).

Hypocharmosyna wilhelminæ, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 73 (1891).

Inner web of quills red in the males.

Habitat. New Guinea, from the Arfak Mountains to the Astrolobe range.

THIS charming little Lory was first described (in 1874) by Dr. Meyer, who named it *wilhelminæ*, in compliment to his wife. That compliment the lady well deserved, as she had been the constant companion of his travels, even in the Molucca Islands.

The coloration of this Lory is as follows:—The upper parts are green generally, but the lower part of the back is bright red, behind which is a patch of purple on the uropygium, which passes into green on the upper tail-coverts. The crown of the head and the nape are reddish brown tinged with purple, with a band of narrow bright blue feathers across the occiput. The face and throat are of a bright pale green, and the same colour prevails on all the underparts, save that there is a patch of narrow, elongated yellow stripes on the breast (each such stripe being margined with dark green), and also a yellow spot upon each flank. The quills have the inner webs red, and the axillaries and under wing-coverts are also red. The under tail-coverts are light green, like the abdomen. The tail is green above. The middle tail-feathers are dark green at the base, then purplish, and light green towards the tip; the bases of the lateral tail-feathers are red, they are then each marked with a transverse purplish-black band, and are green towards the tip. The bill is reddish yellow, the feet grey, and the iris is yellow.

Total length 4·75 inches, wing 2·7, tail 2·25, bill 0·47, tarsus 0·4.

The female has green instead of red (according to Dr. Meyer) on the lower back, and is devoid of the yellow spot on the flanks, while the axillaries, under wing-coverts, and inner web of the quills are green instead of red. It is also rather smaller than the male.

In the British Museum there are four specimens. One (collected by Goldie) has no yellow streaks on the breast, while in another specimen they are but little marked. In an apparently female skin the lower back is purple, as previously remarked by Count Salvadori.



The Pleasing Lory
HYPOCHARMOSYNA PLACENS
1. Male. 2. Female

Encheira by R.H. Porter

2. HYPOCHARMOSYNA PLACENS.

(THE PLEASING LORY.)

[PLATE XLVIII. FIG. 1, male; FIG. 2, female.]

- Psittacus placensis*, Temm. Pl. Col. 553 (1835).
Psittacus (Trichoglossus) placensis, S. Müll. Verh. Land- u. Volkenk. p. 472 (1839-44).
Conurus placens, Bourjot, Perr. pl. 46 (1837-38).
Coriphilus placensis, G. R. Gray, Gen. B. ii. p. 417 (1845).
Coriphilus placens, Schlegel, Dierent. p. 78 (1864); Salvadori, Orn. Pap. e Mol. i. p. 303 (1880); Blasius, Birds of Ceram, P. Z. S. 1882, p. 702.
Nanodes placens, Schleg. Mus. P.-B., Psittaci, p. 113 (1864).
Psitteuteles placens, Bonaparte, Rev. et Mag. de Zool. 1854, p. 157; Sharpe, Gould's B. of New Guinea, vol. v. pl. xx. (1876).
Psitteuteles placensis, G. R. Gray, Hand-list, ii. p. 157 (1870).
Trichoglossus placens, Sclater, Journ. Proc. Linn. Soc. ii. p. 164 (1858); Finsch, Papag. ii. p. 872 (1868); Rehnw. Vogelbild. t. xxix. fig. 9 (1878-83).
? *Trichoglossus versicolor*, Wallace, Ibis, 1861, p. 284 (Ceram).
Trichoglossus placensis, Rosenb. Journ. f. Orn. 1862, pp. 61, 62, 65, 67.
Charmosyna placensis, Wallace, P. Z. S. 1864, pp. 292, 295.
Charmosyna (?) placens, Salvadori, Ann. Mus. Civ. Gen. vii. p. 760 (1875).
Charmosyna, sp., D'Alb. Ann. Mus. Civ. Gen. x. p. 9 (1877).
Hypocharmosyna placens, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 74 (1891).

No red, but a yellow band, on the inner web of the quills; cheeks and throat red in the males; no red patch on the upper tail-coverts; wing blue.

Habitat. New Guinea, Salwatty, Waigiou, Guebé, Mysol, Aru, and Ké Islands, Koor, Poulo-Padjang, Gordon, Ceram, Amboyna, Amblau, Bouru (?), Halmahera, Batchian, Ternate.

THIS handsome and very variously coloured bird has a most extensive range. Prof. Schlegel says that it is found in Halmahera, Ternate, Amblau (an island south-east of Bouru), Ceram, Amboyna, Poulo-Padjang (near Ceram Laut), the Ké and Aru Islands, Mysol, Salwatty, Guebé, and Western New Guinea.

As to the name given to this species in any special locality, Dr. Blasius tells us that seven specimens collected by Dr. Platen in Ceram were labelled as follows:—"Native name Parkietschi Klassa."

Wallace ('Malay Archipelago,' 1st edition, vol. [ii. p. 16) gives us the following account of this bird:—"In September 1858, after my return from New Guinea, I went to stay some

time at the village of Djilolo, situated in a bay on the northern peninsula. Here I obtained a house through the kindness of the Resident of Ternate, who sent orders to prepare one for me. The first walk into the unexplored forests of a new locality is a moment of intense interest to the naturalist, as it is almost sure to furnish him with something curious or hitherto unknown. The first thing I saw here was a flock of small Parroquets, of which I shot a pair, and was pleased to find a most beautiful little long-tailed bird, ornamented with green, red, and blue colours, and quite new to me. It was a variety of the *Charmosyna placentis*, one of the smallest and most elegant of the brush-tongued Lories."

The upper parts are of a lively green, save that there is a large bright blue spot in the region of the uropygium. The pileum is yellowish green. The sides of the face and the throat are bright scarlet, behind which brilliant patch of colour is a not less brilliant patch of blue covering the ears. The underparts from the red throat to (and including) the under tail-coverts are yellowish green, but the sides of the breast and the flanks are scarlet. The quills are dusky, but all save the first two have part of their inner web yellow, thus forming a yellow transverse band on the underside of the wing, with black in front of and behind it. The under wing-coverts are scarlet.

The tail, which is very distinctly graduated, is green above, save that the two middle feathers are tipped with red. Beneath the tail-feathers are red at the base, then black, while they are yellow towards the tips. Thus when the tail is expanded it appears traversed by a black mark in the form of the letter **V**, with its apex posterior.

The bill, cere, and feet are represented (by Dr. Platen's label above referred to) as red, and the iris as yellow (probably orange-yellow).

The total length is 7.2 inches, wing 3.75, tail 4, bill 0.5, tarsus 0.4.

The female differs from the male in having the pileum dark green instead of yellowish green, in being devoid of the bright blue patch on the ear-coverts, which are green with radiating narrow yellow streaks, and in having the cheeks and under wing-coverts of a light green.

There are fifteen skins of this species in the British Museum.



Sclater's Lory .
HYPOCHARMOSYNA SUBPLACENS .
1. Male. 2. Female.

Published by R.H. Porter.

3. HYPOCHARMOSYNA SUBPLACENS.

(SCLATER'S LORY.)

[PLATE XLIX. FIG. 1, male; FIG. 2, female.]

Trichoglossus subplacens, Sclater, P. Z. S. 1876, p. 519.*Psittenteles subplacens*, Sclater, in litt.; Sharpe, Gould's B. of New Guin. v. pl. xvii. (1877).*Coriphilus subplacens*, Salvadori, Ann. Mus. Civ. Gen. x. p. 36 (1877); id. Orn. Pap. e Mol. i. p. 310 (1880).*Hypocharmosyna subplacens*, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 75 (1891).

No red, but a yellow band on the inner web of the quills; cheeks and throat red in the males; no red patch on the upper tail-coverts; rump green, without any blue.

Habitat. S.E. New Guinea, New Britain, Duke of York and Fead Islands*.

THE type of this species is the skin described, in 1876, by Dr. Sclater, F.R.S. It was returned to Italy, and is not in the British Museum.

This specimen came from the mountains of Naiabui, in Southern New Guinea.

The upper parts—the occiput, nape, mantle, wings, uropygium, upper tail-coverts, and basal half of the tail—are of a rather dark green. The pileum is of a very yellow-green, while the bases of the feathers of that region are partly red. The cheeks and throat are bright red, and, as in *H. placens*, the red of the cheeks is bounded behind by a patch of bright blue over the ears. Dark green, however, surrounds the eye on all sides. The breast, abdomen, and under tail-coverts are yellowish green. The sides of the breast are bright red. The quills are dusky, but have a patch of yellow on their inner web, which forms a transverse band of yellow on the underside of the open wing, as in the species last described. The under wing-coverts are also bright red. The tail is green above, the two middle feathers being tipped with red; the lateral feathers are red at the base, then banded with black, while they are yellow towards and at their tips.

D'Albertis, who first discovered this Lory, says that the beak and irides are red and the feet reddish yellow.

Count Salvadori, on the authority of Layard, says "bill and feet coral-red; iris orange."

Total length 7 inches, wing 3·7, tail 3·1, bill 0·55, tarsus 0·4.

The female is distinguished by having the pileum of the same colour as the neck and back, no blue patch on the ear-coverts, which are green with radiating yellow streaks. The under wing-coverts are also green instead of red.

* Fead Island is on the east of New Ireland.



1. The New Britain Lory .
 HYPOCHRAMOSYNA RUBRIGULARIS .
 2. 3. The Golden Banded Lory .
 HYPOCHRAMOSYNA AUREOCINCTA .

Published by R.H. Porter.

4. HYPOCHARMOSYNA RUBRIGULARIS.

(THE RED-THROATED LORY.)

[PLATE L. FIG. 1.]

Trichoglossus rubrigularis, Sclater, P. Z. S. 1881, p. 451.*Trichoglossus rufigularis*, Kleinschmidt, in litt.*Coriphilus* (?) *rubrigularis*, Salvadori, Ann. Mus. Civ. Gen. xviii. p. 419 (1882); id. Orn. Pap. e Mol. iii. p. 520 (1882).*Hypocharmosyna rubrigularis*, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 77 (1891).

No red, but a yellow band on the inner web of the quills; only the upper part of the throat red.

Habitat. New Britain.

THERE is no specimen of this Lory in the British Museum, and we are greatly indebted to the kindness of Dr. Kraepelin, of the Museum at Hamburg. He has been so extremely good as to send us two specimens for examination, description, and representation, and the figure here offered by us to our readers is, we believe, the first which has ever been published.

The species was originally described and named by Dr. Sclater. Mr. Kleinschmidt (the collector of the Godeffroy Museum) found this Lory in New Britain: he tells us that the sexes are nearly alike, that the iris is yellowish red, the bill yellowish red, but darker towards the apex, and that the feet are red. He adds that its native name is "Airara." The specimens so kindly sent us by Dr. Kraepelin were two which had been obtained by Kleinschmidt in New Britain.

The upper parts are green—back, wings, uropygium, and tail-coverts; the pileum and nape of a darker grass-green. The cheeks are of a bright yellow-green, while the ear-coverts are green streaked with light bluish green. There is a small spot of vermilion on the lores, which colour extends downwards to the sides of the chin. The throat beneath is red. The breast and abdomen are of a lighter green than the back, and the sides of the body and flanks are yellow washed with emerald-green. The quills are dusky, with a yellow spot on their inner web, which forms a yellow band across the underside of the wing. The under wing-coverts are yellowish green. The tail above is grass-green, but the feathers become yellow towards their tips; the lateral tail-feathers show a patch of vermilion on the inner web, then a dark spot, and the rest yellow, especially on the inner web.

Total length 6·7 inches, wing 3·4, tail 3·2.

5. HYPOCHARMOSYNA AUREOCINCTA.

(THE GOLDEN-BANDED LORY.)

[PLATE L. FIGS. 2 & 3.]

Trichoglossus aureocinctus, Layard, Ann. & Mag. N. H. (4) xvi. p. 344 (November 1875);
 Finsch, Journ. Mus. Godeffroy, Heft xii. p. 3, Taf. i. fig. 1 (1876); Rowley, Orn.
 Miscellany, vol. i. p. 261, pl. xxvi. (1876); Rehnw. Vogelbild. t. xxi. fig. 6 (1878-83).
Trichoglossus (Glossopsitta) amabilis, Ramsay, Proc. Linn. Soc. N. S. W. i. p. 30 (July
 1875) (1877).

Coriphilus aureocinctus, Tristr. Cat. Coll. B. p. 74 (1889).

Hypocharmosyna aureocincta, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 78 (1891).

Underside of quills entirely dusky and with no yellow band; thighs red; face and throat red.

Habitat. Fiji Islands.

THE Golden-banded Lory was made known and named by Mr. Layard in 1875. He says:—
 “This species was first indicated to me by my son, Mr. Leopold Layard, who saw flocks of
 them at Taviuni in company with *Lorius solitarius*, but could not obtain one. A few were
 subsequently shot (I believe at Ovalau) by some one, and one passed into my possession.”

Mr. Ramsay tells us that “this very beautiful species was found at Ovalau by
 Mr. Charles Pearce, who was fortunate enough to procure both sexes from a large tree
 bearing branches of yellow blooms, from this they extracted a honey-like fluid; they had not
 previously made their appearance, and only remained while the tree was in flower. The
 flock consisted of about thirty individuals; the stomach contained nothing but the fluid
 extracted from the blossoms, and a little pollen from the stamens of the flowers.”

Their flight is rapid and their cry is shrill.

The upper parts are green, brightest on the rump. The upper tail-coverts are green.
 The pileum is of a lighter green than the nape and occiput. The cheeks and the throat are
 red, a crimson patch extending from below the eye to the throat and chest. The lower end
 of the throat is traversed by a narrow band of golden yellow. The breast and abdomen are
 green, as are also the under tail-coverts. The quills have the inner web black, bordered
 externally by green. There is no coloured band on the underside of the wing, and the under
 wing-coverts are green. There is a narrow yellow mark on the external border of the wing.
 The tail is green above, save that the apices of its feathers are yellow. The three outer tail-
 feathers are red at the base and yellow towards and at the point, with a small band near the
 antero-posterior middle of each feather; the fourth feather on either side is blackish towards

the base, with a red spot, but also yellow towards the point; the others are black at the base and yellow towards and at the point.

Mr. Layard informs us that the "bill and feet are red" and "the iris dark buff."

Total length 6·9 inches, wing 3·6, tail 3·15, bill 0·55, tarsus 0·4.

The female does not differ from the male.

Of the five specimens in the British Museum two have the collar very distinctly marked; it is decidedly less so in the other three, yet as these latter include both sexes the difference cannot indicate any difference between females and males. All five skins came from Mr. Layard.



The Kordo Lory.
HYPCHARMOSYNA KORDOANA.
1. Male. 2. Female.

Published by R.H. Porter.

6. HYPOCHARMOSYNA KORDOANA.

(THE KORDO LORY.)

[PLATE LI. FIG. 1, male; FIG. 2, female.]

Trichoglossus (Charmosyna) kordoanus, Meyer, Verh. z.-b. Gesellsch. Wien, xxiv. p. 38 (1874).

Trichoglossus kordoanus, Rehnw. Journ. f. Orn. 1881, p. 151.

Nanodes rubronotatus (part.), Schleg. Mus. P.-B., Psittaci, Revue, p. 51 (1874).

Coriphilus kordoanus, Salvadori, Ann. Mus. Civ. Gen. x. p. 36 (1877); id. Orn. Pap. e Mol. i. p. 313 (1880).

Psitteuteles rubronotatus (female; male?), Sharpe, Gould's Birds of New Guinea, v. pl. xvi. (1877).

Charmosyna ? kordoana, Salvadori, Ann. Mus. Civ. Gen. vii. p. 912 (1875).

Hypocharmosyna kordoana, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 77 (1891).

A yellow band on the inner web of the quills; cheeks green; a bright red patch on the upper tail-coverts; the female with bright green streaks on the ear-coverts; ear-coverts of the male blue.

Habitat. Mysore and adjacent islands in Geelvink Bay.

OF this species the British Museum only possesses a single specimen, which happens to be a female. Having, in this difficulty, addressed ourselves to Count Salvadori, he, being away on his vacation, referred us to Dr. Raphael Gestro, of Genoa, who, with ready kindness, immediately transmitted to us the finest specimen of the male of this species which was in his possession.

The male has the upper parts dark green with a bronzy shade, except that the forehead and upper tail-coverts are very bright red. The ear-coverts are blue. The cheeks and chin are yellowish green, and a continuation of this colour intervenes between the eye and the blue patch over the ears and continues on to the end of the upper border of the blue, where it meets the dark green of the nape. The breast, abdomen, thighs, and under tail-coverts are yellowish green, but the upper parts of the sides of the breast are red. The scapulars and upper wing-coverts are like the back, but the quills are dusky, with a yellow patch on the inner web, producing a yellow band beneath the open wing. The under wing-coverts are red. The tail is green above, the two middle feathers with yellow tips; the lateral tail-feathers are green on the outer web, red at the base of the inner web, and this is succeeded by a black spot, beyond which the feathers are yellow.

According to Dr. Meyer the living bird has the iris of a fine yellow colour, that of the beak and cere is a handsome red, the feet are of a lighter red, and the claws are grey.

Total length 6·48 inches, wing 3·18, tail 2·75, bill 0·51, tarsus 0·43.

The female has the ear-coverts green, with narrow streaks of a yellower brighter green, and the red spot on the upper tail-coverts is broader; the under wing-coverts are green, a trifle lighter in tint than the green of the breast and belly, while the side of the breast is of a very yellow-green shade. The forehead is not red but green, almost yellow just above the bill.

The young male is said to have the forehead of a pale red, with hardly any red on the sides of the breast, while the ear-coverts are green.



The Red-Marked Lory .
HYPOCHARMOSYNA RUBRONOTATA .

Published by R.H. Porter.

7. HYPOCHARMOSYNA RUBRONOTATA.

(THE RED-MARKED LORY.)

[PLATE LII., both Figures male.]

Coriphilus rubronotatus, Wallace, P. Z. S. 1862, p. 165; Salvadori, Orn. Pap. e Mol. i. p. 311 (1880).

Nanodes rubronotatus (part.), Schleg. Mus. P.-B., Psittaci, Revue, p. 51 (1874).

Trichoglossus rubronotatus, Finsch, Papag. ii. p. 876 (1868); Rehnw. Vogelbild. t. xxix. fig. 1 (1878-83).

Psitteuteles rubronotatus, G. R. Gray, Hand-list, ii. p. 157 (1870).

Charmosyna rubronotata, Wallace, P. Z. S. 1864, pp. 293, 294.

Hypocharmosyna rubronotata, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 76 (1891).

No red, but a yellow band on the inner web of the quills; cheeks and throat red in the males; a dull red patch on the upper tail-coverts; the female with yellow streaks on the ear-coverts.

Habitat. Salwatty and Western New Guinea.

OUR Plate represents the type of the species, which was obtained by its first describer, Dr. Wallace, in the island of Salwatty.

This Lory is very like *H. kordoana*. The upper parts, including the scapulars and upper wing-coverts, are dark green, with a bronzy tinge (as in the last-named species), and the forehead is bright red; there is also a patch of duller red on the tail-coverts, but this is less extended than in *H. kordoana*. The cheeks, chin, and underparts are yellowish green, darker, however, than in the last-named form, but the green is similarly continued backwards between the eye and the auriculars, which are blue. Below and in front of the latter (on the cheeks) there are some streaks of yellow-green. The breast, abdomen, and under tail-coverts are yellowish green, as also the thighs, save that they are a trifle more grass-green; the breast has, on either side, a very bright red patch. The quills are dusky, but with a yellow patch on the inner web, forming a yellow band beneath when the wing is expanded. The under wing-coverts are bright crimson. The tail is dark green above, mainly yellow beneath, with black spots, which together tend to form a letter V. The lateral tail-feathers are red at the base of the inner web, which is succeeded by a black spot, beyond which the feathers are yellow.

The bill is red, the iris yellow-red, and the feet dull red.

Total length 6.6 inches, wing 3.3, tail 2.7, bill 0.5, tarsus 0.6.

The female is said to be like the male, except that there is no red on the forehead. The sides of the breast and the under wing-coverts are yellowish green; the ear-coverts are green with yellow streaks.

Salvadori says that the young male is "like the female, but with the forehead, sides of the breast, and under wing-coverts more or less mingled with red ; ear-coverts with streaks partly bluish green and partly yellow."

There is but one specimen in the British Museum. It is the skin of a male bird.



1. The Palm Lory.
HYPOCHARMOSYNA PALMARUM.
2. The Pigmy Lory.
HYPOCHARMOSYNA PYGMÆA.

Published by R. H. Porter

8. HYPOCHARMOSYNA PALMARUM.

(THE PALM LORY.)

[PLATE LIII. FIG. 1.]

Palm Parrot, Latham, Syn. i. p. 253 (1781).*Psittacus palmarum*, Gmelin, Syst. Nat. i. p. 329 (1788).*Nanodes* ? *palmarum*, Stephens in Shaw's Gen. Zool. xiv. 2, p. 120 (1826).*Loriculus* ? *palmarum*, Bonaparte, Rev. et Mag. de Zool. 1854, p. 155.*Cyclopsitta* ? *palmarum*, Bonaparte, Naumannia, Consp. Psitt. (1856).*Trichoglossus palmarum*, Wagl. Monog. Psitt. p. 546 (1832); Finsch, Papag. ii. p. 868 (1868); Brenchley, Cruise of the 'Curacoa,' p. 384, pl. 16 (1873).*Coriphilus palmarum*, Tristr. Cat. Coll. B. p. 74 (1889).*Hypocharmosyna palmarum*, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 78 (1891).

Underside of quills entirely dusky and with no yellow band; thighs green; some red round the base of the bill.

Habitat. New Hebrides.

THE Palm Lory is a species which has been very long known, having been described by Latham in 1781; but nothing, so far as we can ascertain, has been recorded with respect to its habits.

It is a very plain bird compared with most Lories.

The colour of the upper parts is that of a dark grass-green, somewhat olive-brown on the mantle. The cheeks are lighter than the pileum and are streaked with bright emerald-green. The feathers round the base of the bill to the chin are red. The underparts are yellowish green, including the under tail-coverts and thighs. The quills have the inner web black, with a very narrow yellow border, so that the open wing shows no transverse yellow band. The under surface of the wing is blackish, and the under wing-coverts greyish green.

The tail is green above with a yellow tip; the underside of the tail is yellow, more or less blackish in its basal half.

The bill is pale red; the feet are said by Finsch to be flesh-coloured, but Salvadori (on the authority of Richards) says they are dull orange, and the iris bright orange. According to Finsch the iris is red.

Total length 7·5 inches, wing 3·7, tail 3·3, bill 0·5, tarsus 0·5.

The female differs from the male in having very little red round the base of the bill.

There are five specimens in the British Museum.

9. HYPOCHARMOSYNA PYGMÆA.

(THE PYGMY LORY.)

[PLATE LIII. FIG. 2.]

Pygmy Parrakeet, Latham, Syn. i. pt. 1, p. 256 (1781).

Psittacus pygmæus, Gmelin, S. N. i. p. 330 (1788).

Trichoglossus pygmæus, Pelzeln, Sitzb. Ak. Wiss. Wien, xx. p. 165 (1856); Finseh, Papag. ii. p. 870 (1868); Pelzeln, Ibis, 1873, p. 31, pl. i.

Hypocharmosyna pygmæa, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 79 (1891).

Underside of quills entirely dusky and with no yellow band; thighs green; no red round the base of the bill.

Habitat. Unknown.

THIS species was originally described by Latham in 1781 under the name of "the Pygmy Parrakeet." As to its locality, he remarks that it "inhabits some of the *islands* in the *South Seas*. The specimen described was said to have come from *Otaheite*."

This skin, however, was subsequently observed by Dr. Finseh to be labelled "Botany Bay."

No other specimen has ever been obtained, and the unique type which, when described by Latham, was in the Museum of Sir Ashton Lever, Kt. (known as the Museum Leverianum), passed by purchase into the Imperial Museum at Vienna. Through the great kindness of Dr. Ludwig V. Lorenz (with the consent of Dr. F. Steindaehner) we have been able to figure the undoubted type of *H. pygmæa*; for Dr. Lorenz sent us this unique and valuable specimen for that purpose. A figure, said to be of this species, was published by Pelzeln in the 'Ibis' for 1873, but, strange to say, this has not been found to agree with the skin we recently received from Vienna. We have therefore caused the latter to be drawn and coloured with greatest possible care.

It is very like *H. palmarum*, but differs in not having any red round the base of the bill, and also by its smaller size. The latter difference is not evident in our Plate, the figure of *H. pygmæa* having been represented therein as nearer the spectator than that of *H. palmarum*.

It may be described as follows:—Above grass-green, inclined to emerald-green on the head, even to bluish; the underpart of the body is yellowish green. The bases of many of the feathers of the abdomen are yellow. The tail is grass-green, washed with emerald-green. The sides of the face and ear-coverts, as well as the eyebrows, are streaked with bright emerald-green. The wing-coverts are like the back. The quills are dusky, externally grass-

green, olive-green towards the apex and on the inner web. The tail-feathers are grass-green, with rather extensive yellow tips; on the outer feathers the yellow portion is slightly shaded externally with green.

The bill appears to be reddish, and the feet yellowish.

Total length 5·8 inches, wing 3·5.

It is possible, however, that *H. pygmaea* may not be a distinct species. Mr. E. Layard was of opinion that this typical specimen was a skin of the female of *H. palmarum*: this view, however, since we have had the specimen in London, we are not disposed to adopt.



The Diademed Lory.
HYPOCHARMOSYNA DIADEMATA.

Published by R. H. Porter.

10. HYPOCHARMOSYNA DIADEMATA.

(THE DIADEMED LORY.)

[PLATE LIV., both Figures female.]

Psittuteles diadema, Verreaux et O. Des Murs, Rev. et Mag. de Zool. 1860, p. 390, & 1862, p. 132; Oustalet, Bull. Soc. Philom. Paris, iii. p. 218 (1879).

Trichoglossus diadema, G. R. Gray, Hand-list, ii. p. 157 (1870).

Trichoglossus diadematus, Finsch, Papag. ii. p. 867 (1868).

Glossopsittacus diadematus, Salvadori, Cat. of Birds in Brit. Mus. xx. p. 68 (1891).

Crown blue; forehead green; cheeks and throat yellow; a red spot on the crissum.

Habitat. New Caledonia.

THIS beautiful species was first described by MM. Verreaux and O. Des Murs in 1860, and they regarded it as a species of *Psittuteles*, while Dr. Finsch considered it to be a *Trichoglossus*. Count Salvadori placed it in the genus *Glossopsittacus*, but with doubt, saying, "I am not at all sure about its genetic characters, and it may possibly belong to the genus *Hypocharmosyna*." M. E. Oustalet (Dr. ès Sciences, Assistant au Muséum d'Hist. Nat., Jardin des Plantes, Paris) was of opinion that this species, on account of the form of its quills, ought rather to be placed in the genus *Charmosyna* than in that to which Salvadori thought it might possibly belong.

No specimen exists in the British Museum, and the type of the species, a female skin, is preserved in the Colonial Collection in the Palais de l'Industrie at Paris. M. E. Oustalet, however, at the request of Professor Milne-Edwards, has been so very kind as to send us this specimen, and thus we are able not only to figure the bird for the first time, but thereby also to figure the type of the species.

On its receipt we were very anxious to arrive at a correct judgment respecting the generic affinities of the bird, as to which such high authorities in ornithology as Count Salvadori and M. E. Oustalet have taken different views. Being extremely diffident as to our own judgment in the presence of these conflicting opinions, we had recourse to our esteemed friend Dr. R. Bowdler Sharpe, F.L.S., who thereupon was kind enough to study the question with special care, comparing the specimen with all those of the genera *Glossopsittacus*, *Hypocharmosyna*, *Charmosynopsis*, and *Charmosyna* preserved in the National Collection. He came to the conclusion, after full consideration of the shape of the feathers of the wing and all other points, that it should be placed in the genus *Hypocharmosyna*. Relying therefore on the preponderance of authority thus produced—for no single opinion could be more worthy of esteem than that of the distinguished ornithologist of the

British Museum—we have decided to adopt his judgment and to name it *Hypocharmosyna diademata*.

The colour of its bill contrasts strongly with that of all the undoubted species of the genus *Glossopsittacus*.

The habitat of *H. diademata* also—though exceptional—seems less to accord with that of the species of the last-named genus than with the range of the genus *Hypocharmosyna*, which includes the New Hebrides.

It appears that the natives of its island home—New Caledonia—give it the name of “*Kinkin-kunatu*.”

The colour of the upper parts is grass-green, darker and with a shade of brown on the mantle. The tail-coverts are emerald-green. The forehead is of an emerald-green; behind this the vertex and occiput are of an ultramarine-blue. The cheeks, chin, and upper part of the throat are almost yellow, so slight is the tint of green. The ear-coverts are grass-green, with emerald-green streaks. The breast, abdomen, thighs, and under tail-coverts are yellowish green, but there is a scarlet spot on the vent. The quills are brownish and green, the primaries being bordered with very dark green. There is no yellow spot and no yellow band on the under surface of the open wing, which is blackish, save that the under wing-coverts are of a yellowish-green tint. The tail-feathers are dark green above washed with emerald-green, and so form a contrast to the lighter-coloured upper tail-coverts; they are yellow, slightly greenish, for a considerable space (especially on the inner web) towards their tips, save the two median feathers, which have the yellow part shorter. The outer tail-feathers on each side have the inner web reddish at the base, then black for a short space, and finally yellow tinged with green, which is the tint of the whole under surface of the tail when its feathers are not expanded. The bill is said to be “long and much arched and pointed”; but in our specimen the apex was broken; its colour appears to be orange.

Total length 7·9 inches, wing 3·75, tail 3·6, bill 0·55, tarsus 0·4.

CHARMOSYNOPSIS.

POINTED-TAILED LORIES.

Charmosynopsis, Salvadori, Ann. Mus. Civ. Gen. x. p. 37 (1877).

Type of the genus : *C. pulchella*.

Generic characters.—Tail-feathers twelve; point of maxilla long, but not thin; tail-feathers gradually tapering to a point more or less acute; predominant colour on the head, neck, and lower parts red; the two middle tail-feathers not much longer than the lateral ones; the primaries not abruptly attenuated towards their tips. (*Cf.* Salvadori, Cat. of Birds in Brit. Mus. *l. c.*)

Range. New Guinea and Solomon Islands.

THE Pointed-tailed Lories are not only remarkable for the character their English name implies, but also for their brilliant appearance and bright hues of red and yellow as well as green.

In their geographical distribution one of them (*C. margaritæ*) is found in the area so singularly left unoccupied—so far as yet known—by the species of the genus *Hypocharmosyna*, namely that of the Solomon Islands.



The Fair Lory.
CHARMOSYNOPSIS PULCHELLA.
1. Male. 2. Female.
Published by R.H. Porter.

1. CHARMOSYNOPSIS PULCHELLA.

(THE FAIR LORY.)

[PLATE LV. FIG. 1, male; FIG. 2, female.]

Charmosyna pulchella, G. R. Gray, List Psitt. Brit. Mus. p. 102 (1859); Sharpe, Gould's B. of New Guinea, vol. v. pl. xiii. (1876).

Charmosyna pectoralis, Rosenb. Journ. f. Orn. 1862, p. 64.

Eos pulchella, Schleg. Dierent. p. 69 (1864).

Lorius pulchellus, id. Mus. P.-B., Psittaci, p. 130, note (1864).

Nanodes pulchellus, id. Mus. P.-B., Psittaci, Revue, p. 52 (1874).

Coriphilus pulchellus, Finsch, Neu-Guin. p. 158 (1865).

Trichoglossus pulchellus, Finsch, Papag. ii. p. 877 (1868); id. in Rowley's Orn. Misc. vol. i. p. 149, pl. xvii. (1876); Rehnw. Vogelbild. t. xxix. fig. 3 (1878-83).

Psitteuteles pulchellus, G. R. Gray, Hand-list, ii. p. 157 (1870).

Charmosynopsis pulchella, Salvadori, Ann. Mus. Civ. Gen. x. pp. 37, 123 (1877); id. Orn. Pap. e Mol. i. p. 317 (1880), iii. p. 520 (1882); id. Cat. of Birds in Brit. Mus. xx. p. 79 (1891).

No yellow collar round the base of the neck.

Habitat. New Guinea.

SALVADORI considers that this species probably inhabits the whole of New Guinea. It was discovered by Dr. Wallace at Dorey, but nothing is known of its habits. Baron Rosenberg declares it to be there plentiful. Dr. Meyer collected specimens on the west coast of Geelvink Bay and at an elevation of 3500 feet in the Arfak Mountains.

In this bird the upper parts (back, wings, and upper tail-coverts) are grass-green. The uropygium is blackish, with a shade of purple in the middle, on either side of which colour there is red. The occiput and nape are purplish black, the rest of the head, the back of the neck, the lores, cheeks, ear-coverts, and chin are carmine-red; the same brilliant tint is spread over the underparts to, and including, the under tail-coverts. The breast and flanks are marked with narrow bright yellow streaks. The thighs appear dark violet, for the edges of the feathers are of that tint, though nearer the shaft the feathers are dark green. The quills are black underneath, but the under wing-coverts are red. The tail is red, green, and yellow above. The central tail-feathers are carmine-red, green at the base, and with yellowish tips; the lateral feathers are largely carmine, but their outer webs are edged with green, but the whole of the lateral feathers become bright yellow towards and at the tips.

The female is like the male, except that there is a yellow instead of a red patch on either side of the purplish-black uropygium.

In the immature bird the breast and nape are said to be partly green.

There are seven specimens in the British Museum. The specimen marked 59.4.8.42 shows only a trace of bright shaft-streaks on the breast, and they are but slightly indicated in the skin (marked 83.3.8.87) from the Astrolabe Mountains.



Margarets Lory.
CHARMOSYNOPSIS MARGARITÆ.

Published by R.H. Porter.

2. CHARMOSYNOPSIS MARGARITÆ.

(MARGARET'S LORY.)

[PLATE LVI., both Figures female.]

Charmosyna margarethæ, Tristram, Ibis, 1879, p. 442, pl. xii.*Charmosyna margaritæ*, Salvadori, Ibis, 1880, p. 130; Sharpe, Gould's B. of New Guinea, vol. v. pl. xi. (1884).*Charmosyna margarethæ*, Tristram, Ibis, 1882, p. 143.*Trichoglossus margaritæ*, Rehnw. Journ. f. Orn. 1881, p. 396; id. Vogelbild. t. xxix. fig. 7 (1878-83).*Charmosynopsis margaritæ*, Salvadori, Orn. Pap. e Mol. i. p. 319 (1880), iii. p. 520 (1882); id. Cat. of Birds in Brit. Mus. xx. p. 81 (1891).

A yellow collar round the base of the neck.

Habitat. Solomon Islands (Ugi and San Cristoval).

THIS species was discovered by Lieut. Richards, R.N., in the Solomon Islands.

There is no specimen in the British Museum, and for having been enabled to figure the species we are indebted to the ready kindness of Canon Tristram. It was he who first described the species and gave it the name it bears in complement to H.R.H. the Duchess of Connaught, who had then recently been his guest.

It is owing to an unfortunate circumstance, vexatious to us and far more vexatious to Canon Tristram, that we are unable to offer to our readers a figure of the male. The Rev. Canon possessed a fine male skin, but it was stolen by a sweep and never recovered.

Fortunately, however, there appears to be very little difference between the sexes. In the male the sides of the lower back are crimson, in the female they are (as represented in our Plate) orange-yellow. In the male the rump and upper tail-coverts are green washed with golden, in the female they are of an olive tint.

The colours of the female are as follows:—The back and wings above are bright grass-green, the rump and upper tail-coverts are olive, while the sides of the lower back are orange-yellow. The forehead and front part of the vertex are crimson, as are also the occiput and nape; interposed between these anterior and posterior red portions of the head is a cap of purplish black covering the hinder portion of the vertex and descending on either side very nearly to the eye, which is, however, separated from it by a narrow strip of crimson, which tint is spread over the lores, sides of the face, cheeks, ear-coverts, sides of the neck, and entire throat. The neck and throat are bounded posteriorly by a narrow band of purplish black, narrowest at its median ventral portion; immediately behind this succeeds a broad

band of orange-yellow, which is also narrowed in front and broadest on either side; this orange-yellow collar is again bounded behind by another narrow band of purplish black, which extends across the breast and upwards on either side to the axilla. The breast, abdomen, thighs, and basal under tail-coverts are crimson, the larger under tail-coverts are grass-green. The sides of the lower back are orange-yellow, with crimson tips to a few of the feathers. The quills are mainly black underneath, but there is more or less olive-yellow on the inner webs. The primary under wing-coverts are black, but the axillaries and smaller under wing-coverts are crimson. The edges of the wing are grass-green. The median tail-feathers are crimson, slightly tipped with yellow. The lateral tail-feathers have a larger extent of yellow proceeding from the middle tail-feathers outwards; they have an external margin of grass-green and a black margin internally. Bill red, feet orange.

Total length 7.5 inches, wing 4.25, tail 3.25, culmen 0.7, tarsus 0.4.

CHARMOSYNA.

LONG-TAILED LORIES.

Charmosyna, Wagler, Mon. Psitt. p. 493 (1832).

Type of the genus: *C. papuensis*.

Generic characters.—Tail-feathers twelve; point of maxilla long but not thin; tail-feathers gradually tapering to a point, more or less acute; predominant colour on the head, neck, and lower parts red; the two middle tail-feathers generally much longer than the lateral ones, and very narrow towards the tip; the primaries, especially the first four or five, abruptly attenuated towards the tips in adult birds. (*Cf.* Salvadori, Cat. of Birds in Brit. Mus. *l. c.*)

Range. New Guinea, from the north-west to the south-east.

IN shape these birds seem to us more elegant than any other of the Lories, while in brilliance and variety of coloration they are inferior to very few. They all have the wings above and interscapular region dark green, a great part of the body crimson, and the abdomen and thighs purplish black. The head is always red in front, succeeded by a patch more or less blue, with a transverse black band behind it. It is a singular fact, ascertained by Count Salvadori*, that in young birds of this genus the quills are not attenuated towards their tips, while in the adults of both sexes the first five quills are very remarkably and suddenly so attenuated.

The genus is remarkable for being entirely confined to New Guinea, where individuals may be met with at great altitudes.

* See Salvadori's Orn. Pap. e Mol. i. pp. 320-326.



Papuan Lory.
CHARMOSYNA PAPUENSIS .
1. Male. 2. Female .

Published by R. H. Porter.

1. CHARMOSYNA PAPUENSIS.

(THE PAPUAN LORY.)

[PLATE LVII. FIG. 1, male; FIG. 2, female.]

- Avis paradisiaca orientalis*, Seba, Thes. i. t. 60. figs. 1, 2 (1734).
Pica paradisi, Klein, Hist. Av. Prodr. p. 63 (1750).
Papouan Lory, Latham, Syn. i. p. 215, with varr. A, B, C (1781).
Le petit Lory Papou, Sonnerat, Voy. à la Nouv. Guin. p. 175, pl. 111 (1776).
La perruche Lori Papou, Levaill. Perr. ii. pl. 77 (1801).
Psittacus papou, Scop. Del. Flor. et Faun. Insubr. ii. p. 86 (1786).
Psittacus papuensis, Gmelin, Syst. Nat. i. p. 317, with varr. β , γ , δ (1788).
Psittacus omnicolor, Licht. Cat. rer. nat. rariss. Hamb. p. 5 (1793).
Psittacus lichtensteinii, Bechst. Kurze Uebers. p. 83 (1811-12).
Psittacus (Belocercus) papuensis, S. Müll. Verh. Land- en Volkenk. p. 471 (1839-44).
Palæornis papuensis, Vigors, Zool. Journ. ii. p. 56 (1825).
Pyrrhodes papuensis, Swainson, Class. B. ii. p. 304 (1837).
Eos papuensis, Schleg. Dierent. p. 69 (1864).
Trichoglossus papuensis, Finsch, Papag. ii. p. 878 (1868); Rchnw. Vogelbild. t. xxix. fig. 5 (1878-83).
Nanodes papuensis, Schleg. Mus. P.-B., Psittaei, Revue, p. 53 (1874).
Lorius papuensis, Lesson, Tr. d'Orn. p. 195 (1831).
Lorius papuanus, Rosenb. Reist. naar Geelvinkb. pp. 113, 114 (1875).
Charmosina papuensis, Bonaparte, Consp. Av. i. p. 3 (1850).
Charmosyna papua, G. R. Gray, Gen. B. ii. p. 416 (1845).
Charmosyna papuana, Sclater, Journ. Pr. Linn. Soc. ii. p. 165 (1858).
Charmosyna papuensis, Wagl. Mon. Psitt. p. 555 (1832); Selby, Nat. Libr., Parrots, p. 149, pl. 19 (1836); Sharpe, Gould's B. of N. Guinea, v. pl. xiv. (1876); Salvadori, Orn. Pap. e Mol. i. p. 320 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 82 (1891).

Middle tail-feathers green at the base, a patch of yellow on the sides of the breast.

Habitat. North-western New Guinea.

THIS very handsome species is one of the Lories which has been longest known, having been figured by Seba. His figure is a curious one, representing the bird as it used to be prepared by the natives themselves. G. R. Gray in one of his works ('Catalogue of Birds of Tropical Islands &c.,' p. 32) gives New Ireland as its habitat. This, however, he did not else-

where repeat, and it is probably erroneous. Dr. Finsch (in his book on New Guinea, p. 157, 1865) speaks of Waigiou, but this is not repeated in his very excellent work 'Die Papageien.'

Nothing is known of the habits of this species, and it is not easily obtained, frequenting, as it does, the woods of mountains. Indeed, Rosenberg affirms that it is not met with below 2500 feet. It extends up to about 6000 feet above the sea. The natives in the vicinity of Dorey nevertheless use its feathers as ornaments.

The interscapular region of the back and the wings are dark green. The entire head and neck are carmine-red, save that there is a transverse blue band across the vertex, bordered behind with a co-extensive, and about as broad, black band. A second, similarly shaped and extended, black band crosses the lower part of the nape, being separated from the more anterior black band by a broad band of the crimson of the surrounding parts interposed. The lower part of the back, the uropygium, and some of the upper tail-coverts are blue. The longer tail-coverts are green. On either side of the blue patch, the rump and the sides of the back are red. The breast, both middle and sides, is crimson, so that there is a patch of yellow on the front part of either side of the breast, and there is also a patch of yellow on either flank. The middle of the abdomen and the thighs are black. The quills are entirely black beneath, but the axillaries and under wing-coverts are red. The middle feathers of the tail are dark green, becoming yellowish red towards the tip; the lateral tail-feathers are red at the base of the inner web and green on the edge of the outer web, becoming yellow towards the point. Bill orange-red; feet orange; iris yellow.

Total length 14.93 to 16.9 inches, wing 5.3, tail from 8.23 to 10.6, bill 0.65, tarsus 0.51.

In the female the red feathers on the sides of the rump are yellow at the base, and there is a yellow-orange patch over the yellow spot above the thighs. According to Count Salvadori, the young have narrow black edges to the red feathers of the neck and breast, and the abdomen, thighs, and a spot on the occiput dark green.

A considerable degree of variation exists between the skins preserved in the British Museum. Two have conspicuous yellow feathers irregularly scattered on the ventral surface, tending to form a transverse band across the abdomen and a much less marked one across the breast; thus here the two lateral yellow patches before described as existing on either side tend to unite medianly. In two others the colour of the wings above is much lighter than that of the back. Skin S9.1.20.114 is much brighter coloured and more golden beneath than in the other specimens. The extent and shape of the black on the belly also varies. In skin 38.11.13.3 there is no transverse black band on the nape, while in skin 37.7.15.71 it only reaches half across the neck.

We found one very puzzling skin, as its wings were largely ultramarine blue. We consulted Count Salvadori on the subject, who kindly informed us that he knew no such variety, and suggested that the wings might belong to a bird of another species, and such we believe to be the case.



Stella's Lory.
CHARMOSYNA STELLÆ .
1. Male 2. female.

Published by R.H. Porter.

2. CHARMOSYNA STELLÆ.

(STELLA'S LORY.)

[PLATE LVIII. FIG. 1, male; FIG. 2, female.]

Charmosyna josephinae, Sharpe (nec Finsch), Journ. Linn. Soc., Zool. xvi. p. 428 (1882).

Trichoglossus papuana, Ramsay (nec Finsch), Proc. Linn. Soc. N. S. W. p. 244 (1885).

Trichoglossus josephinae, id. loc. cit.

Charmosyna stellae, Meyer, Zeitschr. f. ges. Orn. 1886, p. 9, Taf. ii.; Sharpe, Gould's Birds of N. Guinea, vol. v. pl. xv. (1888); Salvadori, Cat. of Birds in Brit. Mus. xx. p. 83 (1891).

Middle tail-feathers green at the base; no yellow patch on the sides of the breast.

Habitat. South-eastern New Guinea.

THIS species was first determined and described by Dr. Meyer, who named it after Baroness Stella Erggelet.

It seems to be the representative in Southern New Guinea of the Papuan Lory of the north of that island. It appears to be abundant in the Astrolabe Mountains, where many specimens were obtained by Mr. Forbes, and whence Mr. Ramsay received others. Dr. Meyer's specimens came from the Owen Stanley Mountains. The native name, Dr. Sharpe says (on the authority of Mr. Goldie), is "Diou."

The wings and the interscapular region of the back are dark grass-green. The rest of the back, uropygium, and upper tail-coverts are crimson, save that there is a patch of blue and purple on the rump. The forehead and crown of the head are crimson. The occiput bears a patch of long lilac-blue feathers, and the nape is black in the shape of a black band advancing forwards on either side to just behind the eye; behind this the neck, to the interscapular region, is crimson, as are also the ear-coverts, cheeks, chin, throat, and upper breast. The lower breast, abdomen, and thighs are black, with a blue gloss, especially on the thighs. A small patch of green feathers exists on either side of the upper breast just in front of the black coloration. On each flank there are a few white streaks surrounded with blue. The lower abdomen, vent, and under tail-coverts are crimson. The quills are blackish beneath; the edge of the wing is green and the axillaries and under wing-coverts are crimson. The tail is mainly dark green above; the two very long central feathers become first red, then orange, and, lastly, yellow towards their ends; the lateral feathers are yellow towards their ends, the base of the inner web being crimson.

The bill is red and the feet orange.

Total length 15·5 inches, wing 5·6, tail (longest feathers) 10·4, bill 0·8, tarsus 0·55.

The female has the lower back and sides of the rump bright yellow, surrounded below with green.

The young resembles the male and, like it, has a crimson lower back, but the crimson feathers of the hind neck and breast are margined with purplish blue, and the blackish abdomen is washed with green and has blue endings to the feathers. (*Sharpe.*)

According to Salvadori, the young male has the crimson feathers of the neck and breast margined with purplish, the abdomen and thighs are more or less green and blue, and the back yellow with more or less red.

The six specimens in the National Collection show no noteworthy differences other than what are due to sex and age.



Josephine's Lory .
CHARMOSYNA JOSEPHINÆ .
1. Male. 2. Female .

Published by R. H. Porter .

3. CHARMOSYNA JOSEPHINÆ.

(JOSEPHINE'S LORY.)

[PLATE LIX. FIG. 1, male ; FIG. 2, female.]

Trichoglossus josephinæ, Finsch, Atti Soc. Ital. Sc. Nat. xv. p. 427, tav. 7, female (1873);

Rehnw. Vogelbild. t. xxix. fig. 6 (1878-83).

Charmosyna josephinæ, Sharpe in Gould's B. of New Guin. vol. v. pl. xii. (1876); Salvadori, Orn. Pap. e Mol. i. p. 325 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 84 (1891).

Middle tail-feathers red, with no green at the base.

Habitat. North-western New Guinea.

THIS very handsome Lory was first described and named by Dr. Finsch in 1873. He does not tell us why he named it *josephinæ*. He received the type of the species from Count Ercole Turati, of Milan, and it is preserved in the celebrated museum of the brothers Turati. Count Turati had obtained it from M. Laurent de Greaux, of Marseilles, who had bought it in London. Dr. Finsch suspected that the bird had come originally from New Guinea, and this suspicion was curiously confirmed by the fact that he found in the Bremen Museum some native head-dresses ornamented with the feathers of this species as well as of *C. papuensis*. The origin of these head-dresses was made known to him by M. H. von Rosenberg, who assured him that they were worn by natives of the interior of New Guinea.

Dr. Sharpe quotes the following note, which he had received from Dr. Meyer:—“I found this bird on my voyage to New Guinea in June 1873, on the west coast of Geelvink Bay, when it was seen near the sea-shore in large flocks; but in no other spot, during my residence in the island, did I meet with it. The nearly allied *C. papuensis* has, up to the present, only been found in the mountainous districts of New Guinea; and perhaps this smaller species represents it in the lowlands. Young birds have the breast undulated with blackish and green, and in some females the black of the belly is strongly mixed with olive-green. In life, the bill, feet, and irides are deep orange-red, the claws and the naked part round the eye greyish black. In the stomach I only found juice of plants.”

The wings and interscapular region are again dark green, and almost all the rest of the body is carmine-red. There are long rather dark blue feathers on the occiput, bounded behind by a black band extending forwards to just behind the eye; there is also a patch of dull blue on the anterior upper tail-coverts, the posterior ones are crimson. The middle of the abdomen and the thighs are purplish black. Some yellow streaks show themselves on the red flanks, just above the thighs. The crimson colour interposes between the black nuchal band and

the interscapular patch of green, and between the latter and the blue of the anterior upper tail-coverts. The under tail-coverts are crimson. The quills have the external web grass-green, the internal web being dull black. The wing is black underneath, save that the under wing-coverts are crimson. The tail (which is much shorter than in the other species of the genus) has its two median and longer feathers red with yellow tips. The lateral feathers are red at the base (for a large extent on the inner web), then dark green, and, finally, and for a considerable length, bright yellow.

The bill is red, the feet and iris yellow.

Total length 10·22 inches, wing 4·9, tail 4·7, bill 0·72, tarsus 0·55.

The female is distinguished by having the rump and flanks yellow.

OREOPSITTACUS.

THIN-BILLED LORIES.

Oreopsittacus, Salvadori, Ann. Mus. Civ. Gen. x. p. 37 (1877).

Type of the genus: *O. arfaki*.

Generic characters.—Tail-feathers fourteen; point of maxilla very thin as well as long; bill black.

Range. Arfak Mountains, New Guinea.

THE single species which constitutes this genus differs remarkably from all other Lories by having two additional feathers to the tail and the maxilla exceedingly thin towards its apex. Its coloration (red, green, and blue) is attractive, and it is distinguished by having the apices of the tail-feathers red instead of yellow.

Like the last-named genus (and in this like no other genus of the family) it is entirely confined to New Guinea.

OREOPSITTACUS.

THIN-BILLED LORIES.

Oreopsittacus, Salvadori, Ann. Mus. Civ. Gen. x. p. 37 (1877).

Type of the genus: *O. arfaki*.

Generic characters.—Tail-feathers fourteen; point of maxilla very thin as well as long; bill black.

Range. Arfak Mountains in the north, and Victoria Mountain in south-east, of New Guinea.

THE two species which constitute this genus differ remarkably from all other Lories by having two additional feathers to the tail and the maxilla exceedingly thin towards its apex. Their coloration (red, green, and blue) is attractive, and they are distinguished by having the apices of the tail-feathers red instead of yellow.

Like the last-named genus (and in this like no other genus of the family), its component species are entirely confined to New Guinea.



Arfak Lory.
OREOPSITTACUS ARFAKI .
1. Male. 2. Female .

Published by R.H. Porter.

1. OREOPSITTACUS ARFAKI.

(THE ARFAK LORY.)

(PLATE LX. FIG. 1, male ; FIG. 2, female.)

Trichoglossus arfaki, Meyer, Sitzb. k. Ak. Wissensch. Wien, lxi. p. 74 (1874); Rowley, Orn. Miscell. vol. i. p. 145, pl. xvi. (1876); Finsch in Rowley, op. cit. p. 147; Rehnw. Vogelbild. t. xxix. fig. 2 (1878-83).

Trichoglossus (Charmosyna) arfaki, Meyer, Verh. z.-b. Gesellsch. Wien, xxiv. p. 37 (1874).

Charmosyna arfaki, Beccari, Ann. Mus. Civ. Gen. vii. p. 715 (1875).

Psitteuteles arfaki, Sharpe in Gould's Birds of New Guinea, vol. v. pl. 18 (1876).

Oreopsittacus arfaki, Salvadori, Ann. Mus. Civ. Gen. x. p. 37 (1877); id. Orn. Pap. e Mol. i. p. 315 (1880); id. Cat. of Birds in Brit. Mus. xx. p. 84 (1891).

The abdomen of the male more or less red; female with the pileum of a rich green and the abdomen tinged with orange.

Habitat. Arfak Mountains, New Guinea.

THE Arfak Lory differs from all the Lories hereinbefore described by having fourteen tail-feathers. It was first made known and named by Dr. Meyer, who obtained three male specimens (one adult and two young) while collecting in the Arfak Mountains of New Guinea. Dr. Sharpe gives (in his 'Birds of New Guinea') a figure not only of the adult (lent to him by Dr. Meyer), but also of an immature male, lent to him by Mr. Dawson Rowley, who had obtained from Dr. Meyer one of the three specimens he had collected. The other young male is in the Turati Collection at Milan.

Both a male and female skin exist in the British Museum, and both have been represented in our Plate. The type is in the Museum at Dresden.

The figure given in the 'Ornithological Miscellany' really represents the male, and not, as stated, the female. This is so, since Dr. Sharpe was assured by Dr. Meyer that he had ascertained by dissection that the three specimens he obtained were all males.

Beccari says that this species is very common in the Arfak Mountains.

The upper parts, from the occiput to the upper tail-coverts inclusive, are dark yellowish green. The forehead and vertex are bright red. The ear-coverts and cheeks are dark blue, with white dots so disposed as to form white lines. The chin and throat are grass-green. The under part of the shoulders and the flanks are red, and the middle of the abdomen is tinged with red. The thighs are like the abdomen. The under tail-coverts are yellow and green, the bases of the feathers being yellow. The quills are largely black, the first entirely

so; the five next have the outer web margined with blue; the rest have the outer web dark green. The inner web of the quills has a yellow median patch, so that the black under surface of the wing becomes crossed by a yellow band when the wing is expanded. The greater under wing-coverts are dull black, the rest are red. The central tail-feathers are dark green, with a slight blue tinge and pale red tips; the lateral tail-feathers are jet-black at the base, then green on the outer web, and pale red towards their tips.

Bill black; feet dark greyish; iris dark brown.

Total length 5·8 inches, wing 3·05, tail 3·6, bill 0·45, tarsus 0·35.

The female is like the male, except that the top of the head is not red but of a rich green and the underparts have an orange tinge. The cheeks, ear-coverts, and tail are as in the adult male bird. The young male has the pileum green mixed with red.



The Victoria Lory.
OREOPSITTACUS GRANDIS.

1. Male 2. Female.

Published by R.H. Porter.

2. OREOPSITTACUS GRANDIS.

(THE VICTORIA LORY.)

[PLATE LXI. FIG. 1, male ; FIG. 2, female.]

Oreopsittacus grandis, W. R. Ogilvie-Grant, Bulletin of the British Ornithologists' Club, No. xxxi. p. xv. (Species described at the Meeting of Wednesday, 18th December, 1895.)

Male without any red on abdomen ; female with the pileum golden green and underparts without any orange and uniformly green in tint.

Habitat. Mount Victoria, in South-eastern New Guinea.

THIS species of *Oreopsittacus*, which is much larger than *O. arfaki*, was collected on Mount Victoria, which, together with the Owen Stanley range, is in South-eastern New Guinea. Two specimens, a male and a female, were among a number of other birds recently sent from New Guinea to a firm in the City of London. The British Museum purchased them, and our Plate represents the type of the species, which is here figured for the first time.

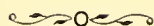
Mr. Ogilvie-Grant characterizes this new species as follows :—“ δ similis *O. arfaki* δ , sed multo major, et plagâ abdominali rubrâ absente distinguendus. ♀ similis *O. arfaki* ♀ , sed multò major et abdomine viridi concolore distinguenda.”

In the male the upper parts are dark green. The pileum is bright red, but not so bright as in *O. arfaki*, while the red colour is more extended than in that species. The cheeks and ear-coverts are dark blue with white spots ; but the blue is darker and the white spots are larger than in *O. arfaki*. There is no red on the abdomen, though there are some red feathers on the flanks, hidden under the wing. The breast and abdomen are green, and the under tail-coverts are green and yellow. The thighs are dark green. The primaries are mainly blackish, but externally edged with blue, which is, however, much less bright than in *O. arfaki*. The under wing-coverts are red, and there is a yellow band beneath the wing, formed by yellow patches on the middle of the inner webs of the quills. The bluish tinge on the tail is somewhat darker blue than in the smaller species and the tip of the tail is much more red.

The female has the pileum of a golden-green tint. The abdomen is entirely green without any orange tinge. The cheeks and tail are like those of the male bird.

Total length 6·3 inches, wing 3·5, tail 3·3, bill 0·7, tarsus 0·65.

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