

REPORT ON A SMALL ZOOLOGICAL COLLECTION FROM NORFOLK ISLAND.

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I. INTRODUCTORY REMARKS.

BY J. A. M. MILLINGTON.

At the instigation of my friend Mr. A. Sidney Olliff, during my recent visit to Norfolk Island, as Assistant to Mr. W. A. Harper, A.M.I.C.E., who was making a survey of the Island, I gathered together such specimens as came under my immediate observation. Unfortunately the time at my disposal was so fully occupied that any attempt at serious collecting was out of the question, and I obtained little but what actually thrust itself upon me when engaged in field-work. Small as the results are, I trust they are not without interest, as I believe that the investigation of isolated faunas like that of Norfolk Island may throw some light on that most important problem, the geographical distribution of animals.

Norfolk Island,* situated in $29^{\circ}2'$ south latitude, and $168^{\circ}1'$ east longitude, is a well-wooded, fertile, and very rugged island, seven miles in length, with a superficial area of some 8960 acres. On the southern side and closely associated with it are Phillip and Nepean Islands, the former distant about five and the latter half-a-mile, which together with a few small bare rocks on the northern side known as the Bird Rocks, constitute the whole of this isolated group.

* For a concise general account of the island, see Dr. C. T. Downing's 'Norfolk Island, its Character and Productions.' Proc. Royal Soc. Tasmania, 1859, pp 195-212.

The birds received no attention from me, and I only obtained three species which are identified by Dr. Ramsay as *Petroeca multicolor*, Gm., *Platyercus Pennantii*, Lath., and *Gygis candida*, Gm. In conclusion, I would express my thanks to Dr. E. P. Ramsay, who has offered me every assistance and encouragement in my endeavour to add a little to our knowledge of the fauna of this interesting island. I am also indebted to Captain Franklin Bates, of Norfolk Island, for valuable contributions and assistance. A set of the specimens obtained by me, including the types of the new species, has been presented to the Trustees of the Australian Museum for the public collection of the colony.

II. REPTILES & FISHES.

BY J. DOUGLAS OGILBY.

REPTILES.

PHYLLODACTYLUS GUENTHERI, Boulenger.

Two examples of this Gecko have been brought back by Mr. Millington, who states that it is not found on Norfolk Island proper, but that it is common on Phillip and Nepean Islands, a remark which had previously been made by Dr. Charles T. Downing.

FISHES.

The collection of fishes consists of fifteen specimens belonging to eight species, two of which are described below as new; they are as follows:—

1. APOGON NORFOLCENSIS, sp. nov.

B. vii.: D. 7, 1/10: A. 2/9:*

V. 1/5: P. 15: C. 17: L.l. 25-26: L.tr. 2/7: Cœc. pyl. 3:
Vert. 10/14.

*The last dorsal and anal ray divided to the base.

Length of head $3\frac{1}{4}$ to $3\frac{2}{3}$, of caudal fin $3\frac{9}{10}$ to $4\frac{1}{10}$, height of body $3\frac{1}{8}$ to $3\frac{1}{2}$ in the total length. *Eye*—Diameter $2\frac{2}{3}$ to 3 in the length of the head; snout obtuse and short, about $\frac{5}{8}$ of a diameter of the eye; interorbital space flat, $\frac{2}{3}$ of the same. Occiput slightly concave; jaws equal; the maxilla reaches to the vertical from the posterior fourth of the orbit; it is dilated behind, and possesses a strong median ridge, which however does not extend to the hinder margin. The outer edge of the vertical limb and posterior half of the lower limb of the preopercle finely and evenly serrated: post-temporal obscurely so. *Teeth*—Villiform in jaws, vomer, and palate. *Fins*—dorsal spines moderately strong, the first minute, the second from $\frac{2}{5}$ to $\frac{1}{3}$ of the third, which is the strongest and highest, about $\frac{2}{3}$ of the length of the head; the origin of the second dorsal is in front of the middle of the total length; its spine is equal to the fifth of the first dorsal, and is about $\frac{1}{2}$ of the length of the head; its soft portion is elongated and pointed anteriorly, its first ray being almost double the length of the spine. The anal commences beneath the third dorsal ray; its second spine is stronger, but not so high as that of the second dorsal. Ventral fins long, reaching beyond the origin of the anal, and about $\frac{3}{4}$ of the length of the head; the spine compressed and very strong, equal to that of second dorsal. Pectorals long and pointed, reaching to the vertical from the 13th scale of the lateral line. Caudal emarginate. *Scales*—one or two in front of the first dorsal; between these and the occiput is a naked space, finely striated longitudinally: nine or ten rows of scales between the second dorsal and the base of the caudal. *Lateral line*—Tubes arborescent on the anterior part of the body, little divided on the tail. *Colours*—Reddish-brown, darkest above, many of the scales above the lateral line having one or two distinct darker spots: scales of the back and sides with a pale margin, those of the throat and abdomen pale with a dark margin. A black spot, covering two lateral line scales, opposite the middle of the base of the caudal fins. Head brown with golden reflections on the opercles, and a pair of rather obscure dark bands from the snout through the interorbital space to the occiput. Dorsal, caudal, anal, and

ventral fins brown with a ruddy tinge, the last the darkest; pectorals red with a dark brown basal band. Irides golden and brown.

The description is taken from two specimens measuring respectively $4\frac{2}{3}$ and 5 inches. Register numbers of types, I. 1398-9.

Note.—Since the above was written Mr. Etheridge's party—to whom I had shown the earlier examples—has brought home three specimens, the largest of which measures $6\frac{1}{4}$ inches, from Lord Howe Island.

2. SCORPIS sp.

The pair of specimens collected are too young to determine with certainty, but are in all probability *S. aequipinnis*.

3. CARANX sp.

A single specimen, also too young to determine.

4. MYXUS ELONGATUS, Günth.

Two small specimens.

5. PARMA POLYLEPIS, Günth.

Two fine specimens.

6. LABRICHTHYS LUCULENTUS, Rich.

Two examples.

7. JULIS LUNARIS, Linn.

Two examples.

8. CORIS TRIMACULATA, sp. nov.

B. vi.: D. 9/12: A. 3/12: V. 1/5: P. 13: C. 14: L. lat. 93-100: L. tr. 10/40.

Length of head rather more than $\frac{1}{4}$, of caudal fin $6\frac{1}{3}$, height of body $4\frac{2}{3}$ in the total length. *Eye*—Diameter $\frac{1}{4}$ of the length of the head and equal to that of the snout: interorbital space slightly convex, $\frac{4}{5}$ of a diameter of the orbit. *Teeth*—No posterior canine. *Fins*—Dorsal spines weak, the last the longest, about a third of the length of the head, and much shorter than the posterior rays: ventral fins short, a little more than half the length of the head, pectorals longer, about two-thirds of the same: caudal rounded. *Colours*—Pale yellowish-brown; the upper surface of the head purple; a violet band on the side immediately below the lateral

line, and disappearing on the tail; several obscure orange transverse stripes on the sides not extending to either the dorsal, or the ventral profile. Fins yellow, the soft dorsal and anal with a broad violet margin: a black spot between the two anterior dorsal spines, and one on each side of the base of the caudal fin, *entirely above the lateral line*.

I have decided on describing this species as new with considerable hesitation on account of the resemblance which it bears in many particulars to the *Labrus annulatus* of Lacépède, of which species I at first considered it to be merely a variety; but the greater length of the pectoral fins, and the absence of the subopercular spot (two characters which are specially emphasized by Dr. Günther—Catal. Fishes, iv. p 202), combined with the two conspicuous caudal spots have decided me to allow specific value, at least provisionally, to this form. Both the specimens brought by Mr. Millington are small, measuring $4\frac{1}{3}$ and $4\frac{1}{8}$ inches respectively. Their register numbers are I. 1402-3

III. MOLLUSCA.

BY JOHN BRAZIER.

This small collection of shells is in a very sad state, the specimens nearly all being sea-worn; some of them are peculiar to Australia, and others are allied to New Zealand and Central and Western Pacific forms.

1. SPIRULA PERONII, Lamarck.

Nautilus spirula, Linn.; *Spirula levis*, Gray; *Spirula vulgaris*, Leach.

Three specimens and fragments.

2. MUREX (PTERONOTUS) ANGASI, Crosse.

Typhis Angasi, Crosse; *Murex eos*, Hutton.

The six specimens are sadly beach-worn. The species is found in New Zealand, Tasmania, South Australia, and New South Wales.

3. PURPURA sp. ?

This species cannot be identified, the specimens being sea-worn.

4. RICINULA RICINUS, Linn.

Murex ricinus, Linn. ; *Ricinula arachnoides*, Lam.

One single example of this common Central Pacific species.

5. RICINULA (SISTRUM) ASPERSA, Lam.

Ricinula aspersa, Lam.

Three specimens in fair condition ; found also in New Caledonia and other Pacific Islands.

6. RICINULA (SISTRUM) CHAIDEA, Duclos.

Purpura chaidea, Duclos.

Three specimens very much worn. This species is very common at Lord Howe Island, 450 miles east of Sydney Heads ; it is also found in Port Jackson, in New Caledonia, and in other islands in the North, South, and Western Pacific.

7. RICINULA (SISTRUM) UNDATA, Chem.

Murex undata, Chem. ; *Murex margriticola*, Broderip ; *Ricinula fiscellum*, Homb. et Jacq. ; *Purpura muricina*, Blainville.

Two specimens found, one very fair and slightly sea-worn ; they do not differ from specimens from Central and Western Pacific Islands.

8. RICINULA (SISTRUM) TUBERCULATA, Blainville.

Purpura tuberculata, Blainville.

Of the four specimens to hand one is evidently the variety *marginalba*, common on the New South Wales coast.

9. LATURUS sp. ?

Three sea-worn specimens resembling *L. Noumeaensis*, from New Caledonia.

10. COMINELLA ACUTINODOSA, Reeve.

Buccinum acutinodosum, Reeve, Conch. Icon. pl. 4, fig. 21.

Six specimens of this species very much sea-worn, are in the collection. I doubt its being a short variety of *Cominella costata*, Quoy. In good living specimens of the former the nodules are acute and sharp-pointed at the angle, and are never rounded except in sea-worn examples.

Mr. Tryon is evidently of opinion that *Cominella glandiforme*, Reeve; *C. Zealandica*, Homb. et Jacq.; and *C. lurida*, Phillippi, are synonyms; but the actual species from New Zealand show that they are quite distinct from *C. acutinodosa*, Reeve, from Norfolk Island, originally given in Reeve, from the Cuming collection, as from South Australia. During my visit to Norfolk Island in 1855, I collected a number of fine specimens under stones at Sydney Bay, but collectors that have been there since have apparently neglected to collect living examples.

11. COMINELLA TRITONIFORMIS, Blainville.

Purpura Tritoniformis, Blainville; *Adamsia typica*, Dunker, P. Z. S. London, p. 357, 1856.

About twelve examples in fair condition, sea-worn; the species is very common in Port Jackson and on the coast of New South Wales, also at Lord Howe Island.

I wish to call the attention of all Conchologists to the fact of the larval state of this species being described as belonging to the genus *Sinusigera*, d'Orb.=*Cheletropis*, Forbes. In fully adult specimens of *C. Tritoniformis*, Bl., the apical whorls show distinctly the claw or *Sinusigera* character; the larval state of *Purpura succincta*, Martyn, has been described as *Sinusigera*. An extensive series of both species of the *Cominella* and *Purpura* from 3 mm. up to 5, 10-20, show the apical structure of *Sinusigera*.

Mr. Tryon lumps *Purpura neglecta*, Angas, with *Cominella Tritoniformis* as a synonym; the apical or embryonic whorls of

Purpura neglecta are quite smooth, and have not the characters of *Sinusigera*. The splendid figure given by De Blainville in the "Nouvelles Annales du Muséum," pl. 8, fig. 18, of his *Purpura Tritoniiformis*, need never be mistaken for any other species; Dunker's specific name of *typica* must stand as a synonym.

12. *NASSA* (*ALECTRION*) *SPIRATA*, A. Ad.

Nassa spirata, A. Adams, Proc. Zool. Soc. London, p. 106, 1851; *Nassa spirata*, Reeve, Conch. Icon. pl. 2, fig. 13.

The specimens are in very good condition considering that they were found on the beach; the species is also found at Lord Howe Island, and on the coast of New South Wales, at Broken Bay and other places to the north.

13. *NASSA* (*HIMA*) *PAUPERA*, Gould.

Nassa paupera, Gould, Moll. Wilkes' Expedition, fig. 330; *Nassa (Hima) rufocincta*, Angas (*non* A. Adams).

The specimens are variable in colour, some being white, yellowish-brown, reddish-brown, or spirally banded with brown broken lines; they are much stouter than those from Port Jackson and the coast of New South Wales.

Mr. Angas in his list of Port Jackson Mollusca, quotes this shell as *Nassa rufocincta*, A. Adams; the *Nassa rufocincta* of A. Adams is a synonym of *Nassa versicolor*, C. B. Adams, a shell from Panama.

14. *VOLUTA* (*LYRIA*) *NUCLEUS*, Lam.

Voluta nucleus, Lam. Ann. du Mus. No. 42; Anim. sans Vert. Tome VII., p. 348, No. 44, 1822; *Voluta harpa*, Mawe, Linnean System of Conchology, p. 110, frontispiece, fig. 2, 1823; *Voluta pattersonia*, Perry, Conchology, pl. 17, fig. 1, 1811; *Voluta perdicina*, Schub. & Wag.

Twelve specimens to hand, six in a good state of preservation, having that peculiar flesh brown colour, variegated and dotted with

brown markings; some are of a dark chestnut brown with two faint transverse white lines in the form of dots. *Voluta pattersonia* of Perry, is an overdrawn figure of *Voluta nucleus*, Lam.; the locality he gives is New Holland. If Perry had been a good authority on the subject of Conchology, his name might have taken precedence of Lamarck and other authors, but he simply ignored the works of other authors such as Linnæus, Chemnitz, &c.

15. ? MITRA (PUSIO) FESTA, Reeve.

Mitra festa, Reeve, Conch. Icon. pl. 36, fig. 303.

Specimens, sea-worn.

16. MITRA (SCABRICOLA) sp. ?

Two specimens in fair condition.

17. MARGINELLA (PERSICULA) PULCHELLA, Kiener.

Marginella pulchella, Kiener, Coq. Viv. pl. 9, fig. 40.

Seven specimens in very good condition; it is quoted by authors as coming from Sydney, New South Wales; it is not found with us, but has been found at Ceylon by Mr. Geoffrey Nevill.

18. COLUMBELLA VERSICOLOR, Sowerby.

Columbella versicolor, Sowerby, Proc. Zool. Soc. London, p. 110, 1832; Thes. Conch. Vol. I., p. 117, pl. 37, figs. 41-46; *Columbella pertusa*, Reeve, Conch. Icon. pl. 26, fig. 161; *Columbella nivosa*, Reeve, pl. 26, fig. 166.

About half a pint of specimens, some in very good condition, others being beach-worn, and smaller than those from Australia, Solomon Islands, New Caledonia, and other Pacific Islands.

19. COLUMBELLA PARDALINA, Lam.

Columbella pardalina, Lam. Anim. sans Vert. Vol. X., p. 270; *Columbellina Tyleri*, Gray in Griffith's Cuvier.

A very common species and variable in colour and markings; *C. Tyleri* of Gray runs into *C. pardalina*, Lam.; it is also found at Lord Howe Island and on the coast of New South Wales.

20. COLUMBELLA (MITRELLA) sp. ?

One specimen very much sea-worn.

21. PLEUROTOMA (DRILLIA) sp. ?

Three sea-worn specimens ; they resemble *Drillia Beraudiana*, Crosse, from Port Jackson.

22. STROMBUS (GALLINULA) FLORIDUS, Lam.

Strombus floridus, Lam. Anim. sans Vert. 2nd edit. Vol. IX., p. 707 ; *Strombus mutabilis*, Swainson, Zool. Illust. pl. 71, fig. 1 ; *Strombus flammeus*, Link ; *Strombus flosculosus*, Mörch ; *Strombus epimellus*, Duclos.

Ten specimens in fair condition, although slightly beach-worn ; it is also found at Lord Howe Island and along the east coast of Australia. It is a very variable species both in colour and marking, which accounts for its having been made into so many species by the various authors quoted above.

23. CYPRÆA sp. ?

One single example in the volute or young state.

24. NATICA AREOLATA, Récluz.

Natica areolata Récluz, Proc. Zool. Soc. London, p. 206, 1843. Four specimens in very good condition.

25. NATICA SAGITTATA, Menke.

Natica sagittata, Menke, Moll. Novae Hollandiae, p. 10, No. 30, 1843 ; *Natica marochiensis*, Angas, Proc. Zool. Soc. p. 197, 1867 ; Brazier, "Chevert" Expedition, Proc. Linn. Soc. New South Wales, Vol. I., p. 236, No. 47.

A number of this very common species in very good condition have come to hand.

26. CAPULUS SUBRUFUS, Sowerby.

Hipponyx subrufa, Sowerby, Proc. Zool. Society, p. 5, 1835; Thes. Conch. Vol. I., p. 370, pl. 73, figs. 21-22-23; *Pileopsis subrufus*, Lam.

Six specimens very much worn; they answer in every respect to living examples collected by myself in 1855-56.

27. HIPPONYX ANTIQUATA, Linn.

Patella antiquata, Linn. 12th edit., p. 1259, No. 762.

A number of sea-worn specimens to hand; the species is very common on the coast of New South Wales. This may be the *Hipponyx foliacea* of Quoy and Gaimard.

28. SOLARIUM (TORINA) PERSPECTIVIUNCULUM, Chem.

Trochus perspectiviunculus variegatus, Chem. Conch. Cab. Vol. V., p. 134, pl. 173, figs. 1708-1709.

Two specimens found of the typical form, and one of the variety *Solarium depressa*, Philippi=*planulata*, Hanley.

29. IANTHINA FRAGILIS, Lam.

Ianthina fragilis, Lam. Anim. sans Vert. p. 89.

One specimen of this very common form.

30. RISELLA sp. ?

Four sea-worn specimens; two species are recorded by Philippi from Norfolk Island, namely, *Risella flavescens* and *plicatula*, Philippi.

31. PLANAXIS (HINEA) MOLLIS, Sowerby.

Planaxis mollis, Sowerby, Genera of Shells, fig. 2, 1824; *Buccinum Brasilianum*, Lam. Anim. sans Vert. Vol. VII., p. 272, No. 32, 1822; *Buccinum levigatum*, Wood, Index Test. 1828; *Planaxis pigra*, Forbes, Proc. Zool. Soc., p. 273, pl. 11, fig. 5; *Planaxis fulva*, A. Adams, Proc. Zool. Soc. p. 271, 1857; *Planaxis (Hinea) brasilianus*, E. A. Smith, Annals and Mag. of Natural History, Vol. IX., fourth series, p. 46, No. 42, 1872.

A number of living specimens in the collection. I collected a large number when last at Norfolk Island in 1865.

It is very common on some parts of the coast of New South Wales, at Bondi and Coogee Bays, and on the outer north head of Port Jackson, Point Piper, Watson's Bay, and Lord Howe Island.

Lamarck's name of *Brasilianum* for this species is a misnomer, the shell not having been found in Brazil. I believe the original specimens that came into Lamarck's hands from Madame Paterson came from either Lord Howe Island, Norfolk Island, or New South Wales.

32. *NERITA MELANOTRAGUS*, E. A. Smith.

Nerita atrata, Reeve (*non* Chemnitz) Conch. Icon. pl. fig. 16 a.b.; *Nerita melanotragus*, Sowerby, Thes. Conch. part 40, p. 120 (Index), letter-press, pl. 3, fig. 41, 1883; *Nerita melanotragus*, E. A. Smith, Zoology of H.M.S. Alert, p. 69, No. 82, June 1884; *Nerita saturata*, Hutton, Proc. Linn. Soc. New South Wales, Vol. II., part 2, read April 30, published August 19th, 1884; *Nerita punctata*, R. Boog Watson (*non* Quoy and Gaimard), Zoology of H.M.S. Challenger, Vol. XV., p. 132, No. 4; *Nerita atrata*, Angas, Proc. Zool. Soc. London, p. 175, No. 123, 1865.

One single sea-worn specimen is in the collection. I found it very common under stones during 1855-1856, and again in company with Mr. Brenchley in H.M.S. Curaçoa in 1865. Found by MacGillivray on Raoul or Sunday Island, Kermadec Islands (Voyage of H.M.S. Herald).

The Rev. Boog Watson is evidently wrong when he asserts in Vol. XV., Zoology of H.M.S. Challenger, p. 133, that Quoy and Gaimard state *Nerita punctata* came from New Holland. Quoy and Gaimard state nothing of the sort; they distinctly say that their specimens came from the Isle of France (Mauritius), and I maintain that their *Nerita punctata* is distinct in every respect from *Nerita melanotragus*, of E. A. Smith, our Port Jackson shell. The *Nerita punctata* of Quoy and Gaimard, I have from

the Mauritius; it is always covered with large white dots, a character that is not to be found in *N. melanotragus*. Professor Hutton named it *Nerita saturata*, but his paper was not published until August 1884. Mr. Smith's name, published in June 1884, therefore, takes precedence.

33. *NERITA ALBICILLA*, Linn.

Nerita albicilla, Linn. Syst. Nat. 12th edit. p. 1254, No. 733.

One sea-worn specimen of this tropical species is in the collection.

34. *BULLA AMPULLA*, Linn.

Bulla ampulla, Linn. Syst. Nat. 12th edit. p. 1183, No. 378.

Six specimens in fair condition, they being of the smaller variety.

35. ? *SIPHONARIA LIRATA*, Reeve.

Siphonaria lirata, Reeve, Conch. Icon. pl. fig. 35, a. b.

The few specimens that are to hand come very near to *S. lirata*, Reeve.

36. *SIPHONARIA CORRUGATA*, Reeve.

Siphonaria corrugata, Reeve, Conch. Icon. pl. 6, fig. 31, a. b.

Seven specimens very badly sea-worn.

IV. INSECTA.

By A. SIDNEY OLLIFF.

Information, however meagre, concerning the fauna of so remote a spot as Norfolk Island must of necessity prove highly interesting, more particularly to the geographical naturalist. I have, therefore, drawn up a list of the coleoptera obtained by Mr. Millington adding references to a few species previously recorded from the island. That this list is incomplete I feel assured, as some of the species (*e.g. Enicodes Fichteli*, and among the butterflies, *Papilio amphiaraus*) obtained during the early settlement of the island appear to have been confused with collections from the

Australian Continent and are consequently recorded from wrong localities; the descriptions too are scattered in various publications, many of them difficult of access.

With regard to the zoo-geography of the island I would remark that, as far as the insects are concerned, all the evidence points to a near affinity to the Australian sub-region. Although admitting the preponderance of Australian types, Mr. Wallace,* relying upon the evidence afforded by its bird-fauna, considers Norfolk Island, as well as Lord Howe Island, to belong to the New Zealand subregion chiefly on account of the presence of certain New Zealand genera which are incapable of long flights. Among the Coleoptera the most conspicuous genera—*Lamprina*, *Chiroplatys*, *Melobasis*, *Toxentes*—are all characteristically Australian, and *Metisopus*, the only endemic genus as yet described, is certainly allied to Australian groups. In fact the only typical New Zealand form is *Xyloteles*, a genus of longicorns, which is represented by two closely allied species. The occurrence of *Enicodes*, a remarkable New Caledonian form, is particularly suggestive, and the presence of two apparently endemic species of *Cossonidæ* is also interesting as it goes to prove that the tendency of the family for insular habitats, so noticeable in the fauna of the Atlantic islands, is also observable in the Pacific; that islands afford conditions especially favourable to the development of these insects appears to be undoubted.

COLEOPTERA.

The following is a complete list of the Coleoptera of which I have authentic information; those not represented in Mr. Millington's collection are distinguished by an asterisk:—

CARABIDÆ.

CHLAENIUS PEREGRINUS.

Chlaenius peregrinus, Laferté, Ann. Soc. Ent. France, 1851, p. 247.

*Geographical Distribution of Animals, Vol. I., p. 453.

An abundant species on the Eastern side of the Australian Continent; also found in Lord Howe Island.

DIAPHOROMERUS IRIPENNIS.

Diaphoromerus (Harpalus) iripennis, Chaudoir, Bull. Mosc. 1843, p. 105.

Apparently abundant; it is common in Queensland, and I have recently seen it from Lord Howe Island.

STAPHYLINIDÆ.

CREOPHILUS ERYTHROCEPHALUS.

Staphylinus erythrocephalus, Fabricius; see *antea* p. 492.

Widely distributed throughout Australia and extending as far as New Caledonia, Tonga, &c.

NITIDULIDÆ.

LASIODACTYLUS CALVUS, sp.n.

Ovate, about twice as long as broad, dark fuscous, somewhat shining, very sparingly and finely pubescent; prothorax and elytra with the margins ferruginous; elytra seriate-punctate, with two testaceous markings at the base, and one on each side of the suture before the middle.

Head finely and irregularly punctured. Antennæ ferruginous. Prothorax at the base about twice as broad as long, slightly emarginate and narrower in front, finely and closely punctured; anterior angles obtuse; the sides arcuate; the posterior angles very slightly produced. Scutellum transverse, somewhat pointed behind, finely and not very closely punctured. Elytra about twice as long as the prothorax, rather finely seriate-punctate, the interstices broad and finely punctured; each elytron with two reddish testaceous spots at the base, one near the scutellum and one at the shoulder, and another less distinct spot on the fourth series of punctures; shoulders not very prominent; sides arcuately narrowed behind. Legs reddish testaceous. Length 4 mm.; greatest width $2\frac{1}{2}$ mm.

This species appears to be more nearly allied to the Ceramese *Lasiodactylus stelidotoides** than any other species, but its more finely punctured and feebly emarginate prothorax, pale-coloured legs, and the different sculpture of its elytra will readily distinguish it.

TROGOSITIDÆ.

* LEPERINA TURBATA.

Leperina turbata, Pascoe, Journ. Entom. II. p. 29 (1863); Olliff, Proc. Linn. Soc. N.S.W., X., p. 705 (1885).

There is a single example of this species from Norfolk Island in the Macleay Museum.

LUCANIDÆ.

LAMPRIMA AENEA.

Lethrus aenea, Fabr.; Schreibers, Trans. Linn. Soc. Lond., VI., p. 185, pl. 20, fig. 1 (1802); Macleay, Proc. Linn. Soc. N.S.W., X., p. 130 (1885).

Of this species, which according to Mr. Macleay is peculiar to the island, only female specimens were obtained.

DYNASTIDÆ.

CHIROPLATYS LISSUS, n.sp.

Elongate, castaneous, shining, very convex; prothorax smooth, finely margined at the sides; elytra obscurely punctate-striate, strongly punctured at the apex; pygidium finely aciculate.

Head finely rugulose in front, smooth behind; clypeus with a strongly reflexed margin. Antennæ castaneous. Prothorax nearly a third broader than long, slightly narrowed behind; the anterior margin and the sides reflexed; the posterior angles rounded.

*Olliff, Entom., XVI., p. 99 (1883). The wood-cut which accompanies the description gives a very inadequate idea of the shape of the prothorax; it is too much narrowed in front, and the depth of the frontal emargination, and the width of the margins are not sufficiently indicated. The left side of the figure is tolerably accurate in outline,

Scutellum smooth, slightly depressed in the middle, rounded behind. Elytra with the sutural stria strongly marked, extending to just before the apex, the discal striæ somewhat obscured, abbreviated posteriorly, those at the sides almost obsolete, the interstices broad, impunctate; the apex of each elytron strongly, irregularly, and sparingly punctured. Underside pale castaneous; the sterna rather thickly clothed with long silky pubescence. Legs castaneous, tibiæ and tarsi pitchy. In the female, which is the only sex known to me, the anterior tibiæ are tridentate, and the others bicarinate. Length 18-23 mm.

In the absence of the male the generic identification of this species cannot be regarded as certain, but I have little doubt that its position is not far removed from *Chiroplatys latipes*, Guérin.

Four ♀ specimens.

BUPRESTIDÆ.

MELOBASIS PURPURASCENS.

Melobasis purpurascens, Fabricius, Syst. El., II., p. 217.

Four examples.

ELATERIDÆ.

MONOCREPIDIUS STRIATUS.

Monocrepidius striatus, Macleay, Trans. Ent. Soc. N.S.W., II., p. 252 (1872).

Three specimens which appear to be identical with the type of this Gayndah species.

MONOCREPIDIUS, sp.

Two abraded specimens of a species closely allied to *M. striatus*.

DICTENIOPHORUS RAMIFER.

Ludius ramifer, Eschscholtz, Thon. Arch., II., p. 34.

A single ♂ specimen agreeing in every respect with this common Australian form.

BOSTRYCHIDÆ.

RHIZOPERTHA, sp.

Two damaged specimens of a species allied to *Rhizopertha collaris*, Erichson.

TENEBRIONIDÆ.

HOPATRUM INSULANUM, sp.n.

Broadly ovate, moderately convex, black, opaque, extremely finely and sparingly pubescent; prothorax finely and closely rugose-punctate, the anterior angles not very prominent; elytra obscurely punctate-striate, finely rugulose.

Head broadly transverse, finely and closely rugose-punctate, somewhat impressed in front, the anterior margin rather strongly emarginate; the sides strongly produced in front of the eyes. Antennæ pitchy red, finely pubescent. Prothorax short, strongly emarginate in front; the sides strongly rounded and somewhat reflexed; the posterior margin bisinuate. Scutellum rounded behind, irregularly punctured. Elytra punctate-striate, the interstices broad, slightly convex, and finely rugulose; the humeral angles rounded, not prominent. Underside piceous, somewhat shining, moderately closely and irregularly punctured. Legs black, tarsi reddish testaceous. Length 8 mm.

This species has the ordinary *facies* of *Hopatrum* and appears to be abundant. It is not unlike the Queensland *H. Mastersi*, Macleay, but is more ovate, slightly more convex, and much less conspicuously pubescent.

METISOPUS PURPUREIPENNIS.

Metisopus purpureipennis, F. Bates, Trans. Ent. Soc. Lond., 1873, p. 371.

Described originally from Norfolk Island, where it is probably endemic.

CURCULIONIDÆ.

OCYNOMA RIIYSA, sp.n.

Fuscous, moderately convex, thickly clothed with greenish grey scales; prothorax about as long as broad, with an impression on each side of the middle; elytra seriate-punctate, the interstices interrupted posteriorly with moderately conspicuous nodiform elevations.

Head finely punctured, closely pubescent, slightly impressed between the eyes; rostrum indistinctly carinulate in the middle; eyes round, very prominent. Antennæ finely pubescent; funiculus with the 2nd joint rather longer than the 1st, the others gradually decreasing in length. Prothorax rather more narrowed in front than behind, rather strongly punctured, closely covered with fine scales and pubescence, with an indistinct raised median line. Elytra considerably broader than the prothorax, thickly covered with fine scales and pubescence, rather strongly seriate-punctate, the interstices moderately broad: each elytron provided near the apex with six or seven moderately distinct nodiform elevations; these elevations vary somewhat in position (in the specimen before me those on one elytron do not correspond precisely with those on the other), but they appear to be confined to the 3rd, 5th, 6th, and 7th interstices. Underside clothed with ashy scales and pubescence. Legs sparingly covered with squamose scales. Length $5\frac{1}{2}$ mm.

I have experienced considerable difficulty in fixing the position of this species owing to the want of material for dissection; it agrees, however, with *Ocynoma*, a genus only known to me from description, in the absence of ocular lobes, the great length of the scape, and other essential characters. In *facies* it is not unlike some of the smaller species of *Perperus*.

A single specimen.

PSEPHOLAX PASCOEI, sp.n.

Elongate, somewhat narrowed both in front and behind, black, shining; prothorax strongly narrowed in front, moderately strongly punctured; elytra tuberculose at the base, rather strongly seriate-punctate, the interstices strongly raised; each elytron with three ridges of short erect pubescence at the apex.

Head and rostrum finely, closely, and irregularly punctured; the latter short and broad; eyes oval, not very prominent. Antennæ rather short, pitchy red. Prothorax about one-third broader than long, much narrower and slightly constricted in front, moderately strongly, irregularly, and not very closely punctured, a small patch of yellowish scales at the base; the anterior margin very slightly emarginate in the middle. Elytra transversely impressed near the base, about two and a half times as long as the prothorax, nearly parallel-sided for two-thirds of their length, seriate-punctate, the base closely covered with minute spiniform tubercles, the interstices raised, those on the disc having a serrate structure; the sides clothed with long fulvous pubescence: each elytron provided near the apex of the 1st, 3rd, and 5th interstice with a ridge of erect black pubescence. Legs black; posterior femora thickly clothed both internally and externally with stiff fulvous pubescence. Length 11-12 mm.

A very distinct species representing a genus confined to Australia and New Zealand. I have dedicated it to Mr. F. P. Pascoe who has made known three Australian forms; of these *Psepholax egerius* appears to have some affinity to the present species.

EUTHYRRHINUS MEDITABUNDUS.

Euthyrrhinus meditabundus, Fabricius, Syst. Ent., p. 139.

A common and widely distributed species which is also found in Lord Howe Island.

PENTARTHURUM MILLINGTONI, sp.n.

Subfusiform, cylindrical, black, shining; rostrum moderately strongly constricted near the base; prothorax very long; elytra obscurely striate-punctate, interstices moderately broad, finely punctured.

Head rather finely and sparingly punctured; rostrum rather long, more closely punctured than the head. Antennæ dark reddish testaceous, the 1st joint of the funiculus rather longer than the succeeding ones. Prothorax about twice as long as broad, slightly constricted in front, rather finely and closely punctured; the sides moderately strongly rounded. Elytra moderately convex, the striæ somewhat impressed; the sides rounded behind. Legs not very robust, black; the tarsi inclining to reddish testaceous. Length 5-6 mm.

Mount Pitt; three specimens.

PENTARTHURUM NEPEANIANUM, sp.n.

Elongate, rather strongly convex, black, somewhat shining; prothorax very coarsely and closely punctured; elytra rather strongly striate-punctate, interstices rather broad, extremely finely and sparingly punctured.

Head rather finely and moderately closely punctured; rostrum short, somewhat narrowed in front, as finely and closely punctured as the head. Antennæ piceous, with the intermediate joints pitchy red; the scape somewhat thickened at the extremity. Prothorax about twice as long as broad, narrowed in front, very strongly and rather closely punctured; the sides somewhat rounded. Elytra moderately long and convex, the striæ rather deeply impressed, the interstices broad, extremely finely punctured and somewhat dull. Legs robust, pitchy red; the tarsi reddish testaceous. Length 4 mm.

This very distinct species, which is from Nepean Island, and the foregoing species from Norfolk Island proper, may ultimately

prove to be distinct from *Pentarthrum*, but as they go very well into that genus in its wider sense I have not thought it necessary to separate them at present. In the absence of the allied genera for comparison, it is scarcely advisable to add to the already too numerous divisions of the Cossonidæ.

CERAMBYCIDÆ.

TOXEUTES RASILIS, sp.n.

Elongate, depressed, brown, somewhat shining; mandibles very prominent; prothorax with two short acute spines on each side; the elytra finely, sparingly and irregularly punctured.

Head longitudinally impressed in the middle, strongly and rather sparingly punctured on the disc, rugose near and behind the eyes; mandibles very prominent, incurved, closely punctured. Antennæ about two thirds the length of the body, scape extending just beyond the posterior margin of the eye. Prothorax broadly transverse, somewhat depressed and rather strongly punctured in the middle, the disc on each side with a large, shining, obscurely punctured space, beyond this rather strongly rugose; the sides with two short acute spines, the first straight, the other either straight or (in large specimens) slightly curved. Scutellum rounded behind, obscurely punctured at the base. Elytra with the ridges indistinct, finely, sparingly, and irregularly punctured; the sides somewhat rounded; the sutural angle produced behind into a short spine. Underside with the abdominal segments devoid of pubescence, shining, extremely finely and sparingly punctured. Legs finely punctured. Length 28-37 mm.

As far as can be judged from the description this species appears to agree with *Toxeutes punctatissimus*, Thomson, in the absence of rugosity at the base of the elytra and in having the thoracic spines short and not strongly recurved; it differs, however, in its finely and sparingly punctured elytra, &c. From *T. arcuatus*, Fabr., which I have seen from Albany, West Australia, as well as from Tasmania, it is also distinguished by its less parallel-sided elytra, and smooth abdominal segments.

CERESIVM SIMPLEX.

Stenochorus simplex, Gyllenhal, Schön. Syst. Ins., App. I., p. 178.

A widely distributed and variable species; it is found in Australia, and in the Pacific Islands it ranges from the Philippines to New Zealand, having been known to occur in Manila, Samoa, Tahiti, and Lord Howe Island.

DIOTIMA UNDULATA.

Diotima undulata, Pascoe, Trans. Ent. Soc. Lond. (2), V., p. 58, pl. 2, fig. 9.

This species is found in Queensland on *Araucaria Cunninghami*; in Norfolk Island it confines itself to the allied Norfolk Island Pine, *A. excelsa*.

DYSTHAETA NAEVIA, sp.n.

Fuscous, moderately convex, closely covered with cinereous pubescence; prothorax with a conspicuous tubercle on each side of the middle; elytra obscurely variegated with fuscous, a tubercle on each side at the base.

Head densely pubescent, with a strongly marked median line. Antennæ fuscous, about as long as the body, the basal joint short, thickened towards the apex, joints 3-11 with the bases clothed with grey pubescence. Prothorax distinctly transverse, densely pubescent, with a stout lateral tooth in the middle, a conspicuous tubercle on each side of the middle just before the lateral teeth. Scutellum rounded behind, densely pubescent. Elytra at the base much broader than the prothorax, narrowed behind, the apex entire, very coarsely and sparingly punctured on the basal half, almost impunctate posteriorly, a few minute tubercles mixed with the punctures near the base; each elytron with a conspicuous tubercle in the middle near the base. Underside ferruginous, closely and finely pubescent. Legs clothed with cinereous pubescence; tibiæ fuscous at the base. Length 15-17 mm.

A very distinct species intermediate in form between the closely allied genera *Dysthaeta* and *Oricopsis*; it agrees with *D. anomala*, Pascoe, in sculpture and in having the prothoracic tubercles simple, but is less narrowed behind and has a single conspicuous tubercle at the base of each elytron; in colour and marking it is very distinct.

XYLOTELES PATTESONI, sp.n.

Elongate, sub-cylindrical, narrowed both in front and behind, pitchy brown, shining, with a coppery tinge; prothorax with a spot of yellowish pubescence in the middle on each side; elytra striate, clothed with fine grey pubescence, sparingly punctured at the base.

Head extremely finely punctured, finely pubescent, with a distinct median line. Antennæ pitchy, finely pubescent, the bases of the joints inclining to reddish testaceous. Prothorax slightly longer than broad, with a few fine scattered punctures, and two deeply impressed transverse lines, one near the anterior margin the other near the base. Scutellum thickly covered with fine yellowish pubescence. Elytra considerably narrowed behind, rather obscurely striate, the interstices extremely finely rugulose-punctate, a few large irregular punctures at the base. Underside shining. Legs pitchy, finely pubescent, the tips of the tibiæ and the tarsi paler. Length 7-12 mm.

This species is closely allied to *Xyloteles griseus*, Fabricius, but differs in having the punctures at the base of the elytra much less numerous and more irregular; it varies greatly in size.

Three specimens.

XYLOTELES SELWYNI, sp.n.

Elongate, pitchy, tinged with green, extremely finely and sparingly pubescent; prothorax with an impressed transverse line near the base; elytra extremely finely and sparingly punctured, the sutural stria deeply impressed, the others obscured.

Head very finely and sparingly punctured, somewhat impressed in the middle, a distinct median line. Antennæ pitchy, the

basal joint robust, the others with the bases finely pubescent and inclining to reddish testaceous. Prothorax longer than broad, with a few extremely fine scattered punctures; a transverse impressed line just behind the anterior margin, and another considerably before the base; an indistinct median line. Scutellum large, rounded behind, thickly covered with fine grey pubescence. Elytra narrowed behind, with a few fine punctures chiefly near the base and along the suture. Underside somewhat shining. Legs robust, pitchy, and finely pubescent. Length 13 mm.

A single specimen of this very distinct species was found under bark.

ENICODES FICHELII.

Cerambyx Fichtelii, Schreibers, Trans. Linn. Soc. Lond., VI., p. 200, pl. 21, fig. 9 (1802); Lacordaire, Gen. Col., pl. 102, fig. 1.

A series of specimens, of which the males vary from 17-30 and the females from 18-21 mm. in length, agreeing in every particular with this species. There can be little doubt that the original male specimen of *E. Fichtelii*, described in great detail by Dr. Schreibers, was from Norfolk Island. Whether the form recorded from New Caledonia by M. Montrouzier is really identical with *E. Fichtelii* I am not in a position to decide; the only species from that locality with which I am acquainted is *E. Montrouzieri*. As far as I am aware *E. Fichtelii* does not occur on the Australian Continent.

CHRYSOMELIDÆ.

COLASPIS sp.

Two imperfect specimens.

LEPIDOPTERA.

The lepidoptera obtained by Mr. Millington comprise five species of butterflies, four heterocera, and a few unrecognisable specimens. The species are as follows:—*Danais plexippus*, Linn., *Pyrameis itea*, Fabr., *Diadema bolina*, Linn., *Pieris java*, Sp., *Papilio*

amphiaraus, Feld., *Protoparce convolvuli*, Linn. (var. *distans*, Btl.), *Deiopeia pulchella*, Linn., *Achaea melicerte*, Dr., and *Acidalia rubraria*, Dbl. Of these *P. itea* is found in Australia and New Zealand, *P. amphiaraus* (*ilioneus*, Don.) in New Caledonia, *P. java* in the Malay Archipelago, *A. melicerte* and *A. rubraria* in Australia and Eastern Asia, and *D. bolina* has a wide distribution in the Pacific; the others are ubiquitous. With regard to *P. amphiaraus* I would here point out that we have no evidence of its presence on the mainland of Australia; the specimens recorded by Donovan and others were probably obtained from Norfolk Island.

The Orthoptera are represented by a few obscure species, mostly in bad condition, belonging to the genera *Blatta*, *Acheta* (probably *A. australis*, Linn.), *Locusta*, and *Phaneroptera*; the Neuroptera by *Chrysopa*, and the Homoptera by a small black *Cicada* which I have not been able to identify.