

From the Proceedings of the Linnæan Society of New South Wales, Vol. xlix.,  
Part 3, 1924.

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RESULTS FROM ROY BELL'S MOLLUSCAN COLLECTIONS.

By TOM IREDALE.

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[Issued 24th October, 1924.]

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(Plates xxxiii.-xxxvi.)

[Read 25th June, 1924.]

Roy Bell has made several collections of molluscs which I hope to report upon more fully in the near future, especially in connection with zoogeographical problems relating to Australasia. Roy Bell was born on Raoul Island, in the Kermadec Group, and was of the greatest assistance to all the members of the Expedition of 1908, but more especially to myself, as I found he had an excellent knowledge of the larger shells and was keenly interested in this group. After I left the island, he made still larger collections, which were partly reported upon by Mr. W. R. B. Oliver, now at the Dominion Museum, Wellington, one of our party. Owing to an unexpected disaster which compelled all the settlers (the Bell family) to leave the island, I was able to obtain his services for Mr. G. M. Mathews, to investigate the bird life of Norfolk and Lord Howe Islands. While upon these islands he made large collections of molluscs for me, until the Great War suspended all scientific work and publication. Bell volunteered, though not sound, and served four years, and upon his demobilisation made more collections in Australia. He landed at Melbourne and went to Port Fairy, Victoria, where he studied the Adelaidean fauna; he then travelled to Mallacoota, Victoria, where he found almost a pure Peronian Mollusc Fauna. This was all I had desired for comparison, but the influenza outbreak prohibiting his return to New Zealand, he travelled to Eden in Twofold Bay and stopped there until the epidemic was over. He employed himself in making a thorough survey of the molluscan fauna, shore collecting in every available place, dredging throughout the Bay in from five to twenty-five fathoms, and outside, as far north as Merimbula, in water to the same depth, and in deeper water, from fifty to seventy fathoms, off Green Cape. In this essay I deal with the Twofold Bay collections, but use the other material for comparison. As all the material has been collected by one man, employing the same methods, the results are especially valuable in this respect, the personal equation, no small factor, being eliminated. Angas recorded shells, received from Brazier, from Twofold Bay, while apparently Cox and Hedley also collected there, but I have seen no note of Disaster Bay, the southernmost limit of New South Wales, which Bell visited. The littoral fauna was found to be stationary, little trace being found at a depth of only five fathoms, while from five to twenty fathoms, the molluscan life was uniform; but beyond twenty fathoms a new fauna was developing, and from the deeper water, 50-70 fathoms, still more different forms were secured, but, as usual, much of the deeper water material was dead. Again, the shells washed up on the beach vary according to the seasons, many being found during winter

(802) *CANCELLARIA AUSTRALIS* Sowerby, 1832.

The name given in the synonymy, *Cancellaria undulata* Sowerby, must be used, as May has already pointed out (Illustr. Index Tasm. Shells, 1923, Appendix, Ref. to Pl. xxxiv., No. 1). Sowerby's name was given to a Tasmanian shell, but the Sydney form does not appear to differ much from the specimens so far studied.

I hope to review the species of this family admitted in the southern Australian fauna, but in the meanwhile No. 805 must be removed from *Admete* back to *Cancellaria* sensu lato, and it must be given specific rank, as quite distinct from the fossil *micra*; the small specimens, compared by Hedley with the type of *micra*, may not be conspecific with the type of *scobina*, and I do not regard them as conspecific with the fossil *micra*, but very close to *exigua* Smith, which would be placed next to *stricta* Hedley, and arranged alongside some of the small fossils such as *micra*.

(813 A) *TEREBRA USTULATA* Deshayes, 1857.

*Terebra ustulata* Deshayes, Journ. de Conch., 1857 (July), p. 97, Pl. iii, f. 12: Van Diemen's Land. Mus. Cuming.

From Twofold Bay four species of *Terebra* were dredged in varying depths, but a single dredging in 10-20 fathoms in Disaster Bay brought up a hundred specimens of a different species, which has been determined as above and which is an addition to the New South Wales fauna. Later, an odd dead shell was found in Twofold Bay dredgings, so that it does reach that bay.

The species has been placed by May, following Hedley, under the genus *Duplicaria* Dall (Nautilus, 21, Mar., 1908, pp. 124, 125), provided for *Terebra duplicata* Lam. Dall later noted that Rafinesque had long previously proposed *Duplicaria* (Atlantic Journal, No. 5, 1833, p. 165) for a different object, so amended his name to *Diplomeriza* (Nautilus, 33, July, 1919, p. 32). Bartsch has recently shown (Nautilus, 37, 1923, pp. 60-64) that some of the so-called *Diplomeriza* have two folds on the columella, and has proposed to separate these under Hind's name *Myurella*, introducing *Myurellisca* for the species confused with Lamarek's *duplicata*, which he distinguished as *Myurella* (*Myurellisca*) *duplicatoides* (p. 64) from Ceylon.

Bartsch has written "Considerable time was required running down references to names and verifying type designations. To save future students of this task a chronologically arranged list of names supplying this information is here appended." Such a statement would suggest accuracy which is belied by the published conclusions. Thus Dall wrote *Acuminia* and *Oxymeris*, but Bartsch quotes *Acumineia* and *Oxomeris*, and on p. 63 he named, as type of his new subgenus *Myurellisca*, "*Terebra* (*Myurellisca*) *duplicatoides* Bartsch described below" but on the next page "*Myurella* (*Myurellisca*) *duplicatoides*" is described: Probably also this new (?) species has been named previously, as there are several synonyms. Again, Bartsch cites names as of Lamarek which had been described before Lamarek's time: this is confusing, but when he writes that the type of *Mazatlanina* Dall is "*Terebra aciculata* Lamarek" and there is no such species, it seems unnecessary to continue this note, and simply to ignore Bartsch's Key, and make an independent review. This is not my purpose, but, in order to stabilise some Australian forms, I propose to separate the species grouped round *ustulata* Deshayes as a new genus *Pervicacia*, using that well-known species as type. There is only the basal twist of the columella to represent a fold.

The species *T. brazieri* Angas was represented at Twofold Bay by a longer

narrower form which varied from almost smooth to well ribbed (Plate xxxvi., f. 6-7), and would fall, according to Bartsch's Key, under *Hastula*, whereas the species has been suggested to be a variety only of *T. lanceata* Linné, the type of *Acuminia* Dall (Nautilus, 21, Mar., 1908, pp. 124-125), which name may be used generically for the Austral species. I note *Terebra leptospira* Tate (Trans. Roy. Soc. S. Aust., 1888, p. 163, Pl. viii., f. 15a, b) from Muddy Creek appears very close to *A. brazieri* Angas, while *Terebra subspectabilis* Tate (loc. cit., p. 162, Pl. ix., f. 11) seems closely related to *P. ustulata* Deshayes. Comparisons should be made.

(813 B) *PERVICACIA ASSECLA*, n.sp. (Plate xxxvi., f. 16).

Shell elongately subulate, rather thin, glossy, last whorl about one-third the length of the shell, mouth oval, canal short and open. Colour pinkish-white with fulvous spots below suture and darker fulvous on basal part of last whorl: sometimes suffused with fulvous throughout. Apical whorls two, smooth; adult whorls ten, sutures impressed, longitudinally ribbed, the ribs being interrupted by a smooth concave depression, sinuous and eighteen in number on the penultimate whorl: on the last whorl the ribs are prominent on the periphery, continuing, but fading, on the base which is rounded. The mouth has the outer lip thin, sinuate through the lack of sculpture below the suture, the columella straight, anteriorly a little bent but showing no folds. Length of type 28 mm., breadth 9 mm.

Dredged in Twofold Bay, N.S.W., in from 10-25 fathoms.

Superficially resembles *P. ustulata* (Deshayes), but I have seen no other Australian Terebrid that can be compared.

(823) *CONUS MACULOSUS* Sowerby, 1859.

A perplexing complex is here exposed, as Roy Bell sent a fine lot of so-called *anemone* from Port Fairy, Vic., where I have since collected it. Previously he had sent a similar species from Lord Howe Island and later sent a few specimens from Twofold Bay, N.S.W. I have collected specimens at Long Reef, near Manly, but these all differed notably and suggest to me a distinct species, though Hedley has only allowed them varietal rank. In any case the name to be used must be revised, and I find that *Conus maculosus* Sowerby dates from the Conchological Illustration, Pl. 3 and 3\*, published 29 Mar., 1833, where it is said to have come from the Island of Capul in the Philippines, and the figures are not like either the Port Fairy or Sydney shells. It is needless to pursue this item further, as the name is preoccupied by Bolten (Mus. Bolten, pt. ii., 1798). The next name cited by Hedley, viz., *C. jukesii* Reeve (Conch. Icon., Vol. i., Apr., 1848, *Conus* suppl. Pl. 2, f. 278) though localised as from North Australia is undoubtedly the Sydney shell, and would be available were it not that Sowerby had figured (Conchological Illustrations, pt. 56, 30 Apr., 1834, fig. 79) a shell (the figure numbered 70 in error) which is easily recognizable as the same species. In the Lists issued with the plates, Sowerby named this *Conus papilliferus*, and the name would have been lost, save that in the Catalogue issued when the Monograph was completed, he had noted that this name had been given, as he there concluded the figured shell was "*C. maculosus*, test. jun.?" In 1859, at the place cited by Hedley, Sowerby used the name *maculatus* for his previously named *maculosus*, whether intentionally or not is unknown. The majority of the specimens from Botany Bay to Port Stephens in the Australian Museum are typically *C. papilliferus*, but there is one set presented by Miss L. Parkes from Middle Harbour,

## Plate xxxiv.

- 1-4. *Lima nimbifer* Iredale. 1. narrowed right valve, inside; 2. Type, side view; 3. full left valve, interior; 4. Type, outside of left valve.  
 5. *Peculator verconis* Iredale, Type.  
 6, 7. *Teleochilus royanus* Iredale, Type. 7. protoconch.  
 8. *Radiolphus royanus* Iredale, Type.  
 9. *Colus novaehollandiae grandiculus* Iredale, protoconch.  
 10. *Typhis philippensis interpres* Iredale, Type.  
 11. *Stiva royana* Iredale, Type.

## Plate xxxv.

1. *Neotrigonia gemma* Iredale.  
 2. *Solamen rex* Iredale.  
 3. *Glycymeris striatularis suspectus* Iredale, Type.  
 4. *Austrotriton parkinsonius basilicus* Iredale, Type.  
 5, 6. *Eligidion audax* Iredale, Type. 5. side view; 6. from above.  
 7-9. *Ethminolia probabilis* Iredale, Type. 7. from above; 8. from side; 9. from below.  
 10. *Fusus grandis* Gray, Type.  
 11. *Spectamen philippensis* Watson.  
 12. *Minolia pulcherrima emendata* Iredale, Type.  
 13. *Microvoluta royana* Iredale, Type.  
 14. *Nuculana dohrnii* (Hanley).  
 15. *Nuculana (dohrnii) tragulata* Iredale.  
 16, 17. *Triviella merces* Iredale, Type. 16. from above; 17. from below.  
 18, 19. *Glycymeris flammeus* Reeve. 18. hinge; 19. hinge of young.  
 20. *G. hedleyi* Lamy.  
 21. *Amygdalum beddomei* Iredale, Type.

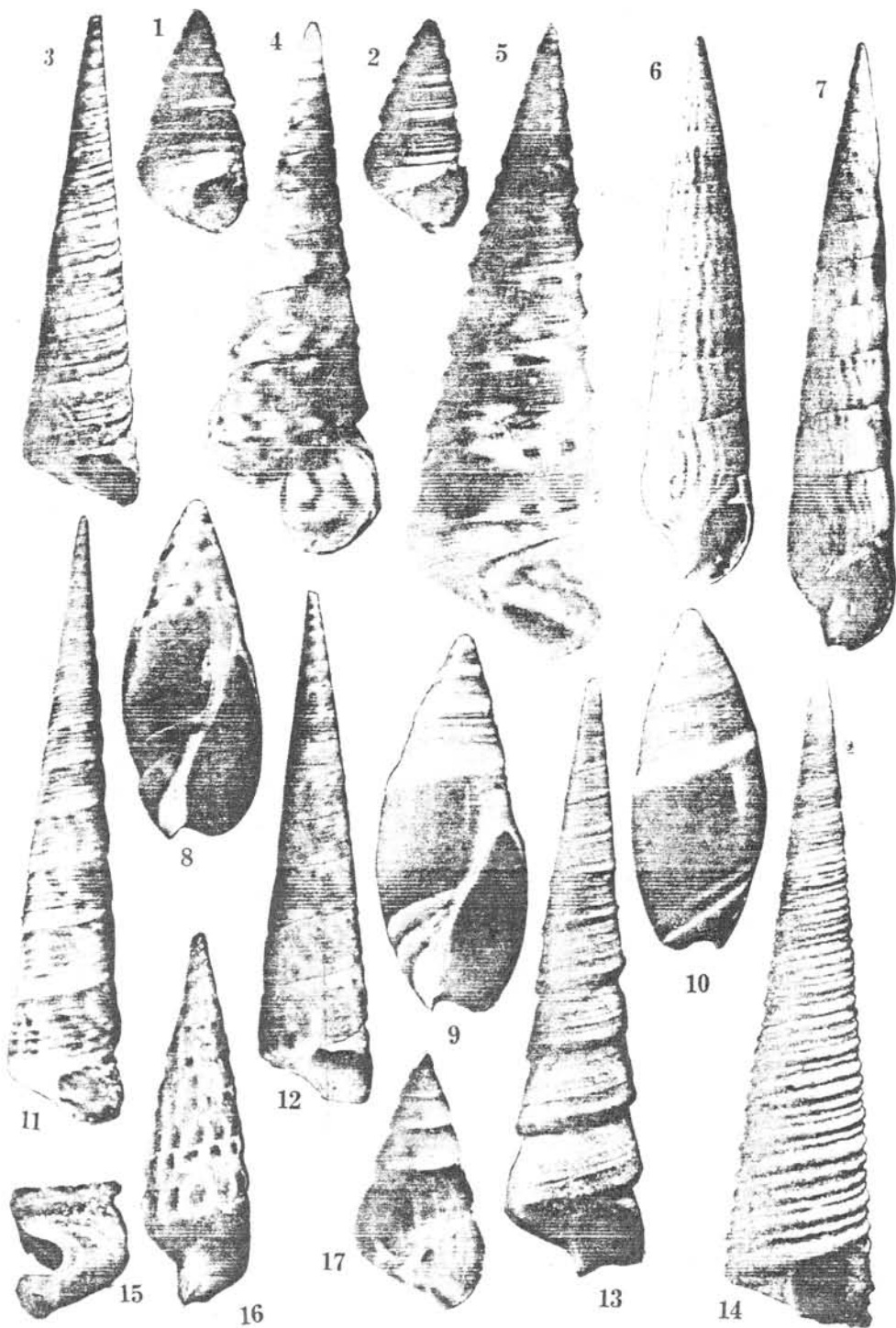
## Plate xxxvi.

- 1, 17. *Leiopyrga lineolaris* Gould. 1. variation; 17. normal.  
 2. *L. octona problematica* Iredale, Type.  
 3, 12, 13. *Gazameda gunnii* Reeve. 3. Disaster Bay form; 12. normal; 13. from deepwater.  
 4, 15. *Colpospira guilleaumei* Iredale, Type. 15. side view of mouth showing sinus.  
 5. *C. quadrata* Donald.  
 X 6, 7. *Terebra brazieri* Angas. 6. sculptured form; 7. smooth form.  
 8. *Baryspira oblonga* Sowerby.  
 9. *B. fusiformis gaza* Iredale. Type from off Merimbula.  
 10. *B. fusiformis* Petterd.  
 11. *Gazameda tasmanica* Reeve, adult.  
 14. *G. tasmanica* Reeve, young.  
 X 16. *Perricacia assecla* Iredale, Type.

Note added 16 Sept., 1924.—I find that some years ago Cossman designated *Ancilla australis* Sowerby as the type of *Baryspira*. This should be noted in 5th line from bottom of page 259 and also line 6 on page 260.

Proc. Linn. Soc. N.S.W., 1924.

PLATE XXXVI.



Mollusca from Roy Bell's Collections.