

SOUTHERN AUSTRALIAN GASTROPODA PART III

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Two new species and one new genus of Gastropods from south-western Australia are described here

Zoila rosselli, sp. nov.

Pl. I, fig. 1-6

Shell pyriform, with flattened base; base spreading, with a sharp edge round the entire circumference; dorsal part of the margin, on the right side, anteriorly and posteriorly obscurely ribbed; the left margin edge medially wavy; dorsum sharply humped, the central portion of the dorsum in the holotype mostly white through the outer layer of shell being dissolved away with hydrochloric acid; normally the dorsum is light brown as shown by patches of the original outer layer left in other specimens which have also been treated with acid; margins and extremities calloused and spread; medium brown-coloured base becoming cream towards the lips at the aperture; aperture wide and curved; outer anterior lip declivous; aperture turns sharply left towards the posterior end; twenty-seven teeth covering the whole length of the aperture; teeth moderately developed, produced slightly across the base, rather coarse and widely spaced, brown with cream interspaces; fossula white, slightly concave, sulcus wide and shallow, neither denticulate; interior of shell, examined in a broken specimen, ivory white. Length 49 mm., width 35 mm., height 25 mm., animal unknown.

Loc.—Fremantle, W. Aust.

Remarks—The species is constant in character, size and shape. Only three distinct species and four subspecies of the primitive cold water cowries belonging to the genus *Zoila* are known, and they are found in Western and South Australia. There are four Tertiary species in the Miocene of Victoria, *Z. consobrina* McCoy 1877, *Z. platypygæ* McCoy 1876, *Z. simplicior* Schilder 1935 and *Z. toxorhyncha* Tate 1890. None of the Tertiary species resembles the Recent one here described. Probably *Z. rosselli* is more closely allied to *Zoila decipiens* Smith 1880 described from North-Western Australia than to any other species, but it is distinct. *Z. rosselli* differs in the flattened base with its spreading and sharply-edged margin and coarse spaced teeth of the columella and outer lip. Curiously, *Z. rosselli* has the general shape of *Siphocypraea mus* Linne 1758 Mediterranean, and of *Bernaya teulerei* Cazenavette 1846 Arabia, and *Bernaya fultonii* Sowerby 1903 Natal, but these three species have well-rounded bases, and *Bernaya* is edentulous. *Siphocypraea* has a complete set of spaced teeth on the margins of the wide aperture, a feature which in some way recalls *Z. rosselli*. The holotype specimen D. 14220 is figured in five different positions, and another broken specimen belonging to the series is figured to show the interior structure.

Mr. Harold Rossell, after whom the new species is named, took the four specimens before me at Fremantle from a beach near North Wharf just beyond the wall where all sorts of rubbish come ashore. The bucket dredges dump their contents straight out to sea opposite this little beach, and the shells may have come from the bottom of the harbour. He writes: "I remember small stones, some with shells such as *Turbo setosus* stuck in them in a partly fossilised state. . . . I often picked up immature *Cypraea scotti* on this little beach, but of course *scotti* were

* South Australian Museum, Adelaide.

and some actually had the remains of their animals in. . . . If I remember, the time would be about October, after the equinoctial blows of September." Mr. Rossell also remarks that "it must be a long time since I took them. . . . at least thirty years ago. I remember it very well, and the dorsum was pale brown, somewhat marked with tiny scratches and cleaned at once with the application of hydrochloric acid. I imagined then that it effected an improvement in the shell's appearance, but I was just beginning to collect things, and had it been recently I would have known better." The only specimens known are six taken by Mr. Rossell, four of them in the W. R. Steadman Collection, one of which, the holotype, described, was donated by Mr. Steadman to the South Australian Museum. One specimen from Cottesloe is in the Australian Museum, according to information received.

***Alcyna acia* sp. nov.**

Pl. I, fig. 7, 8

Shell small, conical, turbiniform, solid, protoconch finely spirally furrowed and blunt, of one and a half whorls; first spire whorl convex, closely lirate with seven close-set cords; third convex, bicarinate, upper carina at about the centre of the whorl, lower immediately above the suture; about ten stout roundish axials from the suture cross and form somewhat vertically compressed nodules on the upper carinae and on the intercarinal lirae, least prominent on the medial lirae, more prominent on the lower carina and largest on the upper; round the base are ten rather broad, rounded spirals; mouth nearly circular, labrum bevelled on the inside, slightly effuse at the base, hollowed on its surface, without any spreading callus; columella with a prominent tooth which is actually a plait; a broad band of rosy tint winds round the base to the basal lip and extends between the tubercles of the lower carina and so can be seen as spots just above the suture; in some specimens a narrow red band appears between the main axials just below the suture and in some a series of dashes extends from its inner margin to the base nearly to the aperture of the shell; the lip is round, smooth inside, with a slight gutter behind; the body whorl has seven or eight equidistant round ribs of sizes equal to the interspaces; some have axial red lines equal in width to the white interspaces, sometimes broken into articulated lines, especially about the periphery of the body whorl, much less over the base; the first and second whorls may be red and the body whorl with seven or eight streaks of red with equally wide streaks of white from the suture to the periphery, and coral red base; some have the first three whorls red, the next two whorls, the ultimate and penultimate, with about six zig-zag broad brown flames and rather narrower white interspaces extending to a brown base; one form has the two carinations articulated with brown, the rest of the shell being light chestnut brown, the first and second whorls being rosy red. Diameter 1.8 mm.; height 3 mm.

Loc.—W. Aust.: Rottnest (type), King George Sound, Hopetoun. S. Aust.: Cape Borda, 60 fathoms.

Remarks—The species is bicarinate and more strongly sculptured than *Alcyna australis* Hedley 1907, from Mast Head Island, 17-20 fathoms; the columellar tooth is less developed, and the colour pattern is different.

Holotype: Reg. No. D, 14219, South Australian Museum.

***Austroliotia* gen. nov.**

Genotype: *Liotia botanica* Hedley 1915, New South Wales.

Shell depressed, moderately heavily sculptured, aperture trumpet-shaped, not

strongly variced; umbilicus wide; operculum horny, multispiral but with faint traces of granules.

Distribution—New South Wales, Victoria, South Australia, Western Australia, Tasmania, New Zealand.

Remarks—*Liotina* Fischer 1885, genotype *L. gervillei* DeFrance, a fossil, has been used for this temperate Australasian genus with widely umbilicate depressed shells, with moderately variced aperture and simple, multispiral, horny, operculum. *Liotina* is more applicable to a well marked tropical and subtropical group of species, with extremely solid, not very depressed shells having a very narrow cylindrical perforation. The genotype, *A. botanica*, typical of a southern Australian series, seems to be a temperate relative of the warm water *Liotina*. *Austroliotia* is separable from *Munditia*, in which the shell is more planorbid with a tendency to reduction of sculpture to knobs on the double keel, and having a very wide perspective umbilicus, lightly variced aperture and simple, horny, multispiral operculum. Species belonging to *Austroliotia*, besides the genotype, are *A. australis* Kiener, *A. densilincata* Tate, and others may also belong here.

KEY TO SPECIES OF AUSTROLIOTIA

a.	Spiral lirae defined	....	....	....	....	....	....	<i>australis</i>
aa.	Spiral lirae weak	....	....	....	....	....	....	<i>densilincata</i>

DESCRIPTION OF PLATE I

- Fig. 1 *Zoila rosselli* sp. nov., ventral, holotype.
 Fig. 2 *Zoila rosselli* sp. nov., dorsal, holotype.
 Fig. 3 *Zoila rosselli* sp. nov., anterior, holotype.
 Fig. 4 *Zoila rosselli* sp. nov., posterior, holotype.
 Fig. 5 *Zoila rosselli* sp. nov., dorsal aspect of broken specimen showing interior.
 Fig. 6 *Zoila rosselli* sp. nov., lateral, holotype.
 Fig. 7 *Alcyna acia* sp. nov., ventral.
 Fig. 8 *Alcyna acia* sp. nov., dorsal.



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