

MINUTE BIVALVES FROM NEW SOUTH WALES.

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(Figures 1-44.)

INTRODUCTION.

This paper was originally intended to be a review of three groups only, *Cuna*, *Condylocardia* and *Cyamiopectra*, but it has been extended to cover most of the minute bivalves living on the coast of New South Wales. In the course of the investigation so many minute forms came under observation, many of rather obscure classification, that the opportunity was taken to study and draw them, and thus the scope of the paper was gradually extended. The term minute is not an arbitrary one, but is here taken to refer to shells less than about 3 mm. in size. An exception is *Cunanax pisum* Hedley, which is 6 mm. in height, but the other members of this family are all minute, so this species could hardly be excluded. The only really small shells not dealt with are certain deep water forms such as *Cyrella*, *Bathyarca*, *Cratis*, *Notomytilus* and *Pronucula*. These were omitted either because of insufficient material, or because there was nothing new to add to the excellent work done by the late Charles Hedley.

Practically all the material here dealt with has been collected by my son John and myself in the last twenty years, and to my collecting partner must go most of the credit for picking out the rarities and novelties from shell sand and dredgings. To Mr. Tom Iredale my thanks are also due, for throughout he has given me the benefit of his great experience and much advice concerning the classification.

All types and specimens illustrated have been presented to the Australian Museum.

THE CUNA GROUP OF GENERA.

Genus *Cuna* Hedley, 1902.

Genotype, *Cuna concentrica* Hedley.

The main characters taken from Hedley's description are:—"A genus of the Crassatellitidae. Shell very small, equilateral or slightly rostrate, higher than long with lunule and impressed dorsal area, beaks erect, prodissoconch marked, valves sometimes clasping. Sculpture concentric. Inner ventral margin usually denticulate. Hinge plate broad and flat; in the left valve two well developed cardinals; in the right a rudimentary cardinal and a massive, projecting, flat-topped and triangular cardinal. Laterals produced, sometimes transversely striated, a posterior and anterior in each valve. Ligament partly internal, protruding in a notch below the beaks."

Hedley included the two species *delta* and *atkinsoni* in *Cuna*, and later described two new species, *C. particula* and *C. pisum*. Iredale (1930) pointed out that these were a very heterogeneous group, and proposed the new genera *Volupicuna*, *Saltocuna* and *Cunanax*, but beyond indicating genotypes did not append generic descriptions. Cotton in his excellent work on the Pelecypods of South Australia (1938) added two more genera *Hamacuna* and *Propecuna*. Even among the South Australian shells still listed under *Cuna* there is such diversity that, had they been larger, further generic differentiation would surely have been undertaken. This has now been done with the New South Wales species, and to keep the relationship clear I have followed Iredale and Cotton in retaining the word "*cuna*" in some part of the new generic names.

The systematic position of *Cuna* and other small genera is still rather obscure. Hedley placed *Cuna* with the Crassatellitidae, a quite reasonable classification for, in hinge and other characters, it conforms broadly with this family. In view of the minute