

A REVISION OF THE NEW SOUTH WALES LEPTONIDAE (MOLLUSCA: Pelecypoda)

(Figs. 1-27)

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(This research has been assisted by a grant from the Science and Industry Endowment Fund.)

INTRODUCTION.

The group of bivalves dealt with in this paper has been classified differently by Australasian conchologists. Hedley in his check list, 1918, used Leptonidae as a family name. Powell in "Shellfish of New Zealand", 1937, divided the group into two families Lasaeidae and Erycinidae. Cotton and Godfrey, "The Mollusca of South Australia", 1938, used Leptonacea as a superfamily, divided into two families, Leptonidae and Montacutidae. Powell again, in a second edition, 1946, reverted to the single family Leptonidae.

That arrangement is followed here. The group, whether considered as a family or superfamily, seems a natural one, and the characters, both anatomical and of the shell, are reasonably definable.

Many of the genera are nestling, others are reputed to be either commensal or parasitic, but the latter habits have not been noticed in any of the Peronian forms. Shell characters which may be noted are the small size, thin cellular crystalline texture, and generally fine concentric sculpture. The colour is mainly white or yellow. A thin periostracum may be present. They are equivalve, sometimes gaping, inequilateral, but often nearly equilateral, the posterior end sometimes longer than the anterior. The ligament is rarely external, and when present is weak, leaving no impression on the shell. The resilium is internal, generally in a subumbonal pit, but with no chondrophore. The hinge plate is narrow, with one or two cardinal teeth in each valve, or they may be quite missing in one valve; the cardinals in the other valve fitting into notches on either side of the resilium; laterals may be present, but are generally weak. The adductors are peripheral and subequal, and the pallial line is entire.

All the genera placed by Hedley in the Leptonidae are discussed in this paper with the exception of the minute genus *Notolepton* Finlay. There is considerable doubt as to the exact classification of *Notolepton*, and it is possible that, together with *Micropolia* Laseron, its affinities are with *Cyamionactra* Bernard rather than with the Leptonidae. In any case I have already discussed both genera in an earlier paper (Laseron 1953).

There is also considerable doubt about the systematic position of *Benthoquetia* Iredale. Cotton placed it near *Montacuta* Turton, but both Hedley and Iredale referred the type species to the Myacidae.

In the preparation of this paper my thanks are again due to Mr. Tom Iredale for his generous advice and for checking the material in the Australian Museum at a time when my own ill health confined me to my home. All the types as well as specimens illustrated have been presented to the Australian Museum.

Genus **Marikellia** Iredale, 1936.

Type species, *Kellia solida* Angas.

Iredale (1936) pointed out that the type species of *Kellia* Turton, s.s., was really the common little gregarious shell known previously as *Lasaea* Brown, and that *Kellia* must replace *Lasaea* in nomenclature. He introduced *Marikellia* as a new generic name with *Kellia solida* Angas as the type species. Cotton and Godfrey (1938) supplied a full generic description of *Marikellia* from which the following characters may be emphasised: The smooth, white, more or less oval inflated inequilateral shell, the hinge with its internal ligament and wide resilifer, the left valve with a conical tooth in front and a lamelliform tooth anterior to that, a lamelliform tooth behind the resilifer, the right valve with a lamelliform tooth both in front and behind, the adductor scars subequal, the pallial line entire.

All the New South Wales species conform to this description and the genus appears to be a natural one with well marked limitations. It appears also to be restricted to shallow water, often living above the limits of low tide, both on the outer coast and within the harbour. A common habitat of several of the species is nestling within masses of the common hairy mussel, *Trichomya hirsuta* Lamarck, which grow on the foreshore reefs just above low tide level.