

NOTES ON THE NEW SOUTH WALES MITRAS WITH SPECIAL REFERENCE TO THEIR PROTOCONCHS.

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(Figures 1-11.)

INTRODUCTION.

The late Charles Hedley (1918) allowed twelve species of *Mitra* as occurring in New South Wales.

These were: 892 *Mitra acromialis* Hedley, 893 *M. carbonaria* Swainson, 894 *M. cookii* Sowerby, 895 *M. glabra* Swainson, 896 *M. legrandi* Ten.-Woods, 897 *M. miranda* Smith, 898 *M. nodostaminea* Hedley, 899 *M. pacifica* Reeve, 900 *M. rhodia* Reeve, 901 *M. solida* Reeve, 902 *M. strangei* Angas, and 903 *M. volucra* Hedley.

Two additional species were described and named by T. Iredale (1929) from the "Triton" dredgings in Sydney Harbour. These were *Chrysame lemma* (p. 343, pl. xxxviii, figure 6) and *Mitropifex quasillus* (p. 346, pl. xxxviii, figure 18).

These species still stand, though there has been some revision in their names. This paper now raises the list of species to twenty-three by the addition of four new species, and five species now recorded from New South Wales for the first time. The four new species are *Mitra sinusigera* Laseron, *M. tasmantis* Laseron, *M. jervisensis* Laseron, and *M. cericosta* Laseron.

Those recorded for the first time are *Mitra eximia* Adams, *M. peregra* Reeve, *M. tuberosa* Reeve, *M. lugubris* Swainson, and *M. scutulata* Lamarck.

Apart from zoological classification, but curiously enough broadly paralleling it, these twenty-three species may be divided into groups based on distribution. Firstly there are six tropical species, representing an overlap into the Neoperonian region, all recorded from the north coast of New South Wales, and introduced no doubt by the warm Notonectian current. These are *pacifica*, *peregra*, *tuberosa*, *lugubris*, *eximia*, and *scutulata*.

The next group includes the species inhabiting the foreshores, or occurring just below low tide. Some of these have a limited geographical range, others occur widely distributed along the coast. They include the brown Mitras, separated by Iredale in *Vicimitra*. They are *contermina* Iredale replacing *carbonaria*, *cookii*, *exposita* Iredale replacing *glabra*, *rhodia*, *prospora* Iredale replacing *solida*, *volucra*, and the new species *sinusigera*.

The final group includes the deep-water species, sometimes found dredged within the harbours, but mainly inhabiting the continental shelf. Most of these are heavily sculptured, and are generally akin to species found in similar locations in Tasmanian waters. The species are *acromialis*, *legrandi*, *miranda*, *nodostaminea*, *strangei*, *lemma*, *quasillus*, *tasmantis*, *jervisensis*, and *cericosta*. It is probable that the genetic relationship of some of these species must be looked for in the past rather than in other zoogeographical provinces, and will be found in the Cainozoic rocks of New Zealand and southern Australia, or in other parts of the world.

The *Mitra* Protoconch.

Though the single genus *Mitra* is here used, it is not suggested that the group is monogenetic, for undoubtedly many genera exist, but it is felt that any revised classification should be based on a wider geographical field, and that characters other than taxonomic must be considered if true genetic relationship is to be established. There has been