

Radioles short and dense; spade-shaped on sternal plastron. Globiferous pedicellariae with curved valves terminating in a slit bordered by six long teeth. Tridentate pedicellariae of two kinds: one with long narrow valves strongly dentate in the lower part and expanded into a spoon-shaped blade distally; the other with small, pointed valves. Typical rostrate, ophicephalus, and triphyllous pedicellariae present.

Test with radioles light brown; denuded test uniform cream.

The sub-genus *Allobrissus* Mortensen is distinguished from the typical *Brissus* by the character of its globiferous pedicellariae, the valves of which terminate in a narrow slit bordered by long, curved teeth. Mortensen (1951) places two species in the sub-genus: *B. agassizii* Döderlein and *B. meridionalis* Mortensen, the former from Japan, and the latter from Norfolk Island and eastern Australia. Mortensen regards the southern form as a separate species on the basis of small differences in the shape of globiferous, tridentate, and rostrate pedicellariae. The New Zealand form possesses a variety of pedicellariae whose shapes may be regarded as a combination of those described for *B. agassizii* and *B. meridionalis*. The occurrence of the different types of pedicellariae in the *Brissus* species is extremely variable, and thus their taxonomic importance must be regarded with caution. For example, the globiferous pedicellariae were entirely lacking in a specimen of *Allobrissus* from Norfolk Island. The variation in pedicellariae on this and another specimen from New South Wales, has led me to consider *B. meridionalis* identical with *B. agassizii*, or at the most a variety of the latter species. The pedicellariae on the New Zealand specimen strengthen this view, and I therefore prefer to classify it as *B. agassizii*.

The discovery of *Allobrissus* in New Zealand and also at Easter Island (Dr D. L. Pawson, pers. comm.) indicates that the sub-genus is much more widespread in the Pacific Ocean than formerly supposed.

DISCUSSION

The occurrence of *Diadema* and *Allobrissus* in New Zealand waters is not surprising since in recent years more and more evidence has accumulated to substantiate the view that the echinoderm fauna of our northern waters has strong tropical Indo-Pacific affinities (Fell, 1953; Pawson, 1961, 1965). The newly recorded heart-urchin may be added to the group of "immigrant" species of echinoderms (Pawson, 1965), known from the Australian-Indo-Pacific region and warmer northern waters. The New Zealand *Diadema* must be regarded as an endemic species at present, although it may eventually prove to be a sub-species of *D. setosum* with a restricted distribution off the northern coasts.

LITERATURE CITED

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