

The holotype and the seven new specimens of *Brissus gigas* are all from the same area in the Bay of Islands. Enquiries have elicited that the holotype was found on a shingle beach in Deepwater Cove, Bay of Islands, and not in "deep water" as has been previously stated (Fell, 1947). A survey of the ocean floor in the type locality was made by skin-divers during February of 1964 in search of living specimens of *Brissus gigas*. The area was examined extensively from low tide level to a depth of fifty feet, and although empty tests were found, a living animal was not located.

Possibly *Brissus gigas* has a rather restricted northern distribution in New Zealand. However, with the increasing usage of underwater breathing apparatus as a research tool in coastal waters, further specimens may be found in new localities.

DESCRIPTION

In the present specimens the test is large, wide and inflated, without an anterior notch. A peripetalous fasciole and a sub-anal fasciole are present, but no anal fasciole. Petals are well formed and depressed. The sub-anal plastron is wide and reniform; the sternal plastron is large and possesses a radial arrangement of fine tubercles. Primary tubercles extend within the peripetalous fasciole, and only the primary tubercles are perforate. The highest point of the test is typically situated in interambulacrum 5, where an accentuated hump or keel commonly occurs posterior to the peripetalous fasciole.

In the known specimens of *Brissus gigas* the size range of the peristome is constant and it is not significantly different in shape or relative size from that of *B. latecarinatus*. Thus Mortensen's suggestion that the short peristome of the holotype might be a diagnostic character of the species is not confirmed. The peristome plates are shown in Fig. 1A. The periproct is relatively constant in size.

The pattern of the peripetalous fasciole in interambulacral column 5 varies considerably.

Mortensen also suggested that the broadly elliptical madreporite of the holotype might be a character distinguishing *B. gigas* from *B. latecarinatus*. The present specimens of *B. gigas* exhibit considerable variation in the shape of the madreporite. In smaller specimens the madreporite is more like that of *B. latecarinus*, which is more elongate, oval, and not so broad; but with increase in the size of the test in *B. gigas* the madreporite becomes more broadly elliptical. (Figs. 1 B i and ii). Considering this variability, the author does not regard the shape of the madreporite as a diagnostic feature of *B. gigas*.

All other previously recorded features of the seven recent tests are in accordance with the original description of *Brissus gigas*.

For the first time radioles and pedicellariae were observed in *Brissus gigas*. Radioles are present on three specimens only, and they occur in small patches. They are up to 7.0mm in length and 0.5mm in diameter, and are sculptured with fine longitudinal ridges connected laterally by narrow alternating bars. The radioles of these specimens lack pigmentation (Fig. 1C).

Four types of pedicellariae were observed on those specimens possessing radioles. Large, rostrate, tridentate pedicellariae ranging in size from 0.6mm-1.1mm were common on the tests (Fig. 1D). A small number of ophiocephalous pedicellariae were found on the periproctal areas of the tests. The valves of these