

***Pseudovermis hancocki* n.sp.**

DESCRIPTION: Fully extended animal (Fig. 2a) approximately 4mm long, ratio of breadth to length approximately 1:15. Colour in life translucent white, digestive gland creamy yellow stippled with black spots. Head reasonably distinct from body and having the greater diameter. Two eyes present. Cerata simple, longer than the diameter of head, five on left side of body, four on the right, first pair opposite, remainder alternate. Body terminating in a short tail. Radular formula 1-1-1  $\times$  36, median plate lacking usual large median tooth, having instead two or three very fine short denticles and four or five lateral denticles. Lateral plates slim, curved and pointed having a well-developed parallel secondary process (Fig. 2d). Mandibles (Fig. 2b and 2c), curved, slender with graduated series of about 16 teeth on their anterior border. Inner border of mandible bent upwards and thickened.

TYPE LOCALITY: The holotype was collected by the author in January, 1968, from sand dredged in 20 feet of water on the southern side of Urapukapuka Island, Bay of Islands, New Zealand (G.R. 726585, N.Z.M.S.1, Sheet N.12).

OTHER LOCALITIES: A second specimen was collected in sand dredged from a similar depth on the southern side of Motu Arohia Island, Bay of Islands, New Zealand (G.R. 672559, N.Z.M.S.1, Sheet N.12).

TYPES: The two specimens of *P. hancocki* collected were both sacrificed for jaw and radular mounts. The holotype is a preparation of the radula and jaws on a microscope slide and is deposited together with microphotographs of the living animal in the Dominion Museum, Wellington, New Zealand. The paratype is a similar preparation and will be retained by the author in the meantime.

REMARKS: *P. hancocki* is externally similar to several of the previously described species of *Pseudovermis*. Internally the central plate of the radula is remarkably different where it lacks the usual predominant median tooth. In view of the uniqueness of this feature, the second specimen was sacrificed to confirm that it was typical of the species.

## BIOLOGICAL NOTES

The feeding of *Pseudovermis* has long been the subject of interest and speculation. That the animal feeds at least to some extent on hydrozoans like the larger aeolids is certain for it is known that where nematocysts are present in the cerata of aeolids they are invariably derived from the hydrozoans upon which these animals feed (see discussion in Graham (1938)). Sand-dwelling Cnidaria of a suitable size are, however, not common, nor have they invariably been found in the sands from which *Pseudovermis* has been collected.

Ev. Marcus (1953) found that nematocysts in the cerata of *P. salamandrops* corresponded closely in size and type with those carried by the free-living sand hydrozoan *Psammohydra nanna* Schultz, 1950. She failed to find *Psammohydra* in the sand but considered it possible that her extraction method was unsuitable for their recovery. Boaden (1961) collected *P. boadeni* Salvini-Plawen, 1968, and *Halammohydra vermiformis* Swedmark and Teissier, 1957, from the littoral sands of the island of Anglesey in northern Wales. From a comparison of the nematocysts present in the two animals he considered it probable that *P. boadeni* feeds upon *H. vermiformis*. Fize (1961) collected *Pseudovermis setensis* from the littoral sand of the Languedoc province of France, but despite the large numbers of *Pseudovermis* present he found no sand-dwelling hydrozoans. *Pseudovermis* of all stages of maturity were collected and he noted that the young *Pseudovermis* lacked nematocysts in their cerata. He observed *P. setensis* attack and eat specimens of a small *Microhedyale* present in the same sand and so corroborated the suggestion by Kowalevsky (1901) that *Pseudovermis* fed at least to some extent on Acochliidae. Fize concluded that *P. setensis* was probably a facultative rather than an obligate hydroid feeder like the larger aeolids.

When *Pseudovermis mortoni* was discovered in the Solomon Islands a thorough search was made for sand hydrozoans which had they been the prey species, could