

Two Spirorbid Tubeworms (Serpulidae, Polychaeta) from Eastern Australia

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(Figs. 1-18)

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INTRODUCTION

This paper describes the systematic features of two species of *Spirorbis* the larvae of which have been used in experimental anti-fouling investigations at the C.S.I.R.O. Marine Laboratory. Dew's (1959) revision of the Australian Serpulidae did not include the genus *Spirorbis*, but she noted that it was well represented and listed the references to the five species previously described from the area.

MATERIAL AND METHODS

All material was collected from the *Posidonia* sp. beds which extend from the C.S.I.R.O. Marine Laboratory's jetty across the entrance to Gunnamatta Bay in Port Hacking, Sydney. Since the *Posidonia* sp. was not observed in flower, its specific identity could not be established.

Dissections of the tubeworms were made on fresh material immersed in the polyvinyl lactophenol mountant recommended for polychaete setae preparations by Knox (1951).

SYSTEMATICS

Genus *Spirorbis* Daudin 1800

Body asymmetrical, less than five thoracic segments; operculum usually with a terminal calcareous plate; tube calcareous, coiled in either a sinistral or dextral spiral; incubation of the eggs either in the tube or the operculum.

Spirorbis convexus, sp. nov.

Tube.—In solitary individuals the tube forms a flat, sinistral spiral (fig. 1), but in crowded populations the tube whorls may twist irregularly or coil on one another to form a tall spiral. The upper surface of the tube is white and shiny, and does not bear longitudinal ridges; its surface is smooth except for slight transverse growth striae. The diameter of 25 specimens each containing well developed larvae averaged 1.35 mm. (range 0.81—1.88 mm.).

Setation.—The setae of the dorsal and ventral bundles of the first thoracic segment are similar. Each of these bundles contains five main setae with well-developed blades, notches and fins (fig. 2.). The blade of each seta has fine serrations and there are 3-4 coarse teeth on the fin. The outline of the seta opposite the notch is unusual in that it is distinctly convex; it is to this feature that the proposed specific name refers. Each bundle has three fine capillary setae. The dorsal and ventral bundles of the second segment each have 7-8 setae bearing simple blades (fig. 3) which vary a little in size and amount of curvature. A few capillary setae are present. The bundles of the third segment are similar to those of the second, but the shape of the setae is slightly different (cf. figs. 3, 4).

Branchiae, operculum and incubation.—The six non-pigmented branchiae each bear 14-20 filaments; the terminal filaments are blunt (fig. 5). The operculum, which is transparent, arises from the right side of the animal and consists of a smooth, approximately cylindrical pedicel terminating in a flattish, rounded plate. The distal face of the plate may be convex, concave or