



Two new species of *Terebrasabella* (Annelida: Sabellidae: Sabellinae) from Australia

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Abstract

Two new species of *Terebrasabella* Fitzhugh & Rouse, 1999 are described from eastern Australia. *Terebrasabella hutchingsae* **sp. nov.**, was found from preserved coral rock debris collected in 1977 on the outer Barrier Reef near Lizard Island, Queensland. *Terebrasabella fitzhughi* **sp. nov.**, was found alive in burrows in and among spirorbin serpulid tubes on intertidal rocks in Tasmania in 1996. Both species were found in mucoid tubes, and brood their young in a manner similar to the only other described species of *Terebrasabella*, *T. heterouncinata* Fitzhugh & Rouse, 1999. *Terebrasabella hutchingsae* **sp. nov.**, is exceptional as it possesses a type of thoracic neurochaetal uncinus different from the other two species, and which is similar to the notochaetal acicular “palmate hook” seen in *Caobangia*. Descriptions of both species are given, and the diagnosis for *Terebrasabella* is emended. Larval and chaetal morphology and relationships among of the three known *Terebrasabella* spp. are discussed.

Key words: polychaete, bioerosion, burrow, hermaphrodite

Introduction

Terebrasabella heterouncinata Fitzhugh & Rouse, 1999 is a small sabellid (< 5 mm long) and is endemic to South Africa, living in burrows on the shells of gastropods. It has become a pest on cultured abalone in South Africa and California (Kuris & Culver 1999; Ruck & Cook 1998). *Terebrasabella heterouncinata* larvae settle on the growing edge of the host shell and the host covers it with nacreous shell (Kuris & Culver 1999) resulting in the burrow. It is a simultaneous hermaphrodite, with sperm storage, and is an intratubular brooder (Fitzhugh & Rouse 1999; Simon 2004; Simon & Rouse 2005). Other aspects of its biology have been investigated (Culver & Kuris 2004; Finley *et al.* 2001; Simon *et al.* 2004; Simon *et al.* 2005a; Simon *et al.* 2005b) making *T. heterouncinata* one of the best-studied annelids. Here, two new species of *Terebrasabella* are described from eastern Australia. *Terebrasabella hutchingsae* **sp. nov.**, was collected from coral rubble at 9–30m depth from Yonge Reef on the outer Great Barrier Reef, Queensland. *Terebrasabella fitzhughi* **sp. nov.**, was extracted mostly from spirorbin serpulid tubes adhering to intertidal rocks in Tasmania. Additionally, a few specimens of *T. fitzhughi* **sp. nov.**, were also discovered on Outer Yonge Reef, Queensland samples. Both species show similarities in morphology, reproduction and ecology with the type species *T. heterouncinata*. The relationships of the three *Terebrasabella* species are discussed.