

***Spiophanes* Species (Polychaeta: Spionidae) From Eastern Australia—With Descriptions of New Species, New Records and an Emended Generic Diagnosis**

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ABSTRACT. The *Spiophanes* fauna from Eastern Australia is described, and includes 5 new species (*S. modestus*, *S. viriosus*, *S. prestigium*, *S. pisinnus*, *S. dubitalis*) and 1 new record (*S. japonicum* Imajima, 1991). The generic diagnosis of *Spiophanes* is revised based on type and non-type material of all species in the genus, and a critical evaluation is also given of the characters previously used to distinguish *Spiophanes* species. A new diagnostic character, the appearance of gland openings exhibiting a chaetal spreader on the anterior chaetigers of the middle body region, is described. *Spiophanes japonicum* is removed from synonymy with *S. berkeleyorum* Pettibone, 1962. *Spiophanes urceolata* Imajima, 1991, is synonymized with *S. wigleyi* Pettibone, 1962. A key to all *Spiophanes* species known from Eastern Australia is given.

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The genus *Spiophanes* Grube, 1860, is a well-defined taxon within the Spionidae. It has been reviewed by Pettibone (1962) and more comprehensively by Foster (1971). Blake & Kudenov (1978) described the spionid fauna of southeastern Australia, including species of *Spiophanes*. Blake (1983, 1996) also provided detailed information for *Spiophanes* species from Californian, South American and Antarctic waters. Imajima (1991) studied material from Japan, resulting in the description of two new species. The most recent but brief overview of the taxonomic status and characters of *Spiophanes* species was by Maciolek (2000). The author also provides the latest description of a *Spiophanes* species, *S. abyssalis* from deep waters of the

Atlantic Ocean, bringing the total number of species to 13, plus an additional subspecies. However, a careful analysis of the literature reveals the paucity of studies in which type material has been examined, especially when synonymies were being proposed or new species described. Serious confusion now exists about the reliability of described diagnostic characters for several species. In addition, characters used to distinguish species are often not useful, so the identification of most *Spiophanes* species is difficult.

The present study is based on *Spiophanes* material available from collections in Australia. Unfortunately only a restricted region, the coastal waters of Eastern Australia from Halifax Bay, near Townsville (Queensland) in the north

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