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Revision of the Australian Sphaerodoridae (Annelida) including the description of four new species

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Abstract

A revision of the complete sphaerodorid (Sphaerodoridae, Annelida) collections housed in the three major Australian museums (The Australian Museum, Museum and Art Gallery of the Northern Territory and Museum Victoria) has been performed. Specimens of three of the four species described to date from Australian waters, *Ephesiella australiensis*, *Sphaerodoropsis exmouthensis* and *Sphaerodoropsis fauchaldi*, have been re-encountered, resulting in changes to their previously reported distribution range. Four additional species are herein described as new: *Sphaerephesia hutchingsae* n. sp., *Sphaerodoropsis longofalcigera* n. sp., *Sphaerodoropsis megatuberculata* n. sp. and *Sphaerodoropsis wilsoni* n. sp. Moreover, *Sphaerodoropsis multipapillata heteropapillata* is elevated to the rank of species. A formal description of other specimens, most likely belonging to undescribed species, is not possible due to insufficient material, but information about some of their morphological features is provided. Descriptions, iconography, geographical and ecological information of all species part of this revision is provided together with a key for identification to all Australian species. An evaluation of some of the traditional generic taxonomic features is made, considering the variation observed within the Australian species.

Key words: sphaerodorids, new records, taxonomy, identification key

Resumen

Se ha llevado a cabo una revisión de las colecciones completas de esferodóridos (Sphaerodoridae, Annelida) de las tres mayores instituciones australianas (The Australian Museum, Museum and Art Gallery of the Northern Territory and Museum Victoria). Se han encontrado ejemplares de tres de las cuatro especies descritas hasta ahora en aguas australianas, *Ephesiella australiensis*, *Sphaerodoropsis exmouthensis* y *Sphaerodoropsis fauchaldi*, resultando en cambios su el rango de distribución conocido. Otras cuatro especies adicionales se describen aquí como nuevas: *Sphaerephesia hutchingsae* n. sp., *Sphaerodoropsis longofalcigera* n. sp., *Sphaerodoropsis megatuberculata* n. sp. y *Sphaerodoropsis wilsoni* n. sp. Además, *Sphaerodoropsis multipapillata heteropapillata* se eleva a rango de especie. Se redesciben *Ephesiella australiensis*, *Sphaerodoropsis exmouthensis* y *Sphaerodoropsis fauchaldi*. La descripción formal de otros ejemplares, que probablemente pertenecen a especies no descritas, no ha sido posible debido al escaso material disponible, pero se ha incluido información de algunas de sus características morfológicas. Se incluyen descripciones detalladas, iconografía, y datos de distribución y ecología de todas las especies identificadas como parte de la presente revisión, junto con una clave de identificación de todas las especies australianas. Se evalúan algunos de los caracteres tradicionalmente empleados en la clasificación, considerando la variación observada en las especies australianas.

Palabras clave: esferodóridos, nuevas citas, taxonomía, clave de identificación

Introduction

Sphaerodorids are scarcely known in Australian waters. Members of this family are generally small and not abundant and only four genera and seven species had been reported from Australia until very recently. Five of these species were originally described from Australian waters: *Ephesiella australiensis* Hartmann-Schröder, 1982,