The new deep-sea families Cebocaridae fam. nov., Cyclocaridae fam. nov. and Thoriellidae fam. nov. (Crustacea: Amphipoda: Lysianassoidea)

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Abstract

Within the Lysianassoidea three new families are established: Cebocaridae fam. nov. is established for the deep-sea bathypelagic genera Cebocaris J.L. Barnard, 1964; Crybelocephalus Tattersall, 1906; Crybelocyphocaris Shoemaker, 1945; Cyphocarioides Birstein & Vinogradov, 1970; Mesocyclocaris Birstein & Vinogradov, 1964; Mesocyphocaris Birstein & Vinogradov, 1960; Metacyclocaris Birstein & Vinogradov, 1955; Metacyphocaris Tattersall, 1906 and Paracyphocaris Chevreux, 1905; Cyclocaridae fam. nov. is established for the deep-sea demersal scavenging genus Cyclocaris Stebbing, 1888; and Thoriellidae fam. nov. is established for the abyssopelagic genera Chevreuxiella Stephensen, 1915, Danaella Stephensen, 1925, Parachevreuxiella Andres, 1987 and Thorieilla Stephensen, 1915. The families Cebocaridae and Thoriellidae are reported from Australian waters for the first time, in the form of Metacyphocaris helgae Tattersall, 1906 and Parachevreuxiella justi sp. nov.

Key words: Crustacea, Amphipoda, Lysianassoidea, Cebocaridae, Cyclocaridae, Thoriellidae, Australia, deep-sea, taxonomy, new families, new species

Introduction

Based on the very reduced coxa 1 and small coxa 2 Barnard & Karaman (1991: 428) included 21 genera in their ‘Cyphocarin Lysianassidae’ group. Since then, one of these genera (Pseudocyphocaris Ledoyer, 1986) has been placed in the Wandiniidae Lowry & Stoddart, 1990; two genera (Cyphocaris Boeck, 1871 and Procyphocaris J.L. Barnard, 1961) have been placed in the family Cyphocarididae Lowry & Stoddart, 1997; four genera (Amaryllis Haswell, 1879, Bathymaryllis Pirlot, 1933, Pseudamaryllis Andres, 1981 and Vijaya Walker, 1904) have been placed in the family Amaryllididae Lowry & Stoddart, 2002 and Lepidepecreella Schellenberg, 1926a has been placed in the family Lepidepecreellidae Stoddart & Lowry, 2010. In this paper nine genera (Cebocaris J.L. Barnard, 1964; Crybelocephalus Tattersall, 1906; Crybelocyphocaris Shoemaker, 1945; Cyphocarioides Birstein & Vinogradov, 1970; Mesocyclocaris Birstein & Vinogradov, 1964; Mesocyphocaris Birstein & Vinogradov, 1960; Metacyclocaris Birstein & Vinogradov, 1955; Metacyphocaris Tattersall, 1906 and Paracyphocaris Chevreux, 1905) are placed in the new family Cebocaridae; the genus Cyclocaris Stebbing, 1888 is placed in the new monotypic family Cyclocaridae; and four genera (Chevreuxiella Stephensen, 1915, Danaella Stephensen, 1925, Thorieilla Stephensen, 1915 and the subsequently included Parachevreuxiella Andres, 1987) are placed in the new family Thoriellidae, all within the Lysianassoidea.

The families Cebocaridae and Thoriellidae are reported from Australian waters for the first time, in the form of Metacyphocaris helgae Tattersall, 1906 and Parachevreuxiella justi sp. nov.

Materials and methods

The family-level diagnoses and descriptions were generated from a DELTA database (Dallwitz 2005) to the families and subfamilies of the lysianassoid amphipods. The family-level names are formed in accordance with...