Lepidepecreellidae fam. nov. (Crustacea: Amphipoda: Lysianassoidea) in Australian waters

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Abstract
The new lysianassoid amphipod family Lepidepecreellidae is established and the genus Lepidepecreella is reported from Australian waters for the first time. The new species Lepidepecreella nellae sp. nov. is described.

Key words: Crustacea, Amphipoda, Lysianassoidea, Lepidepecreellidae, Lepidepecreella, Australia, taxonomy, new family, new species

Introduction
The monotypic lepidepecreellids are a wide-spread group of 11 species. Only two species are known from the northern hemisphere: Lepidepecreella cymba (Goës, 1866) from the North Polar Sea and L. charno J.L. Barnard, 1966 from south-western North America. Five species are known from the Indo-West Pacific: L. bidens (K.H. Barnard, 1930) from northern New Zealand; L. nellae sp. nov. from eastern Australia; L. sarcelle Lowry & Stoddart, 1994 from southern New Caledonia; and two species from the south-western Indian Ocean: L. pamanzi Ledoyer, 1986 from Banc de Geyser and L. tridactyla Bellan-Santin, 1972 from the Prince Edward Islands (recorded by Branch et al. 1991). Five species are known from the Antarctic: L. andeep Berge, Vader & Lockhart, 2004; L. ctenophora Schellenberg, 1926; L. emarginata Nicholls, 1938; L. ovalis K.H. Barnard, 1932; and L. tridactyla Bellan-Santini, 1972. Species of Lepidepecreella are deep-sea amphipods, often living below 2000 m depth. The shallowest known species is L. cymba (Goës, 1866) from 10 to 380 m depth off Spitsbergen in the Barents Sea.

Berge et al. (2004) reviewed the the association between amphipods and echinoids. Among these associations only the lepidepecreellid Lepidepecreella andeep and the uristid Euonyx chelatus Norman, 1867 have been known to feed directly on a living host. Both species have well-developed first gnathopods (simple in L. andeep and chelate in E. chelatus) which could facilitate breaking the epidermis of an echinoid. Euonyx chelatus has very reduced mouthparts but L. andeep has well-developed setal-teeth on maxilla 1 and Berge et al. (2004) described considerable damage around the peristome of the echinoid where the amphipods attach. In other species of Lepidepecreella the first gnathopod is slender and weak with a minutely serrate posterior margin along the dactylus which could be used as a rasp. None of these species has been reported as an associate of echinoids.

Material and methods
The description was generated from a DELTA database (Dallwitz 2005) to the lepedepecreellid species of the world. Bold parts of the description are diagnostic characters. Material is lodged in Museum Victoria, Melbourne (MV). Standard abbreviations on the plates are: A, antenna; G, gnathopod; MD, mandible; MP, maxilliped; MX, maxilla; P, pereopod; T, telson; U, uropod.

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