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Alicellidae and Valettiopsidae, two new callynophorate families (Crustacea: Amphipoda)

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Abstract

Two new families, the Alicellidae **fam. nov.** and the Valettiopsidae **fam. nov.**, are described based on genera traditionally considered as lysianassoid amphipods. The Alicellidae **fam. nov.** are deep-sea scavengers often associated with thermal vents. They are distinguished from all other amphipods by a combination of characters which includes a callynophore on antenna 1; a broad, serrate left lacinia mobilis (occasionally narrow or vestigial) and a reduced or vestigial right lacinia mobilis (occasionally broad and serrate); simple or subchelate gnathopod 1; an elongate ischium, rectolinear carpus and propodus and a small dactylus on gnathopod 2 (not mitten-shaped); absence of apical robust setae on uropods 1 and 2 and a deeply cleft telson. The family contains 6 genera: *Alicella* Chevreux, 1899; *Apotectonia* Barnard & Ingram, 1990; *Diatectonia* Barnard & Ingram, 1990; *Paralicella* Chevreux, 1908; *Tectovalopsis* Barnard & Ingram, 1990; *Transtectonia* Barnard & Ingram, 1990. The Valettiopsidae **fam. nov.** are deep-sea scavenging amphipods defined by a combination of characters which includes a callynophore on antenna 1; serrate, curved incisors; a well developed, serrate lacinia mobilis on each mandible, an oblique setal row on the inner plate of maxilla 2, an elongate ischium on gnathopod 2; the absence of robust setae on the apices of uropods 1 and 2 and a deeply cleft telson. The family contains two genera, *Valettiopsis* Holmes, 1908 and *Valettietta* Lincoln & Thurston, 1983.

Key words: Crustacea, Amphipoda, new families, taxonomy, Alicellidae, Valettiopsidae

Introduction

Dana (1849) described the distinctive family Lysianassidae. These highly recognizable amphipods have a hard enamel-like cuticle; short, robust peduncle of the first antennae; smooth blade-like incisors; a reduced left lacinia mobilis and vestigial or absent right lacinia mobilis; and gnathopod 2 with an elongate ischium, a carpus/propodus with patches of complex setae ('pineapple cushion' in the sense of J.L. Barnard, 1969) and a minute dactylus ('mitten-shaped' in the sense of Barnard & Karaman 1991). These characters form such a distinctive 'jizz' that all genera up to Bousfield (1987), who re-established the Trischizostomatidae Lilljeborg, 1865, were referred to the Lysianassidae. Bousfield (1979) set up a superfamily Lysianassoidea which included only that family.

Although a 'lysianassid' was always easy to recognise it is not so easy to define. The characters on which everything hinged have been the distinctive 'mitten-shape' (in the sense of Barnard & Karaman 1991) of gnathopod 2 and in a more understated way, the lack of a lacinia mobilis on the right mandible. Lysianassid/lysianassoid amphipods occur in many habitats and have a lot of morphological diversity. In the last two decades the Lysianassidae has been divided into 12 families (Bousfield 1987; Lowry & Stoddart, 1990, 1995, 1996, 1997, 2002; Stoddart & Lowry 2004) and this process is continuing. The 'mitten-shaped' second gnathopod

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