

***Brevisomabathynella* gen. nov. with two new species from Western Australia (Bathynellacea, Syncarida): the first definitive evidence of predation in Parabathynellidae**

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Abstract

Brevisomabathynella gen. nov. is established for two new species, *B. cooperi* **sp. nov.** and *B. cunyuensis* **sp. nov.**, from Western Australia. An illustrated description of both species is given. The two species stand out in the family Parabathynellidae by their pygmoid body (the ratio of length to width: 5) and the relatively long head (equaling the anterior five thoracic segments combined). The following characters of both new species associated with the mouthparts are also unique within the Parabathynellidae: (i) the gargantuan labrum with a high number (> 30) of narrow teeth, (ii) the incisor process with four main and three tiny additional teeth, arranged in two size groups, and (iii) the two disto-inner spines of the distal endite of the maxillule being longer than the terminal spines. These unusual characters seem to have developed in response to the predatory habits, which is evidenced by the presence of an unidentified ostracod prey in the gut of *B. cunyuensis*. The new genus, with its primitive characters, closely resembles the genus *Notobathynella* Schminke, 1973.

Key words: Parabathynellidae, *Brevisomabathynella* gen. nov., two new predatory species, Western Australia

Introduction

Recently, the groundwater fauna in the arid region of Western Australia has come to receive the attention of biologists, as it is known to include ancient lineages of diverse crustacean taxa (Poore and Humphreys 1992; Bruce and Humphreys 1993; Humphreys 1993; Yager and Humphreys 1996; Bradbury and Williams 1997; Wilson and Johnson 1999; Wilson and Keable 1999; Wilson 2001, 2003). Bathynellacean syncarids, assumed to have an origin in the Upper Palaeozoic (Brooks 1962; Schram 1977), also occur in this