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(Crustacea: Isopoda: Asellota: Ischnomesidae)**

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The North Atlantic genus *Heteromesus* (Crustacea: Isopoda: Asellota: Ischnomesidae)

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Abstract

Sixteen species of *Heteromesus* Richardson are reviewed, additional terms are introduced to account for special morphologies in the Ischnomesidae, the diagnosis of the genus is updated and a key to species is given. Twelve species, which have previously been recorded from the Atlantic Ocean, are redescribed and four new species are described, *H. calcar*, *H. ctenobasius*, *H. inaffectus* and *H. oryktus*. *Heteromesus similis* Richardson is illustrated for the first time and *H. bifurcatus* Menzies, *H. dentatus* Hansen, *H. frigidus* Hansen, *H. greeni* (Tattersall), *H. granulatus* Richardson, *H. schmidtii* Hansen, *H. spinescens* Richardson and *H. spinosus* (Beddard) are reillustrated from the type material. The morphological features and ecology of the genus are discussed. The specimens of the new species *H. calcar* and *H. ctenobasius*, collected from Lucky Strike (Mid-Atlantic Ridge), are the first record of *Heteromesus* from hydrothermal vent habitats. Finally, the biogeography of the genus is reviewed and confirms that *Heteromesus* is a deep-sea genus restricted primarily to the North Atlantic and Arctic Seas. Data on unpublished records of undescribed *Heteromesus* spp. allows us to predict a much more diverse composition of the genus and sets the southern limit of its distribution at around 23°S in the Eastern South Atlantic off Africa (Walvis Bay).

Keywords: *Heteromesus*, Ischnomesidae, Isopoda, Asellota, deep-sea, North Atlantic Ocean, hydrothermal vents, mid-Atlantic Ridge

Introduction

The endemic deep-sea genus *Heteromesus* Richardson, 1908 repeats a biogeographic pattern noted by Wilson (1983) for the *Eurycope complanata* complex (Munnopsidae Eurycopinae): a restriction to the North Atlantic and Arctic Oceans. To date, the genus includes twelve described species from depths between 698 and 4077 m. Wolff (1979) mentions one undescribed species from the Northern Caribbean Sea at 4417 m and two undescribed species from Puerto Rico Trench at 7430–8330 m. No species of *Heteromesus* have been reported from other oceans or from the South Atlantic Ocean. Therefore, increasing our knowledge of the species this genus will offer an opportunity to evaluate the biogeography of the North Atlantic. In this paper, we re-describe and re-illustrate many of the existing species because the species concepts are weakly established in the literature. Except for *H. bifurcatus* Menzies, 1962, *H. drachi* Chardy, 1974 and *H. wolffi* Chardy, 1974, other species of the genus were described much earlier, so many characters cannot be adequately assessed in the original descriptions and illustrations. We re-illustrate the type of *H. bifurcatus*, but the two species from Chardy (1974) were found to be adequately illustrated after examining the types. *H. similis* Richardson, 1911 is illustrated