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Two new species of *Heteromysis* (*Olivemysis*) (Mysida, Mysidae, Heteromysinae) from the tropical northwest Atlantic with diagnostics on the subgenus *Olivemysis* Băcescu, 1968

W. WAYNE PRICE[1] & RICHARD W. HEARD[2]

[1]*Department of Biology, University of Tampa, Tampa, Florida 33606, USA. E-mail: wprice@ut.edu*
[2]*Department of Coastal Sciences, University of Southern Mississippi, Ocean Springs, Mississippi 39566-7000, USA. E-mail: richard.heard@usm.edu*

Abstract

A survey of mysid crustaceans in near-shore habitats of the Cayman Islands and the Turks and Caicos Islands, BWI yielded two new species of mysids belonging to the genus *Heteromysis* S. I. Smith, 1873. *H.* (*Olivemysis*) *modlini* **n. sp.** occurred on live bottom habitats in shallow waters of Grand Cayman Island, and *H.* (*Olivemysis*) *mclellandi* **n. sp.** from sponges in depths of 21–27 m on deep fringing reefs off Pine Cay, Turks and Caicos Islands. *H. modlini* may be distinguished from closely related species in the western Atlantic by the following characters: (1) 6–7 robust flagellated setae on the medial margin of the carpo-propodus of thoracic endopod 3, (2) 3–5 and 4–6 bent, attenuated spines on male pleopods 3 and 4, respectively, (3) 3–4 spiniform setae along the medial margin of the uropodal endopod, and (4) 10–16 spinules along the anterior ¾ of the telsonic cleft, 14–19 spiniform setae completely lining the lateral margins of the telson, and each apical lobe of the telson with a pair of spiniform setae, the outer 1.6–2.0 times longer than the inner. *Heteromysis* (*Olivemysis*) *mclellandi* is unique among known heteromysids in having modified attenuated setae on pleopods 1–5 of both males and females, and may be distinguished further from its related Caribbean congeners by the following characters: (1) tuberculate flagellated seta on the antennular peduncle, (2) 8–9 flagellated setae on the carpo-propodus of thoracic endopod 3, and (3) telson cleft depth: telson length ratio of about 1/6, and outer: inner length ratio of apical telson setae of 1.2–1.6. Diagnostic tables separating the two new species from related Caribbean congeners are presented. The subgenus *Olivemysis* Băcescu, 1968 is diagnosed and discussed; based on a critical review of the literature, 10 species, besides *H.* (*Olivemysis*) *modlini* **n. sp.** and *H.* (*Olivemysis*) *mclellandi* **n. sp.**, are placed in this subgenus, bringing its total species number to 30.

Key words: Crustacea, heteromysids, Caribbean, taxonomy

Introduction

Surveys of the shallow-water marine crustacean fauna of the Turks and Caicos Islands and the Cayman Islands were conducted from 1988 to 1990 and 1995 to 1999, respectively. Collecting methods for the surveys included the use of fine mesh kicknets, yabby pumps, epibenthic sleds, plankton nets, and light traps. Algal-coral-sponge-rock-sediment washings were eleutriated gently in a 10% formalin-seawater solution and sieved before preservation. SCUBA was used to collect subtidal organisms. To date, 11 publications have resulted from the Turks and Caicos study: three dealing with isopod taxonomy (Kensley & Heard 1991; Schotte & Heard 1991; Schotte *et al.* 1991), six with the taxonomy, distribution, and ecology of commensal palaemonid shrimps (Heard & Spotte 1991; Spotte *et al.* 1991; Heard *et al.* 1993; Spotte, *et al.* 1994; Spotte & Bubucis 1996; Heard & Spotte 1997) and two with the taxonomy of mysids (Price & Heard 2000, 2004).

Contributions related to collections from the Cayman Islands include taxonomic or ecological studies of copepods (Suárez-Morales *et al.* 1999), cumaceans (Petrescu 2003), mysids (Price *et al.* 2002, Price & Heard 2008), tanaidaceans (Gutu & Heard 2002), and pinnotherid crabs (Thoma *et al.* 2009).

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