



New records and taxonomic data for 14 species of sand crabs (Crustacea: Anomura: Albuneidae) from localities worldwide

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Abstract

Specimens representing 12 species of albuneid sand crabs (Albuneidae) are identified and discussed, and new taxonomic information is provided for an additional two species. These mostly new records come from diverse localities including Pacific Mexico (*Lepidopa californica* and *L. deamae*), Atlantic Panama (*Albunea paretii* and *A. catherinae*), Madagascar (*Albunea groeningi* and *A. symmysta*, although the locality data on these species needs verification), India (*A. symmysta*), Réunion Island (*A. holthuisi*), the Philippines (*A. microps*), Guam (*A. speciosa* and *Paralbunea dayriti*), Moorea (*A. elioti*) and Hawaii (*Albunea bulla*). The sole specimen of *Albunea bulla* from Hawaii represents only the third species of albuneid recorded from the island chain. An overlooked misidentification of specimens of “*Albunea thurstoni*” from Hawaii (= *Albunea danai*) is also included. The discovery of a population of *A. catherinae* in Atlantic Panama is surprising and shows a highly disjunct distribution for the species, which could be the result of ballast water discharge near the Panama Canal Zone. Several specimens studied exhibit morphological characters that differ from typical members of their species and this illustrates the challenges of defining species boundaries from relatively small sample sizes. Discovery of a long overlooked species description reveals that *Albunea scutelloides* Garstang, 1897 is the senior synonym of *Albunea mariellae* Serène, 1973 and is the valid name for the type species of the genus *Squillalbunea* Boyko, 2002.

Key words: Albuneidae, *Lepidopa*, *Albunea*, *Paralbunea*, *Squillalbunea*, invasive species, Hawaii, Panama Canal Zone, Guam, Indo-West Pacific, East Pacific, Atlantic

Introduction

Subsequent to the publication of the monographic revision of sand crabs of Boyko (2002) and morphological phylogenetic analysis of Boyko & Harvey (2009), several additional specimens of albuneids from new localities and some with interesting morphological features have been examined. As sand crabs are uncommon in most localities, these records are reported on here to clarify distribution ranges and, in some cases, point out potential confusion in identification between species. Additional synonymy references for these species omitted from or published subsequent to Boyko (2002) are also given, including a misidentification of specimens of “*Albunea thurstoni*” from Hawaii (= *Albunea danai*). One of these (Garstang 1897) contains a long-overlooked description of a species of *Albunea* that is clearly the senior synonym of *Albunea mariellae* Serène, 1973, and must be used as the valid name of the type species of *Squillalbunea* Boyko, 2002. Specimens of *A. catherinae* reported from Atlantic Panama represent a highly disjunct population of that species which is known otherwise only from the southeastern United States. This unusual distribution is postulated to be the result of ballast water transported from a southeastern United States port and discharged near the Panama Canal Zone, an hypothesis best tested using molecular markers. The order of genera in the text follows that given by Boyko (2002).

It should be noted that the key given by Boyko (2002: 230) for species of *Albunea* is in error in that the thickness of the setae in couplet 16 is reversed. The couplet should read as follows (changes in boldface):