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A new species of the ghost shrimp genus *Lepidophthalmus* (Crustacea: Decapoda: Axiidea) from the southwestern Gulf of Mexico

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Abstract

A new species of *Lepidophthalmus* lacking a ventral median sclerite on the second abdominal somite is described from coastal waters of the southwestern Gulf of Mexico. *Lepidophthalmus statoni* **sp. nov.**, originally recognized only as a unique population in allozyme studies, is sympatric with the ventrally plated species *Lepidophthalmus manningi* Felder & Staton, 2000, but more closely resembles *Lepidophthalmus louisianensis* (Schmitt, 1935) from the northern and northwestern Gulf of Mexico. Apparently restricted to intertidal and shallow subtidal tropical waters, the new species is known to range from western Campeche to middle-upper reaches of Veracruz, Mexico. As many members of the genus, it commonly inhabits euryhaline inlets, estuaries, and protected shorelines, including richly organic muddy to clayey sands and sandy muds adjacent to shoreline vegetation. Coloration is documented and discussed as a tool to facilitate field identifications, as are morphological characters.

Key words: Callianassidae, *Lepidophthalmus*, new species, western Atlantic, Gulf of Mexico

Introduction

In 1981, the author and colleagues collected four specimens initially thought to represent *Callianassa jamaicense* Schmitt, 1935, from a single site near Puerto Ceiba, Tabasco, Mexico. Of these, two bore ventral abdominal sclerites and two did not. At the time, all specimens fell within the range of varietal forms and subspecies described by Schmitt (1935) for *C. jamaicense* s.l., which was thought to range widely along western Atlantic shorelines. The presence or absence of ventral sclerites was suspected to be an effect of parasites in that species (Biffar, 1971), and little was known of the tendency for regional endemism in the group, so all four specimens were tentatively identified as that taxon. Shortly following revisions of the American Callianassidae, with assignment of *C. jamaicense* s.l. and its near relatives to *Lepidophthalmus* by Manning & Felder (1991), members of this genus were targeted in studies of suspected regional decapod endemism and to undertake required revisionary treatments, redescriptions, and new descriptions (Felder *et al.,* 1991; Felder & Manning, 1997; Felder & Manning, 1998; Felder & Rodrigues, 1993; Staton *et al.*, 2000). Concerted effort was made to include materials from throughout the Gulf of Mexico region for initiation of allozyme-based studies, and all specimens were submitted to additional morphological examinations. This work suggested that presence, absence, and sculpture in ventral sclerotization patterns was not a symptom of parasitization but rather an analytically supported species-specific character of special utility for species separations (Felder & Rodrigues, 1993; Felder & Manning, 1997; Felder & Staton, 2000; Felder, 2003).

Allozyme analyses clearly supported separations of *L. louisianensis* (Schmitt, 1935) in the northern Gulf of Mexico from other groups in the southwestern Gulf, one of which was initially designated *Lepidophthalmus* sp. "a" (Staton *et al.*, 2000). This group was described as *L. manningi* Felder & Staton, 2000, with notation that it was distinguishable from the ventrally unplated *L. louisianensis* by its ventral abdominal sclerotization. Morphologically, it was clearly identifiable with two of the original specimens collected in 1981, along with a subsequently collected series. However, the allozyme study also revealed the existence of yet another ventrally unplated southwestern Gulf form, therein treated as *Lepidophthalmus* sp. "b", occurring sympatrically with *L.*

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