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Provisional revision of American snapping shrimp allied to *Alpheus floridanus* Kingsley, 1878 (Crustacea: Decapoda: Alpheidae) with notes on *A. floridanus africanus*

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Abstract

Alpheus floridanus Kingsley, 1878 has been previously treated as a single, morphologically diverse species with a broad distribution in the eastern and western Atlantic Ocean and eastern Pacific Ocean. However, variations in morphology and color patterns, in addition to genetic evidence, have prompted further investigation. Morphological characters, including curvature and length of the scaphocerite, number teeth on the incisor process of the mandible, number of pereopodal spines, proportions of the major chela, as well as color patterns, support recognition of several species in the *Alpheus floridanus* complex. *Alpheus floridanus sensu stricto* (s.s.) is redescribed based upon a lectotype selected from the former syntypic pair. The mutilated second specimen of the syntypic pair is identified as *A. platycheirus* Boone, 1927, which is fully redescribed. Three species are described as new: *A. hephaestus* sp. nov. from the eastern Pacific, and *A. roblesi* sp. nov. and *A. ulalae* sp. nov. from the western Atlantic. Morphological comparisons to the eastern Atlantic *A. floridanus africanus* Balss, 1916 are discussed, however a formal treatment of this subspecies is not the objective of this study. Our proposed taxonomic revisions of the *A. floridanus* complex are supported in a companion molecular genetic analysis (following paper, this volume).

Key words: *Alpheus*, species complex, snapping shrimp, color pattern, East Atlantic, West Atlantic, East Pacific

Introduction

Snapping shrimps of the genus *Alpheus* Fabricius, 1798 encompass a very diverse group of decapods numbering

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Key to American species of the *Alpheus floridanus* complex

1. Antennal scale (scaphocerite) lateral margin sinuous (Fig. 6 c), medial bend (toward body midline) originating near midlength; pereopod 5 propodus bearing 1–7 movable spines (rarely lacking, often conspicuous) on ventromesial surface (Fig. 8 e); in life, weakly pigmented except for irregular orange banding on chelae, body translucence overlain by diffuse dorsal aggregations of small orange chromatophores [inner continental shelf, southern Gulf of Mexico, southeastern Florida and Caribbean; eastern Atlantic, Africa] *Alpheus robesli* **sp. nov.**
- Antennal scale lateral margin concave (Figs. 3 a, 4 b, 9 b, 12 b, 15 d), medial bend (if any) restricted to spine at tip; pereopod 5 propodus lacking movable spines along ventromesial surface; in life, body pigmentation varied, sometimes including strongly contrasting dorsal patterns of red, orange, green, brown, or yellow. 2
2. Antennal scale (scaphocerite) blade and its distolateral tooth distinctly over-reaching distal end of antennular peduncle (Figs. 3 a, 4 b, 9 b), distolateral tooth distinctly over-reaching blade, often by $\geq 1/10$ blade length 3