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**Revision of the western Atlantic members of  
the *Alpheus armillatus* H. Milne Edwards, 1837 species complex  
(Decapoda, Alpheidae), with description of seven new species**

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## Abstract

The western Atlantic members of the *Alpheus armillatus* H. Milne Edwards, 1837 species complex, which includes some of the largest and most common intertidal snapping shrimps, are revised based on extensive fresh material collected in the Caribbean Sea, Florida, Gulf of Mexico, Brazil, as well as some older museum material. *Alpheus armillatus* (*sensu* H. Milne Edwards 1837 and Coutière 1899) is redescribed based primarily on the Caribbean material and a neotype from Aruba is designated. *Alpheus lancirostris* Rankin, 1900 and *A. verrilli* (Schmitt, 1924) are resurrected from the synonymy of *A. armillatus* and rediagnosed. *Alpheus angulosus* McClure, 2002 is redefined and reported from several new localities; its presence in Brazil is confirmed. Seven species are described as new: *A. amarillo* **sp. nov.** (Caribbean, southern Florida, Gulf of Mexico), *A. punctatus* **sp. nov.** (Caribbean, southern Florida), *A. tampensis* **sp. nov.** (western Florida), *A. carlae* **sp. nov.** (Caribbean, Florida, Brazil), *A. mathewsae* **sp. nov.** (Caribbean, Florida), *A. brasileiro* **sp. nov.** (Brazil), and *A. nuno* **sp. nov.** (Mexico). In addition, *A. viridari* (Armstrong, 1949), a close relative and presumed sister lineage of the *A. armillatus* complex, is rediagnosed and its distinguishing features are highlighted. All species are abundantly illustrated, including variation of some morphological features and colour patterns. A character table and a key to the western Atlantic species of the *A. armillatus* complex are provided.

**Key words:** Decapoda, Alpheidae, *Alpheus*, snapping shrimp, cryptic speciation, new species, West Atlantic, Caribbean, Florida, Brazil

## Introduction

The snapping shrimp genus *Alpheus* Fabricius, 1798 is abundant in the shallow marine waters of North, Central and South America, with 46 species present on the Pacific coast, ranging from California to southern Chile and with the highest diversity in the Panamanian province, and with 41 species on the Atlantic coast, ranging from the eastern United States to northern Argentina, the vast majority of them being concentrated in the Caribbean Sea and adjacent areas of the Gulf of Mexico and Florida (e.g., Chace 1972; Williams 1984; Knowton & Keller 1985; Abele & Kim 1986; Christoffersen 1998; Coelho et al. 2006; Anker 2007; Anker et al. 2007a, 2007b, 2008a, 2008b, 2008c, 2008d, 2009; Almeida & Anker 2011; Anker & Nizinski 2011).

One of the most common and widespread snapping shrimps in the tropical and subtropical western Atlantic is *Alpheus armillatus* H. Milne Edwards, 1837. The original description of *A. armillatus* by H. Milne Edwards (1837) was very short and not accompanied by illustrations (translated from French): “8. *Alpheus* with bracelets.—*A. armillatus*. Species very close to the preceding one [*A. chiragricus*], from which it can be distinguished by the shape of the small hand, cylindrical, acute, and with the movable finger neither twisted and nor deformed. The