

**Revised nomenclature of *Alpheus angulatus* McClure, 1995
(Decapoda: Caridea: Alpheidae)**

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Abstract.—The name of a recently described species of snapping shrimp from the Gulf of Mexico was discovered to be a junior homonym of another subspecies within the same genus. A new replacement name is given and a complete synonymy is listed. Additional morphological characteristics are described.

In 1995, a new species of snapping shrimp from the Gulf of Mexico was described and named *Alpheus angulatus* McClure, 1995. It was later called to the author's attention that Coutière (1905:914) previously described specimens of *A. strenuus* from the Maldive and Laccadive Archipelagoes under the subspecific name, *Alpheus strenuus* var. *angulatus* Coutière, 1905 (A. Anker, pers. comm.). Banner & Banner (1966) stated that the characteristics used by Coutière for the separation of *A. s. angulatus* from the Maldives and Laccadives were within the normal variation found among other *A. strenuus*, and subsequently they (Banner & Banner, 1982) considered *A. s. angulatus* a junior synonym of *A. s. strenuus*.

However, under Article 46.1 of the International Code of Zoological Nomenclature (1999), specific and subspecific categories are coordinate. A name established at a subspecific rank is deemed to have been simultaneously established at the specific rank, and that name is occupied regardless of synonymy (Article 10.6). Therefore, *Alpheus angulatus* McClure, 1995 is a primary junior homonym of *Alpheus strenuus* var. *angulatus* Coutière, 1905, as defined in Article 53.3, and thus the junior homonym is rejected (Article 57.2). Lacking another available synonym, the junior homonym is herein replaced with a new name as per Ar-

ticle 60.3. Additional morphological characteristics not previously described for this species are included. Specimens were borrowed from the National Museum of Natural History, Smithsonian Institution, Washington, D. C. (USNM).

Alpheus angulosus, new name

Alpheus angulatus.—McClure, 1995:85, figs. 1, 2., 1996:962.—McClure & Wicksten, 1997:480, fig. 4.—McClure & Greenbaum, 1999:462.

Crangon armillatus.—Hay & Shore, 1918: 386, fig. 9. [Not *Alpheus armillatus* Milne Edwards, 1837].

Alpheus armillatus.—Chace, 1972:62 [In part. Not *Alpheus armillatus* Milne Edwards, 1837].

Alpheus estuariensis.—Christoffersen, 1984:191 [In part. Not *Alpheus estuariensis* Christoffersen, 1984].

Holotype.—Male, 28 mm total length, USNM 266804, South Padre Island, Texas, Laguna Madre, coll. M. K. Wicksten, 4 Jul 1992.

Material Examined.—Texas: 2 males, USNM 99837, Institute of Marine Science, coll. by H. Hildebrand, 2 Apr 1955. Louisiana: 1 male, USNM 98135, Rigolets, Lake Pontchartrain, coll. R. M. Darnell, 23 Dec 1954; 1 male, USNM 102891, Grande Isle, Home Pass, coll. E. Behre, 7 Apr

1940. Florida: 2 ovig. females, USNM 77765, Apalachicola Bay, Station 301, coll. A. S. Pearse, 5 Jun 1935; 1 male, 2 females, USNM 77769, Apalachicola Bay, coll. A. S. Pearse, 11 Jul 1935. South Carolina: 3 females, USNM 77766, Calibogue Sound, coll. G. R. Lunz, 29 Oct 1935; 1 male, USNM 77768, Big Bay Creek, coll. G. R. Lunz, 10 Oct 1935.

Etymology.—See McClure (1995).

Discussion.—For description and remarks, see McClure (1995). This species has been frequently mistaken for *A. armillatus* from the coastal areas of the northern Gulf of Mexico and western Atlantic. The two species have similar rostro-orbital depressions, which have been used in the past to identify western Atlantic specimens as *A. armillatus*. McClure (1995) provided diagnostic differences between *A. angulosus* (as *A. angulatus*) and *A. armillatus*. In addition to the characteristics described by McClure (1995), *A. armillatus* specimens usually have a spine at the midline of the first two abdominal sternites (Kim & Abele, 1988, specimens from the Atlantic side of Panama), whereas males of *A. angulosus* have a spine or a blunt projection on the midline of the first abdominal sternite at most, and lacking in females. The ventral carina on the antennular peduncle of *A. angulosus* has both anterior and posterior margins evenly convex, with a sharp point anteriorly directed and positioned about midway, whereas in *A. armillatus*, the anterior margin tends to be concave, with the sharp point anteriorly directed and positioned at about the anterior two-thirds of the carina length.

There exists an *A. armillatus* species complex consisting of described and undescribed species, and possibly synonyms, within the Caribbean, Western Atlantic, and Eastern Pacific, and may be defined by the following characteristics: rostro-orbital depressions showing U-shaped or V-shaped abrupt borders; abdominal sternites with spines on the mid-ventral margin variably present between species in males; merus of

the first pereopod almost always with a strong spine; and minor claw not balaeniceps, but usually robust and setose. Caribbean/Western Atlantic species include *A. armillatus* and *A. angulosus*. Eastern Pacific species include *A. hyeyoungae* Kim & Abele, 1988, *A. scopulus* Kim & Abele, 1988, *A. tenuis* Kim & Abele, 1988, and *A. martini* Kim & Abele 1988.

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