



Revision of the genus *Glyptoxanthus* A. Milne-Edwards, 1879, and establishment of *Glyptoxanthinae* nov. subfam. (Crustacea: Decapoda: Brachyura: Xanthidae)

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Abstract

The xanthid genus *Glyptoxanthus* A. Milne-Edwards, 1879, known from the tropical eastern Pacific, western and eastern Atlantic, and the Red Sea, is revised as part of an ongoing revision of the subfamily Euxanthinae Alcock, 1898. Analysis of morphological characters shows that *Glyptoxanthus* must be excluded from the subfamily Euxanthinae and placed in a distinct subfamily, *Glyptoxanthinae* **nov. subfam.** The new subfamily has affinities to Euxanthinae, Actaeinae Alcock, 1898, and Zalsiinae Serène, 1968, but it is distinguished from these by a suite of characters in the thoracic sternum, third maxillipeds, epistome, chelipeds, and male abdomen and gonopods. All the included species are re-diagnosed, with additional comments and updates on their biology and distribution. In an effort to stabilize the taxonomy of the genus and some of its species, neotypes were selected for *G. erosus* (Stimpson, 1859) (type species), *G. labyrinthicus* (Stimpson, 1860), and *G. meandricus* (Lockington, 1877). A key to the genus is included.

Key words: Xanthoidea, Xanthidae, Actaeinae, Euxanthinae, Zalsiinae, systematics, carapace sculpture, thoracic sternum, coaptation

Introduction

The genus *Glyptoxanthus* was established by A. Milne-Edwards (1879) to receive six species from the eastern and western coasts of the Americas and the western coast of Africa. The six species had been placed under different genera at that time: *Cancer vermiculatus* Lamarck, 1818, *Actaea erosa* Stimpson, 1859, *Actaea labyrinthica* Stimpson, 1860, *Xantho corrosus* A. Milne-Edwards, 1869, *Actaea angolensis* Brito Capello, 1866, and *Actaea cavernosa* A. Milne-Edwards, 1878. All these species were characterized by the prominent vermiculate sculpturing on the surface of the carapace and pereopods. A seventh species, *Actaea meandrica* Lockington, 1877, described from the Gulf of California, was missed by A. Milne-Edwards (1879). An eighth species, *Actaea meandrina* Klunzinger (1913), was described from the Red Sea. Rathbun (1930) subsequently selected *A. erosa* as the type species of the genus. She also considered *A. meandrica* Lockington, 1877, a junior synonym of *Glyptoxanthus labyrinthicus* (Stimpson, 1860). The ninth, and last, species to be described was *G. hancocki* Garth, 1939, from the Galápagos Islands. Some (Odhner, 1925; Monod 1956) did not recognize *Glyptoxanthus* as a valid genus, considering it as a junior synonym or subgenus of *Actaea* De Haan, 1833. Guinot (1967, 1979), however, citing earlier authors, particularly A. Milne-Edwards (1879), Rathbun (1930) and Garth (1939, 1946), considered *Glyptoxanthus* to be a distinct and homogenous grouping apart from *Actaea*, citing its many unique morphological features. She went on further to include *Glyptoxanthus* in the subfamily Euxanthinae Alcock, 1898, citing morphological similarities with the core genera *Euxanthus* Dana, 1851, and *Hypocolpus* Rathbun, 1897 (i.e., condition of carapace anterolateral margin, coaptation of carapace and pereopods, condition of male gonopods). This classification has been adopted by subsequent authors (Serène 1984; Ng *et al.* 2008; De Grave *et al.* 2009).