



Article

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A re-assessment of *Hexapleomera* Dudich, 1931 (Crustacea: Tanaidacea: Tanaidae), with designation of three new species

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Abstract

The tanaid genus *Hexapleomera* has long been considered to be monotypic, comprising a cosmopolitan species predominantly commensal on turtles, or, more rarely, manatees. Recent discovery of material of a distinct species of *Hexapleomera* living on the hulls of yachts in south-west England encouraged re-assessment of the literature on this taxon, and re-examination of free-living benthic material from the eastern Mediterranean. As a result, five species are recognized within the genus *Hexapleomera*; two new species are described, *Pancoloides moverlyi* is moved to *Hexapleomera*, and *H. robusta sensu* Edgar is elevated to specific rank and re-named.

Key words: *Hexapleomera*, Tanaidae; commensalism; cosmopolitanism

Introduction

Representatives of the tanaid genus *Hexapleomera* Dudich, 1931 are most commonly found as commensals on turtles—particularly the loggerhead turtle *Caretta caretta* (L., 1758) (Moore 1894; Sieg 1980 and references therein; Heard *et al.* 2004; Garcia-Madrigal *et al.* 2005; Edgar 2008) or manatees (Morales-Vela *et al.* 2008), although they have also been recorded in (on) benthic sediments (Bamber *et al.* 2009) or in algae (Riggio 1996). At least when commensal, they live within tubes of sediment particles.

The genus *Hexapleomera* is classified in the subfamily Pancolinae Sieg, 1980 within the tanaidacean family Tanaidae Dana, 1849. Particular characterizing features of *Hexapleomera* as diagnosed by Sieg (1980) include: narrow anterior pereonites, pereonites 1–3 together being no longer than wide; a hexamerous pleon; only slight differentiation of the third pleopod; the distal uropod segment not reduced; males showing extreme dimorphism of antennulae and cheliped, the latter being massive with an arcuate dactylus.

Sieg (1980) synonymized the three described species in this genus¹, *Tanais robustus* Moore, 1894, *Tanais testudinicola* Dollfus, 1898 and *Hexapleomera Schmidti* Dudich, 1931, suggesting that the type and only species, *Hexapleomera robusta*, was relatively cosmopolitan, being found off New Jersey, USA (type-locality of *Tanais robustus*), off the Atlantic coast of north-western Africa, in the Mediterranean, off Brazil and Argentina, and in the Galapagos. A further poorly-described species, *Anatanais crassa* Riggio, 1975, from the Italian Mediterranean, was moved to *Hexapleomera* by Riggio (1996). Riggio (1975) also described Mediterranean “*Anatanais*” *robustus* from the same locality, together with an intermediate form between these two which he collected from the decapod *Maia crispata* Risso, 1827 (as *M. verrucosa*).

The Tanaidacea have no obligate dispersive phase in their life history (see Bamber 2010; Brandt *et al.* 2012). Current thinking is therefore that there are no cosmopolitan species of tanaidacean. More detailed examinations of such genera as *Leptochelia* Dana, 1849 and *Sinelobus* Sieg, 1980 have demonstrated that there are sibling, cryptic or even morphologically clearly-distinct species that have been subsumed previously into presumed cosmopolitan taxa such as *Leptochelia dubia* (Krøyer, 1842) or *Sinelobus stanfordi* (Richardson, 1901) (e.g. Bamber 2010; Edgar

1. “*Tanais testudinaria* Dollfus” of Vanhöffen, 1914, was a *lapsus calami* for *T. testudinicola*.