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A new species of *Nebalia* (Crustacea: Phyllocarida: Leptostraca) from the Cape d'Aguilar Marine Reserve, Hong Kong

CHRISTINE N.W. LEE[1] & ROGER N. BAMBER[2,3]

[1]*Flat L, 8/F, Tower 1, Phase 1, Kwun Lung Lau, 20 Lung Wah Street, Kennedy Town, Hong Kong*
[2]*Artoo Marine Biology Consultants, Ocean Quay Marina, Belvidere Road, Southampton SO14 5QY, U.K.*
[3]*Corresponding author. E-mail: leptostracan@yahoo.com, roger.bamber@artoo.co.uk*

Abstract

A new species of leptostracan, *Nebalia mortoni*, is described from the waters of the Cape d'Aguilar Marine Reserve, Hong Kong. It is distinguished from previously described species in particular owing to the squared denticles on the posterior dorsal margins of the pleonites. The species has been collected using baited traps, and has been the subject of previous study of its behaviour and demography. Laboratory culture of immature males has revealed that passage to maturity involved a sudden and dramatic lengthening of the antennae within the space of a single moult. This is only the second description of nebaliacean species from Asia.

Key words: Leptostraca, Nebaliacea, *Nebalia*, southeast Asia

Introduction

Leptostracans are marine, mainly benthic, crustaceans commonly with large compound eyes, a hinged rostrum and a carapace that covers both the head and the broad, leaf-like, thoracopods. According to Mees (2011), there are 54 known extant leptostracan species belonging to ten genera. The majority are species of *Nebalia* Leach.

Since the first species of *Nebalia* was described, as *Cancer bipes* Fabricius 1780 (thence *Nebalia bipes*), some 29 valid species have been described (Mees, 2011). The extensive taxonomic revision of nebaliaceans by Dahl (1985, p.143), which he described as being in "a state of confusion", with only a few diagnostic characters not related to growth, was a milestone publication. In his paper, Dahl dismissed the prevailing mindset whereby a handful of nebaliacean species were considered to have almost global, cosmopolitan, distributions and identified many more diagnostic features that defined them at the species level. As a consequence, the paper sparked a spate of leptostracan re-examinations, resulting in more than 20 new nebaliacean species being described.

As with *Nebalia longicornis* Thomson 1879, which is now known to comprise at least ten distinct species (Dahl 1990), *N. bipes* is another species formerly thought to be ubiquitous with a distribution extending from northern boreal Atlantic waters to the Bay of Naples (Manton 1934), Cyprus (Kocatas *et al.* 2001) and the northern Adriatic Sea (Kazmi and Tirmizi 1989) in the Mediterranean, and to the coast of Pakistan in the Arabian Sea and to Japan in the north-west Pacific (Escobar-Briones & Villalobos-Hiriart 1995) and Hong Kong (Lee & Morton 2004). In contrast, Dahl (1985) asserted that *N. bipes* was a boreal, circum-Arctic, species and, as a result, all records from warm-temperate and tropical seas as well as from the Southern Hemisphere should be regarded as erroneous until proven otherwise. Dahl (1985) consolidated this concept through a re-examination of the Bay of Naples '*N. bipes*' and confirmed that this should be referred to *N. strausi* Risso 1826. *N. bipes* from Cyprus was similarly later shown to be *N. strausi* (Koçak *et al*. 2007). Likewise, *N. bipes* from Pakistani waters of the northern Arabian Sea was re-examined and re-identified six years later as *N. dahli* Kazmi & Tirmizi 1989 (*q.v.*).

The current study re-examines a species of *Nebalia* collected from Hong Kong by Lee & Morton (2004, 2005) and wherein it was also referred to as *N. bipes*.

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