



Article

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A new species of the genus *Cerviniopsis* from Sagami Bay, Japan and reinstatement of the genus *Neocervinia*, with a report on the male of *Neocervinia itoi* Lee & Yoo, 1998 (Copepoda: Harpacticoida: Aegisthidae)

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Abstract

A new aegisthid copepod, *Cerviniopsis reducta* sp. nov. is described from the deep sea in Sagami Bay, Japan. The new species has superficial resemblance to *C. minutiseta* Ito, 1983 in the armature formula of swimming legs. However they differ from each other in the shape of setae of the swimming legs, the distal margin of operculum, length of caudal rami, and the location of setae on P5 exopod. Also, the male of *Neocervinia itoi* Lee & Yoo, 1998 is described on the basis of samples collected from around the type locality in Sagami Bay, Japan. Sexual dimorphism of *N. itoi* male can be observed in the fused rostrum, atrophied mouthparts, P5, and P6. The sixth leg is symmetrical and both gonopores are presumably active, based on the presence of two spermatophores internally in the genital segment. This paper reports for the first time on the sexually dimorphic characters in the genus *Neocervinia* Huys, Møbjerg & Kristensen, 1997, reinstating its generic status with the newly revealed male characters.

Key words: Cold Seep, Taxonomy, Deep-Sea Copepoda, Cerviniopseinae, Cerviniinae

Introduction

Harpacticoid copepods are known to be a dominant group in the hyperbenthos at the Hatsushima cold-seep site in Sagami Bay (Toda et al. 1994). So far three species of deep-sea dwelling harpacticoid copepods were described taxonomically based on the samples from Sagami Bay: *Neocervinia itoi* Lee & Yoo, 1998, *Normanella bifida* Lee & Huys, 1999 and *Nudivorax todai* Lee & Huys, 2000 (see Lee & Yoo 1998; Lee & Huys 1999, 2000). Benthic copepods are dominant in bathyal Sagami Bay and have been studied in several aspects, including sex ratio, reproductive activity (Shimanaga & Shirayama 2003), and temporal patterns in diversity and species composition (Shimanaga et al. 2004). Especially deep-sea cerviniids have been a focus of several studies, which included their distributional characteristics, sex ratio and gut content (Shimanaga et al. 2008, 2009). As a result of an ongoing study on the harpacticoid community in Sagami Bay (Shimanaga et al. 2009), a new *Cerviniopsis* Sars, 1903 species was discovered. In addition, the male of *Neocervinia itoi* was also collected from the area for the first time. The genus *Neocervinia* was erected (Huys et al. 1997) originally to accommodate *N. tenuicauda* (Brotskaya, 1963) and *N. unisetosa* (Montagna, 1981), with *N. itoi* as the third known species of the genus (Lee and Yoo 1998). Seifried (2003) synonymized *Neocervinia* Huys, Møbjerg & Kristensen, 1997 and *Pseudocervinia* Brodskaya, 1963 with *Cervinia* Norman in Brady, 1878 (Aegisthidae), but the generic status of the former is discussed and reinstated herein based on the newly observed characters.