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A new species of the sponge-associated pontoniine shrimp genus *Nippontonia* Bruce & Bauer, 1997 (Decapoda, Caridea, Palaemonidae) from Sabah, Malaysia

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Abstract

A sponge-associated species of the genus *Nippontonia* new to science is described from Semporna, Sabah, Malaysia. The only other species in the genus is also known to be a sponge-dweller. The new species can be distinguished from its congener by a suite of characters mainly of the anterior appendages.

Key words: Crustacea, Decapoda, Palaemonidae, *Nippontonia christellae* new species, phylogeny

Introduction

The pontoniine genus *Nippontonia* Bruce & Bauer, 1997, has so far been monotypic (De Grave & Fransen, 2011). The only species, *N. minirostris* Bruce & Bauer, 1997, was collected from an unidentified sponge in Japanese waters near the Ryukyu Islands. Although several authors have since referred to the species (Nomura, 1999: 9, figs 1, 2; Hayashi, 2005: 644, figs 517b–f; 2006: 74) no additional specimens have been reported since its first discovery. By the courtesy of Sammy De Grave from the Oxford University Museum of Natural History, six additional specimens of *N. minirostris* collected from Taiwan were made available for comparison.

During a survey of pontoniine shrimp diversity in the Semporna region, eastern Sabah, Malaysia in 2010, one male and two ovigerous females belonging to the genus *Nippontonia* Bruce & Bauer, 1997, were collected from a sponge host. When comparing the Semporna specimens with the type description, paratype specimen (RMNH.CRUS.D.47746), and specimens from Taiwan of *N. minirostris*, several morphological differences were noted. The Semporna specimens are herein described as belonging to a species new to science, which is fully illustrated and its systematic position discussed.

Material is deposited in the Crustacea collection (RMNH.CRUS.) of Naturalis Biodiversity Center, Leiden, the Netherlands, formerly known as Rijksmuseum van Natuurlijke Historie. Abbreviations: pocl., postorbital carapace length; FMNH, Florida Museum of Natural History; OUMNH, Oxford University Museum of Natural History.

Material and methods

Sample collection. Specimens were collected during the Semporna Marine Ecological Expedition in 2010 (SMEE2010) in Sabah, Malaysia (Kassem *et al.* 2012; Van der Meij & Hoeksema, 2013; Waheed & Hoeksema, 2013). Specimens were preserved in 75% ethanol. Representatives of the pontoniine genus *Palaemonella* were selected as outgroup. Available COI sequences of representatives of sponge-dwelling pontoniine species were used to clarify the phylogenetic position of *Nippontonia*. Data on the voucher specimens are given in Table 1. Tissue samples, derived from eggs or pleopods, were preserved in ethanol before DNA extraction. Voucher specimens are stored in the collection of Naturalis Biodiversity Center.

Molecular analysis. Total genomic DNA was extracted from eggs or pleopods using the DNeasy Blood & Tissue Kit (QIAGEN, Hilden, Germany). Incubation lasted overnight for approx. 16 hours. The volume in the