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## ***Periclimenes macrorhynchia* sp. nov., a new hydrozoan-associated pontoniine shrimp (Crustacea, Decapoda, Palaemonidae) from North East Kalimantan, Indonesia**

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### **Abstract**

A new species of pontoniine shrimp belonging to the ‘*Periclimenes obscurus* species group’ is described from the Berau Islands, North East Kalimantan, Indonesia. Specimens were obtained from aglaopheniid hydrozoans of the genus *Macrorhynchia*. The new species is here described and figured. Its affinities with related species are discussed and a DNA-barcode is provided.

**Key words:** Crustacea, Decapoda, Palaemonidae, Pontoniinae, *Periclimenes*, new species, Hydrozoa, East Kalimantan, DNA-barcode, symbiont

### **Introduction**

Within the large pontoniine genus *Periclimenes* Costa comprising over 150 species (De Grave & Fransen 2011), several species groups have been recognized. For some of these groups new genera were erected, e.g. *Ancylomenes* Okuno & Bruce, 2010 for the ‘*Periclimenes aesopius* species group’. For several of these species groups however, no solid morphological synapomorphies have been found to classify them in their own genus. Examples are the ‘*Periclimenes iridescens* species group’ known from the Atlantic and first distinguished by Heard & Spotte (1991), the ‘*Periclimenes diversipes* species group’ designated by Bruce (1989), the ‘*Periclimenes granulimanus* species group’ designated by Āuriš (2010), and the ‘*Periclimenes obscurus* species group’ which was designated by Bruce (1987).

A faunal survey for shallow-water pontoniine shrimps during a research expedition around the Berau Islands, East Kalimantan (September–October 2003), yielded specimens of a hitherto undescribed species which were collected from hydrozoans of the aglaopheniid genus *Macrorhynchia*. These specimens have affinities with both the *Periclimenes granulimanus* and *P. obscurus* species groups.

The new species is here described and figured. Its affinities with related species are discussed on the basis of comparative material and descriptions from the literature. A key to the species of both the *Periclimenes granulimanus* as well as the *P. obscurus* species groups is provided. DNA-barcodes of the new species and specimens of *P. batei* (Borradaile, 1917) are made available in GenBank.

### **Material and methods**

Specimens were collected using SCUBA equipment during the LIPI-Naturalis East Kalimantan Expedition (Hoeksema 2004). Specimens were observed, measured and illustrated using a ZEISS Discovery-V8 dissecting microscope and a Leitz Ortholux II stereomicroscope, both with drawing tubes. Post processing of illustrations was done in Adobe Photoshop CS6.

To obtain CO1 barcodes the total genomic DNA was extracted from subsamples of eggs. Extraction was performed according to the protocol of the DNeasy Blood & Tissue Kit (QIAGEN, Hilden, Germany). The