



<http://dx.doi.org/10.11646/zootaxa.3721.3.3>

<http://zoobank.org/urn:lsid:zoobank.org:pub:B2D9F2DF-4116-4515-9BFB-44FFBE875C9E>

Caught in speciation? A new host for *Conchodytes meleagrinae* Peters, 1852 (Decapoda, Caridea, Palaemonidae)

CHARLES H.J.M. FRANSEN¹ & BASTIAN T. REIJNEN²

Department of Marine Zoology, Naturalis Biodiversity Center, P.O. Box 9517, 2300 RA Leiden, The Netherlands.

E-mail: ¹charles.fransen@naturalis.nl; ²bastian.reijnen@naturalis.nl

Abstract

During fieldwork in 2009 at Ternate, Indonesia, a pair of a pontoniine shrimp species belonging to the genus *Conchodytes* was collected from a bivalve mollusk of the genus *Spondylus*. This constitutes the first record of a species of the genus *Conchodytes* associated with a spondylid host. The specimens can be distinguished from other known *Conchodytes* species based on both morphology and colour pattern. Its COI barcode however, strongly resembles those obtained from three specimens of *C. meleagrinae* and is nested in the *C. meleagrinae* clade of the reconstructed phylogeny. Based on morphology and colouration only the specimens associated with the *Spondylus* bivalve would have been described as a species new to science. The modest conflicting molecular data have lead the authors to fully describe and figure the *Spondylus* associated specimens and compare them with the *Pinctada* associated specimens. Based on the present information it is decided not to give the *Spondylus* associated specimens the status as a distinct species but regard them as host-related (colour)morph of *Conchodytes meleagrinae*.

Key words: Palaemonidae, Pontoniinae, *Conchodytes meleagrinae*, new host, phylogeny, Ternate, Indonesia

Introduction

The Indo-West Pacific genus *Conchodytes* Peters, 1852, contains ten known species (De Grave & Fransen, 2011; Fransen & Reijnen, 2012), which are all associated with Indo-West Pacific bivalve mollusks: *C. biunguiculatus* (Paul'son, 1875); *C. chadi* (Marin, 2011), *C. maculatus* Bruce, 1989; *C. meleagrinae* Peters, 1852; *C. monodactylus* Holthuis, 1952; *C. nipponensis* (De Haan, 1844); *C. philippinensis* Bruce, 1996, *C. placunae* (Johnson, 1967), *C. pteriae* Fransen, 1994a, and *C. tridacnae* Peters, 1852. These species have been recorded to live in association with scallops (Pectinidae: *Amusium* Röding, 1798; *Pecten* O.F. Müller, 1776), windowpane oysters (Placunidae: *Placuna* Lightfoot, 1786), cockles (Cardiidae: *Tridacna* Bruguière, 1797), fan shells (Pinnidae: *Atrina* Gray, 1842; *Pinna* Linnaeus, 1758), pearl oysters (Pteriidae: *Pinctada* Röding, 1798), tree oysters (Isognomoidae: *Isognomon* Lightfoot, 1786), and Cock's comb oysters (Ostreidae: *Lopha* Röding, 1798).

A faunal survey for shallow-water pontoniine shrimps during a research expedition to Ternate and surroundings, revealed a male/female pair of shrimps of *Conchodytes* living in a spiny oyster (Spondylidae) of the genus *Spondylus*. This is the first record of a *Conchodytes* living in symbiosis with a species of the bivalve genus *Spondylus*.

Material and methods

Sample collection. The expedition was organised in around Ternate, northern Moluccas (23 October–18 November, 2009) by the Research Center for Oceanography, Indonesian Institute of Sciences (RCO-LIPI), and Naturalis Biodiversity Center in Leiden, the Netherlands, as part of the Ekspedisi Widya Nusantara (E-Win expedition). The specimens were collected using SCUBA equipment. Live specimens were photographed in their