



## ***Periclimenaeus pectinidactylus* n. sp. (Crustacea: Decapoda: Pontoniinae) from the Belizean Barrier Reef, Caribbean Sea**

ZDENĚK ĎURIŠ<sup>1</sup>, IVONA HORKÁ<sup>1,2</sup> & FLOYD SANDFORD<sup>3</sup>

<sup>1</sup>Department of Biology and Ecology, University of Ostrava, Chittussiho 10, 710 00 Ostrava, Czech Republic.

E-mail: zdenek.duris@osu.cz

<sup>2</sup>Department of Ecology, Faculty of Natural Sciences, Charles University, Viničná 7, 128 44 Prague, Czech Republic.

E-mail: ivona.horka@osu.cz

<sup>3</sup>Professor Emeritus of Biology, Coe College, Cedar Rapids, Iowa, U.S.A. E-mail: fsandfor@coe.edu

### **Abstract**

A new species of sponge-associated pontoniine shrimp from the Belizean Barrier Reef in the Caribbean Sea is described and illustrated, and its systematic position is discussed. The single specimen available is incomplete, lacking the major second pereiopod. A comb-like arrangement of the cutting edges on the first pereiopod fingers is unique within the genus. A very short carapocerate and a strongly reduced incisor process on the mandible are among other features which are rare in other *Periclimenaeus* species.

**Key words:** Crustacea, Decapoda, Pontoniinae, *Periclimenaeus pectinidactylus*, new species, sponge associate, Belizean Barrier Reef, Caribbean Sea, Western Atlantic

### **Introduction**

*Periclimenaeus* Borradaile, 1915 is the second largest genus in the palaemonid shrimp subfamily Pontoniinae (Chace & Bruce, 1993; Li, 2000). It currently contains 67 species, of which 50 species are known from the Indo-West Pacific region (Holthuis, 1952; Bruce, 2006a,b), three species from the eastern Pacific (Holthuis, 1951), 13 from the western Atlantic (Holthuis, 1951; Abele, 1971; Chace, 1972; Cardoso & Young, 2008), and one from the eastern Atlantic (Dos Santos *et al.*, 2008).

Where the hosts are known, species of this genus have been reported as obligatory commensals of sponges or ascidians (Bruce, 2006). Recent careful examinations of sponges and other appropriate hosts have revealed the presence of previously unreported small and inconspicuous, often highly cryptic, species of symbiotic organisms, including tiny shrimp species. A single specimen of an unknown *Periclimenaeus* species was collected during a co-operative survey on sponge-associated shrimps of the Belizean Barrier Reef in 2004–2006. Although lacking the major second pereiopod, highly diagnostic for the genus, it agrees well with all other characters (Bruce, 1994) of *Periclimenaeus*. The specimen shows some unique or rare features that allow us to consider it a new species, increasing the number of the known western Atlantic representatives of the genus *Periclimenaeus* to 16 and Atlantic ones in total to 17.

The following abbreviations are used: CL, postorbital carapace length; RMNH, Nationaal Natuurhistorisch Museum – Naturalis (previously Rijksmuseum van Natuurlijke Historie), Leiden, the Netherlands.