



## Two new species of alcyonacean-associated shrimp genus *Alcyonohippolyte* Marin, Okuno & Chan, 2010 (Crustacea: Decapoda: Hippolytidae) from the Great Barrier Reef of Australia

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### Abstract

Two new species of symbiotic hippolytid shrimps of the genus *Alcyonohippolyte* Marin, Okuno & Chan, 2010 are described from Lizard Island, the Great Barrier Reef of Australia. *Alcyonohippolyte tenuicarpus* **sp. nov.** is associated with xeniid soft coral of the genus *Heteroxenia* Kolliker, 1874 and differs from the congeners by a long rostrum greatly exceeding antennular peduncle and slender carpal segments of pereopod II. *Alcyonohippolyte tubiporae* **sp. nov.** is associated with organ pipe coral of the genus *Tubipora* Linnaeus, 1758, possibly *T. musica* Linnaeus, 1758 (Alcyonacea: Tubiporidae), and differs from the congeners by equal distal and proximal carpal segments of pereopod II. Both species can be clearly separated from the congeners ecologically and by coloration.

**Key words:** Crustacea, Decapoda, Palaemonidae, *Alcyonohippolyte*, new species, corals, *Heteroxenia*, *Tubipora*, the Great Barrier Reef, Australia

### Introduction

The Indo-West Pacific hippolytid shrimp genus *Alcyonohippolyte* Marin, Okuno & Chan, 2011 (Decapoda: Caridea: Hippolytidae) presently includes 3 valid species associated with soft corals (Octocorallia: Alcyonacea) of the families Nephtheidae, Xeniidae and Alcyoniidae (Marin *et al.*, 2011). All described species are host specific and possess distinctive species-specific coloration (Marin *et al.*, 2011).

During the survey of caridean shrimp fauna of Lizard Island at the frames of CReefs Lizard Island Expedition 2010 numerous coral hosts were studied for their symbiotic assemblage. As the result, xeniid soft coral *Heteroxenia* Kolliker, 1874 (Alcyonacea: Xeniidae) and organ pipe coral *Tubipora musica* Linnaeus, 1758 (Alcyonacea: Tubiporidae) were observed to be inhabited by symbiotic shrimps of the genus *Alcyonohippolyte*. Both shrimps species are new to the science and described herein. Total length (tl., in mm, the length from the tip of rostrum to the distal part of telson) and postorbital carapace length (pcl, in mm, the dorsal length from orbits to the proximal part of carapace) are used as standard measurements of the size. All examined material is deposited with the Museum of Tropical Queensland (QM), Townsville, Australia.

### Systematic part

#### Family Hippolytidae Bate, 1888

#### Genus *Alcyonohippolyte* Marin, Okuno & Chan, 2010