



<http://dx.doi.org/10.11646/zootaxa.4027.4.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:3B32D183-45BA-41F9-82A9-C9C108D53899>

## Leucosiid crabs from Papua New Guinea, with descriptions of eight new species (Crustacea: Decapoda: Brachyura)

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### Abstract

Twenty-five species of leucosiid crabs are reported from Madang Province, Papua New Guinea. Of these, seven are new to science: two each are included in *Alox* Tan & Ng, 1995 and *Tanaoa* Galil, 2003, and one each in *Ryphila* Galil, 2009, *Seulocia* Galil, 2005, and *Urnalana* Galil, 2005. Fifteen additional species are new records for Papua New Guinea: *Alox rugosum* (Stimpson, 1858), *Ancylodactyla nana* (Zarenkov, 1990), *Arcania heptacantha* De Man, 1907, *Heterolithadia fallax* (Henderson, 1893), *Hiplyra longimana* (A. Milne Edwards, 1874), *Myra curtimana* Galil, 2001, *M. digitata* Galil 2004, *Nursilia dentata* Bell, 1855, *Oreotlos etor* Tan & Richer de Forges, 1993, *Parilia major* Sakai, 1961, *Raylilia coniculifera* Galil, 2001, *R. uenoi* (Takeda, 1995), *Toru pilus* (Tan, 1996), *Urashima pustuloides* (Sakai, 1961) and *Leucosia rubripalma* Galil, 2003. The new species are described and illustrated, and their affinities with allied taxa discussed. Colour photographs are provided for 20 species.

**Key words:** Crustacea, Decapoda, Brachyura, Leucosiidae, *Alox*, *Ryphila*, *Tanaoa*, *Urnalana*, new species, Papua New Guinea, Bismarck Sea

### Introduction

The biota in the seas bordering Papua New Guinea (PNG) is considered highly diverse, yet, an important fraction of the macrofauna and megafauna remains poorly known. The current body of knowledge on Papua New Guinean deep-sea benthos stems almost exclusively from the study of highly specialized hydrothermal vents (Pante *et al.* 2012), and even the biota of the littoral is yet to be fully explored.

The extent and intensity of human impacts on Madang lagoon in northern PNG are alarming. A growing human population, industrialization, fishing, sewage discharge, litter, and an increased input of freshwater and sediment as a result of logging and intensive agriculture are major stressors which have depleted the biota “.... compared to our expectations based on similar surveys in the Philippines, Vanuatu and New Caledonia.” (P. Bouchet. pers. com.). It is therefore with a sense of urgency that the benthic biodiversity of the unique Madang lagoon and the Bismarck Sea coast of the island of New Guinea, barely explored and up for destructive exploitation, are studied. The purpose of the Papua Niugini Biodiversity Expedition, conducted in 2012 by Muséum national d'Histoire naturelle, Paris (MNHN), Institut de Recherche pour le Développement (IRD) and University of Papua New Guinea was to explore remote and uncharted territory and describe its benthic fauna. The expedition was designed to sample specific habitats in order to understand patterns of faunal connectivity across the deep waters of the western Pacific Ocean.

In the present paper, a checklist of 25 species of Leucosiidae is presented. The synonymy provided is restricted to records from Papua New Guinea. The new species are fully described and illustrated whereas notes are provided for the new records, and colour descriptions where none were available before or when greater detail is needed.