



## Revision of the crab genus *Garthambrus* Ng, 1996, with the description of two new genera and discussion of the status of *Tutankhamen* Rathbun, 1925 (Crustacea: Brachyura: Parthenopidae)

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## Abstract

The Indo-West Pacific genus *Garthambrus* Ng, 1996, is revised. Two new species are described from New Caledonia and French Polynesia. *Lambrus* (*Parthenopoides*) *pteromerus* Ortmann, 1893, is now transferred to *Garthambrus*. The genus now consists of 11 nominal species, viz. *G. allisoni* (Garth, 1992), *G. cidaris* (Garth and Davie, 1995), *G. complanatus* (Rathbun, 1906), *G. lacunosus* (Rathbun, 1906), *G. posidon* Ng, 1996, *G. poupini* (Garth, 1992), *G. pteromerus* (Ortmann, 1892), *G. stellatus* (Rathbun, 1906), *G. tani* Ah Yong, 2008, *G. darthvaderi* **sp. nov.** and *G. undulatus* **sp. nov.** Although originally included in *Garthambrus*, *Asterolambrus mironovi* Zarenkov, 1990, is herein transferred to a new genus, *Hispidolambrus* **gen. nov.** Most of these species are known from the West Pacific, but *Garthambrus posidon* only occurs in the Indian Ocean. Most specimens of *Garthambrus* have been collected from depths between 81–600 m. The monotypic Caribbean genus *Tutankhamen* Rathbun, 1925, which closely resembles *Garthambrus*, is also discussed. *Heterocrypta epibranchialis* Zarenkov, 1990, has some resemblance to *Garthambrus* but is here referred to a new genus, *Zarenkolambrus*, along with a new species, *Z. minutus* **sp. nov.**

**Key words:** *Garthambrus*, *Hispidolambrus*, *Tutankhamen*, *Zarenkolambrus*, Parthenopidae, taxonomy, Pacific Ocean, Caribbean Sea, Indian Ocean, new species, new genus

## Introduction

The large number of parthenopids collected during MUSORSTOM expeditions, and held in the Muséum national d'Histoire naturelle, Paris, offered the opportunity to revise many of the genera in this family. The bulk of this work, which includes many undescribed new species, remains part of an unpublished doctoral dissertation (Tan, 2004). Tan & Ng (2007) updated the generic system of the Parthenopidae Macleay, 1838 and they synonymised the subfamilies, Cryptopodiinae Stimpson, 1871, and Lambrachaeinae Števcíć, 1994, with the Parthenopinae Macleay, 1838. They recognised 32 genera, of which 12 were described as new, and provided a key to these genera. The present paper deals with the genus *Garthambrus* Ng, 1996, a discussion about the related genus *Tutankhamen* Rathbun, 1925, and the description of new genera, *Hispidolambrus* **gen. nov.** and *Zarenkolambrus* **gen. nov.**, that are closely allied to *Garthambrus*.

The genus *Garthambrus* was established by Ng (1996) for a number of species previously placed in *Platylambrus* Stimpson, 1871, a heterogeneous group that was in urgent need of revision. Tan & Ng (2007) later recognised several genera that were previously placed in *Platylambrus* sensu lato viz. *Spinolambrus* Tan & Ng, 2007, and *Piloslambrus* Tan & Ng, 2007. The genus *Platylambrus* is now restricted to only two species in the Atlantic, *P. serratus* (H. Milne Edwards, 1834) and *P. granulatus* (Kingsley, 1879) (Tan & Ng, 2007: 99).

Ng (1966) differentiated *Garthambrus* from *Platylambrus* mainly by the shape of the carapace. Six species were included in the genus at that time: *G. complanatus* (Rathbun, 1906), *G. lacunosus* (Rathbun, 1906), *G. mironovi* (Zarenkov, 1990), *G. posidon* Ng, 1996, *G. poupini* (Garth, 1993) and *G. stellatus* (Rathbun, 1906). Herein we place *G. mironovi* in a new genus. The carapace of *Garthambrus* has strongly inflated gastric, cardiac and branchial regions, lacks sub-cylindrical or sub-lamelliform spines on the metabranchial region and posterior epibranchial margins, a trifid rostrum, broad posterior epistomial margin, and a G2 which has an elongate flagellum as long as or longer than the length of the thickened basal part. The definition of *Garthambrus* needs to be modified in order to accommodate the species originally included, especially with reference to the smooth carapace surface of some species. The inclusion of species that do not have a tuberculate carapace means that the carapace surface character must be expanded to become “dorsal surface tuberculate, smooth or pitted. In a paper on the parthenopids of Hawaii, Ng & Tan (1999) elaborated on the three species of *Garthambrus* found there (*G. complanatus*, *G. lacunosus* and *G. stellatus*), added two more species, *G. allisoni* (Garth, 1993) and *G. cidaris* (Garth & Davie, 1995), and provided a key to all species included in *Garthambrus* at the time. Ah Yong (2008) recently described a new species, *G. tani* Ah Yong, 2008, from New Zealand, which is also the first record of a parthenopid species from that area.