

A new species of tree-hole dwelling freshwater crab of the genus *Arachnothelphusa* Ng, 1991 (Crustacea: Decapoda: Brachyura: Gecarcinucidae) from northern Sarawak, Malaysia, Borneo

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Abstract. A new species of tree-hole gecarcinucid freshwater crab, *Arachnothelphusa merarapensis*, is described from a primary dipterocarp forest near Merarap Hot Spring Resort in Lawas, northern Sarawak, Malaysia. This brings the number of species in the genus *Arachnothelphusa* found in Borneo to five, and it is likely that more species will be discovered from this island. The new species has preference for living in water-filled tree-holes, which is the first record of a tree-hole crab for Southeast Asia. The habitat characteristics and distribution of this new species are also discussed.

Key words. Brachyura, Gecarcinucidae, *Arachnothelphusa*, tree-hole, Sarawak, Borneo

INTRODUCTION

Ng (1989, 1991) reviewed the gecarcinucid genus *Thelphusula* Bott, 1969, and transferred a number of long-legged semi-terrestrial species from Borneo to two new genera, *Stygothelphusa* Ng, 1989, and *Arachnothelphusa* Ng, 1991 (see also Tan & Ng, 1998; Ng, 2013; Ng & Grinang, 2014; Grinang & Ng, 2014). Members of *Stygothelphusa* are cavernicolous in habit, have reduced body pigmentation, proportionately longer ambulatory legs, a relatively squarish carapace outline, and distinctly structured male first and second gonopods. This genus currently includes four species viz. *S. bidiense* (Lanchester, 1900), *S. nobilii* (Colosi, 1920), *S. cranbrookii* Ng, 2013, and *S. antu* Ng & Grinang, 2014 (Ng, 1989, 2013; Ng & Grinang, 2014). In comparison, most species of *Arachnothelphusa* are free living, have relatively shorter ambulatory legs, a more transversely ovate carapace outline, and differently proportioned male first and second gonopods. This genus currently contains four species, viz. *Arachnothelphusa melanippe* (De Man, 1899) [central Kalimantan], *A. kadamaiana* (Borradaile, 1900) [northern Sabah], *A. rhadamanthysi* Ng & Goh, 1987 [eastern Sabah], and *A. terrapes* Ng, 1991 [eastern Sabah]. Interestingly, *Stygothelphusa* has only been recorded from limestone caves in western Sarawak, whereas *Arachnothelphusa* is more widely distributed in Borneo. Here we describe a fifth species of *Arachnothelphusa*, *A. merarapensis*, new species, the first member of the genus to be recorded from Sarawak.

MATERIAL AND METHODS

The terminology used essentially follows Ng (1988), with the abbreviations G1 and G2 used for the male first and second gonopods, respectively. Measurements provided (in millimetres) are of the carapace width and length, respectively. Specimens examined are deposited in the Sarawak Biodiversity Centre (SBC), Kuching, Sarawak, Malaysia; the Senckenberg Museum (SMF), Frankfurt am Main, Germany; and the Zoological Reference Collection (ZRC) of the Lee Kong Chian National History Museum (ex Raffles Museum of Biodiversity Research), National University of Singapore.

TAXONOMY

Family Gecarcinucidae Rathbun, 1904

Arachnothelphusa merarapensis, new species

(Figs. 1–3)

Material examined. Holotype: male (22.5 × 16.8 mm) (ZRC), water-filled tree-hole, ca. 100 cm above ground, steep dipterocarp forest, Merarap Hot Spring Resort, Lawas, northern Sarawak, Malaysia, Borneo, 4°22'25.4"N 115°26'10.1"E, 485 m asl, coll. J. Grinang & Y.M. Pui, 31 October 2014. Paratype: 1 female (19.9 × 15.2 mm) (SBC.C.00376), water-filled hole of tree buttress, ca. 90 cm above ground, steep dipterocarp forest, Merarap Hot Spring Resort, Lawas, northern Sarawak, Malaysia, Borneo, 4°22'16.5"N 115°26'12.4"E, 494 m asl, coll. J. Grinang & Y.M. Pui, 1 November 2014; 1 female (22.3 × 16.1 mm) (SBC.C.00377), water-filled hole of tree buttress, ca. 30 cm above ground, same data as paratype, coll. Y.M. Pui, 27 February 2013.

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