

A new species of the genus *Arachnothelphusa* Ng, 1991 (Crustacea: Decapoda: Gecarcinucidae) from a limestone cave in Sarawak (Malaysian Borneo)

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Abstract. A new species of cavernicolous gecarcinucid crab, *Arachnothelphusa sarang*, is described from a limestone cave in northern Sarawak, Malaysian Borneo. This increases the number of *Arachnothelphusa* species to six. It is the second member in the genus that is known to primarily occupy limestone caves, the other being *A. rhadamanthysi* Ng & Goh, 1987, from Gomantong in Sabah. Both species appear to be cavernicolous species with pale body colouration in life.

Key words. Brachyura, taxonomy, Oriental region, freshwater crab, cavernicolous crab

INTRODUCTION

Currently, the Bornean gecarcinucid genus *Arachnothelphusa* Ng, 1991, is represented by five species, viz. *A. melanippe* (De Man, 1899) [central Kalimantan], *A. kadamaiana* (Borradaile, 1900) [northern Sabah], *A. rhadamanthysi* Ng & Goh, 1987 [eastern Sabah], *A. terrapes* Ng, 1991 [eastern Sabah], and *A. merarapensis* Grinang, Pui & Ng, 2015 [northern Sarawak] (Grinang et al., 2015; Ng & Ng, 2018). Members of *Arachnothelphusa* live in a wide range of habitats, from tree-holes to the interior of limestone caves. Of the five species, only *A. rhadamanthysi* has been recorded from limestone caves in Gomantong in Sabah. We here describe a sixth species of *Arachnothelphusa*, *A. sarang*, new species, and the second cavernicolous member from a limestone cave system in Sarawak.

MATERIAL AND METHODS

The terminology used essentially follows Ng (1988) and Davie et al. (2015), 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 Zoological Reference Collection, Lee Kong

Chian National History Museum (former Raffles Museum of Biodiversity Research), National University of Singapore (ZRC); Sarawak Biodiversity Centre, Sarawak, Malaysia (SBC); Naturalis Biodiversity Center (former Rijksmuseum van Natuurlijke Historie), Leiden, The Netherlands (RMNH); and Senckenberg Museum und Forschungsinstitut, Frankfurt am Main, Germany (SMF).

TAXONOMY

Family Gecarcinucidae Rathbun, 1904

Arachnothelphusa Ng, 1991

Type species. *Potamon (Potamon) melanippe* De Man, 1899, by original designation.

Arachnothelphusa sarang, new species

(Figs. 1A–F, 2A–G, 3A–E, 4A)

Material examined. Holotype: male (20.4 × 14.7 mm) (ZRC 2020.0098), limestone cave, Bukit Sarang, Bintulu, Sarawak, Malaysia, coll. H.H. Tan et al., 20 August 2005. Paratypes: 1 male (18.7 × 14.8 mm), 4 females (15.8–19.8 × 12.0–15.8 mm) (ZRC 2020.0099), same data as holotype; 10 males (7.4–11.2 × 5.8–9.6 mm), 7 females (7.5–12.7 × 5.8–9.9 mm) (ZRC 2020.0100), limestone cave, Batu Gelam, Bukit Sarang, Bintulu, Sarawak, Malaysia, coll. H.H. Tan, 20 August 2005; 1 male (12.1 × 9.9 mm), 1 female (12.9 × 10.4 mm) (ZRC 2020.0351), limestone cave, Batu Kelelut, Bukit Sarang, Bintulu, Sarawak, Malaysia, coll. H.H. Tan et al., 18 August 2005.

Comparative material. *Arachnothelphusa merarapensis* Grinang, Pui & Ng, 2015: Holotype male (22.5 × 16.8 mm) (ZRC 2016.0297), water-filled tree-hole, ca. 100

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