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A NEW SPECIES OF THE ANT GENUS *MYRMECINA* CURTIS, 1829 (HYMENOPTERA: FORMICIDAE, MYRMICINAE) FROM THAILAND

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Summary. A new species of the ant genus *Myrmecina* Curtis, 1829 is described and illustrated based on the worker caste under the name *Myrmecina raviwonghei* Jaitrong, Samung, Waengsothorn et Okido, **sp. n.** The new species is easily distinguished from the other members of the genus by the first gastral tergite that is covered with fine and dense punctures. The type series of the new species was collected from rotting wood on the forest floor in a primary forest.

Key words: ants, Formicidae, taxonomy, new species, Southeast Asia.

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Резюме. Из Таиланда по касте рабочих описывается новый для науки вид *Myrmecina raviwonghei* Jaitrong, Samung, Waengsothorn et Okido, **sp. n.** Новый вид отличается от других видов рода *Myrmecina* Curtis, 1829 мелкозернистым первым тергитом брюшка. Типовая серия нового вида собрана в трухлявой древесине под пологом тропического леса.

INTRODUCTION

Ants of *Myrmecina* Curtis, 1829 are relatively rare, generally found in leaf litter samples from forested areas (Shattuck, 2009). The genus belongs to the subfamily Myrmicinae in the tribe Crematogastrini, with *Myrmecina latreillii* Curtis, 1829 [junior synonym of *Myrmecina graminicola* (Latreille, 1802)] as the type species (Blaimer *et al.*, 2018). So far, 54 species have been known (Antweb, 2019). The members of the genus are distributed throughout the Nearctic, Palearctic, Oriental and Australian regions. This genus is apparently absent from Central and South America, sub-Saharan Africa and the Middle East (Antmaps, 2019; Antweb, 2019). Within the Oriental region, *Myrmecina* has been recorded from India and Sri Lanka (4 species), China and Taiwan (10 species), Myanmar (1 species), and Sundaland (7 species) (Wong & Guénard, 2016; Antmaps, 2019; Antweb, 2019). In Thailand, several species have been recorded (Sakchoowong *et al.*, 2008, 2009; Torchote *et al.*, 2010; Jaitrong, 2011; Chantarasawat *et al.*, 2013) from several localities, but most of them are not identified.

Recently, we have examined *Myrmecina* specimens deposited in the ant collection at the Natural History Museum of the National Science Museum, Thailand. We found an undescribed species that has fine and dense punctures on the first gastral tergite. In the present paper we describe this new species based on the worker caste. The list of known ant species of Thailand (Jaitrong & Nabhitabhata, 2005; Sakchoowong *et al.*, 2008; Jaitrong, 2011; Chantarasawat *et al.*, 2013; Tanansathaporn *et al.*, 2018) is enlarged in present paper.

MATERIALS AND METHODS

The holotype and paratypes of *Myrmecina raviwonghei* **sp. n.** were pin-mounted dry specimens. Most morphological observations were made with a ZEISS Discovery.V12 stereoscope. Multi-focused montage images were produced using NIS-Elements-D from a series of source images taken by a Nikon Digital Sight-R1 camera attached to a Nikon AZ100M stereoscope. The holotype and ten paratypes were measured using a micrometer (accurate to 0.01 mm).

Measurements and morphological terminology follow Terayama (1996), Shattuck (2009), and Wong & Guénard (2016). Abbreviations of measurements and indices are as follows: **HL** – maximum length of head in full-face view, measured from midpoint of line drawn across the anteriormost points of clypeus to midpoint of a line drawn across the posteriormost points of head; **HW** – head width, maximum width of head in full-face including eyes; **MDL** – mandible length, maximum length

of mandible measured from mandibular insertion to apicalmost point of mandible, in full-face view; **EL** – eye length, length of major axis of compound eye measured in profile view; **SL** – scape length, maximum length of antennal scape excluding basal condylar bulb; **WL** – weber length, maximum diagonal distance of mesosoma in profile view, measured from anteriormost point of pronotal collar to posteriormost point of propodeal lobe; **PNW** – pronotum width, maximum width of pronotum measured in dorsal view; **PSL** – propodeal spine length, maximum length of propodeal spine measured in profile view from tip of propodeal spine to closer outward margin of propodeal spiracle; **PTH** – petiole height, maximum height of petiole measured from ventralmost point of subpetiolar process to imaginary line tangential to the apex as measured in profile view; **PTL** – petiole length, maximum length of petiole measured from anterodorsalmost point to posterodorsalmost point of petiolar base in profile view; **CI** – cephalic index, $HW \times 100 / HL$; **MDI** – mandible index, $MDL \times 100 / HL$; **SI** – scape index, $SL \times 100 / HW$; **PTHI** – petiole height index, $PTH \times 100 / PTL$.

Acronyms of type depositories: **MHNG** – Muséum d’Histoire Naturelle, Geneva, Switzerland; **SKYC** – Seiki Yamane Collection, Japan; **THNHM** – Natural History Museum of the National Science Museum, Thailand; **USNM** – National Museum of Natural History, Smithsonian Institution, Washington DC, U.S.A.

DESCRIPTION OF A NEW SPECIES

***Myrmecina raviwonghei* Jaitrong, Samung, Waengsothorn et Okido, sp. n.**

<http://zoobank.org/NomenclaturalActs/87D1FC7B-CD2A-480B-A2E9-CC5274A05A02>

Figs 1–5

TYPE MATERIAL. Holotype – worker (THNHM-I-05470, THNHM), **NE Thailand:** Nakhon Ratchasima Province, Wang Nam Kheao District, Udom Sub District, 14.46805°N, 101.90416°E, 22.VI 2018, W. Jaitrong leg., WJT220618-6. Paratypes: 24 workers (THNHM-I-05471, MHNG, SKYC, THNHM, USNM), same data as holotype.

MEASUREMENTS. *Holotype:* HL 0.61; HW 0.59; MDL 0.30; EL 0.13; SL 0.46; WL 0.73; PNW 0.46; PSL 0.17; PTH 0.20; PTL 0.20; CI 97; MDI 49; SI 78; PTHI 100. *Paratypes* (n = 10): HL 0.59–0.63; HW 0.56–0.63; MDL 0.23–0.30; EL 0.08–0.13; SL 0.40–0.46; WL 0.66–0.76; PNW 0.40–0.46; PSL 0.17–0.20; PTH 0.18–0.20; PTL 0.20; CI 100; MDI 41–50; SI 71–78; PTHI 92–100.

WORKER DESCRIPTION. **Coloration.** Body black, tip of gaster reddish brown; mandible, antenna and legs yellowish brown; forecoxa dark brown.

Structure. Head in full-face view, subrectangular, almost as long as broad; posterior margin weakly concave medially; posterolateral corner rounded, not projected posteriorly; lateral margin weakly convex. Mandible broad, subtriangular; masticatory margin bent at mid-length, apical tooth large followed by medium size subapical tooth, 5 small teeth and medium size basal tooth. Dorsal face of clypeus shallowly concave; median portion of anterior clypeal margin projected, usually with three

processes. Frontal carina virtually absent, indistinguishable from rugae of head. Eye small, with 4–6 ommatidia, maximum diameter of eye 0.08–0.13 mm. Antenna 12-segmented, with 3-segmented club; scape short, not reaching posterolateral corner of head; segment II almost as long as broad and broader than each of segments III–VIII; terminal segment (XII) as long as III–VIII combined.



Fig. 1. *Myrmecina raviwonghei*, **sp. n.**, holotype worker (THNHM-I-05470), body in profile view.

Dorsal outline of mesosoma in profile, weakly convex. Pronotum without denticles on its dorsum; anterior ventrolateral portion of pronotum forming distinct process, directed forward and downward; mesonotum completely fused with pronotum; mesopleuron not differentiated from metapleuron. Propodeum in dorsal view not demarcated anteriorly; anterior pair of denticles present on propodeal dorsum, very small and short (difficult to distinguish them from longitudinal rugae on propodeum); propodeal spine relatively long, almost as long as or slightly longer than broad at base; propodeal declivity, seen from back, tapering above and shallowly concave. Petiole short, in dorsal view slightly longer than broad, rectangular; in profile view, as long as broad, its anterior slope almost straight, and dorsal face almost straight; ventral outline straight with a small anterior denticle; postpetiole in dorsal view broader than petiole and slightly shorter than broad; sternopostpetiolar process distinctly projected

with acute anterior apex. Gaster in dorsal view slightly elongate circular; anterior margin of first gastral tergite strongly concave.

Sculpture. Dorsum of head punctured with longitudinal rugae; ventrolateral area (temple + gena) of head with rugae; ventral face with irregular rugae; mandible largely smooth and shiny, with striation at base; clypeus somewhat smooth and shiny; antennal scape punctate. Mesosoma entirely punctured with longitudinal rugae; coxae smooth and shiny, forefemur superficially reticulate with smooth and shiny interspaces; mesofemur and metafemur smooth and shiny. Petiole punctured with few distinct rugae. First gastral tergite finely punctate; first gastral sternite reticulate.



Figs 2–5. *Myrmecina raviwonghei*, **sp. n.**, holotype worker (THNHM-I-05470). 2 – head in full-face view; 3 – body in dorsal view; 4 – first gastral tergite in dorsal view; 5 – propodeal spine, petiole and postpetiole in profile view.

Pilosity. Body covered with abundant short erect hairs, hairs on first gastral tergite slightly longer than those on head and mesosoma; clypeus with several erect hairs, and pair of long hairs arising from median tooth of its anterior margin; scape with many suberect to erect hairs that are longer than scape width; all legs with numerous suberect to erect hairs.

NON-TYPE MATERIAL EXAMINED. **W Thailand:** Tak Province, Umphang District, Thung Yai Naresuan East Wildlife Sanctuary, dry evergreen forest, 25.V 2000, W. Jaitrong leg., THNHM-I-05472 (4 workers, THNHM); Tak Province, Thung [Tung] Yai Wildlife Sanctuary, near Myanmar border, 23.V 1999, W. Jaitrong leg., dry evergreen forest, THNHM-I-05473 (1 worker, THNHM); Kanchanaburi Province, Thong Pha Phum District, Ban Sahakorn Nikhom, dry evergreen forest, 26.VIII 2018, W. Jaitrong leg., WJT260818-8 (4 workers, THNHM-I-05474, THNHM). E Thailand: Sakheao Province, Wang Nam Yen District, Thung Mahacharearn Subdistrict, Khao Takrub, 29.VI 2003, W. Jaitrong leg. (1 worker, THNHM).

REMARKS. This species is easily distinguished from the other members of the genus by the dorsum of head and mesosoma punctured with longitudinal rugae (Figs 1, 2), by the first gastral tergite is covered with fine and dense punctures (Fig. 4), and by anterior margin of first gastral tergite is strongly concave (Fig. 4).

HABITAT. The type series was collected from small rotting wood in lowland dry evergreen forest. A colony from Kanchanaburi Province, western Thailand was collected from leaf litter in a dry evergreen forest. Several specimens from Thung Yai Naresuan East Wildlife Sanctuary, Tak Province were collected in highland (900–1000 m a.s.l.) primary forests. Thus, this species inhabits primary evergreen forest from lowland to highland.

ETYMOLOGY. The specific name is dedicated to Dr. Rawin Raviwonghe, the president of the National Science Museum, Thailand, who kindly supported us in field surveys.

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