

A New Species of the Ant Genus *Acanthomyrmex* (Hymenoptera, Formicidae) from Thailand

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Abstract A new species, *Acanthomyrmex thailandensis*, from Thailand is described based on the worker and female. This is the 12th species of the *Acanthomyrmex* and is the first record of this genus from Thailand.

Key words: *Acanthomyrmex thailandensis* sp. nov.; Formicidae; Hymenoptera; Thailand.

The ant genus *Acanthomyrmex*, belonging to the subfamily Myrmicinae, is represented by 11 described species and restricted in the Oriental Region (MOFFETT, 1986). All the *Acanthomyrmex* species are strongly dimorphic, presenting minor and major worker subcastes. The head length of majors is more than twice that of minors. The majors serve roles in nest defense, and presumably also mill the seeds which form a large part of the diet of these omnivores (MOFFETT, 1985).

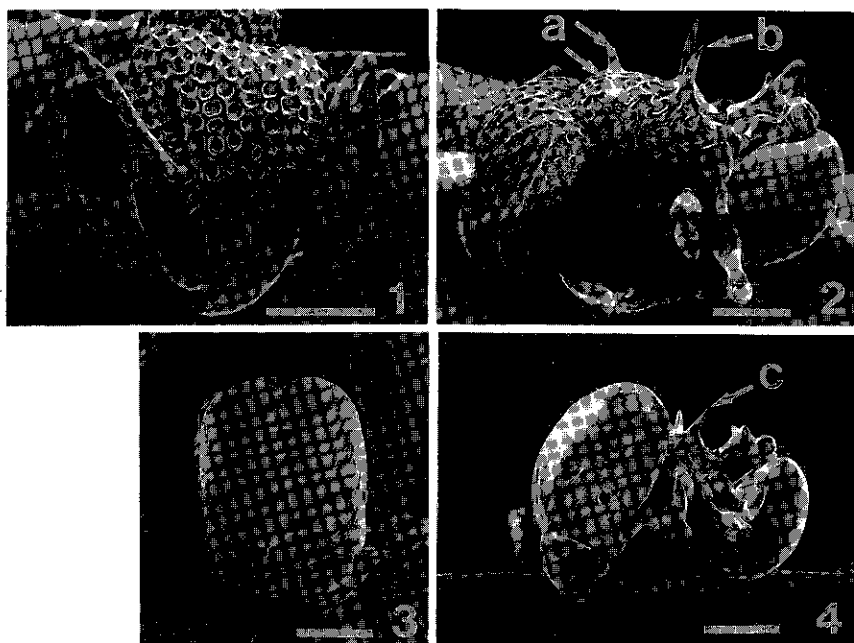
Recently, I have examined Thai specimens of this genus. This is undoubtedly a new record of this genus from this country. After careful examinations, I have concluded that this is a new species, which will be described and illustrated hereinafter.

Acanthomyrmex thailandensis sp. nov.

(Figs. 1-9)

Holotype. Minor worker. Head length (HL) 0.95 mm; head width (HW) 1.25 mm; scape length (SL) 0.90 mm; cephalic index (CI: $HW \times 100 / HL$) 132; scape index (SI: $SL \times 100 / HW$) 72; WEBER's length of alitrunk (WL) 1.13 mm; petiole length (PL) 0.40 mm; petiole height (PH) 0.30 mm; dorsal petiole width (PW) 0.20 mm; postpetiole length (PPL) 0.28 mm; postpetiole height (PPH) 0.45 mm; dorsal postpetiole width (PPW) 0.27 mm; total body length (TL) 3.5 mm.

Head wider than long, with weakly convex sides and feebly concave posterior border in frontal view; surface with rounded, relatively thick-walled foveae. Mandibles broad and subtriangular, with large apical and subapical



Figs. 1-4. *Acanthomyrmex thailandensis* sp. nov. (minor and major workers). — 1, Minor worker, head, frontal view; 2, minor worker, profile, dorsolateral view (a, pronotal spine; b, propodeal spine); 3, major worker, head, frontal view; 4, major worker, profile, lateral view (c, propodeal spine).
Scale lines. Figs. 1-2, 0.5 mm; figs. 3-4, 1 mm.

teeth following by 7 blunt small teeth. Antennae 12-segmented; scape exceeding the posterior border of head, broadest at posterior 1/3; 2nd segment slightly longer than wide; 3rd to 8th segments each wider than long; 9th almost as long as wide; apical 3 segments each longer than wide and terminal segment $2.0\times$ as long as wide. Clypeus with 2 longitudinal rugae; anterior border with a pair of dull small projection. Eyes prominent and convex, 0.18 mm in maximum diameter. Antennal scrobes relatively long, reaching the level of the eyes. Pronotum with rounded, thick-walled foveae; pronotal spines virtually straight, 0.38 mm in length. Mesonotum and propodeum with longitudinal, but relatively irregular striae. Propodeal spines cylindrical and almost straight, 0.50 mm in length, distinctly longer than those on pronotum. Petiole long and slender, node with a pair of short acute lateral spines. Postpetiole higher than long; in dorsal view, node rectangular, $0.86\times$ as long as wide. Gastral tergites with suberect hairs.

Body reddish brown; mandibles and antennae brown; legs yellowish brown.

Paratype minor workers. Five individuals from the same nest as holotype

with following measurements and indices: HL 0.90–0.97 mm; HW 1.20–1.28 mm; SL 0.88–0.92 mm; CI 131–133; SI 72–73; WL 1.10–1.15 mm; PL 0.38–0.42 mm; PH 0.29–0.32 mm; DPW 0.19–0.21 mm; PPL 0.26–0.30 mm; PPH 0.43–0.45 mm; PPW 0.25–0.26 mm; TL 3.4–3.5 mm.

Major workers. HL 2.70–2.80 mm; HW 2.30–2.45 mm; SL 0.90–1.00 mm; CI 85–88; SI 37–43; WL 1.25–1.40 mm; PL 0.60–0.65 mm; PH 0.44–0.45 mm; DPW 0.45 mm; PPL 0.30 mm; PPH 0.49–0.50 mm; PPW 0.45–0.49 mm; TL 5.5 mm (3 individuals were measured).

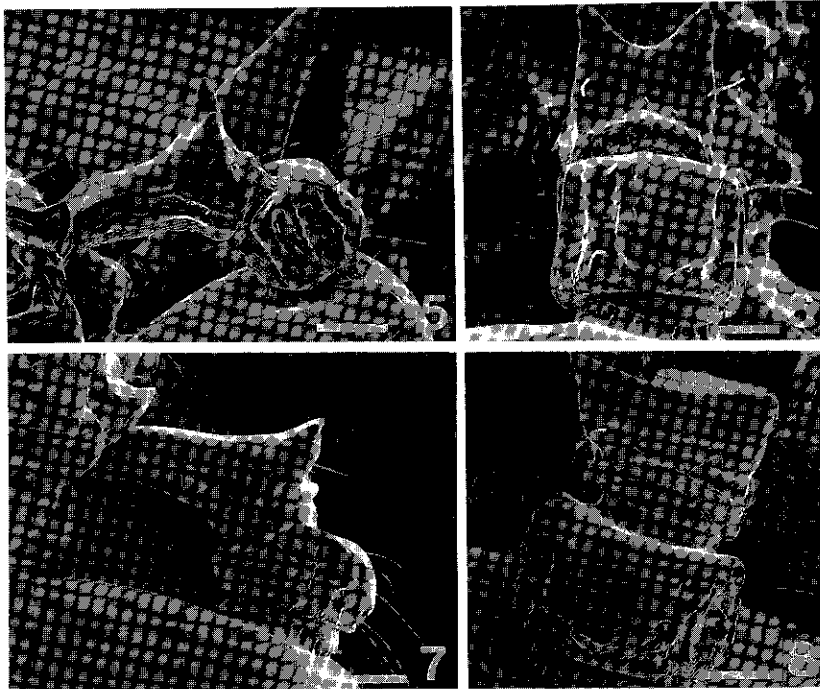
Head longer than wide, with parallel sides and concave posterior border in frontal view; cephalic median hollow well developed; frons smooth and shining, impunctate; malar and occipital areas smooth with shallow punctures sparsely. Eyes small, 0.23 mm in diameter. Anterior border of clypeus transverse, with a pair of low, rounded lobes. Mandibles massive, smooth and shining, without any tooth. Antennae 12-segmented; scape widest at posterior 1/3, with 12–15 erect hairs; 2nd segment longer than wide; 3rd to 8th segments each wider than long; 9th almost as long as wide; 10–12th segments each longer than wide. Alitrunk short, relatively irregularly reticulate; propodeal spines long and straight, 0.52 mm in length. Petiole long, 1.2 × as long as wide, with a pair of short spines. Postpetiole 1.67 × as long as height; in dorsal view, disc rectangular, 0.51 × as long as wide. Gaster round, as long as wide as seen from above; tergites with many suberect hairs.

Head, alitrunk and pedicel reddish brown; gaster dark brown except anterior 1/5 reddish brown; legs yellowish brown.

Female. HL 1.60 mm; HW 1.05 mm; SL 0.90 mm; CI 66; SI 86; WL 1.80 mm; PL 0.75 mm; PH 0.40 mm; DPW 0.53 mm; PPL 0.30 mm; PPH 0.55 mm; PPW 0.50 mm; TL 6.0 mm. (One individual was measured.)

Head wider than long, with subparallel sides and feebly concave posterior border in frontal view; surface with shallow and round, but large foveae moderately. Mandibles large and triangular, with apical and subapical teeth. Anterior border of clypeus transverse, with a pair of low blunt lobes. Antennae as in major worker. Compound eyes 0.25 mm in diameter. Ocelli small; front angle of ocellar triangle about a right angle. Alitrunk short and stout, almost as long as height in lateral view; mesoscutellum and scutellum each strongly convex; posterior margin of metanotum directly above that of propodeum; in dorsal view, mesoscutellum 0.63 × as long as wide, with strongly convex anterior border. Propodeal spines long and straight, 0.48 mm in length. Pronotum and mesoscutellum, scutellum, and anepisternum with shallow round, but large foveae moderately. Petiole and postpetiole as in major worker. Gastral tergites with many suberect hairs. Forewings 5.2 mm in length, with a complete discoidal cell.

Head, alitrunk and pedicel reddish brown; gaster blackish brown excluding



Figs. 5–8. *Acanthomyrmex thailandensis* sp. nov. (minor and major workers). — 5, Minor worker, petiole and postpetiole, lateral view; 6, ditto, dorsal view; 7, major worker, petiole and postpetiole, lateral view; 8, ditto, dorsal view. Scale lines. 0.1 mm.

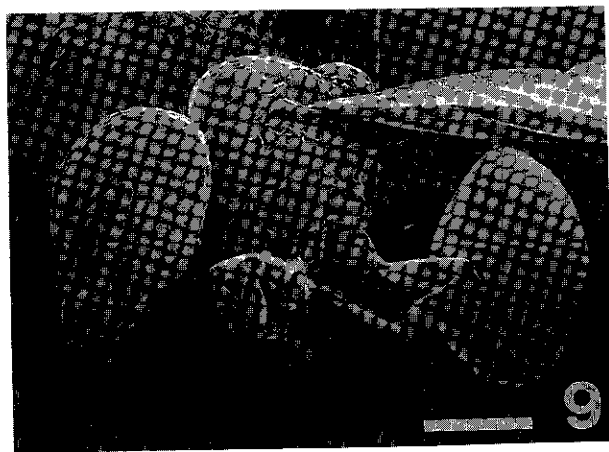


Fig. 9. *Acanthomyrmex thailandensis* sp. nov. (alate female), lateral view. Scale line. 1 mm.

anterior 1/4 reddish; legs yellowish brown.

Holotype. Minor worker, Doi Puli (600 m alt.), Chiang Mai Prov., Thailand, 19. VIII. 1992, M. TERAYAMA leg.

Paratypes. 8 minor workers, 5 major workers, 2 females, same nest as holotype.

Type depository. The holotype and some paratypes are preserved in the collection of the National Institute of Agro-Environmental Sciences, and other paratypes in the National Science Museum, Tokyo, and the Museum of Nature and Human Activities, Hyogo.

Remarks. This species belongs to the *luciolae* species group of MOFFETT (1986), which is characterized by the bilobed posterior border of head in major workers. Among the group, this new species is easily distinguished from the others by the cylindrical and straight propodeal spines, smooth and shining frons of head, and dull and short lateral spines of petiolar node in major workers, and feebly concave occipital border of head, cylindrical and straight propodeal spines, poorly developed median clypeal lobes, and long peduncle of petiole in minor workers. It is known only for *A. ferox* in female (queen) up to the present. This is also distinguished from *ferox* by the absence of longitudinal rugae on head, and convex dorsolateral border of scutellum in female.

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References

- MOFFETT, M. W., 1985. Behavioral notes on the Asiatic harvesting ant *Acanthomyrmex notabilis* and *A. ferox*. *Psyche*, **92**: 165–179.
- 1986. Revision of the myrmicine genus *Acanthomyrmex* (Hymenoptera: Formicidae). *Bull. Mus. Comp. Zool.*, **151**: 55–89.

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