

The Army Ant Genus *Aenictus* (Hymenoptera: Formicidae) from Thailand and Viet Nam, with Descriptions of Three New Species

Mamoru Terayama and Satoshi Kubota

Abstract. Three new species of the ant genus *Aenictus*, *A. changmaianus*, *A. nishimurai*, and *A. thailandianus*, are described and illustrated from Thailand. *A. dentatus* is recorded for the first time from Viet Nam.

The genus *Aenictus* Schuckard, belonging to the subfamily Aenictinae, is mainly distributed in the Ethiopian, Oriental and Australian Regions and represented by 106 species (Bolton, 1990). This genus is distinguished from the other ant genera in workers by the following characters: 1) pedicel consisting of two segments; 2) fused tergite and sternite of postpetiole and 1st gastral segment; 3) spiracles of postpetiole situated behind the midlength; 4) postsclerites of 1st gastral segment constricted anteriorly, forming a narrow neck behind the articulatory presclerites.

Only two species, *A. binghami* Forel and *A. sagei* Forel, have been recorded from Thailand (Wheeler, 1927; Wilson, 1964) and nothing has been known for the record of the genus from Viet Nam.

Recently we have examined specimens of the genus from Thailand and Viet Nam. As a result, we recognized five species, of which three are new to science and one is newly recorded from Viet Nam. In this paper these three new and one newly recorded species of the genus *Aenictus* are added to the army ant fauna of Indo-China.

Before going further, we thank Mr. Masatoshi Nishimura (Tokyo) for his kind help in collecting the material.

Measurements, indices and special terms used in this paper follow in Wilson (1964).

Aenictus binghami Forel

Aenictus Binghamiri [sic.] Forel, 1900, Ann. Soc. Ent. Belg., 44: 76.

Aenictus binghami; Forel, 1901, Jour. Bomb. Nat. Hist. Soc., 13: 465, 474. Bingham, 1903.

Fauna of British India: 19. Wilson, 1964, Pacif. Ins., 6: 450.

Material examined. 3 workers, 8-IX-1989, Phrao, Chang Mai Prov., Thailand, M. Nishimura leg.

Distribution. India, Myanmar (Burma), Thailand.

Aenictus changmaianus sp. nov.

(Figs. 2-4)

Holotype worker. Head length (HL) 0.41 mm; head width (HW) 0.38 mm; scape length (SL) 0.20 mm; cephalic index (CI: $HW \times 100 / HL$) 91; scape index (SI: $SL \times 100 / HW$) 53; Weber's length of mesosoma (WL) 0.58 mm; dorsal mesosoma width (DMW) 0.25 mm; petiolar node length (PNL) 0.15 mm; petiole height (PH) 0.19 mm; dorsal petiole width (DPW) 0.11 mm; total length (TL) 1.5 mm.

Head rectangular, as long as broad, with almost parallel sides and weakly concave occipital border in frontal view. Mandibles narrow, with a large apical tooth followed by 5 teeth. Anterior border of clypeus weakly convex. Antennae 10-segmented; scape short and incrassate, about 1/2 of head length; 2nd segment longer than broad; 3rd to 9th segments each broader than long; terminal segment $2.1 \times$ as long as broad.

Mesosoma in profile straight dorsally, propodeal junction obtusely angulate. Seen from side, petiole well convex, not forming anterodorsal corner. Subpetiolar process large, rectangular; anterior and posterior corners each acutely angulate. Postpetiole higher than long, dorsal border well convex in lateral view. Femora and tibiae each

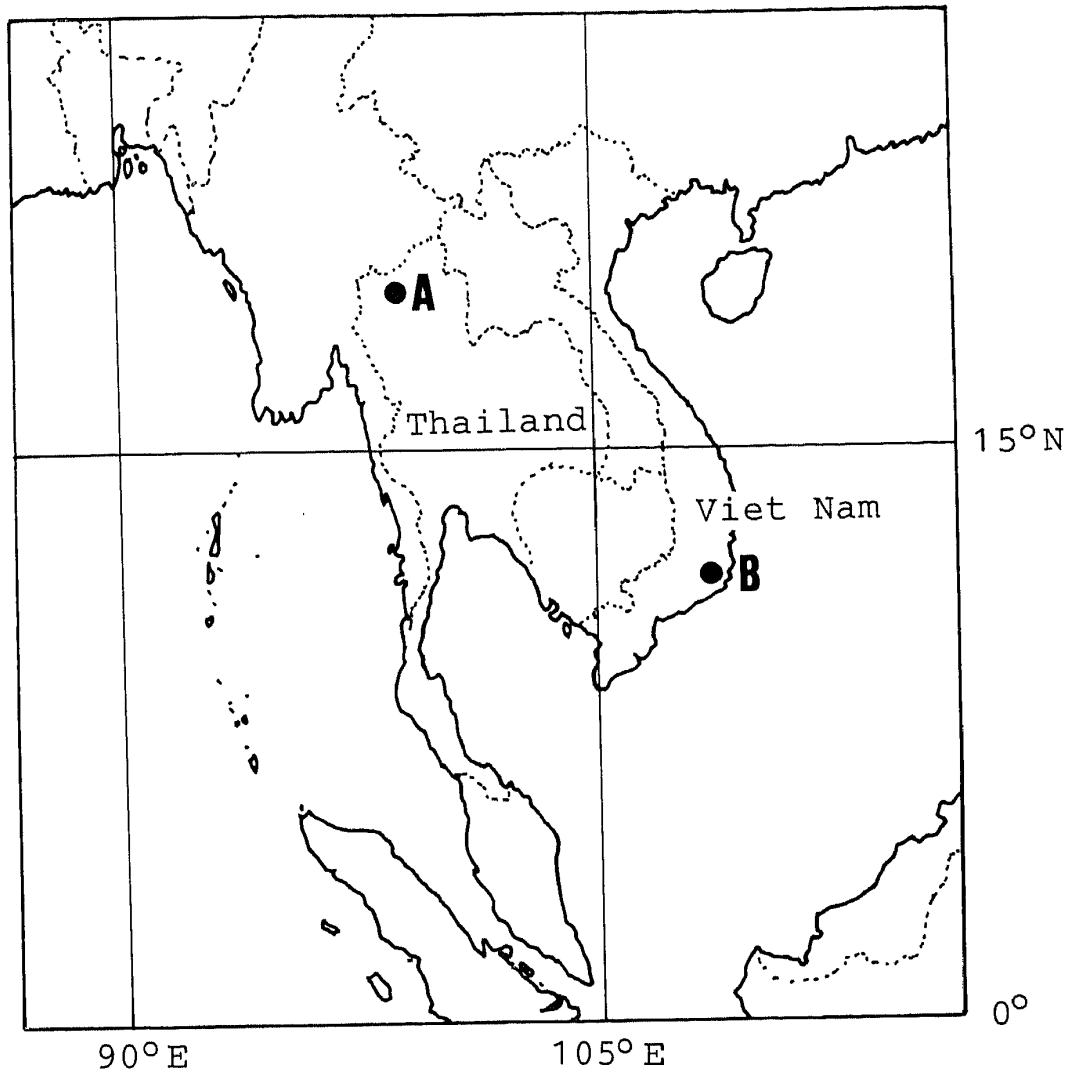
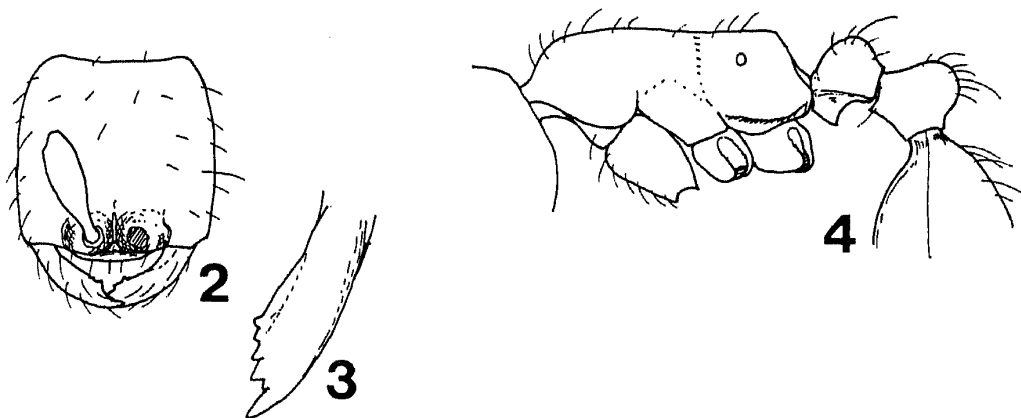


Fig. 1. Map showing the collection sites. A, Chang Mai, Thailand; B, Nha Trang, Viet Nam.



Figs. 2-4. *Aenictus changmaianus* sp. nov., worker; 2, head; 3, mandible; 4, mesosoma, petiole and postpetiole.

flat and incrassate.

Head, pro-mesonotum, dorsum of petiole, and gaster smooth and shining; sides of propodeum, petiole, and postpetiole weakly microreticulate.

Pilosity moderately abundant; length of the longest pronotal hair about 0.05 mm. Ground color yellow. "Typhlatta spots" absent.

Holotype. Worker, 18-VIII-1992, Doi Step

(1500 m alt.), Chang Mai Prov., Thailand, M. Terayama & S. Kubota leg. (new record).

Paratypes. 3 workers, the same data as holotype.

Type depository. The holotype and the one paratype are deposited in the collection of the National Institute of Agro-Environmental Sciences, Tsukuba, and the other paratypes are in the collection of the National Science Museum, Tokyo.

Remarks. This species is similar to *A. minutulus* Terayama & Yamane from Sumatra in having small-sized body and incrassate femora. However, it is distinguished from the latter by obtusely angulate propodeal junction and 6-toothed mandibles.

Aenictus dentatus Forel

(Figs. 5-8)

Aenictus Aitkeni var. *dentata* Forel, 1911, Bull. Soc. Vaud. Sci. Nat., 47: 383.

Aenictus dentatus; Wilson, 1964, Pacif. Ins., 6: 460.

Material examined. 4 workers, 23-V-1992, Nha Trang, Khanh Hoa Prov., Viet Nam, M. Nishimura leg.

Distribution. India, Malaya, Borneo, Viet Nam

Aenictus nishimurai sp. nov.

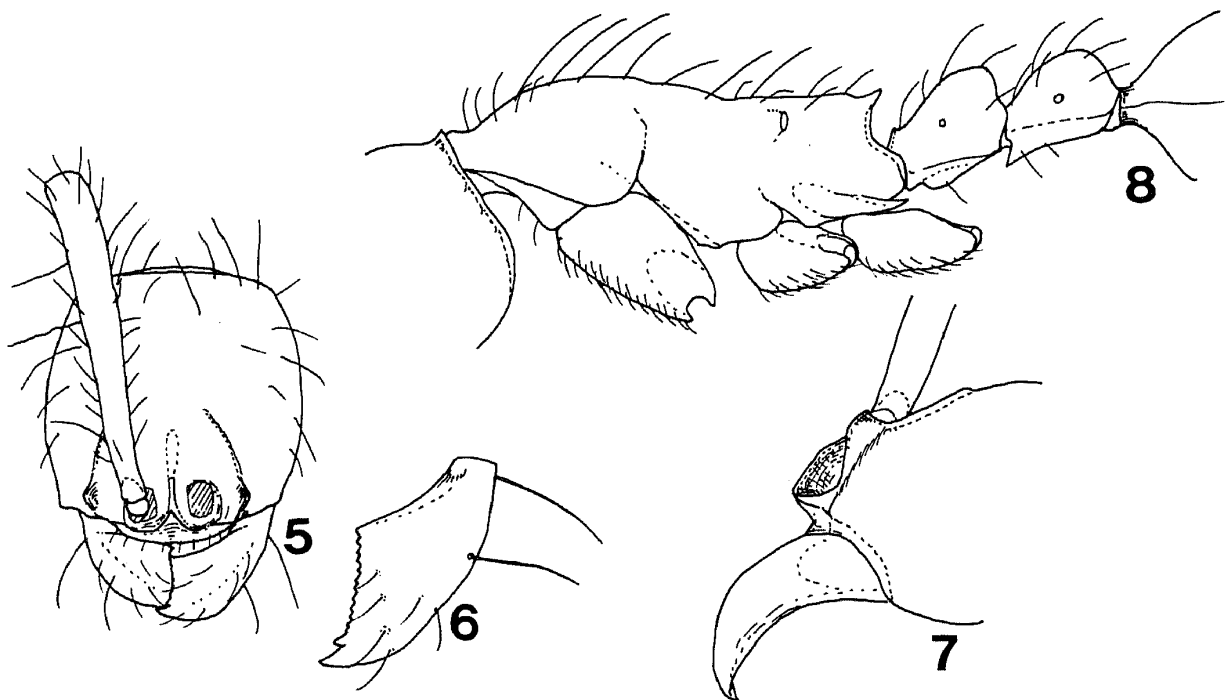
(Figs. 9-10)

Holotype worker. HL 0.55 mm; HW 0.48 mm; SL 0.28 mm; CI 87; SI 58; WL 0.78 mm; DMW 0.33 mm; PNL 0.24 mm; PH 0.28 mm; DPW 0.15 mm; TL 2.4 mm.

Head longer than broad, with gently convex sides and almost straight occipital border in frontal view. Mandibles very narrow, with 3 acute teeth. Anterior border of clypeus convex, armed with 7 denticles. Parafrontal ridge absent. Antennae 10-segmented; scape short, about 1/2 of head length; 2nd segment as long as broad; 3rd to 9th segments each broader than long; terminal segment 2.3× as long as broad.

Mesosoma in profile straight dorsally; propodeal junction dully angulate, forming an almost exact right angle. Seen from side, dorsal outline of petiole strongly convex, not forming an anterodorsal corner. Subpetiolar process large and triangular, anterior border straight, posterior border feebly concave.

Head, pro-mesonotum, gaster, and legs smooth and shining; mesopleuron, propodeum, and peti-



Figs. 5-8. *Aenictus dentatus* Forel from Viet Nam, worker; 5, head; 6, mandible; 7, anterior half of head, lateral view; 8, mesosoma, petiole and postpetiole.



Figs. 9-10. *Aenictus nishimurai* sp. nov., worker; 9, head; 10, mesosoma, petiole and postpetiole.

ole microreticulate; dorsum of postpetiole smooth and shining and sides microreticulate. Pilosity moderately abundant; length of the longest pronotal hair about 0.10 mm. Head, mesosoma, and petiole reddish brown; antennal funicles, legs, and gaster yellowish brown. "Typhlatta spots" absent.

Holotype. Worker, 18-VIII-1992, Doi Step (1500 m alt.), Chang Mai Prov., Thailand, M. Terayama & S. Kubota leg.

Paratypes. 10 workers, the same data as holotype.

Type depository. The holotype and some paratypes are deposited in the collection of the National Institute of Agro-Environmental Sciences, Tsukuba, and the other paratypes are in the collection of the National Science Museum, Tokyo.

Remarks. This species resembles to *A. brevicornis* (Mayr) from India in having the den-

ticles of anterior clypeal border. However, it is distinguished from the latter by angulate propodeal junction and less abundant pilosity.

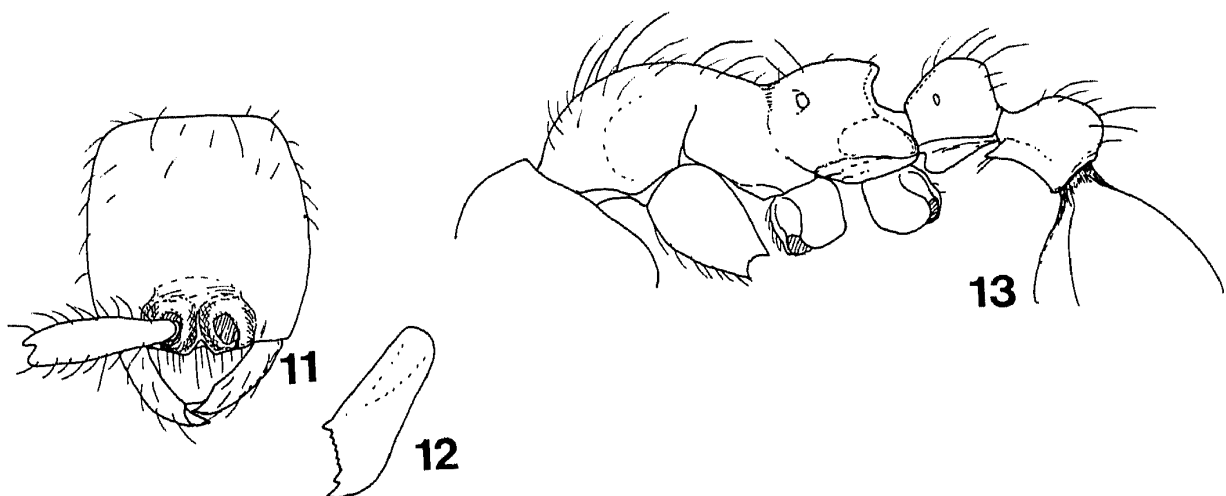
The number of denticles of anterior clypeal border varies from 7 to 10.

Aenictus thailandianus sp. nov.

(Figs. 11-13)

Holotype worker. HL 0.70 mm; HW 0.63 mm; SL 0.55 mm; Cl 90; SI 87; WL 1.15 mm; DMW 0.45 mm; PNL 0.30 mm; PH 0.31 mm; DPW 0.20 mm; TL 2.8 mm.

Head slightly longer than broad, with feebly convex sides and straight occipital border in frontal view. Mandibles narrow, with large acute apical tooth followed by a series of 8 denticles; apical 2nd and basal most teeth larger than the apical



Figs. 11-13. *Aenictus thailandianus* sp. nov., worker; 11, head; 12, mandible; 13, mesosoma, petiole and postpetiole.

3rd to 8th teeth. Clypeus truncated anteriorly. Antennae 10-segmented; scape not reaching the occipital border of head; 2nd segment longer than broad; 3rd to 7th segments each almost as long as broad, 8th and 9th segments each broader than long; terminal segment $2.2\times$ as long as broad.

Dorsal border of pro-mesonotum convex; meta-notum strongly impressed; basal face of propodeum convex; Propodeal junction developed, overhanging the declivitous face. Petiole trapezoidal, anterodorsal and posterodorsal borders dully angulate in lateral view. Dorsal outline of post-petiole convex, not forming an angle.

Subpetiolar process low, forward-directed lobe whose ventral border straight.

Head and gaster smooth and shining; mesosoma, petiole, and postpetiole strongly microreticulate. Legs weakly microreticulate, except for fore coxae which are smooth. Mesopleuron and sides propodeum with relatively irregular longitudinal rugae. Color reddish brown, gaster somewhat lighter. "Typhlatta spots" absent.

Holotype. Worker, 18-VIII-1992, Doi Step (1500 m alt.), Chang Mai Prov., Thailand, M. Terayama & S. Kubota leg.

Paratypes. 39 workers, the same data as holotype.

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

Remarks. The present new species is easily distinguished from the other known species of this genus by 9-toothed mandibles, absence of "Typhlatta spots", low and rounded subpetiolar process, and strongly concaved declivitous face of propodeum.

References

- Bingham, C. T., 1903. Fauna of British India, including Ceylon and Burma. Hymenoptera 2, Ants and cuckoo wasps. 506 pp. London.
- Bolton, B., 1990. Army ant reassessed: the phylogeny and classification of the doryline section (Hymenoptera, Formicidae). Jour. Nat. Hist., **24**: 1339-1364.
- Forel, A., 1900. Ponerinae et Dorylinae d'Australie, recoltes par M. M. Turner, Froggatt, Nugent, Chase, Rothney, J. J. Walker, etc. Ann. Soc. Ent. Belg., **44**: 54-77.
- 1901. Les formicides de l'empire des Indes et de Ceylan. Part VIII. Jour. Bombay Nat. Hist. Soc., **13**: 462-477.
- Terayama, M. & Sk. Yamane, 1989. The army ant genus *Aenictus* (Hymenoptera, Formicidae) from Sumatra, with descriptions of three new species. Jpn. J. Ent., **57**(3): 597-603.
- Wheeler, W. M., 1927. Ant collected by Professor F. Silvestri in Indochina. Boll. Lab. Zool. Gen. Agrar. Portici, **20**: 83-106.
- Wilson, E. O., 1964. The true army ants of the Indo-Australian area (Hymenoptera: Formicidae: Dorylinae). Pacif. Ins., **6**: 427-483.

(Terayama, M.: Department of Biology, College of Arts and Sciences, The University of Tokyo 3-8-1, Komaba, Meguro-ku, Tokyo 153, Japan. Kubota, S.: 3-13-7-902, Taihei, Sumida-ku, Tokyo 130, Japan)

タイおよびベトナム産ヒメサスライアリ属 (ハチ目, アリ科)

寺山 守・久保田 敏

タイおよびベトナム産のヒメサスライアリ属 (*Aenictus*) を点検した結果, 5種が認められた。これらの内, タイ産の3種は新種と判定されたので *A. changmaianus*, *A. nishimurai*, *A. thailandianus* の名で記載した。また *A. dentatus* をベトナムから初めて記録した。

(寺山 守: 153 目黒区駒場 3-8-1 東京大学教養学部生物学教室. 久保田 敏: 130 墨田区太平 3-13-7-902)