

Two New Ants of the Genus *Ponera* (Hymenoptera, Formicidae) from Taiwan

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Abstract Two new species of the ant genus *Ponera*, *P. alisana* and *P. chiponensis*, from Taiwan are described and illustrated. The genus is recorded from Taiwan for the first time.

The *Ponera* LATREILLE, 1804 is a relatively small genus of the subfamily Ponerinae, containing 30 described species most of which are found in the Indo-Australian Region. However, the genus has not been reported from Taiwan previously.

Descriptions of two new species, *P. alisana* and *P. chiponensis*, from Taiwan are presented in this paper.

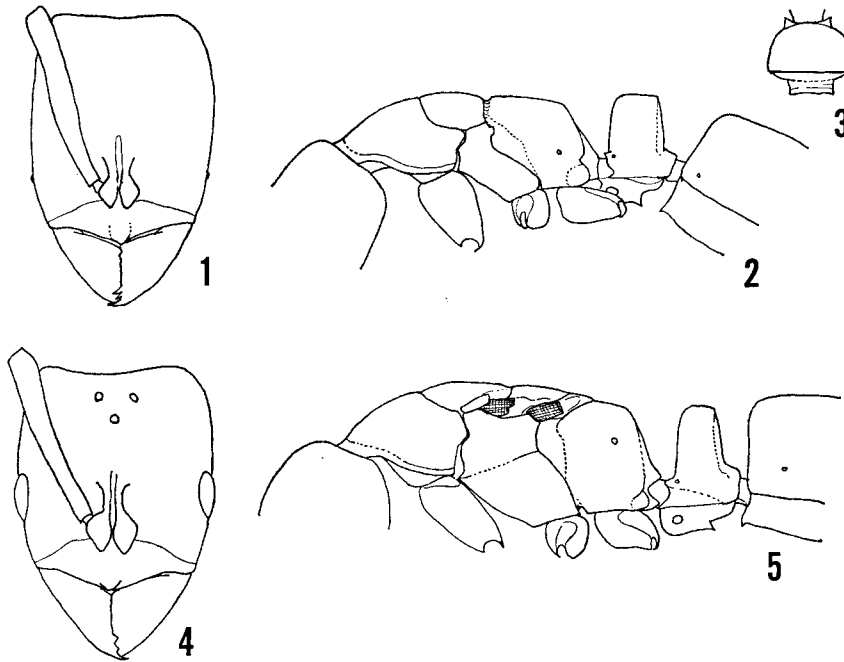
Ponera alisana sp. nov.

(Figs. 1-5)

Holotype worker. Head length (HL) 0.76 mm; head width (HW) 0.60 mm; scape length (SL) 0.61 mm; cephalic index (CI: $HW \times 100 / HL$) 79; scape index (SI: $SL \times 100 / HW$) 101; WEBER's length of alitrunk (WL) 1.10 mm; pronotum width (PW) 0.48 mm; petiole height (PH) 0.49 mm; petiolar node length (PNL) 0.25 mm; dorsal petiole width (DPW) 0.36 mm; total length (TL) *ca.* 3.3 mm.

Head as in Fig. 1, relatively long with convex sides and slightly concave occipital border. Mandibles with 3 well developed teeth occupying approximately apical 1/3 of masticatory border; remainder of border with minute indistinct denticles. Clypeus slightly produced in the middle, with a distinct blunt median tooth. Eyes small, with 2 or 3 indistinct facets; situated about $0.73 \times$ the distance from lateral occipital border to midpoint of anterior genal border. Antennal scapes long, clearly exceeding median occipital border. Antennal club 5-segmented; ratio of length from the base about 7: 8: 9: 10: 24; apical segment $1.8 \times$ as long as broad.

Alitrunk and petiole as in Fig. 2; dorsal face of mesonotum, in side view, slightly convex; mesonotal-propodeal border dipping well below level of basal face of propodeum; dorsal face of propodeum horizontal, posterolateral corners not markedly pronounced, forming blunt angles. Mesonotal-propodeal suture incised. Petiolar node, in side view, massive, rectangular, angulate in posterior corner; dorsal face, viewed from above, half-circler (Fig. 3), posterior border straight.



Figs. 1-5. *Ponera alisana* sp. nov. — 1, Worker, head, frontal view; 2, worker, alitrunk and petiole, lateral view; 3, worker, petiole, dorsal view; 4, female, head, frontal view; 5, female, alitrunk and petiole, lateral view.

Posterolateral teeth of subpetiolar process acute; subpetiolar fenestra moderately large, oval.

Mandibles smooth and shining. Head, pro- and mesonota, and gaster shagreened; propodeum and petiole less shagreened. Pubescence moderately abundant, distributed evenly over the entire body, including mandibles, antennae, and legs. Erect hairs present on antennal scapes, head, dorsum of alitrunk and gaster.

Color dull reddish brown; antennae, mandibles, and tip of gaster yellow.

Paratype workers. Four paratype workers from the same series as holotype with following dimensions and indices: HL 0.78–0.80 mm; HW 0.58–0.60 mm; SL 0.63 mm; CI 74–77; SI 105–109; WL 1.10–1.23 mm; AW 0.48–0.49 mm; PH 0.49–0.50 mm; PNL 0.24–0.25 mm; DPW 0.36–0.38 mm.

Paratype females. HL 0.81–0.83 mm; HW 0.65–0.68 mm; SL 0.66–0.69 mm; CI 78–80; SI 101–106; WL 1.36–1.38 mm; AW 0.68–0.70 mm; PH 0.55–0.58 mm; PNL 0.24–0.25 mm; DPW 0.43–0.45 mm; TL *ca.* 3.8 mm. (Four individuals were measured.)

Head as in Fig. 4; general form of mandibles, clypeus, and antennae as in worker. Maximum diameter of compound eye 0.18 mm. Alitrunk and petiole as in Fig. 5; petiolar node as in worker's but slightly thinner in side view.

Holotype. Worker, 3. VIII. 1980, Fenchihu (alt. ca. 1,400 m), Chiayi Hsien, Taiwan, M. TERAYAMA leg.

Paratypes. Five workers, 4 alate females, from the same nest as holotype.

Type depository. The holotype and some paratypes will be deposited in the National Science Museum, Tokyo, and the other paratypes in the National Institute of Agro-Environmental Science, Japan, and the Taiwan Agricultural Research Institute.

Remarks. This new species is distinguished easily from the other species by the combination of the following characters: size relatively small (HL 0.76–0.80 mm, HW 0.58–0.60 mm); narrow head (CI 74–79); shape of petiole; long scapes which exceed the median occipital border (SI 101–109); presence of mesonotal-propodeal suture on the dorsum of alitrunk.

Ponera chiponensis sp. nov.

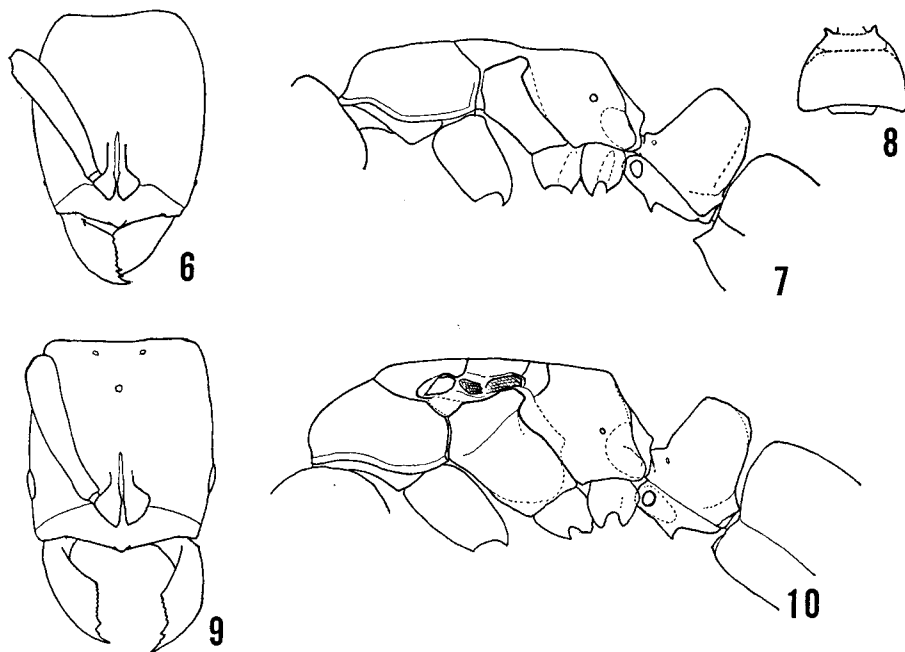
(Figs. 6–10)

Holotype worker. HL 0.53 mm; HW 0.40 mm; SL 0.35 mm; CI 80; SI 84; WL 0.73 mm; PW 0.73 mm; PH 0.31 mm; PNL 0.18 mm; DPW 0.25 mm; TL ca. 2.0 mm.

Head subrectangular, with weakly convex sides and slightly concave occipital border. Mandibles with 3 developed teeth occupying approximately apical 2/5 of masticatory border; remaining border with a series of 5 small regular denticles. Clypeus slightly produced in the middle, with very weak median tooth. Eyes extremely small, composed of single facet, situated about $0.8\times$ the distance from lateral occipital border to midpoint of anterior genal border. Antennae 12-segmented, remarkably short and thick; scape not reaching median occipital border; antennal club 5-segmented, ratio of length from the base about 3:5:6:6:14, apical segment $1.75\times$ as long as broad.

Dorsal outline of alitrunk horizontal; mesonotum weakly convex; posterolateral corners of propodeum not markedly pronounced, forming blunt angles; declivitous face of propodeum barely straight to feebly concave. Mesonotal-propodeal suture not incised on the dorsum of alitrunk. Petiolar node in profile, thick, rectangular; anterior border straight, dorsal border horizontal, posterior border very weakly angulated near the middle; dorsal face, viewed from above, trapezoidal as in Fig. 8, posterior border concaved. Fenestra of subpetiolar process large, oval; posterolateral teeth well developed.

Head, scapes, and gaster closely punctated; alitrunk less density punctated than head; 2nd gastric tergite somewhat less punctated than 1st gastric tergite. Posterior 1/2 of dorsal face of propodeum and dorsal face of petiolar node smooth and shining with a few scattered punctures. Mandibles smooth and shining. Pubescence moderately abundant, distributed evenly over the entire body. Erect or suberect pilosity present on antennal scapes, head, dorsum of alitrunk, and gaster.



Figs. 6-10. *Ponera chiponensis* sp. nov. — 6, Worker, head, frontal view; 7, worker, alitrunk and petiole, lateral view; 8, worker, petiole, dorsal view; 9, female, head, frontal view; 10, female, alitrunk and petiole, lateral view.

Color brown to light brown; mandibles, antennae, legs, subpetiolar process, and tip of gaster yellowish.

Paratype workers. Five paratype workers from the same series as holotype with following dimensions and indices: HL 0.51-0.53 mm; HW 0.40-0.42 mm; CI 78-79; SI 83-88; WL 0.70-0.74 mm; AW 0.30-0.31 mm; PH 0.30-0.33 mm; PNL 0.18-0.20 mm; DPW 0.25 mm.

Paratype females. HL 0.54-0.56 mm; HW 0.43-0.45 mm; SL 0.36-0.38 mm; CI 80; SI 81; WL 0.83-0.88 mm; AW 0.36-0.40 mm; PH 0.33-0.35 mm; PNL 0.20-0.21 mm; DPW 0.28-0.31 mm; TL *ca.* 2.4 mm. (Two females were measured.)

Head subrectangular as in Fig. 9, with almost subparallel sides and slightly concave occipital border. Antennal club 5-segmented. Maximum diameter of compound eye 0.10 mm. Mesosoma and petiole as in Fig. 10. Pilosity and coloration as in worker.

Holotype. Worker, 22. VII. 1982, Chihpen, Taitung City, Taiwan, M. TERAYAMA leg.

Paratypes. One female, 8 workers, from the same nest as holotype; 1 worker, 23. VII. 1982, same locality, M. TERAYAMA leg.; 3 workers, 24. VII. 1982, same locality, M. TERAYAMA leg.; 1 female, 10. VIII. 1980, same locality, M. TERAYAMA leg.

Type depository. The holotype and some paratypes will be deposited in the National Science Museum, Tokyo, and the other paratypes in the National Institute of Agro-Environmental Science, Japan, and the Taiwan Agricultural Research Institute.

Remarks. This new species resembles *P. japonica* WHEELER, *P. incerta* (WHEELER), or *P. swezeyi* (WHEELER) by the 5-segmented antennal club and size of body (HW 0.32–0.50 mm in workers), but can be distinguished by the shape of petiole and the absence of mesonotal-propodeal suture on the dorsum of alitrunk.

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Literature

- TAYLOR, R. W., 1967. A monographic revision of the ant genus *Ponera* LATREILLE (Hymenoptera: Formicidae). *Pacific Ins. Monog.*, (13): 1–112.