

**A new species of *Pristomyrmex* MAYR 1866
(Hymenoptera: Formicidae) from Cebu, the Philippines**

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Abstract: A new species of the myrmicine ant genus *Pristomyrmex* MAYR 1866 is described from Cebu, an island in the Central Philippines. *Pristomyrmex cebuensis* nov.sp. is closely related to *P. curvulus* WANG 2003 which is known only from the nearby island of Negros. This is the first record of the chiefly arboreal genus *Pristomyrmex* from the almost deforested island of Cebu.

Key words: ants, Formicidae, *Pristomyrmex*, new species, Philippines, Cebu.

Introduction

During a recent field survey in a small forest patch on Cebu, Clister V. Pangantihon from the University of San Carlos discovered the first specimens of *Pristomyrmex* MAYR 1866 from this island. They belong to a new species which is here described.

Pristomyrmex belongs to the Myrmecini (BOLTON 2003: 71), and 56 species are hitherto known in the genus; these are distributed in the tropics and subtropics from Africa to Japan and Australia (WANG 2003, ZETTEL 2006, and this study). A taxonomic revision was carried out recently (WANG 2003). ZETTEL (2006) gave an overview of the Philippine species and described three new species. Including the one here described, the Philippines are inhabited by 18 species, 32 % of the world's known *Pristomyrmex* fauna; at least ten species are endemic (see ZETTEL 2006).

Material and methods

Specimens are dry mounted on card squares or triangles. Examination of specimens was carried out with a LEICA Wild M10 binocular microscope; measurements were taken at magnifications of 80× and 128×. Digital photographs were taken with a Leica DFC490 camera attached to a Leica MZ16 binocular microscope with the help of Image Manager IM50 and processed with Auto-Montage Pro and Adobe Photoshop 7.0 programmes.

Terminology and method of description follow WANG (2003). As in ZETTEL (2007) definitions of AL and TL2 are adjusted to WANG (2003: fig. 2).

Measurements and indices (see also WANG 2003: figs 1-3):

- HW..... Head width. Maximum width of head, in full-face view in front of eyes (excluding eyes).
- HL..... Head length, in full-face view, excluding mandibles measured from midpoint of a straight line across pre-occipital margin either to frontal-most point of apex of median tooth on anterior clypeal margin or, if median tooth short or absent, to midpoint of line connecting frontal-most apices of the two lateral teeth of anterior clypeal margin.
- CI..... Cephalic index. $HW/HL \times 100$.
- SL..... Scape length. Length of antennal scape, including lamella encircling base of scape but excluding basal condyle.
- SI..... Scape index. $SL/HW \times 100$.
- PW..... Pronotal width. Maximum width of pronotum in dorsal view (excluding spines).
- AL..... Alitrunk length. Diagonal length of alitrunk in lateral view, from frontal-most point of declivitous area of pronotum to posterior-most point of apex of metapleural lobe.
- EL..... Eye length. Maximum length of eye.
- TL..... Total length = $TL1 + TL2 + TL3$. TL1: Line measured from apex of closed mandibles to midpoint of a straight line across occipital margin, in full-face view. TL2: Straight line from declivitous area of pronotum to point at which posterior margin of postpetiole meets uppermost point of articulation. TL3: Line from anterior-uppermost point of articulation to apex of gaster.
- PSL1..... Pronotal spine length. Straight distance from anterior base to apex of pronotal spine.
- PSL2..... Propodeal spine length. Straight distance from posterior base to apex of propodeal spine.
- PPW..... Maximum width of postpetiole in dorsal view.
- PPL..... Dorso-median length of postpetiole.
- PPI..... Postpetiole index = $PPW/PPL \times 100$.

All measurements are taken in millimetres; for paratypes the minimum and maximum values are presented.

Pristomyrmex cebuensis nov.sp. (Figs. 1, 2)

Type material: holotype (worker; in the Entomological Collection of the University of San Carlos, Cebu City) and paratypes (nine workers; in the Natural History Museum Vienna and in the author's collection) labelled "Philippines: Cebu\ Cebu City, Cantipla-Uno\ 7.3.22007, leg. C.\ Pangantihon (P258)".

Type locality: Philippines, Cebu Island, municipality of Cebu City, barangay Tabunan, sitio Cantipla-I [= Cantipla-Uno], ca. 800-900 m a.s.l., 10°24' N, 123°49' E (GPS).

Diagnosis (worker): Large species, TL = 4.89-5.34. Clypeus on ventral surface with more or less developed transverse ridge or low tubercle, dorsally with prominent median carina and pair of fine but complete lateral rugae along sides, and on anterior margin with seven (rarely confluent to five or six) small denticles. Masticatory margin of mandible with four teeth and diastema. Pronotum with pair of very long spines (PSL1 0.52-0.62), which are more than four times as long as propodeal spines (PSL2 0.11-0.15). Dorsum of head between frontal carinae with large punctures, almost alveolate, lateral to frontal carinae and on genae with longitudinal rugae. Dorsum of alitrunk anteriorly smooth and polished, posteriorly with some longitudinal rugae. Frontal carinae posteriorly reaching level of posterior eye margin, antennal scrobes distinct. Anterior face of

petiolar node distinct from dorsal surface of peduncle. Petiolar node with three to five pairs of hairs. First gastral tergite without erect setae.

Description:

Measurements of holotype worker: TL 5.17, HL 1.24, HW 1.28, CI 103, SL 1.42, SI 111, EL 0.23, PW 0.81, AL 1.30, PPW 0.34, PPL 0.39, PPI 87.

Measurements of paratype workers (n = 9): TL 4.89-5.34, HL 1.21-1.26, HW 1.21-1.32, CI 100-105, SL 1.38-1.44, SI 107-115, EL 0.22-0.24, PW 0.77-0.85, AL 1.29-1.40, PPW 0.33-0.36, PPL 0.35-0.40, PPI 105-111.

Head (Fig. 1): Mandibles with fine longitudinal rugae, reduced, at most, at extreme dorsal apex. Masticatory margin of mandible with four teeth: strongest apical + second strongest preapical + long diastema + two small basal teeth of similar size; basal margin of mandible almost straight, lacking tooth. Clypeus short, with strong, sharp and complete median carina and one pair of fine, but sharp and complete rugae along sides. Anterior clypeus margin with short median tooth and three (rarely two) short lateral denticles on each side. Venter of clypeus with transverse ridge which is laterally reduced in some specimens; then the ridge appears as a low medial tubercle. Palp formula 1, 3. Frontal carinae strongly developed, posteriorly extending caudad approximately to level of posterior eye margins. Antennal scrobes distinct, laterally delimited by short, sharp ridges. Frontal lobes absent; antennal insertion entirely exposed. Genae and lateral dorsum of head up to frontal carinae with more or less distinct longitudinal rugae. Frons anteriorly with median furrow. Antennal scapes, when lying on dorsum of head, clearly surpassing occipital margin of head. Eyes containing ca. 11-13 ommatidia in longest row. Profile shape of alitrunk and pedicel segments as in Fig. 2. Pronotum with pair of long spines, PSL1 0.52-0.62. Propodeum with pair of short spines, 0.11-0.15, distinctly shorter than distance between apices. Dorsum of alitrunk somewhat flattened, behind pronotal spines almost straight in lateral view. Metapleural lobes triangular, with weakly rounded apex. Petiole in profile with long peduncle; peduncle distinct from anterior surface of node by shallow concavity; node almost evenly rounded in lateral view. Postpetiole in profile rounded dorsally, in dorsal view slightly broadening from front to back. Dorsum of head not rugoreticulate, but with relatively dense, large punctures, almost foveolate, punctures variably confluent longitudinally, interspaces smooth and polished. Scrobal areas with few longitudinal rugae. Dorsum of alitrunk smooth and polished, but in posterior part with a few more or less developed longitudinal rugae. Petiole, postpetiole, and gaster smooth and shiny. Dorsal surfaces of head and alitrunk with numerous long erect or suberect hairs. Dorsum of petiolar node with 3-5 pairs of setae; dorsum of postpetiole with 2-4 pairs. First gastral tergite lacking erect or suberect hairs. A few pairs of forward projecting hairs present near anterior clypeal margin. Scapes and tibiae with numerous erect to suberect hairs. Colour reddish-brown.

Comparative notes: This species is similar to *P. curvulus* WANG 2003. Important similarities are especially found in the structures of the clypeus, the punctured central dorsum of the head, the longitudinal rugae on genae and sides of alitrunk, and the long pronotal spines (Fig. 2). However, there are several obvious differences between the two species: the dorsum of the head between the frontal carinae is finely and sparsely punctured in *P. curvulus* (see ALPERT et al. 2007), but with coarse, almost alveolate punctures which are partly longitudinally confluent in *P. cebuensis* nov.sp. (Fig. 1). The clypeus of *P. cebuensis* nov.sp. has a pair of sharp lateral rugae along sides, while in *P.*

curvulus only "sometimes a few additional superficial rugae" are present (WANG 2003). The mandible of *P. cebuensis* nov.sp. is finely and densely striate all over its surface, but in *P. curvulus* it is punctured and "with a few basal longitudinal rugae" (WANG 2003; see also ALPERT et al. 2007). The pronotal spines are comparatively long in both species, but in *P. cebuensis* nov.sp. even longer than in *P. curvulus*, in absolute length (PSL1 0.52-0.62 vs. PSL1 0.38-0.44) as well as in relative length compared to propodeal spines (the pronotal spines in *P. cebuensis* nov.sp. are more than four times as long as the propodeal spines, but in *P. curvulus* approximately three times as long). Finally, the posterior dorsum of the alitrunk bears some rugae in *P. cebuensis* nov.sp. which are absent in *P. curvulus*. From the other two Philippine species with punctured head and long pronotal spines, *P. longispinus* WANG 2003 from Negros and *P. schoedli* ZETTEL 2006 from Leyte, the new species can be readily distinguished – among other features – by the sharp median carina of the clypeus.

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Zusammenfassung

Eine neue Myrmicinae der Gattung *Pristomyrmex* MAYR 1866 wird von Cebu, einer Insel der zentralen Philippinen beschrieben. *Pristomyrmex cebuensis* nov.sp. ist mit *P. curvulus* WANG 2003 nahe verwandt, welcher nur von der Insel Negros bekannt ist. Es handelt sich hier um den ersten Nachweis der hauptsächlich arborealen Ameisengattung *Pristomyrmex* von der bereits fast gänzlich entwaldeten Insel Cebu.

References

- ALPERT G.D., COVER S., GENERAL D.M. & V. SAMARITA (2007): Ants of the Philippines. – http://pick4.pick.uga.edu/mp/20q?act=x_checklist&list=Ants_Philippines, retrieved on 24 August 2007.
- BOLTON B. (2003): Synopsis and classification of Formicidae. — *Memoirs of the American Entomological Institute* **71**: 370 pp.
- WANG M. (2003): A monographic revision of the ant genus *Pristomyrmex* (Hymenoptera: Formicidae). — *Bulletin of the Museum of Comparative Zoology* **157** (6): 383-524.
- ZETTEL H. (2006): On the ants (Hymenoptera: Formicidae) of the Philippine Islands: I. The genus *Pristomyrmex* MAYR, 1866. — *Myrmecologische Nachrichten* **8**: 59-68.

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Figs 1-2: *Pristomyrmex cebuensis* nov.sp., paratype (NHMW; HW = 1.32 mm, HL = 1.26 mm): (1) Head, full face view. (2) Habitus, lateral view.