

A New Species of the Genus *Pyramica* (Hymenoptera: Formicidae) From Nankunshan National Forest Park of Guangdong, South of China

by

Shanyi ZHOU^{1,2,3}

ABSTRACT

A new species of the ant genus *Pyramica* Roger, i. e. *P. nankunshana* sp. nov., from Nankunshan National Forest Park, Guangdong Province is described. The new species resembles *P. elegantula* (Terayama et Kubota) but differs from the later by its cephalic dorsum with 3 pairs of long simple standing hairs in profile view, dorsum of pronotum with distinct transverse striations and without a median long stria, and disc of petiole with transverse rugae. It differs from *P. leptothrix* Wheeler by its leading edge of scape without anteriorly projecting straight suberect simple hair, standing hairs on cephalic dorsum much less, dorsal surface of body without standing hairs.

Key words: Formicidae, *Pyramica*, new species, China

INTRODUCTION

The ant genus *Pyramica* was erected by Roger in 1862. Bolton revised the genus and merged with several small genera, including *Serrastruma* (Brown 1952; Bolton 1983), *Smithistruma* (Brown 1953, 1964; Ward 1988; Terayama et al. 1996; Ogata & Onoyama 1998), *Neostruma* (Brown 1959), *Strumigenys gundlachi*-group (Brown 1960), *Pentastruma* (Brown & Boisvert 1979), so that the genus is a worldwide distributed large genus with more than 300 species (Bolton 2000). In China, Xu (2004) made a systematic study on the genus, treated with twenty-six species and described three new species. A new species is described in this paper and it will be added to Chinese ant fauna.

¹College of Life Sciences, Guangxi Normal University, Guilin 541004, China.

E-mail: syzhou@mailbox.gxnu.edu.cn

²The Guangxi Key Laboratory of Environmental Engineering, Protection and Assessment, Guilin, 541004, China.

³Key Laboratory of Ecology of Rare and Endangered Species and Environmental Protection, Ministry of Education, Guilin, 541004, China.

MATERIAL AND METHODS

This study is based on the specimens collected from Nankunshan National Forest Park, Guangdong Province, South of China by the author.

Measurements and indices used here follow Bolton (2000) :

TL (Total length). The total outstretched length of the ant from the mandibular apex to the gastral apex; when measured in profile the sum of ML+HL+AL+length of waist segments+length of gaster.

HL (head length). The length of the head capsule excluding the mandibles, measured in full face view in a straight line from the mid-point of the anterior clypeal margin to the mid-point of the occipital margin. In species where one or both of these margins is concave the measurement is taken from the mid-point of a transverse line that spans the apices of the projecting portions.

HW (head width). The maximum width of the head in full face view, excluding the eyes.

CI (cephalic index). $HW \times 100 / HL$.

ML (mandible length). The straight-line length of the mandible at full closure, measured in the same plane for which the HL measurement is taken, from the mandibular apex to the anterior clypeal margin.

MI (mandibular index). $ML \times 100 / HL$.

PW (pronotal width). The maximum width of the pronotum in dorsal view.

SL (scape length). The maximum straight-line length of the scape, excluding the basal constriction or neck that occurs just distal of the condylar bulb.

SI (scape index). $SL \times 100 / HW$.

AL (alitrunk length). The diagonal length of the alitrunk in profile from the point at which the pronotum meets the cervical shield to the posterior basal angle of the metapleuron.

All measurements are expressed in millimeters .

DESCRIPTION OF THE NEW SPECIES

Pyramica nankunshana sp. nov. (Figs. 1-3)

Holotype worker. TL 2.8, HL 0.70, HW 0.50, CI 71, ML 0.10, MI 14, SL 0.33, SI 66, PW 0.25, AL 0.70. Head with mandibles subtriangular, narrower in front than behind, occipital margin deeply concave, occipital corners

bluntly rounded. Mandibles with a row of small teeth. Clypeus as broad as long, anterior border roundly convex. Antennae 3rd to 6th segments in a ratio of 2.5 : 2.0 : 4.0 : 12.0; 3rd segment 1.1× as long as broad; 4th segments as long as broad; 5th segment 1.5× as long as broad; apical segment 3 × as long as broad.



Fig. 1. *Pyramica nankunshana* sp.nov., body in profile view



Fig. 2. *Pyramica nankunshana* sp.nov. alitrunk in dorsal view



Fig. 3. *Pyramica nankunshana* sp.nov. head in fullface view.

Pronotum marginate dorsolaterally, its dorsum flat, lateral borders subparallel in dorsal view. Propodeal spines subtended by broad lamellae, strongly developed, narrowly triangular, tip upturned. Petiolar disc $1.8\times$ as long as broad, postpetiolar disc $1.4\times$ as broad as long dorsally.

Head with numerous, curved, slender, spatulate hairs. In profile view, cephalic dorsum with 3 pairs of standing hairs: 1st pair of hairs close to occipital margin; 2nd pair are in front of, and out of the 1st pair; and

the 3rd pair on the upper margin of antennal scrobe just behind the eyes. In full face view, lateral clypeal dorsum with decumbent hairs. Anterior margin of antennal scapes with arranged, slender, spatulate hairs which are curved anteriorly. Dorso-lateral borders of alitrunk with 4 pairs of long erect hairs, humeral hair straight and simple, projecting laterally; mesonotum with 3 pairs of standing simple hairs. Dorsal surfaces of middle and hind tibiae with suberect long straight simple projecting hairs, the longest of them distinctly longer than the maximum tibial width. First gastral tergite with more than 30 long erect hairs, restricted to 5-6 transverse rows.

Dorsal surface of head reticulate and rugose. Antennal scapes microreticulate. Dorsum of alitrunk finely microreticulate, with distinct transverse striations, without longitudinal median stria. Lateral surface of pronotum smooth and shining, mesonotum and propodeum microreticulate. Lateral surface of petiole microreticulate, disc finely reticulate and rugose transversely. Postpetiolar disc and gaster smooth and shining.

Color reddish brown; clypeus, mandibles, antennae, and legs yellowish brown.

Paratype workers. TL 2.7-2.8, HL 0.70-0.72, HW 0.49-0.50, CI 69-71, ML 0.10-0.11, MI 14-15, SL 0.33-0.34, SI 66-68, PW 0.25-0.27, AL 0.68-0.70 (5 individuals measured).

Holotype worker. Nankunshan National Forest Park, Guangdong Prov-

ince, South of China, August 22, 2010, Shanyi Zhou leg. Paratype 20 workers, data as holotype.

Queens and males are unknown.

Ecology. Nested under a stone.

Etymology. The species is named after its type-locality, Nankunshan.

This new species resembles *P. elegantula* (Terayama *et* Kubota) but differs from the later by its cephalic dorsum with 3 pairs of long simple standing hairs in profile view, pronotal dorsum with distinct transverse striations and without a median long stria, and disc of petiole with transverse rugae. It differs from *P. leptothrix* Wheeler by its leading edge of scape without anteriorly projecting straight suberect simple hairs, standing hairs on cephalic dorsum much less, dorsal surface of body without standing hairs.

ACKNOWLEDGMENTS

I thank Dr. Barry Bolton (Department of Entomology, the Natural History Museum, UK) for sending me papers, and Professor Zaifu Xu, Min Wang & Mingyi Tian (South China Agricultural University) for giving me the opportunity to perform the field studies. This study is supported by the National Natural Science Foundation of China (Project No. 36360013 and No. 31071971) and Science Foundation of the Key Laboratory of Ecology of Rare and Endangered Species and Environmental Protection, Ministry of Education.

REFERENCES

- Bolton, B. 1983. The Afrotropical dacetine ants. *Bulletin of the British Museum (Natural History) (Entomology)* 46: 267-416.
- Bolton, B. The ant tribe Dacetini. Part 1. *Memoris of the American Entomological Institute* 2000, 65: 1-1019.
- Brown, W. L. Jr. 1952. Revision of the ant genus *Serrastruma*. *Bulletin of the Museum of Comparative Zoology at Harvard College* 107: 67-86.
- Brown, W. L. Jr. 1953. Revisionary studies in the ant tribe Dacetini. *American Midland Naturalist* 50: 1-137.
- Brown, W. L. Jr. 1959. A revision of the dacetine ant genus *Neostruma*. *Breviora* 107: 1-13.
- Brown, W. L. Jr. 1960. The Neotropical species of the ant genus *Strumigenys* Fr. Smith: group of *gundlachi* (Roger). *Psyche* 66 (1959): 37-52

- Brown, W. L. Jr. 1964. The ant genus *Smithistruma*: a first supplement to the world revision. Transactions of the American Entomological Society 89: 183-200.
- Brown, W. L. Jr. & R.G. Boisvert 1979. The dacetine ant genus *Pentastruma*. Psychi 85 (1978): 201-207.
- Ogata, K. & K.Onoyama 1998. A revision of the ant genus *Smithistruma* Brown of Japan, with descriptions of four new species. Entomological Science 1: 277-287.
- Terayama, M., C.-C. Lin, & W.-J. Wu 1996. The Taiwanese species of the ant genus *Smithistruma*. Japanese Journal of Entomology 64: 327-339.
- Terayama, M. & S. Kubota 1989. The ant tribe Dacetini of Taiwan, with descriptions of three new species. Japanese Journal of Entomology 57: 778-792.
- Ward, P. S. 1988. Mesic elements in the western Nearctic ant fauna: taxonomic and biological notes on *Amblyopone*, *Proceratium* and *Smithistruma*. Journal of the Kansas Entomological Society 61: 102-124.
- Xu, Z. & X. Zhou 2004. Systematic study on the ant genus *Pyramica* Roger of China. Acta Zootaxonomica Sinica 29: 440-450.

