

# TWO NEW SPECIES OF THE GENERA *Mystrium* AND *Cryptopone* FROM YUNNAN, CHINA (Hymenoptera: Formicidae)\*

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**Abstract** Two new ant species from the tropical rain forest of Xishuangbanna Nature Reserve in Yunnan Province, *Mystrium oculatum* sp. nov. and *Cryptopone recticlypea* sp. nov., were described. The genus, *Mystrium* Roger, was first recorded in China.

**Key words** Formicidae, *Mystrium*, *Cryptopone*, New species, China

*Mystrium* Roger (1862) is a small ant genus, which contains only 8 species: 1 from Burma, 6 from Madagascar, and 1 from Cameroun (Bolton, 1994, 1995).

*Cryptopone* Emery (1893) is a worldwide genus, which has 16 species including 1 subspecies (Bolton, 1994, 1995). Among them, 11 species are found in Southeastern Asia and 3 species are known in China (Terayama, 1990). Lately, Wu *et al.* (1995) described 1 new species, *C. gigas*, from Anhui Province, China.

In 1996, the author and some students collected 2 new species from the tropical rain forest of Xishuangbanna Nature Reserve in southwestern Yunnan. One of them belongs to genus *Mystrium* Roger and the other to genus *Cryptopone* Emery. The genus *Mystrium* Roger is recorded in China for the first time. Type specimens are deposited in the Insect Collection, Department of Forest Protection, Southwest Forestry College, Kunming, Yunnan.

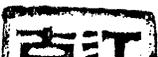
Measurements (in mm) and indices are as defined by Holldobler *et al.* (1990): total length-TL, head length-HL, head width-HW, cephalic index-CI, scape length-SL, scape index-SI, pronotal width-PW, alitrunk length-AL, maximum diameter of eye-ED, mandibular length-ML.

## 1 *Mystrium* Roger, New record in China

*Mystrium* Roger, 1862. *Berl. ent. Zeit.* 6: 245. Type-species: *Mystrium mysticum* Roger.

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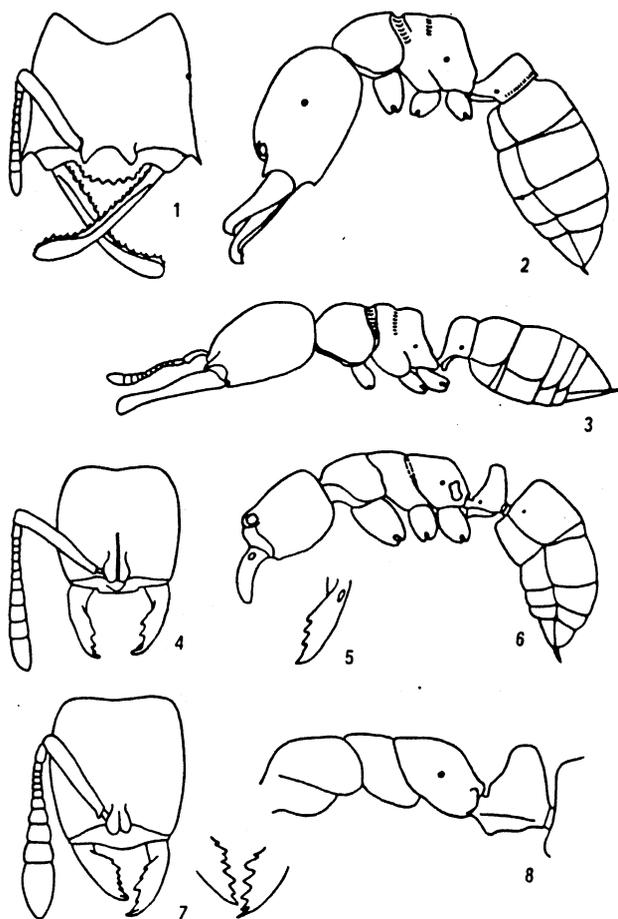
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Bingham, 1903. The Fauna of British India including Ceylon and Burma. Hymen. 2: 35.

## 2 *Mystrium oculatum* sp. nov. (Figs. 1-2)

Holotype worker: TL 4.7, HL 1.25, HW 1.33, CI 106, SL 0.75, SI 57, PW 0.68, AL 1.25, ED 0.05, ML 1.35. Head slightly wider than long, much broader in front than in the post. Occipital margin deeply and roundly emarginate. Occipital corners extruding. Anterior 2/3 of the lateral margin straight, the posterior 1/3 narrowed posteriorly. Anterolateral corner of head produced into an acute spine. Central dorsum of head flat. Mandibles long and linear, the basal 2/3 straight, apical 1/3 incurved, apex slightly expanded; dorsum has a longitudinal carina; inner margin with 2 rows of hamulus-like denticles, each row with about 12 denticles; apical tooth hooked, ventrally curved. Central portion of clypeus flat, depressed; anterior margin roundly extruded in the middle, with a row of teeth; lateral portion of clypeus extended into a blunt angle at the base of mandible. Frontal lobes small, frontal carinae absent. Antennae with 12 joints: scape falling short of the occipital corner by about 1/3 of its length; flagellum incrassate towards apex, the apical 4 joints formed a weak club. Eyes very small, situated in the lateral margin and behind the middle line of the head, each with 5-6 ommatidia. In dorsal view, pronotum and propodeum broad, mesonotum constricted. In profile view, dorsum of alitrunk about at the same level, promesonotal



Figs. 1-8 Workers of *Mystrium* and *Cryptopone*  
 1-2. *Mystrium oculatum* sp. nov.; 3. *M. camillae* Emery  
 (after Taylor); 4-6. *Cryptopone recticlypea* sp. nov.;  
 7-8. *C. typhlos* (Karawajew) (after Karawajew).  
 1, 4, 7. Head in full face view; 2, 3, 6, 8. Body in profile  
 view; 5. Mandible in dorsal view.

view, dorsum of alitrunk about at the same level, promesonotal

suture wide and deeply depressed; metanotal groove narrow, shallowly depressed. Dorsum of propodeum short, weakly convex, and formed a blunt angle with the declivity; declivity long and truncate, slope, about 2 times as long as dorsum. In profile view, petiolar node rectangular, higher than long, articulated to the gaster by whole of its posterior face; anterior face truncate, dorsal face weakly convex and constricted near the posterior margin; subpetiolar process narrow and long, anteroventrally pointed, blunt at apex. In dorsal view, petiolar node transverse, long elliptic, about 2 times as broad as long. Constriction between the 2 basal segments of gaster weak, but obvious. Outer faces of mandibles longitudinally rugose. Head, dorsum of alitrunk, dorsum of petiolar node, and dorsum of first gastral tergum coarsely reticulate; lateral faces of alitrunk, posterior face of propodeum, anterior and lateral faces of petiolar node, and gaster finely and densely punctulate, punctures of gaster relatively weaker. Head, alitrunk, petiole, gaster, mandibles, antennae, and legs with abundant, decumbent, short, clavate setae; apical 4 joints of antenna, ventral or inner faces of legs, and apex of gaster with normal subdecumbent hairs. Colour yellowish brown, eyes and apices of mandibles black. Paratype workers: TL 4.1-4.7, HL 1.03-1.25, HW 1.13-1.33, CI 106-112, SL 0.68-0.75, SI 57-60, PW 0.63-0.68, AL 1.13-1.25, ED 0.05-0.06, ML 1.03-1.35 ( $n=5$ ). As holotype.

Holotype: worker, Bakaxiaozhai (21.9° N, 101.2° E), 840 m, Menglun Town, Mengla County, Yunnan Province, 8-III-1996, by Xu Zheng-hui. Paratypes: 23 workers, with same data as holotype. Specimen No. A96-318.

This new species is close to *M. camillae* Emery (Fig. 3), but differs from the latter by: small eyes present; central dorsum of head flat; metanotal groove only shallowly depressed; declivity of propodeum flat, not depressed; anterodorsal angle of petiolar node more extruding.

### 3 *Cryptopone recticlypea* sp. nov. (Figs. 4-6)

Holotype worker: TL 3.1, HL 0.59, HW 0.64, CI 109, SL 0.48, SI 75, PW 0.48, AL 0.95, ED 0.00, ML 0.43. Head square, slightly broader than long. In full face view, lateral margins of head evenly convex, occipital margin shallowly depressed in the middle, occipital corners rounded. Clypeus transverse, narrow; convex in the center, but without longitudinal carina; middle portion of clypeus slightly protruded, its anterior margin slightly convex, nearly straight. Mandibles long triangular, outer face with a shallow elliptic fovea at base; masticatory margin has 4 teeth. Frontal lobes large, close together and covered most of the antennal insertions; a deep central furrow about 2 times as long as the frontal lobes presented between the lobes. Antennae with 12 joints, apex of scape reached to the occipital corner; flagellum incrassate towards apex, the apical 4 joints longer and formed a club. Eyes absent. In profile view, pronotum and mesonotum a little higher than propodeum, slightly convex. Promes-

onotal suture complete and shallowly depressed, metanotal groove depressed. Metanotal glands large. Propodeum a little lower, dorsum and declivity slightly convex, nearly straight; dorsum weakly lowering down posteriorly and rounded into declivity; declivity slightly shorter than dorsum. In dorsal view, propodeum nearly triangular, narrowed anteriorly and very narrow near the metanotal groove. In profile view, petiolar node cuneiform and erect, narrowed upwards; anterior face depressed, posterior face almost straight; dorsal face lowering down posteriorly as a slope; subpetiolar process large, its anteroventral angle roundly extruded. In dorsal view, petiolar node transverse, anterior face depressed, posterior face flat, dorsal face subrectangular; in front view, upper margin of the node rounded. Constriction between the 2 basal segments of gaster distinct. Sing protruded. Mandibles smooth and shining. Head and alitrunk densely and finely punctate, head dull, alitrunk duller. Propodeum, petiole, and gaster with shallow, dense, fine punctures, relatively shining. Head and body with sparse suberect hairs and dense subdecumbent pubescences, but dorsa of head and pronotum without hairs. Dorsa of scapes and hind tibiae with dense decumbent pubescences, without hairs. Outer faces of middle tibiae and tarsi with rich strong setae. Colour brownish yellow; legs yellow; gaster dark yellowish brown.

Holotype: worker, Bakaxiaozhai (21.9° N, 101.2° E), 840 m, Menglun Town, Mengla County, Yunnan Province, 8-III-1996, by Chen Zhi-ping. Specimen No. A96-336.

This new species is close to *C. testacea* (Motschulsky), but its mandible has only 4 teeth; clypeus without longitudinal carina, anterior margin almost straight; gaster dark yellowish brown. It is also close to *C. typhlos* (Karawajew, 1935) (Figs. 7-8), but its mandible has only 4 teeth; anterior margin of clypeus straight in the middle; petiolar node much shorter in profile view.

## References

- Bingham C T, 1903. The fauna of British India including Ceylon and Burma. Hymenoptera 2. Ants and cuckoo-wasps. London: Taylor and Francis. 1-414.
- Bolton B. 1994. Identification guide to the ant genera of the world. Cambridge: Harvard University Press. 1-222.
- Bolton B. 1995. A new general catalogue of the ants of the world. Cambridge: Harvard University Press. 1-504.
- Brown W L Jr. 1963. Characters and synonymies among the genera of ants. *Breviora. Mus. Comp. Zool.* 190: 1-10.
- Holldobler B, Wilson E O, 1990. The ants. Cambridge: The Belknap Press of Harvard University Press. 1-732.
- Karawajew W, 1935. Neue Ameisen aus dem Indo-Australischen Gebiet, Nebst Revision Einiger Formen. *Treubia, Buitenzorg*, 15: 57-117.
- The Myrmecological Society of Japan, 1989. A guide for the identification of Japanese ants (I). Ponerinae, Cerapachyinae, Pseudomyrmecinae, Dorylinae and Leptanillinae (Hymenoptera: Formicidae). 1-42.
- Terayama M. 1990. A list of Ponerinae of Taiwan (Hymenoptera: Formicidae). *Bull. Toho Gakuen*, 4: 25-49.
- Wu J, Wang C-L. 1995. The ants of China. Beijing: China Forestry Publishing House. 1-214.

## 云南迷猛蚁属和隐猛蚁属二新种记述

(膜翅目: 蚁科)

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**摘要** 本文记述采自云南省西双版纳自然保护区热带雨林内的 2 个蚂蚁新种: 小眼迷猛蚁 *Mystrium oculatum* sp. nov. 和直唇隐猛蚁 *Cryptopone recticlypea* sp. nov.。迷猛蚁属 *Mystrium* Roger 为中国新记录属。

**关键词** 蚁科, 迷猛蚁属, 隐猛蚁属, 新种, 中国

**中图分类号** Q969.554.2

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1 本表根据中国科学引文数据库 1996 年的数据统计而成。1996 年该库共收录中国出版的重要科技期刊 582 种。

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