

# A New Species of the Ant Genus *Polyrhachis* Smith (Hymenoptera: Formicidae) from Guangdong Province, China

QIAN Fang, ZHOU Shan-yi<sup>①</sup>

(College of Life Science, Guangxi Normal University, Guilin, Guangxi 541004, China)

**Abstract:** A new species of the genus *Polyrhachis* Smith, i. e. *P. tianjingshanensis* sp. nov. was described. The new species belongs to the subgenus *Myrmhopla* Forel and resembles *P. bicolor* Smith, but differs from the later by antennae, mandibles and legs black; pronotal and propodeal spines long and strong, much longer than petiolar spines; head, thorax and petiole coarsely punctuate.

**Key words:** Hymenoptera; Formicidae; *Polyrhachis*; new species; Guangdong; China

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*Polyrhachis* Smith, 1857 is a large genus in the family Formicidae. According to Bolton (1995a, 1995b), 477 species were described in the world. Most of the species are distributed in Indo-Australian region, Australasian region, Oriental region, and Ethiopian region. Since the genus was established by Smith (1857), it was separated into many subgenera for a time. All subgenera have been given as provisional junior synonyms of *Polyrhachis* by Brown (1973), Hölldobler and Wilson (1990). Bolton (1995b) reserved the names of subgenera.

Many experts reported Chinese species of *Polyrhachis*, such as Smith (1858), Forel (1879), Viehmeyer (1912), Wheeler (1930), and Chou *et al.* (1991). Recently, the comprehensive studies of *Polyrhachis* were made by Wang *et al.* (1991), Wu *et al.* (1995) and Tang *et al.* (1995), treated with 29 species of the genus. Zhou *et al.* (1997), Xu *et al.* (1998), Xu (1998, 2002), Zhou *et al.* (2002) also reported part species of the genus. When we investigated the ant fauna of Nanling Nature Reserve, Guangdong Province, a new species was found. Up to date, 40 species and 1 subspecies of this genus are known in China.

Standard measurements and indices used in this paper are as follows: HL (head length), HW (head width), SL (scape length), PW (pronotum width), AL (alitrunk length), ED (eye

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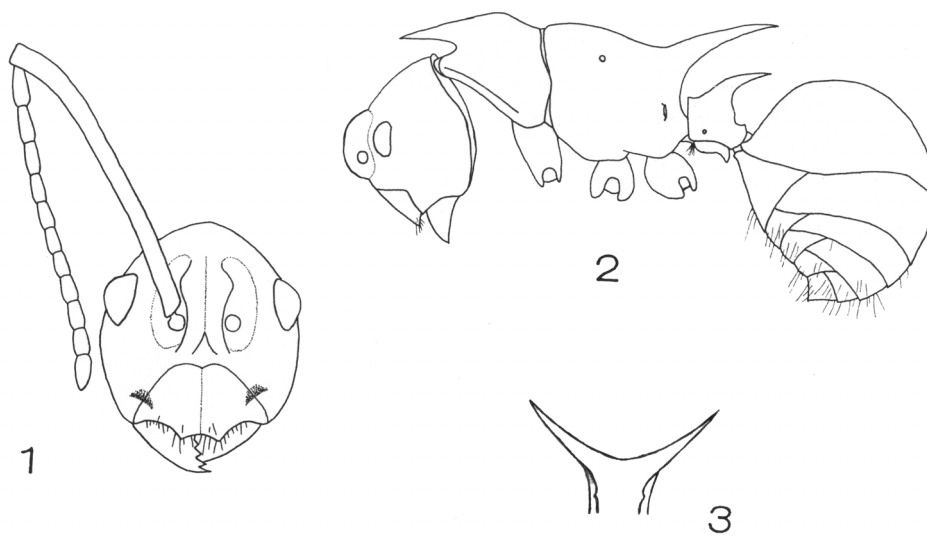
①Corresponding author, E-mail: syzhou@mailbox.gxnu.edu.cn

diameter), CI (cephalic index =  $HW \times 100 / HL$ ), SI (scape index =  $SL \times 100 / HW$ ), TL (total length). All measurements are expressed in millimeters.

The type specimens are deposited in the Insect Collection, College of Life Science, Guangxi Normal University, Guilin, China.

***Polyrhachis tianjingshanensis*, sp. nov.** (Figs. 1~3)

Holotype worker: TL 11.5, HL 2.37, HW 2.23, CI 94, SL 3.43, SI 154, PW 1.83, AL 4.75, ED 0.57. Head slightly longer than broad, almost round in full face view. Occipital margin moderately convex. Eyes prominent and highly behind midline of the head. Mandibles with 5 teeth. Clypeus with longitudinal central carina, its anterior border distinctly emarginated in the middle, with two small denticles laterally. Pronotum distinct convex, with two strong straight spines, long and point at front. Pronotal and mesonotal suture distinctly depressed; the mesonotal and propodeal suture blurring. Propodeal spines longer than pronotal spines, posteriorly pointed, and slightly curved downwards. In profile view, pronotum much higher than mesonotum and metanotum. Anterolateral of petiole with two small vertical tooth. Anterior surface and posterior surface of the petiolar node parallel in profile view, posterolateral armed with two long spines, pointing backwards the gaster and curved inwards in dorsal view, subpetiolar process distinct and digitiform. Legs long and thick. Gaster rounded.



Figs. 1~3 *Polyrhachis tianjingshanensis*, sp. nov. worker

1. head (full face view); 2. body (profile view); 3. petiolar node (front view)

Mandibles slightly longitudinally striate. Head, alitrunk and petiole closely and coarsely punctuate. Legs and gaster densely and finely punctuate. The whole body covered with sparse and recumbent pubescence. Erect hairs red-brown, very infrequent, only present on the clypeus, ventral and tail end of the gaster, decumbent hair present, sparse; head, thorax and petiole black, gaster dark-red.

Paratype workers : TL 11.4~11.7, HL 2.33~2.70, HW 2.20~2.73, CI 91~99, SL

3.37~3.65, SI 128~154, PW 1.77~2.03, AL 3.70~4.35, ED 0.53~0.63 (12 individuals measured).

Holotype worker, Tianjingshan Forestry Centre of Nanling Natural Reserve (24°41'N, 112°59'E), 450 m, **Guangdong** Province, collected on the path of the wildwood, 18-VIII-2007, No. 3, leg by HOU Zhan-hua; Paratypes: 12 workers, in the same nest, data as holotype but No.3-5.

This new species resembles *P. bicolor* Smith, but antennae, mandibles and legs black; pronotal and propodeal spines long and strong, much longer than petiolar spines; head, thorax and petiole coarsely punctuate.

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## 广东多刺蚁属一新种

(膜翅目: 蚁科)

钱芳, 周善义

(广西师范大学生命科学学院, 广西 桂林 541004)

在广东南岭自然保护区进行昆虫考察时发现多刺蚁属 *Polyrhachis* 1 新种, 即: 天井山多刺蚁 *P. tianjingshanensis*, sp. nov., 隶属于多刺蚁属六刺多刺蚁亚属 *Myrmhopla*。本新种与双色多刺蚁 *P. bicolor* Smith 相似, 但触角、上颚和足均为黑色, 前胸背板刺和并胸腹节刺粗长, 远长于腹柄节刺, 头、并腹胸和腹柄节具粗糙刻点。

正模: 工蚁, TL 11.5, HL 2.37, HW 2.23, CI 94, SL 3.43, SI 154, PW 1.83, AL 4.75, ED 0.57; 副模 12 工蚁: TL 11.4~11.7, HL 2.33~2.70, HW 2.20~2.73, CI 91~99, SL 3.37~3.65, SI 128~154, PW 1.77~2.03, AL 3.70~4.35, ED 0.53~0.63。

正模: 工蚁, 广东南岭自然保护区天井山林场 (24°41'N, 112°59'E), 450 m, 2007-VIII-18, 侯占华采; 副模: 12 工蚁, 与正模同巢, 侯占华采。

模式标本保存于广西师范大学生命科学学院昆虫标本室。

关键词: 膜翅目; 蚁科; 多刺蚁属; 新种; 广东; 中国