

## 中国红蚁属一新种记述 (膜翅目, 蚁科)\*

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**摘要** 描述陕西佛坪红蚁属1新种, 即郑氏红蚁 *Myrmica zhengi* sp. nov.。新种体色极浅; 头部正面观方形; 前中胸背板刻纹横形, 但极不规则; 并胸腹节刺粗壮, 基部宽; 后腹第1节背板基侧具明显细纵刻纹与近似种类相区别。模式标本保存于陕西师范大学动物研究所, 副模标本分存于广西师范大学生命科学学院、西北农林科技大学昆虫博物馆、东北师范大学生命科学学院和西南林业大学标本馆昆虫标本室。

**关键词** 切叶蚁亚科, 红蚁属, 新种, 中国。

**中图分类号** Q969.54

红蚁属 *Myrmica* 由 Latreille 于 1804 年以 *Formica rubra* Linnaeus, 1758 为模式种建立。目前, 全世界已知 190 种 (Bolton *et al.*, 2006), 主要分布于古北区, 东洋区次之, 新北区和热带区少有报道。中国记载 54 种 (王维等, 2005; 黄建华等, 2007; Radchenko *et al.*, 2008; Radchenko & Elmes, 2009), 34 种的模式产地为中国。Mayr (1889) 和 Ruzsky (1915) 报道西藏红蚁 8 新种 (亚种)。Viehmeyer (1922)、Radchenko *et al.* (2008) 以及 Radchenko 和 Elmes (2009) 报道四川 9 新种。Wheeler (1928, 1929, 1930)、Elmes 和 Radchenko (1998) 报道台湾 4 新种。吴坚和王常禄 (1995) 报道山东 1 新种。Wei *et al.* (2001)、Radchenko *et al.* (2008) 以及 Radchenko 和 Elmes (2009) 报道陕西 5 新种。Radchenko *et al.* (2001) 报道广西、广东等地 3 新种。Radchenko *et al.* (2008) 以及 Radchenko 和 Elmes (2009) 报道云南 4 新种。本文报道该属采自陕西佛坪的 1 新种。

本文使用的量度、比例及其缩略语参考周善义 (2001), 度量单位均为 mm。标本照片拍摄通过景深扩展成像系统 (Qimaging Retiga 4000R CCD + Auto-montage 叠加软件) 完成。模式标本保存: 正模及 5 副模标本保存于陕西师范大学动物研究所, 4 副模标本保存于广西师范大学生命科学学院, 4 副模标本保存于西北农林科技大学昆虫博物馆, 5 副模标本保存于东北师范大学生命科学学院, 5 副模标本保存于西南林业大学标本馆昆虫标本室。

郑氏红蚁, 新种 *Myrmica zhengi* sp. nov. (图 1~5)

正模: 工蚁 TL 7.5, EL 0.2, EI 12, HL 1.6, HW 1.5, CI 94, SL 1.4, SI 93, AL 2.3, PW 1.1。

头方形, 后头缘平直, 两侧缘直; 上颚三角形, 具 2~3 枚端齿以及 7~9 枚连续或不连续的小齿; 唇基凸圆, 前缘具棱边, 略宽凹; 颚叶窄, 上翘, 正面观略向外侧呈弧形突出; 触角窝暴露; 触角基部完全可见, 触角柄节短, 不到达后头缘, 其端部粗、基部细, 基部弯曲成钝角, 无叶状脊; 复眼大, 圆凸, 其最大直径明显大于触角柄节端部最大直径, 位于头前部两侧。并腹胸短, 不及头长的 1.5 倍, 前胸背板较粗圆, 向后至中并胸腹节缝逐渐收缩; 中并胸腹节缝浅宽凹, 其宽为并腹胸长度的 1/5; 并胸腹节刺粗大, 明显长于并胸腹节基面, 其基部亦宽, 几与并胸腹节基面等长。第 1 结节三角形, 具腹柄下突; 第 2 结节略呈球状。后腹部卵圆形。

上颚、唇基前部以及触角窝周围具纵刻纹; 上颚具光泽, 唇基及额区光亮, 头部其余部分具亚平行纵刻纹, 刻纹间具刻点。并腹胸刻纹横形, 极不规则; 并胸腹节刺间光亮; 侧面观, 中胸侧板及并胸腹节侧板刻纹纵形。背面观, 第 1 结节具横形刻纹, 第 2 结节刻纹略呈纵形。后腹第 1 节背板 1/4 部分具密集的纵形刻纹; 其余部分光亮。

体黄色, 第 2 结节及后腹部颜色深, 呈棕黄色。体具稀疏的亚直立毛。

副模: 工蚁 TL 7.3~8.2, HL 1.54~1.65, HW 1.43~1.52, CI 91~94, SL 1.32~1.40, SI 92

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图 1~5 郑氏红蚁, 新种 *Myrmica zhengi* sp. nov.

1. 工蚁背面观 (worker, dorsal view) 2. 工蚁侧面观 (worker, lateral view) 3. 雄蚁侧面观 (male, lateral view)

4. 工蚁头部正面观 (head of worker, front view) 5. 雄蚁头部正面观 (head of male, front view)

~94, AL 2.1~2.3, PW 0.98~1.10。

唇基前缘在个体间存在微小差异, 或宽凹、或平直, 但绝不突出。

雄蚁 头部具 3 枚单眼, 大且圆凸; 复眼极大, 具深色斑块。触角柄节极短, 约为头宽的 1/2。唇基圆凸成球状, 端缘平直; 上颚具 7 枚齿。并胸腹节刺钝凸; 第 1 结节背侧宽平、腹侧基部不具腹柄下突。体深褐色, 被毛稀疏; 除前胸背板、结节和腹部光亮外, 其余刻纹的分布状况似工蚁。

模式标本: 正模 (工蚁), 陕西佛坪, 2006-07-23, 马丽滨采。副模: 20 工蚁, 3 雄蚁, 采集信息同正模。

词源: 新种种名取自郑哲民先生的姓氏, 以示对郑先生在昆虫分类学等领域做出显著贡献的敬意。

根据 Radchenko 和 Elmes (2001, 2009) 对红蚁属的划分, 新种隶属于种团 *pachei*-group。该种团工蚁触角柄节基部弯曲但不成角状, 且不具叶状突; 雄虫触角柄节短; 身体刻纹常不甚粗糙, 且于前中胸背板分布有细密横形刻纹。新种与其相近种类比较如下: 1) 新种与 *Myrmica taibaiensis* Wei et al., 2001 相似, 但新种唇基前缘略宽凹, 而后者微凸出且绝无缺刻; 新种前中胸背板刻纹横形, 但极不规则, 略成网状, 而 *M. taibaiensis* 呈规则横形; 新种后腹第 1 节背板具细密纵形刻纹, 而后者光亮; 新种刻纹

间粗糙, 具刻点, 而 *M. taibaiensis* 光亮; 2) 新种亦与 *Myrmica sculptiventris* Radchenko & Elmes, 2009 相似, 但后者体色为深褐色, 而新种为黄色; *M. sculptiventris* 唇基前缘微凸且绝无缺刻, 而新种平直或宽凹; 新种被毛稀疏, 而后者被毛丰富, 且具明显细长毛; 新种前中胸背板刻纹横形, 但极不规则, 略成网状, 而后者呈规则横形。

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## A NEW ANT SPECIES OF THE GENUS *MYRMICA* FROM CHINA (HYMENOPTERA, FORMICIDAE)

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**Abstract** *Myrmica zhengi* sp. nov. is reported here from Foping, Shaanxi, China. Type specimens are kept in the Institute of Zoology, Shaanxi Normal University, and some of paratype specimens are also deposited in the College of Life Sciences, Guangxi Normal University, the Entomological Museum, Northwest A & F University, the College of Life Sciences, Northeast Normal University and the Insect Collections of Southwest Forestry University.

***Myrmica zhengi* sp. nov.** (Figs 1-5)

Holotype. Worker TL 7.5, EL 0.2, EI 12, HL 1.6, HW 1.5, CI 94, SL 1.4, SI 93, AL 2.3, PW 1.1.

Head nearly square-shaped; mandible armed with 2-3 distal large teeth and 7-9 small teeth which continuous or discontinuous; clypeus convex and round, and its anterior margin slightly wide concave. Scapes not reached the occipital margin, its base bared, without lobes and curved as obtuse angle. Eyes large, convex and round. Alitrunk shorter than 1.5 times of head length; pronotum somewhat thick and round, which gradually contracted to propodeum; propodeal spine thick, strong, widen at base and longer than basal face of propodeum. Petiole triangular and with ventral process; postpetiole oval.

Mandible, anterior part of clypeus and area around the scrobe with longitudinal striate; mainly part of clypeus and frontal area shiny and smooth, the

remainder of head with subparallel longitudinal striations and the interspaces punctate. Alitrunk with very irregular transverse striations; between the propodeal spines shiny and smooth; meso-pleura and the sides of propodeum with longitudinal striations. Dorsum of petiole with transverse striations and the striations on postpetiole slightly longitudinal. The first gastral tergite with longitudinal striations and the remainder of gaster shiny and smooth.

Body mainly yellowish, postpetiole and gaster dark. Body armed with sparse suberect hair.

Paratype. Worker TL 7.3-8.2, HL 1.54-1.65, HW 1.43-1.52, CI 91-94, SL 1.32-1.40, SI 92-94, AL 2.1-2.3, PW 0.98-1.10.

The anterior margin of clypeus straight or slightly wide concave, but never convex.

Male. Head with three large, convex and round ocelli; eyes very large and with dark patches. The scape very short and nearly 1/2 width of the head. Clypeus round and convex, almost globular, and its anterior edge straight; mandible with seven teeth. Propodeal spines blunt convex, very short and small; petiole wide and flat in dorsum and with out ventral process. Body colored dark brown and clothing sparse hair. The pronotum, petiole, postpetiole and gaster shiny and smooth, and the striations on the remainder are same as those of workers.

Holotype worker, China, Shaanxi, Foping

(33°42'N, 107°48'E), 23 July 2006, coll. MA Li-Bin. Paratypes 20 workers and three males, same data as holotype.

**Etymology.** This species is named in honor of Professor ZHENG Zhe-Min for his outstanding contribution to the systematic entomology.

**Remarks.** The new specie belongs to *pachei*-group of the genus *Myrmica*, the species of this group are characterized by antennal scapes slightly curved at bases, not angulate and without trace of a lobe; males

**Key words** Myrmicinae, *Myrmica*, new species, China.

with short antennal scapes; generally with much less coarse sculpture on the body, and with dense fine transverse striations on the promesonotum, etc. It can be distinguished from other related species mainly by its very light coloration, head nearly square in front view, the striations on the promesonotum transverse but very irregular, propodeal spine strong and widen at base, the first gastral tergite with obviously longitudinal fine striate-punctatures.