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TWO NEW SPECIES OF THE ANT GENERA *RECURVIDRIS* BOLTON AND *KARTIDRIS* BOLTON (HYMENOPTERA: FORMICIDAE: MYRMICINAE) FROM SOUTHWESTERN CHINA

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Abstract: Two new species are described in the present paper, which are found in Southwestern China, i.e. *Recurvidris nuwa* sp. nov. and *Kartidris ashima* sp. nov. The type specimens are deposited in the Institute of Zoology, Shaanxi Normal University.

Key words: Hymenoptera, Formicidae, *Recurvidris*, *Kartidris*, new species, China

Introduction

The ant genus *Trigonogaster* was established by Forel in 1890 based on the type species *T. recurvispinosa* Forel. Bingham (1903) recognised one species of the genus, *T. recurvispinosa* Forel, from Western India. Later, Wheeler (1927) reported the same species from Back Liang, Amoy, China. It was the only species of the genus found in China until 1991. Bolton (1992) reviewed the genus and recognised the name *Trigonogaster* was preoccupied by a pteromalid chalcid (Hymenoptera: Pteromalidae). He proposed *Recurvidris* to replace *Trigonogaster* and treated 7 species, of which 5 were new ones, in the Oriental and Indo-Australian regions. Recently Bolton (1991) erected another ant genus *Kartidris* and described three new species: *K. galos* from Southern China, *K. nyos* from India, and *K. matertera* from Thailand. All the species are terrestrial in mountainous areas. When we study the ant fauna of Southwestern China, two new species belonging separately to the above mentioned genera are discovered. They are *Recurvidris nuwa* sp. nov. and *Kartidris ashima* sp. nov. Both species were collected on the ground in the forest in mountainous areas. The type specimens are deposited in the Insect Collection, the Institute of Zoology, Shaanxi Normal University. The standard measurements and indices are as defined by Bolton (1983). All measurements are expressed in millimeters.

1. *Recurvidris nuwa*, sp. nov. (figs. 2,3,4)

Body slender. Head roughly rectangular, longer than broad. Occipital margin straight. The anterior portion of the head strongly convex, so that the clypeus nearly vertical. Median portion of clypeus convex, anterior margin straight, with a narrow edge. Mandibles with

fine longitudinal rugulae, and 4 teeth which nearly equal in size on the masticatary margin. Frontal carinae short, divergent posteriorly. Scrobes absent. Antennae have 11 segments, the scapes not reaching the occipital angles; the last 3 segments forming the clubs, the apical one the longest, about 2.3 times as long as the segment next to it. The eyes extending as an angle anteroventrally, the maximum diameter of eye 0.13 (0.28×HW) and with 7—8 ommatidia in the longest row. Pronotum high, dorsum comparatively flat. Mesonotum lowering down as a slope posteriorly. Metanotal groove depressed. Propodeum low, with the dorsum convex. Propodeal spines long and strong, compressed laterally, and curved anterodorsally. Petiole with peduncle anteriorly, a long spine-like process are present underneath, pointing posteroventrally; the node triangular, with dorsum slightly longitudinally depressed. Postpetiole with strong peduncle anteriorly, the node very low, trapezoid in dorsal view, wider than long, without constriction posteriorly, and widely attacking to the gaster. Gaster in profile view triangular, flat above and convex as a round angle below. Head, alitrunk and pedicel have fine dense reticulate-rugulae. Dorsal median portion of the head, clypeus, dorsum and lateral portions of pronotum, dorsum of mesonotum, and gaster smooth and shining. Head and body with abundant erect or suberect short blunt hairs. Dorsal surfaces of scapes and hind tibiae with short curved pubescences. Body yellow, the posterior half of gaster brownish yellow.

Measurements and indices: Holotype worker. TL 1.9, HL 0.48, HW 0.44, CI 92, SL 0.36, SI 82, PW 0.25, AL 0.65. Paratype workers. TL 1.8-2.0, HL 0.48-0.50, HW 0.43-0.44, CI 88-89, SL 0.36-0.38, SI 83-88, PW 0.25, AL 0.63-0.64, Maximum diameter of eye 0.13 (0.29×HW) (2 specimens measured).

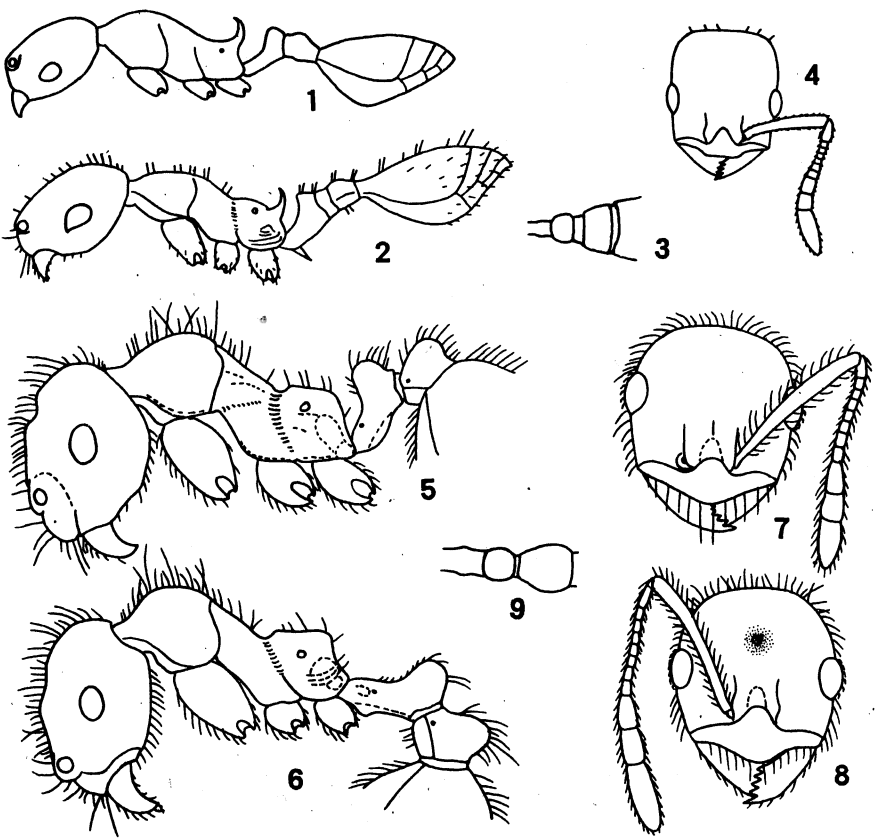
Holotype worker, China: Duyun City (107°32′E, 26°16′N), Guizhou Prov. 780 m, 10-Ⅸ-1991, No. A91-693 (Xu Zhenghui). Paratypes: 2 workers, with the same data as holotype, No. A91-674.

R. nuwa is close to *R. recurvispinosa* (Forel) (fig. 1), but differs from the latter in: head and body with abundant short and blunt hairs, occipital margin straight, petiole with a long spine-like ventral process.

2. *Kartidris ashima*, sp. nov. (figs. 6,8,9)

Head longer than broad, occipital margin roundly convex. Mandibles have fine longitudinal striae, and 5 teeth on the masticatary margin. Median portion of clypeus strongly convex, anterior margin roundly extruding. Antennae have 12 segments, the last 3 forming the clubs, the apical one the longest, about 2 times the length of the segment next to it. Maximum diameter of eye 0.18 (0.21×HW) and with 8-9 ommatidia in the longest row. Vetex with a depressed pit in the centre, in profile view the vetex slightly impressed. Pronotum high, dorsum roundly convex. Mesonotum lowering down as a slope posteriorly. Metanotal groove deeply depressed. Propodeum low, dorsum flat in profile view. Propodeal spines absent, the posterolateral angles of propodeum more extruding, median portion between them longitudinally depressed. Petiole with long peduncle anteriorly, and a low round process anteroventrally; the node high, rounded above. Postpetiolar node high and convex, inclined posteriorly, with the dorsum slightly longitudinally depressed in the middle. Head and body smooth and shining. The portions between the antennal fossae and the eyes have weak retic-

ulate-rugulae; mesopleura with fine dense reticulate-rugulae; metapleura with longitudinal striae. Sterna of pedicel segments with fine dense punctulations. Head and body with abundant erect or suberect hairs, hairs on the head dense. Eyes with abundant anteriorly curved short hairs arising between the facets. Dorsal surfaces of scapes and hind tibiae with suberect long and short hairs. Body yellowish brown, head and gaster brown.



Figs. 1-4 *Recurvidris* workers; Figs. 5-9 *Kartidris* workers.

1-2. Body in profile view; 1. *recurvispinosa*; 2. *nuwa*; 3. Pedicel of *nuwa*; 4. Head of *nuwa*; 5-6. Body in profile view; 5. *nyos*; 6. *ashima*; 7-8. Head; 7. *nyos*; 8. *ashima*; 9. Pedicel of *ashima*. (1. Pilosity is omitted, after Bingham; 5、7. after Bolton)

Measurements and indices: Holotype worker. TL 3.5, HL 0.85, HW 0.83, CI 97, SL 0.78, SI 94, PW 0.53, AL 1.10. Paratype workers. TL 3.4-3.8, HL 0.83-0.88, HW 0.80-0.85, CI 93-100, SL 0.76-0.80, SI 94-97, PW 0.50-0.54, AL 1.05-1.15, Maximum diameter of eye 0.18-0.20 (0.21-0.24 × HW) (7 specimens measured). Some specimens with lower ventral process of petiole. Paratype female. TL 9.6, HL 1.65, HW 1.85, CI 112, SL 1.36, SI 70, PW 2.40, AL 3.60, Maximum diameter of eye 0.45 (0.24 × HW) (1 specimens measured). The female is much larger than the workers. Alate when virgin and with a complete complement of flight sclerites. The head narrowing

anteriorly, with 3 ocilli. Mandibles as workers. Head and alitrunk have dense coarse striae. Pedicel segments have dense puncto-striae. Petiolar node compressed anteroposteriorly. Gaster with fine dense punctulations. Head and body with dense pilosity and pubescences. Body blackish brown, meso- and metapleura, and legs reddish brown.

Holotype worker, China: Anning Co. (102°26′E, 24°56′N), Yunnan Prov., 1820 m, 19-Ⅶ-1991, No. A91-298 (Xu Zhenghui). Paratypes: 7 workers and 1 female, with the same data as holotype, Nos. A91-871, A91-896.

K. ashima is close to *K. nyos* Bolton (figs. 5,7), but differs from the latter in: vetex slightly depressed, posterolateral angles of propodeum more extruding, petiole with ventral process.

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中国西南地区角腹蚁属和卡蚁属新种记述

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本文报道了在中国西南地区发现的2个蚂蚁新种。新种女娲角腹蚁 *Recurvidris nuwa*, sp. nov. 与弯刺角腹蚁 *R. recurvispinosa* (Forel)接近,但前者头和体背面具丰富短而钝的刚毛,后头缘平直,腹柄节下方具长刺突。新种阿诗玛卡蚁 *Kartidris ashima*, sp. nov. 与 *K. nyos* Bolton 接近,但前者头顶凹陷较浅,并胸腹节后侧角较突出,腹柄节前下方具钝圆突起。模式标本保存于陕西师范大学动物研究所昆虫标本室。

关键词 膜翅目 蚁科 角腹蚁属 卡蚁属 新种 中国