

***Coellicia mingxiensis* sp. nov. from Fujian, China
(Odonata: Platycnemididae)**

Xu Qi-han

Zhangzhou Education College, Zhangzhou 363000, Fujian, China.
<qihanx@yahoo.com.cn>

Key words: Odonata, dragonfly, Platycnemididae, *Coellicia*, new species, China.

ABSTRACT

The new species *Coellicia mingxiensis* sp. nov. (holotype ♂: 26 July 2004, Mingxi County, Fujian Province, China) is described and illustrated from a single male. The specimen is deposited at Zhangzhou Education College, Fujian, China.

INTRODUCTION

Coellicia is the largest genus in the Platycnemididae, with about 60 species in Asia (Tsuda 2000). Not including the new species, nine *Coellicia* species are hitherto known from China: Ris (1912) described *C. flavicauda* from Taiwan; Needham (1930) added *C. cyanomelas* Ris, 1912 from Sichuan, Zhejiang, Fujian and Taiwan, and *C. didyma* (Selys, 1863) from Tibet and Guangxi; then Laidlaw (1932) described *C. scutellum hainanense* from Hainan; later, Sui & Sun (1984) added *C. chromothorax* (Selys, 1891), *C. loogali* Fraser, 1932, and *C. poungyi* Fraser, 1924, all from Yunnan; the latest additions to the Chinese fauna were *C. sexmaculata* from Henan, recorded and described by Wang (1994) and *C. galbina* from Guangxi, recorded and described by Wilson & Reels (2003). In the present paper, a new Chinese species is described and illustrated.

Coellicia mingxiensis sp. nov.
(Figs 1a-f, Plate VIIIb)

Specimen studied

Holotype ♂ — China, Fujian Province, Mingxi County (26°24'N, 116°56'E), 26 July 2004, leg. Xu Q., deposited at Zhangzhou Education College in Fujian Province, China. Female unknown.

Etymology

The new species is named after the collecting locality, Mingxi.

Description of the holotype male

Head: labium pale yellow. Labrum brown, its posterior half dark brown. Anteclypeus dark yellowish-green. Postclypeus black. Frons black, its anterior margin marked with a transverse orange band, which is narrow in center and broad at both sides; a black curved ridge on posterior frons. Vertex black, marked with an irregular transverse orange band. Scape of antenna orange, marked with brown on median area; pedicel blackish-brown with brown on distal end; flagellum blackish-brown. Occiput black; postocular spots orange. Dorsal view of head as shown in Figure 1a.

Thorax: prothorax blackish-brown on dorsum, orange on sides. Synthorax blackish-brown, marked with orange-coloured stripes; upper end of antehumeral stripes and stripes on mesepimeron and metepimeron covered with blurred pale blue (this blue is not pruinose). Synthoracic colour pattern as shown in Figure 1b. Legs orange, the outer side of femora, tarsi and spines on legs blackish-brown. Wings hyaline, Pt greyish-brown, covering ca 1.3 cells, braced at its proximal side. In Fw 21 Px, 18 in Hw. In addition to the venational characters of *Coelliccia*, IR3 arises at the subnode, R4 proximal to it, 2 cells between the quadrilateral cell and the vein descending from the node.

Abdomen: S1 yellow, marked with a dorsal brown spot; S2 brown on dorsum and dorsolaterally, orange ventrolaterally, its dorsal carina marked with an orange stripe; S3 brown on dorsum, dark yellow on sides, its basal end marked with a creamy yellow ring which is broken off by a middorsal brown spot; S4 brown on dorsum, yellowish-brown on sides; S5 dark brown on dorsum, pale brown on sides,

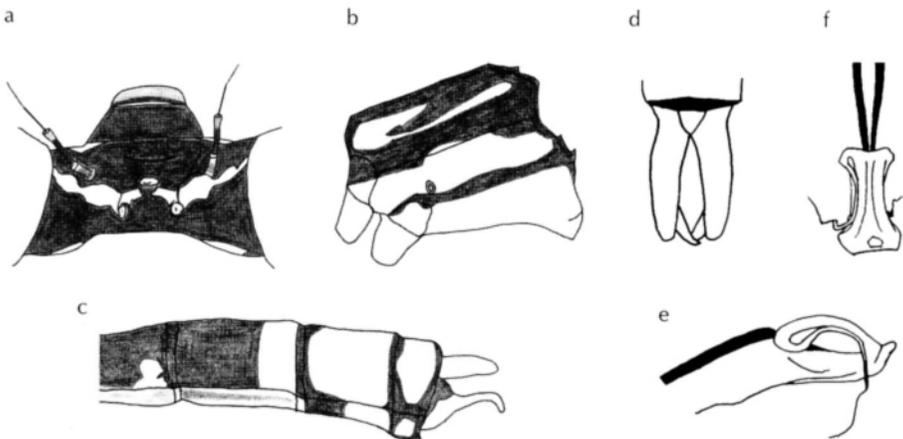


Figure 1: *Coelliccia mingxiensis* sp. nov. holotype ♂ — (a) head, dorsal; (b) synthoracic colour pattern, lateral; (c) distal abdominal segments, lateral; (d) caudal appendages, dorsal; (e) penile organ, lateral; (f) penile organ, ventral.

its apical end marked with an orange spot on sides; S6 dark brown, its apical end marked with a rectangular yellowish-brown spot on sides; S7 blackish-brown, its apical end marked with a dark yellowish-brown spot on lower sides; S8 blackish-brown on basal $\frac{2}{3}$, and greenish-yellow on apical $\frac{1}{3}$; S9 greenish-yellow with a narrow blackish-brown ring on basal end; S10 greenish-yellow, bordered with blackish-brown, its ventrolateral part blackish-brown, marked with a dark greenish-yellow spot on median area. Superior caudal appendages greenish-yellow, without ventral spines but with an internal subbasal prominence in dorsal view; inferior appendages yellowish-brown, slightly longer than the superiors, curled down at the tip. Abdominal tip as shown in Figure 1c. Caudal appendages in dorsal view as shown in Figure 1d. The penile organ is of peculiar shape, the last segment arches back over the second segment with a pair of long, fine whip-like processes which grow from both sides of the terminal lobe curled backward tightly alongside the edge of the last segment and then downward near the base of the same segment (Figs 1e, 1f).

Measurements [mm]: abdomen length 41.2 (excl. appendages); Hw length 27.0; Pt length 1.0.

Differential diagnosis

The new species does not appear to have any near allies because it is so distinct in its caudal appendages and the structure of the penile organ. Its venational characters – IR3 arising at the subnode and R4 proximal to it – correspond to Laidlaw's *bimaculata*-Group, which also includes *C. galbina* (Laidlaw 1932). Most Chinese *Coelliccia* belong to Laidlaw's *didyma*-Group, with IR3 arising distal to the subnodus and R4 proximal to it (e.g. *chromothorax*, *cyanomelas*, *didyma*, *flavicauda*, *loogali*, *poungyi*, and *scutellum*). As for the superior appendages, *Coelliccia* species usually have an inner subapical spine (e.g. Fraser 1933: 152-153), but the new species lacks it. As for the penile organ, the closest Chinese species is *C. flavicauda* (Asahina 1951: 17, figs 21-22), but the whip-like processes of the penis are obviously shorter than in the new species. So the new species can be easily distinguished from congeneric species by the peculiar characters of caudal appendages and penile organ.

Biological notes

The specimen was captured at a forest streamlet at an elevation of 1,000 m a.s.l.

ACKNOWLEDGEMENTS

I am grateful to Zhu Hui-qian, Jürg De Marmels and to Keith Wilson for their kind comments on the manuscript.

REFERENCES

- Asahina, S., 1951. New dragonflies from the north-eastern Asia (Odonata). *Kontyû* 19: 15-22.
- Fraser, F.C., 1933. *Fauna of British India, including Ceylon and Burma. Odonata, Vol. I.* Taylor & Francis, London.
- Laidlaw, F.F., 1932. A revision of the genus *Coeliccia* (order Odonata). *Record of the Indian Museum* 34: 7-42, 3 pls.
- Needham, J.G., 1930. A manual of the dragonflies of China. *Zoologia Sinica* 11: i-xi, 1-344.
- Ris, F., 1912. *Neue Libellen von Formosa, Südchina, Tontin und den Philippinen.* Supplementa Entomologica 1: 44-85.
- Sui, J. & H. Sun, 1984. *Common species of dragonflies from China.* Agriculture Publishing House, Beijing. [In Chinese; English title].
- Tsuda, S., 2000. A distributional list of world Odonata. Tsuda, Osaka.
- Wang, Z., 1994. A new species of *Coeliccia* (Odonata: Platycnemididae) from China. *Entomotaxonomia* 16: 82-84.
- Wilson, K.D.P. & G.T. Reels, 2003. Odonata of Guangxi Zhuang Autonomous Region, China, part I: Zygoptera. *Odonatologica* 32: 237-279.