

## A revision of the Chinese *Mesorhaga* (Diptera: Dolichopodidae)

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### Abstract

The species of the genus *Mesorhaga* SCHINER from China are revised. Three species, *Mesorhaga fujianensis*, *M. grootaerti* and *M. xizangensis*, are described as new to science. A key to the Chinese species is also presented.

**Key words:** Dolichopodidae; taxonomy; *Mesorhaga*; new species; China.

### Introduction

The genus *Mesorhaga* SCHINER belongs to the subfamily Sciapodinae. Up to the present 6 species are known from the Palaearctic region (NEGROBOV, 1984, 1991) and 47 species from the Oriental and Australian regions (BICKEL, 1994). Five species are known from China.

In this paper 3 species of the genus *Mesorhaga* from China are described as new to science. The types of the new species are mainly deposited in the Insect Collection of the Beijing Agricultural University, Beijing, and 2 paratypes are kept in the Institut Royal des Sciences Naturelles, Brussels.

### Genus *Mesorhaga* SCHINER

*Mesorhaga* SCHINER, 1868, Freg. Nov., Zool. 2(1)B: 217.  
Type species. *Mesorhaga tristis* SCHINER, 1868.  
*Aptorthus* ALDRICH, 1893, Kans. Univ. Quart. 2: 48.  
Type species. *Aptorthus albiciliatus* ALDRICH, 1893.

**Diagnosis.** Eyes in both sexes widely separated; vertex distinctly excavated. Antennal flagellum subtriangular, arista dorsal and rather short. 5 strong dc; lateral scutellar bristle short. Hind and mid femora without preapical bristles; tibiae without bristles.

Wing: vein M2 absent; crossvein bm-cu absent, m-cu straight.

### Key to species of *Mesorhaga* from China

1. Halter brown to dark brown ..... 2  
Halter yellow ..... 6
2. Femora chiefly black ..... 3  
Femora yellow. North China *albiflabellata* PARENT
3. Hind tarsomere 1 brown to black ..... 4  
Hind tarsomere 1 (except apex) yellow.  
Fujian ..... *fujianensis* sp. nov.
4. Apices of fore and hind femora yellow ..... 5  
Femora wholly black. Taiwan ..... *septima* BECKER
5. Hind tibia blackish with base and apical portion brownish yellow. Xizang ..... *xizangensis* sp. nov.  
Hind tibia wholly yellow. Xizang *grootaerti* sp. nov.
6. 2-3 paired acr ..... 7  
6-8 paired acr ..... *palaearctica* NEGROBOV
7. Femora entirely black. Taiwan ..... *dispar* BECKER  
Apical half of fore femur and apical 1/3 of mid femur yellow. Taiwan ..... *stylata* BECKER

### *Mesorhaga fujianensis* sp. nov.

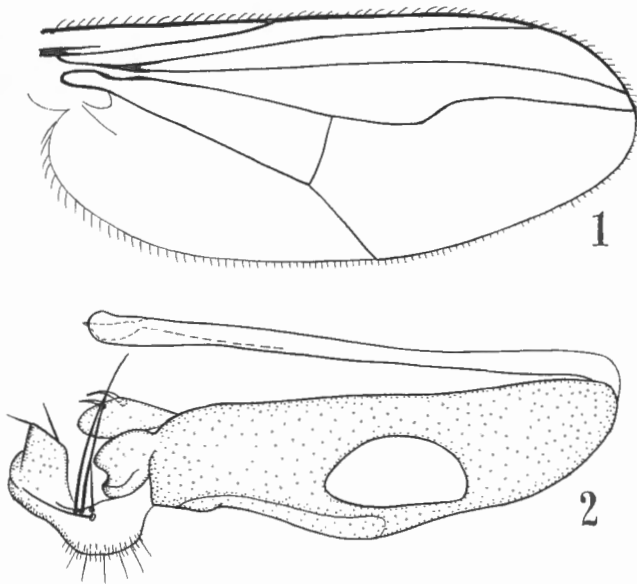
(Figs 1-2)

#### Male.

*Body length* 4.8 mm, *wing length* 4.0 mm.

*Head* metallic green; vertex distinctly excavated. Hairs and bristles on head black; ocellar tubercle with a pair of strong ocellar bristles and 2 long posterior hairs on post-lateral slope. Antenna black; arista dorsal, much shorter than width of head. Proboscis dark brown; palpus black.

*Thorax* metallic green with black hairs and bristles. 3 long irregularly paired acr, 5 strong dc, 2 pairs of scutellar bristles. Legs black; tibiae and tarsomere 1 (except apex of hind tarsomere 1) dark yellow to yellow, tarsomeres 2-5 dark brown. Hairs on legs black. Relative lengths of segments (excluding coxa and trochanter) of legs: LI 2.3: 2.7: 1.6: 0.6: 0.4: 0.3: 0.3; LII 3.1: 4.0: 2.6: 0.9: 0.7: 0.4: 0.3; LIII 3.3: 4.1: 1.9: 1.5: 1.0: 0.6: 0.3.



Figs 1-2. — *Mesorhaga fujianensis* sp. nov. 1, Wing; 2, male genitalia, lateral view.

*Wing* hyaline; veins brown, CuAx ratio 0.7. Halter dark brown.

*Abdomen* metallic green with black hairs. Male genitalia (Fig. 2): Hypandrium elongate with aedeagus extending only slightly beyond its apex; surstylus short and broad with concave apical margin; cercus curved, slightly constricted medially with somewhat acute apex; epandrial lobe rather short.

*Female*. Unknown.

*Holotype* ♂, Fujian: Fuzhou, 20.X.1974, Fasheng LI.

*Distribution*. China (Fujian).

*Remarks*. This species is somewhat similar to *M. septima* BECKER from Taiwan, but may be separated from the latter by having the hind tarsomere 1 yellow with brown apex. In *M. septima*, the hind tarsomere is black (BECKER, 1922).

*Mesorhaga grootaerti* sp. nov.  
(Fig. 3)

*Male*.

*Body length* 5.0 mm, *wing length* 4.8 mm.

*Head* metallic green; vertex distinctly excavated. Hairs and bristles on head black; ocellar tubercle with a pair of strong ocellar bristles and 4 long posterior hairs; frons with 6 long hairs on post-lateral slope. Antenna black, arista dorsal and much shorter than width of head. Proboscis brownish yellow; palpus black.

*Thorax* metallic green with black hairs and bristles. 3 long irregularly paired acr, 5 strong dc; 2 pairs of scutellar bristles. Legs black; apices of fore and mid femora, fore

and mid tarsomere 1, and tibiae yellow; fore and mid tarsomeres 2-5 and entire hind tarsus brown to dark brown. Hairs on legs black; coxae with entirely pale hairs; femora with pale ventral hairs. Relative length of segments of legs: LI 2.8: 3.0: 1.9: 0.8: 0.4: 0.3: 0.3; LII 3.0: 4.3: 3.2: 1.2: 0.8: 0.5: 0.3; LIII 4.1: 5.4: 2.3: 1.8: 1.1: 0.7: 0.3.

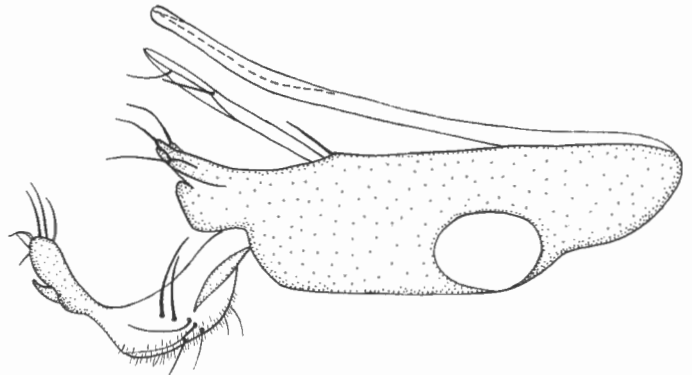


Fig. 3. — *Mesorhaga grootaerti* sp. nov. 3, Male genitalia, lateral view.

*Wing* hyaline; veins dark brown, Cu Ax ratio 0.8. Halter brown.

*Abdomen* metallic green with black hairs. Male genitalia (Fig. 3): Hypandrium elongate; surstylus short and broad; cercus curved and constricted medially, with rounded apex; epandrial lobe rather long.

*Female*. Unknown.

*Holotype* ♂, Xizang: Zayu, 25.VI.1978, Fasheng LI.

*Distribution*. China (Xizang).

*Remarks*. This new species is very similar to *M. xizangensis* sp. nov., but can be distinguished from the latter by having the hind tibia wholly yellow.

*Mesorhaga xizangensis* sp. nov.  
(Fig. 4)

*Male*.

*Body length* 3.5-3.8 mm, *wing length* 4.7-4.9 mm.

*Head* metallic green; vertex distinctly excavated. Hairs and bristles on head black, but those on postventral surface pale; ocellar tubercle with a pair of strong ocellar bristles and 4 long posterior hairs; frons with 4 long hairs on post-lateral slope. Antenna black; arista dorsal, much shorter than width of head. Proboscis dark brown; palpus black.

*Thorax* metallic green with black hairs and bristles; 3 long irregularly paired acr, 5 strong dc; 2 pairs of scutellar bristles, lateral ones rather short and weak. Legs black; apices of fore and mid femora, fore and mid tibiae and tarsomere 1 yellow; fore and mid tarsomeres 2-5 and hind tarsomeres 1-5 brown to dark brown; hind tibia blackish

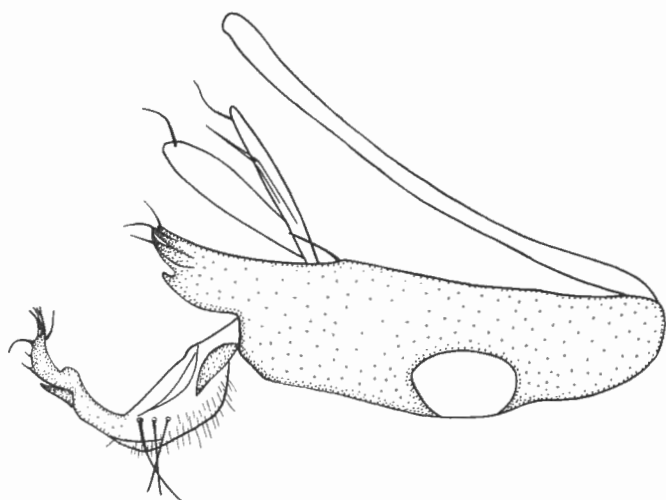


Fig. 4. – *Mesorhaga xizangensis* sp. nov. 4, Male genitalia, lateral view.

with base and apical portion brownish yellow. Hairs on legs black, but those on coxae pale; femora with pale hairs on ventral surface. Relative length of segments of legs: LI 2.9: 3.3: 2.1: 0.9: 0.4: 0.3: 0.3; LII 3.4: 4.3: 3.1: 1.2: 0.8: 0.4: 0.3; LIII 4.4: 5.8: 2.2: 1.9: 1.0: 0.7: 0.3.

*Wing* hyaline; veins dark brown, CuAx ratio 0.8. Halter dark brown.

*Abdomen* metallic green; hairs on abdomen black, but venter with pale hairs. Male genitalia (Fig. 4): hypandrium elongate, somewhat broad apically; surstylus divided into dorsal and ventral arms; cercus curved with apical portion thin and somewhat bent.

*Female.* Unknown.

*Holotype* ♂, paratypes 4 ♂♂, Xizang: Bomi (2500 m), 11.VI.1978, Fasheng Li. Paratypes 3 ♂♂, Xizang: Bomi (2300 m), 11-13.VI.1978, Fasheng Li; 1 ♂ Xizang: Bomi (2700 m), 21.VII.1978, Fasheng Li.

*Distribution.* China (Xizang).

*Remarks.* This new species may be separated from *M. grootaerti* by having the hind tibiae with base and apical portion yellow.

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