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 Sciaridae. 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


**Diagnosis.** Eyes in both sexes widely separated; vertex distinctly excavated. Antennal flagellum subtriangular, ariste 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; LI 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.

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 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...
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: 0.3: 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; surstylius 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.

Acknowledgements

My sincere thanks are due to Dr. P. GROOTAERT (Institut Royal des Sciences Naturelles, Brussels), Prof. Chi-kun YANG and Associate Researcher Fasheng Li (Beijing Agricultural University) for their help during the study.