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Two New Species of the Genus *Mansoniella* Poppius (Hemiptera: Miridae) **【Research report】**

曼盲蝽屬之兩新種 (半翅目：盲蝽科) **【研究報告】**

Cheng-Shing Lin*
林政行*

*通訊作者E-mail: cslin@mail.nmns.edu.tw

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Abstract

This paper describes two new species of the genus *Mansoniella* Poppius, *M. formosana* Lin, n. sp. and *M. wuyishana* Lin, n. sp. A key to world species of the genus *Mansoniella*, and figures of the genitalia and parameres are included.

摘要

本文描述曼盲蝽屬 (*Mansoniella* Poppius) 之兩新種：蓬萊曼盲蝽 (*M. formosana* Lin, n. sp.) 及武夷山曼盲蝽 (*M. wuyishana* Lin, n. sp.)。並附曼盲蝽屬種檢索表、新種及比對種 (*M. cervivirga* and *M. wangi*) 之背面觀及新種外生殖器圖。

Key words: Miridae, Bryocorinae, *Mansoniella*, new species

關鍵詞: 盲蝽科、單室盲蝽亞科、曼盲蝽屬、新種

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Two New Species of the Genus *Mansoniella* Poppius (Hemiptera: Miridae)

Cheng-Shing Lin* Department of Zoology, National Museum of Natural Science, Taichung 404, Taiwan

ABSTRACT

This paper describes two new species of the genus *Mansoniella* Poppius, *M. formosana* Lin, n. sp. and *M. wuyishana* Lin, n. sp. A key to world species of the genus *Mansoniella*, and figures of the genitalia and parameres are included.

Key words: Miridae, Bryocorinae, *Mansoniella*, new species

Introduction

The Bryocorinae is comprised of three tribes and five subtribes (Schuh, 1976), including tribe Bryocorini, tribe Dicyphini (subtribe Dicyphina, subtribe Monaloniina, and subtribe Odoniellina), and tribe Eccritotarsini (subtribe Eccritotarsina and subtribe Palaucorina) (Schuh and Slater 1995). The genus *Mansoniella* Poppius, which belongs to the subtribe Monaloniina, was established by Poppius (1915), and the type species, *M. nitida* Poppius, was described from Vietnam.

The characteristics of the genus *Mansoniella* are as follows: body elongate, shiny, pubescent; head with a distinct neck, globose, wider than long; frons rounded, vertex smooth, immarginate; eyes removed from collar by a distance about as long as length of eye; antennae with segment I incrassate apically, segment II much longer than segment I,

segments III-IV slender, cylindrical; rostrum short, reaching apex of 1st coxa; pronotum strongly narrowed anterior, with 2 constrictions; mesoscutum exposed, scutellum small, flat, smooth; hemelytra narrowed on basal 1/3, embolium flat, cuneus slightly longer than wide at base, membrane with angulate areola; legs long and slender, tibiae with long and erect hairs. This genus can be distinguished from other genera in the tribe by the short rostrum, by the double constriction of the pronotum, by the densely pubescent clavus, and by the short 1st segment of the antenna (Carvalho, 1981).

Carvalho (1981) described *M. minuta* Carvalho from New Guinea. Hu and Zheng (1999) described seven new species and suggested three new combinations. Lin (2000, 2001) described four new species of *Mansoniella* from Taiwan.

Members of *Mansoniella* are tropical with about 16 species in the world,

*Correspondence address
e-mail: cslin@mail.nmns.edu.tw

geographically distributed in New Guinea, Vietnam, China mainland, and Taiwan. These insects are found in arboreal habitats; some species have been collected from *Cinnamomum*, *Sassafras tzumu* (Lauraceae), and *Acer* (Aceraceae) (Zheng and Li, 1992; Zheng and Liu, 1992; Hu and Zheng, 1999; Lin, 2000, 2001). According to L.Y. Zheng (2002), most *Mansoniella* insects are predaceous and feed on scale insects. There is a paucity of biological information on this insect.

This paper reports two new species from *Liquidambar formosana* (Hamamelidaceae). The type series are deposited in the National Museum of Natural Science. Methods of dissection and terminology followed those of Hu and Zheng (1999).

Key to the world species of the genus *Mansoniella* Poppius

1. Body length equal or less than 6 mm ----- 2
Body length greater than 6 mm-----7
2. Costal margin of hemelytra convex at apical half -----
M. cristata Fu et Zheng, 1999
Costal margin of hemelytra not convex at apical half-----3
3. Hemelytra lutescent to ochraceous, body length less than 5.5 mm-----
M. minuta Carvalho, 1981
Hemelytra not lutescent or ochraceous, body length more than 5.5 mm -----4
4. Lateral collar and anterior pronotal lobe with an X-shaped blackish spot -----
M. elongata Hu et Zheng, 1999
Lateral collar and anterior pronotal lobe without an X-shaped blackish spot----- 5
5. Lateral posterior pronotal lobe with black stripe--
M. formosana Lin, n. sp.
Lateral posterior pronotal lobe without black stripe-----6
6. Lateral neck, collar, and anterior pronotal lobe with black stripe -----
M. cervivirga Lin, 2000
Lateral neck, collar, and anterior pronotal lobe without black stripe-----
M. kungi Lin, 2001
Body length greater than 8.5 mm ----7
Body length less than 8.5 mm -----8
7. Collar and anterior pronotal lobe with lateral longitudinal black stripe, corial annular spot rosy-----
M. rosacea Hu et Zheng, 1999
Collar and anterior pronotal lobe with a small black spot, corial annular spot red
M. rubida Hu et Zheng, 1999
8. Frons tumid, fuscous or black-----
M. shihfanai Lin, 2000
Frons neither tumid or weakly tumid nor black -----9
9. Corium with a red annular spot-----
M. annulata Hu et Zheng, 1999
Corium without a red annular spot 10
10. Vertex tumid -----
M. cinnamomi (Zheng et Liu, 1992)
Vertex not tumid----- 11
11. Posterior vertex with 2 blackish-brown spots or a transverse band -----
M. juglandis Hu et Zheng, 1999
Posterior vertex without blackish brown spots or transverse band----- 12
12. Posterior pronotal lobe width equal to or greater than 2.0 mm ----- 13
Posterior pronotal lobe width less than 2.0 mm----- 14
13. Cuneus length greater than 1.5 mm--
M. wuyishana Lin, n. sp.
Cuneus length less than 1.5 mm-----
M. wangi (Zheng et Li 1992)
14. Collar and anterior pronotal lobe lateral with broad black stripe, posterior pronotal lobe yellowish brown-----
M. flava Hu et Zheng, 1999
Collar and anterior pronotal lobe lateral without broad black stripe, posterior pronotal lobe yellow or red ----- 15
15. Posterior pronotal lobe red with a yellow medial stripe-----
M. sassafri (Zheng et Liu, 1992)
Posterior pronotal lobe yellowish brown and without a yellow medial

stripe ----- 16
16. Neck red with center yellow-red,
body length equal to or greater than
7 mm, largest width of both
hemelytra greater than 2.5 mm -----

M. nitida Poppius, 1915

Neck yellow, body length less than 7
mm, largest width of both hemelytra
less than 2.5 mm-----

M. yafanae Lin, 2000

***Mansoniella formosana* Lin, n. sp.**

(Figs. 1A, B, D, 2A, C, E)

Body elongate, approximately 3.5
times as long as body width, shiny.
Hemelytra with dense pale and
semi-erect hairs, costal margin medially
slightly concave. Head yellowish brown
to brown. Vertex hairless, posterior 1/2
coral red. Frons weakly tumid. Rostrum
brown and apex blackish brown,
reaching apex of 1st coxa. Antennae
with 1st segment coral red and the
remaining segments brown. Neck
lateral black and dorsal brown.

Collar brown, anterior rim with
coral-red ring. Anterior pronotal lobe
lateral black and dorsal yellowish
brown, posterior pronotal lobe lateral
black and dorsal brown to fuscous.
Scutellum yellow whitish to yellowish
brown. Clavus black or brown and
lateral margin with a black stripe.
Hemelytra yellowish brown or brown,
anterior and posterior margin coral red,
corium black. Cuneus yellow whitish
with posterior apex coral red.
Membrane gray, cell and central area of
membrane fuscous, vein red. Venter
brown, episternum with fuscous spot.
Leg yellow-brownish, basal hind femur
with coral-red band.

Left paramere with broad,
rectangular-shaped basal, having a
concave trough, terminal becoming
narrower and pointed. Right paramere
with broad, curved, horn-shaped basal.
Vesica long, moderately curved, finger-

shaped, membranous lobe without
spicule.

Measurements (in mm). Head width
0.8; interocular distance 0.5; antennal
segment lengths: 0.7: 1.8: 1.1: 0.6;
rostrum length 0.7. Collar length 0.2,
width 0.4; anterior pronotal lobe length
0.3, width 0.5; posterior pronotal lobe
length 0.6, width 1.0-1.5. Scutellum
length 0.6. Claval commissure length
1.0; cuneus length 0.7, width 0.4;
cuneus apex to membrane apex 1.1;
largest width of both hemelytra at
repose 1.7; basal width 1.5. Body length
5.7.

Female is very similar to male, but
with larger body and larger eyes.
Antennae totally coral red. Head and
body shing brown. From neck to
posterior pronotal lobe with lateral
black band. Dorsal posterior pronotal
lobe with a large fuscous spot. Lateral
margin of clavus with black stripe.

Measurements (in mm) for female.
Head width 0.9; interocular distance 0.5;
antennal segment lengths: 0.9: 2.0: 1.5:
0.6; rostrum length 0.7. Collar length
0.2, width 0.4; anterior pronotal lobe
length 0.2, width 0.5; posterior pronotal
lobe length 0.55, width 1.1-1.4.
Scutellum length 0.7. Claval com-
missure length 1.1; cuneus length 0.9,
width 0.4; cuneus apex to membrane
apex 1.2; largest width of both
hemelytra at repose 2.0; basal width 1.6.
Body length 6.0.

Holotype: ♂, NANTOU: Wushe,
11-XI-2002, C. S. Lin, sweeping from
Liquidambar formosana Hance (Hama-
melidaceae). Paratypes: 3 ♂ 4 ♀, data
same as for holotype. 2 ♂, 16-X-2002, C.
S. Lin.

Remarks: This new species is
similar to *M. cervivirga*, Lin 2000 (Figs.
1C, E, 2B, D, F), but can be recognized
by the following characters: left paramere
with terminal end rather broad, but
rather slender and pointed in *M.*
cervivirga. Right paramere broader and

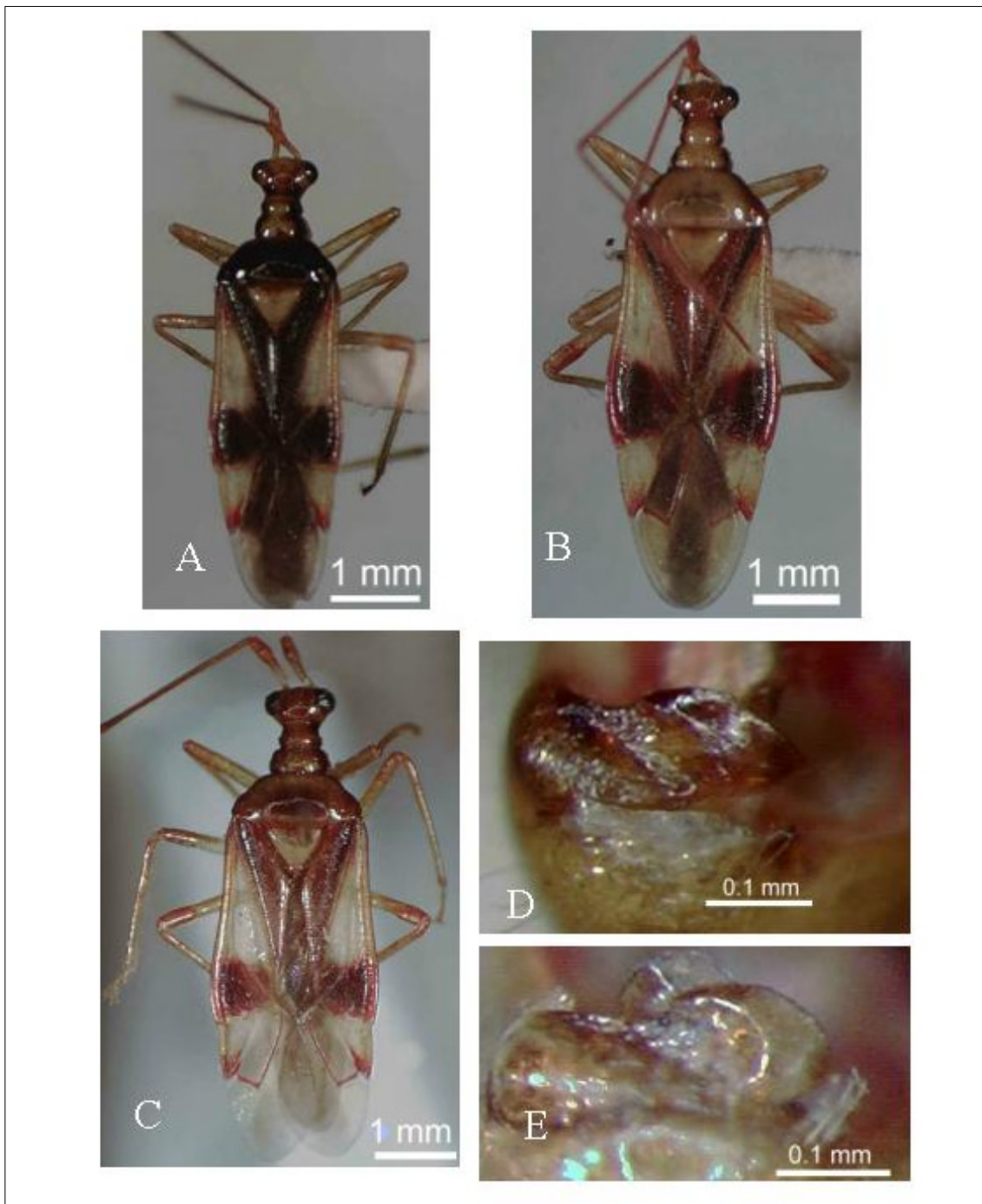


Fig. 1.

A. *Mansoniella formosana* Lin, n. sp., holotype (male).

B. *Mansoniella formosana* Lin, n. sp., paratype (female).

C. *Mansoniella cervivirga* Lin, holotype (male).

D. Left paramere of *Mansoniella formosana* Lin, n. sp., holotype (male).

E. Left paramere of *Mansoniella cervivirga* Lin, holotype (male).

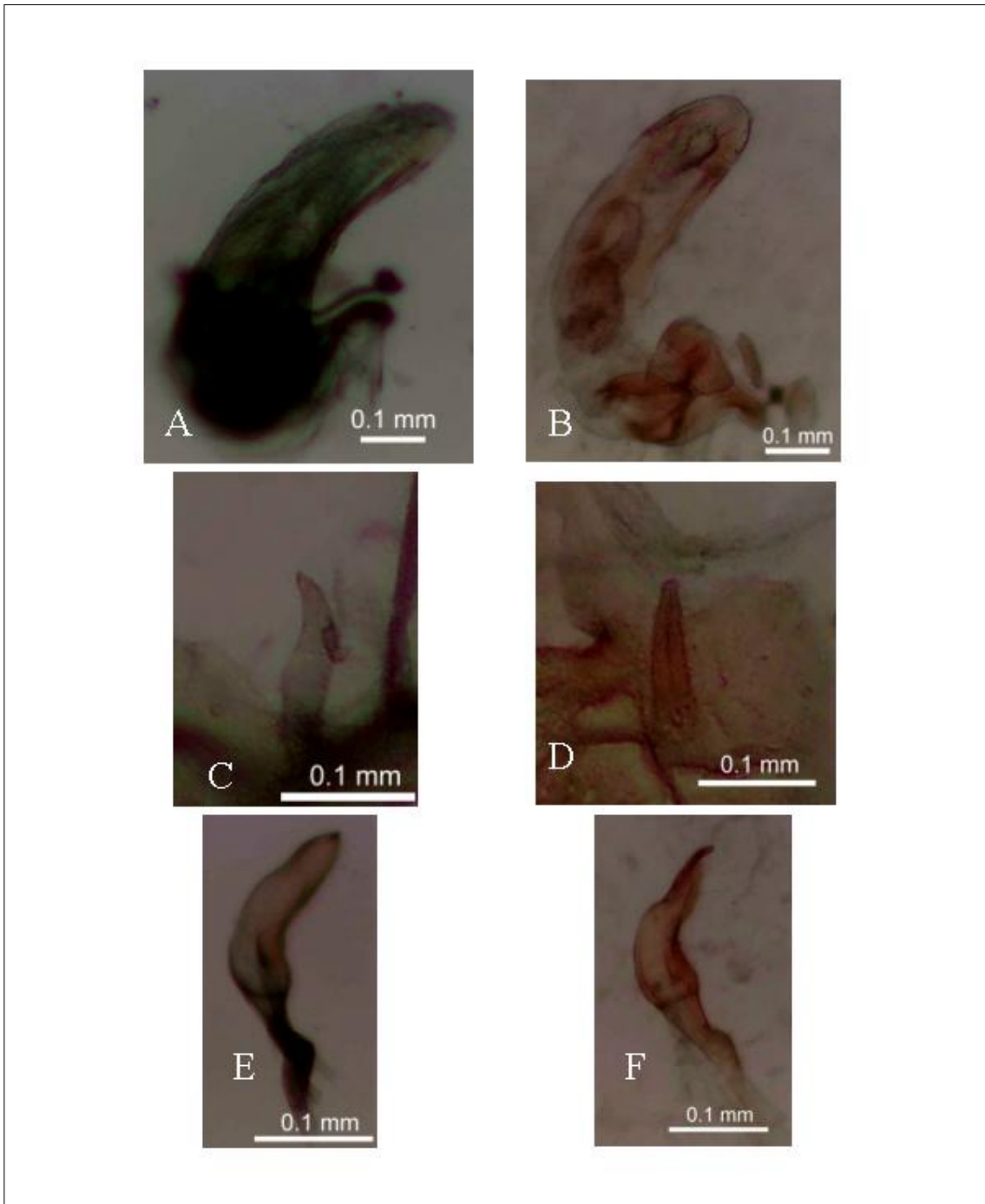


Fig. 2.

- A. Vesica of *Mansoniella formosana* Lin, n. sp.
- B. Vesica of *Mansoniella cervivirga* Lin.
- C. Right paramere of *Mansoniella formosana* Lin, n. sp.
- D. Right paramere of *Mansoniella cervivirga* Lin.
- E. Left paramere of *Mansoniella formosana* Lin, n. sp.
- F. Left paramere of *Mansoniella cervivirga* Lin.

curved in the middle in this species, but slender and straight in *M. cervivirga*.

Etymology: Named for the locality, Formosa (Taiwan).

***Mansoniella wuyishana* Lin, n. sp.**
(Figs 3A-C, 4A-D)

Body elongate, approximately 3 times as long as body width, shiny. Hemelytra with dense, pale, semi-erect hairs, costal margin medially slightly concave. Head brown or fuscous. Vertex smooth, hairless, posterior 1/2 with a coral-red area. Frons weakly tumid and black. Fronto-ventral area black and reaching clypeal base. Clypeus black. Dorsal side of neck brown with lateral black. First segment and basal 2nd segment of antennae coral red, the remaining portion reddish brown. Length of segment I approximately 1.8 times as long as vertex width, apical 1/2 swollen; hairs sparse, short; segments II, III, and IV with dense pubescence, hairs about 1.5 times as long as diameter of segment II.

Pronotum brown or reddish brown, lateral with black band extending to the posterior 1/2 of collar. Anterior pronotal lobe dorsal yellowish white, posterior pronotal lobe dorsal brown or fuscous with a narrow, yellow stripe in middle. Collar with dorsal reddish-brown ring.

Scutellum weakly concave, yellow and posterior apex coral red, with semi-erect, soft hairs. Clavus brown or fuscous with inner and commissure marginal area black, pubescence straight or feebly curved, length similar to that of scutellum hair. Corium light yellow, apical 1/4 with a blackish coral-red annular spot, and inner margin coral red, basal 1/8 area with coral-red spot. Embolium light yellow, apical 1/5 and basal 1/8 coral red. Cuneus yellow, apex and inner margin stained with coral, pubescence length same as that of clavus. Membrane gray, terminal margin yellow

whitish; veins red. Legs yellowish brown, about 1/3 of apical femur and 1/3 posterior area coral red. Ventral thoracic portion yellowish brown, epimeron brown and episternum fuscous, ventral abdomen anterior 1/2 coral red and posterior half fuscous.

Left paramere with broad, rectangular-shaped basal, terminal becoming narrower, pointed, beak-like. Right paramere with basal moderately enlarged, and terminal portion become narrower, finger-shaped. Vesica with broad, rather short and straight basal, membranous lobe lacking spicule.

Measurements (in mm). Head width 0.9; interocular distance 0.5; antennal segment lengths: 0.7: 2.5: 1.6: 0.6; rostrum length 0.9. Collar length 0.1, width 0.4; anterior pronotal lobe length 0.2, width 0.5; posterior pronotal lobe length 0.55, width 1.1-1.4. Scutellum length 0.7. Claval commissure length 1.1; cuneus length, 0.9, width 0.4; cuneus apex to membrane apex 1.2; largest width of both hemelytra at repose 2.0; basal width 1.6. Body length 6.0.

Female very similar to male. Antennae, vertex coral red. Frons weakly tumid coral red. Neck, collar, and pronotum lateral with black stripe. Scutellum yellow with apical area coral red. Corium yellowish brown, apical 1/4 with a coral-red spot and lateral margin with a black annular spot, posterior 1/8 coral red.

Measurements (in mm) for female. Head width 1.0; inter-ocular distance 0.5; antennal segment lengths: 0.8: 2.5: 2.0: 0.65; rostrum length 1.0. Collar length 0.2, width 0.55; anterior pronotal lobe length 0.3, width 0.7; posterior pronotal lobe length 1.5-2.0, width 2.0. Scutellum length 0.7. Claval commissure length 1.5; cuneus length, 1.1, width 0.5; cuneus apex to membrane apex 1.4; largest width of both hemelytra at repose 2.6; basal width 2.0. Body length 7.5.

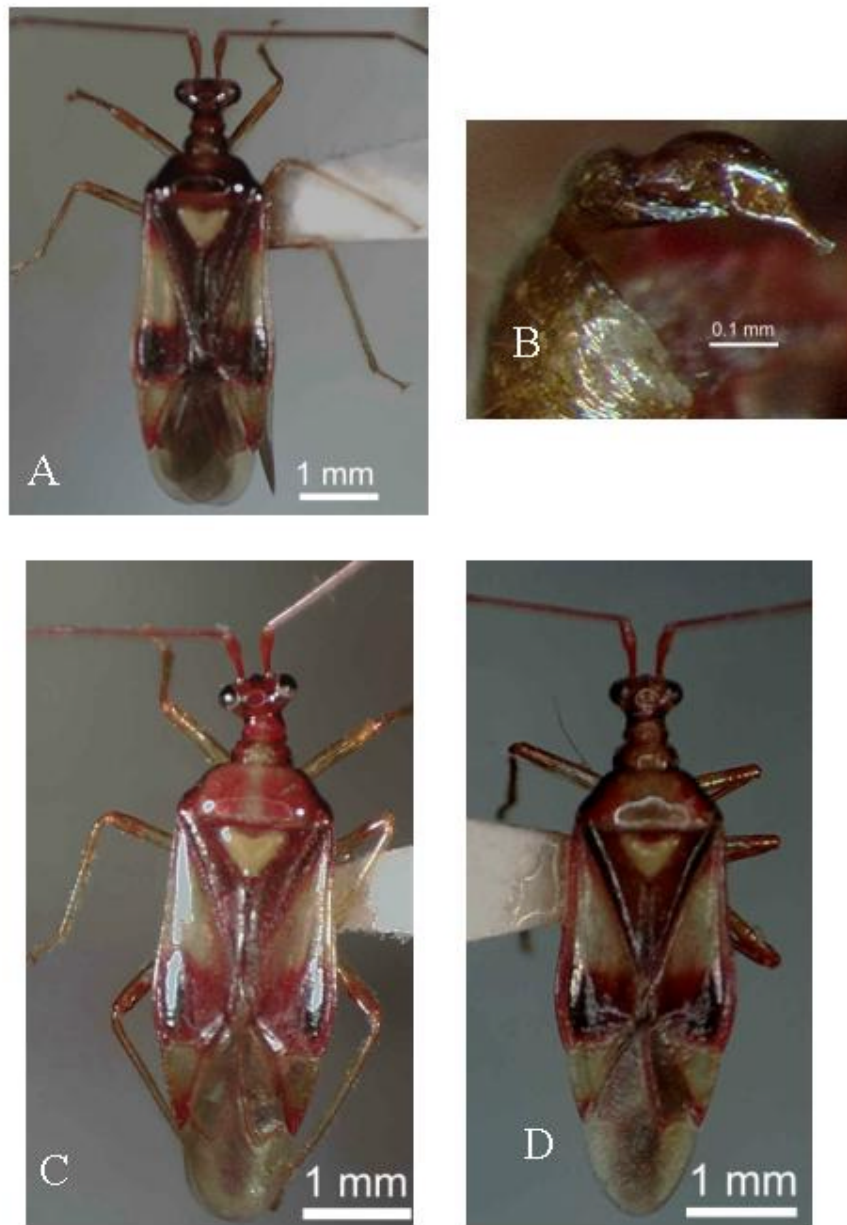


Fig. 3.

A. *Mansoniella wuyishana* Lin, n. sp., holotype (male).

B. Left paramere of *Mansoniella wuyishana* Lin, n. sp., holotype (male).

C. *Mansoniella wuyishana* Lin, n. sp., paratype (female).

D. *Mansoniella wangi* Zheng & Li, paratype (female).

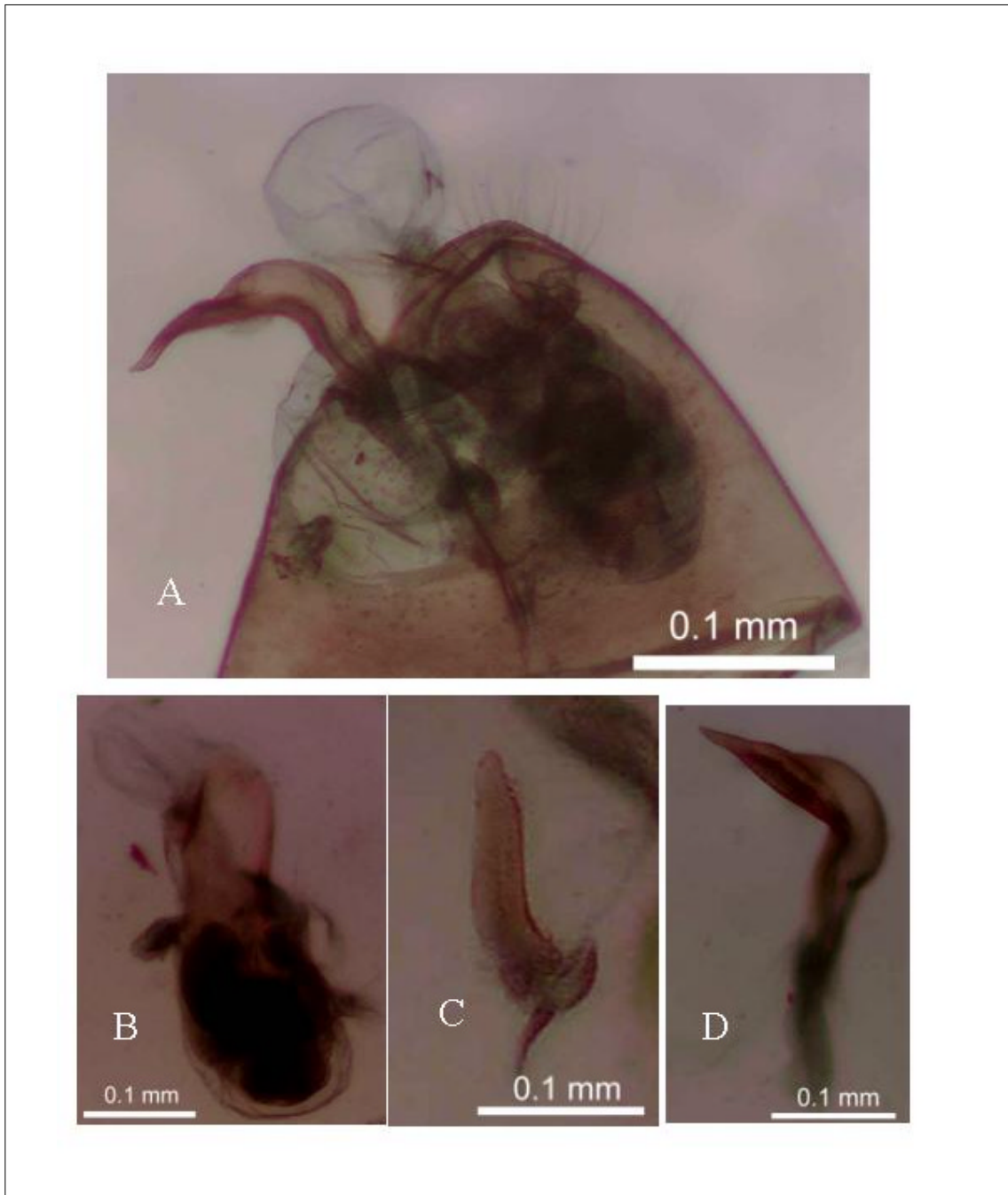


Fig. 4.
A. External genitalia of *Mansoniella wuyishana* Lin, n. sp.
B. Vesica of *Mansoniella wuyishana* Lin, n. sp.
C. Right paramere of *Mansoniella wuyishana* Lin, n. sp.
D. Left paramere of *Mansoniella wuyishana* Lin, n. sp.

Holotype: ♂, FUJIAN: Nanping Wuyishan, 21-VIII-2002, C. S. Lin, beating from *Liquidambar formosana* Hance (Hamamelidaceae). Paratypes: 4 ♂6 ♀, same as holotype.

Remarks: This new species is similar to *M. wangi* (Zheng & Li, 1992) (Fig. 3D), but can be recognized by the following characters: different antennal segment length ratio (0.8: 2.5: 2.0: 0.65), posterior end of scutellum extended and pointed in new species, and different shape of cuneus, being long and narrow in this species and short and broad in *M. wangi*.

Etymology: Named for the type locality, Wuyishan.

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曼盲蝨屬之兩新種（半翅目：盲蝨科）

林政行* 國立自然科學博物館動物學組 臺中市館前路一號

摘 要

本文描述曼盲蝨屬 (*Mansoniella* Poppius) 之兩新種：蓬萊曼盲蝨 (*M. formosana* Lin, n. sp.) 及武夷山曼盲蝨 (*M. wuyishana* Lin, n. sp.)。並附曼盲蝨屬種檢索表、新種及比對種 (*M. cervivirga* and *M. wangi*) 之背面觀及新種外生殖器圖。

關鍵詞：盲蝨科、單室盲蝨亞科、曼盲蝨屬、新種