Gunungmia unimaculata gen. & sp. nov. of the subtribe Paraboloponina leafhoppers (Hemiptera: Cicadellidae: Deltocephalinae) from Borneo

Lin LU[1], Christopher DIETRICH[2], Yalin ZHANG[1①]

1. *Key Laboratory of Plant Protection Resources and Pest Management, Ministry of Education, Entomological Museum of Northwest A&F University, Yangling, Shaanxi 712100, China*

2. *Illinois Natural History Survey, Institute for Natural Resource Sustainability, University of Illinois at Urbana-Champaign, IL, USA*

Abstract: *Gunungmia unimaculata* **gen. & sp. nov.** are described from Borneo (Sarawak, Malaysia) and placed in the leafhopper subtribe Paraboloponina (Cicadellidae: Deltocephalinae: Drabescini) based on the characters of anterior margin of head with several transverse striations, antenna longer than half body length, antennal pits located near upper corner of eyes.

Key words: Auchenorrhncha; Drabescini; Paraboloponini; Malaysia; taxonomy

婆罗洲脊翅叶蝉亚族一新属一新种（半翅目：叶蝉科：角顶叶蝉亚科）

吕林[1]，Christopher DIETRICH[2]，张雅林[1①]

1. 植保资源与病虫害治理教育部重点实验室，西北农林科技大学植物保护学院昆虫博物馆，陕西 杨凌 712100；2. Illinois Natural History Survey, Institute for Natural Resource Sustainability, University of Illinois at Urbana-Champaign, IL, USA

摘要：基于头冠前缘具多横纹，触角长过身体的一半，触角窝着生于复眼上眼角等特征，报道了来自婆罗洲的脊翅叶蝉亚族（叶蝉科：角顶叶蝉亚科：胫槽叶蝉族）1 新属及 1 新种 *Gunungmia unimaculata* **gen. & sp. nov.**。

关键词：头喙亚目；胫槽叶蝉族；脊翅叶蝉亚族；马来西亚；分类

Introduction

The Oriental leafhopper subtribe Paraboloponina belongs in the tribe Drabescini (Hemiptera: Cicadellidae: Deltocephalinae) based on morphological characters, e.g., fore margin of the head with carinae and or transverse striations and antennae very long and placed high on the face (Dmitriev 2004; Dietrich 2005) and molecular evidence (Zahniser & Dietrich 2010, 2013). In our study, *Gunungmia unimaculata* **gen. & sp. nov.** are described from Borneo (Sarawak). The new species is characterized by its unique color pattern, with a distinct large black anteromedially on the pronotum, and its male genitalia exhibits a complex

Accepted 10 September 2025. Published online 4 December 2025.

① Corresponding author, E-mail: yalinzh@nwsuaf.edu.cn

structure described in detail in taxonomy. This discovery adds the growing knowledge on the biodiversity of leafhoppers in the Malay Archipelago and highlights the importance of continued exploration in this region.

Material and methods

External characteristics and male genitalia were observed and photographed using advanced stereo-microscope (Discovery V20, Zeiss) and CCD camera (AxioCam ICc5, Zeiss), followed by the leafhopper terminology of Webb (1981), Zhang & Webb (1996) and Dietrich (2005). Type specimen was deposited in the Illinois Natural History Survey, Champaign, Illinois, USA (INHS).

Taxonomy

Gunungamia gen. nov.

Type specie. *Gunungmia unimaculata* **sp. nov.**, here designated.

Description. Head and mesonotum yellowish, pronotum whitish with yellowish tinge. Forewing grayish hyaline.

Head nearly equal in width to pronotum. Crown angularly produced and depressed between ocelli; concave and distinctly elevated posteriorly; slightly longer medially than next to eyes; coronal suture distinct; anterior margin of head with several transverse and oblique striations. Ocelli relatively large, separated from eyes by distance equal to nearly twice their diameter, situated in depressions on anterior margin of head. Face as broad as long; anteclypeus flat, apex wider than base; antennae situated near upper corner of eye in facial view, longer than half body length; antennal pit deep and slightly encroaching onto clypeus; lateral frontal sutures well developed, evenly curved from above antennal pits to ocelli; gena slightly emarginate below eye. Pronotum shorter than mesonotum, lateral margin short with carina distinctly. Forewing with four apical cells and three subapical cells, inner subapical cell open; with cross-vein connecting outer claval vein to claval suture. Hindwing with four apical cells. Hind femur macrosetae 2+2+1.

Male genitalia. Pygofer with dorsal margin of lobe oblique to narrowly rounded apex with a dorsal apical process; extended anteriorly on each side into rounded apodeme; without macrosetae. Valve pentagonal. Subgenital plate with outer lateral margin strongly constricted near 1/5 base in ventral view, with irregular lateral row of macrosetae in distal one third and scattered fine setae dorsolaterally, mesal margin straight, apex digitate. Style with preapical lobe developed, apical process short and robust, beak-like. Connective long, articulated with aedeagus, stem approximately three times length of arms. Aedeagus with shaft curved dorsally, laterally compressed with processes, gonopore apical on ventral surface; dorsal apodeme well developed.

Etymology. The genus is named after the type locality of the type species, Gunung Mulu National Park.

Remarks. This genus can be distinguished from other Paraboloponina genera by the following combination of characters: body color pale yellowish, crown elevated posteriorly,

male pygofer with a pair of posterodorsal processes; connective stem long and aedeagal shaft curved dorsally, laterally compressed with two pair of processes. The posteriorly elevated crown is also found in *Drabescoides* Kwon & Lee, 1979; *Kutara* Distant, 1908; *Papuakutara* Lu, Webb & Zhang, 2018 and *Neokutara* Lu, Webb & Zhang, 2023.

Distribution. Malaysia (Sarawak).

***Gunungamia unimaculata* sp. nov.** (Fig. 1)

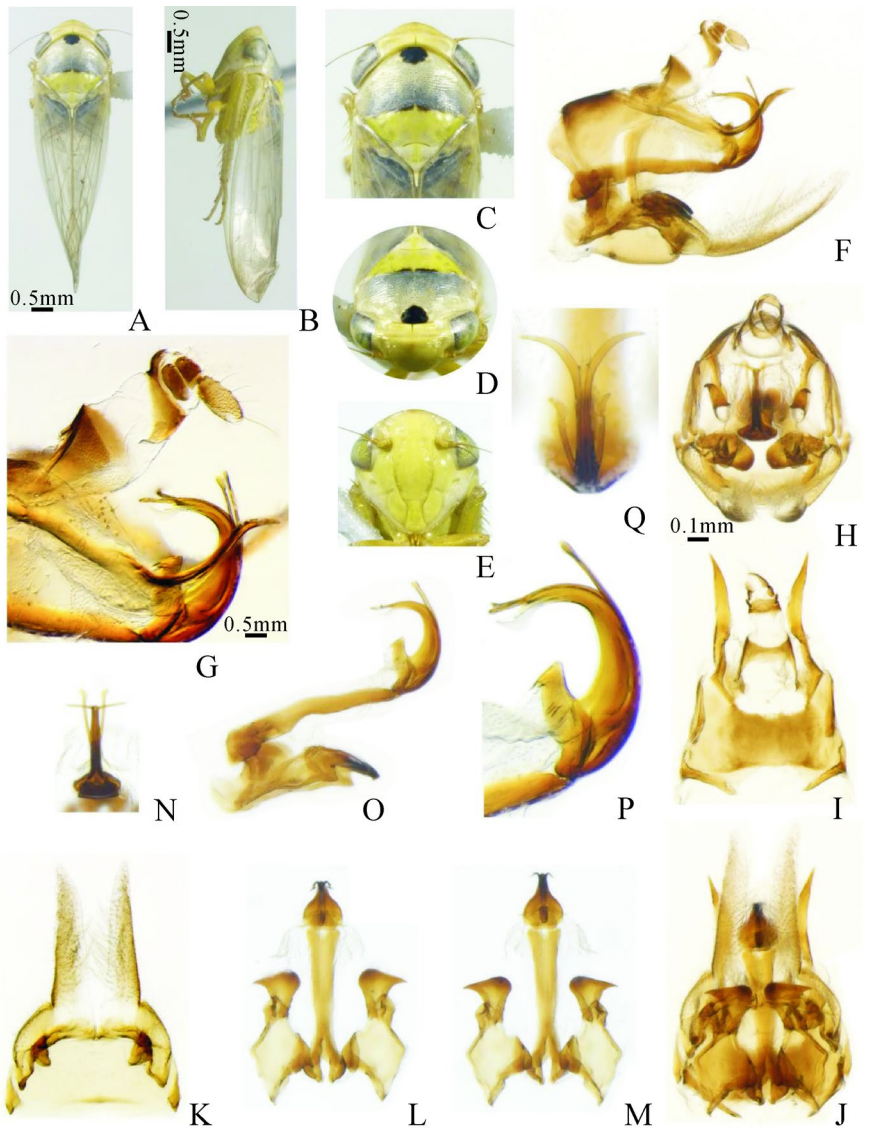

Figure 1. *Gunungamia unimaculata* **sp. nov.** A, B. Male habitus, dorsal and lateral views; C, D. Head and thorax, dorsal and dorso-anterior views; E. Face; F, G. Pygofer and apex amplification, lateral views; H–J. Male genitalia, caudal, dorsal and ventral views; K. Valve and subgenital plates, ventral view; L, M. Style, connective and aedeagus, dorsal and ventral views; N. Aedeagus, caudal view; O. Style, connective and aedeagus, lateral view; P, Q. Amplification of aedeagus, lateral and dorsocaudal views.

Description. Length (including tegmen). Male: 6.7 mm.

Body pale white with a faint yellow tinge, head and mesonotum yellowish; crown with the tip pale brown, pronotum whitish with yellowish tinge, with a single large black anteromedially. Scutellum with yellowish patches anteriorly. Ocelli grayish. Antennal pit yellowish. Face yellow and gena white and yellowish.

Front femur with AM1 large, near mid-height, with single seta AV1 near ventral margin, intercalary row (IC) with about 10 long setae. Foretibia cylindrical, with 2+4 dorsal macrosetae.

Male genitalia. Aedeagus with dorsal apodeme well developed; shaft strongly curved dorsally, laterally compressed, with paired apical divergent processes, and distal ventral margin extended into a hook-like semi-membranous projection anteriorly in lateral view, and a pair of divergent ventral processes arising near midlength of shaft, directed dorsad.

Holotype. ♂, **Malaysia**, Sarawak (Borneo), Gunung Mulu National Park, 30–50 m elevation, alt. 900 m, 4°02′32.9″N, 114°48′46.7″E, 16–22-X-2006, JR CRYAN & JM URBAN (INHS).

Etymology. The specific epithet "*unimaculata*" refers to a single black spot on pronotum anteromedially.

Acknowledgements

We are grateful to Prof. JR CRYAN and Prof. JM URBAN (New York State Museum, U.S.) for the specimens for revising the manuscript. This study was supported by the National Natural Science Foundation of China (U1603106; 31420103911) and the Shaanxi Provincial Scientific Foundation (2023-JC-YB-174).

References

Dietrich CH. 2005. Keys to the families of Cicadomorpha and subfamilies and tribes of Cicadellidae (Hemiptera: Auchenorrhyncha). *Florida Entomologist*, 88(4): 502–517.

Distant WL. 1908. Rhynchota–Homoptera. *Fauna of British India*, 4: 1–501p.

Kwon YJ & Lee CE. 1979. Some new genera and species of Cicadellidae of Korea (Homoptera: Auchenorrhyncha.). *Nature and Life in Southeast Asia* (*Kyungpook Journal of Biological Sciences*), 9(1): 49–61.

Lu L, Webb MD & Zhang YL. 2018. A new leafhopper genus of subtribe Paraboloponina (Hemiptera: Cicadellidae: Deltocephalinae: Drabescini), with description of two new species from Papua New Guinea. *Zootaxa*, 4521(2): 281–286.

Lu L, Webb MD & Zhang YL. 2023. *Neokutara*, a new arboreal genus in the *Kutara* leafhopper group (Hemiptera: Cicadellidae: Deltocephalinae), with four new species from Sulawesi, Indonesia. *Entomotaxonomia*, 45(4): 241–250.

Webb MD. 1981. The Asian, Australasian and Pacific Paraboloponinae (Homoptera: Cicadellidae). *Bulletin of the British Museum* (*Natural History*) (*Entomology*), 43: 39–76.

Zhang YL. 1990. *A Taxonomic Study of Chinese Cicadellidae* (*Homoptera*). Tianze Eldonejo, Yangling, 218 pp.

Zhang YL & Webb MD. 1996. A revised classification of the Asian and Pacific Selenocephalinae leafhoppers (Homoptera: Cicadellidae). *Bulletin of the Natural History Museum, Entomology Series*, 65: 1–103.