THE CICADA GENUS Mogannia (Hemiptera: Cicadidae) FROM VIETNAM, WITH KEY TO SPECIES

PHAM HONG THAI
Institute of Ecology and Biological Resources, Vietnam Academy of Science and Technology

I. INTRODUCTION

The cicada genus Mogannia Amyot & Serville is characterized by its anteriorly protruding postclypeus and was formerly placed in the tribe Moganniini Distant (sensu Metcalf 1963a, 1963b; Duffels & van der Laan 1985). Hayashi (1976) reviewed the genus Mogannia from Taiwan and the Ryukyus, illustrated five known species and provided a key to the species as well. According to Hayashi (1976), the genus Mogannia should be allied to Nipponosemia Kato and Emathia Stal. Lee & Hill (2010) recognized Moganniini as a junior synonym of Cicadatrini Distant and redefined the latter by including Cicadatra Kolenati, Psalmocharias Kirkaldy, Mogannia, Nipponosemia and Emathia. Recently, Pham & Yang (2009) reviewed the family Cicadidae from Vietnam, with provided a list ten species of genus Mogannia.

In the present paper we reviewed the species of Mogannia from Vietnam, with a key to species of the genus Mogannia from Vietnam is provided.

II. MATERIALS AND METHODS

Specimens were collected by netting and light trapping. Previously collected specimens were included in our evaluations. Specimens are deposited at the Department of Insect Systematics of the Institute of Ecology and Biological Resources, Hanoi (IEBR).

The tribal classification of this study is based on that of Moulds (2005). Genus and species names, as well as synonymies, follow the catalogues of Metcalf (1963), and Lee (2008).

The nomenclature of the different parts of the body follows Moulds (2005).

Specimens examined are listed by provinces (given in bold).

The following acronyms are used: NP (National Park), NR (Natural Reserve).

III. TAXONOMY

Family: Cicadidae
Subfamily: Cicadinae
Tribe: Moganniini
Genus: Mogannia Amyot & Audinet-Serville, 1843

Type species: Cicada conica Germar, 1830, Tnon’s Arch. II., 2: 39.
Distribution. Oriental region.
Key to the Vietnamese species of the genus Mogannia

1 (2) Vertex, supra-antennal plate, pronotal collar, and mesonotum green ........................................ 3
2 (1) Vertex, supra-antennal plate, pronotal collar, and mesonotum not so ........................................ 7
3 (4) Fore wing hyaline without mark infuscations ................................................................. M. viridis
4 (3) Fore wing hyaline with mark infuscations ............................................................ 5
5 (6) Hind wing without fuscous stripes on anal angle .................................................... M. hebes
6 (5) Hind wing with a fuscous stripe on anal angle .................................................. M. obliqua
7 (8) Body lustrous metallic dark blue or bluish-black; frontoclypeus longer than vertex in median length ........................................................-ceaseless and not bluish; frontoclypeus as long as or shorter than vertex in median length 9
8 (7) Body lusterless and not bluish-black; frontoclypeus as long as or shorter than vertex in median length .......................................................... M. cyanea
9 (10) Fore wing bright yellow for half the length from the base, marked with black at the base, and with a large black spot at the base of the first and second discal areolets .......................................................... M. cyanea
10 (9) Fore wing with half of basal brown or deep brown .................................................. 11
11 (12) Hind wing hyaline with their bases narrowly sanguineous ................................... M. saucia
12 (11) Hind wing hyaline without their bases narrowly sanguineous ................................ M. effecta
13 (14) Fore wing pale hyaline; the basal halves fuscosus and semi-opaque, costal membrane and extreme base sanguineous .......................................................... M. conica
14 (13) Fore wing not so ........................................................................................................... 15
15 (16) Fore wing with basal area, clavus and transverse streak on media black-brownish .......................................................... M. caesar
16 (15) Fore wing not so ........................................................................................................... 17
17 (18) Fore wing hyaline, the latter black on basal half, one basal round spot and apical fascia yellowish black .......................................................... M. funebris
18 (17) Fore wing pale hyaline, the venation and costal area pale castaneous; an oblique dark castaneous fascia, enclosing a transverse, waved, pale, linear fascia commencing at upper end of radial cell and terminating on claval cell .......................................................... M. aliena

Mogannia effecta Distant, 1892
Distribution: Vietnam (Vinh Phuc), China, India, Nepal, Indonesia.

Mogannia cyanea Walker, 1858
Material examined: No specimen was examined.
Distribution: North Vietnam, South China, Taiwan (China), Thailand, Myanmar, India.
HỘI NGHỊ KHOA HỌC TOÀN QUỐC VỀ SINH THÁI VÀ TÀI NGUYỄN SINH VẬT LẦN THỨ 5

*Mogannia hebes* (Walker, 1858)

*Cephaloxys hebes* Walker, 1858b: 38 [TL: North China].


**Material examined**: Vinh Phuc: 1♂, Tam Dao NP, 900-1000m, Cic1501, 2002; 1♀, same locality, Cic0817, vi.2002; Dong Nai: 1♂, Cat Tien NP, Cic0882, 9.v.2001.

**Distribution**: Vietnam (Lao Cai, Vinh Phuc, Lang Son, Dong Nai), China, India, South Korean, Japan, Malaysia, Taiwan (China).

*Mogannia caesar* Jacobi, 1902


**Material examined**: Vinh Phuc: 2♂, 1♀, Tam Dao NP, 900-1000m, Cic0762-Cic0764, 2002; 1♀, same locality, Cic0334; 15.vii.2001; 2♂, 1♀, Dao Tru, Lap Thach, Cic0330, Cic0332, Cic0333, Cic0815, 19.v.2001; 1♂, Me Linh Station for Biodiversity, 100m, Cic0331, 23.iv.2001; 1♀, same locality, Cic1169, 31.v.2007; **Hai Phong**: 1♂, Cat Ba NP, Cic0335, 17.vii.2003, coll. Pham Hong Thai; **Ninh Binh**: 1♂, Cuc Phuong NP, Cic1168, 24.v.2005; 1♀, same locality, Cic1172, 3.v.2006; 1♂, same locality, Cic1173, iv.2006; 2♀, same locality, VS378, VS379, v.2006; **Thanh Hoa**: 1♂, Pu Luong NR, Thanh Son, Ba Thuoc, 600m, Cic0234, 10.iv.2002; 1♀, Pu Luong NR, Lung Cao, Ba Thuoc, 500-700m, Cic0223, 14.vi.2003; **Ha Tinh**: 3♂, 2♀, Khe Let, Son Hong, Huong Son, 600-800m, Cic0446-Cic0450, 22-24.iv.2004, coll. Truong Xuan Lam; **Lam Dong**: 1♂, Dambri, Bao Loc, 800m, Cic0115, v.2003, coll. Ta Huy Thinh.

**Distribution**: Vietnam (Vinh Phuc, Lang Son, Hai Phong, Ninh Binh, Thanh Hoa, Ha Tinh, Lam Dong), China, Thailand.

*Mogannia conica* (Germar, 1830)

*Cicada conica* Germar, 1830: 39 [TL: Java].


**Material examined**: Vinh Phuc: 2♂, Tam Dao NP, 900-1000m, Cic0762-Cic0764, 2002; 1♀, same locality, Cic0334; 15.vii.2001; 2♂, 1♀, Dao Tru, Lap Thach, Cic0330, Cic0332, Cic0333, Cic0815, 19.v.2001; 1♂, Me Linh Station for Biodiversity, 100m, Cic0331, 23.iv.2001; 1♀, same locality, Cic1169, 31.v.2007; **Thanh Hoa**: 1♂, Pu Luong NR, Thanh Son, Ba Thuoc, 600m, Cic0234, 10.iv.2002; 1♀, Pu Luong NR, Lung Cao, Ba Thuoc, 500-700m, Cic0223, 14.vi.2003; **Ha Tinh**: 3♂, 2♀, Khe Let, Son Hong, Huong Son, 600-800m, Cic0446-Cic0450, 22-24.iv.2004, coll. Truong Xuan Lam; **Lam Dong**: 1♂, Dambri, Bao Loc, 800m, Cic0115, v.2003, coll. Ta Huy Thinh.

**Distribution**: Vietnam (Vinh Phuc, Lang Son, Hai Phong, Ninh Binh, Thanh Hoa, Ha Tinh, Lam Dong), China, Thailand.

*Mogannia aliena* Distant, 1920


**Material examined**: No specimen was examined.

**Distribution**: North Vietnam.

*Mogannia saucia* Noualhier, 1896

Mogannia indigotea Distant, 1917a: 101, 103 [TL: Chapa, Tonkin; N. China; Milanao, Tayabas, Philippine Is.]; Metcalf, 1963b: 879 (synonymized by Boulard (2005d)).

**Material examined:** **Vinh Phuc:** 2♂, Lap Thach, 200m, 19.v.2001, coll. Hoang Vu Tru; **Phu Tho:** 2♂, Xuan Son NP, 400m, 15.vi.2004, coll. Pham Hong Thai; **Hai Phong:** 1♀, Cat Ba NP, 200m, 17.vii.2003, coll. Pham Hong Thai; **Quang Nam:** 1♀, LaBo B, ChaVal, Song Thanh NR, Ho.1022, 28.iv.2005.

**Distribution:** Vietnam (Vinh Phuc, Phu Tho, Hai Phong, Lang Son, Quang Nam), South China, Philippine, Indonesia, Laos, Cambodia, Thailand.

Mogannia obliqua Walker, 1858


**Material examined:** **Hoa Binh:** 1♀, Tan So’n, Mai Chau, 900m, Cic0074, 30.vi.2001; **Gia Lai:** 1♀, Ayun, Mang Yang, 978m, Ho.2.0125, 1.vi.2011, coll. Hoang Vu Tru; 1♂, Dak Jo Ta, Mang Yang, 1000-1100, Ho.2.0013, 9.vi.2011, Hoang Vu Tru; **Dong Nai:** 1♀, Cat Tien NP, Sa Mach, Cic0095, 5.vi.2002.

**Distribution:** Vietnam (Hoa Binh, Gia Lai, Dong Nai), Malaysia, Indonesia (Java), Myanmar, India.

*Mogannia viridis* (Signoret, 1847)

*Cephaloxys viridis* Signoret, 1847a: 294 [TL: Java].


*Mogannia distinguenda* Distant, 1920: 337 [TL: Haut Mekong, Muong Sing, Indochina] (synonymized by Moulton (1923)).

**Material examined:** **Lam Dong:** 1♂, Bao Loc pass, 800m, Cic0338, 5.viii.2001.

**Distribution:** Vietnam (Lam Dong), Philippines, Indonesia (Java, Sumatra), Myanmar, India.

*Mogannia funebris* Stål, 1865


**Material examined:** No specimen was examined.

**Distribution:** Vietnam (Mau Son, Lang Son), Myanmar, Bangladesh, India.

**Acknowledgments:** We thank Dr. Susini Marie-Lucie and Dr. Patrick Grootaert (Royal Belgian Institute of Natural Sciences) for grant support to the first author; the grant was issued by the capacity building Programme of the Belgian Global Taxonomic Initiative National Focal Point and runs with financial support from the Belgian Directorate-General for Development Cooperation. The present study was partially supported by the basis project of the Department of Insect Systematics, IEBR, the National Foundation for Science and Technology Development (NAFOSTED-106.12-2012.63), Vietnam, the International Foundation for Science (IFS-No D/5181-1), Sweden, and the Nagao Natural Environment Foundation, Japan.
REFERENCES


6. Distant, W.L., 1913; On some recently received Rhynchota. The Annals and Magazine of Natural History (8), 12 (72), 556-563.


GIÓNG VE SẦU Mogannia (Hemiptera: Cicadidae) Ở VIỆT NAM

PHẠM HỒNG THÁI

TÓM TẮT

Giống ve sầu Mogannia thuộc tổ Mogannini, phân họ Cicadinae, họ ve sáo Cicadidae gồm 10 loài được ghi nhận có mặt ở Việt Nam: Mogannia Amyot & Audinet-Serville, 1843; Mogannia effecta Distant, 1892; Mogannia cyanea Walker, 1858; Mogannia hebes (Walker, 1858); Mogannia caesar Jacobi, 1902; Mogannia conica (Germar, 1830); Mogannia aliena Distant, 1920; Mogannia saucia Noualhier, 1896; Mogannia obliqua Walker, 1858; Mogannia viridis (Signoret, 1847) và Mogannia funebris Stal, 1865. Trong bài báo này, chúng tôi đưa thông tin về phân bố của tất cả các loài và dựa trên những đặc điểm hình thái, xây dựng khóa định loại đến loại thuộc giống Mogannia đã được ghi nhận ở Việt Nam.