

A NEW SPECIES OF GENUS *CHREMISTICA* STÅL, 1870 (HEMIPTERA: CICADIDAE) FROM VIETNAM

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ABSTRACT: A new species of the genus *Chremistica* Stål, from Vietnam, *Chremistica sueuri* sp. n. was described and illustrated. Habitus pictures of the adult, illustrations of the male genitalia, a distribution map and biological data are provided. A key to two species of *Chremistica* from Vietnam, based on the males, was also given. *Chremistica sueuri* sp. n. was a species of the *Chremistica bimaculata* group. The new species was distinguishable from all other species of the group by the structure of pygofer. Pygofer oblong in ventral view, dorsally marked with black, and sparsely covered with ochraceous hairs along proximal and laterodistal margins; basal lobe of pygofer S-shaped with apex slightly prominent, upper lobe of pygofer in ventral view with a broad and straight apical margin; a narrowly rounded, slightly inwardly curved, mediobasal corner, and an obtusely angled corner between apical margin of lobe and more distal pygofer margin; uncus bifurcate, lobes elongate and acute apically; dorsal beak acute, brownish black; anal styles and anal tube dark brown.

Keywords. Auchenorrhyncha, Cicada, *Chremistica*, morphology, new species, Vietnam.

INTRODUCTION

The genus *Chremistica* Stål, 1870 contains 49 species distributed throughout the Oriental Region and a single group of species is recorded from Madagascar [9, 3, 4, 13]. The present paper deals with the *Chremistica* species from Vietnam. Distant (1906) recorded *Rihana bimaculata* Distant, a junior synonym of *Chremistica viridis* (Fabricius, 1803), the only species known to date from Vietnam. During examination of the Cicadidae collection in the Museum National d'Histoire Naturelle, Paris (MNHN) a second species of *Chremistica* from Vietnam was found and is here described. A key to two species from Vietnam is provided.

MATERIALS AND METHODS

The type specimens of this new species are deposited in the Museum National d'Histoire Naturelle, Paris.

For identification of subfamilies and genera of the family see Lee (2008) and Pham & Yang (2009) [8, 11]. Morphological terminology follows that of Moulds (2005) [10]. The male genitalia of the holotype were examined and photographed using a dissecting microscope (Leica MZ12.5). A distribution map produced by the software CFF 2.0 [0].

RESULTS AND DISCUSSION

Taxonomy Family Cicadidae Subfamily Cicadinae Tribe Cryptotympanini Genus *Chremistica* Stål, 1870

Chremistica Stål, 1870: 714 (as a subgenus of *Cicada*). Type species: *Cicada bimaculata* Olivier, 1790; *Rihana* Distant, 1904: 426. Type species: *Fidicina ochracea* Walker, 1850.

Diagnosis. Head including eyes wider than base of mesonotum; anterior margin of head forming a triangle with frontoclypeus prominent anteriorly; lateral margin of pronotum insignificant; tymbal completely concealed with tymbal covering; male abdomen a little longer than, but female abdomen about as long as or shorter than, distance from head to cruciform elevation; 8th abdominal tergum much longer than 7th tergum in median length; ovipositor not extending beyond pygofer; fore femur with two big and a very small spines on under surface; male operculum longitudinal, overlapping each other, and not exceeding posterior margin of 3rd abdominal sternum in most cases, with apex broadly rounded; fore and hind wings hyaline without infuscation.

Key to the species-males of genus *Chremistica* from Vietnam

- 1(2) Rostrum reaching intermediate coxae, apex of uncus lobes with a variable number of triangular teeth.....*C. viridis*
- 2(1) Rostrum reaching hind coxae, apex of uncus lobes extending long ventrally and each with acute tip.....*C. sueuri*, sp.n.



Figure 1. Distribution of two species *Chremistica viridis* (Fabricius) and *Chremistica sueuri* sp.n. in Vietnam

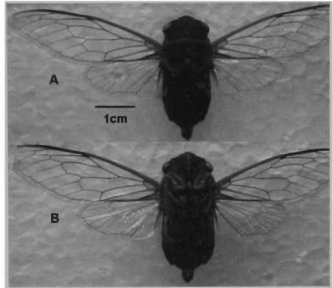


Figure 2. *Chremistica sueuri* sp.n.: A, dorsal view of male. B, ventral view of male.

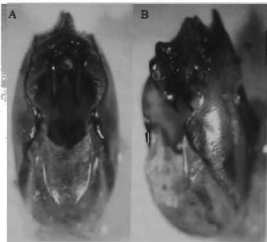


Figure 3. *Chremistica sueuri* sp. n.

- A. Male genitalia in ventral view;
- B. male genitalia in lateroventral view.

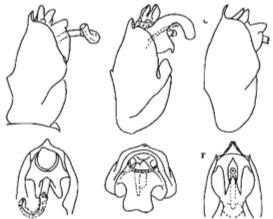


Figure 4. Male genitalia of *Chremistica* species in lateral view

- A. *C. moultoni*; B. *C. bimaculata*; C. *Chremistica sueuri* sp.nov.; D. *C. moultoni*; E. *C. bimaculata*;
- F. *Chremistica sueuri* sp. n. (A, B, D, E: after Boulard, 2002)

Chremistica sueuri, sp.n.

Etymology: The species was dedicated to Dr. Jérôme Sueur in acknowledgment for his kindly allowed me to access to MNHN collection.

Material examined: Holotype ♂: [Saigon, 5-V-50, leg. J. Barbier] (MNHN). Paratypes (3 ♂): 1 ♂: "Saigon [Ho Chi Minh city], 1909, leg. A. Bonhoure" (MNHN); 1 ♂: "Annam [central Vietnam], Quang Tri, 1925, leg. M. et M. Poilane" (MNHN); 1 ♂: "Tonkin [north Vietnam], Hoabinh, 1927, leg. A. De Cooman" (MNHN).

Description

Head: including eyes distinctly narrower than pronotum and slightly wider than mesonotum; vertex black and covered with coppery short hairs; anterior parts of vertex lobes brown, supra-antennal plates, and a pair of triangular to conical spots between lateral ocelli and eyes pale brown; ocelli brown; eyes pale yellow-brown; frons pale yellow-brown; gena, lorum and anteclypeus with exception of keel densely covered with yellow to white long hairs; anteclypeus black with a longitudinal streak yellow-brown; gena black with borders on antenna, postclypeus, and lorum pale yellow-brown; postclypeus prominent with a longitudinal streak yellow-brown with two small longitudinal streak black each side, and transverse groove yellow-brown; lorum black with border on gena pale yellow-brown; rostrum pale yellow-brown with black-brown apex just reaching hind coxae.

Thorax: pronotum yellow-green, with black fasciae in paramedian oblique fissures; anteriorly connected with medially interrupted black fascia along anterior margin of pronotum and posteriorly with a U-shaped, median black mark that touches the black ambient fissure along anterior margin of pronotum collar, markings enclosing a median anchor-shaped spot of the ground colour, black fasciae in paramedian oblique fissures sometimes enclosing a long narrow spot of the ground colour; pronotal collar pale yellow-brown with fasciae black on lateral angle of pronotal collar; mesonotum pale yellow-brown, with submedian

sigilla obconical fields extending to half and sometimes three-fourths of mesonotum disc length, black, lateral sigilla obconical fields enclosing a very narrow to narrow black, elongate spot of the ground colour, central mark sometimes enclosing a pair of spots of the ground colour, basal part of central mark sparsely covered with coppery short hairs, median point of central mark sometimes touching posterior margin of pronotum collar, cruciform elevation pale yellow-brown anterior branches of cruciform elevation with a small apical black spot; thorax in ventral view pale yellow-brown, with second and third basisternum and trochantin brown-black.

Wings: fore and hind wings hyaline, with basal cell of tegmina pale yellow-brown or greenish, costal vein yellow-brown sometimes greenish in basal half and turning dark brown or castaneous apically.

Legs: all legs yellow-brown with markings as follows: fore femora with two long, pale ochraceous to occasionally yellow-brown, spines with dark-brown tips and a very small triangular spine distally of the most distal long spine, apical pretarsal claw of all legs brown-black.

Abdomen: black in dorsal view, tymbal cover half black and yellow-brown, a pair of conspicuous white pubescent, waxy oval patches covering anterior four-fifths of lateral parts of tergite III; tergite VIII brown-black with posterior margin black; pale brown in ventral view, a large mark on median part of sternite II, black; median part of sternite III and whole of sternite VIII brown-black; sternites and paratergites densely covered with silver to golden pubescence.

Operculum: yellow-brown, area basal medially and lateral margins black, basal two-fifths of medial margins slightly overlapping, lateral margin straight and slightly oblique, not reaching beyond anterior margin of abdominal segment II.

Genitalia ♂: pygofer pale brown, oblong in ventral view, dorsally marked with black, and sparsely covered with ochraceous hairs along proximal and laterodistal margins; basal lobe of

pygofer S-shaped with apex slightly prominent, upper lobe of pygofer in ventral view with a broad and straight apical margin; a narrowly rounded, slightly inwardly curved, mediobasal corner, and an obtusely angled corner between apical margin of lobe and more distal pygofer margin; uncus bifurcate, lobes elongate and acute apically; dorsal beak acute, brownish black; anal styles and anal tube dark brown.

Measurements in mm (mean (min-max)): (4 males): body length: 27.95 (27.1-28.8); fore wing length: 35.63 (35.1-36.0); head width: 10.67 (10.5-11.0); pronotum width: 11.1 (10.7-11.5).

Distribution: Vietnam (Hoa Binh, Ha Noi, and Sai Gon).

Discussion

Chremistica sueuri sp.n. was a species of the *C. bimaculata* group as defined by Yaakop, Duffels & Visser (2005) which was characterized by a pair of conspicuous, white, pubescent, waxy oval patches covering anterior four-fifths of the lateral parts of the abdominal tergite III. The new species is distinguishable from all other species of the group by the elongate, apically acute, male uncus (figs. 4).

According to Jacobi, 1905, the species *C. viridis* was distributed in Mau Son, Lang Son province, Vietnam. Therefore, we have made a new map for distribution of two *Chremistica* species in Vietnam (fig. 1).

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LOÀI VE SÀU MỚI THUỘC GIỐNG *CHREMISTICA* STAL, 1870 (HEMIPTERA: CICADIDAE) Ở VIỆT NAM

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TÓM TẮT

Loài ve sầu mới cho khoa học thuộc giống *Chremistica* Stål, *Chremistica sueuri* sp. n. đã được mô tả. Mẫu vật của loài này thu được ở Việt Nam. Bài báo cung cấp ảnh mẫu vật cá thể con trưởng thành, cấu tạo bộ phận sinh dục của con đực và bản đồ phân bố của chúng. Khóa định loại của 2 loài thuộc giống *Chremistica* dựa vào cá thể đực con trưởng thành ghi nhận có mặt ở Việt Nam được trình bày. Loài mới *Chremistica sueuri* sp. n. thuộc nhóm loài *Chremistica bimaculata*, nhóm loài này được xác định do có lớp lông tơ màu trắng như sáp bao phủ trên mép bên của đốt bụng thứ 3. Loài mới này được phân biệt với tất cả các loài còn lại của nhóm loài này bởi cấu trúc của bộ phận sinh dục con đực trưởng thành. Bộ phận sinh dục con đực nhìn từ phía bụng hình thuẫn dạng chữ nhật, với lớp lông tơ dài ở mép bên; thùy gốc của bộ phận sinh dục con đực hình chữ S với đỉnh nhô lên rõ rệt, thùy bên của bộ phận sinh dục con đực nhìn từ phía bụng với mép ở đỉnh thẳng và rộng; một đường hẹp lượn tròn hơi cong ở phía trong; uncus phân nhánh, thùy uncus kéo dài và nhọn ở đỉnh; dorsal beak sắc nhọn, màu đen hơi nâu; anal styles và anal tube màu nâu tối.

Từ khóa: Phân bộ ve sầu và rầy, ve sầu, *Chremistica*, hình thái học, loài mới.

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