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A NEW SPECIES OF *OLIARUS* FROM TAIWAN (Homoptera : Fulgoroidea : Cixiidae)

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Shun-Chern Tsaur (1989) A new species of *Oliarus* from Taiwan (Homoptera : Fulgoroidea : Cixiidae). *Bull. Inst. Zool., Academia Sinica* **28**(3): 171-174. A new species *Oliarus yangi* (Cixiidae) from Taiwan is described. The key to *Oliarus* from Taiwan is attached.

Key words: Taiwan, New species, *Oliarus yangi*, Cixiidae.

The cixiids genus *Oliarus* in Taiwan was recently revised by Tsaur *et al.* (1988). Subsequently a male specimen representing a new species was found among unidentified Homoptera in the insect collection of the National Taiwan University. It is described and illustrated here. Key to *Oliarus* from Taiwan is also modified in addition to this new species.

Oliarus yangi Tsaur, n. sp.

(Fig. 1, A-F)

Description: male general color black dorsally, yellowish brown ventrally. Body slightly covered with powdery wax. Ocelli light yellow. Face two-colored, frons brownish black, postclypeus brown, keels pale; a light yellow macula on each side of frontoclypeal suture. Lateral margins of vertex each with a yellow spot near middle. Intermediate carinae of pronotum each bearing a prominent yellow stripe, another longitudinal, yellow stripe, another longitudinal, yellow marking on middle line. Mesonotal carinae brownish black. Tegmina hyaline. *Sc+R* forked at same level as *Cu*, costal margin with some granules between base and stigma.

Vertex deeply concave at middle portion, 1.7 times as long in middle than broad at base, without median carina, lateroapical areolets extending backwards to basal 2/5, contiguous at apex. Frons slightly wider at widest portion than long in middle line, narrowing basally about 1/3 length of widest portion, median carina forked at basal 1/5. Rostrum missing. Tegmen with 12 apical cells and 5 anteapical cells. Veins without any tiny seta. Chaetotaxy of hind tarsi 7/7. Tegmen 3.2 times as long as broad.

Male genitalia: Pygofer extremely asymmetrical; in left side view dorsolateral angle produced into a finger-shaped process, directed caudodorsal; in right side view nearly quadrate except concave laterocaudally thus forming 2 rounded productions, all directed caudad, medioventral process flame-shape, longer than broad (1.6:1). Anal segment long, with a small apical process on right side; in dorsal view asymmetrical, slightly inclined to left side, anal style slender, tongue-shaped. Genital style asymmetrical, in

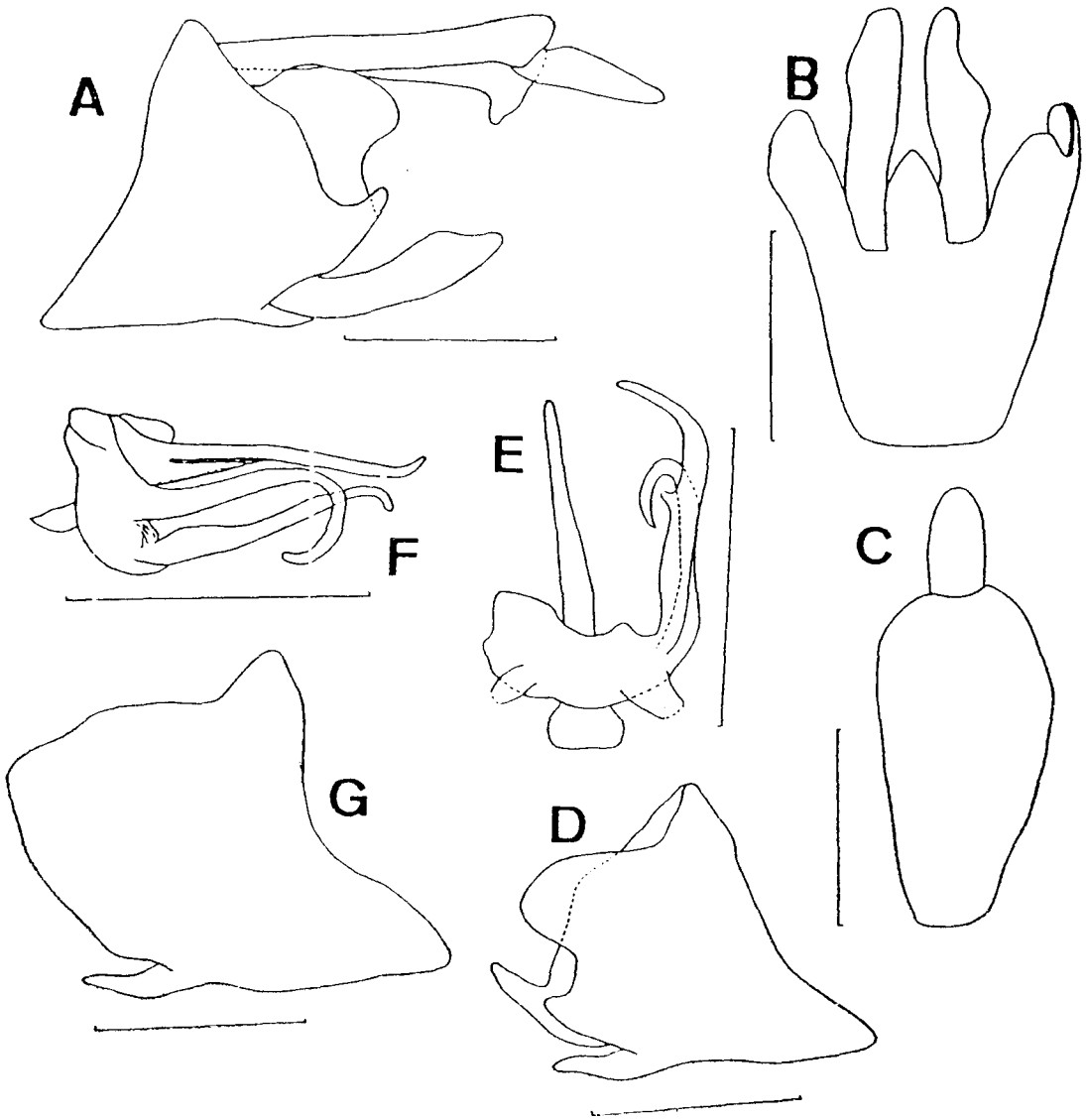

Fig. 1. *Oliarus yangi* n. sp. A. Male genitalia, left side view; B. Pygofer and genital styles, ventral view; C. Anal segment, dorsal view; D. Pygofer, right side view; E-F. Aedeagus. E. Dorsal view; F. Left side view. *Oliarus horishanus* Matsumura; G. Pygofer, right side view. (scale lines=1 mm)

ventral view with left lobe somewhat longer than right lobe. Aedeagus narrowly ring-like at base, in total with 3 spinose processes inserted on base, all visible in left-side orientation: ventral one swollen near base, narrowed to end, directed ventrad apically. Apical part of aedeagus with 2 spines inserted on left side; lower one slightly narrowed to apex, coiled 180 degrees downward at apical third, directed cephalad; upper one dilate basally, narrowing to apex, curving approximately 80 degrees to right at apical fifth; in dorsal view its inner side

bearing a small production near middle.

Female unknown.

Male

Length of body (includ. teg.): 9.03 mm
Length of tegmen : 7.60 mm
Width of mesonotum : 2.09 mm

Holotype: Male, Chihnankung, Taipei City, 1-VI-1987, S. C. Chen. (dissected, and deposited in NTU).

Host plant: Unknown.

Distribution: Taiwan.

Relationship: Oliarus yangi is closely related to *O. horishanus* Matsumura and *O. nigronervatus* Fennah in the general pattern of the male genitalia and appearance. The main differences are found in the structure of male pygofer: in *O. yangi* the dorsolateral angle of left side bears a finger-shaped production while such a produdtion lacks in *O. horishanus*; obtusely triangular in *O. nigronervatus.*

This species is named in honor of Prof. Chung-Tu Yang in recognition of his contributions to our knowledge of the Taiwanese Fulgoroidea.

Key to the Taiwanese *Oliarus*

1. Aedeagus with 4 spinose processes...2
-. Aedeagus with more or less spinose processes than above 7
2. Vertex twice as long as broad or more 3
-. Vertex 1.5 times as long as broad or less 4
3. Genital styles penetrate through pygofer; apical margin of aedeagus with a spiral, awl-shaped process; anal segment of male complete .... *velox* Matsumura
-. Genital styles laying above ventral margin of pygofer; apical margin of aedeagus without process; anal segment of male in caudal view with a longitudinal slit medially..... .....*hopponis* Matsumura
4. Aedeagus with process on right side 5
-. Aedeagus without any process on right side.....6
5. Genital style with an outer lobe subapically; flagellum directed right side.....*chiangi* Tsaur et Hsu
-. Genital style without any lobe; flagellum curving left then right ....*speciosus* Matsumura
6. Anal segment of male symmetrical, of female ovate; aedeagal process 3 directed laterad, 1 cephalad..... .....*formosanus* Matsumura
-. Anal segment of male asymmetrical, of female triangular; aedeagal process 1 directed laterad and 3 cephalad .....*scalenus* Tsaur et Hsu
7. Aedeagus tubular 10
-. Aedeadus irregular.....8
8. Body length (includ. teg.) of male less than 7 mm; medioventral process reduced; genital style with sinuate margin.....*tappanus* Matsumura
-. Body length (include. teg.) of male more than 9 mm; medioventral process flame-shaped; genital style with smooth margin.....9
9. Male pygofer in lateral view quadrate; in dorsal view left side of aedeagus with two processes; one curving to right the other curving to left.....*horishanus* Matsumura
-. Male pygofer in lateral view with 1 or 2 productions; in dorsal view left side of aedeagus with two processes; one curving to right the other curving ventrad (Fig. 1)..... .....*yangi* n. sp.
10. Vertex twice as long as broad; out side of genital style with production subapically.....11
-. Vertex 1.6 times as long as broad or less; genital style without and production.....*oryzae* Matsumura
11. Aedeagus with 5 spinose processes... 12
-. Aedeagus with 3 spinose processes... ..... *bifidus* Tsaur et Hsu

12. Aedeagual process directed cephalad; male anal segment crooked ....*elevatus* Tsaur et Hsu
-. Aedeagual process only one directed cephalad; male anal segment asymmatrically ovate ...*mori* Matsumura

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菱飛蝨科 *Oliarus* 屬之一新種

曹 順 成

臺灣菱飛蝨科 *Oliarus* 屬之昆蟲，最近剛由 Tsaur *et al.* 於 1988 年增訂完畢。本文增補一新種 *Oliarus yangi* (楊氏菱飛蝨)，並將 *Oliarus* 屬之檢索表修正，以便涵蓋本種。