TWO NEW SPECIES OF OECLEUS FROM TEXAS AND ARIZONA (HOMOPTERA: FULGOROIDEA: CIXIIDAE)[1/]

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ABSTRACT

Two new species of Oecleus, obrieni from Texas and biflagellatus from Arizona, are described. Kramer's (1977) key to Oecleus is modified for their inclusion.

INTRODUCTION

The genus Oecleus in the United States was recently revised by Kramer (1977). Subsequently several specimens representing 2 new species were found among unidentified Oecleus in my collection. These are described and Kramer's key is modified for their inclusion.

OECLEUS OBRIENI O'BRIEN, NEW SPECIES
(Fig. 1-3)

Salient features.—Length of males 3.5-3.8 mm., females 4.0-4.2 mm. Ground color of frons and clypeus light brown to light fuscous, vertex and thorax usually darker with all carinae pale; vertex slightly narrowed but not closed basally, prolonged anteriorly for less than greatest width; pronotum pale with 2 dark longitudinal lines on each side meeting those of mesonotum; disc of mesonotum with 5 longitudinal carinae, innermost lateral carinae often obscure in apical 1/3; ground color of thoracic disc darker than carinae, but areas along median carina and short broad longitudinal bar on lateral disc usually tawny, so that fuscous ground color is reduced to 2 dark lines bordering each outermost lateral carina; forewings hyaline, crossveins brown, other veins pale with distinct brown pustules, 2 dark patches on commissural margin, one near middle of clavus, other 1/2 its length at claval apex, each forewing with enfumed spot at apex of each longitudinal vein, costal vein pale anterad to stigma, stigmal cell with narrow brown patch.

Male genitalia.—Median lobe of pygofer in ventral view lobately produced (Fig. 1); aedeagal shaft with 3 ventral processes, left and middle processes less than 1/2 length of right process (these may be slightly curved at tip), right process curved smoothly to right; flagellum with one process near apex (Fig. 2); anal flap in lateral view with truncate apex, slight emargination on venter before apex (Fig. 2).

Type.—Holotype ♂ and allotype ♀: 4 mi. s. Pine Springs, Culbertson Co., TX, VI-10-1972, C. W. O'Brien.

Specimens studied.—17 paratypes (9♂, 8♀) with same data as holotype.

Type repository:—Holotype, allotype, and 13 paratypes—collection of Lois O'Brien. Paratypes deposited in the collections of Texas A & M University (1♂, 1♀) and California Academy of Sciences (1♂, 1♀).

Notes.—The aedeagal processes are the distinctive features of this species, but the small size of the species and the pattern on the pro- and mesonota may be helpful for its recognition. Externally it would be confused most easily with monilipennis Van Duzee which is only slightly larger and has a similar but paler color pattern.

This species is named in honor of my husband Charles, whose skill and patience have

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OECLEUS BIFLAGELLATUS O'BRIEN, NEW SPECIES
(Fig. 4-6)

Salient features.—Length of males 4.9-5.0 mm. Ground color of head, thorax, and legs fuscous to black with most carinae paler; vertex narrowly open basally and prolonged anteriorly for less than greatest width; disc of mesonotum with 5 longitudinal carinae, innermost lateral carinae scarcely elevated; outermost lateral carinae not differing from ground color, median carina narrowly tawny, innermost lateral carinae broadly tawny; an even wider short longitudinal tawny bar on lateral disc of mesonotum, contrasting sharply with black ground color; forewings hyaline with pustules on veins indistinct, 2 narrow brown patches on commissural margin, one near middle of clavus, other at claval apices, and a narrow brown patch contiguous to vein in stigmal cell.

Male genitalia.—Median lobe of pygofer in ventral view spatulately produced(Fig. 5); aedeagal shaft with 2 ventral processes which are fused at base so they almost seem to form a second flagellum; both processes curved to the left, one curving around and above the aedeagal shaft; flagellum with 2 processes of about equal length, one extending beyond flagellar apex (Fig. 4); anal flap in lateral view subtriangular (Fig. 4)

Type.—Holotype ♂: Sunnyside Canyon, 3.5 mi. s. Parker Canyon Lake, 5800', Yuma Co.,AZ., IX-9-1965, L. and C. W. O'Brien.

Specimens studied.—Paratype ♂: Molino Basin, Sta. Catalina Mts., 4600', Pima Co., AZ., IX-3-1965, blacklight trap, L. B. and C. W. O'Brien.

Type repository.—Collection of Lois B. O'Brien.

Notes.—This species can be recognized by the broad basal fusion of the 2 ventral processes of the shaft of the aedeagus. Because this fused region is about the width of the flagellum, the aedeagus appears to have two flagella. The specific name, a Latin adjective, refers to the apparent presence of two flagella.

MODIFICATIONS TO KRAMER'S KEY TO OECLEUS

(N.B.: Couplet 4 is unchanged but is included so that one need not switch back and forth from key to key repeatedly. Figures in this paper are numbered 1-6, Kramer's figure numbers, included from his key, are indicated with an asterisk.)

3. Shaft with 1 process 4
   Shaft with 2 or 3 processes (may be fused at base) 5A
4. Larger tawny species; face, carina included, tawny; forewings unmarked; anal flap in lateral view strongly convex on distal ventral margin (fig. 14*) ..... snowi Ball
   Smaller dark species; face, carina excepted, intense black; each forewing with dark, narrow, transverse, subapical stripe; anal flap in lateral view weakly convex on distal ventral margin (fig. 17*) ..... vates Kramer
5A. Shaft with 3 processes 6A
   Shaft with 2 processes (may be united at base) 5B
5B. Two processes of shaft united at base for at least 1/3 their length, fused base of processes almost as thick as flagellum at base (Fig. 4). biflagellatus O'Brien, n. sp.
   Two processes of shaft not united for 1/3 their length 12
6A. All processes more than 1/2 length of shaft, apex of middle process abruptly narrowed and hooked, nearly touching base in ventral view (fig. 19*) ..... martharum Kramer
   Not all processes more than 1/2 length of shaft, middle process not as above. 6B
6B. In ventral view, apex of middle process gradually narrowed and curved to right, apex of left process slightly curving to left (fig. 22*), right process variable in length with apex curving to left 7
   In ventral view, middle and left process almost straight and equal in length, right process long with apex curving to right (Fig. 1) ..... obrieni O'Brien, n. sp.

ACKNOWLEDGEMENT

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LITERATURE CITED

Kramer, J. P. 1977. Taxonomic study of the planthopper genus Oecleus in the United States (Homoptera: Fulgoroidea: Cixiidae). Trans. Amer. Entomol. Soc. 103:379-449.

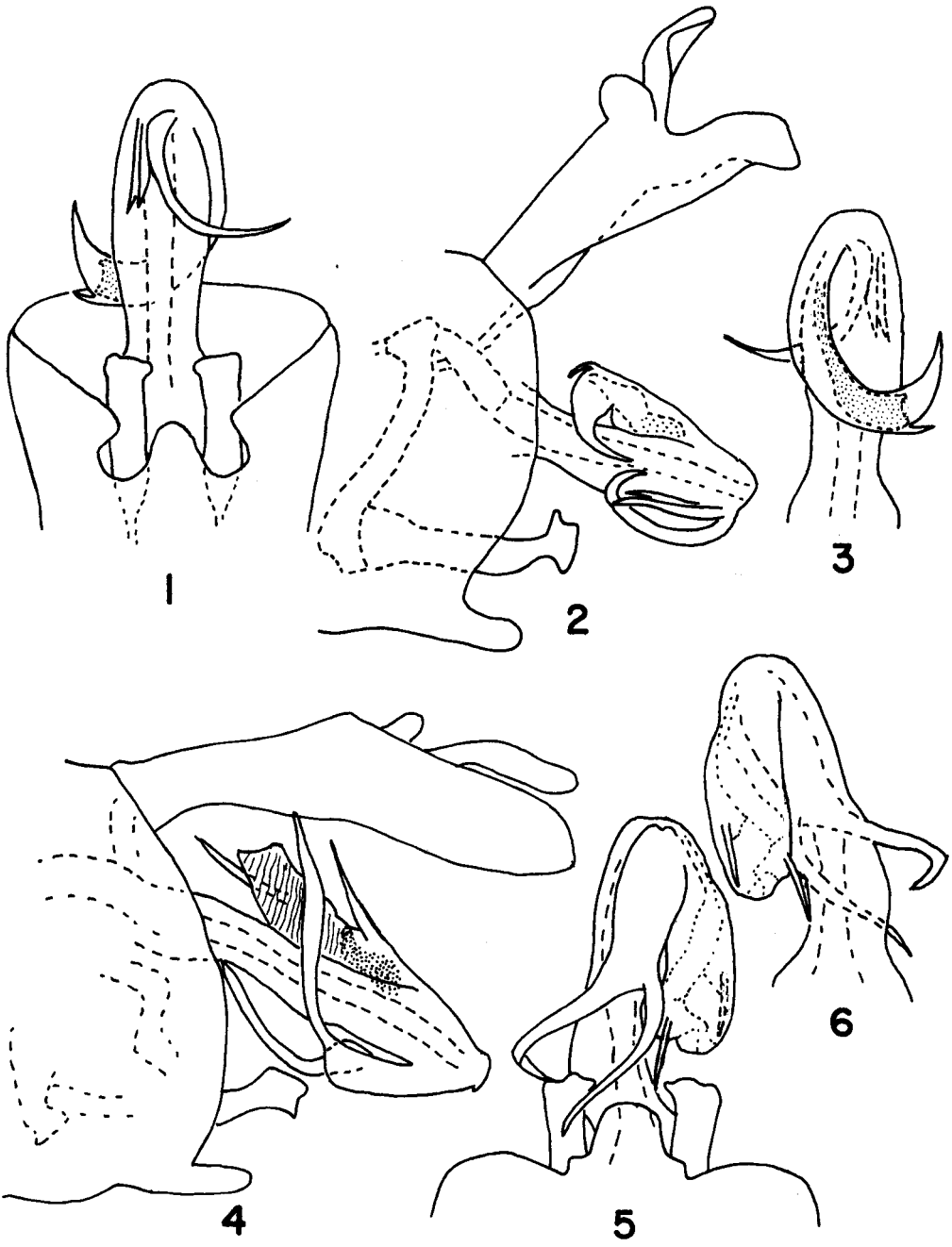

FIGURE LEGENDS

Fig. 1-3. Oecleus obrieni, n. sp.: 1. Ventral view of aedeagus and pygofer. 2. Lateral view, pygofer, aedeagus, and anal flap. 3. Dorsal view of aedeagus.
Fig. 4-6. Oecleus biflagellatus, n. sp.: 4. Lateral view of pygofer, aedeagus, and anal flap. 5. Ventral view of aedeagus and pygofer. 6. Dorsal view of aedeagus.

CORRECTIONS

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Last sentence of page 252 should read "This species is named in honor of my husband Charles, whose skill and patience have resulted in the collection of many new species of Fulgoroidea."