

# *CARMENTA MUNROEI*, A NEW CLEARWING MOTH FROM COSTA RICA (LEPIDOPTERA: SESIIDAE)

THOMAS D. EICHLIN

Plant Pest Diagnostics Center, California Department of Food & Agriculture, Sacramento, California 95832-1448, USA

ABSTRACT.— A new species of Sesiidae from Costa Rica, *Carmenta munroei* Eichlin, n. sp., is described and salient features illustrated.

KEYWORDS: Arctiidae, *Carmenta munroei* n.sp., Central America, Ctenuchinae, distribution, Hymenoptera, Mesoamerica, mimicry, Neotropical, Puntarenas, sex attractants, taxonomy.

The following species description results from ongoing studies of Western Hemisphere Sesiidae. An additional impetus for writing this paper is to recognize Dr. Eugene G. Munroe on the occasion of his 80th birthday in 1999 and his lifetime of achievement and excellence in the systematics of the Lepidoptera.

Dr. Munroe is world renowned for his research and wrote prodigiously on the biosystematics of the Pyralidae and related groups (not Sesiidae), and we have been colleagues in the study of Lepidoptera for many years. I respectfully dedicate this new sesiid to Dr. Munroe.

### *Carmenta munroei* Eichlin, new sp.

**Diagnosis.**— Wing length: 9-10mm. The forewings are mostly opaque brown black with diffuse scaling angled outward from the cell to the whitish anterior tip of each wing. The hindwings are hyaline. The antennae are relatively short. The head and body are mostly brown black, but there is a very narrow white band on the second abdominal segment dorsally; ventrally, the abdomen is solid white toward the base. The abdomen is constricted basally creating a waistlike appearance.

**Description.**— Male (see illustrations): Head with vertex brown black; front gray; occipital fringe brown black with white and pale yellow mixed; Labial palpus brown black, mixed with white, roughened, basal segment with tufting more elongate than last two segments; antenna relatively short, about half of total wing length, some white near base. Thorax brown black, few pale orange scales at wing base on most specimens. Abdomen constricted at segment 2, brown black, dorsally with very narrow white band on posterior margin of segment 2; ventrally with segments 1 and 2 solid white, some pale yellow also on segment 3 of one specimen. Legs mostly brown black, with white on base and apex of forecoxa and ventrally on femora. Forewing mostly opaque, brown black, distal edge of opaque region spreading obliquely from posterior margin at discal spot to anterior tip of wing, leaving hyaline region apically which may contain some transparent scales and white scales, creating whitened apical region; ventrally with orange scaling on discal spot and powdered on anterior opaque area beyond discal spot. Hindwing hyaline, with brownish translucent staining in cell and in region just posterior to cell. Genitalia (see illustration).

Female.— Unknown.

**Host plant.**— Unknown.

**Distribution.**— Known only from type series from COSTA RICA: Puntarenas Province, Golfito.

**Types.**— *Holotype* ♂: Costa Rica: Puntarenas Prov., Golfito, 25 Jun 1976; Malaise Trap, 8AM-5PM, M. Wasbauer Coll. (USNM).

*Paratypes* (3 ♂♂): (2 ♂♂) same as holotype except, 26 Jun 1976; (1 ♂) same as holotype except, 3 Jul 1976; genitalia slide by M. R. Papp, CDA 231 (CNC, CSCA).

**Etymology.**— This species, *munroei*, is named for Dr. Eugene Munroe in honor of his lifetime of contributions to our science.

**Remarks.**— The color patterns of *Carmenta munroei* are similar to species in other higher taxa of Sesiidae, but unlike any known

*Carmenta* species (Duckworth and Eichlin, 1978), and certain similar so-called wasp moths of the Ctenuchinae (Arctiidae); this suggests that a complex of mimics has resulted from attempts to resemble certain irascible and stinging Hymenoptera species. The type series of four males was captured in Malaise traps that also had sesiid sex attractant (Z,Z 3-13 octadecadiene-1-ol acetate) attached to the verticle netting, but it was not possible to determine if they were responding to the attractant or were simply captured in the flight trap (M. S. Wasbauer, pers. comm.).

### ACKNOWLEDGMENTS

I thank Marius Wasbauer for collecting the type series. Technical expertise was provided by my assistant Scott Kinnee.

Acronyms used:

CNC (Canadian National Collection, Agriculture Canada, Ottawa, Ontario, Canada)

CSCA (California State Collection of Arthropods, Sacramento, California), formerly CDFA

USNM (National Museum of Natural History, Smithsonian Institution, Washington, DC)

### LITERATURE CITED

Duckworth, W. D. and T. D. Eichlin

1978. The type-material of Central and South American clearwing moths (Lepidoptera: Sesiidae). *Smithson. Contr. Zool.* (Washington), 261:1-28.

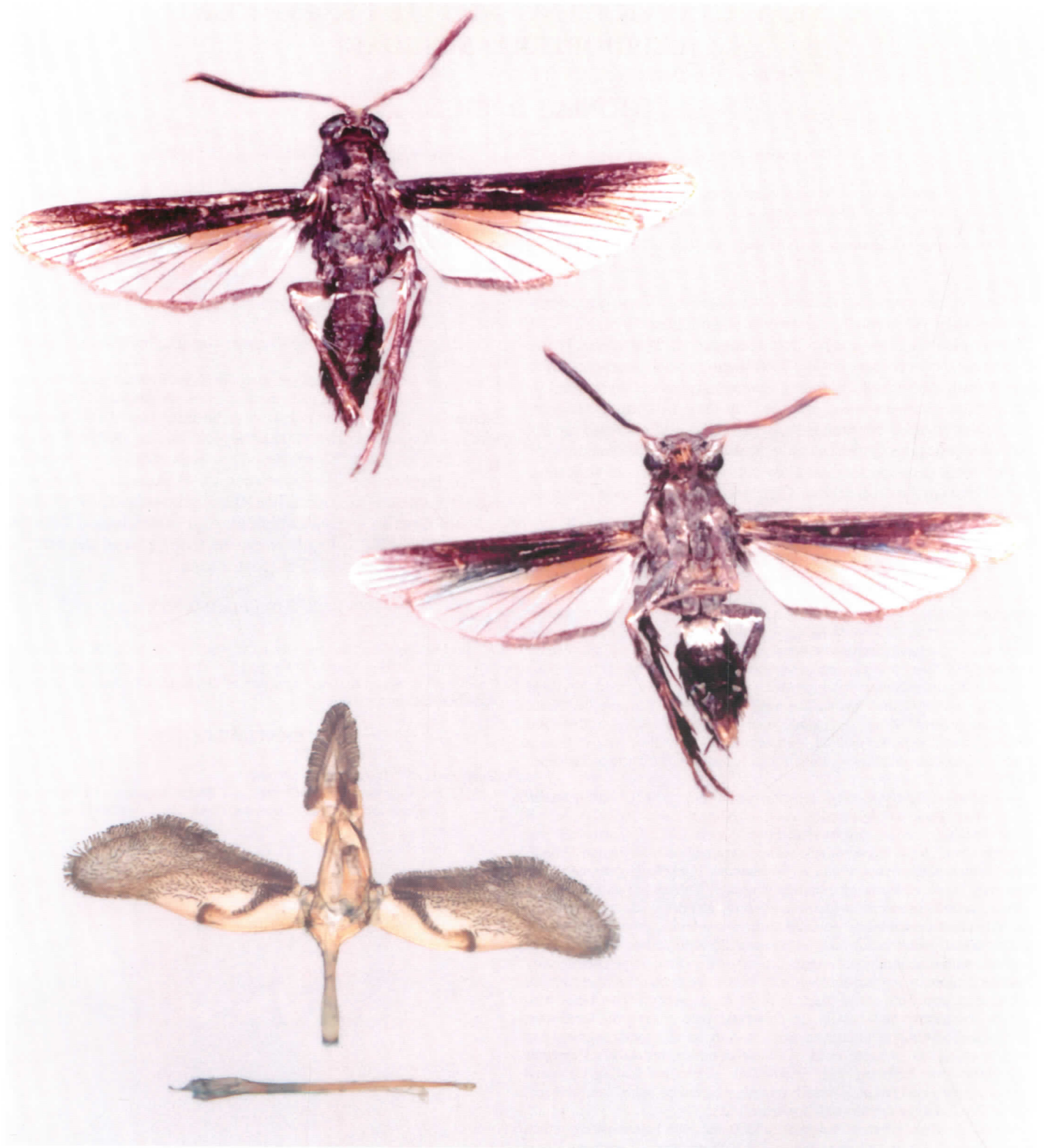


Fig. 1. Adult male of *Carmenta munroei* Eichlin (left: dorsal view; right: ventral view); male genitalia with separated aedeagus (below: ventral view).