

podeal groove and evenly convex subgenital plate with *Ycaploca*, but these features are also present in *Scolebythus*. An apparent tibial spur formula of 1-1-1 may be an additional character linking *D. inopinatus* with *Y. evansi* since *Scolebythus* and *Clystopenella* have the ancestral tibial spur formula of 1-2-2. *Dominibythus inopinatus* may be distinguished from *Y. evansi*, and other extant scolebythids, by its much more reduced wing venation which does not include a complete marginal, submarginal or discoidal cell, by its more strongly diverging frontal carinae, by its lack of well developed notauli and by its lack of an evident metapostnotum on the propodeum.

DISCUSSION

The addition of two new monotypic fossil scolebythid genera to the three extant monotypic genera might seem to unnecessarily clutter this small family with genera. However, on phenetic grounds, the recognition of five genera is justified. Neither fossil species may be placed in a currently defined genus and both are as morphologically distinct as any of their extant relatives. This taxonomic arrangement simply reflects the relictual status of this group and accords with the great range in age of the included species. Unfortunately, this scheme does not represent any cladistic or phenetic relationship between the species.

When Evans (1963) described the family, he speculated that the species attacked wood-boring beetle larvae based on their possession of some characteristics reminiscent of wasps, such as Aulacidae, having such a biology. Features mentioned by Evans (1963: 14) are "the broad mouth opening and powerful mandibles, the reduced clypeus, and the strong malar space; on the thorax the elongate proepisterna, perhaps the large prosternum, and the flattened coxae." Evans (1963: 8) also identified a well developed proepimeron in scolebythids that he stated as "... completely set off by sutures from the proepisterna." From studying his figures and specimens of *Clys-*

topsenella longiventris and *Ycaploca evansi*, as well as the fossil material, however, it appears that this "so-called" proepimeron is actually a part of the fore coxa that extends as a lobe basad of the insertion of the trochanter. Based on collection data from a number of specimens of *Y. evansi*, Nagy (1975) and Brothers (1981) have essentially confirmed Evans' (1963) original speculation. The information indicates that scolebythids develop on wood-boring beetle larvae (Cerambycidae) that are attacked in their host beetle's burrows. Of interest is the possibility that they are gregarious parasitoids (Brothers 1981), which, if true, is unusual for an aculeate. Given the nearly identical modifications of the fossil scolebythids to their extant relatives, it is very likely that they, too, attacked wood boring beetle larvae in the same manner as living scolebythids.

In addition to the features listed by Evans, other peculiar apomorphies of the family include the convexity of SI, the lack of an articulation between SI and SII, the deep concavity in TI that fits the end of the propodeum, the transverse flatness of the tergites as opposed to the convexity of the sternites, and the overall length of the metasoma. Possibly these features facilitate movement through their host's burrows, although it is curious that each modification would seem to allow the metasoma to be more freely articulated dorsad. Possibly this is an alternative means for bringing the sting to bear on the prey; if true, this would differ from the movement of other aculeate wasps which universally articulate the metasoma downward and below the body for stinging prey. If anything, the peculiar modifications of the propectus enhance this idea, for the form of the propectus allows the head to be strongly directed dorsad (as seen in the fossils and pinned scolebythids), and the fore legs to be brought forward; this could allow the mandibles and forelegs to grip the prey while stinging with the metasoma held up and over the body of the wasp.

By attacking wood boring beetle larvae, scolebythids are exposed to places (such as the bases of resin producing trees) where they may be trapped in resin having the possibility of subsequent fossilization. Thus, like many other aculeate wasp taxa that have been found in amber, the biology of scolebythids increases the probability that they may be found in amber. This may partially explain their occurrence in both Lebanese and Dominican ambers, although it is also possible that the family may have been more common in the geologic past.

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A NEW SPECIES AND GENERIC PLACEMENT FOR THE MISIDENTIFIED TYPE SPECIES OF *EPICLEA* DYAR, 1905 (LEPIDOPTERA: LIMACODIDAE)

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Abstract.—A Mexican species of Limacodidae has remained undescribed, hidden under the name *Epiclea elaea* (Druce) 1887 because of an improper type label on a specimen now in the collection of The Natural History Museum, London. The species is described as *Monoleuca longifascia*, new species, and is placed in *Monoleuca* based on a number of putative synapomorphies with the type species *Monoleuca semifascia* Walker.

Key Words: *Epiclea*, *Euprosterina*, *Monoleuca*, Limacodidae, Type species, Mexico, mislabelled type

Druce (1887) described a species of Limacodidae as *Perola elaea* from Volcan de Chiriqui, Panama (Ribbe, in mus. Staudinger). Dyar (1905:373) considered a specimen labelled “type,” from a mixed series of species under the name *P. elaea* in the Druce Collection, to be the type of *P. elaea*. Druce’s specimen, now in the collection of The Natural History Museum, London, is clearly not the type of *P. elaea* but an unnamed species from Jalapa, Mexico (collected by M. Trujillo). Dyar (1905:377) recognized that a second species in Druce’s mixed series matched the figure of *P. elaea* in Druce (1887), although he named it *Euprosterina elaeasa* because he assumed the other species to be *elaea* (see “Discussion” below). A further problem arose when Dyar used the mislabelled “*elaea*” as a basis for describing a monotypic genus *Epiclea* (Dyar 1905:373). Recently, *Epiclea* Dyar was synonymized under *Euprosterina* Dyar 1905 (Becker and Epstein 1995), since true *elaea* belongs in *Euprosterina*, and *Euprosterina elaeasa* was synonymized under *elaea* Druce (Epstein and Becker 1994). The purpose of this treatment is to describe

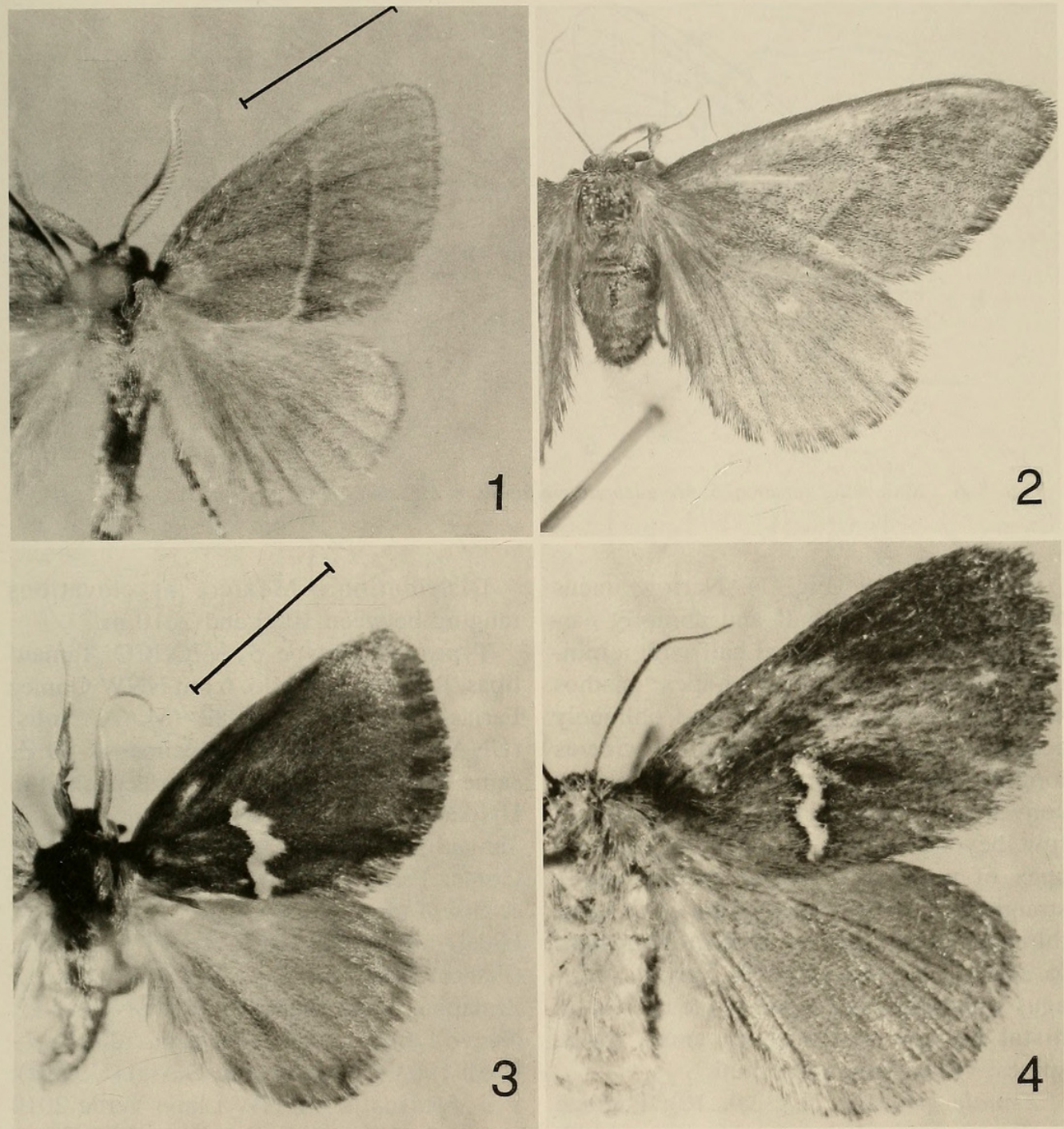
the Mexican species, which has remained without a name and place it in a genus.

Specimens examined were from: The Natural History Museum, London (BMNH); National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM); Natural History Museum of Los Angeles Co., CA (LACM); Vitor O. Becker Collection, Brasilia, Brazil (VOB); Carnegie Museum of Natural History, Pittsburgh, PA (CMNH). The holotype and five paratypes will be deposited in the collection of Instituto de Biología, Universidad Nacional Autónoma de México, Mexico City, D.F. (UNAM).

Monoleuca longifascia Epstein, New species

Diagnosis.—Combination of medial band on forewing, male antennae with broad pectinations to near apex (Fig. 1), fused R_3 and R_4 (Fig. 5), and two hind tibial spurs separate this species from all other known species of limacodids in the Neotropics.

Adult (Figs. 1, 2).—**Head:** Male antenna bipectinate to 3/5 from base; longest pectinations around twice length of antennal



Figs. 1–4. 1, Holotype of *Monoleuca longifascia*, male wing pattern (UNAM) (forewing 9 mm, scale bar = 5 mm). 2, *M. longifascia*, female wing pattern (USNM) (forewing 15 mm) (photo by V. Krantz). 3, *M. semifascia*, male wing pattern (USNM) (forewing 10 mm, scale bar = 5 mm). 4, *M. semifascia*, female wing pattern (forewing 13.5 mm).

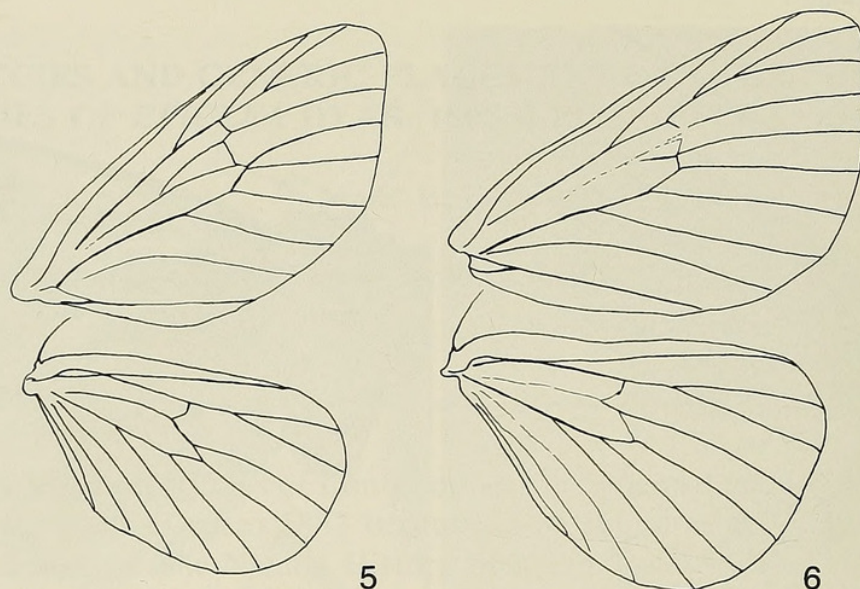
segments. Female antenna filiform. Third labial palpal segment oval, connected to apex of second palpal segment; haustellum weakly developed.

Legs: Hind tibia with one pair of spurs (incorrectly reported as being without spurs by Dyar [1905a, 1935]).

Forewing: Length: 8–11 mm male, 15

mm female. Tawny with narrow buff colored medial band, parallel to outer margin from inner margin to costa; suffused with lighter scales on basal area in some specimens, fringes without checkered appearance; R_3 and R_4 fused, connected to R_5 (Fig. 5).

Hindwing: Unmarked, similar hue to FW.



Figs. 5–6. Male wing venation. 5, *Monoleuca longifascia*. 6, *M. semifascia*.

Male genitalia (Fig. 7): Narrow uncus triangulate in basal half and abruptly narrowed to spindle in apical half with a minute, obliquely curved claw at apex; gnathos with fused distal portion angled obliquely posteroventrad and approx. half as wide as long, extending as far to posterior as uncus, convex above and apex rounded; valva narrow beyond midpoint, extending beyond apex of uncus with dorsal margin nearly straight and ventral margin round in basal third and angled approx. 45 degrees upward to apex; juxta and transtilla simple; aedeagus with basal third upcurved to horizontal distal portion and without small distal spines; vesica without cornuti.

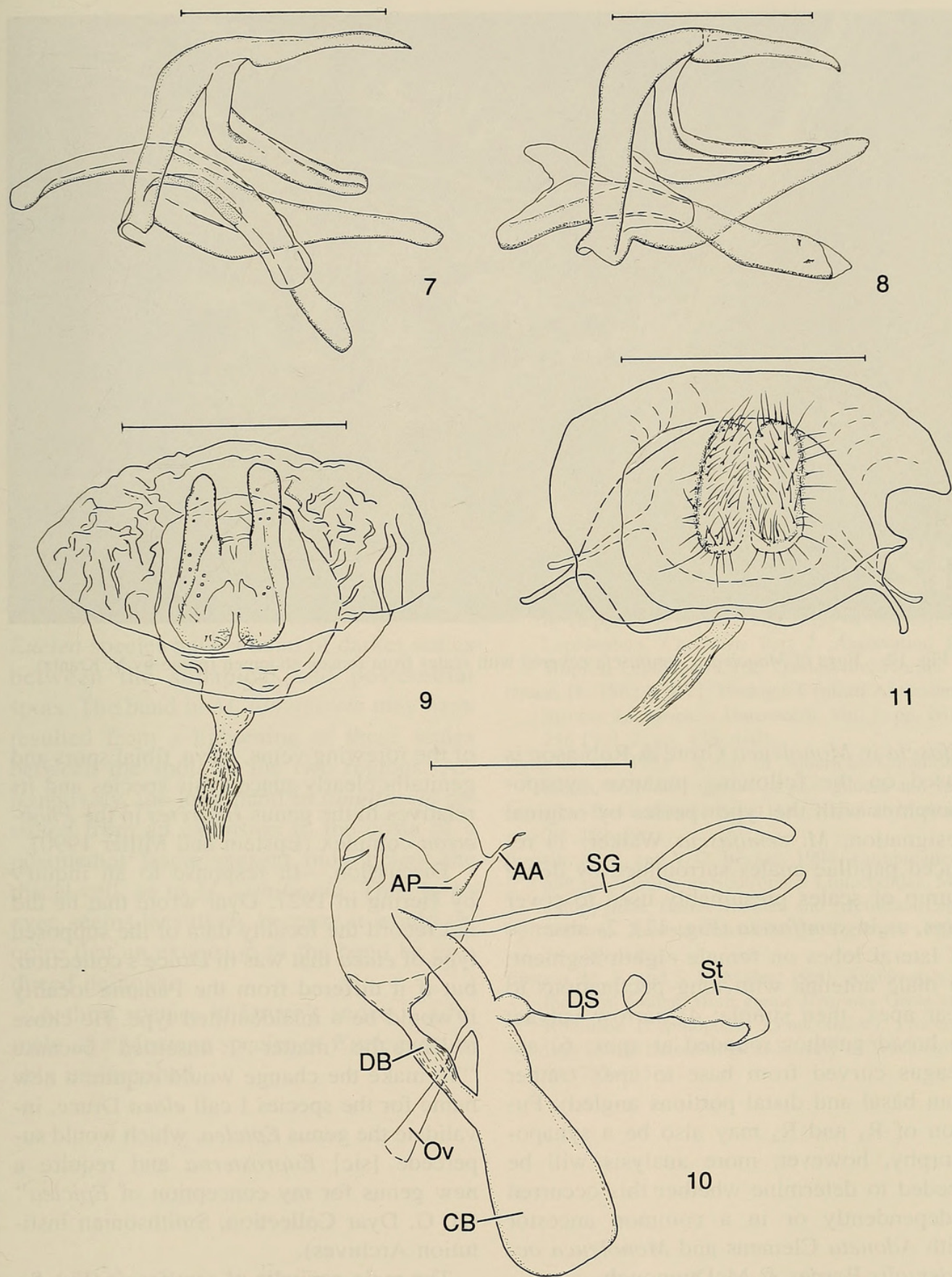
Female genitalia (Figs. 9, 10): Papillae anales narrow relative to transverse width of eighth abdominal segment; dorsum of lobes appearing elongate with angulate margins; lateral lobes on eighth segment absent (often found in limacodids); seventh segment wrinkled, extending to posterior to cover much of eighth segment. Bursa copulatrix short, only about twice length of papillae anales; ductus bursae and corpus bursae approx. equal length; ductus seminalis broadly connected to ductus bursae at distal end proximate to corpus bursae; signum absent.

Larva.—Unknown.

Distribution.—Mexico, at elevations ranging between 1050 and 2010 m.

Types.—Holotype ♂, MEXICO: Tamaulipas, Rancho del Cielo, 6 km NNW Gomez Farias, 3500 ft, vii 1982 (M. A. Solis) (UNAM). Paratypes (27 specimens): 10 ♂, same data as holotype (5 each deposited in UNAM and USNM); MEXICO: 5 ♂, 1 ♀, Tamaulipas, Rancho del Cielo, 6 km NNW Gomez Farias, 3500 ft, 30 vii 1988 (Becker & Solis) (3 ♂ VOB, others USNM); 1 ♂, Hidalgo, 8 mi NE Jacala, vii 1970, 5200 ft, (Fisher) (LACM); 2 ♂, Hidalgo, 11 mi S Zimapan, 3 viii 1966 (Flint) (USNM); 1 ♂, Nuevo Laredo, 3 mi E Galeana, 5000 ft, 7–9 viii 1963 (Duckworth & Davis) (USNM); 1 ♂, Oaxaca, 2 km NW Llano Verde 2010 m, 7 July 1977 (J. E. Rawlins) (CMNH); 1 ♂, Oaxaca, 5 mi NW of Huajuapán, “UVLite,” 28 July 1981 Acc. #699 (P. Jump) (LACM); 2 ♂, Hidalgo, La Montana, Tlanchinol 6000' 11–13 May 1991 D.G. Marqua (LACM); 1 ♂, Veracruz, 8 mi SE Jalapa, 19 July 1981, UVLite Acc#681 P. M. Jump (LACM); 1 ♂, Jalapa (Schaus) (USNM) [genit. prep. 28,200; compared with Druce specimen in BMNH by Dyar]; 1 ♂, Guerrero vic. Acuitlapan, 10 mi NE Taxco 5000 ft. 4–5 September 1970 (E. M. and J. L. Fisher) (LACM).

Generic placement.—Placement of *lon-*



Figs. 7-11. Male genitalia, lateral view (left valva removed) (scale length in parentheses). 7, *Monoleuca longifascia* (2 mm). 8, *M. semifascia* (distal end of aedeagus, right) (1 mm). 9-11, Female genitalia (scale length in parentheses). 9, *M. longifascia*, ventral view, papillae anellus and segments 7-8 (1 mm). 10, *M. longifascia*, view of bursa copulatrix and associated structures (1 mm). 11, *M. semifascia*, ventral view, as for Fig. 9 (1 mm). AA = anterior apophyses; AP = posterior apophyses; CB = corpus bursae; DB = ductus bursae; DS = ductus seminalis; Ov = ovaries; SG = sebaceous gland; St = spermatheca.



Epstein, Marc E. 1996. "A new species and generic placement for the misidentified type species of *Epiclea dyar*, 1905 (Lepidoptera: Limacodidae)." *Proceedings of the Entomological Society of Washington* 98, 812–817.

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