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NEOTROPICAL MICROLEPIDOPTERA, I and II

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BY J. F. GATES CLARKE

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The project reported in this series of papers, to be published under the title "Neotropical Microlepidoptera," was initiated with the aid of a grant from the National Science Foundation for the purpose of increasing the knowledge of the fauna of this vast and interesting geographical region. The grant has enabled me to collect in South America a substantial number of specimens of these small moths. To these will be added, for the purposes of this study, other material that has accumulated over the years in the U.S. National Museum. It is my intention to describe the many novelties and eventually to revise the groups as time will permit.

I. THE GENUS *HOMOEOPREPES* WALSINGHAM  
(LEPIDOPTERA: BLASTODACNIDAE)

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In 1909, Thomas de Grey, Lord Walsingham, established the genus *Homoeoprepes*, for *trochiloides*, from Costa Rica, a species described as new at the same time, and placed it in the family Laveruinae.

When he described this species and genus Walsingham remarked: "The specimen is unfortunately in very poor condition, but it is of

so remarkable a form that it seems desirable to indicate its presence as a feature of the Central American fauna." In addition to the abdomen, which very fortunately was intact, the type consists of the right forewing and left hind wing, both labial palpi (partly denuded), part of one antenna, and one leg.

In view of the condition of the specimen, Walsingham's diagnosis is remarkably accurate. Inasmuch as the type (which I have examined) was in such poor condition, it follows that the generic description contained a few inaccuracies and some omissions. Despite the few inadequacies of the original diagnosis, Walsingham's figure is sufficiently accurate to permit easy identification of his genus.

Following is an emended description:

### Genus *Homocoprepes* Walsingham

*Homocoprepes* Walsingham, 1909, in Godman and Salvin, *Biologia Centrali-Americana*, vol. 42 (Lepidoptera-Heterocera vol. 4), p. 10, fig. 4. (Type of genus: *Homocoprepes trochiloides* Walsingham, by monotypy).

*Homocoprepes* Walsingham, Fletcher, 1929, Mem. Dep. Agric. in India, vol. 11, pp. 111, 142 (as a synonym of *Mompha* Hübner, 1826).

Antenna pubescent, about four-fifths the length of forewing; scape with well-developed pecten. Labial palpus long, recurved; second segment somewhat thickened, slightly roughened in front; third segment nearly as long as second, slender, acute. Head smooth with erect fan of scales from each side meeting along crown; tongue well developed, heavily scaled; maxillary palpus moderately well developed; ocellus absent. Hind tibia long, slender, moderately clothed with hairlike scales above.

Forewing elongate, with 12 veins; 1c well preserved at margin; 2, 3, and 4 from angle of cell; 3 and 4 connate or stalked; 5 well separated from 4; 6 obsolete but well preserved at margin; 7 and 8 stalked, both to costa, 7 very weak except at margin; 9 near or connate with the stalk of 7 and 8; 10 from near outer end of cell; 11 from before middle of cell. Hind wing elongate, apex rounded or bluntly pointed, with 8 veins; 2, 3, and 4 remote; 5 and 6 stalked; 7 separate; 8 short, scarcely separate from costal edge. Frenulum bristles 2 in female, not 3 as illustrated by Walsingham. First abdominal sternite of male with eversible sac, lined with specialized scales.

Male genitalia with uncus absent; gnathos divided; socii present, minute. Female genitalia with two signa.

There is a very close affinity between *Homocoprepes* and *Nanodacna* Clarke (in press), the latter described from the Juan Fernandez Islands, off the coast of Chile. *Homocoprepes* differs from *Nanodacna* by having vein 5 of the forewing distant from vein 4; vein 7 is obsolete except at

margin in *Homocoprepes* but strong in *Nanodaena*; vein 10 is approximately equidistant from 9 and 11 in *Nanodaena* but much nearer to 9 than to 11 in *Homocoprepes*.

In venation, the hind wings of *Homocoprepes* and *Nanodaena* are essentially the same. Although the hind wing of *Nanodaena* is lanceolate, shape cannot be used for generic distinction in this case as can be demonstrated by the two different hind-wing forms in the closely related species of *Homocoprepes* described below.

*Homocoprepes* appears to favor high altitudes and, undoubtedly, more species of this genus remain to be discovered in the Neotropical region.

### Key to the Species of *Homocoprepes*

1. Alar expanse 24 mm., or more . . . . . 2  
    Alar expanse 19 mm., or less . . . . . *sympatrica* Clarke, new species
2. At end of cell a short blackish transverse streak edged with ocherous white  
    and brick red . . . . . *felisae* Clarke, new species  
    At end of cell a patch of dull golden scales mixed with fuscous.  
    *trochiloides* Walsingham

### *Homocoprepes trochiloides* Walsingham

#### FIGURE 3

*Homocoprepes trochiloides* Walsingham, 1909, in Godman and Salvin, *Biologia Centrali-Americana*, vol. 42 (Lepidoptera-Heterocera, vol. 4), p. 10, fig 4.

Type: British Museum (Natural History). Type locality: Costa Rica, Volcán de Irazú, 6000–7000 ft., *H. Rogers*. Unique.

The moth was described from an imperfect female as previously indicated, but the genitalia of this specimen were not included in the description and are as follows: Ostium moderately large, oval. Ductus bursae membranous except for a sclerotized section near middle; inception of ductus seminalis near junction of ductus bursae and bursa copulatrix. Bursa copulatrix longer than ductus bursae; signa two elongate sclerotized plates each with central dentate process.

### *Homocoprepes felisae*, new species

#### FIGURES 1, 4

Alar expanse, 24–27 mm.

Labial palpus ocherous white with slight pinkish reflections on inner side; second segment fuscous on outer side except apical fifth; third segment with fuscous subapical annulus. Antenna grayish fuscous with narrow, paler annulations; scape fuscous above, mixed with few red scales, ocherous white beneath. Head ocherous white with pinkish reflections laterally; face edged laterally with fuscous. Thorax

ocherous white except for a fuscous spot posteriorly; tegula fuscous with a few ocherous white scales on inner edge.

Forewing fuscous with slight reddish violet luster; at apical fourth a small, but conspicuous, ocherous white spot; on forewing seven groups of raised scales as follows (worn specimens lose these scales): at base, just inside costal edge a brick-red spot; on fold, at extreme base, a brick-red longitudinal streak with a few ocherous white scales at base; at basal fifth, between fold and costa, an oval patch of fuscous and ocherous white scales edged with brick red, followed on fold with a small fuscous spot similarly edged; in the cell, slightly beyond the small red-edged fuscous spot, and between it and costa, a larger brick-red-edged fuscous spot containing a few ocherous white scales; on costal edge of cell, near base of vein 10, a small brick-red spot containing a few ocherous white scales; at end of cell a short, transverse black streak broadly edged with ocherous white with a few brick-red scales mixed; between this streak and the costal spot are scattered ocherous white scales which continue apically and obliquely to vein 6 then transversely to tornus as a narrow line; cilia basally blackish fuscous followed by a narrow brassy line and terminating in a broad grayish band, these shades attenuated around tornus. Hind wing gray with brassy hue; cilia yellowish brassy, darker around apex. Under-side of fore and hind wings fuscous with brassy hue; base of hind wing paler.

Male genitalia: Harpe rectangular, about twice as long as broad; cucullus truncate: from middle of costa a stout, rounded, heavily spined prominence. Anellus a square plate with median, ventral keel and long slender digitate process from each posterior corner. Aedeagus slightly longer than harpe, nearly straight, somewhat dilated near base, unarmed. Vinculum a narrow ring. Transtilla strongly developed into two heavily spined lobes, fused medially. Tegumen about as long as harpe. Gnathos consisting of two long curved arms each dilated and strongly spined in distal half. Socii mainly indicated by a few fine setae.

Female genitalia: Unknown.

Type: Colombia, Cauca, Páramo de Puracé, Lago San Rafael, 3570 m. (Jan. 27, 1959, J. F. G. Clarke), USNM 65694.

Described from the type male and three male paratypes, all from the same locality, and dated Jan. 27 and 29, 1959. One paratype is in the British Museum (Natural History).

In wing shape *felisae* approaches *trochiloides*, but it should be noted that the dorsal margin of the forewing of *felisae* is convex, not straight as in *trochiloides*, and that the hind wing of *felisae* is broader beyond middle.



FIGURE 1.—*Homocoprepes felisae* Clarke, new species. Left wings.



FIGURE 2.—*Homocoprepes sympatrica* Clarke, new species. Left wings.

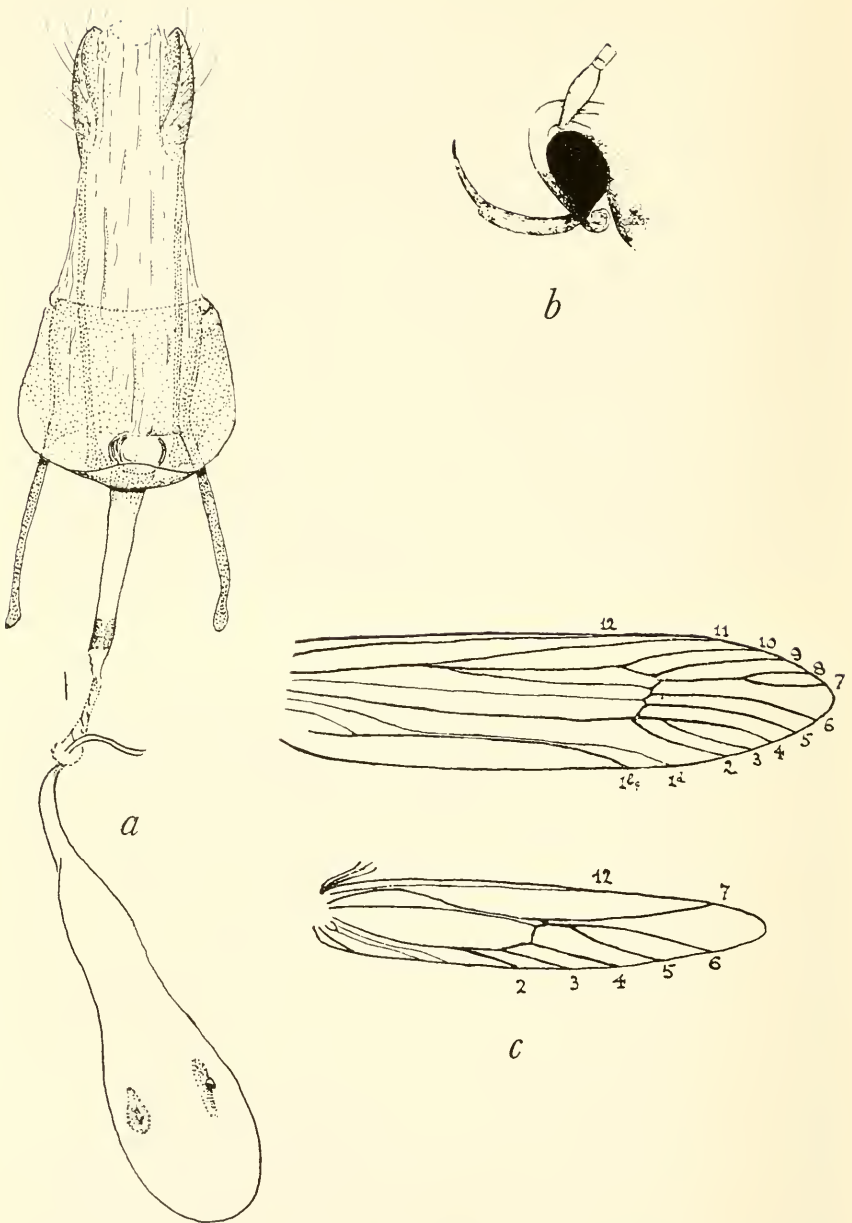


FIGURE 3.—*Homoeoprepes trochiloides* Walsingham. *a*, ventral view of female genitalia illustrated from Type in the British Museum (Natural History); *b*, lateral aspect of head [after Walsingham]; *c*, venation of wings [after Walsingham].

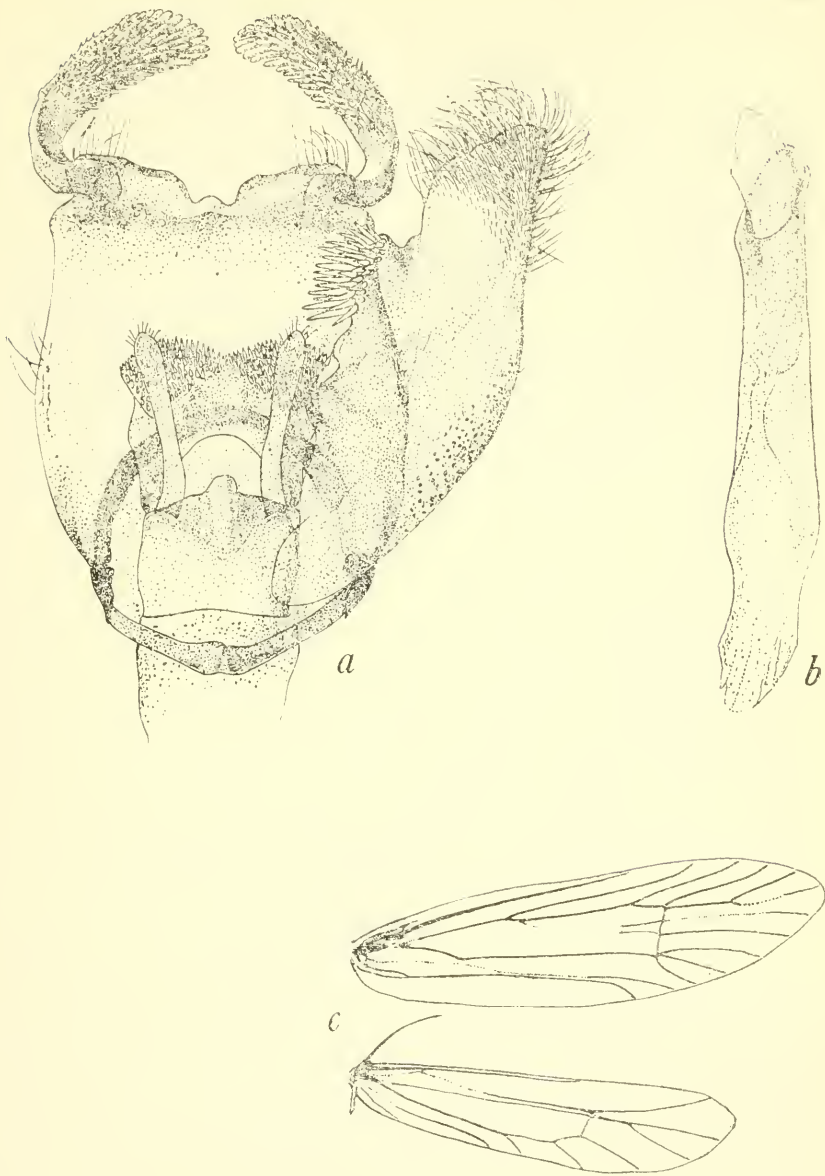


FIGURE 4.—*Homocoprepes felisae* Clarke, new species. *a*, ventral view of male genitalia with left harpe and aedeagus removed; *b*, aedeagus; *c*, venation of right wings.

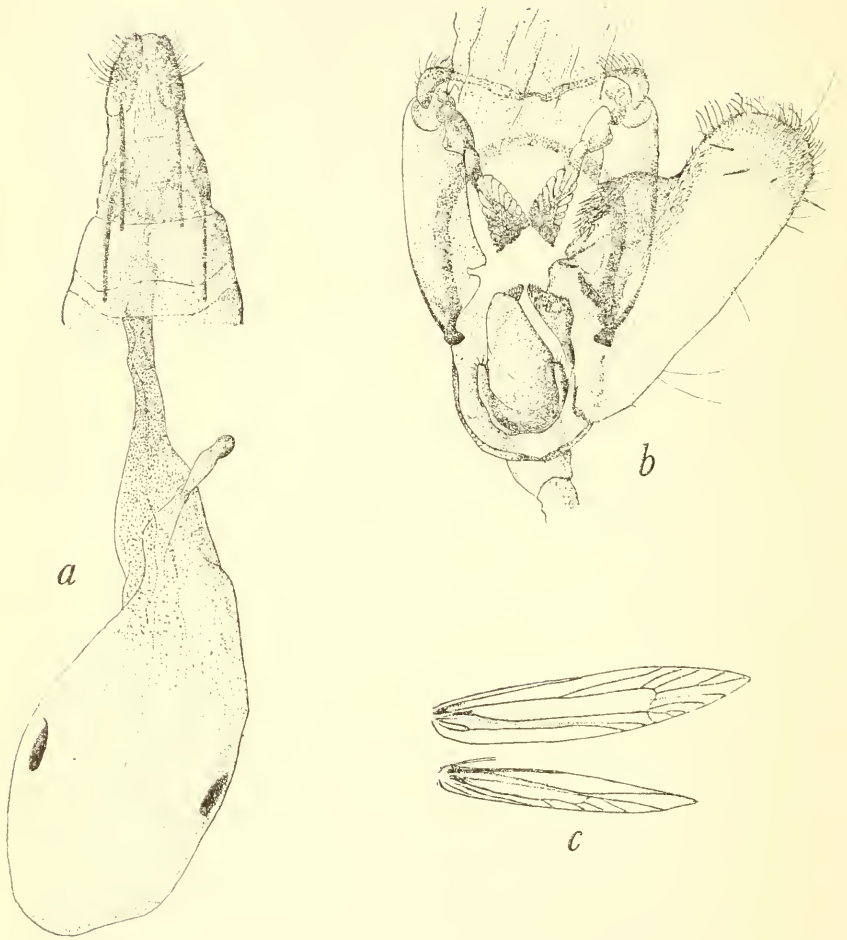


FIGURE 5.—*Homoeoprepes sympatrica* Clarke, new species. *a*, ventral view of female genitalia; *b*, ventral view of male genitalia with left harpe removed; *c*, venation of right wings.



Unfortunately, we know only the female of *trochiloides* and the male of *felisae*, so no comparison of the genitalia can be made.

This species is named for Mrs. Felisa Carriker, wife of Melbourne A. Carriker, in appreciation of the friendly help received while on my visit to their home. It was they who introduced me to the fascinating collecting area of Lago San Rafael.

*Homoeoprepes sympatrica*, new species

FIGURES 2, 5

Alar expanse, 18–19 mm.

Labial palpus ocherous white, somewhat iridescent on inner surface; second segment fuscous on outer side except tip; apex of third segment fuscous. Antenna grayish fuscous; scape ocherous white beneath. Head ocherous white shaded with fuscous laterally beneath scape. Thorax ocherous white shaded with fuscous posteriorly; tegula grayish fuscous overlaid with rust red basally in male; in female tegula much paler.

Forewing ground color fuscous, almost obscured in one example (male) by heavy overlay of rust red; females exhibit considerable ocherous white scaling in dorsal area; at base of fold a small black spot and at basal fifth, on fold, a similar spot; at two-fifths, in cell, and at end of cell similar black spots of raised scales surrounded by red and ocherous scales; cilia fuscous mixed with reddish scales at apex and termen shading to grayish fuscous at tornus. Hind wing shining grayish, paler basally; cilia grayish fuscous at apex shading to yellowish at base. Foreleg fuscous, tarsi with ocherous white annulations; mid and hind legs grayish fuscous on outer surface; inner surface ocherous white; tarsi annulated with ocherous white. Abdomen grayish dorsally, darker laterally, and ocherous white ventrally.

Male genitalia: Harpe rectangular, about twice as long as broad; cucullus rounded; costa with large basal prominence clothed with setae. Anellus a narrow ring with a short digitate process from each side basally. Aedeagus moderately short, stout, slightly curved, unarmed. Vinculum a narrow ring. Transtilla two elongate spined lobes dilated distally. Gnathos consisting of two long curved arms, dilated and clothed distally with flattened setae. Tegumen nearly as long as harpe, broad. Socii small, curved processes.

Female genitalia: Ostium narrow, transverse, slitlike. Ductus bursae membranous except for two or three tiny longitudinal sclerotized rods; inception of ductus seminalis slightly posterior to bursa copulatrix. Signa two narrow sclerotized plates, each with central longitudinal keel.

Type: Colombia, Cauca, Páramo de Puracé, Lago San Rafael, 3570 m. (Jan. 27, 1959, J. F. G. Clarke), USNM 65695.

Described from the type male and two female paratypes, all from the same locality, and dated Jan. 27 and 29, 1959. One female paratype is in the British Museum (Natural History).

Of the two species described here, *sympatrica* is the narrower winged form. The forewing is pointed and the hind wing is distinctly lanceolate, although Walsingham described the hind wing of his species as "obtusely lanceolate." In wing form, *sympatrica* approximates species of the genus *Nanodacna*.

II. A NEW GENUS AND SPECIES OF CLEAR-WING MOTH  
INJURIOUS TO FIG IN COLOMBIA  
(LEPIDOPTERA: AGERIIDAE)

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The species described below was received from Dr. F. Luis Gallego M., Chief, Departamento de Entomología, Facultad de Agronomía e Instituto Forestal, Universidad Nacional, Medellín, Colombia, who states that it is of economic importance as a pest of fig.

I am indebted to Mr. John D. Bradley, British Museum (Natural History), who searched the collections of that institution in an effort to identify this species. Mr. Bradley writes, "The only species showing close resemblance in forewing pattern in our collections is *Synanthedon (Aegeria) apicalis* Walker from Amazon. But . . . the wing venation differs and the species is not congeneric with your specimens."

***Ficivora* Clarke, new genus**

Antenna of male strongly ciliate, except 10 terminal segments, each segment with multiple cilia ventrally and clothed with closely appressed scales above. Female antenna minutely and sparsely pubescent ventrally, dorsally thickened by loosely appressed, long scales; terminal 7 or 8 segments finely pubescent only. Tongue well developed, naked. Ocellus well developed, posterior. Labial palpus upturned, second segment roughened by long spreading scales; third segment somewhat depressed, clothed with long, closely appressed scales. Head and thorax smooth.

Forewing with 10 veins; 2 and 3 coincident from angle of cell; 4 nearer to 2+3 than to 5; 4, 5, and 6 about equidistant; 7 to costa slightly before apex; 9 stalked with 10 and not reaching costa; 11



FIGURE 6.—*Ficivora leucoteles* Clarke, new species. Male, left wings.



FIGURE 7.—*Ficivora leucoteles* Clarke, new species. Female, left wings.

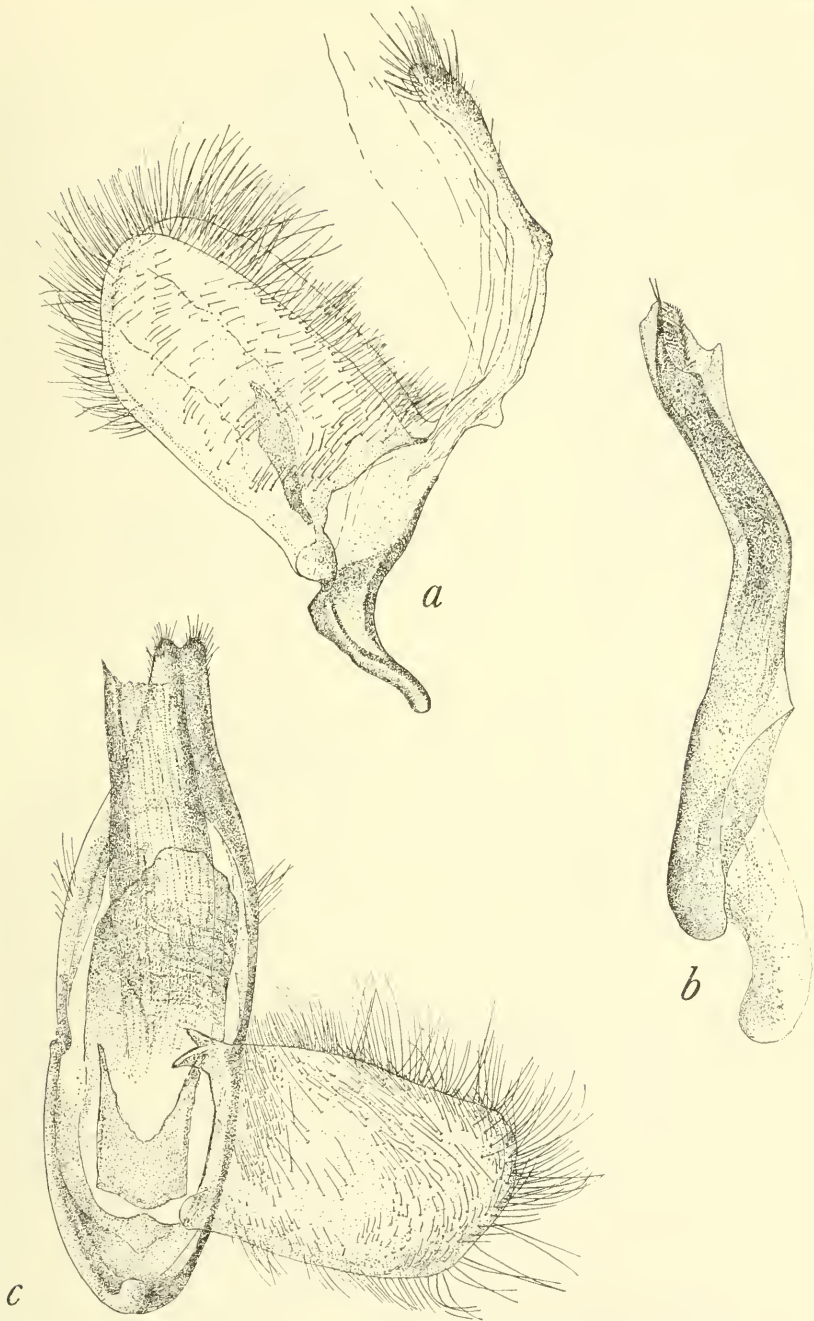


FIGURE 8.—*Ficiwora leucoteles* Clarke, new species. *a*, lateral aspect of male genitalia with aedeagus removed; *b*, aedeagus; *c*, ventral view of male genitalia with aedeagus and left harpe removed.

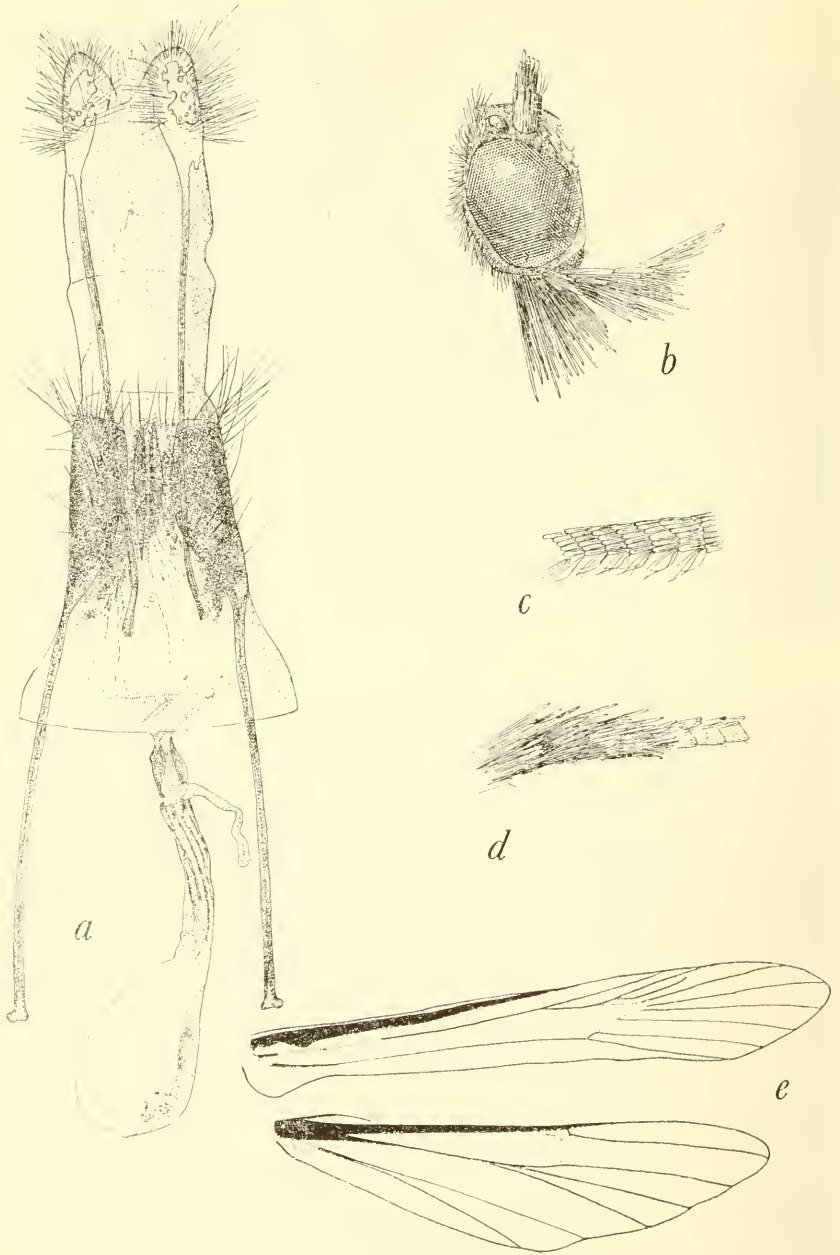


FIGURE 9.—*Ficivora leucoteles* Clarke, new species. *a*, ventral view of female genitalia; *b*, lateral aspect of head showing palpus; *c*, section of male antenna; *d*, section of female antenna; *e*, venation of right wings.

from outer fourth of cell; 12 very much thickened. Hind wing with 6 veins; 3 and 4 separate; 4 and 5 coincident; 4+5 remote from 6, parallel; 7 absent (faintly indicated by a crease); 8 thickened. Posterior tibia with clusters of strong, long setae at spurs; basal segment of posterior tarsus also armed with long setae. Anal tuft of both male and female moderate, apparently not spreading.

Male genitalia: Harpe simple. Uncus well developed, upright. Socii indicated by a few hairlike setae. Aedeagus simple.

Female genitalia: Signum present but weak.

*Ficivora* exhibits to a great extent the appearance of the North American *Zenodoxus* but structurally is quite distinct. Each antennal segment of the male of *Ficivora* is strongly multiciliate compared to the biciliate antenna of *Zenodoxus*. The antenna of the female of the latter genus lacks the long rough scaling of the female of *Ficivora*. The forewing of *Zenodoxus* has 11 veins and the hind wing 7, but each wing of *Ficivora* has one less vein than its equivalent in *Zenodoxus*. There is little in the genitalia to distinguish the two genera, the males of each having simple harpes and similar uncus and tegumen. The females are also similar, those of each genus having a weak signum and longitudinal rods in the ductus bursae.

*Ficivora leucoteles* Clarke, new species

FIGURES 6-9

Alar expanse: 16-36 mm.

Labial palpus sooty black; second and third segments with occasional grayish scales mixed. Antenna shining black above, cilia more sooty black. Head, thorax, and abdomen shining black with some bluish-metallic reflections; head with posterior fringe of sordid-white hairlike scales.

Wings: Male forewing sooty black basally, in costal half and along dorsum, remainder hyaline, the membrane with a dusky tinge, but veins outlined in black; cilia fuscous. Hind wing hyaline, the membrane dusky tinged, veins black; cilia fuscous. Female forewing sooty black fading to olivaceous brown toward apex and then to ochereous white; cilia ochereous white with a few brownish scales in tornal area. Hind wing membrane dusky brown, overlaid with sooty black in anal area, becoming lighter toward costa; apical half with relatively few dark scales, the veins in this area black. Cilia fuscous fading to ochereous white toward, and at apex. Legs shining black except posterior edges of mid and hind femora white; tarsi ventrally brownish ochereous. Hind tibia of male with white scales on inner side.

Male genitalia: Harpe rectangular, cucullus rounded. Anellus rectangular in outline, lateral edges curved dorsad, posterior end with deep triangular cleft; aedeagus enclosed posteriorly with heavy membranous sheath. Vinculum rounded, saccus slightly less than half the length of harpe. Tegumen and uncus elongate, the latter with shallow median cleft posteriorly. Alimentary canal with narrow, rather strongly sclerotized ventral plate.

Female genitalia: Ostium moderately broad, funnel shaped, membranous. Ductus bursae strongly sclerotized in posterior third; inception of ductus seminalis anterior to this sclerotized portion; anterior to ductus seminalis the ductus bursae is lined with longitudinal sclerotized rods. Signum a weakly sclerotized plate, essentially a slight thickening of membrane of the bursa copulatrix.

Type: Male, Colombia, Medellín (Antioquia), July 1959. F. Luis Gallego M. USNM 65823.

Food plant: *Ficus carica* L.

Described from the type male, 6 male and 11 female paratypes all with the same data. Paratypes in the U.S. National Museum and the collection of the Universidad Nacional.

Of this striking clearwing moth Dr. Gallego writes: "El insecto a que me refiero hace sus daños en ramas y tallos como borer, en donde sus larvas dejan grandes horadaciones; abunda en el Valle de Medellín y sus alrededores, lo mismo que en varios municipios del Norte, Noroeste y Suroeste de Antioquia; también en Bucaramanga y otros municipios de Santander del Sur, todos estos lugares comprendidos entre los 1.400 y 2.200 metros de altura. Abunda en todos los meses del año. Julio de 1949 y siguientes."

In flight at the same time as *leucoteles*, and easily confused with it, is a species of Amatidae, *Macroneme* sp., near *evelina* Druce. The resemblance in this apparent case of mimicry is remarkable. In the amatid the apical half of the forewing is a little broader and the white apex is a little more extensive than in *leucoteles*.

#### Acknowledgments

The photographs for these papers were made by Mr. Jack Scott, staff photographer. Drawings for part I were made by Mr. Andre Pizzini. All figures for part II except as noted following were drawn by Mr. Andre Pizzini; figures 3b and 3c are reproduced from the original publication by Walsingham, and figures 3a, 4c, and 5c were drawn by the author.