NEOTROPICAL MICROLEPIDOPTERA, XI

REVISION OF GENUS IDOLATTERIA
(LEPIDOPTERA: TORTRICIDAE)

By Nicholas S. Obraztsov

The genus Idolatteria Walsingham is endemic to the Neotropical region, and includes, as far as known, few species. They are poorly represented in the collections, and the material available for the present study amounted to only 15 specimens consisting of eight species, three of which were new. No ecological information is known concerning this genus; thus, it is not known whether the moths


2 Deceased May 6, 1966.
are actually rare in nature, or if their apparent rarity is due merely to the fact that their habitats have not been discovered by collectors.

In their appearance the *Idolatiera* species are strikingly colored moths, superficially very similar to those of the genera *Pseudattheria* Walsingham and *Atteria* Walker. Especially impressive is the fact that the resemblance is displayed even in a parallelism of the various types of the wing pattern observed in these three genera. For instance, *Idolatiera zanthocapna* (Meyrick) might easily be confused with *Pseudattheria heliocausa* (Dognin), and the two new *Idolatiera* species, *I. fasciata* and *I. cantharopisca*, could be mistaken for dwarfs of *P. cantharopa* (Meyrick). Only careful examination of structural characters can provide a definitive generic separation of the specimens belonging to the three named genera.

The most important generic distinction is present in the genitalia, and according to this character all three genera must be referred to three separate tribes of the subfamily Tortricinae of the family Tortricidae. *Pseudattheria* belongs to the tribe Polyorthini, *Atteria* to Anacrusiini, and *Idolatiera* to Archiini. Actually the wing venation alone is satisfactory for separating the three genera. *Idolatiera* and *Pseudattheria* differ from *Atteria* in having the veins R₄ and R₅ of the forewing separate; in the latter genus they are stalked. In *Idolatiera* the vein R₅ of the forewing runs to the termen, in *Pseudattheria* to the wing apex.

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**Genus Idolatiera** Walsingham, 1913

*Figures 1–3; Plates 1–8*


Type species: *Idolatiera simulatrix* Walsingham, 1913; by monotypy and original designation.

Head smooth, sides of vertex with cristae of longer and raised
scales. Antenna dentate, in female with teeth shorter, in both sexes biciliate, with setae shorter than width of antennal shaft; scapus cylindrical. Labial palpus about three times as long as width of eye, obliquely ascending, with apex rather porrect; basal segment pronounced; second segment longest of all segments, smoothly scaled, slightly dilated apicad; terminal segment about half as long as second, tapering distad, and ending rather acutely. Proboscis moderate. Thorax smooth.

Forewing smoothly scaled, elongate subrectangular; costa strongly arched in basal third, then gently arcuate to almost straight; apex rotundate; termen convex, slightly oblique; tornus broadly rotundate; dorsum very gently arched to almost straight or flatly undulate. No costal fold in male. Twelve veins, all separate: S gently sinuate; R₁ from about middle of discal cell; R₂ less than twice as close to R₃ as to R₁; R₃ twice as remote from R₄ as latter from R₅; R₄ running to costa, R₅ to termen, never in apex, although sometimes rather close to it; M₁ nearer to R₅ than to M₂; M₂, M₃, and Cu₁ almost equidistant, latter originating from lower angle of discal cell; Cu₂ from about two-thirds of discal cell; A₁ indiscernible basally, distinct tornally; basal fork of A₂+₃ about one-fourth as long as entire vein. Hindwing subtrapezoidal, as broad as forewing or narrower; costa gently arched or slightly sinuate; apex rotundate; termen gently convex to almost flat; tornus broadly and flatly rotundate; dorsum straight or slightly concave in external portion, strongly curved basally. Eight veins: S straight or slightly sinuate; R and M₁ closely parallel to about their half, then diverging; M₂ gently descending basad, and at basis about twice as close to M₃ as at termen; M₃ and Cu₁ connate or stalked, originating at lower angle of discal cell; Cu₂ from two-thirds of discal cell; A₁ well developed or vestigial; A₂ with basal fork, twice as close to A₃ as to A₁. No cubital pecten.

MALE GENITALIA.—Eighth abdominal segment with a subtriangular menis ventralis having a slightly stronger sclerotized proximal angle. Uncus hooklike, moderately long, strongly sclerotized; gnathos with a dilated middle process; socius absent or indicated by few hairs on internolateral fold of tegumen. Tegumen moderately broad with shoulders oblique; pedunculi moderately broad, narrowing ventrad; saccus broad, not deep, laterally dilated. Valva moderately sclerotized, roundly and broadly dilated in basal two-thirds, and ending with a much narrower cucullus turned upward; valvula with ventral portion longitudinally folded and reaching into cucullus, and with basal portion bearing a haired pulvinus; sacculus stronger sclerotized, rather broad, without a free tip, and with ventral edge subangular. Fultura superior complete, narrowed at middle; fultura inferior flatly subcordate, with weak, haired dorsal papillae; caulis
moderately long. Aedeagus moderately long, tubular, narrowed and pointed ventroapically, with a long, obliquely located orificium dorsoapically; coecum penis curved downward, slightly tapering to bottom, ending with a narrow process, or without such a process; cornuti flat, rather long, narrowed at base and apically, and lying over one other.

Female genitalia.—Papillae anales pelmiform, oblong, soft, and haired. Sinus vaginalis infundibular or somewhat tureen shaped, cephalically rounded or flat. Lamella antevaginalis narrow, encircling sinus vaginalis cephalically; lamella postvaginalis composed of two triangular pieces located caudolaterad of ostium bursa and connected to dorsal, membranous wall of sinus vaginalis. Antrum short, tubular, membranous or slightly sclerotized, bearing two narrow, lateral collicule; ductus bursa rather short; bursa copulatrix membranous; cervix bursae variously long and broad, but generally moderate; corpus bursa rotundate or slightly elongate, smooth or somewhat rugose; signum strongly sclerotized, with a basal plate elevated over external surface of corpus bursa, narrowly extended caudal and cephalad, and having a variously pronounced capitulum; internal process of signum dagger shaped, straight or curved.

Remarks.—In spite of its very distinct appearance, Idolatteria is morphologically very close to the genus Argyrotaenia Stephens, having similar wing venation and very similar genitalia. The genitalic resemblance of these two genera is so complete, even in details, that it is impossible to separate one genus from the other, using only these characters. The external distinction consists of very long labial palpi of Idolatteria and the bright coloring of the wings and the body of the moths of this genus. Also the pattern of the wings is completely distinct in both Idolatteria and Argyrotaenia. The labial palpi of Idolatteria further differ from those of Argyrotaenia in having a tapering, subacute terminal segment which in the latter genus is more cylindrical and blunt.

Key to Idolatteria Species

1. Forewing with not less than nine costal streaks; at least two subterminal spots basad of terminal spots; bands in discal area (if any present) narrow and irregular
   Forewing with four costal spots, all of them in external third of costa;
   a very large, round or somewhat piriform spot in subterminal area;
   two broad bands crossing forewing from costa to (or almost to) dorsum
   Forewing without spots on dorsum
   Forewing with spots on dorsum
   Termen of forewing with three smaller and two larger spots; hindwing darker than forewing
   xanthocapna Meyrick
Termen of forewing with two large spots; hindwing concolorous with forewing.

4. Discal spots of forewing at part fused into transverse rows. maon Druce
Discal spots of forewing not fused into transverse rows.

5. Forewing with few spots in discal cell and between its end and terminal spots; few spots on dorsum and none in supradorsal area.

6. Forewing with discal spots numerous, also in supradorsal area; many spots on dorsum.

7. Cilia of both wings orange, slightly grayish on tips of hindwing.

Idolatteria xanthocapna (Meyrick)

Plate 1


MALE GENITALIA.—Uncus moderately long, curved, tapering apicad, with tip obtuse. Valva roundly dilated in basal portion; cucullus rather narrow, far not reaching upper level of dilated portion of valva. Aedeagus with a very short apical tip.

TYPE.—Holotype, male (genitalia on slide 4428, JFGC), Manizales, Caldas, Colombia (A. M. Patino); BM.

REMARKS.—Known as a single male specimen. Superficially this species reminds one of Pseudatteria helioausta (Dognin) but differs from the latter both structurally and in the wing markings.

Idolatteria simulatrix Walsingham

Figure 1; Plate 2

Idolatteria simulatrix Walsingham, 1913, in Godman and Salvin, Biologia Centrali-Americana, Lepidoptera Heterocera, vol. 4, p. 214; 1914, ibid., vol. 4, p. 270, pl. 8, fig. 8.

FEMALE GENITALIA.—Sinus vaginalis infundibular, abruptly narrowed toward ostium bursae; lamella antevaginalis narrow, with lateral portions inclined mediad and incurved, and medial portion forming a short arch bent cephalad. Antrum coincident with short, cylindrical portion of ductus bursa bearing two lateral colliculi.
Signum narrow, dagger shaped, very insignificantly curved; caudal and cephalic extensions of its basis narrow and almost equally long; capitulum somewhat flat.

**Type.**—Holotype, female (genitalia on slide 2770), Geronimo, Vera Paz, Guatemala (Champion; Godman and Salvin Collection; 66270); BM.

**Remark.**—The holotype is the only known specimen of this species.

*Idolatteria mydros, new species*

**Plate 3**

**Female.**—Antenna [only basal third present] black. Labial palpus dark brown, basal segment and inner surface of second segment yellow. Head dark brown; face and marginal cristae yellow. Thorax dark brown with posterior margin orange yellow; most of tegula yellow. Abdomen dark brown. Forewing reddish orange with markings dark brown, iridescent bluish separated by cream-white interspaces, and arranged as follows: nine variously broad streaks on costa, last two of them occasionally connected at tips; a circular, moderately sized apical spot closely touching a larger terminal spot, located below and slightly incised at termen and interiorly; a second terminal, slightly elongate spot, located closer to tornus, and also incised at termen and interiorly; an elongate spot at tornus; a more or less round spot dorsad of last two costal streaks and basad of upper terminal spot, slightly larger than latter; a small spot (on right forewing accompanied by a very minute dot) located above tornal spot; some little, faint dots along external borders of orange area; cilia cream white, in front of terminal spots and around tornus black. Length of forewing 11 mm. Hindwing red orange with black spots: a preapical spot on costa, an apical spot and six marginal spots along termen and tornus; an obscure spot almost midway between discocellulars and termen; cilia grayish black.

**Male.**—Unknown.

**Female genitalia.**—Sinus vaginalis flatly infundibular, narrowed at ostium bursae; lamella antevaginalis narrow, with lateral portions inclined mediad and medial portion forming a short arch, bent cephalad. Antrum short, joined to a narrower, almost cylindrical portion of ductus bursae bearing two lateral colliculi. Signum curved, dagger shaped; caudal and cephalic extensions of its basis strongly thickened, almost equally long and broad; capitulum not separated, forming highest point of basis of signum.

**Type.**—Holotype, female (genitalia on slide 1-Obr., Jan. 22, 1961), Loja vicinity, Ecuador, 1887; USNM 67735.

**Remarks.**—Somewhat similar to *simulatrix* Walsingham, but with
Figures 1–3.—*Idolatteria xanthocapna* (Meyrick), holotype, male: 1, left wings; 2, caudal aspect of genitalia with valvae spread and aedeagus removed; 3, lateral aspect of aedeagus. (From Clarke, 1958.)
Figures 1-4.—Idolatteria simulatrix Walsingham, holotype, female: 1, left wings; 2, ventral aspect of genitalia; 3, detail of sinus vaginalis; 4, detail of signum.
Figures 1–4.—Idolatteria mydros, new species, holotype, female: 1, left wings; 2, ventral aspect of genitalia; 3, detail of sinus vaginalis; 4, detail of signum.
Figures 1-4.—Idolatteria pyropis Walsingham, females: 1, holotype, left wings; specimen from Monteverde, Costa Rica: 2, ventral aspect of genitalia; 3, detail of sinus vaginalis; 4, detail of signum.
Figures 1-4.—Idolatteria maon (Druce), holotype, female: 1, right wings (image reversed) 2, ventral aspect of genitalia; 3, detail of sinus vaginalis; 4, detail of signum.
Figures 1-4.—Idolatricia orgias (Meyrick), holotype, female: 1, left wings; 2, ventral aspect of genitalia; 3, detail of sinus vaginae; 4, detail of signum. (From Clarke, 1958.)
Figures 1-7.—Idolatteria fasciata, new species, holotype, male: 1, left wings, 2, caudal aspect of genitalia with valvae spread and aedeagus removed; 3, lateral aspect of aedeagus; allotype, female: 4, right wings (image reversed); 5, ventral aspect of genitalia; 6, detail of sinus vaginalis; 7, detail of signum.
Figures 1-4.—*Idolatteria cantharopisca*, new species, holotype, male: 1, left wings; 2, caudal aspect of genitalia with valvae spread and aedeagus removed; 3, lateral aspect of aedeagus; 4, ventral aspect of mensis ventralis.
only two terminal spots and without any dorsal spot on the forewing. The submarginal spots of the forewing are dissimilar in shape, and on the hindwing the submarginal row of spots is represented by only one indistinct spot. The female genitalia resemble those of simulatrix, but the signum is of a quite different shape. The specific name is derived from the Greek word μυδρός, meaning "a red-hot mass."

_Idolatteria pyropis_ Walsingham

_Figure 2; Plate 4_

_Idolatteria pyropis_ Walsingham, 1914, _in_ Godman and Salvin, _Biologia Centrali-Americana, Lepidoptera Heterocera_, vol. 4, p. 270, pl. 8, fig. 9.

**Female genitalia.**—Sinus vaginalis tureen shaped; lamella antevaginalis narrow, straight cephalically. Antrum membranous, broader than adjacent, cylindrical portion of ductus bursae bearing two lateral colliculi. Signum dagger shaped, slightly curved apically; caudal extension of its basis longer than cephalic extension; capitulum semirotundate.

_Type._—Holotype, female (abdomen missing), Volcan de Irazú, Costa Rica, 6000–7000 ft. (H. Rogers; Godman and Salvin Collection; 66225); BM.

_Other specimen examined._—One female (genitalia on slide 757-Obr.), Monteverde, Puntarenas, Costa Rica, 4600 ft., Feb. 28, 1962 (C. W. Palmer); AMNH.

_Remarks._—No male of this species is known. There are some color differences between the holotype, which appears somewhat faded, and the other specimen examined, due probably to different collection times. The antennae, labial palpi, head, thorax, and the wing markings, described by Walsingham as being "purplish fuscous" or "dark purple," are found by the present author as having these colors in the holotype. In the newly collected specimen they are almost black with a slight bluish hue. The head would best be described as being black with a large, cream-white spot on the face and with concolorous cristae externad of the eyes. The patagia are black. The thorax is also black with two anterior, mediolateral yellow streaks becoming pale orange distally; the posterior margin of the thorax is orange; the external cristae of the tegulae are cream white. The abdomen is bluish black with narrow postsegmental bands orange dorsally, whitish laterally and ventrally, and also whitish on the dorsal surface of the tip. The arrangement of the wing spots is approximately the same in both of the examined specimens, although the size and shape of separate spots are slightly distinct. In spite of all the mentioned differences, there are no grounds to treat the above specimens as belonging to two separate species.
Idolatteria maon (Druce)

Plate 5

Pseudatteria maon.—Meyrick, 1912, in Wagner, Lepidopterorum catalogus, pt. 10, p. 16; 1913, in Wytsman, Genera insectorum, fasc. 149, p. 22.
Idolatteria maon.—Durrant, 1914, in Godman and Salvin, Biologia Centrali-Americana, Lepidoptera Heterocera, vol. 4, p. 270.

Female genitalia.—Sinus vaginalis tureen shaped; lamella antevaginalis narrow, straight cephalically. Antrum membranous, broader than adjacent, cylindrical portion of ductus bursae bearing two lateral colliculi touching each other medially. Signum strong, dagger shaped, insignificantly curved; caudal extension of its base a little longer than cephalic extension; capitulum broadly rounded, but moderately prominent.

Type.—Holotype, female (genitalia on slide 5762), Chiguinda, Ecuador (C. Buckley; 6610); BM.

Remark.—The holotype is the only specimen known.

Idolatteria orgias (Meyrick)

Plate 6


Female genitalia.—Sinus vaginalis tureen shaped; lamella antevaginalis narrow, straight cephalically. Antrum membranous, infundibular, much broader than adjacent portion of ductus bursae bearing two lateral colliculi. Signum dagger shaped, broad, curved; caudal extension of its basis narrow and long; cephalic extension much broader and slightly shorter, and with scalloped margins; capitulum with tip slightly narrowed.

Type.—Holotype, female (genitalia on slide 4440, JFGC), Pacho, East Cordilleras, Colombia, 7250 ft. (Paravicini Collection); BM.

Other specimens examined.—One female (one wing and abdomen missing), Bogota, Cundinamarca, Colombia (Felder Collection; 400159); BM. One female (genitalia on slide 4441, JFGC), same locality; USNM.

Remarks.—The male is unknown. All three female specimens are very similar, varying slightly in the shape and size of separate wing spots.
Idolatteria fasciata, new species

Plate 7

Male.—Antenna blackish brown with black annulation; tip white scaled. Labial palpus black with inner surface of basal and second segments cream yellow. Head black; face encircled by cream yellow. Thorax black with prismatic blue hue; its middle, posterior margin, and tips of tegula orange. Abdomen brown black with orange yellow, on ventral surface paler, postsegmental rings. Forewing orange with markings prismatic blue or violet, arranged as follows: A narrow band at wing basis, oblique externad; a broad, almost vertical band before middle of forewing and crossing it from costa to dorsum; a third band, parallel to and almost as broad as former, and located just beyond middle of forewing; a large, round or slightly piriform spot in external third of forewing, separated from or connected to a much smaller tornal spot; a triangular costal streak in interspace of first and second bands; two or three more or less rotundate costal dots distad of third transverse band, and a similar dot on forewing apex; five more or less separate dots on termen; cilia black. Length of forewing 9.5-10.0 mm. Hindwing orange with brownish-black spots: an irregularly shaped spot at wing basis, separate or fused with a dorsal spot; a more or less rotundate spot at middle of disc, separate or fused with a dorsal spot, other than already mentioned; sometimes these two dorsal spots fused together; a rotundate or slightly piriform spot in external portion of wing, lying free or occasionally reaching to termen; a small preapical dot on costa; a more or less rotundate apical dot; two or three terminal dots; cilia orange yellow, slightly checked with black in front of terminal dots, or entirely black.

Female.—Similar to male, but with antenna not white at tip; third band of forewing not reaching dorsum, or connected with it by means of a narrow streak; interspace of second and third bands of forewing with spots, a larger one on costa, a smaller on dorsum; spots in basal half of hindwing fused together. Length of forewing 11 mm.

Male genitalia.—Uncus moderately long, tapering apicad, basally distinctly broader than apically, with tip somewhat obtuse. Valva strongly rotundate dilated in basal portion; cucullus moderately broad; sacculus before middle with an arcuate elevation directed dorsad. Aedeagus with a moderately long tip; coecum penis elongate, acutely narrowed at bottom.

Female genitalia.—Sinus vaginalis tureen shaped, rounded at bottom; lamella antevaginalis narrow, equally arcuate. Antrum cylindrical, fused with adjacent portion of ductus bursa bearing two lateral colliculi. Signum straight, dagger shaped; caudal and cephalic
extensions of its basis almost equally long, but former with a weakly sclerotized prolation reaching into cervix bursae; capitulum rotundate, slightly prominent.

Types.—Holotype, male (genitalia on slide 8667), Bolivia, 1903 ("Staudinger"); BM. Allotype, female (genitalia on slide 6603), Rio Zongo, Bolivia, 750 m. (A. H. Fassal); BM. Paratypes: One male (genitalia on slide 6604), Andes, Bolivia, 1920; one female, Bolivia; BM. One male, Rio Zongo, Yungas, Bolivia, 1200 m., 1895-1896 (Garlepp); ZMB.

Remarks.—Very similar to the following species, canalappisca, with which it is compared. As a manuscript name, fasciata has been used by Walsingham on the labels of some specimens, now becoming the types of this species.

Idolatteria cantharopisca, new species

Figure 3; Plate 8

Male.—Antenna entirely black with a prismatic blue hue. Labial palpus black, at basis and on inner surface of basal and second segments orange. Head black with greenish hue; face encircled by orange. Thorax black with greenish hue, at posterior margin and on tips of tegulae orange. Abdomen entirely greenish black. Forewing orange with prismatic green markings narrowly outlined with black and arranged as follows: A narrow, transverse basal arcuate outward; a very broad, transverse band in basal half of forewing, externad of former band; a slightly narrower, transverse band crossing forewing just externad of its middle; a large, round spot in external third of forewing; three costal dots in same area; an apical dot, five terminal dots, and a slightly larger tornal dot; cilia entirely orange. Length of forewing 10 mm. Hindwing orange with black markings, arranged as follows: A wide area consisting of at least three large spots fused together, occupying more than basal half of hindwing, and including some orange dots; a piriform, black spot externad of this area and reaching termen; a black costal spot connected with basal area; a preapical dot on costa; an apical dot, accompanied by a smaller dot on termen; a larger spot on tornus; cilia orange, slightly grayish at tips.

Female.—Unknown.

Male Genitalia.—Uncus rather long, narrow, tapering apicad, and ending acutely. Valva with a rather narrow cucullus; sacculus before middle with a triangular tooth directed dorsal. Aedeagus moderately long, with a narrow, long tip; coecum penis elongate, rounded at bottom.
Type.—Holotype, male (genitalia on slide B.26), “Loeotal,” Bolivia, 2600 m., 1891 (Garlepp); ZMB.

Remarks.—Very similar to Idolatteria fasciata, new species, but differs from it in some details. The antenna is not white at the tip, and is not annulated. The labial palpus has the basis and the inner surface of the basal and second segments deep orange. On the forewing the markings are green. Most of the discal spots of the hindwing are joined into a common, black area. The cilia of both wings are entirely orange, only those of the hindwing turn slightly grayish toward the tips. The uncus of cantharopisca is somewhat longer and narrower than in fasciata, and has a more acute tip. The tooth in the basal half of the sacculus is triangular, not obtuse as in fasciata. The bottom of the coecum penis is rotundate, and has no process. Superficially the new species reminds one of a little specimen of Pseudatteria cantharopa (Meyrick). The specific name cantharopisca is derived from the name of this Pseudatteria species and the Greek diminutive suffix ὀκτ. 