

# **Article**



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# Annotated list of Mimallonidae (Lepidoptera, Mimallonoidea) from Trinidad and Tobago, with the description of a new species of *Cicinnus* Blanchard, 1852 and taxonomic notes

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#### **Abstract**

We present the first list focused on Mimallonidae from Trinidad and Tobago and report seven genera and 13 species from Trinidad, and two genera and two species from Tobago, one species of which has not yet been found in Trinidad. All species found on these islands are figured, with the exception of the species known only from Tobago. Additionally, we describe a new species: *Cicinnus trini*, **sp. n.** This new species is closely allied to *C. beta* (Schaus, 1910), **comb. n.** and *C. veigli* (Schaus, 1934), **comb. n.** which we transfer to *Cicinnus* Blanchard, 1852 from *Psychocampa* Grote & Robinson, 1866 based on male genitalia characteristics. We designate lectotypes for *C. beta*, *C. magnapuncta* (Kaye, 1901), and *Trogoptera guianaca* Schaus, 1928.

Key words: Alheita, Cicinnus trini sp. n., Druentica, Lacosoma, Mimallo, Neotropics, taxonomy, Trogoptera, Zaphanta

#### Introduction

Caribbean Mimallonidae have been sparsely reported in the literature. Kaye (1901) described a single species from Trinidad, and later listed two species from the island (Kaye & Lamont 1927). Nakahara *et al.* (1992) mentioned an inconclusively identified species of *Druentica* Strand, 1932 from Trinidad as a potential biological control agent of the invasive *Clidemia hirta* (Melastomataceae) on Hawai'i. Cock (2003) gave a tally of 11 species from Trinidad and one from Tobago, and while a list of species was not provided, *D. patawa* Herbin, 2016 (misidentified as *D. scissa* (Herrich-Schäffer, 1856)) from Trinidad was figured. Recently, St Laurent and McCabe (2016) worked on the Mimallonidae of the Caribbean Basin, but focused primarily on the West Indies and northern coastal Venezuela and did not provide any information regarding the species present in the Lesser Antilles or Trinidad and Tobago. Therefore, until the present work, no list has been available for the Mimallonidae of Tobago and none for Trinidad since that of Kaye & Lamont (1927).

Taxonomy of Mimallonidae has been revitalized by several recent works (for example, Herbin 2012; Herbin & Mielke 2014; Herbin & Monzón 2015; Herbin 2016; St Laurent & Dombroskie 2016), but many genera still remain poorly studied. Most genera do not have reliable genus-specific apomorphies associated with them, and have not been characterized utilizing modern morphological or molecular techniques. Therefore, the arrangement of the present list is preliminary pending more thorough work focused on the genera mentioned below, none of which have undergone recent revisions.

We report 13 species of seven genera of Mimallonidae from Trinidad, and two species of two genera from Tobago, one of which has not yet been found in Trinidad. One of the species from Trinidad is described as new.

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# Materials and methods

Material (specimens and images) from the following collections was examined:

AMNH	American Museum of Natural History, New York, New York, USA	
CDH	Collection of Daniel Herbin, Garidech, France	
CPC	Collection of Philippe Collet, Caen, France	
CUIC	Cornell University Insect Collection, Ithaca, New York, USA	
HDOA	Hawai'i Department of Agriculture, Honolulu, Hawai'i, USA	
MJWC	Collection of M.J.W. Cock, Llanon, Wales, UK	
MNHN	Muséum National d'Histoire naturelle, Paris, France	
MNHU	Museum für Naturkunde der Humboldt-Universität zu Berlin, Germany	
MWM	Museum Witt, Munich, Germany	
NHMUK	The Natural History Museum, London, UK	
NMSE	National Museums of Scotland, Edinburgh, UK	
USNM	National Museum of Natural History [formerly United States National Museum], Washington D.C.,	
	USA	
UWIZM	University of the West Indies Zoological Museum, St. Augustine, Trinidad and Tobago (including the	
	former collection of the International Institute of Biological Control (CAB International), designated	
	by a sequential 'CABI' accession number)	

For species known only from a single sex in Trinidad, we figure the opposite sex using specimens from French Guiana when available. Dissections performed during this study are kept in microvials pinned with the specimen or in a separate glycerol filled microcentrifuge tube. In the annotated list, the few previous publications dealing with each species in Trinidad are listed below the details of the type. All forewing measurements are from the base of the costa at the edge of the thorax, out to the forewing tip. Wingspan was only measured for specimens fully spread, with anal margins of forewings horizontal or slightly angled forward.

In material examined sections below each species treatment, we list material from Trinidad, and from Tobago, separately despite the fact that these islands comprise a single country. We follow this pattern in order to show from which islands each mimallonid species has been recorded. Other countries from which we have examined specimens are likewise separated in the material examined.

**TABLE 1.** The following species are reported from Trinidad and/or Tobago. An asterisk (\*) denotes new reports from either of these islands. Note we consider both *Druentica* species as having been reported from Trinidad previously since prior literature mentioning this genus lacked correct determinations of the two similar species.

Species	Trinidad	Tobago
Alheita caudina (Schaus, 1905)	X*	
Cicinnus incerta (Möschler, 1877)	X*	
Cicinnus joanna Schaus, 1905	X*	
Cicinnus magnapuncta (Kaye, 1901)	X	
Cicinnus trini St Laurent and Cock, 2017, sp. n.	X*	
Cicinnus sp. undetermined		X*
Druentica coralie Herbin, 2016	X	
Druentica patawa Herbin, 2016	X	
Lacosoma ostrinum Herbin, 2016	X*	
Lacosoma valva Schaus, 1905	X*	
Mimallo amilia (Cramer, 1780)	X	X*
Trogoptera belilia Schaus, 1928	X*	
Trogoptera guianaca Schaus, 1928	X*	
Zaphanta infantilis Dyar, 1910	X*	

#### **Annotated list**

## Alheita Schaus, 1928

Type species: Alheita anoca (Schaus, 1905)

Alheita caudina (Schaus, 1905)

(Figs. 7, 8)

Type locality. French Guiana [USNM, syntype examined]

This species is broadly distributed in Latin America, from Guatemala, the Amazonian region, Brazilian Atlantic Forest, and Cerrado (R.A. St Laurent unpublished; Herbin & Mielke 2014). Given the broad distribution and uniqueness of this species, it is easily recognizable and well represented in many collections and seems quite common where it occurs. Therefore, its presence in Trinidad is expected.

The male specimen from Trinidad (Fig. 7) is quite dark in maculation in comparison to most other specimens of this species. However, an examination of the genitalia revealed no distinct differences from a mainland, Amazonian population (Brazil, Amazonas, in CUIC). Furthermore, the maculation of the female specimen from Trinidad (Fig. 8) is typical of the species.

The two known specimens from Trinidad are from lowland forest localities: Valencia Forest, to the East of the 'Long Stretch' between Arima and Sangre Grande, which has mostly been cleared now, and the Parrylands Oilfield, which has changed little since collecting in 1980.

**Material examined.** (1  $\circlearrowleft$ , 1  $\circlearrowleft$  total) **TRINIDAD:** 1  $\circlearrowleft$ , La Brea Ward, Parrylands Oilfield: 13.XI.1980, M.J.W. Cock [*leg.*], MV light (MJWC). 1  $\circlearrowleft$ , 2.5 mi. SE of Valencia, Valencia Forest: IV.1980, M.J.W. Cock [*leg.*], MV light (MJWC).

# Cicinnus Blanchard, 1852

Type species: Cicinnus orthane Blanchard, 1852

Cicinnus trini St Laurent & Cock, sp. n. (Figs. 3, 5, 11, 12)

**Type material. Holotype,** &. **TRINIDAD:** TRINIDAD: PAR. OF ST. GEORGE, MORNE BLEU, TEXTEL INSTALLATION, 6.XII.1980, AT LIGHT, M.J.W. COCK [*leg.*]/ *Cicinnus* sp. not *fogia* Schaus, Det. D. Davis 1981/ *Psychocampa* sp. near *beta* Schaus male, Det. M.J.W. Cock 2000/ St Laurent diss.: 5-19-16:1/ HOLOTYPE & *Cicinnus trini* St Laurent and Cock, 2017 [handwritten red label]/ (to be deposited in USNM, ex. MJWC).

Paratypes, 10 ♂ total. TRINIDAD: 1 ♂, Arima Valley: 12.II.1952, Gift of New York Zoo. Soc., Dept. Tropical Research, William Beebe, Dir. (AMNH). 3 ♂, Caparo: XI.1905, XII.1905, no date, S.M. Klages [leg.], Rothschild Bequest, B.M. 1939–1, NHMUK010354546, 010354547, St Laurent diss.: 9-8-16:1 (NHMUK). 2 ♂, Cumaca Road, 4.6 mi: 21.X.1982, M.J.W. Cock [leg.], at MV light (MJWC, UWIZM CABI.2464). 2 ♂, Hollis Reservoir, pump house: 2.XI.1978, 13.XI.1978, M.J.W. Cock [leg.], at light (NHMUK, MJWC, MJWC specimen dissected). 2 ♂, Off Saunders Road, Inniss Field, c. 50 m, at beginning of track to dam: 17.V.1999, M.J.W. Cock [leg.], MV light, dusk to 22.10h (UWIZM CABI.2462, 2463). – All paratypes with the following yellow label: PARATYPE ♂ Cicinnus trini St Laurent and Cock, 2017.

Additional specimen examined: [not included in type series] **COLOMBIA: Meta:** 1  $\circlearrowleft$ , Villavicencio, 400 m: Coll. Fassl, Joicey Coll., Brit. Mus. 1925–157, St Laurent diss.: 8-29-16:3, NHMUK010354545 (NHMUK).

**Diagnosis.** This new species belongs to a group of several similar *Cicinnus* spp. characterized by black postmedial lines on fore and hindwings with distinct pale patches variously diffused with black scales present near the tornus, anterior, and anal margins of the hindwing, along with singular B-shaped hyaline patches on each wing.

The most similar species from this group is *C. beta* (Schaus, 1910) **comb. n.**, but *C. trini* can be differentiated by the smaller size, the hindwing hyaline patch is located on top of, or outside of, the postmedial line rather than on the inside (proximal to body) of the line as in *C. beta*, and by the male genitalia (compare Figs. 4 and 5). Most prominently, the genitalia of *C. trini* are distinctly smaller than those of *C. beta*, being about half their size. Additionally, the gnathos projections are shorter, and more robust in *C. trini* than in *C. beta*, and extend outward to the same length as the uncus, whereas in *C. beta*, the uncus extends beyond the narrower gnathos projections. The phallus of *C. trini* is shorter and stouter relative to the rest of the genitalia structure compared to *C. beta*.

**Description. Male.** Head: Light brown to straw colored, lustrous, interspersed with black petiolate scales; eyes very large, occupying more than two thirds area of head, bordered posteriorly by brown scales; antenna coloration similar to head, but slightly lighter, bipectinate to tip, pectinations longer basally; labial palpus highly reduced, not extending beyond frons, apparently three segmented, but segmentation not easily discernable due to compactness of palpus, coloration as for rest of head with darker brown scales dorsally. *Thorax*: Coloration light gray, though scales of prothorax slightly darker, browner. Black petiolate scales interspersed among thinner scales as on head. Legs: Vestiture gray, appearing darker due to high concentration of black petiolate scales. Tibial spurs somewhat reduced, almost entirely clothed in scales. Forewing dorsum: Forewing length: 14.5-18.0 mm, avg.: 16.8 mm, wingspan: 33–37 mm, n=7. Somewhat subtriangular, barely elongated, apex falcate, margin convex until just before apex where concave. Ground color pale grey with varying degree of red or salmon-pink undertones, undertones more distinct in worn specimens, overall lightly to moderately speckled by black petiolate scales, petiolate scales densest near tornus. Antemedial line reduced to faint brown suffusion or absent. Postmedial line nearly straight with slight inward bulge just below discal area, it curves toward costa just before passing Rs4, becoming faint but reaching costa. Antemedial, medial, and submarginal areas mostly concolorous except along postmedial line extending to apex and at tornus. Tornus with pale yellow region variously obscured by dense covering of petiolate scales. Faint red patch of scales present near apex outside of postmedial line, and on disc along lower cell. Discal region with small, B-shaped hyaline patch bisected by M, located on inner side of postmedial line, near the line but never touching it. Fringe contrasting white. Forewing ventrum: Ground color similar to dorsum, but appearing darker due to stronger brown and red undertone suffusion medially, overall more heavily speckled by black petiolate scales than on dorsum. Antemedial line absent. Postmedial line reduced to outwardly curved, somewhat wavy, traces. Antemedial and medial areas darker than submarginal area due to medial brown and red suffusions, submarginal area with unsoiled area centrally between yellow and black tornus and blood-red patch near apex, which is larger than corresponding pink area of dorsum apex. Discal region as for dorsum but outwardly smudged with black. *Hindwing dorsum*: Coloration follows similar patterning to forewing dorsum but antemedial line absent, postmedial line straight, yellow patch like that of forewing tornus present along anterior wing margin and near anal angle, yellow patch likewise covered in black petiolate scales, well-defined pink area absent. Discal hyaline region smaller than on forewing, but always situated on top of or distal (toward wing margin) to postmedial line, never present on inner side of postmedial line. Hindwing ventrum: Following same pattern as forewing. Frenulum not visible, either absent or vestigial. Abdomen: Coloration mostly as for thorax, but dorsally browner, matching prothorax, ventrally lighter gray. Genitalia: (Fig. 5) n=4. Complex; uncus short, triangular, truncated distally, becoming somewhat tubular, uncus angled distally, perpendicular to vinculum. Gnathos U-shaped, with pair of sharp, robust, stout mesal projections, projections extend outward equally in length to uncus. Valve as two distinct, but connected lobes: upper lobe more heavily sclerotized, ear-shaped; lower lobe more membranous, especially ventrally, lower lobe subtriangular. Vinculum box-like, but more rounded along tegumen, ventral corners of vinculum accentuated as rounded, backward angled knobs (apopdemes). Saccus quadrate, bilobed, either side somewhat globular, usually somewhat folded up against base of valves. Thick, curved, arms extend inward but do not meet, curved arms originating from base of vinculum, reaching midway between saccus and gnathos. Juxta fused to both phallus and vinculum; pair of creased structures extend from juxta dorsally over phallus, forming connection with vinculum along secondary, inner vinculum-like ring. Phallus very short, essentially no sclerotization extending outward beyond juxta, basally as stout lobe, phallus cannot be excised from genitalia capsule without damaging juxta-vinculum complex. Vesica elongated, tubular with two lightly sclerotized outer plates. Female. Unknown.

**Distribution.** *Cicinnus trini* is known primarily from the island of Trinidad, but we are aware of a single specimen from central Colombia (eastern side of the Andes) that is very similar in external morphology and maculation, as well as in male genitalia, to the new species, suggesting that *C. trini* will be found to be more widely distributed in northern South America.

The Trinidad captures have been made in forested areas, mostly in the valleys of the Northern Range, although one (Morne Bleu Textel Installation) was taken on a ridge top at 700 m, and two were taken at Caparo, West Central Trinidad.

**Etymology.** The new species is named in recognition of the type locality, Trinidad. Trini is a local colloquial term equivalent to Trinidadian, which may be used as a noun, e.g. referring to people, or as an adjective.

Remarks. Previously, species related to *C. trini*, including *C. beta* and the similar Brazilian species, *C. veigli* (Schaus, 1934), comb. n. were placed in the genus *Psychocampa* Grote & Robinson, 1866 by Schaus (1928). However, Herbin (2012) described two additional South American species in this group, and placed them in *Cicinnus* based on male genitalia characters similar to other species described in that genus. Although Herbin (2012) recognized that *C. beta* and *C. veigli* also belong to this group, he did not transfer them to *Cicinnus* despite their being more closely allied to *Cicinnus*. We agree with Herbin's placement of the taxa named in 2012 within *Cicinnus* based on our own comparisons with dissections of the type species of both *Cicinnus*, *C. orthane* Blanchard, 1852 (Franclemont dissection: 1772, CUIC), and *Psychocampa*, *P. concolor* Grote & Robinson, 1866 (Franclemont dissection: C611, CUIC). We now make the taxonomic changes associated with the species *C. beta* and *C. veigli* because morphological affinities recognized by Herbin (2012) are supported by our subsequent investigation.

We compared the specimens from Trinidad with the primary types and genitalia of nontypes of the following related *Cicinnus* species:

*C. beta* (Type locality: Costa Rica). 1 &, Costa Rica, Sixola River, syntype, here designated the lectotype with the following labels: *Cicinnus beta* type Schaus/ [Lecto]Type No. 16965 U.S.N.M./Sixola [*recte* Sixaola] Rv. CR/Sept/ USNM-Mimal:1012/ LECTOTYPE & *Cicinnus beta* Schaus designated by St Laurent and Cock, 2017 [handwritten red label]/ St Laurent diss.: 8-29-16:1/ (USNM); 1 &, Panama, Rio Trinidad, St Laurent diss.: 8-29-16:2 (USNM).

*C.* cf *veigli* (Type locality: Brazil, Minas Gerais). 2 &, Brazil, Santa Catarina, Jaraguá do Sul, St Laurent diss.: 5-15-16:4 (CUIC); Franclemont dissection: 1433 (CUIC). 1 &, Brazil, Paraná, Curitiba [*recte* Guaratuba], Serra do Mar, Estrada de Castelhanos, genital prep. 29.990 (MWM). 1 &, Brazil, Bahia, Maraú, Fazenda Água Boa, genital prep. 29.991 (MWM).

*C. kawensis* Herbin, 2012 (Type locality: French Guiana). 1 ♂, French Guiana, Kaw Rd., km 11, holotype, Herbin gen. prep. H668, (MNHN); 1 ♂, Surinam, Moengo, Boven Cottica River, St Laurent diss.: 5-15-16:2 (CUIC); 1 ♂, Bolivia, Chaparé, Río Cristal Mayu, 1000–2000 m, St Laurent diss.: 5-15-16:3 (CUIC).

*C. mamorensis* Herbin, 2012 (Type locality: Bolivia). 1 ♂, Bolivia, Beni, [Road] Trinidad to Yucumo km 50, 38 km [after] Río Mamore, 250 m, holotype, Herbin gen. prep. H686 (MNHN).

We determined that the species present in the island of Trinidad is much closer to *C. beta* than *C. veigli*, *C. kawensis*, or *C. mamorensis*, based on the gray ground color with salmon-pink (ranging to more red) undertones and presence of thick postmedial lines. However, the small hyaline patch of the hindwing, which is present in all species of this group, is located on the outer side or on top of the hindwing postmedial line in specimens from Trinidad (and one from Colombia), while those from Central America and mainland South America have the hyaline patch on the inner side of the postmedial line, usually distant from it. The specimens from Trinidad and Colombia are all distinctly smaller than those of other mainland populations, with the exception of some specimens from Guatemala and Belize that are likely an additional undescribed species. Examination of the genitalia of specimens from Trinidad reveals a close association with the aforementioned species, particularly *C. beta*, but can be distinguished by the characters given in the diagnosis.

In addition to being externally nearly identical to specimens from Trinidad, the single central Colombian specimen is also essentially identical to *C. trini* in male genitalia. Therefore, this new species is not likely to be endemic to Trinidad, and will probably be discovered at additional localities in northern South America. Furthermore, a single specimen from Nova Olinda do Norte, Amazonas, Brazil in the Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA, also displays the same external morphology and maculation as the Trinidad and Colombian specimens, suggesting that this species is more widely distributed than the data that we present.

# Cicinnus incerta (Möschler, 1877)

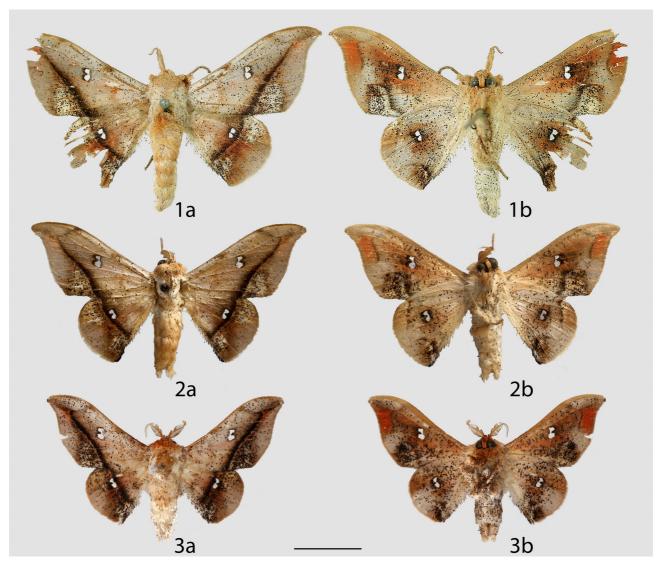
(Figs. 13, 14)

Type locality. Surinam [MNHU, photos of syntypes examined]

*Cicinnus incerta* is quite similar to several other species in the genus *Cicinnus*, which form a clear species group (Herbin & Monzón 2015). However, *C. incerta* seems to be the only species broadly inhabiting the Amazonian Basin, assuming cryptic species do not exist. The specimens from Trinidad are externally identical to those from mainland populations, specifically in comparison to French Guiana specimens.

The two known specimens from Trinidad are from Curepe, a lowland suburban area at the foot of the Northern Range.

**Material examined.** (2  $\circlearrowleft$ , 1  $\circlearrowleft$  total) **TRINIDAD:** 2  $\circlearrowleft$ , Curepe: XI.1972, light trap (UWIZM CABI.2471); 23.IX.1978, M.J.W. Cock [*leg.*], MV trap (MJWC). **FRENCH GUIANA:** 1  $\circlearrowleft$ , Mont Itoupé, 800 m: 16.I.2016, [E. Poirier *leg.*] (CPC).



**FIGURES 1–3.** *Cicinnus* adults, a= recto, b= verso. 1. *C. beta* male, lectotype, Costa Rica, Sixaola River (USNM). 2. *C. beta* male, Panama, Río Trinidad (USNM). 3. *C. trini* male, holotype, Trinidad, St. George, Morne Bleu Textel Installation (USNM). Scale bar= 1cm.

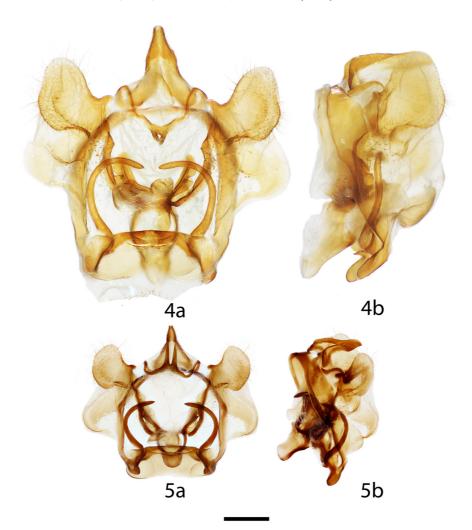
## **Type locality.** French Guiana [USNM, syntype examined]

The name *Cicinnus joanna* is currently applied to all populations of several similar species ranging from Guatemala and Belize south to throughout South America, but are all currently considered synonyms except for *C. joanna* (Becker 1996). All synonyms of *C. joanna* are likely to be have full species status considering external and genitalia differences (R.A. St Laurent unpublished) and thus were inappropriately synonymized by Schaus (1928) and Becker (1996). Furthermore, genitalia examinations displays that *C. joanna sensu lato* belongs to *Psychocampa* Grote & Robinson, 1866. Future revisions of *Cicinnus* and *Psychocampa* will ultimately be necessary to determine the true status of the several names treated as *C. joanna* as well as a definitive generic placement, thus we have chosen not to make these taxonomic changes at this time.

The species present in Trinidad is most likely true *C. joanna* due to the relative proximity of the type locality and affinity of Trinidad species with those found in French Guiana. The population of Trinidad also matches the type of *C. joanna* in external appearance.

The two specimens known from Trinidad were taken at light on a forested hill-top (Brigand Hill, 217 m, in the Central Range) and ridge top (Morne Bleu Textel Installation, 700 m, in the Northern Range).

**Material examined.** (1  $\circlearrowleft$ , 2  $\circlearrowleft$  total) **TRINIDAD:** 1  $\circlearrowleft$ , Brigand Hill Lighthouse: 17.I.2004, M.J.W. Cock [*leg.*], at security lights by 2200 h (MJWC). 1  $\circlearrowleft$ , Morne Bleu, Textel Installation: 11.X.1978, M.J.W. Cock, at light (MJWC). **FRENCH GUIANA:** 1  $\circlearrowleft$ , Saül, Point de Vue, 8.IX.2010 (CPC).



**FIGURES 4, 5.** *Cicinnus* male genitalia, a= ventral, b= lateral. 4. *C. beta* lectotype, Costa Rica, Sixaola River, St Laurent diss.: 8-29-16:1 (USNM). 5. *C. trini* holotype, Trinidad, St. George, Morne Bleu Textel Installation, St Laurent diss.: 5-19-16:1 (USNM). Scale bar= 1 mm.

# Cicinnus magnapuncta (Kaye, 1901)

(Figs. 6, 9, 10, 31)

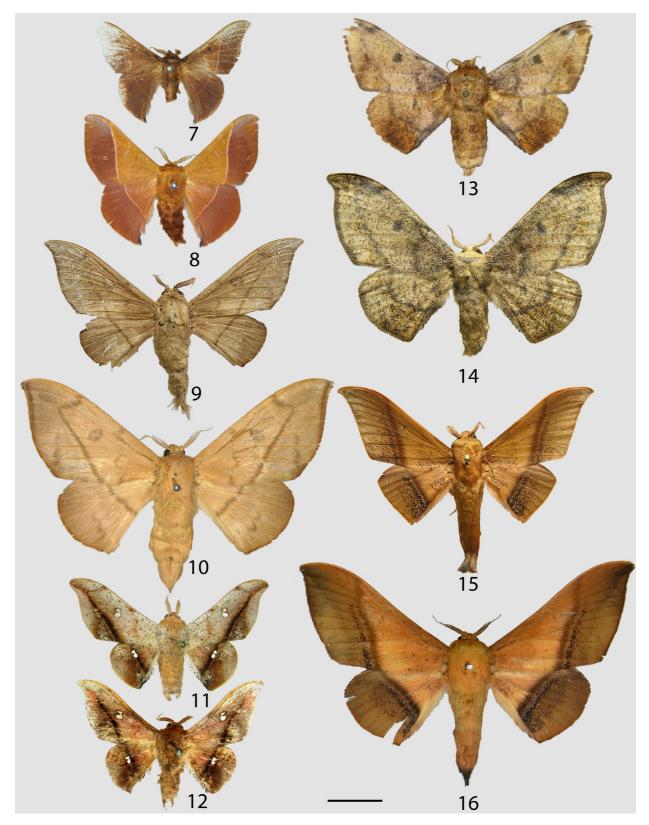
**Type locality.** Trinidad, Tabaquite [NHMUK, syntype examined, designated here as lectotype] *Perophora magnapuncta* Kaye, 1901: Kaye (1901); Kaye & Lamont (1927).

Cicinnus magnapuncta was described and illustrated implicitly from one (but possibly more) specimens collected at Tabaquite, central Trinidad, in June 1898 by W.J. Kaye (Kaye 1901, Kaye & Lamont 1927). Kaye (1901) does not indicate the sex of the type material but his illustration and the single specimen recognized as a type in the NHMUK is female (Fig. 31). The syntype in the NHMUK lacks a collecting data label, though it does bear a label reading "Trinidad, Kaye" and the accession number 1901-72. On the reverse of the accession label, Perophora magnapuncta Kaye is handwritten, in a style similar to that seen for other Kaye types from 1901 in NHMUK, although different from Kaye's characteristic writing on later types. A red edged type label is also present on the specimen, along with a genitalia preparation label (the genitalia are apparently missing because the slide only contains the terminal two abdominal segments). We therefore believe that this specimen is a syntype, and here designate it as the lectotype with the following labels: C, magnapuncta Keyes [recte Kaye] Type genit.pr. No 6 Mimallonidae/BMNH(E) #805414/ NHMUK010588329/ Type [red edged circular label]/ Trinidad Kaye 1901-72 [number after 1901 unclear, 72 or 92, written on upper surface of label]; Perophora magnapuncta Kaye [written on lower surface of label]/ LECTOTYPE \( \rightarrow \) Perophora magnapuncta Kaye designated by St Laurent and Cock, 2017 [red handwritten label].



FIGURE 6. Cicinnus magnapuncta live female. Trinidad, Brasso Seco. Photo courtesy of Kris Sookdeo.

Cicinnus magnapuncta was the only mimallonid species described from Trinidad until C. trini described above. Although C. magnapuncta seemed to be endemic to the island, a single male specimen from French Guiana in the MNHN (Fig. 9) may be this species considering the similarities in external appearance to the females and the close affinity of Trinidad Mimallonidae with those of French Guiana. However, due to the lack of males from Trinidad, it is not possible to definitively state at this time that the two populations are conspecific. Interestingly, so far only females of C. magnapuncta have been collected or photographed in Trinidad, thus males seem to either not be strongly attracted to light or are potentially diurnal or crepuscular whereas the females arrive late (23.51 h and 00.44 h) at light (K. Sookdeo pers. comm.).



FIGURES 7–16. Mimallonidae of Trinidad. 7. *Alheita caudina* male, Trinidad, 2.5 mi SE of Valencia, Valencia Forest (MJWC). 8. *A. caudina* female, Trinidad, La Brea Ward, Parrylands Oilfield (MJWC). 9. *Cicinnus magnapuncta* (putative), male, French Guiana, St. Jean du Maroni, photo courtesy of P. Collet (MNHN). 10. *C. magnapuncta* female, Trinidad, Cumaca Road, 4.6 mi (MJWC). 11. *C. trini* male, paratype, Trinidad, Hollis Reservoir (MJWC). 12. *C. trini* male, paratype, Trinidad, Cumaca Road, 4.6 mi (MJWC). 13. *C. incerta* male, Trinidad, Curepe (MJWC). 14. *C. incerta* female, French Guiana, Mont Itoupé, 800 m, photo courtesy of P. Collet (CPC). 15. *C. joanna* male, French Guiana, Saül, Point de Vue, photo courtesy of P. Collet (CPC). 16. *C. joanna* female, Trinidad, Brigand Hill Lighthouse (MJWC). Scale bar= 1 cm.

Several similar *Cicinnus* species are known from mainland South America, namely: *C. bactriana* (Butler, 1878), *C. callipius* Schaus, 1928, *C. candacus* Schaus, 1928, *C. gaujoni* (Dognin, 1922), and *C. marona* Schaus, 1905. Primary types of all species have been examined by the first author. *Cicinnus magnapuncta* is unique in having weak maculation, particularly submarginally, such that there is a complete absence of dark petiolate scales. The relatively faint postmedial lines and discal spots, as well as light brown to fawn ground coloration, also can be used to distinguish *C. magnapuncta* from other species listed previously, which are darker brown or nearly orange in the case of *C. marona*, and nearly always have stronger maculation.

Prior to this work, *C. magnapuncta* was only known from a single location in Trinidad, therefore we report several new locations for this species, and figure actual specimens (not a painted illustration) for the first time. This species is restricted to forested areas of Trinidad, though the previously mentioned specimen from French Guiana may be this species. In addition to the lectotype collected from Tabaquite in the Central Range, *C. magnapuncta* has been found on the slopes of the Northern Range.

**Material examined.** (1  $\circlearrowleft$ \*, 6  $\circlearrowleft$  total) **TRINIDAD:** 2  $\circlearrowleft$ , Brasso Seco: 14.III.2015 (K. Sookdeo photograph, not collected). 1  $\circlearrowleft$ , Cumaca Road 0.5 mi: 27.X.1980, M.J.W. Cock [*leg.*], at MV Light (UWIZM CABI.2457). 3  $\circlearrowleft$ , Cumaca Road, 4.6 mi: 21.X.1982, M.J.W. Cock [*leg.*], at MV light (2  $\hookrightarrow$  MWJC, 1  $\hookrightarrow$  to be deposited USNM). 1  $\hookrightarrow$ , [Tabaquite]: [VI.1898], Kaye 1901, [lecto]type, BMNH(E)# 805414, NHMUK010588329 (NHMUK). **FRENCH GUIANA:** 1  $\circlearrowleft$ , St. Jean du Maroni: 2.I.1978, T. Porion *leg.* [\*provisionally identified as this species] (MNHN).

# Cicinnus sp. undetermined

(Not figured.)

We have seen images of two *Cicinnus* sp. specimens from Tobago, which are unfortunately very badly damaged by psocids. These specimens are damaged to the point where almost none of the wings remain, thus identification is essentially impossible. However, the apical half of one specimen's wings were still present when M. Kelly photographed them, and display characters such as postmedial shading and a small hyaline patch similar to *C. packardii* (Grote, 1865). There are currently no described species matching the appearance of this moth from northern South America, but there are one or two undescribed species from northern Venezuela that are somewhat similar (St Laurent unpublished). Hopefully more material will be located in the future for a meaningful determination and potential species description. Ingraham's material was collected at light in or near the forest at his house high on the main ridge of Tobago, above Charlotteville.

**Material examined.** (Photos of 2 ♂ total) **TOBAGO:** 2 ♂, Englishman's Bay: VI–XII.2009, J. Ingraham [*leg.*] (UWIZM 2015.15.138, 139; M. Kelly photo 11609 *et seg.*).

# Druentica Strand, 1932

Replacement name for *Druentia* Schaus, 1928 Type species: *Druentica partha* (Schaus, 1905)

Druentica is composed of many similar species in several distinct species-groups, and identification of most species is difficult until a thorough revision of the genus has been completed. Two species are recognized from Trinidad, one of which has been studied as a potential biological control agent of the weed Clidemia hirta (Melastomataceae), a neotropical shrub introduced and invasive in various areas of the Old World tropics including Hawai'i (Waterhouse & Norris 1987). Druentica species are considered to be specialized on Melastomataceae (Herbin 2016).

# Druentica coralie Herbin, 2016

(Figs. 17, 18)

## Type locality. French Guiana

Druentia [sic] sp. prob. inscita (Schaus): Nakahara et al. (1992), Culliney & Nagamine (2000)

Druentica inscita (Schaus): Waterhouse & Norris (1987)

Several specimens of *Druentica* from AMNH, HDOA and NHMUK are similar to the holotype of *D. coralie* Herbin, 2016, a species described from French Guiana. Two genitalia preparations of these specimens reveal characters matching those figured by Herbin (2016). We do note, however, that the hindwings of specimens from Trinidad display a small discal spot, a character not seen in specimens from French Guiana. This character may be an instance of geographic variation in the species, considering that other characters of habitus and male genitalia are otherwise perfect matches for *D. coralie*.

The earliest mention of *Druentica* from Trinidad in the literature appears in Simmonds (1930), and although the insect in question is not identified, the description highly suggests *Druentica*. Considering the age and obscurity of this citation, we reproduce this description here: "A second species made a hard case out of silk, recalling the cocoon of the European Puss Moths. This larva was brown with a yellow stripe on each segment and lived within the case, leaving an opening at each end to allow it to come out to feed. When full fed it closed the two ends of a barrel shaped cocoon and pupated within..." This larval description was in relation to *Clidemia hirta* (Melastomataceae), a known host of this species (see below).

Nakahara *et al.* (1992) later discuss this Trinidad *Druentica* species, which R.M. Burkhart studied in Trinidad as a potential biological control agent of *Clidemia hirta* on Hawai'i. They include brief notes on its biology and host range restricted to Melastomataceae, including its apparently preferred field food plant *Miconia acinodendrum*, but it has not subsequently been released in Hawai'i (Winston *et al.* 2014). Waterhouse & Norris (1987), Nakahara *et al.* (1992), and Culliney & Nagamine (2000) referred to the species as *Druentia* [sic] or *Druentica* sp. prob. *inscita* (Schaus, 1890), and although *D. inscita* is similar to *D. coralie* and *D. patawa* (treated below), *D. inscita* is not likely to be present in Trinidad because it is a Mexican species. We have seen two HDOA voucher specimens for the material reared from *C. hirta* in Trinidad, which we determine as *D. coralie* (verified by male genitalia dissection). There do not seem to be any vouchers for the material reared from *Miconia acinodendrum*, so this host plant record could refer to either *Druentica* species treated here, given that *Druentica* spp. are specialists on species of Melastomataceae (Herbin 2016).

Although the main reported food plants, *M. acinodendrum* and *C. hirta*, are widespread and common in Trinidad (Williams 1934), the original Burkhart collections were all from the Northern Range. Fortunately, there are two reared specimens preserved in the collection of the Hawaii Department of Agriculture from the Northern Range, May 1980, and the live material sent to Hawai'i consisted of two airfreight consignments in November 1980, the first of seven larvae from Maracas Valley and the second of five larvae from the Northern Range, all collected from *C. hirta* (M. Ramadan, pers. comm. 2016). The distribution of *D. coralie* mostly overlaps with *D. patawa* in the Northern Range of Trinidad, but *D. coralie* has also been recorded from lowland forest (Caparo).

If our determination of this species is correct, we figure (Fig. 18) the female of *D. coralie* for the first time, as previously it was unknown (Herbin 2016).

**Material examined:** (8  $\circlearrowleft$ , 1  $\circlearrowleft$ , total) **TRINIDAD:** 1  $\circlearrowleft$ , Arima Valley, 800–1200 ft: 10–22.II.1964, Rozen & Wygodzinsky *leg.* (AMNH). 5  $\circlearrowleft$ , Caparo: XI.1905 (4  $\circlearrowleft$ ), XII.1905 (1  $\circlearrowleft$ ), S.M. Klages [*leg.*], Rothschild Bequest, B.M. 1939-1, NHMUK010588413, 010588414 [dissected] (NHMUK). 1  $\circlearrowleft$ , Curepe: 1–20.III.1982, F.D. Bennett [*leg.*], black light trap (UWIZM CABI.2469). 1  $\circlearrowleft$ , 1  $\hookrightarrow$ , Northern Range: V.1980, R.M. Burkhart [*leg.*], reared from *Clidemia hirta*, St Laurent diss.: 1-10-17:1 [ $\circlearrowleft$ ] (HDOA).

# Druentica patawa Herbin, 2016

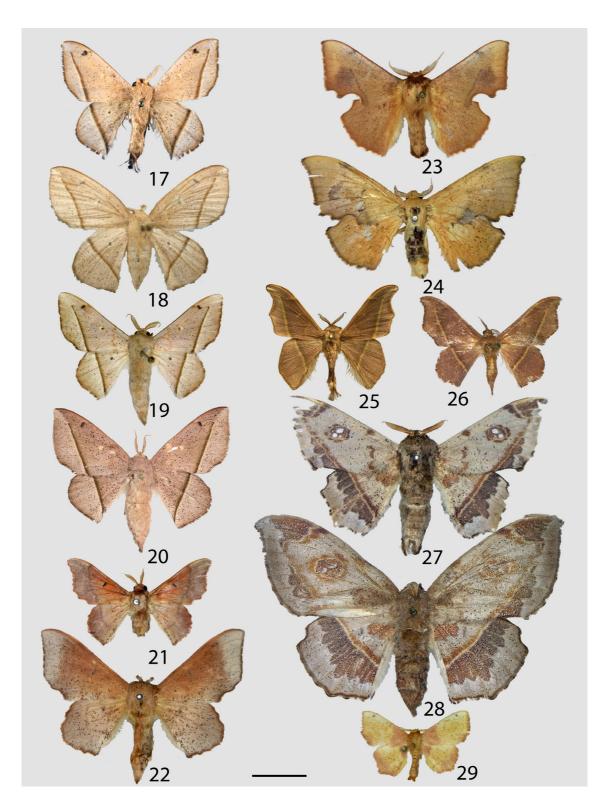
(Figs. 19, 20)

# Type locality. French Guiana

Druentica scissa (Herrich-Schäffer): Cock (2003: 50, 51, fig. 19 ♂)

This identification was confirmed by genitalia dissection of one male specimen collected in Trinidad, which is a perfect match for *D. patawa*, newly described from French Guiana (Herbin 2016). Therefore, this is the first report of this species from outside of French Guiana. Prior to the description of *D. patawa*, Cock (2003) referred to this species as *D. scissa*, a presumably Amazonian species of uncertain identity.

*Druentica patawa* has primarily been collected from forested areas of the Northern Range, both in the valleys and on ridge tops, where it is not rare.



FIGURES 17–29. Mimallonidae of Trinidad. 17. Druentica coralie male, Trinidad, Arima Valley, 800–1200 ft (AMNH). 18. D. coralie female, Trinidad, ex. Clidemia hirta, photo courtesy of M. Ramadan (HDOA). 19. D. patawa male, Trinidad, Hollis Reservoir (MJWC). 20. D. patawa female paratype, French Guiana, Kaw Rd., 286 m (CDH). 21. Lacosoma ostrinum male, Trinidad, Off Saunders Road, Inniss Field, 50 m (MJWC). 22. L. ostrinum female, Trinidad, 2.5 mi SE of Valencia, Valencia Forest (MJWC). 23. Trogoptera guianaca male, Trinidad, Morne Bleu, Textel Installation (MJWC). 24. T. belilia female, Trinidad, Off Saunders Road, Inniss Field, 50 m (MJWC). 25. L. valva male, French Guiana, Réserve des Nouragues, Inselberg DZ, photo courtesy of P. Collet (CPC). 26. L. valva female, Trinidad, 2.5 mi SE of Valencia, Valencia Forest (MJWC). 27. Mimallo amilia male, Trinidad, Curepe (MJWC). 28. M. amilia female, Trinidad, Arima Valley (MJWC). 29. Zaphanta infantilis male, Trinidad, 2.5 mi SE of Valencia, Valencia Forest (MJWC). Scale bar= 1 cm.

Material examined: (9 ♂, 1 ♀, total) TRINIDAD: 4 ♂, Arima-Blanchisseuse Road, milestone 9.75: 21.IX.1982, M.J.W. Cock [leg.], MV light (3 ♂ UWIZM CABI.2465, 2467, 2468, 1 ♂ MJWC). 1 ♂, Cumaca Road, 4.6 mi: 21.X.1982, M.J.W. Cock [leg.], MV light (UWIZM CABI.2466). 1 ♂, Curepe: 11–20.II.1982, M.J.W. Cock [leg.], MV light (MJWC). 1 ♂, Hollis Reservoir, pump house: 2.XI.1978, M.J.W. Cock [leg.], at light (MJWC). 2 ♂, Morne Bleu, Textel Installation: 7.I.1979, 29.III.1979 M.J.W. Cock [leg.], at light (MJWC, NHMUK010588412). FRENCH GUIANA: 1 ♀, Kaw Rd., 4°32′57.41″N, 52°8′52.57″W, 286 m: 27.X.2013, D. Herbin leg., CDH 2.820, Paratype ♀ Druentica patawa Herbin det. Antenor 2016 (CDH).

#### Lacosoma Grote, 1864

Type species: Lacosoma chiridota Grote, 1864

#### Lacosoma ostrinum Herbin, 2016

(Figs. 21, 22)

Type locality. French Guiana

Like *Druentica*, *Lacosoma* consists of many similar taxa, and is in dire need of an adequate revision. However, the genitalia dissection of the single male *Lacosoma* (other than *L. valva*) in Trinidad is a very close match to the genitalia of the holotype of *L. ostrinum* (Herbin 2016, figs. 90–92). Externally, these specimens are quite close as well, although the forewings are slightly more falcate in the holotype of *L. ostrinum*. If our determination is correct, this is the first report of *L. ostrinum* outside of French Guiana.

Although we have only examined a single pair of specimens from Trinidad, we have no reason to believe that they are not conspecific considering the scarcity of *Lacosoma* collected in Trinidad. Therefore, we figure here the female of *L. ostrinum* for the first time. Both Trinidad specimens were captured in lowland forest, the male in the south and the female between the Northern and Central Ranges.

**Material examined.** (1  $\circlearrowleft$ , 1  $\circlearrowleft$  total) **TRINIDAD:** 1  $\circlearrowleft$ , Off Saunders Road, Inniss Field, c. 50 m, at beginning of track to dam: 17.V.1999, M.J.W. Cock [*leg.*], MV light, dusk to 22.10h (MJWC). 1  $\circlearrowleft$ , 2.5 mi. SE of Valencia, Valencia Forest: IV.1980, M.J.W. Cock [*leg.*], MV light (MJWC).

## Lacosoma valva Schaus, 1905

(Figs. 25, 26)

Type locality. French Guiana [USNM syntype, examined]

Lacosoma valva is one of the few species of Lacosoma that is easily recognizable, in particular by the satin black ground color and yellowish pale postmedial lines. This species is broadly distributed in the Amazonian region, and is therefore another expected species for Trinidad. The only Trinidad specimen known to us was taken at light in lowland forest (Valencia Forest; see comments under Alheita caudina above).

**Material examined.** (1  $\circlearrowleft$ , 1  $\circlearrowleft$  total) **TRINIDAD:** 1  $\circlearrowleft$ , 2.5 mi. SE of Valencia, Valencia Forest: 5.VIII.1981, M.J.W. Cock [*leg.*], MV light (MJWC). **FRENCH GUIANA:** 1  $\circlearrowleft$ , Réserve des Nouragues, Inselberg DZ: 8.IX.2010 (CPC).

#### Mimallo Hübner, [1820]

Type species: Mimallo amilia (Cramer, 1780)

# Mimallo amilia (Cramer, 1780)

(Figs. 27, 28)

**Type locality.** Surinam [NHMUK syntype, examined] *Lacosoma amilia* (Cramer): Kaye & Lamont (1927)

Mimallo amilia is one of the most broadly distributed mimallonids, found from Mexico to Southeast Brazil and Paraguay (Schaus 1928; St Laurent unpublished). This species was previously reported from Trinidad as *Lacosoma amilia* by Kaye & Lamont (1927) based on a specimen taken by F.W. Jackson in 1922, which we assume is the male with matching data that we list below in NHMUK. We here include additional new records from Trinidad, as well as the first report of this species from Tobago making this one of two mimallonid species reported from the island, together with the here undetermined *Cicinnus* species listed above.

This species is reported to feed on various Myrtaceae and is a minor pest of guava (*Psidium guajava*) in Brazil (Costa Lima 1950; Zanuncio *et al.* 2005), so it is not surprising that it is widespread in disturbed areas in Trinidad and Tobago.

Material examined. (23 ♂, 2 ♀ total) TRINIDAD: 1 ♀, Arima Valley: I.1980, K. Preston-Mafham [leg.] (MJWC). 8 ♂, Caparo: XII.1905 (4 ♂), S.M. Klages [leg.], Rothschild Bequest, B.M. 1939–1; XI.1905 (2 ♂), S.M. Klages, Rothschild Bequest, B.M. 1939–1; no date (2 ♂), S.M. Klages [leg.], Joicey Coll., Brit. Mus. 1925–157 (NHMUK). 5 ♂, Curepe: 197?, F.D. Bennett [leg.], light trap (3 ♂, UWIZM CABI.2459, CABI.2460 CABI.2461); 8.I.1980, 29.I.1980, M.J.W. Cock [leg.] (NHMUK, MJWC). 3 ♂, Palmiste: 27.XII.1946, 30.XII.1946, 31.XII.1946, N. Lamont [leg.] (UWIZM). 1 ♂, Palmiste: 31.XII.1931, N. Lamont [leg.]; 1 ♀, Palmiste: 30.I.1938, N. Lamont [leg.] (NMSE). 2 ♂, St. Augustine: 14.II.1956, M. Bigger [leg.], 'ex. Guava' (UWIZM.2014.9.755); II.1977, [D.J. S[tradling]] (name obscured by grease but no doubt as to provenance), at light (NMSE). 2 ♂, No specific location: (UWIZM CABI.2456); F.W. Jackson [leg.], Brit. Mus. 1922–285 (NHMUK). TOBAGO: 1 ♂, Englishman's Bay: VI—XII.2009, J. Ingraham [leg.], at light (UWIZM.2015.15.140). 1 ♂, Speyside: 14–17.V.1982, M.J.W. Cock [leg.], MV light (MJWC).

# Trogoptera Herrich-Schäffer, [1856]

Type species: Trogoptera erosa Herrich-Schäffer, 1856

# Trogoptera belilia Schaus, 1928

(Fig. 24)

Type locality. Brazil: Amazonas [USNM, syntype examined]

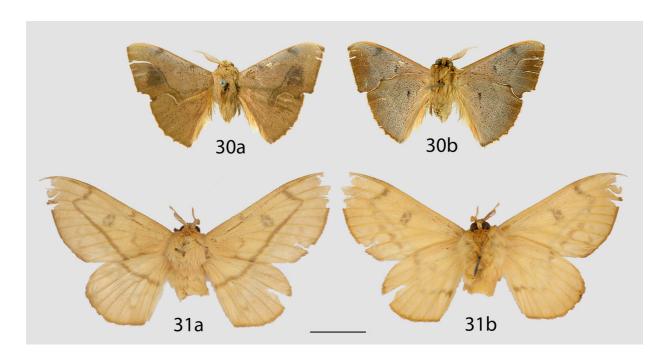
*Trogoptera*, like *Druentica* and *Lacosoma* above, is a poorly studied genus, with numerous similar species, potential synonymies, and undescribed cryptic taxa. However, we are aware of at least two specimens (one male, one female, we only figure the putative female of this species) from Trinidad that closely match a syntype of *T. belilia* in the USNM. Pending additional information regarding *Trogoptera* from Trinidad, we maintain our determinations of these two specimens as *T. belilia* and consider it present on the island. The genitalia preparation of the syntype of *T. belilia* in the USNM is missing and thus the identity of this species will remain in question until topotypical material can be examined.

**Material examined.** (1  $\circlearrowleft$ , 1  $\circlearrowleft$  total) **TRINIDAD:** 1  $\circlearrowleft$ , Off Saunders Road, Inniss Field, at beginning of track to dam, c. 50 m: 17.V.1999, M.J.W. Cock [*leg.*], MV light, dusk–2210h (MJWC).  $\circlearrowleft$ , [additional label data besides "Trinidad" not available for this study] (AMNH).

# Trogoptera guianaca Schaus, 1928

(Figs. 23, 30)

**Type locality.** Brazil: Amazonas; Venezuela: Merida; French Guiana [USNM syntype, French Guiana, examined, French Guiana specimen designated here as lectotype]



**FIGURES 30, 31.** Additional lectotypes designated in this work (for the lectotype of *C. beta* see Figs 1, 4), a= recto, b= verso. 30. *Trogoptera guianaca* male, French Guiana, Nouveau Chantier, photo courtesy of D. Herbin (USNM). 31. *Cicinnus magnapuncta* female, Trinidad, Tabaquite, photo courtesy of A. Giusti (NHMUK). Scale bar= 1 cm.

The specimens from Trinidad that we have examined, closely match a male syntype of *T. guianaca* from French Guiana, and thus we assign the specimens from Trinidad to this species. As noted earlier, there is a strong similarity between the Mimallonidae fauna of French Guiana and that of Trinidad.

Considering the fact that *T. guianaca* was described from an unspecified number of specimens from Brazil, Venezuela, and French Guiana, there is uncertainty surrounding the identity of this species. Therefore, we designate a lectotype for *T. guianaca* using a syntype in the USNM from French Guiana with the following labels: *Trogoptera guianaca* type Schaus/ Genitalia Slide By C.H. # 23 USNM 86051/ ③ genitalia slide, 24 Mch.'28 C.H. #23/ Avril [April]/ Guyane Françse [French Guiana], Nouveau Chantier, Collection Le Moult/ Dognin Collection/ [Lecto]Type No. 33568 U.S.M.N./ USNM-Mimal: 1045/ LECTOTYPE ③ *Trogoptera guianaca* Schaus designated by St Laurent and Cock, 2017 [red handwritten label]. This designation enables us to more accurately identify the specimens from Trinidad that we attribute to *T. guianaca*, and more importantly, offers stability as to the identity of the species *T. guianaca*.

The few specimens are from diverse habitats in Trinidad: suburban (Curepe), lowland forest (Inniss Field), and high forest (Morne Bleu Textel Installation).

Material examined. (5 ♂ total) TRINIDAD: 1 ♂, Curepe: 2–8.XI.1981, M.J.W. Cock [*leg.*], MV light (UWIZM CABI.2470). 3 ♂, Morne Bleu, Textel Installation: 11.X.1978 (2 ♂), 10.V.1981 (1 ♂), M.J.W. Cock [*leg.*], at light (NHMUK, MJWC). FRENCH GUIANA: 1 ♂, Nouveau Chantier: IV, Collection Le Moult, Dognin Collection, [lecto]type no. 33568 USNM, *Trogoptera guianaca* [lecto]type Schaus, Genitalia Slide By C.H. # 23 USNM 86051, ♂ genitalia slide, 24 Mch.'28 C.H. #23, USNM-Mimal: 1045 (USNM).

# Zaphanta Dyar, 1910

Type species: Zaphanta infantilis Dyar, 1910

**Zaphanta infantilis Dyar, 1910** (Fig. 29)

Zaphanta infantilis is the sole representative of the genus Zaphanta, and is one of the smallest Mimallonidae. This species is broadly distributed in Central America and South America (Schaus 1928) and in actuality the name infantilis likely includes multiple species (St Laurent unpublished). As is the case for Lacosoma valva, the only Trinidad specimens known to us were taken at light in lowland forest (Valencia Forest; see comments under Alheita caudina above).

**Material examined.** (2 ♂ total) **TRINIDAD:** 2 ♂, 2.5 mi. SE of Valencia, Valencia Forest: IV.1980, M.J.W. Cock [*leg.*], MV light (NHMUK, MJWC).

#### **Discussion**

We report 13 species of Mimallonidae from Trinidad and two from Tobago, one of which is not known from Trinidad (see Table 1). Cock (2003) suggested that the number of species of each of the more speciose moth families or family groups known from Tobago represented 11% of the number found in Trinidad on average. Of the more speciose families, this percentage varied from 2% for the sedentary Saturniidae to 18% for Pyralidae (i.e. Pyralidae + Crambidae). For Mimallonidae, the two representatives from Tobago represent 15.4% of the 13 species found in Trinidad, i.e. at the upper end of the range previously reported.

Most species that we report are common Amazonian species, and may represent only a proportion of Mimallonidae present on these two islands. Only the undetermined *Cicinnus* species from Tobago, *C. trini*, and *C. magnapuncta* have not yet been found in the Amazon rainforest, save for some putative specimens of the latter two species. Furthermore, some of the species present in Trinidad and Tobago that are shared with Amazonia are also found in additional regions (such as *A. caudina* in Brazilian Cerrado and Atlantic Forest, *Zaphanta infantilis* in Costa Rica and Atlantic Forest, and *Mimallo amilia* from Mexico to Paraguay), supporting our hypothesis that only common or at least widespread Mimallonidae species are present on these islands.

All 14 species of Mimallonidae are apparently uncommon in Trinidad and Tobago, the most frequently collected being *M. amilia*, known from 25 specimens. The majority of species are only known from one sex, one is known from a single specimen and four from two specimens. This seems somewhat unusual when comparing the same species from mainland populations, which are often represented in collections in series (St Laurent pers. obs.).

All specimens were collected at light, apart from very few reared specimens, notably those *D. coralie* reared as part of a study of the herbivores of *Clidemia hirta*. Bearing in mind that the second author's collections in a suburban area (Curepe) represent hundreds of light trap nights, and forest collections no more than dozens (Cock 2003), it is striking that most species were only found in forested situations. Of particular interest is Valencia Forest, which was a rather narrow strip of disturbed mature lowland forest, that is now sadly gone. The second author ran a mercury vapor light for only two part nights at this location but collected the specimens of two species of Trinidad Mimallonidae so far only known from the island at this locality. Therefore, it is likely that additional species of Mimallonidae will be discovered on these islands, either by serendipity or by systematic collecting.

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publication, and Daniel Herbin (France) for aid in identification of *Lacosoma* and *Druentica* as well as providing photos of *C. callipius*, *D. patawa* (Fig. 20), and *T. guianaca* (Fig. 30), and review of the manuscript. Carlos Mielke (Brazil) provided helpful corrections and suggestions on the manuscript. Travel expenses for Ryan St Laurent were in part covered by the Cornell University College of Agriculture and Life Sciences Alumni Association award.

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