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Papilionoidea) of Tobago, West Indies

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Abstract. This catalogue comprises records of 355 species of moths (non-papilionoid Lepidoptera) from Tobago, of which 15 are partially identified. Of this total, all except 17 (5%) are known from Trinidad, although not all these records from Trinidad are published yet. Of these 17, eleven are expected to occur in Trinidad as they also occur on the mainland of South America and two are only known from Tobago but will probably also occur in Trinidad. This leaves just four species (1% of the total) that are known from the Lesser Antilles and are currently not known from further south than Tobago. The families represented by the most species are Erebidae, Crambidae, Geometridae, Noctuidae and Sphingidae, which between them account for 73% of records. Taxonomic changes are made as follows. *Podalia farmbri* (Kaye, 1925) **sp. rev.** (Megalopygidae) is removed from the synonymy of *P. nigrescens* Schaus, 1905. *Podalia walkeri* Hopp, 1935 and *P. dimidiata* (Walker, 1865) are **syn. nov.** of *P. farmbri* Kaye, 1925. *Renia bipunctata* (Kaye, 1901) (Erebidae) is a **comb. nov.** for *Zanclognatha bipunctata*. *Aristaria trinitalis* Schaus, 1906 (Erebidae) is a **syn. nov.** of *Renia bipunctata* Kaye, 1901. *Aglaonice deldonalis* Walker, 1859 **sp. rev.** (Erebidae) is removed from the synonymy of *A. hirtipalpis* Walker, [1859]. *Plusiodonta cupristria* Kaye, 1923 (Erebidae) is a **syn. nov.** of *Oraesia excitans* Walker [1858]. *Oroscopta abluta* (Schaus, 1912) (Erebidae) is a **comb. nov.** for *Freilla abluta* Schaus, 1912, which is a new combination in common use, but not previously published. *Ptichodis dorsalis* (Fabricius, 1797) (Erebidae) is a **comb. nov.** for *Noctua auct. dorsalis* Fabricius, a new combination already in use, but not formally published. I endorse the unpublished conclusion of I.W.B. Nye that *Ptichodis basilans* (Guenée, 1852) is a **syn. nov.** of *Ptichodis dorsalis* (Fabricius, 1797). *Ptichodis agrapta* Hampson, 1913 is also a **syn. nov.** of *Ptichodis dorsalis* (Fabricius, 1797).

Key Words. Erebidae, Crambidae, Geometridae, Noctuidae, Sphingidae, Trinidad, pests.

Resumen. Este catálogo incluye registros de 355 especies de polillas de Tobago, de las cuales 15 han sido parcialmente identificadas. Del total de especies, sólo 17 (5%) no se han identificado en Trinidad, aunque no todos estos registros han sido publicados todavía. De estas 17 especies, once se espera que estén presentes en Trinidad ya que también ocurren en tierra firme en Sudamérica y tan sólo dos se ha identificado en Tobago pero es probable que también esté presente en Trinidad. De tal modo, tan sólo cuatro especies (1% del total) que ocurren en las Antillas Menores no se han identificado más al sur de Tobago. Las familias más representadas son Erebidae, Crambidae, Geometridae, Noctuidae and Sphingidae, correspondiendo al 73% de los registros. Se realizan los siguientes cambios taxonómicos. *Podalia farmbri* (Kaye, 1925) **sp. rev.** (Megalopygidae) se elimina como sinónimo de *P. nigrescens* Schaus, 1905. *Podalia walkeri* Hopp, 1935 y *P. dimidiata* (Walker, 1865) son **syn. nov.** de *P. farmbri* Kaye, 1925. *Renia bipunctata* (Kaye, 1901) (Erebidae) es una **comb. nov.** para *Zanclognatha bipunctata*. *Aristaria trinitalis* Schaus, 1906 (Erebidae) es un **syn. nov.** de *Renia bipunctata* Kaye, 1901. *Aglaonice deldonalis* Walker, 1859 **sp. rev.** (Erebidae) se elimina como sinónimo de *A. hirtipalpis* Walker, [1859]. *Plusiodonta cupristria* Kaye, 1923 (Erebidae) es un **syn. nov.** de *Oraesia excitans* Walker [1858]. *Oroscopta abluta* (Schaus, 1912) (Erebidae) es un **comb. nov.** para *Freilla abluta* Schaus, 1912, la cual es una combinación nueva de uso común, pero que no ha sido publicada anteriormente. *Ptichodis dorsalis* (Fabricius, 1797) (Erebidae) es una **comb. nov.** para *Noctua auct. dorsalis* Fabricius, una nueva combinación ya en uso pero que no se ha publicado formalmente. Apoyo la conclusion no publicada de I.W.B. Nye afirmando que *Ptichodis basilans* (Guenée, 1852) es un **syn. nov.** de *Ptichodis dorsalis* (Fabricius, 1797). *Ptichodis agrapta* Hampson, 1913 es también un **syn. nov.** de *Ptichodis dorsalis* (Fabricius, 1797).

Palabras Clave. Erebidae, Crambidae, Geometridae, Noctuidae, Sphingidae, Trinidad, plagas.

Introduction

At the beginning of the last century, the first catalogue of moths of Trinidad was published: *A Preliminary catalogue of the Lepidoptera Heterocera of Trinidad* (Kaye 1901). Now, more than 100 years later, this paper presents the first catalogue for Tobago, the other main island in the country

of Trinidad and Tobago. At that time, Kaye (1901) was able to catalogue 245 species for Trinidad, of which he described 46 as new. That number has since grown to at least 2,275 (Cock 2003) although many records have yet to be published. Here, I record 355 species from Tobago, based on the limited literature, museum collections and my own limited collecting.

This list is effectively a spin-off from my work on the Lepidoptera of Trinidad, in the course of which I have examined the literature, studied major collections and considerably expanded the number of species known from Trinidad (Cock 2003). Relevant taxonomic catalogues and revisions have been reviewed, and a small number of records for Tobago compiled from these. The applied entomology literature has been reviewed, based on CAB Abstracts, the Crop Protection Compendium (CABI 2016), CABI Distribution Maps of Pests and Diseases, etc. One problem encountered is that many records, particularly those compiled for phytosanitary purposes, refer to species being present in the country 'Trinidad and Tobago' when this often means that a species is recorded from Trinidad, but there is no evidence that it is present in Tobago. Based on my experience, I would encourage those involved in compiling such lists to differentiate between the two main islands of Trinidad and Tobago. The Ministry of Agriculture, Land and Fisheries might also consider a comprehensive pest survey of Tobago, to clarify if there are significant internal quarantine risks that should be managed, i.e. pests that are present in Trinidad but not in Tobago, or opportunities to recognise Tobago as a pest free zone for some pest species.

Collectors, publications and collections of Tobago moths. Almost nothing has been recorded regarding the moths of Tobago, although scanning the applied entomology literature has produced a few agricultural pests, and occasional mention in taxonomic reviews shows there has been some collecting.

The botanist Walter Elias Broadway (1863–1934), was very active in Trinidad in the early part of the last century, and there are a few specimens of moths which he collected in Tobago in The Natural History Museum, London (NHMUK). George Blundell Longstaff (1849–1921) visited Tobago in 1907, and reported his butterfly collecting in Longstaff (1908), reprinted with additional moth records in Longstaff (1912); his material is held in the Oxford University Natural History Museum (OUNHM). David J. Stradling (1939–2012), formerly of the University of the West Indies (UWI), gave me a list of 11 Sphingidae which he collected at mercury vapour light at Arnos Vale in 1977.

In visits to the United States National Museum, Washington (USNM) early this century I was able to examine some of the material collected by D. Hardy and W. Lowe in 1979, at light at a variety of locations across the island. When all this material is reviewed and identified, it is sure to contain additional records.

My limited collecting comprises (1) small numbers of moths collected at lights at Crown Point (June 1981, January and September 1982); (2) less than a week collecting with a light trap at Marden House, near Scarborough, in January 1982 in collaboration with Robert Forrester (then of UWI) and a UWI undergraduate field course; and (3) four nights collecting with a light trap in a disturbed area near Speyside, and one night in forest above this, in June 1982.

Dr Roger Hammond (CABI, retired) visited Charlotteville in June 1998 and June 1999 with University of Wales Cardiff field courses and collected moths at light on my behalf. Some of these new to Tobago were reported in a university newsletter (Mettam 1999). Ian Woiwod and Matt Kelly have sent me photographs of moths taken in Tobago. Kris Sookdeo of Penal, Trinidad, sent me images of Lepidoptera taken during the Trinidad and Tobago Field Naturalists' Club Bioblitz 2015 at Charlotteville. Five of these (Figures 5, 7, 25–27) represent the only species records I have from Tobago.

The late Jeffery Ingraham was resident in Tobago for some years before his death in 2013 (Donahue 2013), and made a collection of larger moths and insects at light at his residence above Englishman's Bay. Matt Kelly made a photographic record of this collection in 2011, and gave a two CD record to the University of the West Indies Zoology Museum (UWIZM) and the author. Part of this collection was pinned and had suffered significant damage from psocids, and part was unpinned and kept in a freezer. The material was unlabelled but the approximate period of collecting and the fact that all material was collected at Ingraham's residence was established in correspondence. The pinned material left in Tobago is now in UWIZM, but has deteriorated since Kelly made his photographic record, and the unpinned material is assumed lost. The records which I include here are my identifications primarily made from Kelly's photographs, but I have listed the UWIZM specimens with accession numbers where they exist and Kelly's image numbers where they don't, e.g. [M. Kelly photos 11609 et seq.] refers to a sequence of images starting with number 11609.

The moths listed here are predominantly the results of the collecting of D. Hardy and W. Lowe, Jeffrey Ingraham and the author; almost all represent previously unpublished new records for the island.

Materials and Methods

Structure of the list. In the list that follows, each species entry is structured as follows:

The currently accepted name for that species and subspecies where used. The author and year of publication for each name is included, in parentheses where the species or subspecies was originally described in a different genus. Although not required for a trinomial, the authorship of the species name is included as there will be occasions when users of the list will need only the species level name.

Indented below this are entries for this and any other names or combinations for this species which have appeared in the literature and refer explicitly to its presence in Tobago, i.e. these do not include generalised statements, e.g. that a particular species occurs throughout the Caribbean, or throughout the Neotropical Region. I have listed taxonomic papers where Tobago is included in material examined; although this is rare, I have doubtless missed some of these, but hopefully I have located and referred to all those papers dealing with Tobago specifically, or including information on biology and ecology. This is followed by an explanation of the basis of my identification.

Next, there is a listing of the material which I have seen. The format for the listing of material examined is as follows. Specimens are listed by locality, which are arranged alphabetically, with material simply labelled Tobago listed last. The locality may be followed by capture method, e.g. at light, and then a colon, after which the number and if known, the sex of material seen (with a ? to indicate where the sex is unclear, e.g. when working from an image). This may be followed by a comment in parentheses on the condition of the material, e.g. '(abdomen missing)'. Next the date of capture (if recorded) is given, followed by the collector's name in parentheses; where the record is based on a photograph this is indicated. Finally, in square brackets, the location of the specimen is given, followed by any comment on identifications associated with the specimen, or how the specimen is curated if it differs from my identification; the inclusion of 'photo' within the square brackets indicates that I have only examined a photograph of the specimen. Comments of curation in collections refers to when I examined the collection which may be up to 35 years ago, and may no longer reflect the current curation; nevertheless, this information may throw light on names used in the literature.

Identifications. This list is based on my study of the Lepidoptera of Trinidad, in the course of which I have examined the collections of NHMUK, NMSE, OUNHM and UWIZM (expanded abbreviations immediately below) and identified many of the Trinidad species. In most cases this is based on a careful examination and comparison of the phenotypes of my material and named material, primarily in the NHMUK and USNM, as indicated under each species. Whenever available I have tied this comparison to type specimens as indicated under each species, but in almost all cases I have not been rigorous in checking the status of these type specimens and have generally accepted them as types if they are labelled as such, although I now know that many specimens labelled as holotype in the NHMUK and USNM are actually syntypes (many of which have been or will be designated lectotypes over time). I am aware that a significant proportion of the species named will prove to include cryptic species that will need revision based on genitalia and molecular methods. Given that very few of the species identified have been dissected or have authoritative genitalia figures available, I have seldom dissected material to confirm my identification, but this is indicated where I have done so. For those species where I have been unable to establish a name from the resources available, I have included images to facilitate their future recognition. Given our current state of our knowledge, I think these limitations are acceptable, and hope this list will in time be improved as our knowledge of the taxonomy of Neotropical moths improves.

The museum abbreviations used in this paper are as follows:

- CABI** CAB International – see under UWIZM.
MGCL McGuire Center for Lepidoptera and Biodiversity, Florida, USA (incorporating the Allyn Museum of Entomology which the author visited).
MJWC The author's private collection, UK.

- NHMUK** The Natural History Museum, London.
NMSE National Museums of Scotland, Edinburgh, UK.
OUNHM Hope Entomological Collections of the Oxford University Natural History Museum, Oxford, UK.
USNM United States National Museum, Washington DC
UWIZM University of the West Indies Zoology Museum, St. Augustine, Trinidad and Tobago (<http://sta.uwi.edu/fst/lifesciences/zoology.asp>). The collection of the former International Institute of Biological Control (part of CABI) is now incorporated into UWIZM, identified by an accession number starting 'CABI'.

List A: The moths of Tobago

The sequence of superfamilies and families follows Nieuwerkerken et al. (2011), except that Papilionoidea have been treated separately (Cock 2017).

Superfamily Hepialoidea

Family Hepialidae

Nomenclature follows Mielke and Grehan (2012).

Gymelloxes terea (Schaus, 1892)

The single Tobago specimen is small and badly rubbed, but the distinctive fore wing discal spots are just visible, enabling it to be matched to Trinidad specimens. Identified by comparison with the NHMUK series; this seems to be a very variable species. Although this name is appropriate at this time, the genus needs revision, and material from northern South America may well prove to be distinct from *G. terea*, which was described from Mexico (C.G.C. Mielke pers. comm. 2017).

Charlotteville, at light: ♂ 16–18 Jun 1999 (R. Hammond) [MJWC]

Superfamily Tineoidea

Family Psychidae

Arrhenophanidae (*Arrhenophanes*) was a separate family in Tineoidea (Davis 2003), but is now considered to be a subfamily of Psychidae (Mutanen et al. 2010, Nieuwerkerken et al. 2011). Nomenclature follows Davis (1975) for Psychinae (*Oiketicus*) and Davis (2003) for Arrhenophaninae.

Arrhenophanes perspicilla (Stoll, 1790)

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.121]

Oiketicus kirbyi Guilding, 1827

Oiketicus kirbyi Guilding: Davis (1975)

Early stages identified from Davis (1975).

Charlotteville: larval/pupal case 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2); Tobago: 2♂ [NHMUK] (Davis 1975).

Family Tineidae

Nomenclature follows Davis (1984).

Acrolophus schistoides Meyrick, 1915

Identified by comparison with the lectotype of *Acrolophus schistoides* Meyrick and NHMUK series. In the NHMUK, *A. schistoides* is curated as a synonym of *A. fervidus* Busck, 1912, but if this synonymy is correct, it does not seem to have been published yet.

Cocoa Wattie: ♂ (pale or faded) 8 Apr 1907 (G.B. Longstaff, TESL 1908, 53–57) [OUNHM]. Note that although a data label refers to Longstaff (1908) that paper deals with butterflies only; the information on Tobago moths is in Longstaff (1912).

Leucophasma carmodiella Busck, 1910

Leucophasma carmodiella Busck: Busck (1910) TL

Identified by comparison with the cotype in NHMUK (Tobago). The female type is in the USNM labelled 'Tobago, B.W.I.' (S.E. Miller pers. comm. 2017). Busck's (1910) original description records that the type series was reared from cocoa wood infested with *Eutypa* sp. fungus, forwarded from Tobago by W.E. Broadway and reared by F.W. Urich. No Trinidad records.

Tobago: ? (abdomen and right wings missing; cotype) [NHMUK]; ♀ type in USNM not examined.

Superfamily Yponomeutoidea

Family Plutellidae

Plutella xylostella (Linnaeus, 1758)

Cock (1985) reports the release of parasitic wasps *Cotesia vestalis* (Haliday) (= *C. plutellae* (Kurdyumov); Braconidae) and *Tetrastichis sokolowskii* Kurdyumov (Eulophidae) in Tobago for the biological control of *P. xylostella*. This globally distributed pest of cabbage is certainly present, although I have not traced any specimens or more formal record. There are none in NHMUK or USNM.

Family Attevidae

Nomenclature follows Becker (2009).

Atteva pustulella (Fabricius, 1787)

Tinea pustulella was published as a replacement name for *Phalaena punctella* (Stoll), which was preoccupied but had remained in common use until recently (Becker 2009). Identified by comparison with the NHMUK series.

Charlotteville, at light: 18♂, 14♀ (13♂, 7♀ discarded) 14–18 Jun 1999 (Roger Hammond) [10♂, 10♀ UWIZM.CABI.8019–38; 8♂, 4♀ MJWC]; Speyside, MVL: 2♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Superfamily Gelechioidea

Family Oecophoridae

Nomenclature follows Becker (1984a).

Antaeotricha laudata Meyrick, 1916

Identified by comparison with the USNM series.

Charlotteville, black light: 2♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Cerconota palliata (Walsingham, 1913)

Identified by comparison with the USNM series.

Charlotteville, black light: 6♂, 4♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Stenoma affirmatella Busck, 1914

Identified by comparison with the USNM series.

Speyside, MVL: ♀ 14–17 May 19182 (M.J.W. Cock) [MJWC]

Family Elachistidae

The former family Ethmiidae (*Ethmia* spp.) are now treated as the subfamily Ethmiinae of Elachistidae (Kaila 2004, Nieukerken et al. 2011). Nomenclature follows Powell (1973).

Ethmia elutella Busck, 1914

Identified from Powell (1973).

Charlotteville, at light: 3♂, 6♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♂, 2♀ MJWC; 2♀ UWIZM.CABI.4202–03; 2♂, 2♀ NHMUK]; 2♂, ♀ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8161–63]

Ethmia festiva Busck, 1914

Identified from Powell (1973).

Speyside, MVL: ♂ (left hindwing and abdomen missing) 14–17 May 1982 (M.J.W. Cock) [MJWC]

Family Momphidae

Mompha trithalama Meyrick, 1922

Mompha trithalama Meyrick: Julien and Griffiths (1998), Conant (2000), Conant (2009), Conant et al. (2013), Winston et al. (2014)

Julien and Griffiths (1998) and Winston et al. (2014) record this species as introduced into Hawaii from 'Trinidad and Tobago', for the biological control of *Clidemia hirta* (Melastomataceae). Conant (2000, 2009) and Conant et al. (2013) confirm that Tobago was a source.

Family Gelechiidae

Nomenclature follows Becker (1984b).

Trichotaphe nessica (Walsingham, 1911)

Dichomeris nessica Walsingham: Mettam (1999)

Identified by comparison with the type (NHMUK, Panama), which is certainly very close, and probably conspecific. Tobago material is darker than Trinidad material, perhaps because it is fresher.

Charlottetown, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell)

Superfamily Carposinoidea

Family Carposinidae

Carposina bullata Meyrick, 1913

Carposina bullata Meyrick: Julien and Griffiths (1998), Conant (2000), Conant (2009), Conant et al. (2013), Winston et al. (2014)

Julien and Griffiths (1998) and Winston et al. (2014) record this species as introduced into Hawaii from 'Trinidad and Tobago', for the biological control of *Clidemia hirta* (Melastomataceae). Conant (2000, 2009) and Conant et al. (2013) specify that Tobago was the source.

Superfamily Immoidea

Family Immidae

Nomenclature follows Heppner (1984).

Moca nephallactis (Meyrick, 1906)

Identified by comparison with the types (NHMUK, Ciudad Bolivar, Venezuela).

Charlottetown, at light: ?♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 1); Cocoa Wattie: ♂ 8 Apr 1907 (G.B. Longstaff) [OUNHM]

Superfamily: Tortricoidea

Family: Tortricidae

Subfamily: Olethreutinae

Gymnandrosoma aurantiana Lima, 1927

Gymnandrosoma aurantiana Lima: Adamski and Brown (2001)

Charlottetown, at blacklight: ♀ 14-21 Mar 1979 (D. Hardy & W. Lowe) [USNM] (Adamski and Brown 2001)

Strepsicrates tetropsis (Busck, 1913)

J.W. Brown (pers. comm. 2017) advises me that there are four specimens of this species from Tobago in USNM, as listed below. This species is recorded from guava from 'Trinidad and Tobago' by Schotman (1989) and Gould and Raga (2002).

Tobago, larva on shoots and young leaves of guava: 2♂, 2♀ Sep 1952 (F.D. Bennett) [USNM]

Superfamily Cossoidea**Family Cossidae**

Nomenclature follows Donahue (1995).

Aramos ramosus (Schaus, 1892)

Identified by comparison with the type (USNM, Rio de Janeiro), type of *A. aetes* Druce (NHMUK, ♀, a synonym) and NHMUK series.

Englishman's Bay, at light: ♂ (damaged) Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.12]

Langsdorfia franckii Hübner, 1824

Identification by comparison with the NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.122]; Scarborough, Marden House, MVL: 2♂ 15 Jan 1982 (R. Forrester) [det. MJWC; discarded]

Superfamily: Castnioidea**Family Castniidae**

Nomenclature follows González and Cock (2004)

Feschaeria amycus amycus (Cramer, 1779)

Schaefferia amicus (Cramer): Lathy (1923)

Feschaeria amycus amycus (Cramer): González and Cock (2004)

Tobago: ♀ [NHMUK]

Superfamily Zygaenoidea**Family Limacodidae**

Nomenclature follows MS in preparation by M.E. Epstein and M.J.W. Cock.

Euprosterna aroensis (Schaus, 1900) (Figure 7)

Charlotteville, at light: ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3; Figure 7)

Euprosterna elaea (Druce, 1887)

Euprosterna elaea (Druce): Mettam (1999)

Identified by comparison with the NHMUK series.

Charlotteville, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]

Miresa clarissa (Stoll, 1790)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.133]

Natada cochuba Schaus, 1900

Identified by comparison with the NHMUK series.

Charlotteville: ♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.134]; Hillsborough Dam: ♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Speyside, MVL: 14–17 May 1982 (M.J.W. Cock) [MJWC]

Natada debella Dyar, 1905

Material from Trinidad was identified by M.E. Epstein (2000).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.135]

Natada subpectinata Dyar, 1905

Identified by comparison with the NHMUK series and a 'cotype' (OUNHM, ♂).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.136]

Perola bistrigula (Hampson, 1898)

Perola bistrigula (Hampson): Cock (2003).

Identified by comparison with the type (NHMUK, St Lucia) and NHMUK series. No Trinidad records. Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Family Megalopygidae

Nomenclature follows Becker (1995), except as indicated.

Megalopyge lanata (Cramer, 1780)

Megalopyge lanata (Cramer): Polar et al. (2011)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.19]; 2♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10995]; Scarborough, Marden House, MVL: ♂ 15 Jan 1982 (R. Forrester) [det. MJWC; discarded]

Megalopyge pellita (Felder, 1874)

Identified by comparison with the USNM series from French Guiana, the type locality.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.137]

Megalopyge xanthopasa xanthopasa (Sepp, [1848])

Identified by comparison with the NHMUK series.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Norape plumosa (Butler, 1877)

Becker (1995) recognised three subspecies. Identified by comparison with the NHMUK series. This group of white megalopygids from Trinidad and Tobago needs more careful study and dissections, before this name can be used with confidence.

Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Podalia farmbri (Kaye, 1925) **sp. rev.**

Kaye (1925) described and illustrated *Megalopyge farmbri* from Trinidad, and states that the type is in OUNHM. I have not located the type of *farmbri* in OUNHM (or NHMUK or NMSE which contain other Kaye types). Fortunately only one Trinidad species matches Kaye's (1925) description and illustration of the female ventral view (which is replicated in Kaye and Lamont (1927)), and I have matched the male and female based on Trinidad material. *Podalia farmbri* and *P. nigrescens* (Schaus, 1905) are treated as synonyms of *P. amarga* (Schaus, 1905) by Epstein and Becker (1993), while *P. farmbri* and *P. amarga* are treated as synonyms of *P. nigrescens* in Becker (1995). I have compared *P. farmbri* with the type and USNM series of *P. nigrescens*, and conclude that they are not synonyms. However, *farmbri* is synonymous with *P. dimidiata* (Walker, 1865), based on Walker's type from Brasil in the NHMUK. *Podalia dimidiata* is an unavailable homonym, and so Hopp (1935) introduced the replacement name *P. walkeri* Hopp, 1935. Hence, *P. farmbri* Kaye, 1925 is a senior subjective synonym of *P. walkeri* Hopp, 1935, **syn. nov.** and the unavailable homonym *P. dimidiata* Walker, 1865, **syn. nov.**

Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; Crown Point, at light: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Englishman's Bay, at light: ♂, ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.17-18]

Podalia orsilocha orsilocha (Cramer, 1775)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: 5♂ Jun–Dec 2009 (J. Ingraham) [♂ UWIZM.2015.15.20; 4♂ UWIZM.2015.15.57-60]

Superfamily Pyraloidea

Classification and nomenclature based on Nuss et al. (2003–2015), supplemented with Munroe et al. (1995).

Family Pyralidae**Subfamily Pyralinae***Hypsopygia nigrapuncta* (Kaye, 1901)

I have not located the type, and this identification was by comparison with the USNM series. This species was placed in *Dolichomia*, which is now a synonym of *Hypsopygia* (Leraut 2006). It may prove to be a synonym of *H. resectalis* (Lederer).

Hillsborough Dam, black light: ♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Charlotteville, black light: ♂, 2♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Charlotteville, at light: 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7468, NHMUK]; ♂ (+ 3♂ discarded) 14–18 Jun 1999 (Roger Hammond) [MJWC]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Hypsopygia nostralis (Guenée, 1854)

Identified by comparison with the type (NHMUK) and NHMUK series. This species was placed in *Ocrasa*, which is now a synonym of *Hypsopygia* (Leraut 2006). It was previously considered a pantropical sorghum pest, but Leraut (2006) restricted the application of this name to the Americas, and recognised five other geographically separated Old World species.

Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; 3♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♀ 14–17 May 1981 (M.J.W. Cock) [MJWC]

Subfamily Chrysauginae*Caphys biliniata* (Stoll, 1782)

Identified by comparison with the type and NHMUK series. This seems to be the only species of this appearance in Tobago, but there are two or three confusingly similar species found in Trinidad, which might also be found in Tobago.

Charlotteville, at light: 15♂, 2♀ 14–21 Mar 1979 (D. Hardy & W. Rowe); 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7466–67]; ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 1); Hillsborough Dam, black light: ♀ 21 Mar 1979 (D. Hardy & W. Rowe); Roxborough, 6 mi. N on Bloody Bay Road, black light: ♂ 20–21 Mar 1979 (D. Hardy & W. Rowe); Scarborough, Marden House, MVL: 2♂, ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Tobago: ♂ 1–4 Feb 1931 (Capt. A.K. Totton) [NHMUK]

Carcha hersilialis Walker (see *Tosale oviplagalis*)*Galasa cuprealis* (Hampson, 1906)

Identified by comparison with the type (NHMUK, Paraguay) and NHMUK series.

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Galasa ditrogalis (Hampson, 1906)

Galasa ditrogalis (Hampson): Mettam (1999)

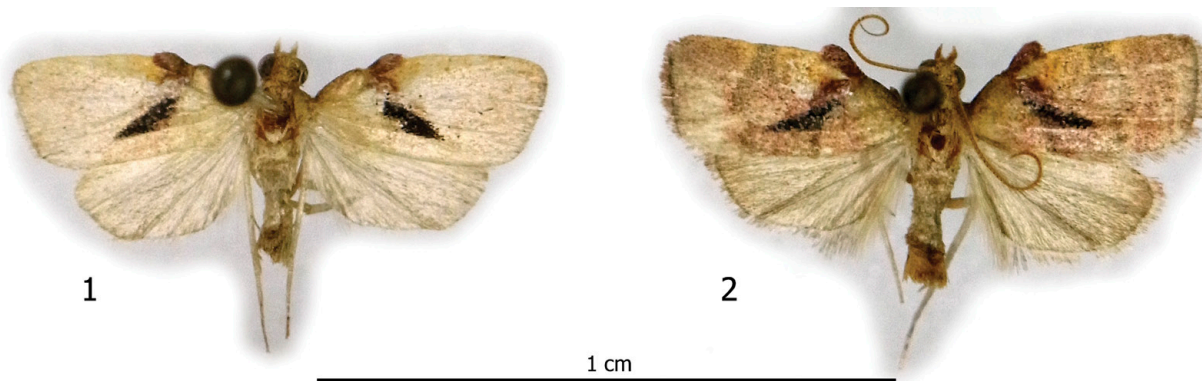
Identified by comparison with the type (NHMUK, French Guyana) and NHMUK series.

Charlotteville, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell)

Hyperparachma sp. (Figures 1–2)

Identified by comparison with the USNM series as *Hyperparachma* sp. D, which was curated by E.D. Cashatt as part of his unpublished dissertation (Cashatt 1969). Figure 1 shows the single Tobago specimen alongside one from Trinidad (Figure 2) in better condition and more heavily marked.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC] (Figure 1)



Figures 1–2. *Hyperparachma* sp. ♂. **1**, Tobago, Speyside, MVL, 14–17 May 1982 (M.J.W. Cock) [MJWC]. **2**, Trinidad, Curepe, MVL, 23 Jan 1979 (M.J.W. Cock) [MJWC].

Nachaba diplagialis (Hampson, 1906)

Chrysaugae flavelata (Stoll): Mettam (1999) [misidentification]

Identified by comparison with the types (♂ Surinam, ♀ Rio) and NHMUK series. In comparison *Chrysaugae flavelata* (Stoll) (TL Surinam) has a narrow dark margin on the hindwing, and does not seem to occur in Trinidad or Tobago.

Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]

Tosale oviplagalis (Walker, 1866)

Tosale oviplagalis (Walker): Longstaff (1912)

Identified by comparison with type (NHMUK, ♀ ?locality) and NHMUK series. The female can be misidentified as *Carcha hersilialis* Walker, a species which does not seem to occur in Trinidad or Tobago, but the male has distinctive large black areas on the disc of the dorsal hindwing and ventral forewing, which are not found in *C. hersilialis*.

Charlotteville, at light: ♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM, as *Carcha hersilialis*]; ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; Cocoa Wattie: ♂, ♀ 8 Apr 1907 (G.B. Longstaff) [OUNHM, det. H. Druce 1908]

Subfamily Phycetinae

Anabasis ochrodesma (Zeller, 1881)

Identified by comparison with the USNM and NHMUK series.

Charlotteville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Ancylostomia stercorea (Zeller, 1848)

Identified by comparison with the NHMUK series. A podborer pest of pigeon pea.

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Ectomyelois muriscis (Dyar, 1914)

Ectomyelois muriscis (Dyar): Heinrich (1956)

Identified by comparison with the NHMUK series, confirmed by comparison of the male genitalia with Heinrich (1956), who also records this species from Tobago. This species has been treated as *Apomyelois muriscis*, but the combination *E. muriscis* was reinstated by Ren and Yang (2016).

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Elasmopalpus lignosellus (Zeller, 1848)

Elasmopalpus lignosellus (Zeller): Heinrich (1956), Neunzig (1979)

A podborer pest of pigeon pea. I have seen no material.

Etiella zinckenella (Treitschke, 1832)

Provisional identification of pinned material in poor condition, by comparison with the USNM series. Tobago, ex pods of *Crotalaria* sp.: 5? v.1967 (F.D. Bennett) [UWIZM.CABI.3399–3403]

Fundella argentina Dyar, 1919

The single female from Tobago was dissected and identified by comparison with Heinrich (1945, 1956). This specimen lacked the spine-like extensions of the sclerotized band behind the genital opening, which Heinrich (1945, 1956) considered normal in the West Indies, but found missing in Venezuelan material. Crown Point, at light: ♀ 17 May 1981 (M.J.W. Cock) [MJWC]

Phestinia costella Hampson, 1930

Previously known as *Mescinia parvula* Zeller or *Mescinia* sp. nr. *parvula*, but see Solis et al. (2008). Identified by comparison with material reared from *Chromolaena* in Trinidad by R.E. Cruttwell in USNM. Charlotteville, at light: ♀ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Moodna sp. (Figures 3–4)

Hampson curated what appears to be this species from Jamaica as an undescribed species, which does not seem to have been described since then. Identified by comparison with the ‘type’ and NHMUK series (Jamaica only). There are three more specimens from Trinidad in the author’s collection (Figure 4). Charlotteville, at light: 3♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC] (Figure 3); ♂ 14–18 Jun 1989 (Roger Hammond) [MJWC]



Figures 3–4. *Moodna* sp. 3, ♂ Tobago, Charlotteville, at light, 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]. 4, ♀ Trinidad Morne Bleu, Textel Installation, at light, 2 Mar 1981 (M.J.W. Cock) [MJWC].

Piesmopoda flavicans (Zeller, 1881)

Identified by comparison with the NHMUK series
Charlotteville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Ufa rubedinella (Zeller, 1848)

Identified by comparison with the NHMUK series.
Roxborough: 2♂ 5 Jul 1914 (W.E. Broadway) [NHMUK]; Scarborough: 3♀ 19 Jun 1914 (W.E. Broadway) [NHMUK]

Family Crambidae**Subfamily Crambinae***Diatraea centrellus* (Möschler, 1883)

Diatraea canella Hampson: Box (1931, 1953a), Vesey-Fitzgerald (1936) [synonym].

Eodiatraea centrella [sic] (Möschler): Box (1953b, 1954).

Diatraea saccharalis (Fabricius): Longstaff (1912) [misidentification]

A stemborer pest of sugar-cane.

Cocoa Wattie: ♂, ♀ (♀ left forewing only on pin; rest of specimen in associated gelatine capsule) 8 Apr 1907 (G.B. Longstaff) [OUNHM, det. *D. saccharalis* by H. Druce, 1908; det. as *D. canella* by H.E. Box 1930]

Diatraea lineolata (Walker, 1856)

Diatraea lineolata (Walker): Kevan (1943), Box (1950), Rodriguez-Del-Bosque et al. (1988)

Zeadiatraea lineolata (Walker): Box (1955)

A stemborer pest of maize. I have seen no Tobago material, but have no reason to doubt these records.

Diatraea saccharalis (Fabricius, 1794)

Diatraea saccharalis (Fabricius): Box (1953a, 1954)

A stemborer pest of sugar-cane. Longstaff (1912) recorded this species, but his specimens in OUNHM are *D. centrellus*.

Charlotteville, at light: ? 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Fissicrambus fissiradiellus (Walker, 1863)

Identified by comparison with the USNM series.

Charlotteville, at light: 18♂, 2♀ (+ 87♂, 8♀ discarded) 14–18 Jun 1999 (Roger Hammond) [MJWC]

Subfamily Glaphyriinae

Aethiophysa falcatalis (Hampson, 1895)

Identified by comparison with a type (NHMUK) and NHMUK series.

Cocoa Wattie: ♀ 8 Apr 1907 (G.B. Longstaff) [OUNHM]; Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Roxborough: ♂ 5 Jul 1914, W.E. Broadway [NHMUK]; Scarborough: ?♀ (abdomen missing) 9 Apr 1907 (G.B. Longstaff) [OUNHM]; ♀ 12 Jun 1914, W.E. Broadway [NHMUK]; ♀ 13 Jun 1914, W.E. Broadway [NHMUK]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Dicymolomia rufifusalis (Hampson, 1912)

Identified by comparison with a type (NHMUK, ♂ Panama).

Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; 2♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Hellula phidilealis (Walker, 1859)

My use of this name is based on Trinidad material in the NHMUK, but I have seen no material from Tobago. There is no record from Tobago in the CIE (1964) pest distribution map for this species, although Tobago is included in the encircled area of distribution. Similarly it is not specifically reported by Alam (1989) or Sommeijer (1974). Yaseen et al. (1977) refer to cabbage integrated pest management in Trinidad and Tobago, but the text makes clear that the work relates specifically to Trinidad. As a result of an enquiry that I initiated, Deanne Ramroop, Plant Pathologist, Ministry of Agriculture, Trinidad and Tobago, wrote to Vyju Lopez, FAO Plant Regional Protection Officer, 9 Apr 2014: 'I spoke with the Crop Protection Officer, Tobago (Ms. Casey Boucher). She indicated that *Hellula* [*phidilealis*] is present in Tobago and farmers do report [it] periodically but it is not a major problem.'

Subfamily Nymphulinae

Petrophila triumphalis (Schaus, 1912)

Identified by comparison with the USNM series.

Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Odontiinae

Cliniodes opalalis Guenée, 1854

Identified by comparison with the USNM series.

Roxborough, 6.5 km N, B1/5, 390m, UVlight: ♀ 15–16 Jun 1993 (O.S. Flint, Jr.) [USNM]

Subfamily Pyraustinae

Epicorsia sp. *lucialis baezalis* Munroe or *avilalis* Amsel

Epicorsia lucialis baezalis Munroe and *E. avilalis* Amsel occur in Trinidad (Munroe 1958). The males can be separated by characters of their genitalia, but Munroe (1958) did not find characters to separate the females. Hence, a single female from Tobago cannot be allocated with confidence to either species, although *E. lucialis* seems to be the more common in Trinidad.

Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Hahncappsia ramsdenalis (Schaus, 1920)

Identified by comparison with the USNM series.

Crown Point, at light: 2♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Helvibotys helvialis (Walker, 1859)

Identified by comparison with the NHMUK series.

Charlotteville, at light: ♂, 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♀ UWIZM. CABI.4180; ♂ MJWC; ♀ NHMUK]; Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Hyalorista exuvialis (Guenée, 1854)

Identified by comparison with the type (NHMUK, ♀ French Guiana), NHMUK series (appears mixed) and USNM series.

Scarborough: ?♀ (no head, no abdomen) 9 Apr 1907 (G.B. Longstaff) [OUNHM, det. as *Pionea taeniolalis* Guen. By H. Druce 1908]

Oenobotys vinotinctalis (Hampson, 1895)

Identified by comparison with the type (Grenada) and NHMUK series.

Charlotteville, at light: 4♂, ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♂, ♀ UWIZM. CABI.4181–82; 2♂ MJWC; ♂ NHMUK]; 2♂, ♀ (+ ♂ discarded) 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8164–66]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Spilomelinae

Agathodes sp. nr. *designalis* Guenée, 1854

This is very close to the holotype (NHMUK, ♂ Brazil), but E. Munroe has segregated Venezuelan and Guianan material in NHMUK as a separate undescribed species (none from Trinidad or Tobago in NHMUK). In USNM similar material is curated as *A. designalis*. The recent paper by Sourakov et al. (2015) clarifies some issues with the taxonomy of this genus, but does not deal with material from this part of the continent.

Charlotteville, at light: ♂ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]; Hillsborough Dam, black light: ♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Roxborough, 6.5 mi N on Bloody Bay Road, black light: 2♀ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Apogeshna stenialis (Guenée, 1854)

Identified by comparison with the NHMUK series and USNM series.

Charlotteville, at light: ♂, ♀ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]; 3♂, 6♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♂, 5♀ UWIZM.CABI.7488–93; ♂ MJWC; ♂, ♀ NHMUK]; ♂ (discarded) 14–18 Jun 1999 (Roger Hammond) [MJWC]; Hillsborough Dam, black light: 5♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Roxborough, 6.5 mi N on Bloody Bay Road, at light: ♂ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Asciodes gordialis Guenée, 1854

Identified by comparison with types (NHMUK, French Guiana) and NHMUK series.

Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Ategumia dilecticolor (Dyar, 1912)

Identified by comparison with the USNM series.

Charlotteville, black light: ♂ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Azochis ?gripusalis Walker, 1859

Azochis gripusalis Walker: Longstaff (1912)

Identified by comparison with the NHMUK series arranged by E. Munroe, who only recognizes the Upper Amazon series as this species with certainty.

Cocoa Wattie: ♂ (abdomen missing; dark patch hindwing dorsum strong) 8 Apr 1907 (G.B. Longstaff) [OUNHM, det *Azochis gripusalis* Walk., by H. Druce 1908]

Azochis trichotarsalis Hampson, 1918

Identified by comparison with the NHMUK series arranged by E. Munroe.

Charlotteville, at light: ♀♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2); Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Blepharomastix sp.

A single female in poor condition is attributed to this genus in the group that includes *B. saponalis* (Guenée, 1854) and *B. lacertalis* (Guenée, 1854) in Trinidad.

Charlotteville, at light: ♀ (worn) 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]

Bocchoris marucalis (Druce, 1895)

Identified by comparison with the the type (NHMUK, Mexico).

Charlotteville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Coenostolopsis apicalis (Lederer, 1863)

Identified by comparison with the NHMUK series and USNM series.

Charlotteville, black light: ♀ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Conchylodes platinalis (Guenée, 1854)

Identified by comparison with the NHMUK series.

Scarborough, Marden House, MVL: 2♂, 3♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Diacme mopsalis (Walker, 1859)

Nacoleia ebulealis (Guenée): Longstaff (1912) [misidentification]

Identified by comparison with the type (NHMUK, ♀) and NHMUK series. *Ategumia ebulealis* (= *Nacoleia ebulealis*) is a different species.

Charlotteville, black light: 4♂, ♀ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]; Charlotteville, at light: ♂, 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♂, ♀ UWIZM.CABI.2585–86; ♀ NHMUK]; Cocoa Wattie: 2♂, 2♀ (1♂, 1♀ abdomen missing) (G.B. Longstaff) [OUNHM, 1♀ labelled anonymously as *Nacoleia ebulealis* (Guenée)]; Hillsborough Dam, black light: 2♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♂, ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Diaphania arguta (Lederer, 1863)

Identified by comparison with a type (NHMUK), NHMUK series, USNM series and from Arias and Clavijo (2001).

Charlotteville, black light: ♂ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Diaphania subtilalis Amsel, 1956

Identified from Arias and Clavijo (2001).

Charlotteville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Diaphania plumbidorsalis (Guenée, 1854)

Identified by M.A. Solis (pers. comm. 2016) following dissection.

Charlottetown, black light: ♂ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Diaphania hyalinata (Linnaeus, 1767)

Identified by comparison with the USNM series, NHMUK series and from Arias and Clavijo (2001).

Charlottetown, at light: ♀ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Diaphania translucidalis (Guenée, 1854)

Identified by comparison with the NHMUK series and from Arias and Clavijo (2001).

Charlottetown, black light: ♀ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM, det. as *D. translucidalis* by J. Clavijo]; Hillsborough Dam, black light: 2♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM, det. as *D. translucidalis* by J. Clavijo]

Diathrausta cubanalis Dyar, 1914

Identified by M.A. Solis (pers. comm. 2016) and comparison with the type (USNM, Cuba) and USNM series.

Charlottetown, black light: ♂ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Ercta vittata (Fabricius, 1794)

Identified by comparison with the NHMUK series.

Speyside, MVL: 2♂, ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Glyphodes dinichealis (Walker, 1859)

Identified by comparison with the NHMUK series. Munroe et al. (1995) indicate this species is misplaced in *Glyphodes*.

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Herpetogramma omphalobasis (Hampson, 1899) (Figure 5)

V.O. Becker (pers. comm. 2017) made the identification used here.

Charlottetown: ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2; Figure 5)

Hymenia perspectalis (Hübner, 1796)

Hymenia perspectalis (Hübner): Mettam (1999)

Identified by comparison with the NHMUK series.

Hillsborough Dam, black light: ♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Charlottetown, at light: 9♂, 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [7♂ UWIZM.CABI.7459–68; ♂, ♀ MJWC; ♂, ♀ NHMUK]; ♀ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8168]

Leucochroma corope (Stoll, 1781)

Identified by comparison with the NHMUK series.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Liopasia apicenotata Hampson 1918

Identified by comparison with the type (Trinidad) and NHMUK series.

Charlottetown, at light: 7♂, 3♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Hillsborough Dam, black light: ♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Roxborough, 6.5 mi N on Bloody Bay Road, black light: 2♀ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Scarborough: ♀ 9 Apr 1907 (G.B. Longstaff) [OUNHM]

Liopasia ochracealis (Walker, [1866])

Identified by comparison with the NHMUK and USNM series.

Charlottetown, black light: 10♂, 6♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Roxborough, 6.5 mi N on Bloody Bay Road, black light: 6♂, 4♀ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Hillsborough Dam, black light: 2♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Liopasia teneralis (Lederer, 1863) (Figure 6)

Identified by comparison with the NHMUK series.

Englishman's Bay: ♀ 15 Dec 2014 (M. Kelly photo 038; Figure 6)

Lygropia tripunctata (Fabricius, 1794)

Identified by comparison with the NHMUK series (under *Pilocrocis*) and USNM series.

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Lypotigris reginalis (Stoll, 1781)

Identified by comparison with the USNM series

Englishman's Bay, at light: ?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.124]

Maracayia chlorisalis (Walker, 1859)

Identified by comparison with the NHMUK series and USNM series.

Charlottetown, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Megastes pusialis Snellen, 1875

Identified by comparison with the NHMUK series. CPPC (1972), Talekar and Pollard (1991), CARDI (2010) and other sources refer to *Megastes grandalis* Guenée, 1854 as occurring in 'Trinidad and Tobago'. Other authors, e.g. Fennah (1947) and Lowe and Wilson (1972) indicate that *M. grandalis* is found in Trinidad but not on other Caribbean islands. While this sweet potato pest is reported from Trinidad, I have located no clear records from Tobago. As *M. pusialis* occurs in both Trinidad and Tobago and also has been reported as a sweet potato pest, there is some room for confusion here.

Nr. Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Microthyris anormalis (Guenée, 1854)

Identified by comparison with the NHMUK series, including type material of *M. helcitalis*, a synonym. This species group needs further work, but I have used this name on the basis of the type locality (French Guiana) and because it is the oldest name in the group.

Charlottetown, at light: 4♂, 3♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM, as *Microthyris asadias* Druce]; ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Roxborough, 6.5 mi N on Bloody Bay Road, black light: 2♂ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM, as *Microthyris asadias* Druce]

Neoleucinodes prophetica (Dyar, 1914)

Identified by comparison with the USNM series.

Charlottetown, black light: ♂ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Neoleucinodes torvis Capps, 1948

Identified by comparison with the USNM series.

Charlottetown, black light: ♀ 14–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Omiodes confusalis (Dognin, 1905)

Identified by comparison with the type of *O. duplicata* (Kaye, 1923), a synonym (NMSE, Trinidad; Bland 2010), material labelled as type of *O. duplicata* in NHMUK and USNM series of *O. duplicata*.

Charlottetown, black light: ♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Hillsborough Dam, black light: ♂ (dissected) 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Omiodes stigmosalis (Warren, 1892)

Identification by comparison with the type (NHMUK, Sao Paulo), NHMUK series and USNM series.

Hillsborough Dam, black light: 3♂, 2♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Roxborough, 6.5 mi N on Bloody Bay Road, at black light: 2♂ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Palpita isoscelalis (Guenée, 1854) *gourbeyrensis* Munroe, 1959

M. A. Solis examined a dissection of the specimen listed below and made this identification.
Hillsborough Dam, black light: ♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Penestola bufalis (Guenée, 1854)

Identified by comparison with the NHMUK series.

Charlotteville, at light: 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♀ UWIZM.CABI.4179; ♀ MJWC]; Crown Point, at light: ♂ 6–12 Mar 1979 (M.J.W. Cock) [MJWC]; ♀ 6–12 Mar 1979 (M.J.W. Cock) [NHMUK]

Phostria temira (Stoll, 1781)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.123]

Pilocrocis guianalis Schaus, 1920

Identified by comparison with the USNM series. Munroe et al. (1995) indicate this species is misplaced in *Pilocrocis*; it may belong in *Microthyris*.

Cocoa Wattie): 2♂ 7 Apr 1907 (G.B. Longstaff) [OUNHM]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Polygrammodes eleuata (Fabricius, 1777)

This species has commonly been referred to as *P. elevata* in the past (e.g. Munroe et al. 1995), but Fabricius' original spelling as used by Nuss et al. (2003–2015) is used here. Identified by comparison with the NHMUK series (arranged by E. Munroe) and USNM series.

Hillsborough Dam, black light: 2♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Polygrammodes ostrealis (Guenée, 1854)

Identified by comparison with the NHMUK series (arranged by E. Munroe).

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Rhectocraspeda periusalis (Walker, 1859)

Identified by comparison with the USNM series; ♀ is darker, with a purple flush when fresh. The type (NHMUK) is in poor condition, but the NHMUK series is a reasonable match.

Crown Point, at light: 2♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Salbia flabellalis Guenée, 1854

Identified by comparison with the NHMUK series.

Charlotteville, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.4178]; ♀ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8169]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Samea castellalis Guenée, 1854

Identified by comparison with the lectotype of *S. disertalis* Walker (NHMUK, ♂ Honduras), a synonym (Landry 2016).

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Charlotteville, at light: 3♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [2♀ UWIZM.CABI.4183–84; ♀ NHMUK]

Sparagmia gonoptera gonoptera (Latreille, 1829)

Identified by comparison with the USNM series.

Roxborough, 6.5 mi N on Bloody Bay Road, at black light: ♂ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Spoladea recurvalis (Fabricius, 1775)

Spoladea recurvalis (Fabricius): Landry (2016)

One or more specimens are in NHMUK (Landry 2016).

Steniodes declivalis (Dyar, 1914)

Identified by comparison with the USNM series.

Charlottesville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; Hillsborough Dam, black light: ♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Synclera jarbusalis (Walker, 1859)

Synclera jarbusalis (Walker): Landry (2016)

Identified by comparison with the NHMUK series and USNM series.

Charlottesville, black light: ♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Charlottesville, at light: 2♂, 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♂, ♀ UWIZM.CABI.2637, 2641; ♀ MJWC; ♂ NHMUK]; ♂ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8167]; Hillsborough Dam, black light: ♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Syngamia florella (Stoll, 1781)

Syngamia florella (Stoll): Mettam (1999), Landry (2016)

Identified by comparison with the NHMUK and USNM series.

Charlottesville: ?♀, at *Bidens pilosa* flowers, 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2)
Charlottesville, black light: 2♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Charlottesville, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; Charlottesville, River Bridge: ♀ 12–21 Mar 1966 (D. Hardy & W. Rowe) [USNM]

Terastia meticulosalis Guenée, 1854

Identified by comparison with the NHMUK and USNM series.

Roxborough, 6.5 mi N on Bloody Bay Road, black light: 2♀ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Subfamily Epipaschniinae

Anarnatula sylea (Druce, 1899)

Identified by comparison with the USNM series.

Roxborough, 6.5 mi N on Bloody Bay Road, black light: ♂ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Chloropaschia mennusalis Schaus, 1922 (or near)

Identified by comparison with the type (USNM, ♂ Guyana), USNM series (♂ Costa Rica) and NHMUK series, but not a perfect match.

Hillsborough Dam, black light: 4♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Deuterollyta nigripuncta (Schaus, 1912)

Identified by comparison with the USNM series.

Hillsborough Dam, black light: 4♂ 21 Mar 1979 (D. Hardy & W. Rowe)

Phidotricha erigens Ragonot, 1889

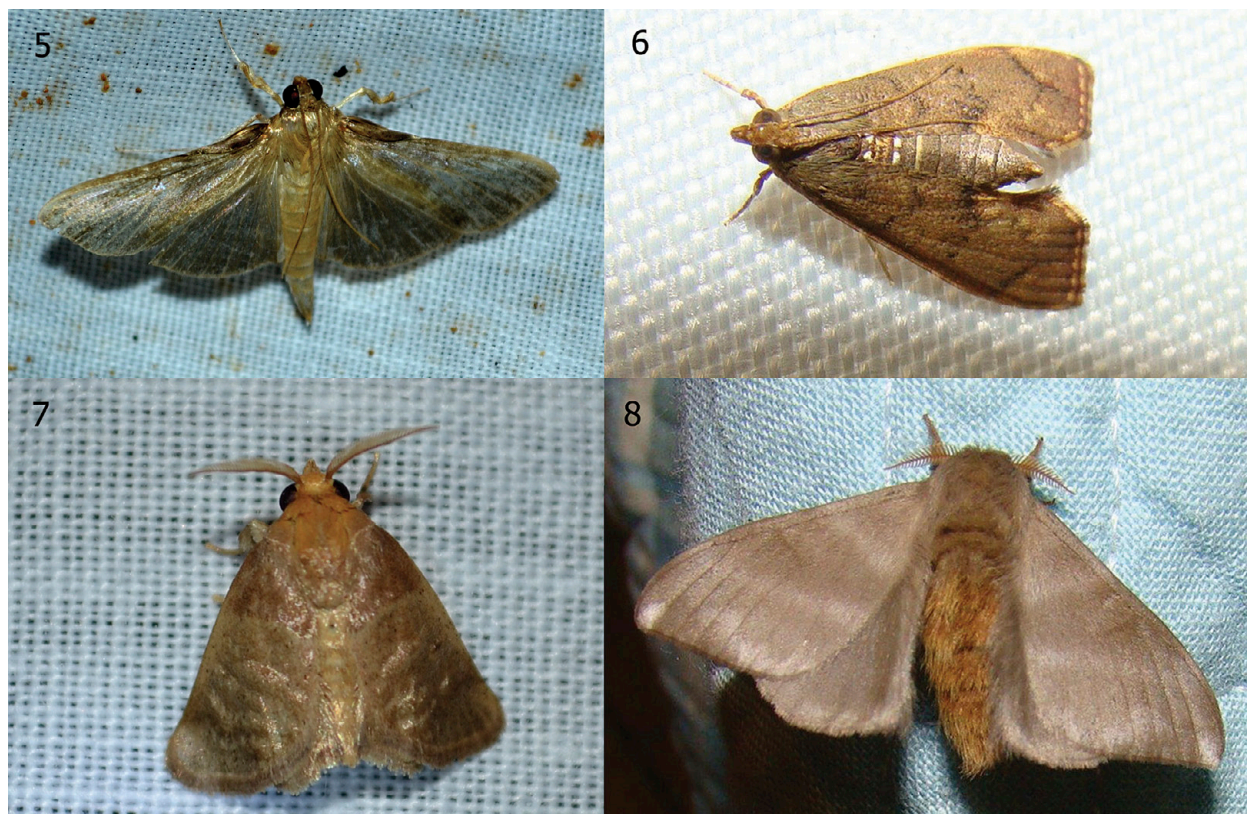
Identified by comparison with the USNM series. This matches the NHMUK series of *Pococera atramentalis* Lederer, but not the type (NHMUK, ♂ Venezuela) (Solis 1993).

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Charlottesville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Pococera aelredella (Schaus, 1922)

Identified by comparison with the type (USNM, ♂ French Guiana) and NHMUK series.

Charlottesville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]



Figures 5–8. Tobago moths recorded from images of living adults. **5**, *Herpetogramma omphalobasis* (Hampson) (Crambidae) ♂, Charlotteville, 24 Oct 2015 (K. Sookdeo). **6**, *Liopasia teneralis* (Lederer) (Crambidae) ♀ Englishman's Bay, 15 Dec 2014 (M. Kelly). **7**, *Euprosterma aroensis* (Schaus) (Limacodidae) ♂ Charlotteville, at light, 24 Oct 2015 (K. Sookdeo). **8**, *Hylesia metabus* (Cramer) (Saturniidae) ♂ Englishman's Bay, at light, 16 Dec 2014 (M. Kelly).

Superfamily Mimallonoidea

Family Mimallonidae

Nomenclature follows St Laurent and Cock (2017).

Cicinnus sp.

Cicinnus sp.: St Laurent and Cock (2017)

This does not match any species known from Trinidad, and may be undescribed. However, the two specimens available are so badly damaged by psocids that fresh material will be needed to take this further. An attempt to obtain a DNA barcode was not successful.

Englishman's Bay, at light: 2♂ (bad psocid damage) Jun–Dec 2009 (J. Ingraham) [M. Kelly photos 11609 et seq.; UWIZM 2015.45.138-139]

Mimallo amilia (Stoll, 1780)

Mimallo amilia (Stoll): St Laurent and Cock (2017)

Identified by comparison with the NHMUK series.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]; Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.140]

Superfamily Lasiocampoidea

Family Lasiocampidae

Nomenclature follows Becker and Heppner (1996).

Euglyphis albiochrea (Kaye, 1923)

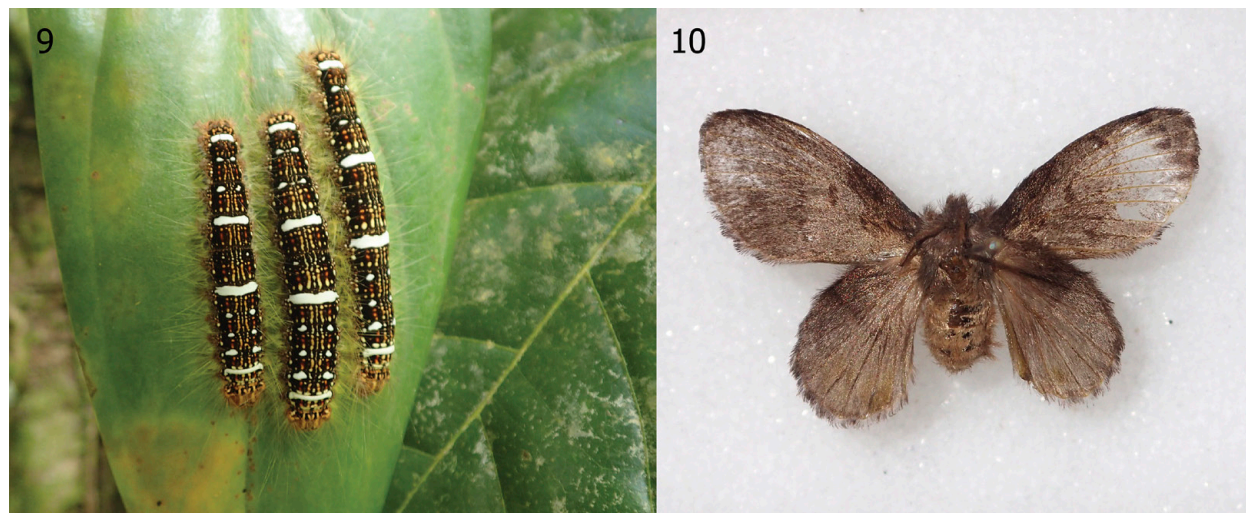
My identification is based on Kaye's (1923) illustration and two named males in Sir Norman Lamont's collection (UWIZM). The type is in NMSE (Bland 2010).

Tobago: ♂ (rubbed) (E. Bourke) [OUNHM]

Euglyphis intuta (Dognin, 1916) (Figures 9–10)

The single Tobago specimen is a female, which I was unable to associate with the species known from males in Trinidad. This identification was made by V.O. Becker (pers. comm. 2017).

Charlotteville, Flagstaff Hill, larvae collected 4 Jul 2016, on unidentified plant: ♀ (M.G. Rutherford) [UWIZM.2016.33.15] (Figures 9–10)



Figures 9–10. *Euglyphis intuta* (Dognin) collected 4 Jul 2016, on unidentified plant, Charlotteville, Flagstaff Hill (M.G. Rutherford) [UWIZM.2016.33.15]. **9**, larva. **10**, adult female.

Titya hirta (Stoll, 1782)

Identified by comparison with the NHMUK series (♀ apart from 1♂ which may not match).

Englishman's Bay, at light: ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.1]

Superfamily Bombycoidea**Family Bombycidae**

Family placement follows Zwick et al. (2011).

Colla rhodope (Drury, 1782)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: 4♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.35-38]; ♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10995]

Family Saturniidae

Nomenclature follows Lemaire (1996, 2002).

Automeris liberia (Cramer, 1780)

Identified by comparison with the NHMUK series and from Lemaire (2002).

Englishman's Bay, at light: 7♂ Jun–Dec 2009 (J. Ingraham) [3♂ UWIZM.2015.15.21-23; 4♂ UWIZM.2015.15.47-50]; 3♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photos ♂ 10871, 10872; ♂ 10874, 10875; ♂ 10876, 10877]

Automeris zurobara zurobara Druce, 1886

Identified by comparison with the NHMUK series and from Lemaire (2002).

Englishman's Bay, at light: 2♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.45-46]

Citheronia hamifera Rothschild, 1907

Identified by comparison with the type (NHMUK, Trinidad) and NHMUK series.

Englishman's Bay, at light: 2♂, 2♀ Jun–Dec 2009 (J. Ingraham) [2♂ UWIZM.2015.15.15-16; 2♀ UWIZM.2015.15.55-56]

Dysdaemonia boreas (Cramer, 1775)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: 2♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photos ♀ 10869, 10870, 10873; ♀ 10950, 10951]

Hylesia indurata Dyar 1910

Identified by comparison with the type (USNM, French Guiana) and from Lemaire (2002).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.2]

Hylesia metabus (Cramer, 1775) (Figure 8)

Identified from Lemaire (2002).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.2]; ♂ 16 Dec 2014 (M. Kelly photo; Figure 8)

Hylesia nanus (Walker, 1855)

Identified by comparison with the NHMUK series and from Lemaire (2002).

Englishman's Bay, at light: 5♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.24-27; UWIZM 2015.45.190]

Syssphinx molina (Cramer, 1780)

Identified by comparison with the NHMUK series.

Charlotteville, MVL: ♂, ♀ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Englishman's Bay, at light: 4♂, 7♀ Jun–Dec 2009 (J. Ingraham) [4♂, 3♀ UWIZM.2015.15.28-34; 4♀ UWIZM.2015.15.51-54]; 6♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photos ♀ 10884, 10885; ♀ 10886, 10887; ♀ 10888, 10889; ♀ 10890, 10891; ♀ 10892, 10893; ♀ 10964, 10965]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Family Sphingidae

Nomenclature follows Kitching and Cadiou (2000). Identified by comparison with the CABI collection now in UWIZM (which was mostly identified by A.H. Hayes, NHMUK) and D'Abrera (1986) except as indicated.

Subfamily Sphinginae*Manduca sexta paphus* (Cramer, 1779)

Tobacco horn worm: Guppy (1910)

Protoparce sexta: Guppy (1911).

Guppy (1910, 1911) reports this species as a common pest of tobacco being grown near Scarborough in February 1909.

Nr. Arnos Vale, Prospect, hilltop MVL: ♀ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Englishman's Bay, at light: 1♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.76]

Manduca rustica rustica (Fabricius, 1775) (Figure 5A)

Near Crown Point: ♀ 4 Jan 2014 (M. Kelly, photo 134) (Figure 5A)

Manduca florestan (Stoll, 1782)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: 3♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.04-05; UWIZM.2015.15.75]; 3♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo: 10902–6]

Protambulyx strigilis (Linnaeus, 1771)

Nr. Arnos Vale, Prospect, hilltop MVL: ♂ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Englishman's Bay, at light: 4♂ ?2009 (J. Ingraham) [M. Kelly photos 11880]; ♂, 2♀ Jun–Dec 2009 (J. Ingraham) [♂ UWIZM.2015.15.40; 2♀ UWIZM.2015.15.77-78]; 3♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10995]



Figures 11–14. Sphingidae from Tobago. **11,** *Manduca rustica rustica* (Fabricius), road kill, near Crown Point: ♀ 4 Jan 2014 (M. Kelly). **12,** *Aellopos ceculus* (Cramer), at *Duranta* flowers, Englishman's Bay, ♂ 14 Mar 2013 (M. Kelly). **13–14,** *Aellopos clavipes clavipes* (Rothschild and Jordan), at *Duranta* flowers 17.30h, Englishman's Bay, ♀ 17 Feb 2009 (M. Kelly).

Subfamily Macroglossinae

Aellopos ceculus (Cramer, 1777) (Figure 12)

Englishman's Bay, at *Duranta* flowers: ♂ 14 Mar 2013 (M. Kelly, photo; Figure 5B)

Aellopos clavipes clavipes (Rothschild and Jordan, 1903) (Figures 13–14)

Aellopos clavipes clavipes (Rothschild and Jordan): Kelly (2011)

Figures 13–14 shows pictures taken by Kelly (2011) on which this record is based. The dorsal view

(Figure 13) shows the outer row of three white spots, diagnostic for *A. tantalus* (Linnaeus) and *A. clavipes*, while the ventral view (Figure 14) shows the two small vertical white streaks mid disk, diagnostic for *A. clavipes* (D'Abrera 1986).

Englishman's Bay, at *Duranta* flowers 17.30h: ♀ 17 Feb 2009 (M. Kelly, photos; Figures 13–14; Starwood Trace, at *Plumbago auriculata* flowers 17.40h: ? 17 Feb 2017 (J. Muddeman photos).

Enyo ocypete (Linnaeus, 1758)

Englishman's Bay, at light: 4♂, 1♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.6-9; UWIZM.2015.15.79]; ♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10897, 10899]

Erinnyis alope alope (Drury, 1773)

Nr. Arnos Vale, Prospect, hilltop MVL: 12♂, 2♀ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Englishman's Bay, at light: ?♂ (J. Ingraham) [M. Kelly photo 11884]; ♂, ♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photo: ♂ 10911–2; ♀ 10913–4]

Erinnyis ello ello (Linnaeus, 1758)

Nr. Arnos Vale, Prospect, hilltop MVL: 3♂ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Charlotteville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Englishman's Bay, at light: 5♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.100-104]; Scarborough, Marden House, MVL: ♀ 15 Jan 1982 (R. Forrester) [det. MJWC; discarded]

Erinnyis lassauxi (Boisduval, 1859)

Nr. Arnos Vale, Prospect, hilltop MVL: ♂ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Englishman's Bay, at light: 2?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.72-73]

Eumorphia capronnieri (Boisduval, [1875])

Englishman's Bay, at light: 2?♂ (J. Ingraham) [M. Kelly photo 11884]; ♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10995]

Eumorphia obliquus (Rothschild and Jordan, 1903)

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.66]; ♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10917–8]

Eumorphia satellitia licaon (Cramer, 1775)

Nr. Arnos Vale, Prospect, hilltop MVL: ♀ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Charlotteville, at light: 2♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7494-95]; ♂ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8160]; Englishman's Bay, at light: 5♂, ♀ Jun–Dec 2009 (J. Ingraham) [2♂ UWIZM.2015.15.41-42; 3♂, 1♀ UWIZM.2015.15.62-65]; ?♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10954–5]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Eumorphia vitis vitis (Linnaeus, 1758)

Nr. Arnos Vale, Prospect, hilltop MVL: 2♂, 2♀ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]

Eupyrrhoglossum sagra (Poey, 1832)

Englishman's Bay, at light: ? late 2010–early 2011 (J. Ingraham) [M. Kelly photo: 10908, 10909]

Hemeroplanes triptolemus (Cramer, 1779)

Englishman's Bay, at light: ♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photo: 10907, 10910]

Madoryx oiclus oiclus (Cramer, 1779)

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.39]; ♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10995]

Oryba achemenides (Cramer, 1779)

Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Pachlyia ficus (Linnaeus, 1758)

Nr. Arnos Vale, Prospect, hilltop MVL: 2♀ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Englishman's Bay, at light: 4♂ Jun–Dec 2009 (J. Ingraham) [2♂ UWIZM.2015.15.43-44; 2♂ UWIZM.2015.15.69-70]; 2♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10915–6, 10952–3]

Pachylia syces syces (Hübner, [1819])

Englishman's Bay, at light: 2♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.67-68]

Pachlyioides resumens (Walker, 1856)

Englishman's Bay, at light: ♂, 2♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.13-14; UWIZM.2015.15.71]

Perigonia lusca lusca (Fabricius, 1777)

Englishman's Bay, at light: 22?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.10-11; UWIZM.2015.15.80-99]; ♂, ♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photos: ♂ 10896, 10898; ♀ 10894, 10895, 10900, 10901]

Pseudosphinx tetrío (Linnaeus, 1771)

Pseudosphinx tetrío (Linnaeus): Cock (2008), Ciesla (2011, p. 130)

Agrius cingulata (Drury): Plester (1994) [misidentification; the description of the caterpillar and food plant is clearly *P. tetrío*]

Nr. Arnos Vale, Prospect, hilltop MVL: 2♂, ♀ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Englishman's Bay, at light: ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.74]

Xylophanes pluto (Fabricius, 1777)

Nr. Arnos Vale, Prospect, hilltop MVL: 2♂ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]

Xylophanes tersa tersa (Linnaeus, 1771)

Xylophanes tersa (Linnaeus): Rothschild and Jordan (1903)

Nr. Arnos Vale, Prospect, hilltop MVL: 2♂ 8 Aug 1977 (D.J. Stradling) [Det. D.J. Stradling, not kept, pers. comm. 1983]; Englishman's Bay: ♂ 1 Jan 2009 (M. Kelly, photo); Englishman's Bay, at light: 3? late 2010–early 2011 (J. Ingraham) [M. Kelly photos: 10882–3; 10957–8; 10993]; Scarborough, Marden House, MVL: 3♂ 15 Jan 1982 (R. Forrester) [det. MJWC; discarded]

Xylophanes tyndarus (Boisduval, [1875])

Englishman's Bay, at light: 4? (J. Ingraham) [M. Kelly photo 11885]

Superfamily Geometroidea

Family Sematuridae

Mania lunus (Linnaeus, 1758)

Mania lunus (Linnaeus): Cock (2016)

Identified by comparison with the type of a synonym, *M. selene* (Guenée) (NHMUK, ♂), and NHM series (Cock 2016). A single Tobago record from the Admiral Bourke collection (OUNHM).

Tobago: ♀ (no head, no abdomen) (E. Bourke) [OUNHM]

Family Uraniidae

Nomenclature follows Beccaloni et al. (2003).

Subfamily Uraniinae

Urania leilus (Linnaeus, 1758)

Urania leilus (Linnaeus): Plester (1994)

Englishman's Bay: 2009 (J. Ingraham) [M. Kelly photos 11877]; Scarborough-Speyside Col: ♂ 15 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Epipleminae

Antiptecta sp. (or *Neodeta* sp.) (Figure 15–16)

The specimen listed below matches an unnamed male from Dominica in the NHMUK. It does not seem to be represented in the USNM.

Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC] (Figure 15–16)



Figures 15–16. *Antiptecta* sp. ♀ Tobago, Speyside, MVL, 14–17 May 1982 (M.J.W. Cock) [MJWC]. **15**, dorsal view. **16**, ventral view.

Family Geometridae

Subfamily Sterrhinae

Nomenclature follows Scoble (1999).

“Cyclophora” urcearia (Guenée, 1858)

Identified by comparison with the type (NHMUK, ♂ French Guiana), type of *Pryoptera candara* Druce (NHMUK, ?♂ Chiriqui, a form of *Anisodes importaria* Möschler, a synonym) and NHMUK series.

Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Cyllopoda gibbifrons Prout, 1917

Cyllopoda gibbifrons Prout: Lewis and Covell (2008)

Identified from Lewis and Covell (2008), who include Tobago in the distribution of this species, but list no material examined.

Charlotteville-Speyside Ridge, amongst cacao: ♀ 15 May 1982 (M.J.W. Cock) [MJWC]

Cyllopoda jatrophia (Linnaeus, 1758)

Cyllopoda jatrophia jatrophia (Linnaeus): Lewis and Covell (2008)

Cyllopoda jatrophia puta (Strand): Lewis and Covell (2008)

Lewis and Covell (2008) include Tobago in the distribution of both subspecies, but list no material examined. Identified by comparison with the NHMUK series.

Charlotteville: ♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2); Tobago: ♀ (M. Kelly, photo); Scarborough: ♀ viii.1913 [NHMUK]

Idaea cellifimbria (Prout, 1922)

Identified by comparison with the type (NHMUK, ♀ Trinidad; ♂ type not located) and NHMUK series.

I consider this a variable and sexually dimorphic species. There are several older names, some of which may well be synonymous (*I. adipata* Schaus, 1913, *I. purpureovittata* Warren, 1906, *I. umbrimargo* Dyar, 1914); I have used *I. cellifimbriaria* since it is described from Trinidad, but recognize that future work may reduce it to a synonym of one of these older names.

Charlotteville, at light: 11♂, 7♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [9♂, 5♀ UWIZM.CABI.7470–83; ; 2♂, 2♀ NHMUK]; 3♂, 5♀ (+11♂,15♀ discarded) 14–18 Jun 1999 (Roger Hammond) [3♂, 2♀ UWIZM.CABI.8176–80; 3♀ MJWC]; Scarborough: ♀ 15 Jun 1914 (W.E. Broadway) [NHMUK, over blank label]; Speyside, MVL: 3♂, 4♀ 14–17 May 1982 (M.J.W. Cock) [3♂, 3♀ MJWC; ♀ UWIZM.CABI.7936]; Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [UWIZM.CABI.7937]

Idaea incanata (Schaus, 1901)

Identified by comparison with the type (USNM, ♂ Peru), which is more heavily and clearly marked than Trinidad and Tobago material, and the NHMUK series.

Charlotteville, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; 3♂ (♂, ♀ discarded) 14–18 Jun 1999 (Roger Hammond) [2♂ UWIZM.CABI.8184–85; ♂ MJWC]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Idaea rufarenaria (Warren, 1906)

Identified by comparison with the type (USNM, ♂ French Guiana).

Charlotteville, at light: ♀ (no abdomen) 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7484]; ♂, 3♀ (+ ♂, 3♀ discarded) 14–18 Jun 1999 (Roger Hammond) [♂, 2♀ UWIZM.CABI.8181–83; ♀ MJWC]; ?♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2); Crown Point, at light: ♂ 6–12 Dec 1979 (M.J.W. Cock) [MJWC]; ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; 3♀ 15–17 May 1981 (M.J.W. Cock) [♀ MJWC; 2♀ UWIZM.CABI.7940–41]; Speyside, MVL: 2♂, 4♀ 14–17 May 1982 (M.J.W. Cock) [2♂, 2♀ MJWC; 2♀ UWIZM.CABI.7943–44]; Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [UWIZM.CABI.7942]

Idaea triangularia (Guenée, 1858)

Identified by comparison with the type (NHMUK, ♀ Brazil).

Charlotteville, at light: ♀ 14–18 Jun 1999 (Roger Hammond) [MJWC]; ♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2)

Idaea triangulata (Warren, 1906) (Figures 17–18)

Identified by comparison with the types (USNM, ♂♀ French Guiana) and USNM series.

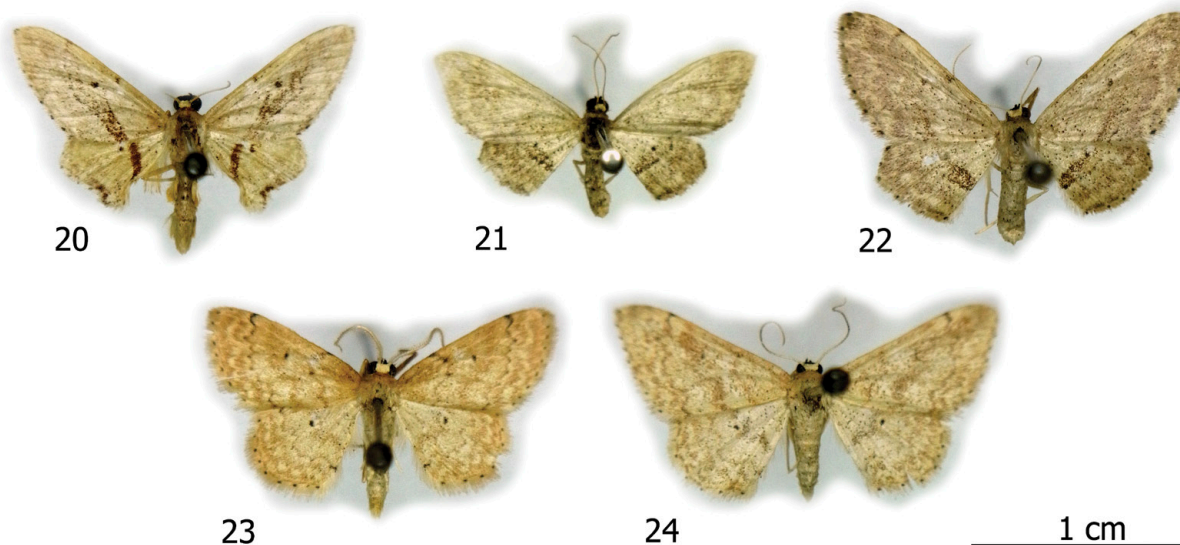
Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7485]; 2♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]; ♂, ♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2; Figures 17–18); Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]



Figures 17–19. Tobago Geometridae Sterrhinae. **17–18**, *Idaea triangulata* (Warren) ♂, ♀ Charlotteville, at light, 24 Oct 2015 (K. Sookdeo). **19**, *Scopula* sp. Huevos Island, at light, 21 Feb 2014 (K. Sookdeo photo, Huevos Moths 2).

Idaea sp. near *triangulata* (Warren) (Figures 20–22)

This species, also found in Trinidad, may be undescribed; I was unable to match it in the NHMUK or USNM. Charlotteville, at light: 3♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC] (Figure 21); 5♂, ♀ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC] (Figure 20)



Figures 20–24. Partially identified Geometridae Sterrhinae. **20–22**, *Idaea* sp. near *triangulata* (Warren); **23–24**, *Scopula* sp. **20**, ♂, Speyside, MVL, 14–17 May 1982 (M.J.W. Cock) [MJWC]. **21**, ♀, Charlotteville, at light, 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]. **22**, ♀, Morne Bleu, Textel Installation, at light, 6 Dec 1980 (M.J.W. Cock) [MJWC]. **23**, ♂, Crown Point, at light, 9 Jan 1982 (M.J.W. Cock) [MJWC]. **24**, ♀, Speyside, MVL, 14–17 May 1982 (M.J.W. Cock) [MJWC]

Idaea verrucifera (Hampson, 1895)

Identified by comparison with the type (NHMUK, Grenada). No Trinidad records.

Crown Point, at light: ♂ 6–12 Mar 1979 (M.J.W. Cock) [MJWC]; 2♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Leptostales praepeditaria praepeditaria Möschler, 1890

Identified by comparison with the cotype of *Lipomelia semisignata* Dognin (USNM, ♂ Orinoco, Venezuela), a synonym in USNM (see also Zagatti et al. 2006).

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Leptostales ptyctographa (Dyar, 1913)

Identified by comparison with the type (USNM, ♂ Taboga Is, Panama).

Crown Point, at light: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Leptostales nycteis (Druce, 1892) *ignifera* (Warren, 1906)

Identified by comparison with the NHMUK series, which is curated with four subspecies, including *L. nycteis ignifera* Warren (TL Cayenne) and *L. nycteis astota* Schaus (TL Venezuela; none in NHMUK). Trinidad and Tobago material appears to be subspecies *L. n. ignifera* Warren, although the type (USNM, ♂ French Guiana) is less yellow.

Crown Point, at light: 2♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; ♂, ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7486]

Leptostales desmogramma (Dyar, 1913)

Identified by comparison with a type (USNM, ♂ French Guiana) and NHMUK series.

Charlottetown, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7487];
Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Pleuroprucha insulsaria (Guenée, 1858)

Identified by comparison with the NHMUK series.

Charlottetown, at light: 2♂, 2♀ 14–18 Jun 1999 (Roger Hammond) [♂ UWIZM.CABI.8186; ♂, 2♀ MJWC];
Crown Point, at light: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Pseudasellodes laternaria (Guenée, 1858)

Identified by comparison with the type (NHMUK, ♂ Brazil) and NHMUK series.

Tobago: ♀ 1–4 Feb 1931 (Capt. A.K. Totton) [NHMUK]

Scopula sp. (Figures 19, 23–24)

This species appears to be close to *S. apparitaria* Walker, but I was unable to match it in NHMUK or USNM. I have one specimen from Trinidad and an image from Huevos Island between Trinidad and Venezuela (Figure 19).

Crown Point, at light: ♂, ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC] (Figure 23); ♀ 6–12 Mar 1979 (M.J.W. Cock) [MJWC]; Speyside, MVL: 2♀ 14–17 May 1982 (M.J.W. Cock) [MJWC] (Figure 24)

Scopula asopiata (Guenée, 1858)

Identified by comparison with the type (NHMUK, French Guyana) and NHMUK series

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Charlottetown, at light: ♀ (very rubbed) 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]

Scopula subquadrata (Guenée, [1858])

Identified by comparison with a paratype (NHMUK, ♀ Cayenne) and NHMUK series.

Tobago: ♀ ii.1931 (Capt. A.K. Totton) [NHMUK]

Scopula umbilicata umbilicata (Fabricius, 1794)

Identified by comparison with the NHMUK series.

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Geometrinae

Chloropteryx glauciptera (Hampson, 1895)

Identified by comparison with the type (NHMUK, ♂ St Vincent) and NHMUK series.

Charlottetown, at light: ♀ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Dichorda uniformis Warren, 1909

Tachyphyle (Dichorda) iris (Butler): Longstaff (1912) [presumed misidentification]

I have not found Longstaff's specimen in OUNHM, but there is no reason to suggest he did not capture a species of *Dichorda*. However, as *D. uniformis*, the only species of the genus known from Trinidad, was described from Trinidad in 1909, after Longstaff's visit to Tobago in 1907, it seems a reasonable assumption that this is the species that Longstaff caught.

Nemoria pacificaria (Möschler, 1881)

Identified by comparison with the NHMUK series.

Speyside, at light: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]; Tobago: ♀ (E. Bourke) [OUNHM]

Nemoria punctilinea (Dognin, 1902)

Trinidad material identified by comparison with the type (USNM, ♂ French Guiana), USNM and NHMUK series. Although I am not entirely confident of this match, the Tobago specimen matches material from Trinidad which is accepted as *N. punctilinea* by Pitkin (1993).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.130]

Subfamily Ennominae*Cyclomia mopsaria* Guenée, [1858]

Identified by comparison with the type (NHMUK, ♂ Haiti) and NHMUK series.

Charlottetown, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Roxborough: ♂ 5 Jul 1914, ♂, 2♀ 19 Jul 1914, ♂, ♀ 26 Jul 1914, ♂ 27 Jul 1914, W.E. Broadway [NHMUK]; Scarborough: ♀ 12 Jun 1914, W.E. Broadway [NHMUK]; Speyside, MVL: 2♂, 3♀ 14–17 May 1982 (M.J.W. Cock) [♂, 2♀ MJWC; ♂, ♀ UWIZM.CABI.7938–39]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Herbita praeditaria (Herrich-Schäffer, [1858])

Identified by comparison with the NHMUK series (TL Brazil) and type of *H. saturniata* Guenée (a synonym).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.131]

Macaria abydata (see *Psamatodes abydata*)*Pero albivena* (Warren, 1897)

Identified by comparison with the type (NHMUK ♂ S America), NHMUK series and Poole (1987).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.125]; Speyside, MVL: ♂, ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Pero exquisita (Thierry-Mieg, 1894)

Identified by comparison with the NHMUK series and Poole (1987).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.132]

Pero infantilis (Warren, 1897)

Identified by comparison with the type (NHMUK), NHMUK series and Poole (1987).

Charlottetown, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.126]

Psamatodes abydata Guenée, [1858]

Scoble (1999) and Scoble and Krüger (2002) treated *Psamatodes* Guenée, 1857 as a synonym of *Macaria* Curtis, 1826. Ferguson (2008), in his posthumous work on this section of North American Ennominae, treated it as a separate genus of mostly Neotropical species, although he acknowledges (p.179) that this arrangement is somewhat 'tenuous' and 'it remains for further work on the Neotropical fauna to determine whether this is supportable'. Lafontaine (in Ferguson 2008, p. 165, 170–171) lists several Neotropical species which he transfers to *Psamatodes*, but this is not a comprehensive treatment for the Neotropical Region, and to date there is none. The use of the combination *P. abydata* is now well established in North America, as well as the Pacific to Southeast Asia where it has spread as an alien species. Identified by comparison with the lectotype (NHMUK, Brazil) and NHMUK series; examination of male genitalia of Trinidad material have confirmed this identification by comparison with Ferguson (2008, p. 173).

Charlottetown, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 2); Crown Point, at light: ♀ (CIBC-MJWC 09) 9–12 Mar 1979 (M.J.W. Cock) [MJWC]; ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [UWIZM.CABI.2525]

Sphacelodes vulneraria (Hübner, 1823)

Identified by comparison with the NHMUK series.

Charlottetown, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7469]; ♂, ♀ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8137–38]; Englishman's Bay, at light: 2♂, ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.127-129]; Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Thysanopyga abdominalia (Guenée, 1858)

Identified from Krüger and Scoble (1992).

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Larentiinae

Disclisioprocta stellata (Guenée, 1858)

Identified by comparison with the type (NHMUK, ♀ Brazil) and NHMUK series (Brazil to Bahamas).

Crown Point, at light: ♂ 9–12 Mar 1979 (M.J.W. Cock) [MJWC]

Eois pseudobada (Dognin, 1918)

Identified by comparison with the NHMUK series.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Eupithecia assimilis (Warren, 1906)

Identified by comparison with the NHMUK series.

Crown Point, at light: (no abdomen) 9 Jan 1982 (M.J.W. Cock) [MJWC]

Superfamily Noctuoidea

Family Notodontidae

Nomenclature based on Becker (2014).

Bardaxima lucilinea Walker, 1858

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.171]

Bifargia felderi (Schaus, 1901)

Identified by comparison with the type (USNM, ♂ Peru).

Charlottetown, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Cecrita echina (Schaus, 1906)

Identified by comparison with the type (USNM, ♂ French Guiana).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.191]

Crinodes besckeii (Hübner, 1821)

Identified by comparison with the NHMUK series.

Charlottetown, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.8188]; Englishman's Bay, at light: 2♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.174-175]; ♂ late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10971–2]; Speyside, at light: ♂ 15 May 1982 (J.J. Cock) [MJWC]

Disphragis occulta Schaus, 1906

Identified by comparison with the type (USNM, ♀ French Guyana).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.188]

Hapigia cresus (Cramer, 1777)

Identified by comparison with the NHMUK series. *Hapigia 'croesus'* is a common mis-spelling.

Englishman's Bay, at light: ♂, ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.172-173]

Hemiceras conspirata Schaus, 1906

Comparison with the type (USNM, ♂ Guyana) suggests this species, but Trinidad material has the ♂ hindwing stigma more elongate, although within the range of variation of the NHMUK and USNM series of this species.

Englishman's Bay, at light: 2♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.176-177]

Hemiceras deornata (Walker, 1865)

Identified by comparison with the type (NHMUK, ♀ Bogota) and NHMUK series.
Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Hemiceras meona (Stoll, 1781)

Identified by comparison with the NHMUK series.
Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.178]

Hemiceras pallidula Guenée, 1852

Identified by comparison with the NHMUK series. There are no records of this species from Trinidad. Charlotteville, at light: ♂ (very rubbed) 14–18 Jun 1999 (Roger Hammond) [MJWC]; Englishman's Bay, at light: 3♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.179-181]; Roxborough, 6.5 mi N on Bloody Bay Road, black light: ♀ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Hemiceras rufula Dognin, 1923

Identified by comparison with the female type of f. *vinosa* Dognin (USNM, ♀ Amazonas).
Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.182]

Malocampa ziliante (Stoll, 1782)

This species has long been known as *M. punctata* (Stoll), but this is a junior homonym (Becker 2014).
Identified by comparison with the NHMUK series.
Englishman's Bay, at light: 2♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.183-184]

Nycterotis sinistra (Weller, 1991) or near

Identified from Weller (1991); dissection needed to confirm, but to date this is the only species of this complex confirmed from Trinidad.
Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.186]

Nystalea aequipars Walker, 1858

Nystalea aequipars Walker: Weller (1990)

Weller (1990) lists a specimen from Tobago (Hillsborough Dam, 21 Jan 1979) in the USNM.

Nystalea ebalea (Stoll, 1780)

Identified by comparison with the NHMUK series.
Scarborough, Marden House, MVL: ♂ 15 Jan 1982 (R. Forrester) [det. MJWC; discarded]

Nystalea nigritorquata Dognin, 1900

Identified by comparison with the NHMUK series. There are no records of this species from Trinidad.
Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.185]

Phastia basalis Walker, 1862

Identified by comparison with the NHMUK series.
Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.187]

Pseudodryas pistacina (Schaus, 1901)

Identified by comparison with the type (USNM, ♂ Honduras) and type of *Phastia maricolor* Kaye (a synonym; ♀ Trinidad, NMSE). Draudt (1931–1933) established this synonymy; P. Thiaucourt (pers. comm.) has dissected a Trinidad ♂, compared it with Central American specimens (Honduras, Costa Rica, Mexico) and confirms the synonymy.
Crown Point, at light: ♂ (CIBC-MJWC 52) 9–12 Mar 1979 (M.J.W. Cock) [MJWC]

Rhogalia epigena (Stoll, 1780)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.189]

Family Erebidae

Classification follows Zahiri et al. (2011, 2012a, 2012b).

Subfamily Lymantriinae

Nomenclature follows the NHMUK collection (Beccaloni et al. 2003).

Eloria subapicalis subapicalis Walker, 1863

Identified by comparison with the NHMUK series.

Nr. Scarborough: ♂ Aug 1913 [NHMUK]; Tobago: ♂ 11 Nov 1913 [NHMUK]

Subfamily Arctiinae

Tribe Lithosiini

Nomenclature follows the NHMUK collection (Beccaloni et al. 2003).

Balbura dorsisigna Walker, 1854

Identified by comparison with the type (NHMUK, ♀ Venezuela) and NHMUK series.

Charlotteville, at light: ♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Epeiromulona ?hamata Field, 1952

Identified by comparison with paratypes (NHMUK, Trinidad) and NHMUK series. The Tobago specimen is very rubbed, hence the element of doubt about this identification.

Charlotteville, at light: ♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; ♀ (very rubbed) 14–18 Jun 1999 (Roger Hammond) [MJWC]

Tribe Arctiini

Subtribe Arctiina

Nomenclature follows Vincent and Laguerre (2014).

Agaraea semivitrea Rothschild, 1909

Identified by comparison with a syntype (NHMUK) and NHMUK series.

Hillsborough Dam, black light: 2♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Speyside, MVL: 14–17 Sep 1982 (M.J.W. Cock) [MJWC]

Ammalo helops (Cramer, [1776])

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♂, ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.105-106]

Amphelarctia priscilla (Schaus, 1911)

Watson (1971) illustrates the male lectotype and its genitalia, which I have compared with those of a Trinidad male.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.107]

Halysidota orientalis Rothschild, 1909

Identification by comparison with the NHMUK series and Watson (1980). These records from Tobago are the first from the island, but not surprising since *H. orientalis* occurs in both Trinidad and Grenada (Watson 1980).

Charlotteville, at light: ♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.108]; Roxborough, 6.5 mi N on Bloody Bay Road, at light: ♀ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Nr. Speyside, to *Heliotropium* by night: ♂ 15 May 1982 (M.J.W. Cock) [MJWC]

Hypercompe trinitatis (Rothschild, 1910)

This species was originally described from Trinidad as a subspecies of *Epantheria icasia* (Cramer), but Watson and Goodger (1986) raised its status to that of a valid species. Identified by comparison with the NHMUK series.

Tobago: 2♂ (E. Bourke) [OUNHM]

Trichromia leucoplaga Hampson, 1905

Identification by comparison with a type (NHMUK, French Guiana) and NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.109]

Lophocampa seruba (Herrich-Schäffer, [1855]) *parva* (Rothschild, 1909)

Identification by comparison with the NHMUK series.

Charlotteville, at light: 5♂, 1♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Hillsborough Dam, black light: 2♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Nr. Speyside, MVL: 2♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Pareuchaetes pseudoinsulata Rego Barros, 1956

Identification based on Cock and Holloway (1982).

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Utetheisa ornatix ornatix (Linnaeus, 1758)

Utetheisa ornatix (Linnaeus): Longstaff (1912)

Identification by comparison with the NHMUK series.

Cocoa Wattie: ♂ 7 Apr 1907 (G.B. Longstaff) [OUNHM]; Crown Point, at light: 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough: 2♀ 3 Apr 1907 (G.B. Longstaff) [OUNHM], ♂ 4 Apr 1907 (G.B. Longstaff) [OUNHM]; Tobago: 3♀ (E. Bourke) [OUNHM]

Virbia medarda (Stoll, 1781)

Virbia sp.: Longstaff (1912)

Identification by comparison with the NHMUK series and MJWC collections from Trinidad. I believe a single variable species is present in Trinidad and Tobago, to which several names have been applied. Thus, Kaye and Lamont (1927) probably correctly treated *mentiens* Walker (TL Venezuela) and *birchi* Druce (TL Trinidad, Colombia, an all ♀ species in NHMUK) as synonyms of *medarda* Stoll (TL Surinam), although Watson and Goodger (1986) and Vincent and Laguerre (2014) treat them as valid species. Pending a full investigation, I do not formally synonymise these here, but do use the oldest available name.

Charlotteville, at light: ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3); Cocoa Wattie: ♂ 8 Apr 1907 (G.B. Longstaff) [OUNHM, as *Virbia mentiens* Walker]; Charlotteville, at light: ♂, ♀ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; 2♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.7458, NHMUK]; Englishman's Bay, at light: 2♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.110-111]; Hillsborough Dam, black light: 10♂, 1♀ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Roxborough, 6.5 mi N on Bloody Bay Road, at light: 4♂, 2♀ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subtribe Pericopina

Nomenclature follows Watson and Goodger (1986).

Dysschema marginalis (Walker, 1855)

Identification by comparison with the holotype (NHMUK, Venezuela) and NHMUK series. My Tobago specimen is considerably smaller than Venezuelan material of the same species. This species shows strong sexual dimorphism; the female having the dorsal forewing brown with a broad pale bar, and dorsal hindwing orange with a dark margin. No records from Trinidad.

Charlotteville, at light: 2♂ 14–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Englishman's Bay, at light: 3♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.117-119]; Nr. Forest Reserve: ♂ v.2007 (I.P. Woiwod,

photo); Hillsborough Dam, black light: 7♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Roxborough, 6.5 mi N on Bloody Bay Road, at light: 5♂ 20–21 Mar 1979 (D. Hardy & W. Rowe) [USNM]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC].

Hyalurga fenestrata (Walker, 1855)

Identification by comparison with the NHMUK series. This may prove to be part of a species complex (A. Watson, pers. comm.)

Englishman's Bay, at light: ♂, ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.61; UWIZM.2015.15.115]

Subtribe Ctenuchina

Classification and nomenclature follow Fleming (1959) and the NHMUK collection (Beccaloni et al. 2003) for species not covered by Fleming.

Anycles dolosa (Walker, 1854)

Identified by comparison with the type (NHMUK, ♀ Brazil, no abdomen) and NHMUK series. Fleming (1959) and Field (1975) treated this species in *Anycles* Herrich-Schäffer, 1855, a synonym of *Anycles* Walker, 1854 (Watson et al. 1980). This material from Tobago may be a distinct subspecies (or species); compared to Trinidad material, it differs due to a stronger red spot posterior to the eye, the UPS is more intensely black, the green stripes on abdomen broader, and the white spot posterior to the tympanic hood green rather than white.

Charlottesville-Speyside Ridge, to *Heliotropium*: 6♂ 15 May 1982 (M.J.W. Cock) [MJWC]

Correbidia assimilis (Rothschild, 1912) (Figure 25)

Identified by comparison with the type (NHMUK, ♂ Venezuela) and NHMUK series. Fleming (1959) made *C. similis* (Rothschild, 1912) a synonym of *C. assimilis*; I suspect both taxa will prove to be synonyms of *C. notata* (Butler, 1878).

Charlottesville, at light: ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3; Figure 25)



Figures 25–27. Tobago Erebididae. **25,** *Correbidia assimilis* (Rothschild), ♂ Charlottesville, at light, 24 Oct 2015 (K. Sookdeo). **26,** *Mocis diffluens* (Guenée) Charlottesville, at light, 24 Oct 2015 (K. Sookdeo). **27,** unidentified Herminiinae sp. 1, Charlottesville, at light, 24 Oct 2015 (K. Sookdeo).

Episcepsis hypoleuca Hampson, 1898

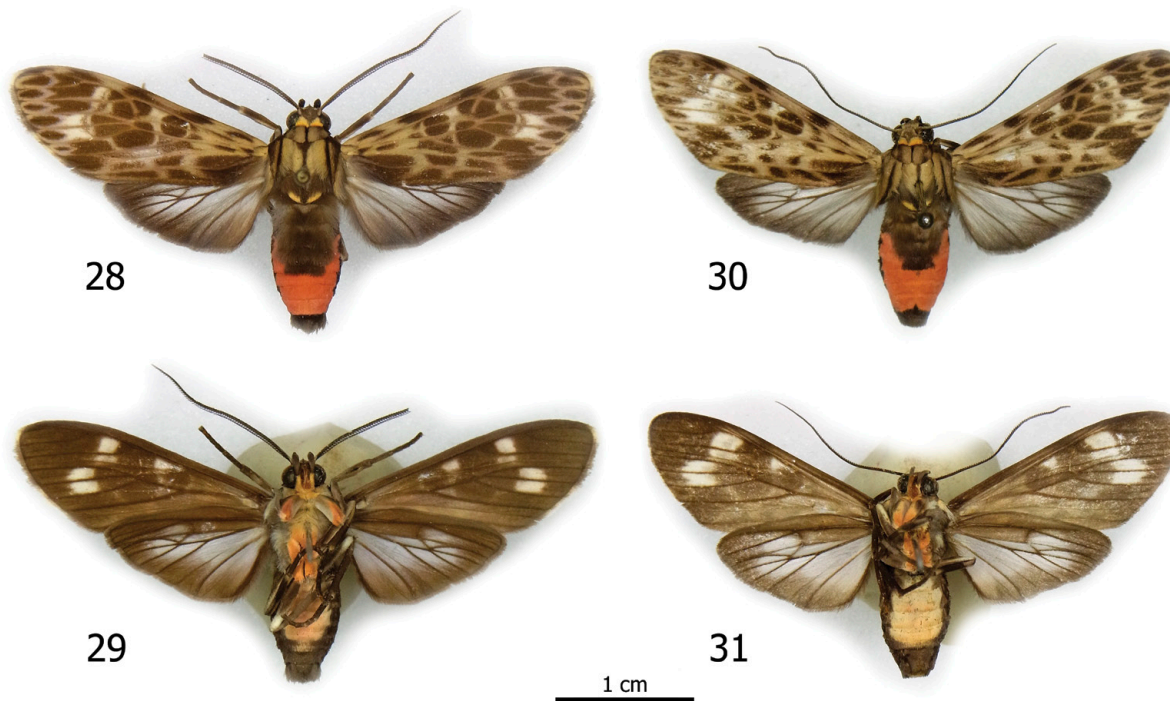
Identified by comparison with the type (NHMUK, ♂ Costa Rica) and NHMUK series. This species has also been placed in *Epidesma*. One of a group of confusingly similar species, which would benefit from revision.

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Eucereon latifascia sensu Hampson, 1898 *nec* Walker, 1856 (Figures 28-31)

This seems to be an undescribed species, also known from Trinidad (Figures 28-31). Initially I identified it as *E. latifascia* Walker from Fleming (1959) who recognised that the holotype is a different species to the species treated as *E. latifascia* in his paper and in NHMUK. I have examined the holotype in OUNHM (Para, ♂) and it is clearly not the same species, having slightly different markings on the forewing, a hyaline discal hindwing rather than translucent, and the red lateral markings on abdomen extend anteriorly one segment in the type and two in this species. Hampson's (1898, pl 16.14) illustration of what he treats as *E. latifascia* from Peru is closer to the Trinidad material than to the holotype, e.g. with regard to the hindwing and abdominal markings. I have found no matching type material in NHMUK or USNM.

Englishman's Bay, at light: ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.116]



Figures 28–31. *Eucereon latifascia sensu* Hampson, 1898. 28–29, ♂ Morne Bleu, Textel Installation, at light, 11 Oct 1978 (M.J.W. Cock) [MJWC]. 30–31, ♀ Parrylands Oilfield, MVL, 25 Jul 1981 (M.J.W. Cock) [MJWC].

Eucereon mitigata Walker, 1857

Identified by comparison with the lectotype (OUMNH, ♂ Brazil). This species has been incorrectly treated as *E. reticulatum* Butler, but as suggested by Fleming (1959) and clarified by Pinheiro (2016) that was based on a misidentification.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.115]

Eucereon sylvius (Stoll, 1790)

Identified by comparison with the neotype (NHMUK, ♂) and NHMUK series.

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Eucereon maia Druce, 1884

Eucereon maia Druce: Longstaff (1912)

Identified by comparison with the type (NHMUK, ♀ Costa Rica) and NHMUK series.

Charlottesville, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; Cocoa Wattie: ♂ 8 Apr 1907 (G.B. Longstaff; TESL 1908, 53–7) [OUNHM]. Note, Longstaff (1908) deals with butterflies only and does not mention this specimen, but it is listed in Longstaff (1912).

Subtribe Euchromiina

Classification and nomenclature follows Fleming (1957) and the NHMUK collection (Beccaloni et al. 2003) for species not covered by Fleming.

Cosmosoma anoxanthia Druce, 1905

Identified by comparison with the type (♂ Caura Valley, Venezuela) and NHMUK series Englishman's Bay, at light: ?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.110]

Cosmosoma remota (Walker, 1854)

Identified by comparison with the type (NHMUK, ♀ with discal bar on forewing, Venezuela) and NHMUK series (including ♀ specimens with no discal bar).

Englishman's Bay, at light: 2♂ Jun–Dec 2009 (J. Ingraham) [UWIZM.2015.15.113-114]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]; Tobago: ♂ [MGCL, ex coll Kaye]; ♀ 4 Aug 1923 (L. Guppy) [MGCL, ex coll Kaye]

Cosmosoma gemmata (Butler, 1876)

Identified by comparison with the type (NHMUK, ♀ St Marta, Colombia) and NHMUK series. No records from Trinidad.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Loxophlebia diaphana (Sepp, [1848])

Identified by comparison with the type of *discifera* Walker (NHMUK, ♂ Para), a synonym, and NHMUK series (all ♂). The orange lateral stripes on most of this material is wider than in Trinidad and Tobago specimens, and the spots on the collar are less red.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Macrocneme thyra Möschler, 1883

Macrocneme thyra Möschler: Dietz (1994)

Identified from Dietz (1994), which includes a Tobago record.

Tobago: ♀ 1–4 Feb 1931 (Capt. A.K. Totton) [NHMUK]

Pheia utica (Druce, 1889)

Identified by comparison with the type (NHMUK, ♂ Guerro, Mexico) and NHMUK series.

Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Tobago: ♂, ♀ 16 Aug 1924 (C.L. Withycombe) [NHMUK]; ♂ (L. Guppy) [MGCL, ex coll. Kaye]; ♂ [MGCL, ex coll. Kaye]

Subfamily Herminiinae

Nomenclature follows Poole (1989).

Aglaonice deldonalis Walker, 1859 **sp. rev.**

Identified by comparison with the type (OUNHM, ♀ Brazil). Although this name has been treated as a synonym of *A. hirtipalpis* Walker, in my interpretation, they are distinct. The male palpi are thick and rounded, projecting as a semi-circle in front of the head, whereas in *A. hirtipennis* (type examined, NHMUK ♂, Venezuela) they are relatively thin, straight and projecting.

Charlottesville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [MJWC]

Aristaria theroalis Walker, [1859]

Identified by comparison with type (♀, Venezuela) and NHMUK series. Material in the USNM which I consider this species were misidentified as *Aristaria trinitalis* Schaus, which is discussed below under

Renia bipunctata Kaye.

Charlotteville, black light: ♂, 4♀ 14–21 Mar 1979 (D. Hardy and W. Rowe) [USNM]; Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Hillsborough Dam, black light: 2♂ 21 Mar 1979 (D. Hardy and W. Rowe) [USNM]; 6.5 miles North of Roxborough on Bloody Bay Road, black light: 2♂, 6♀ 20–21 Mar 1979 (D. Hardy and W. Rowe) [USNM]

Bleptina caradrinalis Guenée, 1854

Identified by comparison with the NHMUK series.

Charlotteville, at light: 5♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.8149–53]; 2♀ 14–18 Jun 1999 (Roger Hammond) [MJWC]; Crown Point, at light: ♂, ♀ 15–17 May 1981 (M.J.W. Cock) [♂ MJWC, ♀ UWIZM.CABI.3596]; Scarborough: ♀ 3 Apr 1907 (G.B. Longstaff) [OUNHM]; ♀ 9 Apr 1907 (G.B. Longstaff) [OUNHM]; 2♂, ♀ 10 Jun 1914 (W.E. Broadway) [NHMUK]; 3♀ 12 Jun 1914, (W.E. Broadway) [NHMUK]; 3♀ 13 Jun 1914 (W.E. Broadway) [NHMUK]; ♀ 15 Jun 1914 (W.E. Broadway) [NHMUK]; 2♀ 17 Jun 1914 (W.E. Broadway) [NHMUK]; ♂, ♀ 19 Jun 1914 (W.E. Broadway) [NHMUK]; Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Speyside, MVL: 2♀ 14–17 May 1982 (M.J.W. Cock) [♀ UWIZM.CABI.3595, ♀ MJWC]; Tobago: ♂, 3♀ 9 Jun 1914, (W.E. Broadway) [NHMUK]; ♀ 1–4 Feb 1931 (Capt. A.K. Totton) [NHMUK]

Heterogramma circumflexalis Guenée, 1854

Identified by comparison with types and NHMUK series. Tobago specimens in the USNM are (or were) curated as *Neohermnia fadusalis* (Walker); *Neohermnia* is a synonym of *Phalaenophana* (Poole 1989). *Phalaenophana fadusalis* is a similar species but with a falcate forewing (type examined in OUNHM). Charlotteville, black light: 3♀ 14–21 Mar 1979 (D. Hardy and W. Rowe) [USNM]; Hillsborough Dam, black light: ♀ 21 Mar 1979 (D. Hardy and W. Rowe) [USNM]; 6.5 miles North of Roxborough on Bloody Bay Road, black light: 4♂ 20–21 Mar 1979 (D. Hardy and W. Rowe) [USNM]

Lascoria orneodalis (Guenée, 1854)

Tortricodes orneodalis Guenée (1854): Longstaff (1912)

Longstaff's specimen could not be located in OUNHM, and I have not seen any specimens.

Physula migralis Guenée, 1854

Identified by comparison with type (NHMUK, ?♀, abdomen missing, Cayenne) and NHMUK series. This may prove to be a species complex.

Charlotteville, at light: ♂, ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Metalectra agriodes Schaus, 1914

Identified by comparison with the type (USNM, ♂ Cayenne) and USNM series. No Trinidad records. Charlotteville, at light: ?♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; Charlotteville, at light: ?♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3, provisional identification)

Metalectra carneomacula (Guenée, 1852)

Identified by comparison with type (NHMUK, ?♀, abdomen missing, Cayenne) and NHMUK series. Englishman's Bay, at light: ?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.164]

Renia bipunctata Kaye, 1901 **comb. nov.**

Identified by comparison with type (♀ Trinidad) and NHMUK series. Kaye (1901) described this species as *Zanclognatha bipunctata* from Trinidad. Poole (1989) treats *Zanclognatha* Lederer as a synonym of *Polypogon* Schrank, and so used the combination *Polypogon bipunctata*. However, *bipunctata* belongs

in *Renia* Guenée, based on the similarities of maculation, palpi and male antennae, **comb. nov.** Schaus (1906) described *Aristaria trinitalis* based on a male from Trinidad. Based on the type (USNM), *A. trinitalis* is a male synonym of *R. bipunctata*, **syn. nov.**, although the remainder of the USNM series of *A. trinitalis* (including specimens from Tobago) matches *A. theroalis* (above).

Charlotteville, at light: 2♂, 2♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [♀ UWIZM.CABI.8156; ♂ MJWC, ♂, ♀ NHMUK]; Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Renia clavalis Guenée, 1854

Identified by comparison with type (NHMUK, ♂ Brazil) and NHMUK series.

Charlotteville, at light: ♀ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.3818]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Salia brevilinealis (Schaus, 1916)

Identified by comparison with type (USNM, ♂ Cayenne, USNM series (both sexes) and NHMUK series (all ♂).

Charlotteville, black light: ♀ 14–21 Mar 1979 (D. Hardy and W. Rowe) [USNM]

Unidentified Herminiinae sp. 1 (Figure 27)

One image could not be matched to any known Trinidad species.

Charlotteville, at fruit trap: ?♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3; Figure 27)

Subfamily Hypeninae

Nomenclature follows Poole (1989).

Hypena porrectalis (Fabricius, 1794)

This species has been placed in *Ophiuche* Hübner, but Poole (1989) synonymised the two genera, and this is accepted by Lafontaine and Schmidt (2010), although not by Heppner (2003). Identified by comparison with the NHMUK series, with the type of its synonym *obditalis* Walker (NHMUK, ♂) and NHMUK series. Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.8154]; Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough, Scarborough, Marden House, MVL: 3♂ 9 Jan 1982 (M.J.W. Cock) [♂ UWIZM.CABI.3573, 2♂ MJWC]

Hypena lividalis (Hübner, 1796)

Like the last, this species has also been placed in *Ophiuche*. Identified by comparison with the type of *H. scissalis* Walker (NHMUK, Dominican Republic, a synonym) and NHMUK series of *H. lividalis*. Charlotteville, at light: ♀ (no head) 14–18 Jun 1999 (Roger Hammond) [MJWC]

Subfamily Scoliopteryginae

Nomenclature follows Poole (1989).

Anomis properans (Walker, [1858])

Identified by comparison with neotype (NHMUK, Dominican Republic) and NHMUK series.

Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Subfamily Calpinae

This subfamily name has been applied to the subfamily Ophiderinae (sensu Hampson, Poole), but here Ophiderinae is treated in a much narrower sense (Zahiri et al. 2011, Zaspel et al. 2012); nomenclature follows Poole (1989).

Coenobela paucula (Walker, 1858)

Pleonectyptera paucula (Walker): Longstaff (1912)

Identified by comparison with the NHMUK series. Subfamily placement from BOLD (2016).

Scarborough, Scarborough, Marden House, MVL: 3♂ (+ 5 discarded) 9 Jan 1982 (M.J.W. Cock) [♂ UWIZM.CABI.3594, 2♂ MJWC]

Cryptochrostis seppulchraria Hübner

Identified by comparison with the NHMUK series. Subfamily placement from BOLD (2016).
Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.153]

Eudocima apta (Walker, [1858])

Zilli and Hogenes (2002) established that *E. apta* is a valid species, not a synonym of the Old World *E. materna* (Linnaeus). Identified by comparison with the NHMUK series of *E. apta*. No Trinidad records.
Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Gonodonta incurva (Sepp, [1840])

Identified from Todd (1959).
Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Gorgone augusta (Stoll, 1782)

Identified by comparison with the NHMUK series. Subfamily placement from BOLD (2016).
Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Gorgone fellearis (Hübner, 1823)

Identified by comparison with the NHMUK series. Subfamily placement from BOLD (2016).
Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Herminodes concatenalis (Warren, 1889)

Identified by comparison with type (NHMUK, Amazons) and NHMUK series. Subfamily placement from BOLD (2016).
Charlotteville, at light: ?♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3); Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Mazacyla relata (Walker, 1858)

Identified by comparison with the NHMUK series. Subfamily placement from BOLD (2016).
Englishman's Bay, at light: 3?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.161-163]

Oraesia excitans Walker, [1858]

Identified by comparison with the type series (NHMUK). Kaye (1923) described *Plusiodonta cupristria* Kaye, 1923 from a single specimen collected in Trinidad: Palmiste, 8 Jan 1921 (N.Lamont). I have examined this type specimen in the NMSE (Bland 2010), and it is a ♀ *Oraesia excitans* Walker, **syn. nov.**
Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Oroscopta abluta (Schaus, 1912) **comb. nov.**

Poole (1989) lists *abluta* under *Freilla*, its original combination, but I follow NHMUK and USNM usage and place it in *Oroscopta*, in line with the obvious similarity with other members of the genus, which is an apparently unpublished **comb. nov.** Identified by comparison with type (USNM, ♂ Cayenne) and NHMUK series. Subfamily placement from BOLD (2016).
Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Oroscopta punctata Druce, 1891

Identified by comparison with the NHMUK series. Subfamily placement from BOLD (2016).
Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Oxidercia toxea (Stoll, 1782)

Identified by comparison with the NHMUK series. Subfamily placement from BOLD (2016).
Charlotteville, at light: ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3); Scarborough, Scarborough, Marden House, MVL: ♂, ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Poena drucella Nye, 1975

Identified by comparison with types (NHMUK, including 2♂♂ 1♀ from Trinidad) and NHMUK series. Subfamily placement from BOLD (2016).

Charlotteville, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [NHMUK]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Scolecocampinae

Nomenclature follows Poole (1989).

Gabara bisinuata (Hampson, 1926)

Identified by comparison with the type (NHMUK, Panama), the only specimen in NHMUK.

Scarborough, Scarborough, Marden House, MVL: 4♂ 9 Jan 1982 (M.J.W. Cock) [2♂ UWIZM.CABI.3591–92, 2♂ MJWC]

Pharga pholausalis (Walker, [1859])

Identified by comparison with the type (NHMUK, ♂ Venezuela) and NHMUK series.

Charlotteville, at light: 2♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.8158–59]; Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Boletobiinae

Nomenclature follows Poole (1989).

Cecharismena inoa (Schaus, 1906)

Identified by comparison with the type (USNM, ♂ Cayenne) and USNM series. Subfamily placement from BOLD (2016).

Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Isogona scindens (Walker, 1858)

Identified by comparison with type and NHMUK series. Placed in *Panula* (Erebidae, Erebiinae) in NHMUK, but I have not investigated this. No Trinidad records. Subfamily placement from BOLD (2016). Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Subfamily Anobinae

Nomenclature follows Poole (1989).

Baniana inaequalis Walker, 1862

Identified by comparison with the NHMUK series (all ♂).

Tobago, main ridge: ♂ 18 May 1981 (M.J.W. Cock) [MJWC]

Baniana veluticollis Hampson, 1898

Identified by comparison with the type (NHMUK, St. Lucia) and NHMUK series.

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Hemeroplanis scopulepes (Haworth, 1809)

Identified from Todd (1960).

Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Erebiinae

Classification follows Zahiri et al. (2012), although groups below subfamily are not presented. Nomenclature follows Poole (1989), except as indicated.

Antachara mexicana (Hampson, 1909)

Identified by comparison with the type (NHMUK, Mexico) and from Thöny (1999). No Trinidad records. Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Antiblemma acclinalis Hübner, 1823

Antiblemma acclinalis Hübner: Julien and Griffiths (1998), Conant 2000, Conant 2009, Conant et al. (2013), Winston et al. (2014)

Identified by comparison with the NHMUK series. This species was introduced into Hawaii from Tobago, for the biological control of *Clidemia hirta* (Melastomataceae) (Conant 2000, 2009; Conant et al. 2013).

Antiblemma brassorata Kaye, 1925

Identified by comparison with the type (NHMUK, Trinidad, battered). This species may well belong in *Carteris* (Erebidae, Herminiinae).

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Antiblemma bistriata (Butler, 1879)

Poole (1989) treats *Antiblemma linula* (Guenée, 1852), *A. bistriata* (Butler) and *A. mundicola* (Walker, 1865) as valid species. In the NHMUK, *A. bistriata* is treated as a synonym of *A. linula*, whereas in the USNM *A. biseriata* is treated as a synonym of *A. mundicola*. I have not seen the type of *A. linula* (TL unknown; in MNHN, Paris according to Poole 1989), but I have examined the types of *A. bistriata* (NHMUK, Brazil, Amazonas) and *mundicola* (OUNHM, Brazil, Rio Janeiro) and find they are distinct species, both of which occur in Trinidad, but only *A. bistriata* in Tobago. Hence, I have used the name *A. bistriata* for this species, although further study may show it to be a synonym of *A. linula*.

Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Ascalapha odorata (Linnaeus, 1758)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photos]

Calyptis iter Guenée, 1852

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.145]; Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Coenipeta capensis (Cramer, 1777)

Identified by comparison with NHMUK series.

Englishman's Bay, at light: 2?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.151-152]

Euclystis guerini (Guenée, 1852)

Identified by comparison with NHMUK series.

Englishman's Bay, at light: 2?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.154-155]

Euclystis insana (Guenée, 1852)

Identified by comparison with the NHMUK series.

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Euclystis manto (Cramer, 1776)

Identified by comparison with the NHMUK series.

Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Hemeroblemma leontia (Stoll, 1790)

Hemeroblemma leontia Stoll is not included in Poole (1989), perhaps because it has been placed in the geometrid genus *Melanchroia*. Identified by comparison with the NHMUK series, the *H. leontia* phenotype is the male of a sexually dimorphic species. The female has been treated as the Cuban *H. rengus* (Poey, 1832), which in turn has been treated a synonym of the male *H. numeria* (Drury, 1773) from Jamaica (Núñez Aguila and Barro Cañamero 2012). Although, the female of *H. leontia* certainly resembles the female *H. rengus*, and they are treated as synonyms in the NHMUK, synonymy has not been investigated for this publication as *H. leontia*, described from Surinam is anyway the older name

and satisfactory for use for the species that occurs in Trinidad and Tobago.
Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.156]

Itomia opistographa Guenée, 1852

Identified by comparison with the the NHMUK series.

Scarborough, Scarborough, Marden House, MVL: ♀ (abdomen missing) 9 Jan 1982 (M.J.W. Cock) [MJWC]

Lesmone ellops (Guenée, 1852)

Identified by comparison with the NHMUK series. This species has also been placed in *Obroatis* (e.g. NHMUK), but I have not investigated this.

Englishman's Bay, at light: 2?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.165-166]

Lesmone formularis (Geyer, 1837)

Identified by comparison with the NHMUK series.

Crown Point, at light: ♂, 2♀ 15–17 May 1981 (M.J.W. Cock) [♂ UWIZM.CABI.3599, 2♀MJWC]; ♂, ♀ 9 Jan 1982 (M.J.W. Cock) [♂ MJWC, ♀ UWIZM.CABI.3598]; Scarborough, Scarborough, Marden House, MVL: ♂, ♀ 9 Jan 1982 (M.J.W. Cock) [♂ MJWC, ♀ UWIZM.CABI.3578]

Lesmone porcia (Stoll, 1790)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: 2?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.157-158]; Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Feigeria buteo Guenée, 1852

This generic placement follows (Berio [1991]) and subsequent authors, e.g. Barbut et al. (2012). Identified by comparison with the NHMUK series.

Charlotteville, at light: ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 1); Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Nr. Speyside, fruit trap: ♂ 17 May 1982 (M.J.W. Cock) [MJWC]

Feigeria magna (Gmelin, [1790])

As for the last, this generic placement follows (Berio [1991]). Identified by comparison with the the NHMUK series.

Charlotteville, at light: ♂ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 1); Englishman's Bay, at light: 2♀ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.159-160]

Melipotis decreta Walker, [1858]

Trinidad specimen identified by V.O. Becker.

Roxborough: 5 Jul 1914 (W.E. Broadway) [NHMUK]

Melipotis famelica (Guenée, 1852)

Identified by comparison with the NHMUK series.

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Nr. Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [UWIZM.CABI.3590]

Melipotis fasciolaris (Hübner, [1831])

Identified by comparison with the NHMUK series.

Charlotteville, at light: ♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3); Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Melipotis perpendicularis (Guenée, 1852)

Identified by comparison with the NHMUK series. No Trinidad records.

Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Metria celia (Stoll, 1782)

Identified by comparison with the the NHMUK series.

Englishman's Bay, at light: 3♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.146-148]

Metria demera (Schaus, 1901)

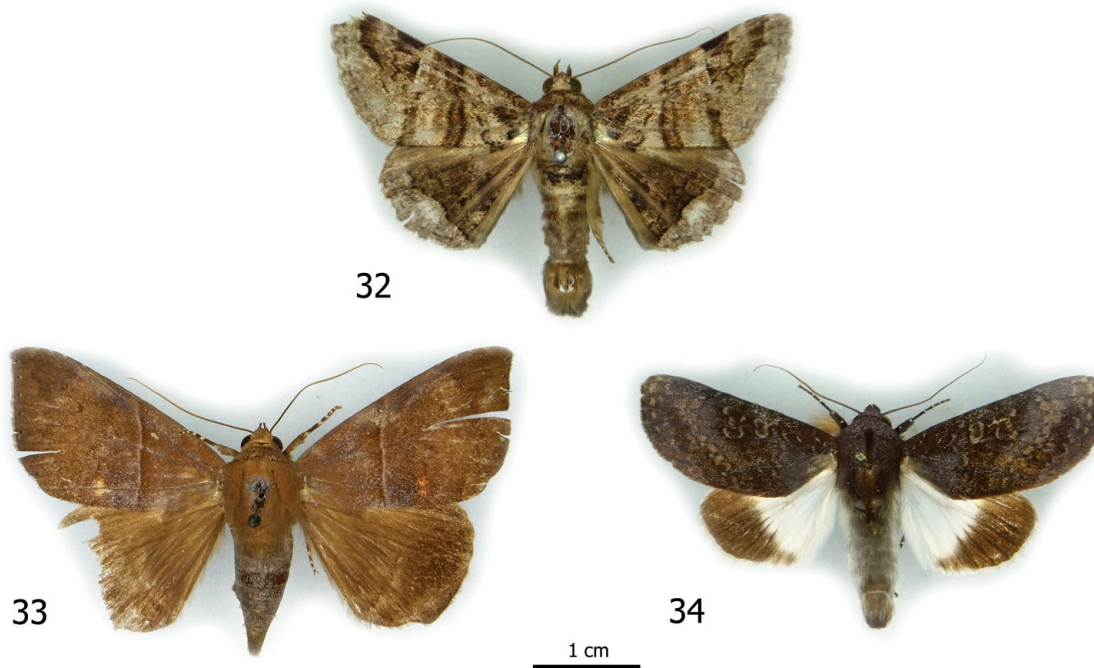
Identified by comparison with type (USNM, ♂ Panama) and NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.149]

Metria sp. (Figure 32)

This species resembles *M. demera* (above) and *M. simplicior* (Walker) (identified by comparison with the type and NHMUK series), but does not match either. Similar specimens have been noted from Trinidad (MJWC; Figure 32) and French Guyana (USNM).

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.150]; Tobago: ♂ 9 Jun 1914 (W.E. Broadway) [NHMUK]



Figures 32–34. Partially identified Tobago Erebidae. **32**, *Metria* sp. ♂, Trinidad, Mt. St. Benedict, Pax Guest House, 600 ft., at light, 10–16 Jul 1996 (M.J.W. Cock) [MJWC]. **33**, *Ophisma* sp. nr. *variata* Schaus, ♀, Tobago, Speyside, MVL, 14–17 May 1982 (M.J.W. Cock) [MJWC]. **34**, *Hemicephalis* sp. nr. *laronia* (Druce) ♂ Trinidad, Curepe, MVL, 13 Sep 1978 (M.J.W. Cock) [MJWC].

Mocis diffluens (Guenée, 1852) (Figure 26)

Charlotteville, at light: ?♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3; Figure 26)

Mocis disseverans (Walker, 1858)

Identified by comparison with the type (NHMUK, ♂ Florida) and NHMUK series.

Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Mocis latipes (Guenée, 1852)

Identified by comparison with the types (NHMUK) and NHMUK series.

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Ophisma sp. nr. *variata* Schaus, 1901 (Figure 33)

This species is close to *O. variata*, and although it is included in the series of that species in NHMUK,

they are separated in USNM. E.L. Todd dissected a male and female of each in the USNM and considered them different.

Englishman's Bay, at light: 2?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.142-142]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC] (Figure 33)

Perasia garnoti (Guenée, 1852)

Identified by comparison with the NHMUK series.

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough, Scarborough, Marden House, MVL: 4♂ 9 Jan 1982 (M.J.W. Cock) [♂ UWIZM.CABI.3578, 3♂ MJWC]; Tobago: ♂ 1–4 Feb 1931, Capt. A.K. Totton [NHMUK]

Pseudophisma diatonica (Möschler, 1880)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ?♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.144]

Ptichodis dorsalis (Fabricius, 1797), **comb. nov.**

Identified by comparison with the types of *P. dorsalis* (NHMUK, Brazil), *P. basilans* Guenée (NHMUK, ♂ Brazil) and *P. agrapta* Hampson, 1913 (NHMUK, ♂ British Guiana). Poole (1989) includes the species *Noctua auct. dorsalis* Fabricius, 1797, *Ptichodis basilans* (Guenée, 1852) and *P. agrapta* (Hampson, 1913) as valid (although he misspells the genus *Ptichodis* Hübner, 1818 as *Ptichodes*). In the card index of the NHMUK (LepIndex; Beccaloni et al. 2003), *Noctua dorsalis* is placed in the genus *Ptichodis*, and although this combination occurs commonly on the internet, I have not traced any formal publication of this, so here I consider it a **comb. nov.** Furthermore, the NHMUK card index (Beccaloni et al. 2003) is annotated to the effect that there are syntypes of *P. dorsalis* in the Banks collection and in the NHMUK, and of *P. basilans* in the NHMUK, and that [I.W.B.] Nye recognised *P. basilans* as a synonym of *P. dorsalis*. Again this does not seem to have been published, so I treat this as a **syn. nov.** Nye (1966 in Beccaloni et al. 2003). In Trinidad, I have observed that the male of *P. dorsalis* is variable with regard to a black discal streak on dorsal foreing, which may be strong, weak, or more or less absent. Hampson (1918) described two males from British Guiana (i.e. Guyana), of the form with the streak absent as *P. agrapta*, **syn. nov.**

Charlotteville, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.8157]; Roxborough: ♂ 5 Jul 1914, W.E. Broadway [NHMUK as *P. agrapta*]; Scarborough, Scarborough, Marden House, MVL: 5♂, 3♀ (+ 5♂ discarded) 9 Jan 1982 (M.J.W. Cock) [3♂, ♀ UWIZM.CABI.3581–84; 2♂, 2♀ MJWC]; Tobago: ♀ 9 Jun 1914, W.E. Broadway [NHMUK as *P. agrapta*]

Ptichodis crucis (Fabricius, 1794)

Poaphila immunis (Guenée): Longstaff (1912) [synonym]

Identified by comparison with the NHMUK series.

Charlotteville, at light: ♀ 24 Oct 2015 (K. Sookdeo photo, Tobago Moths 3); Crown Point, at light: ♂, ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough, Scarborough, Marden House, MVL: 4♂, 2♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Thysania zenobia (Cramer, 1777)

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♀ late 2010–early 2011 (J. Ingraham) [M. Kelly photos 10880, 10881]

Tyrissa multilinea Barnes and McDunnough, 1913

Identified by comparison with the NHMUK series.

Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Zale fictilis (Guenée, 1852)

Identified by comparison with Zagatti et al. (2006) and the NHMUK series of *Z. terrosa* (Guenée), a synonym.

Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Subfamily Eulepidotinae

Nomenclature follows Poole (1989).

Anticarsia gemmatalis Hübner, 1818

Identified by comparison with the NHMUK series.

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Azeta melanea (Stoll, [1782])

Identified by comparison with the NHMUK series.

Arnos Vale: ♂ 18.vi.2011 (John Morrall) [MJWC]

Azeta versicolor (Fabricius, 1794)

Identified by comparison with the NHMUK series. The ground colour of this species varies from brown to near black.

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Obrima pyraloides Walker, 1856

Identified by comparison with the type (NHMUK, ♂) and NHMUK series.

Nr. Speyside, MVL: 2♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Renodes aequalis (Walker, [1866])

Identified by comparison with the NHMUK series. Trinidad material differs from most in the absence of a dark spot on the dorsal hindwing dorsum (present in Tobago specimen).

Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Renodes liturata (Walker, 1865)

Identified by comparison with the NHMUK series.

Charlotteville, at light: 2♀ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.3827, MJWC]; Scarborough: 1 13 Jun 1914 (W.E. Broadway) [NHMUK]; 3 19 Jun 1914 (W.E. Broadway) [NHMUK]; Nr. Speyside, MVL: 2♂ 16 May 1982 (M.J.W. Cock) [MJWC]; Tobago: 1? 9 Jun 1914 (W.E. Broadway) [NHMUK]

Syllectra congemmalis Hübner, 1823

Identified by comparison with NHMUK series.

Englishman's Bay, at light: ♂, ♀ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.168-169]

Syllectra erycata (Cramer, 1780)

Identified by comparison with NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.170]

Family Euteliidae

Nomenclature follows Poole (1989).

Eutelia ablatrix (Guenée, 1852)

Identified by comparison with type (NHMUK, ♂ no locality) and NHMUK series.

Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Family Nolidae

Classification follows Zahiri et al. (2012b); nomenclature follows Poole (1989).

Collomena chirica (Schaus, 1906)

Identified by comparison with the NHMUK series, a paratype (USNM, ♀ Mexico) and USNM series.

Scarborough, Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Family Noctuidae

Classification follows Zahiri et al. (2011); nomenclature follows Poole (1989).

Subfamily Dyopsinae

Sosxetra grata Walker, 1862

Identified by comparison with the NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.167]

Subfamily Plusiinae

Pseudoplusia includens (Walker [1858])

Identified by comparison with the types (NHMUK, Sto. Domingo [Dominican Republic]) and NHMUK series.

Crown Point, at light: 2♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Subfamily Bagisarinae

Bagisara repanda (Fabricius, 1793)

Identified by comparison with the NHMUK series.

Charlottetown, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [NHMUK]; Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Subfamily Cydosiinae

Cydosia nobilitella (Cramer, 1779)

Cydosia histrio (Fabricius): Longstaff (1912) [synonym]

Identified by comparison with the NHMUK series.

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Subfamily Eustrotiinae

Tripudia quadrifera (Zeller, 1874)

Identified by comparison with the NHMUK series.

Charlottetown, at light: ♂ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [MJWC]; ♂, ♀, 3? (5 discarded) 14–18 Jun 1999 (Roger Hammond) [3? UWIZM.CABI.3830–32, ♂, ♀ MJWC]

Subfamily Oncocnemidinae

Catabenoides vitrina (Walker, 1857) complex

This generic placement follows R.W. Poole (in Becker and Miller 2002). It was identified by comparison with the NHMUK series. However, at that time this series would have represented what Becker and Miller (2002) refer to as the *C. vitrinus* [sic] complex, commenting that the true *C. vitrina* does not occur in the Lesser Antilles. No Trinidad records.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Neogalea sunia (Guenée, 1852)

This species was known as *N. esula* (Druce), but *N. sunia* is the senior name; the species incorrectly known as *Spodoptera sunia* was misidentified and is now referred to *S. albula* (Walker) (Poole 1989). Identified by comparison with the NHMUK series.

Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Condicinae

Condica circuita (Guenée, 1852)

Identified by comparison with the NHMUK series, including a male from Tobago labelled 'genitalia compared with holotype'.

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Roxborough: ♂ (genitalia compared with holotype) 20 Jul 1914, W.E. Broadway [NHMUK]; Scarborough: 11 Jun 1914, W.E. Broadway [NHMUK]; Speyside, MVL: ♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Condica mimica (Hampson, 1908)

Identified by comparison with type (NHMUK, Venezuela ♂) and NHMUK series.

Englishman's Bay, at light: ♂ Jun–Dec 2009 (J. Ingraham) [UWIZM 2015.45.141]

Condica sutor (Guenée, 1852)

Identified by comparison with the NHMUK series.

Crown Point, at light: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Diastema tigris Guenée, 1852

Identified by comparison with the NHMUK series.

Crown Point, at light: 2♂ 15–17 May 1981 (M.J.W. Cock) [♂ UWIZM.CABI.3593, ♂ MJWC]; Scarborough: (W.E. Broadway) [NHMUK]; Speyside, MVL: ♂ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Hemicephalis sp. nr. *laronia* (Druce, 1890) (Figure 34)

This fits within the range of variation of *H. laronia* in USNM (Costa Rica to Paraguay), but is not a satisfactory match to the types (NHMUK, Panama and Ecuador). In the NHMUK it is curated as an un-named species found in Brazil and Paraguay. It is also found in Trinidad (Figure 34).

Englishman's Bay, at light: ? late 2010–early 2011 (J. Ingraham) [M. Kelly photo 10990]

Micrathetis triplex (Walker, 1857)

Identified by comparison with the NHMUK series.

Scarborough: ♀ 3 Apr 1907 (G.B. Longstaff) [OUNHM]; Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]; Speyside, MVL: 2♂, 2♀ 14–17 May 1982 (M.J.W. Cock) [MJWC]

Subfamily Heliothinae*Helicoverpa zea* (Boddie, 1850)

Identified by comparison with the NHMUK series. Cock (1985) records the release of parasitic wasps *Chelonus formosanus* Sonan (Braconidae), *Campoletis chlorideae* Uchida (Ichneumonidae) and *Teleonomus remus* Nixon (Scelionidae) in Tobago for biological control of '*Heliothis* spp.' – i.e. *Helicoverpa zea* and *Chloridea virescens* (Fabricius) (below). These widespread polyphagous pests almost certainly occur in Tobago, but I have not located specimens or a more formal record.

Chloridea virescens (Fabricius, 1777)

Guppy's (1910) report that he did not find tobacco bud moth on tobacco being grown near Scarborough in February 1909 is assumed to be a reference to this species. The current generic placement follows Pogue (2013). See comments under the preceding species, *H. zea*, regarding the occurrence of this species in Tobago.

Subfamily Noctuinae*Anicla infecta* (Ochsenheimer, 1816)

Identified by comparison with the NHMUK series.

Charlotteville, at light: ♂ 14–18 Jun 1999 (Roger Hammond) [UWIZM.CABI.3774]; Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

Elaphria agrotina (Guenée, 1852)

Identified by comparison with the NHMUK series.

Crown Point, at light: ♂, ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Elaphria barbarossa (Hampson, 1909)

Identified by comparison with the type (NHMUK ♂ Paraguay) and NHMUK series.

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Elaphria deltoides (Möschler, 1880)

Identified by comparison with NHMUK series.

Scarborough, Marden House, MVL: ♂ 15 Jan 1982 (R. Forrester) [det. MJWC; discarded]; Hillsborough Dam, black light: ♂ 21 Mar 1979 (D. Hardy & W. Rowe) [USNM]

Elaphria devara (Druce, 1898)

Identified by comparison with the type (NHMUK, Guatemala), NHMUK series and Zagatti et al. (2006).

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Elaphria grata Hübner, 1818

Identified by comparison with the NHMUK series.

Charlottetown, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [UWIZM.CABI.8155];

Crown Point, at light: 2♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Marimatha tripuncta (Möschler, [1890])

This species has been identified as the Brazilian species *Thioptera aurifera* (Walker, [1858]) in the past, e.g. by comparison with the NHMUK series. The identification and generic placement used here is based on Ferris and Lafontaine (2010).

Charlottetown, at light: ♀ 15–19 Jun 1998 (Roger Hammond & Piers Meynell) [NHMUK]; Crown Point, at light: ♂, ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough, Scarborough, Marden House, MVL: ♂ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Spodoptera albula (Walker, 1857)

Spodoptera albula (Walker): Cock (1985)

Identified from Todd and Poole (1980). No specimens were examined during the preparation of this catalogue; if specimens still exist they may be in the CABI collection in UWIZM.

Spodoptera dolichos (Fabricius, 1794)

Spodoptera dolichos (Fabricius): Cock (1985), Pogue (2002)

Identified from Todd and Poole (1980).

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Spodoptera eridania (Stoll, 1782)

Spodoptera eridania (Stoll): Cock (1985)

Identified from Todd and Poole (1980). No specimens were examined during the preparation of this catalogue, and there are none from Tobago in the CABI collection in UWIZM. Although I referred to specimens in my collection when I recorded this species from Tobago in Cock (1985), I cannot now locate any. However, given its distribution in northern South America and the Caribbean (Cock 1985, Zagatti et al. 2006), this species is expected to occur in Tobago.

Spodoptera frugiperda (J.E. Smith, 1797)

Spodoptera frugiperda (J.E. Smith): Cock (1985)

Identified from Todd and Poole (1980).

Crown Point, at light: ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Spodoptera latifascia (Walker, 1856)

Spodoptera latifascia (Walker): Cock (1985)

Identified from Todd and Poole (1980).

Crown Point, at light: ♂, ♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]; Scarborough, Marden House, MVL: ♀ 9 Jan 1982 (M.J.W. Cock) [MJWC]

Leucania albifasciata (Hampson, 1905)

Identified by comparison with type (NHMUK, Paraguay) and NHMUK series.

Crown Point, at light: ♂ 15–17 May 1981 (M.J.W. Cock) [UWIZM.CABI.3640]

Nr. Speyside, MVL: ♂ 16 May 1982 (M.J.W. Cock) [MJWC]

Leucania humidicola Guenée, 1852

Two females dissected and identified from Adams (2001).

Crown Point, at light: 2♀ 15–17 May 1981 (M.J.W. Cock) [MJWC]

Marilopteryx lamptera (Druce, 1890)

Identified by comparison with the type (NHMUK, ♂) and NHMUK series.

Nr. Speyside, MVL: ♀ 16 May 1982 (M.J.W. Cock) [MJWC]

List B. Moth species considered not to occur in Tobago, in spite of published records**Family Erebidae****Subfamily Erebinae***Thysania agrippina* (Cramer, 1776)

Thysania agrippina (Cramer): Plester (1994)

Plester (1994) reports a specimen of *T. agrippina* (Cramer) attracted to light at Grafton, but since he states that it was very small, with a ‘wing-span’ of 8cm, whereas *T. agrippina* has a wingspan of at least 20cm, this should be a misidentification, perhaps for a *Feigeria* sp. or *T. zenobia*.

List C. Moth species recorded from Tobago, but not from Trinidad**Family Tineidae***Leucophasma carmodiella* Busck, 1910

This species was described from Tobago. Although it is not known from Trinidad, it seems likely that it will be found to occur there.

Family Tortricidae*Strepsicrates tetropsis* (Busck, 1913)

This species is recorded from guava from ‘Trinidad and Tobago’ by Schotman (1989) and Gould and Raga (2002), but I only know of specimens from Tobago. Since this species is widespread in mainland South America, it is expected to occur in Trinidad.

Family Limacodidae*Perola bistrigula* (Hampson, 1898)

This is a species of the Lesser Antilles, and currently Tobago is its southernmost locality.

Family Mimallonidae*Cicinnus* sp.

The two Tobago specimens of this species were in such poor condition that St Laurent and Cock (2017) were unable to identify them or even consider a match with any species from the South American mainland.

Family Lasiocampidae

Euglyphis intuta (Dognin, 1916)

This species was described from Guyana and so can be expected to also occur in Trinidad.

Family Geometridae

Idaea verrucifera (Hampson, 1895)

This species was described from Grenada, and may be limited to the Lesser Antilles.

Scopula asopiata (Guenée, 1858)

This species was described from French Guiana, and so may be expected to occur in Trinidad.

Family Notodontidae

Hemiceras pallidula Guenée, 1852

As this species occurs on the mainland of South America, it is likely to occur in Trinidad too. The Tobago records suggest it may be a species of dry forest.

Nystalea nigritorquata Dognin, 1900

As this species occurs on the mainland of South America, it is likely to occur in Trinidad too.

Family Erebidae

Antachara mexicana (Hampson, 1909)

This species occurs from Mexico (type locality) south to Brazil (Thöny 1999), including northern Venezuela (NHMUK collection), so may be expected to occur in Trinidad as well.

Cosmosoma gemmata (Butler, 1876)

As this species occurs on the mainland of South America, it is likely to occur in Trinidad too.

Dysschema marginalis (Walker, 1855)

This species was described from Venezuela and occurs in Central America, the Greater Antilles and Lesser Antilles to Tobago. Curiously it has not been recorded from Trinidad, and it seems unlikely that this conspicuous day-flying species would have been overlooked.

Eudocima apta (Walker, [1858])

This is probably a vagrant specimen, of a species that could well turn up in Trinidad too.

Isogona scindens (Walker, 1858)

This species was described from the Dominican Republic and is found in southern USA, Greater and Lesser Antilles, to Paraguay, and so can be expected to occur in Trinidad.

Metalectra agriodes Schaus, 1914

As this species was described from French Guiana, it is likely to occur in Trinidad too.

Melipotis perpendicularis (Guenée, 1852)

This widespread species can be expected to be found in Trinidad.

Family Noctuidae

Catabenoides vitrina (Walker, 1857) complex

The NHMUK collection includes specimens of this complex from Texas and the Caribbean, but see the treatment in Becker and Miller (2002). Tobago seems to be the southernmost locality known for this complex.

Discussion

In this catalogue, I have compiled records of 355 species of moths from Tobago (List A), of which 17 are partially identified. Of this total, all except 17 (5%) are known from Trinidad (List C), although these records from Trinidad are not necessarily published yet. Of these 17, eleven are expected to occur in Trinidad as they also occur on the mainland of South America, two (*Cicinnus* sp. Mimallonidae; *Leucophasma carmodiella*, Tineidae) are known only from Tobago but will probably also occur in Trinidad. This leaves just four species (1% of the total) that are known from the Lesser Antilles and are currently not known from further south than Tobago: *Perola bistrigula* (Limacodidae), *Idaea verrucifera* (Geometridae), *Dysschema marginalis* (Erebidae) and *Catabena vitrina* complex (Noctuidae). The South American distribution of *D. marginalis* is unclear but may be restricted to part of Venezuela.

The breakdown by families is shown in Table 1. The families represented by most species are Erebidae, Crambidae, Geometridae, Noctuidae and Sphingidae, which between them account for 73% of records.

Table 1. Breakdown of Tobago moths by main families.

Family	Number of species
Pyralidae	18
Crambidae	67
Saturniidae	8
Sphingidae	26
Geometridae	35
Notodontidae	19
Erebidae	106
Noctuidae	28
Families with less than 5 species	51
Total	355

It is difficult to assess how complete this catalogue is. As noted in the introduction, there will be additional records from the material collected by D. Hardy and W. Lowe, which was not accessible when I reviewed the USNM collection, i.e. most groups except Pyraloidea and Arctiina. Of the 85 records of Pyraloidea (Table 1), 13 are based on species that were only collected by D. Hardy and W. Lowe. Extrapolating this ratio to the other families suggests a potential total of 405 species, but this may be an overestimate since the species-rich collection of Jeffery Ingraham neglected the small moths. No collectors in Tobago have paid significant attention to the families of so-called Microlepidoptera apart from Pyraloidea, so the number of missing species this represents is an unknown factor. For the butterflies (Papilionoidea), Cock (2017) records 151 species from Tobago, compared to approximately 781 species known from Trinidad (Cock and Alston-Smith 2017), i.e. about 20% of the Trinidad total. Extrapolating from the approximately 2,275 known species of moths from Trinidad (Cock 2003), suggests the Tobago total might be around 450 when Tobago moths have been as well studied as Trinidad moths are now.

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