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Annotated checklist and biogeographic composition of the Lycaenidae
(Lepidoptera) of Trinidad, West Indies

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Abstract. A revised annotated checklist for the butterfly family Lycaenidae (Lepidoptera) of Trinidad is presented, updating nomenclature, and indicating synonyms from earlier lists and papers. The checklist includes 131 species of Lycaenidae, comprising 127 species of 49 genera of Eumaeini, Theclinae, and four species of three genera of Polyommatainae. There are more than 30 new island records. No lycaenid species is endemic to Trinidad, and the fauna consists primarily of widespread species (71%) that occur from Central America to the Amazon Basin. However, the primary biogeographic affinity is the Amazon Region, where 94% of the Trinidad lycaenid fauna also occurs. Corrections are made to the literature cited in the first author's earlier checklists on other Trinidad butterflies.

Key words. Butterflies, Theclinae, Eumaeini, Polyommatainae, William James Kaye, Malcolm Barcant, Chacachacare Island

Resumen. Se presenta una lista anotada para la familia de mariposas Lycaenidae (Lepidoptera) de Trinidad, actualizando la nomenclatura e indicando sinónimos de listas y artículos previos. La lista incluye 131 especies de Lycaenidae, que comprende 127 especies de 49 géneros de Eumaeini, Theclinae, y cuatro especies de tres géneros de Polyommatainae. Se presentan más de 30 nuevo registros procedente de la isla. Ninguna especies de lycaenido es endémico de Trinidad, y la fauna consiste principalmente de especies de amplia distribución (71%) que ocurren desde Centroamérica hasta la Cuenca del Amazonas. Sin embargo, la principal afinidad biogeográfica es la Región Amazónica, donde el 94% de la fauna de lycaenidos de Trinidad ocurren. Se hacen correcciones en la literatura citada de las listas anotadas anteriores del primer autor sobre otras mariposas de Trinidad.

Palabras clave. Mariposas, Theclinae, Eumaeini, Polyommatainae, William James Kaye, Malcolm Barcant, Isla Chacachacare

Introduction

The butterflies of Trinidad, including Lycaenidae, have been catalogued in a series of lists and amendments (Crowfoot 1893; Kaye 1904, 1914, 1921, 1940). The last complete treatment was Barcant's (1970) *Butterflies of Trinidad and Tobago*, where the section on Lycaenidae was based primarily on the earlier work of Kaye. The Checklist of Neotropical Butterflies (Lamas 2004a) brought many changes to the nomenclature of the Neotropical fauna, notably in the tribe Eumaeini (Theclinae) of Lycaenidae (Robbins 2004). For the first time, all available specific names were placed in nomenclaturally valid genera, rather than in the catch-all genus *Thecla* Fabricius, which does not belong to the Eumaeini (Eliot 1973). The names and combinations in this paper are updated according to the Checklist of Neotropical Butterflies except where newer information has been published, as indicated under the relevant species. A similar style and approach as in previous updated lists of Papilionidae, Pieridae and Nymphalidae (Cock 2014a) and Hedylidae and Hesperidae (Cock 2014b) are followed.

Biogeography. As with the previous annotated checklists for Trinidad butterflies (Cock 2014a, 2014b), the geographical area covered by the checklist is the island of Trinidad and its offshore islands, including the Bocas Islands, but excluding Tobago and its offshore islands. In practice, the few butterflies recorded from Trinidad's offshore islands are species also known from the island of Trinidad. The

one exception is Chacachacare Island, where *Strymon astiocha* (Prittwitz), *Strymon* sp. nr. *bazochii* (Godart), *Ministrymon megacles* (Stoll), and *Ministrymon albimimicus* (K. Johnson) have been found, but are not known from Trinidad.

Brown (1982) divided the forested lowland continental Neotropics into major butterfly biogeographic zones. Trinidad is a “border” country. It is at the eastern edge of the Transandean Region and at the northern edge of the Amazonian Region. To determine the biogeographic composition of the Trinidad Lycaenidae fauna, we note for each species whether it is Transandean, Amazonian, or both. Only one species, *Ziegleria hernandezi* (K. Johnson and Kroenlein), is endemic to the overlap area of these two regions. The purpose of these biogeographic data is to assess whether the Trinidad fauna is composed primarily of Amazonian or Transandean species.

Preparation of the Checklist. The advantage of using the Atlas of Neotropical Lepidoptera checklist as the standard for the checklists of Trinidad species (Cock 2014a, 2014b), including this one, is that it provides a recent update of name changes across all families, which hopefully will provide some stability for years to come. Even so, we have updated the checklist where more recent work indicates the need, and this is explained in the notes below the species in question. Subspecies are not used in the checklist for Eumaeini (Robbins 2004), but are used for Polyommatainae (Lamas 2004b), and we have followed the same practice here.

Four lists of species are presented below: (1) the main checklist of 131 species of Lycaenidae that we recognize from Trinidad; (2) a list of seven additional species that have been recorded from Trinidad but we have not been able to confirm; (3) five species recorded from Trinidad considered to be in error; and (4) a list of 48 species that might be found in Trinidad based on their mainland distribution. All names listed by Crowfoot (1893), Kaye (1904, 1914, 1921, 1940) and Barcant (1970) are included; original spellings and combinations are used, but the names of the authors of the specific names have been corrected when necessary to align with Robbins (2004) and Lamas (2004b). In addition, we include other relevant publications that refer specifically to a species being found in Trinidad, or provide information on the biology of that species in Trinidad, including the food plant listing of Beccaloni et al. (2008). This may not provide a complete bibliography of Trinidad Lycaenidae, but should include all key works. Where a work treats a species that is found in Trinidad, but does not mention Trinidad specifically, this reference is not included under that species. We have not included the original description of every species and subspecies, as this information can be obtained from the bibliography of Neotropical butterflies (Lamas 2016), using the author and date of publication from our list. However, for the few Lycaenidae taxa described from Trinidad (indicated in the list by ‘TL’, type locality, after the reference), we have provided the citation for the original description.

There are more than 30 new records included that have not previously been published. These are documented in the notes below these species, including the collection(s) where a voucher is deposited. Some of these are species that have been overlooked, as they resemble other more common species, but others are newly discovered from Trinidad. Where there is no obvious correlation between the current name and the name used by previous authors, or some explanation is needed for other reasons, we have added a brief comment in square brackets, e.g. [synonym], [misidentification]. In compiling these lists we refer to the following public collections:

ABCT	Angostura–Barcant Collection, Trinidad and Tobago
BMNH	The Natural History Museum, London, UK
MGCL	McGuire Center for Lepidoptera and Biodiversity, Gainesville, Florida, USA
OMNH	Hope Entomological Collections, Oxford University Museum of Natural History, Oxford, UK
RSME	National Museums of Scotland, Edinburgh, UK
USNM	National Museum of Natural History, Smithsonian Institution, Washington, DC, USA
UWIC	University of the West Indies Zoological Museum, Trinidad and Tobago, including the collections of the Imperial College of Tropical Agriculture (ICTA) and CABI, Trinidad and Tobago

We also refer to these private collections:

FCU	Frederick Clive Urich, Trinidad and Tobago (deceased)
JMO	John Morrall, UK
MJWC	Matthew J.W. Cock, UK
SAS	Scott Alston-Smith, Trinidad and Tobago

The main list comprises those species for which there is evidence that they occur (or occurred at least once) in Trinidad. This is followed by a second list of those species that were incorrectly recorded from Trinidad or for which we could find no evidence. Unless we specifically indicate otherwise, all records have been confirmed by specimens collected since 1978 (when the first author started to study Lepidoptera in Trinidad) and identified by the authors. We have examined the collections of the BMNH, RSME, OMNH and USNM for Trinidad material, as well as the collections of Trinidad butterflies made by Malcolm Barcant (ABCT), Frederick Clive Urich (FCU), and Scott Alston-Smith (SAS). Of the collections where we know there are significant holdings of Trinidad Lycaenidae, we have not specifically examined the collections of the AMNH and MGCL for Trinidad lycaenids.

Lycaenidae collectors in Trinidad and their collections. Additional information on some of the following collectors can be found in the newly published paper by Baker and Hancock (2016). The first list of Trinidad butterflies was by **William Miller Crowfoot** (1838–1918) and included two Polyommatae and 21 Theclinae (Crowfoot 1893). Crowfoot was an English surgeon and enthusiastic naturalist who lived in Suffolk, UK (RCSE 2016). His list was based on material collected by ‘The Hon **S.H. Gatty**, Q.C., and **Beavan Rake**, M.D.’ which Crowfoot identified (Crowfoot 1893, Rake 1894). **Beavan Neave Rake** (1858–1894) was an authority on leprosy and active member of the Trinidad Field Naturalists’ Club with an interest in butterflies (TFNC 1894), e.g. he was member of the Publications Committee (Tikasingsh 2003), while Gatty was Trinidad’s attorney general at about that time (TFNC 1894). We have no information on whether any of their specimens have survived, and assume that all material is either lost or not labeled so that it can be recognized. All these records have been substantiated by subsequent captures and are included in our list.

William James Kaye (1875–1967), a UK-based lepidopterist, catalogued the Trinidad butterflies in a series of papers (Kaye 1904, 1914, 1921, 1940). Kaye’s (1904) preliminary catalogue was based mostly on his brother’s collecting in 1896 and his own collecting on visits in 1898 and 1901, but supplemented with records from local scientists and naturalists, and the collections of the BMNH and OMNH. It included two Polyommatae and 33 Theclinae. Most records are explicitly or implicitly based on Kaye’s collecting, but Lycaenidae records by H. Caracciolo (2) and J.H. Hart (1) are based on specimens stated to be in the BMNH, as are many of Kaye’s own captures from this period. Kaye (1914) added 20 further Theclinae, based on the collecting of G.E. Tryhane (9), K. St. A. Rogers (2), F. Birch (2), G.B. Longstaff (2), H. Caracciolo (1), P.L. Guppy (1) and the literature.

In 1920, Kaye visited Trinidad again, and a new catalogue of Trinidad butterflies was compiled and published in 1921, including additional records from: Sir N. Lamont (8), R. Dick (3), P.L. Guppy (3), E.J. Patterson (3), G.E. Tryhane (2), F.W. Jackson (1), K. St. A. Rogers (1), F.W. Urich (1), C.B. Williams (1) and the literature. The total for Lycaenidae was now two Polyommatae and 56 Theclinae. Kaye’s material from this time was mostly kept in his own collection and is now in MGCL. Finally, Kaye (1940) published additions and corrections to the 1921 catalogue, which included a net increase of 23 Theclinae, based mostly on new records by R. Dick (11), Sir N. Lamont (5), Dr F.W. Jackson (5), Admiral E. Bourke (1), E.E. Fabien (1), R.M. Farmborough (1), A. Hall (1) and F.W. Urich (1). This brought the total Lycaenidae recorded from the island to 58.

Brief comments on the collectors and scientists whose records were compiled by Kaye, and the whereabouts of their collections, may be useful. **Henry Caracciolo** (1859–1934) was an influential naturalist and agriculturalist (Rooks 1991) and at least some of his specimens are in the BMNH. **John Hinchley Hart** (1847–1911) was Superintendent of the Royal Botanic Garden, Port of Spain (Baksh-Comeau 1991), who also occasionally collected some insects, some of which are preserved in the BMNH. We have found very little information on **George E. Tryhane**. Apart from the records listed by Kaye, Bruner (1906) includes records of Orthoptera that ‘G.E. Tryhane of St. Anne’s, Trinidad’ sent to him in his *Report on the Orthoptera of Trinidad, West Indies*. At least some of Tryhane’s butterfly

collection is incorporated in the BMNH. **Kenneth St. Aubyn Rogers** (1869–1943) was the bishop of Mombasa, Kenya, and an authority on East African butterflies. In 1913 he visited his brother, a forester, in Trinidad and while there made a collection of butterflies that is now in OMNH. **Frederick (Fred) R. Birch** visited Trinidad to collect insects, including butterflies, in 1904. Barcant (1970), who refers to him variously as F. Birch, W. Birch and T. Birch, indicates that Kaye ‘took over’ Birch’s collection. However, a letter from Alfred Russell Wallace (1906?) to Birch indicates that Birch’s material was being sold in the UK; certainly at least some of his butterflies and moths are now preserved in the BMNH. **George Blundell Longstaff** (1849–1921) was a well-travelled butterfly collector who visited Trinidad and Tobago. He published detailed accounts of his collecting, which were compiled in his 1912 book *Butterfly-hunting in many lands: Notes of a field naturalist*, and his collection is now held in OMNH. **Plantagenet Lechmere Guppy, Jr.** (1871–1934) was known as ‘Jim’ (Guppy 1991), which must be why Kaye (1904) referred to him as J. Guppy. He worked with F.W. Urich on insect pests, and was also a keen naturalist, publishing an annex of life history plates in Kaye’s (1904) catalogue.

Sir Norman Lamont (1869–1949) collected butterflies and moths in Trinidad from around 1913 until his death in 1949 (Shephard 1949), and Kaye (1921, 1940) frequently refers to his captures. Lamont’s collection is divided between RSME and UWIC, although some specimens are in OMNH. The curation indicates some significant misunderstandings, particularly amongst the Calycopidina. As W.J. Kaye would have seen at least some of Lamont’s collection, this probably reflects Kaye’s own misunderstandings for some species. Barcant (1970) writes that, during the 1920s and 1930s, **Robert Dick** built up for himself a reputation as Trinidad’s leading lepidopterist, his collection being the most complete and outstanding in the island. On his death in 1943, his collection went to his nephew, Percy Rodriguez, until his death in 1961, when it was acquired by Barcant and added to his collection (ABCT). We have no information on **E.J. Patterson** and have not seen any of his (or her) specimens in museums. **Dr. F.W. Jackson**’s records of butterflies and moths from visits between 1913 and 1928 are documented by W.J. Kaye and most of his (or her) collection is divided between OMNH and BMNH. **Frederick William Urich** (1870–1937) was a government entomologist with the Ministry of Agriculture and then Professor at the Imperial College of Tropical Agriculture (ICTA, now the University of the West Indies, St. Augustine Campus), and interested in all areas of zoology (Busck 1939; de Verteuil 1996). He did not specifically make a butterfly collection, but sent many specimens for identification at the BMNH and USNM where they are now preserved, while others were placed in the ICTA collection and are now part of UWIC. Early last century, **Carrington Bonsor Williams** (1889–1981) was working as a sugar cane entomologist in Trinidad, and compiling information on insect migrations in which area he went on to become a world authority. He seems to have collected a small number of butterflies in Trinidad incidentally to other work, at least some of which are in UWIC and OMNH.

Admiral Edmund George Bourke (1843–1924) visited Trinidad in April–May 1902 during the course of his duties in the Royal Navy, and made a collection that is now preserved intact in OMNH, where W.J. Kaye examined it. **E.E. Fabien** made several unusual captures in the South in Trinidad in 1922, but we know nothing about him and have not seen any of his specimens in museums. **R.M. Farmborough** collected some larger moths and butterflies in southern Trinidad between 1917 and 1919; his (or her) material is in OMNH. Kaye (1940) refers to the collector as R.M. Farmborough, but data labels on specimens in OMNH use the initials R.W. An internet search suggests this may be Robert W. Farmborough (1880–1946). **Arthur Hall** (1873–1952) visited Trinidad several times between 1920 and 1939 and specialized on Nymphalidae; most of his collection and his journals are held at the Booth Museum of Natural History, Brighton, UK, but some are in the BMNH (notably Hesperidae and Tobago specimens).

In 1949, **Charles William Beebe** (1877–1962) purchased Verdant Vale, an old cacao estate with mixed forest in the Arima Valley (and well-known Lepidoptera collecting locality), renamed it Simla, and in 1950 donated it to the New York Zoological Society to establish its Tropical Research Station, which operated until the 1970s before being donated in 1974 to the Asa Wright Nature Centre, which continues to maintain it as the William Beebe Tropical Research Station (<http://www.wbtrs.org/index.html>). Although Lycaenidae were not a subject of Beebe’s research group, it is likely that they would have collected some specimens, as would some of their visitors. Any of the former should be in AMNH, but the latter would be scattered among museums, such as some T.G. Pliske specimens in MGLC.

Malcolm Gerard Barcant (1913–1986) was a keen butterfly collector in Trinidad from the 1920s

until he sold his collection to Angostura Ltd. (<http://www.angostura.com/>) in 1974 (Baker 2014) and moved to Florida. It is now known as the Angostura-Barcant collection (ABCT) and held at the company headquarters at Laventille, Trinidad. Barcant's collection formed the basis of his 1970 book *Butterflies of Trinidad and Tobago*, which included 3 Polyommata and 90 Theclinae, i.e. it included 35 new records. The ABCT collection has been particularly useful for interpreting the use of names used for Lycaenidae in Barcant (1970). The first author reviewed the Lycaenidae in ABCT in the early 1980s, and again from photographs kindly shared by P. Geerah of UWI, when preparing this checklist. While Barcant's collection is generally accurately identified with regard to the larger and more distinctive species of Lycaenidae, he had difficulties identifying the smaller species. Lamont's collection is likely to have been the source of some of Barcant's errors, but others arose with new records often identified from the English language version and plates of Seitz' *Macrolepidoptera of the World* (Draudt 1919–1921) rather than by reference to type material. Various errors are corrected in the list presented here.

Contemporary collectors of Malcolm Barcant in Trinidad included **William Anthony Francis (Frank) Ambard** (?–1967) and **Frederick Clive Urich** (?–2010, the nephew of F.W. Urich, and known as Clive Urich) (Barcant 1970). In the early 1980s, the first author reviewed and made notes on Urich's collection with particular attention to Lycaenidae, and his coverage was certainly comparable with, and probably better than, Barcant's. Some of Urich's duplicate Lycaenidae were transferred to MJWC at that time. Unfortunately Urich's collection was unlabeled, although the great majority of specimens were captured on his Sans Souci Estate, near Sangre Grande. Clive Urich died in 2010, and we understand his collection has now passed to MGCL.

Since the publication of Barcant (1970), the most active collector on the island has been **Scott Alston-Smith**, now living in Tobago, who has personally accumulated the most comprehensive collection of Trinidad butterflies. Some of his new records for other families were included in Cock (2014a, 2014b) and further new records of Lycaenidae are now included in our checklist.

There have been many other collectors living in or visiting Trinidad, some of whom collected insects including Lycaenidae and a few of whom reported on their captures. **C.W. Ellacombe** collected in 1891; his (or her) material is in the BMNH labeled St. Georges (the county which included Port of Spain) and not Trinidad. M.J.W. Cock has reviewed the Hesperidae in the BMNH and Ellacombe's material is curated as from Trinidad, and entirely compatible as being from Trinidad, i.e. all species are corroborated by other specimens from the island, so there is no doubt that St. Georges refers to the county of Trinidad rather than elsewhere, such as St. Georges, Grenada. Nevertheless, this labeling has caused some confusion; for example, see the entry for *Calycopis calus* (Godart) below. Kaye (1904, 1921) reports a small number of captures by C.W. Ellacombe but does not seem to have reviewed all his Trinidad material. **Dr Percy John Rendall** (1861–1947, 1948 or 1952) was a widely-travelled zoologist and collector (Beolens et al. 2009) who collected butterflies and day-flying moths in Trinidad in 1897; his material is in the BMNH labelled as collected by 'Dr. Rendall'.

Thomas Winfrid Kirkpatrick (1896–1971) was a professor at ICTA, where he made a small study on insect pests of cocoa in Trinidad and in the process first documented several life histories of Lycaenidae in Trinidad (Kirkpatrick 1954); this material was held in ICTA and is now in UWIC. There are at least some specimens collected by **Bernard W. Heineman** (1893–1979) in AMNH as reported by Johnson (1993a) and Johnson and Kroenlein (1993a, 1993b), but we have no other information on this material. **Julius Oscar Boos** (1946–2010) was an active naturalist, resident in Trinidad until the end of the 1970s, with a particular interest in Nymphalidae and Papilionidae (H.E. Boos 2010, J.O. Boos 2010). He collected small numbers of other families of butterflies and moths, some of which, including a new lycaenid for Trinidad, he passed to the first author and are now in MJWC or UWIC, while his main collection is in MGCL (J.O. Boos 2010). **Matthew J.W. Cock** resided in Trinidad (1978–1982) and visited at intervals thereafter; some of his material is now in UWIC, but the remainder is held in his private collection at present, but will be donated to a museum in due course. Entomologists of the CABI centre in Trinidad, including **Frederick J. Simmonds** (1915–1985), **Frederick (Fred) Douglas Bennett**, **Rachel E. Cruttwell** (now McFadyen) and **Maajid Yaseen** (1934–1987), collected and reared insects as part of their research programmes (and out of personal interest), and occasionally Lycaenidae were amongst these. Some visitors to CABI also made collections, e.g. the Encyrtidae specialist **John Stuart Noyes** collected some butterflies that were placed in the CABI collection and are now in UWIC. **Robert (Bob) M. Burkhart** was an exploratory entomologist with the Hawaii Depart-

ment of Agriculture, now retired and resident in Tobago. He was based at the CABI centre in Trinidad for extended periods in the 1980s studying the natural enemies of the weed *Clidemia hirta* (L.) D. Don (Melastomataceae), and reared many insects, including some interesting Lycaenidae from flowers of this and other plants. **June D. and Floyd W. Preston** spent a year in Trinidad in 1981–1982 (Preston and Preston 1983). M.J.W. Cock reviewed their collection before they left Trinidad and made notes on unusual captures. Some spare material from the collection was deposited in MJWC at that time and is now mostly incorporated into UWIC. **Ronnie Hernandez**, the manager of William Beebe Tropical Research Station in Arima Valley has collected Lycaenidae for some years; the authors have not had the opportunity to examine his collection, but S. Alston-Smith (pers. comm. 2015) has and found none that were not familiar to him. In recent years, **John Morrall** of the UK has repeatedly visited and collected; some of his records are mentioned in the following list.

(1) Checklist of the Lycaenidae of Trinidad

Family LYCAENIDAE Subfamily THECLINAE Tribe Eumaeini

Eumaeus section

Paiwarria venulius (Cramer, 1779)

Thecla venulius (Cramer): Crowfoot (1893, no. 144)

Paiwarria venulius (Cramer): Kaye (1904, no. 169), Kaye (1921, no. 261), Barcant (1970, no. 355)
Amazonian Region

Brangas section

Brangas dydimaon (Cramer, 1777)

Atlides didymaon [sic] (Cramer): Kaye (1940, no. 245c), Barcant (1970, no. 337) [misspelling]

Brangas dydimaon (Cramer): Warren et al. (2015)

Amazonian Region

Brangas getus (Fabricius, 1787)

Atlides caranus (Cramer): Kaye (1940, no. 245a), Barcant (1970, no. 335), Preston and Preston (1983)
[misidentification]

Atlides getus (Fabricius): Lewis (1974, plate 66.13)

Brangas getus (Fabricius): Warren et al. (2015)

No specimens of the rather similar *B. caranus* have been found in collections.

Transandean and Amazonian Region

Enos thara (Hewitson, 1867)

New island record collected by M.J.W. Cock (♀, Morne Bleu Textel Road, Oct 1979).

Transandean and Amazonian Region

Evenus regalis (Cramer, 1775)

Thecla regalis (Cramer): Crowfoot (1893, no. 128)

Evenus regalis (Cramer): Kaye (1904, no. 171), Kaye (1921, no. 251), Barcant (1970, no. 365)

Transandean and Amazonian Region

Evenus satyroides (Hewitson, 1865)

Macusia satyroides (Hewitson): Kaye (1904, no. 168), Kaye (1921, no. 250), Barcant (1970, no. 363)

Amazonian Region

Atlides section

Atlides polybe (Linnaeus, 1763)

Atlides polybe (Linnaeus): Kaye (1904, no. 165), Kaye (1921, no. 245), Barcant (1970, no. 334)
Transandean and Amazonian Region

Atlides rustan (Stoll, 1790)

Oenamaus [sic] *rustan* (Stoll): Kaye (1940, no. 243a), Barcant (1970, no. 351)
Transandean and Amazonian Region

Pseudolycaena marsyas (Linnaeus, 1758)

Thecla marsyas (Linnaeus): Crowfoot (1893, no. 130), Rake (1894)

Pseudolycaena marsyas (Linnaeus): Kaye (1904, no. 161), Kaye (1921, no. 262), Barcant (1970, no. 364), Austin et al. (2007), Beccaloni et al. (2008), Geerah and Rutherford (2015), Warren et al. (2015)

Thecla marsyas (Linnaeus): Kirkpatrick (1954)

'Thecla' marsyas (Linnaeus): Cock (1981a)

A recent analysis suggests that, in spite of the variation in colour, size and wing shape, this appears to be a single species (Austin et al. 2007).

Transandean and Amazonian Region

Theritas mavors Hübner, 1818

Mithras mavors (Hübner): Kaye (1914), Kaye (1921, no. 249), Barcant (1970, no. 361)
Transandean and Amazonian Region

Theritas hemon (Cramer, 1775)

Thecla hemon (Cramer): Crowfoot (1893, no. 129)

Mithras hemon (Cramer): Kaye (1904, no. 166), Guppy (1904), Kaye (1921, no. 248), Barcant (1970, no. 360)

Thecla hemon (Cramer): Kirkpatrick (1954)

'Thecla' hemon (Cramer): Robbins and Aiello (1982)

Denivia hemon (Cramer): Beccaloni et al. (2008)

Theritas hemon (Cramer): Geerah and Rutherford (2015)

Transandean and Amazonian Region

Theritas phegeus (Hewitson, 1865)

Thecla laudonia (Hewitson): Barcant (1970, no. 375c) [synonym]
Amazonian Region

Theritas lisus (Stoll, 1790)

Mithras lisus (Stoll): Kaye (1940, no. 247a), Barcant (1970, no. 362)

Thecla orsina Hewitson: Kirkpatrick (1954) [synonym]

Denivia lisus (Stoll): Beccaloni et al. (2008)

Transandean and Amazonian Region

Micandra section

Lathecla mimula (Draudt, 1920)

Calycopis odinus (Godman and Salvin): Kaye (1940, no. 232b), Barcant (1970, no. 322) [misidentification, see Robbins and Busby (2015)]

Lathecla mimula (Draudt): Robbins and Busby (2015)

In Robbins (2004) this species was included as a synonym of *L. latagus* (Godman and Salvin), but its status was revised by Robbins and Busby (2015). The genus was transferred from the *Thestius* section to the *Micandra* section by Robbins and Busby (2015).

Amazonian Region

Ipidecla crepundia (H.H. Druce, 1909)

Thecla crepundia (H.H. Druce): Kaye (1940, no. 247d), Barcant (1970, no. 375)

Ipidecla crepundia (H.H. Druce): Beccaloni et al. (2008), Warren et al. (2015)

Amazonian Region

***Thereus* section**

Thereus cithonius (Godart, [1824])

Tmolus comana (Hewitson): Kaye (1940, no. 217b), Barcant (1970, no. 299) [synonym]

Noreena comana (Hewitson): Johnson (1989a) [synonym]

Transandean and Amazonian Region

Thereus enenia (Hewitson, 1867)

New island record collected by J.O. Boos (Cat's Hill, Dec 1979, in MJWC); also collected by F.C. Urich. Amazonian Region

Thereus pedusa (Hewitson, 1867)

New island record collected by F.C. Urich, M.J.W. Cock (♂, Las Lomas, Jan 1982; ♂, Parrylands, Nov 1981) and J. and F. Preston.

Transandean and Amazonian Region

Thereus lausus (Cramer, 1779)

Thecla lausus (Cramer): Barcant (1970, no. 371)

Transandean and Amazonian Region

Thereus ortalus (Godman and Salvin, 1887)

New island record collected by S. Alston-Smith (♂, Rio Claro – Guayaguayare Road, Oct 1995).

Transandean and Amazonian Region

Thereus tiasa (Hewitson, 1869) group

New island record collected by S. Alston-Smith (♀, Sangre Grande, Sep 1980) and M.J.W. Cock (♀, Inniss Field, Oct 1994). No males have been found as yet, for which reason this identification is tentative.

Amazonian Region

Rekoa meton (Cramer, 1779)

Thecla meton (Cramer): Crowfoot (1893, no. 133)

Rekoa meton (Cramer): Kaye (1904, no. 167), Kaye (1921, no. 246), Barcant (1970, no. 357), Robbins (1991), D'Abbrera (1995, p. 1249), Warren et al. (2015)

Transandean and Amazonian Region

Rekoa palegon (Cramer, 1780)

Thecla palegon (Cramer): Crowfoot (1893, no. 136), Comstock (1914)

Tmolus palegon (Cramer): Kaye (1904, no. 151)

Rekoa palegon (Cramer): Kaye (1940, no. 246a), Barcant (1970, no. 358), Robbins (1991), D'Abbrera (1995, p. 1249), Beccaloni et al. (2008), Geerah and Rutherford (2015), Warren et al. (2015)

Thecla palegon (Cramer): Cruttwell (1974)

Thecla (Rekoa) myrtillus (Stoll): Cock (1981b) [synonym]

Thecla (Rekoa) palegon (Cramer): Cock (1982)

Transandean and Amazonian Region

Rekoa marius (Lucas, 1857)

Calycopis spurina (Hewitson): Kaye (1940, no. 235a) [synonym]

Thecla zebina (Hewitson): Kaye (1940, no. 247c) [misidentification], Barcant (1970, no. 370) [misidentification, part]

Siderus voltinia (Hewitson): Barcant (1970, no. 345) [misidentification, part]

Thecla ericusa (Hewitson): Johnson (1989a) [synonym]

"*Thecla*" *ericusa* (Hewitson): Robbins and Aiello (1982) [synonym]

Rekoa marius (Lucas): Robbins (1991), Beccaloni et al. (2008), Warren et al. (2015)

Rekoa zebina is a Central American species that resembles *R. marius* and *R. stagira* (Hewitson) (Robbins 1991). Kaye's (1940) original report was based on two specimens collected by F.W. Jackson (St Joseph 5.iv.1922; Balata Hill 28.iii.1922) but these have not been located in BMNH (main sequence) or OMNH. The series in Barcant's collection appears to comprise seven *R. marius* and two *R. stagira*, but the specimen illustrated (Barcant 1970, plate 28.24) is not in his collection now.

Transandean and Amazonian Region

Rekoa stagira (Hewitson, 1867)

Thecla stagira Hewitson: Crowfoot (1893, no. 147)

Tmolus stagira Hewitson: Kaye (1904, no. 145, citing Crowfoot (1893))

Siderus voltinia (Hewitson): Barcant (1970, no. 345) [misidentification, part]

Thecla zebina (Hewitson): Barcant (1970, no. 370) [misidentification, part]

Rekoa stagira (Hewitson): Robbins (1991), D'Abbrera (1995, p. 1250), Sookdeo (2013), Warren et al. (2015)

S. voltinia is a synonym of *Kolana ergina* (Hewitson) (Robbins 2004), and we assume that represents Kaye's (1921) use of the name. In his collection, Barcant curated what appear to be four *Rekoa stagira* and five *R. marius* as *Siderus voltinia*. The specimen illustrated (Barcant 1970, plate 28.24) is a male *R. stagira* in his collection.

Transandean and Amazonian Region

Arawacus lincoides (Draudt, 1917)

Not previously recorded from Trinidad, but included on the basis of a specimen from Matura in USNM and more recent captures on Chacachacare Island by S. Alston-Smith.

Transandean Region

Arawacus aetolus (Sulzer, 1776)

Thecla linus (Fabricius): Crowfoot (1893, no. 134), Longstaff (1912) [synonym]

Arawacus linus (Fabricius): Kaye (1904, no. 163), Guppy (1904), Kaye (1921, no. 247), Barcant (1970, no. 353), Lewis (1974, plate 66.9) [synonym]

Arawacus aetolus (Sulzer): D'Abbrera (1995, p. 1134–35), Geerah and Rutherford (2015)

Arawacus aetolus aetolus (Sulzer): Robbins and Aiello (1982)

Amazonian Region

Arawacus dolylas (Cramer, 1777)

Thecla spurius (C. Felder and R. Felder): Longstaff (1912) [synonym]

Rekoa dolylas (Cramer): Kaye (1914), Kaye (1940, no. 246b), Barcant (1970, no. 359)

Tigrinota pallida (Lathy): Johnson (1992) [synonym]

Tigrinota spurius (C. Felder and R. Felder): Johnson (1993b) [synonym]

Tigrinota dolosa (Staudinger): Johnson (1993b) [synonym]

Transandean and Amazonian Region

Arawacus dumenilii (Godart, [1824])

Thecla argiva Hewitson: Crowfoot (1893, no. 135) [synonym]

Polyniphes dumenilii (Godart): Kaye (1904, no. 140), Longstaff (1912), Kaye (1921, no. 254), Barcant (1970, no. 354, incorrectly attributed to Kaye's authorship, but Kaye (1904) actually described the genus *Polyniphes*), Lewis (1974, plate 67.24)

Arawacus dumenilii (Godart): Warren et al. (2015)

Transandean and Amazonian Region

Kolana ergina (Hewitson, 1867)

Thecla ergina Hewitson: Crowfoot (1893, no. 143)

Tmolus ergina (Hewitson): Kaye (1904, no. 147, citing Crowfoot (1893))

Siderus voltinia (Hewitson): Kaye (1921, no. 240) [synonym]

Calycopis ergina (Hew.): Kaye (1921, no. 225) Barcant (1970, no. 312) [based on Crowfoot (1893)]

Calycopis socia (Hewitson): Barcant (1970, no. 313) [misidentification]

In his collection, Barcant had no specimens as *C. ergina*, whereas he curated 4–5 specimens of *K. ergina* as *C. socia*.

Amazonian Region

Satyrium section

Ocaria thales (Fabricius, 1793)

Calycopis thales (Fabricius): Kaye (1921, no. 229), Barcant (1970, no. 317)

Transandean and Amazonian Region

Ocaria ocrisia (Hewitson, 1868)

Siderus ocrisia (Hewitson): Kaye (1921, no. 239), Barcant (1970, no. 340)

Transandean and Amazonian Region

Chlorostymon simaethis (Drury, 1773)

Tmolus simaethis (Drury): Kaye (1914)

Chalybs simaethis (Drury): Kaye (1921, no. 258), Barcant (1970, no. 332)

Chalybs simaethis sarita (Skinner): Johnson (1989b)

This species has been divided into subspecies (Nicolay 1980; Johnson 1989b), but this is questionable in that no one has analyzed wing pattern variation over the entire range of the species, so a division into wing pattern subspecies is not yet documented by evidence.

Transandean and Amazonian Region

Chlorostrymon telea (Hewitson, 1868)

Chalybs telea (Hewitson): Kaye (1921, no. 255), Barcant (1970, no. 331)

Chlorostrymon telea (Hewitson): Johnson (1989b)

Transandean and Amazonian Region

***Callophrys* section**

Cyanophrys amyntor (Cramer, 1775)

Thecla amyntor (Cramer): Clench (1946), Johnson and Le Crom (1997)

Cyanophrys amyntor (Cramer): D'Abrera (1995, p. 1144–5), Robbins and Duarte (2005)

Kaye (1921) and Barcant (1970) would have had this species mixed with *C. herodotus*.

Transandean and Amazonian Region

Cyanophrys herodotus (Fabricius, 1793)

Chalybs herodotus (Fabricius): Kaye (1914), Kaye (1921, no. 256), Barcant (1970, no. 329)

Cyanophrys herodotus (Fabricius): Beccaloni et al. (2008), Geerah and Rutherford (2015) [misspelling]

Transandean and Amazonian Region

***Thestius* section**

Megathecla cupentus (Stoll, 1781)

Tmolus cupentus (Stoll): Kaye (1940, no. 217a), Barcant (1970, no. 304)

Kaye (1940) reports a specimen from St. Ann's (R. Dick). R. Dick's specimen is in Barcant's collection.

We are not aware of any subsequent records.

We follow Robbins (2004), Faynel (2010), Diringier (2012) and Robbins et al. (2012) in placing this species in *Megathecla* Robbins, as we do not accept the need to place it in a separate monotypic genus, *Cupathecla* Bálint, as proposed by Bálint (2005).

Transandean and Amazonian Region

Thestius lycabas (Cramer, 1777)

Siderus ocrida (Hewitson): Kaye (1940, no. 239a), Barcant (1970, no. 343) [synonym]

Amazonian Region

***Allosmaitia* section**

Allosmaitia strophius (Godart, [1824])

Calycopis pion (Godman and Salvin): Kaye (1940, no. 235b) [synonym]

Based on his collection, Barcant (1970) applies the name *C. pion* to another species (*Tmolus mutina*).

Transandean and Amazonian Region

Subtribe Calycopidina (formerly *Lamprospilus* section)

Duarte and Robbins (2010) established this subtribe.

Lamprospilus collucia (Hewitson, 1877)

Tmolus iodinus Kaye: Kaye (1914) TL [synonym]

Calycopis amphrade Schaus: Kaye (1921, no. 226) [synonym]

Calycopis badaca (Hewitson): Kaye (1914, with *Thecla collucia* as synonym), Kaye (1921, no. 228, with *T. collucia* as a synonym) [misidentification]

Calycopis orcidia (Hewitson): Kaye (1921, no. 230, with *T. iodinus* as synonym), Barcant (1970, no. 318) [misidentification]

Calycopis orchidia (Hewitson): Preston and Preston (1983) [misspelling, misidentification]

Gigantorubra collucia (Hewitson): Johnson (1993a), Johnson and Kroenlein (1993a)

Gigantorubra orcidia (Hewitson): Johnson (1993a) [assumed misidentification based on his figure of the male of *G. orcidia*]

Lamprospilus collucia (Hewitson): Sookdeo (2013)

Kaye (1940) removed *C. amphrade* Schaus (Lycaenidae No. 226) from the Trinidad list as a misidentification. The analysis of Robbins et al. (2010a) should be referred to for the complexities of previous usage.

Transandean Region

Lamprospilus aunus (Cramer, 1775)

New island record collected by M.J.W. Cock (♂, Trinity Hills, Apr 1982) and S. Alston-Smith (♂, Trinity Hills) and photographed by K. Sookdeo (♂, El Tucuche, Nov 2012).

Amazonian Region

Badecla quadramacula (Austin and K. Johnson, [1998])

Badecla quadramacula (Austin and K. Johnson): Sookdeo (2013)

The date of publication for this species in Robbins (2004) was 1997, but Lamas (2016) lists the publication date as ‘(“September–December 1997”, [early 1998]).’ This species was treated in *Lamprospilus* by Robbins (2004), but the current placement is from Duarte and Robbins (2010). Also taken by S. Alston Smith (♀, North Post, Oct 1999; ♀, Sangre Grande, May 1999; 2♀, West Trinity).

Amazonian Region

Kisutam syllis (Godman and Salvin, 1887)

Tmolus politus (H.H. Druce): Kaye (1914) [synonym; incorrectly considered a form of *T. beon* (Kaye 1908)]

Thecla politus (H.H. Druce): Longstaff (1912), Draudt (1919–1921) [synonym]

Calycopis beon (Cramer): Kaye (1921, no. 218, listing *Thecla politus* H.H. Druce as a synonym, although it is actually a synonym of *K. syllis*) [one of several species grouped under this name]

Calycopis vesulus (Cramer): Barcant (1970, no. 306) [misidentification]

Kisutam syllis (Godman and Salvin): Johnson and Kroenlein (1993a)

Strymon syllis (Godman and Salvin): D’Abrera (1995, p. 1238)

This species was treated in *Ziegleria* by Robbins (2004), but the current placement is from Duarte and Robbins (2010). The material in Barcant’s collection as *C. vesulus* is male and female *K. syllis*; he illustrates a female *K. syllis* as male *C. vesulus* (Barcant 1970, plate 28.6).

Transandean and Amazonian Region

Ziegleria hesperitis (Butler and H. Druce, 1872)

Thecla hesperitis (Butler and H. Druce): Crowfoot (1893, no. 142)

Tmolus perdistincta Kaye: Kaye (1904, no. 153) TL

Calycopis hesperitis (Butler and H. Druce): Kaye (1904, no. 156 quoting Crowfoot (1893)), Kaye (1914, with *T. perdistincta* as synonym), Kaye (1921, no. 221, with *T. perdistincta* as synonym), Barcant (1970, no. 308), Lewis (1974, plate 67.12)

Thecla’ hesperitis (Butler and H. Druce): Cock (1981a)

Ziegleria hesperitis (Butler and H. Druce): Johnson (1993a), Sookdeo (2013)

D’Abrera (1995, p. 1216) illustrates a different species as *Thecla perdistincta* Kay [sic], which we do not recognise as a Trinidad species.

Transandean and Amazonian Region

Ziegleria hernandezi (K. Johnson and Kroenlein, 1993)

Angulopsis hernandezi K. Johnson and Kroenlein: Johnson and Kroenlein (1993a) TL

Electrostrymon grumus K. Johnson and Kroenlein: Johnson and Kroenlein (1993b) TL [synonym]

Ziegleria hernandezi (K. Johnson and Kroenlein): Warren et al. (2015)

In Robbins (2004), *E. grumus* was placed as a synonym of *Ministrymon azia* (Hewitson), but the current synonymy follows Robbins and Glassberg (2013).

This species is the only one on Trinidad that is endemic to the area where the Transandean and Amazonian Regions overlap.

Rubroserata ecbatana (Hewitson, 1868)

Thecla cleon (Fabricius): Druce (1907) [misidentification, with *T. ecbatana* as synonym]

Tmolus cleon (Fabricius): Kaye (1914, quoting Druce (1907)) [misidentification]

Calycopis cleon (Fabricius): Kaye (1921, no. 227), Barcant (1970, no. 315), Lewis (1974, plate 67.9) [misidentification]

Thecla cleon (Fabricius): D'Abrera (1995, p. 1234) [misidentification]

Rubroserata arima K. Johnson and Kroenlein: Johnson and Kroenlein (1993a) TL [synonym]

For many years this species was treated as *Ministrymon cleon* (Fabricius), but examination of the type of *M. cleon* has shown this to be an error (Robbins 2004; Duarte and Robbins 2010). *Rubroserata ecbatana* was treated in *Electrostrymon* by Robbins (2004), but the current placement is from Duarte and Robbins (2010).

Amazonian Region

Electrostrymon hugon (Godart, [1824])

Electrostrymon hugon (Godart): Sookdeo (2013)

This species was treated as *E. cyphara* (Hewitson) in Robbins (2004); the current name is based on the discovery of a type of *E. hugon* (Faynel and Bálint 2004). New island record collected by M.J.W. Cock (Chacachacare Island, ♀ Jan 1980, ♂ Jan 1982) and K. Sookdeo (♂, Penal)

Transandean Region

Electrostrymon joya (Dognin, 1895)

Calycopis cyphara canus (H.H. Druce): Kaye (1921, no. 231) [*C. cyphara* is a misidentification; *C. canus* is a synonym]

Calycopis denarius (Butler and H. Druce): Kaye (1940, no. 232a), Barcant (1970, no. 321) [misidentification]

Calycopis sangala (Hewitson): Kaye (1921, no. 232), Barcant (1970) [misidentification]

Calycopis cyphara nubes (H.H. Druce): Barcant (1970, no. 319) [*C. cyphara* is a misidentification; *C. nubes* is a synonym]

Strymon nubes (H.H. Druce): D'Abrera (1995, p. 1237) [synonym]

Electrostrymon nubes (H.H. Druce): Johnson and Kroenlein (1993a) [synonym]

Following Duarte and Robbins (2010) *Electrostrymon denarius* is the correct combination for the species that Kaye (1940) added to the Trinidad list as *C. denarius* based on a specimen from St. Ann's (R. Dick). Although Dick's collection was acquired by Barcant (1970), there are no specimens curated as *C. denarius* in Barcant's collection. In the absence of any historical specimens, and given that *E. denarius* does not occur in South America and the confusion over species of this phenotype in Trinidad collections, we conclude that *E. joya* was the species in question.

Kaye (1921) records captures of *C. sangala* by Sir N. Lamont (Palmiste) and F.W. Jackson (in BMNH). Lamont's specimen is in RSME; it needs re-examination, but may be a ♂ *Z. hernandezi* or a male *E. joya*. Jackson's specimen in the BMNH appears to be a female *E. joya*. In Barcant's collection, the female of *E. joya* is treated as *C. sangala*. Until confirmed material of *E. sangala* from Trinidad is located, we assume earlier records are in error for *E. joya*.

Transandean and Amazonian Region

Calycopis atnius (Herrich-Schäffer, [1853])

Callicista atrius (Herrich-Schäffer): Lewis (1974, plate 67.4) [misspelling]

Kaye (1921) and Barcant (1970) misidentified *C. petaurister* as this species. However, *C. atnius* is a valid Trinidad species, collected by F.C. Urich, M.J.W. Cock and S. Alston-Smith (Point Gourde, Lopinot-Arima Ridge, etc.)

Transandean and Amazonian Region

Calycopis mimas (Godman and Salvin, 1887)

Calycopis mimas (Godman and Salvin): Barcant (1970, no. 314)

Transandean and Amazonian Region

Calycopis petaurister (H.H. Druce, 1907)

Calycopis atrius (Herrich-Schäffer): Kaye (1914), Kaye (1921, no. 233), Barcant (1970, no. 325) [misidentification; misspelling of *C. atnius*]

Thecla petaurister H.H. Druce: D'Abrera (1995, p. 1222).

Kaye's (1921) record is based on a specimen collected at Macqueripe Bay, Jan 1905 by F. Birch. This

specimen is in the BMNH; it is a ♂ *C. petaurister*. Barcant's (1970) plate 28 of *C. atrius* shows the ♂ upperside of *C. petaurister* and the males in his collection as '*C. atrius*' are *C. petaurister*.

Transandean and Amazonian Region

Calycopis demonassa (Hewitson, 1868)

Calycopis demonassa (Hewitson): Kaye (1899), Kaye (1904, no. 155), Kaye (1921, no. 234), Barcant (1970, no. 326), Lewis (1974, plate 67.10), Sookdeo (2013)

Transandean and Amazonian Region

Calycopis calus (Godart, [1824])

Calycopis calus (Godart): Kaye (1904, no. 154), Kaye (1921, no. 235), Barcant (1970, no. 327)

Thecla calus (Godart): D'Abbrera (1995, p. 1220–1221)

The two ♀♀ illustrated by D'Abbrera (1995) are from Trinidad (not Brazil or Grenada as D'Abbrera speculates – St Georges refers to the Trinidad county, and C.W. Ellacombe (not W. Ellacombe) is a recognised Trinidad collector).

Transandean and Amazonian Region

Calycopis caesaries (H.H. Druce, 1907)

Thecla caesaries (H.H. Druce): Kaye (1940, no. 235c), Barcant (1970, no. 368)

Transandean and Amazonian Region

Calycopis bactra (Hewitson, 1877)

Calycopis bactra (Hewitson): Field (1967a)

Kaye (1921) treated *C. bactra* as a synonym of *C. beon*. Barcant (1970) lumped it with several other species as *C. beon*. It is a common Trinidad species. We use this name in the sense of Field (1967a), but the type may prove to be a different species (cf. discussion in Robbins et al. 2012).

Transandean Region

Calycopis bellera (Hewitson, 1877)

Bithys xeneta (Hewitson): Kaye (1940 no. 242b), Barcant (1970, no. 347) [misidentification]

Calycopis xeneta and *C. devia* (Möschler) (a junior synonym of *C. bellera* based on the rearing in Duarte and Robbins (2009)) were once considered subspecies (Field 1967a), but both occur without intergradation in Panama (Robbins et al. 2012). Trinidad specimens are *C. bellera*.

Transandean and Amazonian Region.

Calycopis cinniana (Hewitson, 1877)

Calycopis cinniana (Hewitson): Kaye (1914), Kaye (1921, no. 224), Hicks (1925), Barcant (1970, no. 311), Lewis (1974, plate 67.8), Johnson (1990), Sookdeo (2013)

Calystryma cinniana (Hewitson): Field (1967b)

Amazonian Region

Calycopis vesulus (Stoll, 1781)

Tmolus vesulus (Stoll): Kaye (1914)

Calycopis vesulus (Stoll): Kaye (1921, no. 219; it will be necessary to locate the individual specimens listed to see how Kaye applied this name, but probably in line with BMNH), Lewis (1974, plate 67.16)

Thecla pisis Godman and Salvin: Lewis (1974, plate 69.37 text) [assumed misidentification]

The species Barcant (1970) treated as *Calycopis vesulus* is *Ziegleria syllis*.

Five males and six females of different sizes were dissected from diverse localities in Trinidad; all seem to be the same species. They are close to, but differ from, Johnson's (1991a) illustrations of the genitalia of *C. puppius* (Godman and Salvin) and its synonym *C. assuensis* (K. Johnson). Here, we use the name *C. vesulus* as a working hypothesis in line with the external appearance of material treated as this species in the BMNH, until this group of *Calycopis* is better understood, and type material for *C. vesulus* is found or designated. A male with no abdomen treated in the BMNH as *C. puppius* (Mt Tucuche, Aug 1905, F. Birch) is treated here as *C. vesulus* as we have seen no dissected specimens of *C. puppius* from Trinidad. Lewis (1974) states *C. pisis* is a Trinidad species, but although he based his book on the BMNH collection, there are no specimens of this species from Trinidad in the BMNH, and we assume this is an error for *C. vesulus*.

Amazonian Region

Calycopis janeirica (C. Felder, [1863])

New island record widespread and occasional in forested situations throughout the island (Arima

Valley, Chaguaramas, Heights of Guanapo, Morne Catherine, Point Fortin, Quinam Bay, Mt Tamana, etc.). This species has been referred to as *C. cissusa* (Hewitson) in Trinidad usage, although there are no publications to this effect. It was reared by Duarte and Robbins (2009), who gave the reasons why the name *C. janeirica* should be used.

Amazonian Region

Calycopis origo (Godman and Salvin, 1887)

Calycopis origo (Godman and Salvin): Sookdeo (2013)

New island record, common and widespread in disturbed and forested situations throughout the island). Kaye (1921) and Barcant (1970) included this species under the name *C. beon*. Robbins et al. (2012) noted that the name *C. bactra* may have been misidentified by Field (1967a) and may be an older name than *C. origo* for this species. Work on this taxonomic problem is in progress.

Transandean and Amazonian Region

Strymon section

Strymon albata (C. Felder and R. Felder, 1865)

Thecla albata C. Felder and R. Felder: Crowfoot (1893, no. 148), Longstaff (1912)

Tmolus albata (C. Felder and R. Felder): Kaye (1904, no. 144)

Callicista albata (C. Felder and R. Felder): Kaye (1921, no.211), Barcant (1970, no. 296), Lewis (1974, plate 66.18)

“*Thecla*” (*Callicista*) *albata* (C. Felder and R. Felder): Cock (1981b), Cock (1984)

Strymon albata (C. Felder and R. Felder): D’Abrera (1995, p. 1240–41), Geerah and Rutherford (2015)

Transandean Region

Strymon mulucha (Hewitson, 1867)

Thecla mulucha (Hewitson): Crowfoot (1893, no. 145)

Callicista mulucha (Hewitson): Kaye (1904, no. 150), Kaye (1921, no. 207), Barcant (1970, no. 291)

Strymon mulucha (Hewitson): Beccaloni et al. (2008)

Transandean and Amazonian Region

Strymon cestri (Reakirt, [1867])

Callicista cydia (Hewitson): Kaye (1914), Kaye (1921, no.209) [synonym]

Callicista faunalia (Hewitson): Kaye (1940, no. 210a), Barcant (1970, no. 292) [a synonym of *S. astiocha*; misidentification]

Kaye (1940) records a single specimen of *C. faunalia* from ‘Las Lappas, 1500 ft. 27.i.1928 (Sir N Lamont)’. This specimen is in RSME; it is a female *S. cestri*.

Barcant (1970) lists *C. faunalia* but in his collection, he applied the name to a mixed series containing of *S. bubastus* and *S. cestri*.

Based on his collection, Barcant (1970, no. 294) misapplies the name *C. cydia* to *S. bazochii*.

Transandean and Amazonian Region

Strymon astiocha (Prittwitz, 1865)

Thecla (Callicista) faunalia (Hewitson): Cock (1981b), Cock (1984) [synonym]

This species has only been found on Chacachacare Island by M.J.W. Cock (♂ Jan 1980; 3♂ Jan 1982) and S. Alston-Smith.

Transandean and Amazonian Region

Strymon bazochii (Godart, [1824])

Thecla thius (Geyer): Crowfoot (1893, no. 146) [synonym]

Callipsyche thius (Geyer): Kaye (1904, no. 137) [synonym]

Callicista thius (Geyer): Kaye (1921, no. 210), Barcant (1970, no. 295) [synonym]

Callicista cydia (Hewitson): Barcant (1970, no. 294) [misidentification]

Thecla (Callicista) bazochii Godart: Cock (1981b)

Strymon bazochii (Godart): Geerah and Rutherford (2015)

Specimens in Barcant’s collection as this species are large individuals of *S. bazochii*; smaller specimens are treated as *S. cydia*.

Transandean and Amazonian Region

Strymon sp. nr. *bazochii*

Strymon bazochii (Godart): Lewis (1974, plate 67.5)

The ♂ of this species has white sub-apical markings on the dorsal forewing, no blue dorsal hindwing cell (also differentiates ♀), and a pronounced white radial streak on the ventral hindwing. The male is illustrated by Lewis (1974, plate 67.28) as *S. bazochii*. We are uncertain whether this South American phenotype represents a distinct species or a sympatric dimorphic form of *S. bazochii*. In Trinidad, it has only been collected from Chacachacare Island (S. Alston-Smith), so we list it separately here.

Amazonian Region

Strymon bubastus (Stoll, 1780)

Callipsyche bubastus (Stoll): Kaye (1914)

Thecla salona Hewitson: Comstock (1914) [synonym]

Callicista bubastus (Stoll): Kaye (1921, no.208), Barcant (1970, no. 293), Cruttwell-McFadyen and Bennett (1995)

Thecla (Callicista) bubastus (Cramer): Cock (1981b)

Strymon bubastus (Stoll): Beccaloni et al. (2008), Geerah and Rutherford (2015)

Amazonian Region

Strymon serapio (Godman and Salvin, 1887)

Tmolus azuba (Hewitson): Kaye (1914), Kaye (1921, no. 216) [misidentification]

Strymon echinita (Schaus): D'Abbrera (1995, p. 1238–1239) [misidentification]

Strymon originatus K. Johnson, Hernandez and Cock: Johnson et al. (1997) TL [synonym]

Strymon serapio (Godman and Salvin): Robbins (2010b)

Kaye (1914, 1921) incorrectly treats *S. serapio* as a synonym of *T. azuba*, and there are single specimens of *S. serapio* curated as *T. azuba* in Sir Norman Lamont's collections in RSME and UWIC. A pair of specimens in ABCT as *T. azuba* (Barcant 1970, no. 302) represent neither of these species, and are treated under the entries for *Tmolus venustus* and *Nicolaea fabulla*.

Transandean and Amazonian Region

Strymon megarus (Godart, [1824])

Tmolus echion (Linnaeus): Kaye (1914), Kaye (1921, no.213), Harris (1927) [misidentification (see Kaye 1908)]

Tmolus basalides (Geyer): Barcant (1970, no. 298), Lewis (1974, plate 69.47) [misspelling of *basilides*, a synonym]

Strymon basilides (Godart): D'Abbrera (1995, p. 1239) [synonym]

Strymon megarus (Godart): Beccaloni et al. (2008), Robbins (2010b), Geerah and Rutherford (2015)

Kaye (1908, 1914, 1921) lists *S. basilides* (misspelled as *S. basalides*) and *S. ziba* as synonyms of *T. echion*; *S. basilides* is a synonym of *S. megarus* and *S. ziba* is a similar valid species (Robbins 2010b), indicating that Kaye confused at least two different species of *Strymon* under this name. Harris' (1927) material reported as *T. echion* is either or both *S. megarus* and *S. ziba* (Robbins 2010b). Similarly, Barcant's (1970) description matches this species, but his comments about variability suggest he lumped together *S. megarus* and *S. ziba*, and both species were curated together as *S. basilides* in his collection.

Transandean and Amazonian Region

Strymon ziba (Hewitson, 1868)

Thecla ziba (Hewitson): Crowfoot (1893, no. 139) [*Strymon megarus* likely to have been confused under this name]

Tmolus echion (Linnaeus): Kaye (1914), Kaye (1921, no.213), Harris (1927) [misidentification, see comments under *S. megarus*]

Tmolus basalides (Geyer): Barcant (1970, no. 298) [misspelling of *T. basilides*; misidentification, part]

Strymon ziba (Hewitson): Beccaloni et al. (2008), Robbins (2010b)

Transandean and Amazonian Region

***Tmolus* section**

Tmolus echion (Linnaeus, 1767) complex

Thecla echion (Linnaeus): Crowfoot (1893, no. 140)

Thecla labes H.H. Druce: Druce (1907) TL, Draudt (1919–1921), D’Abrera (1995, p. 1198–1199) [synonym]

Tmolus crolus (Stoll): Kaye (1904, no. 148), Kaye (1921, no. 214) [synonym]

Thecla crolus (Stoll): Comstock (1914) [synonym]

Tmolus echion (Linnaeus): Kaye (1904, no. 141, quoting Crowfoot (1893)), Barcant (1970, no. 300), Sookdeo (2013), Geerah and Rutherford (2015)

Tmolus labes (H.H. Druce): Kaye (1914)

Thecla’ echion (Linnaeus): Cock (1981a)

The records of Kaye (1921) and Harris (1927) are treated under *S. megarus* above.

Current usage of this name applies to a species complex in which the wing markings, androconia and eye colour are highly variable. There is also seasonal and geographic wing pattern variation. The first step will be to determine biological species. The second will be to apply available names from throughout the Neotropics to the biological species. We have evidence that at least two different biological species occur on Trinidad, but it is premature to apply names to these taxa.

Transandean and Amazonian Region

Tmolus venustus (H.H. Druce, 1907)

Tmolus azuba (Hewitson): Barcant (1970, no. 302) [misidentification]

There is a pair of specimens in Barcant’s collection (ABCT) as *T. azuba*. The male (Maupertuis, Aug 1937) is *T. venustus*, a species not previously recorded from Trinidad. The female is *Nicolaea fabulla* and treated under the checklist entry for that species.

Amazonian Region

Tmolus cydrara (Hewitson, 1868)

Tmolus cydrara (Hewitson): Kaye (1921, no.212), Barcant (1970, no. 297)

Transandean and Amazonian Region

Tmolus mutina (Hewitson, 1867)

Thecla mecrida Hewitson: Barcant (1970, no. 374) [misidentification, part]

Calycopis pion (Godman and Salvin): Barcant (1970, no. 324) [misidentification]

Barcant’s collection includes one specimen curated as *Calycopis pion*, which is a male *T. mutina*, and two specimens curated as *Thecla mecrida*, which are a female *Tmolus mutina* and a male *Celmia conoveria*. There are several subsequent records of *T. mutina* (F.C. Urich, S. Alston-Smith).

Transandean and Amazonian Region

Nicolaea besidia (Hewitson, 1868)

Nicolaea besidia (Hewitson): Alston-Smith and Cock (2011)

Amazonian Region

Nicolaea fabulla (Hewitson, 1868)

There is a female in Barcant’s collection (ABCT) as *Tmolus azuba* (Sans Souci, Sange Grande, 2 Dec 1961). This is a new island record, since collected by S. Alston-Smith (Guapo, ♂ Jun 1981, ♂ Sep 1981).

Amazonian Region

Nicolaea ophia (Hewitson, 1868)

A new island record collected by S. Alston-Smith (♂, Hololo Mountain Road, May 1980; ♀, Mora Trace, Cumana, Mar 1993).

Transandean and Amazonian Region

Nicolaea heraldica (Dyar, 1914)

New island record collected by M.J.W. Cock (♂, no locality) and S. Alston-Smith (♂, North Post ridge, Apr 2006).

Transandean and Amazonian Region

Nicolaea lemuria (Hewitson, 1868)

Thecla collustra H.H. Druce: Druce (1907), Draudt (1919–1921) TL [synonym]

Calycopis collustra (H.H. Druce): Kaye (1914), Kaye (1921, no.220), Barcant (1970, no. 307) [synonym]

For many years, the only Trinidad record was the type of *T. collustra*, collected by F. Birch at Caparo in Jul 1904, but S. Alston-Smith captured a female in the Arima Valley, Aug 2015.

Transandean and Amazonian Region

Ministrymon zilda (Hewitson, 1873)

- New island record collected by F.C. Urich (no locality) and M.J.W. Cock (♀, Cat's Hill, Sep 1982)
Transandean and Amazonian Region
- Ministrymon phrutus* (Geyer, 1832)
Tmolus phrutus (Geyer): Kaye (1914)
Calycopis phrutus (Geyer): Kaye (1921, no. 223), Barcant (1970, no. 310), Lewis (1974, plate 67.15)
Transandean and Amazonian Region
- Ministrymon azia* (Hewitson, 1873)
Tmolus azia (Hewitson): Kaye (1914)
Thecla azia (Hewitson): Comstock (1914)
Calycopis azia (Hewitson): Kaye (1921, no. 222), Barcant (1970, no. 309)
'Thecla' azia Hewitson: Cock (1985)
Ministrymon azia (Hewitson): Robbins and Glassberg (2013), Geerah and Rutherford (2015)
Transandean and Amazonian Region
- Ministrymon albimimicus* (K. Johnson, 1986)
A new island record collected by S. Alston-Smith on Chacachacare Island (♂, Jan 2001; ♂, Feb 2002).
Transandean Region
- Ministrymon megacles* (Stoll, 1780)
New island record collected S. Alston-Smith (Chacachacare Island, ♂ Jul 1981, ♀ Jan 1997).
Amazonian Region
- Gargina gargophia* (Hewitson, 1877)
Siderus gargophia (Hewitson): Kaye (1940, no. 240a)
As shown by examination of his collection, Barcant (1970, plate 28.26) misidentified *Ostrinotes silva* as this species. Nevertheless it is a Trinidad species with records from Brasso, Guapo, Waller Field etc. (M.J.W. Cock, S. Alston-Smith, F.C. Urich). There is also an historical specimen from the Kaye collection in MGCL: St. Ann's, Jan 1922, F.W. J[ackson] (C.V. Covell Jr., pers. comm. 2016), so this species may appear in Kaye's work under another name.
Transandean and Amazonian Region
- Gargina gnosia* (Hewitson, 1868)
Siderus caninius (H.H. Druce): Beccaloni et al. (2008) [misidentification]
New island record collected by S. Alston-Smith (♂, Hololo Mountain Road, May 1980; ♀, Point Gourde, Jan 1984). S. Alston-Smith's rearing data are reported by Beccaloni et al. (2008) using an earlier misidentification.
Transandean and Amazonian Region
- Gargina emessa* (Hewitson, 1867)
Thecla trinitatis Lathy: Lathy (1936) TL, Johnson (1991b) [synonym]
Widespread in the Northern Range, but also present in the south.
Transandean and Amazonian Region
- Gargina thoria* (Hewitson, 1869)
New island record collected by S. Alston-Smith (♀, Caltoo Trace, Mar 2001; ♂, Tucker Valley, Apr 2001).
Transandean and Amazonian Region
- Siderus parvinotus* Kaye, 1904
Siderus parvinotus Kaye: Kaye (1904, no. 158) TL, Warren et al. (2015)
Siderus leucophaeus (Hübner): Kaye (1921, no. 237), Barcant (1970, no. 338), Lewis (1974, plate 67.32 text) [incorrect synonymy]
Thecla leucophaeus (Hübner): Draudt (1919–1921, with *S. parvinotus* as synonym) [incorrect synonymy]
This species has been treated as *S. leucophaeus* Hübner in Trinidad, but the two species are distinct and only *parvinotus* Kaye has been confirmed from Trinidad.
Simmonds (1930, 1933) reports *Siderus leucophaeus* (misspelt *S. leucophagus* in the earlier paper) feeding on berries of *Clidemia hirta* in Trinidad, but this is most probably an error for *Ostrinotes tympania* (Hewitson), which is commonly reared from flowers and berries of this plant.
Transandean and Amazonian Region
- Siderus* n. sp. 8 MS (Robbins 2004)

This is species no. 773 in Robbins (2004). A new island record, it has been collected by J. Morrall (♀, Moreau, Nr Moruga, Sep 2011) and by S. Alston-Smith (♂, Forest Reserve, May 2000; Lalaja Ridge, ♀ Oct 1990, ♀ Jul 1999).

Transandean and Amazonian Region

Siderus athymbra (Hewitson, 1867)

New island record collected by J. and F. Preston, M.J.W. Cock (♀, Morne Catherine, Mar 1982) and S. Alston-Smith (♂, Guanapo Valley, Dec 1998).

Amazonian Region

Siderus philinna (Hewitson, 1868)

Tmolus unilinea Kaye: Kaye (1904, no. 143) TL [synonym]

Tmolus philinna (Hewitson): Kaye (1914, with *T. unilinea* as synonym), Kaye (1921, no. 217), Barcant (1970, no. 303), Lewis (1974, plate 69.52 text)

Transandean and Amazonian Region

Theclopsis gargara (Hewitson, 1868)

Siderus camissa (Hewitson): Kaye (1940, no. 236a), Barcant (1970, no. 341) [misidentification]

Kaye (1940) lists specimens of *S. camissa* from Siparia, 20 Nov 1920 (W.J. Kaye), and St. Ann's, 1300 ft. (R. Dick). The later should be in Barcant's collection. It isn't, but based on his collection, Barcant (1970) applied this name to *Theclopsis gargara*. The former should be in Kaye's collection in MGCL, and there is a specimen of *T. gargara* in MGCL with same data as the first specimen Kaye listed (C.V. Covell Jr., pers. comm. 2015). Accordingly, we conclude that Kaye misidentified *T. gargara* as *S. camissa*. This is an uncommon species, with more recent records from lowland areas (♂, Guapo, Sep 1981, S. Alston-Smith; ♂, Parrylands, Jan 1988, M.J.W. Cock).

Amazonian Region

Ostrinotes tympania (Hewitson, 1869)

Thecla tympania Hewitson: Kirkpatrick (1954)

Bithys syedra (Hewitson): Kaye (1940, no. 242a) [misidentification]; Barcant (1970, no. 346) [misidentification (part)]

Ostrinotes tympania (Hewitson): Beccaloni et al. (2008)

Simmonds (1930, 1933) reports *Siderus leucophaeus* feeding on berries of *Clidemia hirta* in Trinidad, but this is most probably an error for *O. tympania*, which commonly feeds on this plant in Trinidad.

Kaye (1940) records *B. syedra* from Trinidad based on specimens from Siparia (18 Nov 1920, W.J. Kaye), Hololo (W.J. Kaye) and Guaico (29 Jan 1922, F.W. Jackson). We have yet to locate these specimens; they are not in BMNH (main sequence) or OMNH and could not be located in MGCL (C.V. Covell, pers. comm. 2016). However, there is a female of *O. tympania* in OMNH from Maraval waterworks (31 Jan 1912, G.B. Longstaff), which Kaye had identified as *B. syedra*. In Lamont's collection in RSME and Barcant's collection (ABCT), *O. tympania* was treated as *B. syedra*. On this basis, we believe Kaye misidentified *O. tympania* as *B. syedra*.

Amazonian Region

Ostrinotes silva Faynel and Robbins, 2015

Siderus gargophia (Hewitson): Barcant (1970) [misidentification]

The single specimen in Barcant's collection listed as *S. gargophia* is the recently described *O. silva*.

It is an uncommon species also collected by F.D. Bennett (♂, Curepe, Mar 1982, at light).

Transandean and Amazonian Region

Strephonota tephraeus (Geyer, 1837)

Thecla tephraeus (Geyer): Crowfoot (1893, no. 141)

Tmolus tephraeus (Geyer): Kaye (1904, no. 146, citing Crowfoot (1893))

Bithys tephraeus Geyer: Kaye (1921, no. 242), Barcant (1970, no. 349)

Calycopis spurina (Hewitson): Barcant (1970, no. 323) [misidentification]

In his collection, Barcant treats males with red-brown androconia as *C. spurina* and males with dark androconia as *S. tephraeus*; they are all *S. tephraeus*.

Transandean and Amazonian Region

Strephonota sphinx (Fabricius, 1775)

Callipsyche dindymus (Cramer): Kaye (1904, no. 157), Kaye (1921, no. 236), Barcant (1970, no. 328), Lewis (1974, plate 67.11) [synonym]

Transandean and Amazonian Region
Strephonota cyllarissus (Herbst, 1800)
Thecla cyllarus (Cramer): Barcant (1970, no. 375e) [synonym, unavailable homonym]
Transandean and Amazonian Region

***Panthiades* section**

Panthiades bitias (Cramer, 1777)
Thecla syncellus (Stoll): Longstaff (1912) [synonym]
Tmolus bitias (Cramer): Kaye (1914)
Siderus bitias (Cramer): Kaye (1921, no. 238), Barcant (1970, no. 339)
Thecla bitias (Cramer): Kirkpatrick (1954)
Panthiades bitias bitias (Cramer): Nicolay (1976)
Panthiades bitias (Cramer): Beccaloni et al. (2008), Sookdeo (2013), Geerah and Rutherford (2015)
Transandean and Amazonian Region
Panthiades aeolus (Fabricius, 1775)
Thecla pelion (Cramer): Crowfoot (1893, no. 132), Draudt (1919–1921) [synonym]
Panthiades pelion (Cramer): Kaye (1904, no. 164), Kaye (1921, no. 253), Barcant (1970, no. 356), Nicolay (1976), Lewis (1974, plate 67.22) [synonym]
Thecla (Panthiades) pelion (Cramer): D'Abbrera (1995, p. 1180–1181) [synonym]
Transandean and Amazonian Region
Panthiades bathildis (C. Felder and R. Felder, 1865)
Panthiades bathildis (C. Felder and R. Felder): Nicolay (1976), Sookdeo (2013)
Transandean and Amazonian Region
Panthiades phaleros (Linnaeus, 1767)
Thecla phaleros (Linnaeus): Crowfoot (1893, no. 131)
Cycnus phaleros (Linnaeus): Kaye (1904, no. 162), Kaye (1921, no. 244), Barcant (1970, no. 352), Nicolay (1976)
Robbins (2005) gave the evidence for transferring this species from *Cycnus* to *Panthiades*.
Transandean and Amazonian Region
Thepytus thyrea (Hewitson, 1867)
Thecla thyrea (Hewitson): Barcant (1970, no. 375d)
Robbins et al. (2010b) revised *Thepytus*.
Amazonian Region
Oenomaus ortygnus (Cramer, 1779)
Thecla ortygnus (Cramer): Crowfoot (1893, no. 138)
Oenomaus ortygnus (Cramer): Kaye (1904, no. 160), Kaye (1921, no. 243), Barcant (1970, no. 350), Lewis (1974, plate 67.20), Beccaloni et al. (2008), Faynel et al. (2012)
Thecla ortygnus (Cramer): Fennah (1937)
Transandean and Amazonian Region
Parrhasius polibetes (Stoll, 1781)
Thecla polibetes (Stoll): Barcant (1970, no. 372)
Parrhasius polibetes (Stoll): Nicolay (1979), Sookdeo (2013)
Transandean and Amazonian Region
Parrhasius orgia (Hewitson, 1867)
Thecla orgia (Hewitson): Barcant (1970, no. 369)
Transandean and Amazonian Region
Michaelus phoenissa (Hewitson, 1867)
Bithys phoenissa (Hewitson): Kaye (1914), Kaye (1921, no. 241), Barcant (1970, no. 348)
Michaelus phoenissa (Hewitson): Beccaloni et al. (2008)
Transandean and Amazonian Region
Michaelus jebus (Godart, [1824])
Chalybs jebus (Godart): Kaye (1921, no. 259), Barcant (1970, no. 333)
Michaelus jebus (Godart): Nicolay (1979), D'Abbrera (1995, p. 1159, 1162), Faynel and Bálint (2004)

Transandean and Amazonian Region

Michaelus thordesa (Hewitson, 1867)

A new island record collected by S. Alston-Smith (♀, Hololo Mountain Road, May 1981, ♂ May 1982).

Kaye (1921) incorrectly listed *M. thordesa* as a synonym of *M. jebus*. They are distinct species (Nicolay 1979) that are both recorded from Trinidad.

Transandean and Amazonian Region

Michaelus ira (Hewitson, 1867)

Thecla vibidia (Hewitson): Barcant (1970, no. 375a) [synonym]

Robbins (2010a) clarifies the treatment in Robbins (2004).

Transandean and Amazonian Region

Ignata mulsus (H.H. Druce, 1907)

Thecla mulsus (H.H. Druce): Barcant (1970, no. 373)

Transandean and Amazonian Region

Ignata norax (Godman and Salvin, 1887)

New island record collected by M.J.W. Cock (♂, Arima Valley, Simla, Jan 1981) and S. Alston-Smith

(♂, Brasso, Oct 2001; ♀, Rio Claro-Guayaguayare Road, Oct 1993).

Transandean and Amazonian Region

Hypostrymon section

Nesiostrymon celona (Hewitson, 1874)

Thecla celona (Hew.): Barcant (1970, no. 375b)

Transandean and Amazonian Region

Nesiostrymon tristis (Lathy, 1926)

New island record collected by S. Alston-Smith (♂, Lalaja Ridge, May 1993).

Transandean and Amazonian Region

Aubergina alda (Hewitson 1868)

New island record reared by M.J.W. Cock from flowers of *Mikania vitifolia* (♀, Arima Valley, Sep 1978; specimen lost?); also collected by F.C. Urich and by S. Alston-Smith (♀, Hololo Mountain Road, Jul 1982; ♂, Quinam, May 1990).

Amazonian Region

Iaspis castitas (H.H. Druce, 1907)

Tmolus talayra (Hewitson): Kaye (1904, no. 152) [misidentification]

Iaspis talayra (Hewitson): Kaye (1940, no. 207c), Barcant (1970, no. 367) [misidentification]

Thecla talayra Hewitson: Kirkpatrick (1954) [misidentification]

Iaspis castitas (H.H. Druce): Beccaloni et al. (2008)

See Robbins (2010a) regarding the former misuse of the name *I. talayra*. The Trinidad material of this species has a consistently pale underside similar to that of the Central American *I. andersoni* Robbins (Robbins 2010a). However, the male upperside is a much paler blue than that of *I. andersoni* and in this regard matches the Amazonian *I. castitas*. The underside of *I. castitas*, as presently treated, is variable in ground colour, and at least one specimen from Guyana matches Trinidad material in this regard. Accordingly, we use the name *I. castitas*, at least pending a better understanding of this genus.

Amazonian Region

Iaspis thabena (Hewitson, 1868)

New island record collected by F.C. Urich (no locality) and S. Alston-Smith (Inniss Field, ♂ May 1999, 4♂ 4♀ June 2000, ♀ August 2000).

Amazonian Region

Iaspis temesa (Hewitson, 1868)

Iaspis temesa (Hewitson): Kaye (1904, no. 159), Kaye (1921, no. 260), Barcant (1970, no. 366)

Transandean and Amazonian Region

Celmia celmus (Cramer, 1775)

Tmolus celmus (Cramer): Kaye (1904, no. 149), Kaye (1921, no. 215), Barcant (1970, no. 301)

Thecla celmus (Cramer): Comstock (1914)

Celmia celmus (Cramer): Sookdeo (2013)

Transandean and Amazonian Region

Celmia conoveria (Schaus, 1902)

Thecla mecrida Hewitson: Barcant (1970, no. 374) [misidentification]

Barcant (1970) recorded *Tmolus mecrida* from Trinidad based on a single male collected by R. Dick (Rio Claro, Oct 1924). There is a male *C. conoveria* in Barcant's collection labelled *T. mecrida* from Rio Claro, Sep 1925, which is almost certainly R. Dick's specimen. This species has been subsequently collected by S. Alston-Smith (♂, Inniss Field, Jun 1982; ♀, Sangre Grande, Sep 1980; ♂, Sangre Grande, Dec 1980) and photographed by K. Sookdeo (Point Gourde, Jun 2012). The name is a new island record.

Transandean and Amazonian Region

Dicya carnica (Hewitson, 1873)

New island record collected by J. and F. Preston (♂, Lalaja Ridge, Apr 1982) and S. Alston-Smith (♂, Lalaja Ridge, Jul 1991; ♀, Lalaja Ridge, Aug 1991).

Transandean and Amazonian Region

***Erora* section**

Johnson et al. (1993) refer to an unspecified *Erora* sp. from Trinidad, which could be any of the following four species, of which *E. gabina* (Godman and Salvin) is the most commonly collected.

Erora badeta (Hewitson, 1873)

A new island record collected by M.J.W. Cock (♀, Morne Bleu Textel Road, Mar 1980) and M.J.W. Cock and S. Alston-Smith (2♂, Rio Claro-Guayaguayare Road, Oct 1993), and three females reared from flowers of *Miconia nervosa* (Sm.) Triana (Melastomataceae) by R.M. Burkhart (El Tucuche trail, 1 Jan 1983; near Mt. Harris, 8 Nov 1982; Plum-Mitan Road, 1 Mar 1983).

Transandean and Amazonian Region

Erora gabina (Godman and Salvin, 1887)

A new island record reared from flowers of *Varronia* sp. (formerly *Cordia*, Boraginaceae) by F.J. Simmonds (St. Augustine, ♀ Oct 1946, ♂ Nov 1947, etc.) and collected by M. Barcant (Santa Cruz, 10 Oct 1970), F.C. Urich, M.J.W. Cock (♀, Waller Field, Dec 1980) and S. Alston-Smith (Rio Claro-Guayaguayare Rd., ♂ Oct 1993, ♂ Oct 2001, ♀ Sep 2006).

Transandean and Amazonian Region

Erora sp. nr. *subflorens* (Schaus, 1913)

A new island record reared from flowers of *Miconia nervosa* by R. Burkhart (♂, Arima-Blanchisseuse Road, May 1983; ♂, near Mt. Harris, Nov 1982). The male has the frons green in the dorsal half only; it has extensive blue dorsally and strong markings ventrally, which are unusual for the *subflorens* group, especially for a male.

We do not allocate this uncertain species to a region.

Erora carla (Schaus, 1902)

A new island record collected by F.C. Urich (♀ no locality, in MJWC).

Transandean and Amazonian Region

Chalybs hassan (Stoll, 1790)

Chalybs romulus (Fabricius): Kaye (1904, no. 170, with *C. jantias* as synonym), Kaye (1921, no. 257, with *C. jantias* as synonym), Barcant (1970, no. 330) [*nomen dubium* which has been applied to *C. jantias*]

Robbins (2004) treats *Papilio romulus* as a *nomen dubium*. Barcant's (1970) plate of *romulus* shows a male of *C. hassan*.

Transandean and Amazonian Region

Symbiopsis aprica (Möschler, 1883)

New island record collected by M.J.W. Cock (♀, Moruga East, Feb 1980) and S. Alston-Smith (♂ Parrylands, May 1982; ♀ Vance River, Feb 2001) and photographed by K. Sookdeo (Inniss Field, Dec 2012). This species has also been referred to in Trinidad under its synonym *S. pennatus* (H.H. Druce).

Amazonian Region

Subfamily: POLYOMMATINAE*Leptotes cassius cassius* (Cramer, 1775)

Lycaena cassius (Cramer): Crowfoot (1893, no. 127), Rake (1894), Comstock (1914)

Syntarucoides cassius (Cramer): Kaye 1904, no. 138)

Leptotes cassius (Cramer): Longstaff (1912), Kaye (1921, no. 206), Barcant (1970, no. 290), Cock (1981a), Bálint and Johnson (1995), Sookdeo (2013), Geerah and Rutherford (2015)

Transandean and Amazonian Region

Zizula cyna (W.H. Edwards, 1881)

New island record collected by F.C. Urich (Sangre Grande).

Transandean and Amazonian Region

Hemiargus hanno hanno (Stoll, 1790)

Lycaena hanno (Stoll): Crowfoot (1893, no. 126), Rake (1894), Comstock (1914)

Chilades hanno (Stoll): Kaye (1904, no. 137)

Catochrysops hanno (Stoll): Longstaff (1912)

Hemiargus hanno (Stoll): Kaye (1921, no. 205), Barcant (1970, no. 289), Cock (1985), Beccaloni et al. (2008), Geerah and Rutherford (2015)

Transandean and Amazonian Region

Hemiargus huntingtoni huntingtoni (Rindge and Comstock, 1953)

Echinargus huntingtoni Rindge and Comstock: Rindge and Comstock (1953) TL, Barcant (1970, no. 289a), D'Abbrera (1995, p. 1256–7), Johnson and Bálint (1995)

Hemiargus huntingtoni (Rindge and Comstock): Warren et al. (2015)

The current generic placement is derived from the molecular phylogeny of Talavera et al. (2013).

Transandean Region

(2) Species recorded from Trinidad that we have been unable to confirm.

These are a mixture of errors and species needing confirmation.

Brangas* sectionBrangas caranus* (Stoll, 1780)

See comments under *B. getus* in main list.

Brangas neora (Hewitson, 1867)

Atlides neora (Hewitson): Kaye (1940, no. 245b), Barcant (1970, no. 336)

Kaye (1940) records this species from Trinidad based on a specimen collected at Morne Diabale, Feb 1922 by E.E. Fabien. Barcant (1970) did not seem to know this species, as there are none in his collection. We have not located Fabien's specimen, or any other specimens of this species from Trinidad. It is possible that it was misidentified, e.g. for the male or female of *B. dydimoon*. Nevertheless, its continental distribution suggests it could well occur in Trinidad.

Annamaria ganimedes (Cramer, 1775)

Theritas nobilis (Herrich-Schäffer): Kaye (1904, no. 172), Kaye (1921, no. 252) [synonym]

This species was included as *Lamasina ganimedes* in Robbins (2004), but the present generic name follows ICZN (2015). Kaye (1904, 1921) records a specimen from Maraval Valley, but this species was not listed by Barcant (1970). We have not located Kaye's specimen in BMNH, nor could it be located in MGCL (C.V. Covell Jr, pers. comm. 2016). We have seen no Trinidad specimens.

Thereus* sectionArawacus ellida* (Hewitson, 1867)

Tigrinota ellida (Hewitson): Johnson (1993b)

Johnson (1993b) listed a male in AMNH (Arima Valley, B. Heineman). We have not seen this specimen or any others of this distinctive species from Trinidad. *Arawacus ellida* occurs primarily in very dry deciduous forest from northern Venezuela (Aroa, where it is very rare) to coastal and interior Brazil and to Argentina, so the high rainfall Arima Valley seems an unlikely locality compared to the northwest peninsula of Trinidad or the Bocas Islands.

Subtribe Calycopidina (formerly *Lamprospilus* section)*Badecla badaca* (Hewitson, 1868)*Thecla badaca* Hewitson: Longstaff (1912)*Calycopis badaca* (Hewitson): Barcant (1970, no. 316), Lewis (1974, plate 67.5)*Angulopsis badaca* (Hewitson): Johnson and Kroenlein (1993a)

This species was treated in *Lamprospilus* by Robbins (2004), but the current placement is from Duarte and Robbins (2010). Longstaff's (1912) specimen from Ariapita Road (13 Jan 1913) is in the OMNH; it is a female *Lamprosilus collucia*, identified as *Tmolus badaca* by H. Druce. Kaye (1914, 1921, no. 228) listed *Calycopis badaca* (Hewitson) from Trinidad based on a specimen from Emperor Valley (30 Jan 1913, K.St.A. Rogers). This specimen is also in OMNH and is also a female *L. collucia*. Kaye (1914, 1921) treated *L. collucia* as a female synonym of *B. badaca*, so there seems no doubt that *L. collucia* is the species that he knew from Trinidad, not *B. badaca*. Barcant (1970) did not know *B. badaca* as he merely repeats Kaye's record and there are none labelled as *B. badaca* in his collection. Johnson and Kroenlein (1993a) list a female from Trinidad (Arima Valley, 19–21.i.1961, B. Heineman, AMNH). We have not seen this specimen or any others of this species from Trinidad.

Camissecla camissa (Hewitson, 1870)*Siderus camissa* (Hewitson): Kaye (1940, no. 236a)See under *Theclopsis gargara* in main list.***Erora* section***Chalybs jantias* (Cramer, 1779)

Kaye (1904, 1921) included *C. jantias* as a synonym of *C. romulus*, which Robbins (2004) treats as a *nomen dubium* (see comments under *C. hassan* in main list above). All specimens examined to date have been *C. hassan*, and we have not seen any specimens of *C. jantias* from Trinidad. However, based on its mainland distribution, it can be expected to occur.

(3) Species recorded from Trinidad, but not accepted for this checklist***Thereus* section***Rekoa bourkei* (Kaye, [1925])*Thecla bourkei* Kaye: Kaye (1925) TL, Kaye (1940)

Kaye (1925) described this species from Trinidad, but subsequently clarified that it is a Jamaican species accidentally attributed to Trinidad (Kaye 1940).

Subtribe Calycopidina (formerly *Lamprospilus* section)*Calycopis beon* (Stoll, 1780)*Thecla beon* (Cramer): Crowfoot (1893, no. 137)*Tmolus beon* (Stoll): Kaye (1904, no. 142), Williams (1920), Williams (1930), Robbins and Small (1981)*Calycopis beon* (Cramer): Kaye (1921, no. 218), Barcant (1970, no. 242)

Robbins (2004) treats this name as a *nomen dubium* because there are no extant types, and the name cannot be identified definitively from the original illustration. The name has been used as a catchall for several species of similar Lycaenidae in Trinidad. Kaye (1904, 1921) lists *Tmolus bactra* (a separate species listed above), *T. isobeon* Butler (a separate species not found in Trinidad, but close to *C. origo*) and *Thecla politus* H.H. Druce (a synonym of *K. syllis*) as synonyms, but was aware that several species might be involved. Subsequently, he makes it clear that he considers the female of *K. syllis* (as *politus*) to be *C. beon* (Kaye 1908). Comstock (1914) lists four species 'in *beon* group'. It is clear from Barcant's collection that he too included diverse species under this name. *Calycopis bactra*, *C. susanna* and *C. vesulus* have consistently been treated as *C. beon*, but one or both sexes of *K. syllis*, *C. cinniana*, *C. cissusa*, *C. mimas*, *C. atnius*, and *C. bellera* might also have been lumped together as *C. beon* in Trinidad collections.

Calycopis caulonia (Hewitson, 1877)*Antrissima varicolor* K. Johnson: Johnson (1991a) [synonym]

Johnson (1991a) illustrates the male, female and their genitalia. He includes Trinidad in the distri-

bution of this genus; however his description of the species included no reference to Trinidad. We have seen no specimens from Trinidad and discount this reference to it occurring there.

***Tmolus* section**

Nicolaea socia (Hewitson, 1868)

Calycopis socia (Hewitson): Kaye (1940, no. 227a)

Kaye (1940) records a specimen in coll. E. Bourke, OMNH. M.J.W. Cock has reviewed the Bourke collection, and identified all Lycaenidae. There were no specimens of *N. socia*, but six specimens of Lycaenidae were removed some time last century, apparently on loan and not returned. Some key specimens of moths referred to by Kaye (1925) are also missing from the collection, and it may have been Kaye himself who borrowed them. We know of no other Trinidad records of this species, which is not expected to occur, as it is endemic to the Brazilian cerrado as far as we know.

Barcant (1970, no. 313) misapplies this name to *Kolana ergina*.

***Panhiades* section**

Ignata elana (Hewitson, 1874)

Siderus elana (Hewitson): Kaye (1940, no. 236b), Barcant (1970, no. 342)

Kaye (1940) reports a specimen from St. Ann's collected by R. Dick. A specimen in Barcant's collection labelled as R. Dick's original record is a female *Parhassius polibetes*. In the absence of any other specimens, we conclude this record of *I. elana* was an error.

Olynythus obsoleta (Lathy, 1926)

A male collected at 'Maturá' (25 Nov 1874, light) is curated in the BMNH as from Trinidad. It is the specimen collected by J.W.H. Trail at Maturá (on the Amazon near Tonantins, Amazonas, Brazil) incorrectly treated as *Bithys punctum?* (Herrich-Schäffer) by Butler (1877). It is clear that the collection locality is not Matura, Trinidad.

(4) Species that might occur in Trinidad, but for which there are no records

This list consists primarily of lowland species that occur in both the Transandean and Amazonian Regions. In cases where two names are given, such as *Thereus lutzi/T. caltha*, the former is Transandean, the latter is Amazonian, and one of the two could occur in Trinidad. In a few cases (marked with an asterisk *), an Amazonian lowland species is widespread, and might well be found in Trinidad.

***Eumaeus* section**

Paiwarria antinous (C. Felder and R. Felder, 1865)/*P. telemus* (Cramer, 1775)

Mithras nautes (Cramer, 1779)*

Mithras colombiensis (K. Johnson and Constantino, 1997)*

***Brangas* section**

Enos falerina (Hewitson, 1867)

Enos myrtea (Hewitson, 1867)

Evenus batesii (Hewitson, 1865)

***Atlides* section**

Atlides inachus (Cramer, 1775)

Atlides atys (Cramer, 1779)

Atlides bacis (Godman and Salvin, 1887)

Arcas imperialis (Cramer, 1775)

***Micandra* section**

Temecla tema (Hewitson, 1867)

Ipidecla schausi (Godman and Salvin, 1887)

Thereus section*Thereus guianivaga* (K. Johnson, 1989)*Thereus lutzi* (Huntington, 1932)/*Thereus caltha* (H.H. Druce, 1907)*Contrafacia imma* (Prittwitz, 1865)*Kolana ligurina* (Hewitson, 1874)**Satyrium section***Magnastigma hirsuta* (Prittwitz, 1865)**Allosmaitia section***Allosmaitia myrtusa* (Hewitson, 1867)*Janthecla rocena* (Hewitson, 1867)*Janthecla sista* (Hewitson, 1867)***Calycopidina (formerly *Lamprospilus* section)***Arzecla arza* (Hewitson, 1874)

This species was placed in *Lamprospilus* in Robbins (2004); the present generic placement follows Duarte and Robbins (2010).

Arzecla calatia (Hewitson, 1873)

This species was placed in *Lamprospilus* in Robbins (2004); the present generic placement follows Duarte and Robbins (2010).

Arzecla taminella (Schaus, 1902)

This species was placed in *Lamprospilus* in Robbins (2004); the present generic placement follows Duarte and Robbins (2010).

Arumecla aruma (Hewitson, 1877)*Ziegleria ceromia* (Hewitson, 1877)*Calycopis buphonia* (Hewitson, 1868)*Calycopis cerata* (Hewitson, 1877)**Strymon section***Strymon rufofusca* (Hewitson, 1877)*Strymon yojoa* (Reakirt, [1867])**Tmolus section***Nicolaea dolium* (H.H. Druce, 1907)

A photograph from Penal, 28 Feb 2010 by K. Sookdeo may represent this species, but specimens are needed to confirm this.

Ministrymon cruenta (Gosse, 1880)**Ministrymon cleon* (Fabricius, 1775)

Although this species has been reported from Trinidad (Druce 1907; Kaye 1914, 1921; Barcant 1970; Lewis 1974; D'Abbrera 1995), thus far all specimens have proved to be *M. ecbatana*.

Ministrymon una (Hewitson, 1873)*Gargina thyesta* (Hewitson, 1869)*Gargina caninius* (H.H. Druce, 1907)*Siderus leucophaeus* (Hübner, 1818)

This species has been reported from Trinidad (Kaye 1904, 1921; Draudt 1919–1921; Barcant 1970) but all material examined to date has been *S. parvinotus*, which at that time was considered a synonym. Simmonds (1930, 1933) reports *S. leucophaeus* feeding on berries of *Clidemia hirta* in Trinidad, but this is most probably an error for *Ostrinotes tympania*, which is commonly reared from flowers and berries of this plant. The record is repeated in Waterhouse and Norris (1987).

Theclopsis lydus (Hübner, [1819])**Ostrinotes halciones* (Butler and H. Druce, 1872)

Panthiades* sectionThepytus echelta* (Hewitson, 1867)*Porthecla annette* (Faynel and Robbins, 2011)/*P. ravus* (H.H. Druce, 1907)*Oenomaus taua* Faynel and Moser, 2008*Oenomaus atena* (Hewitson, 1867)*Oenomaus atesa* (Hewitson, 1867)*Ignata caldas* (Robbins, 2010)*Olynthus narbal* (Stoll, 1790)*Olynthus punctum* (Herrich-Schäffer, [1853])***Hypostrymon* section***Hypostrymon asa* (Hewitson, 1868)*Apuecla picus* (H.H. Druce, 1907)*Terenthina terentia* (Hewitson, 1868)**Discussion**

Cock (2014a) discussed selected larger butterflies from Trinidad, specifically those that are likely resident, migrant, vagrant, nationally extinct, or recent colonists. He was unable to offer comparable insights for the HesperIIDae (Cock 2014b). The information on LycaenIDae is also somewhat limited because they are not a well-collected group.

Periodic mass movements of LycaenIDae are occasionally recorded. Williams (1920) described a mass movement of “*Tmolus beon*” (Cramer) observed over the Pitch Lake, southwest Trinidad, in 1919, the butterflies flying almost due south, with a strong breeze from the east, counted at rates of 8–25 per minute across a 30 yard front. Two male butterflies were caught and subsequently identified by W.J. Kaye as “*Tmolus beon*”. Unfortunately, as indicated above, *T. beon* is a catchall name applied by Kaye (1921) to a variety of species in the genus *Calycopis* Scudder and similar genera, so Williams’ observation might apply to any of a dozen or more species. However, there is a female *C. origo* in poor condition labelled St. [sic] Fernando, xi.1918 (C.B. Williams) in OMNH as *T. beon*, which may be representative of this record.

Alston-Smith and Cock (2011) reported a mass movement of *Nicolaea besidia* at Columbus Bay, Cedros, at the end of the southwestern peninsula of Trinidad, about 12 km from the South American mainland. The butterflies were flying in off the sea from the direction of Venezuela and settling on the mangrove trees behind the shore. At the time, this species was not known from Trinidad, but has since been found to occur in several of the swamps of the island, so this is probably a long-term resident Trinidad species, previously overlooked, whose populations are reinforced by immigrations from the mangrove swamps of Venezuela (Alston-Smith and Cock 2011).

Mass movements of two species found in Trinidad, *Ministrymon azia* and *Leptotes cassius*, have been reported from Portachuelo Pass, Rancho Grande, northern Venezuela (Beebe 1951; Robbins and Small 1981), but not from Trinidad. More generally, periodic mass movements of LycaenIDae from the mainland to Trinidad are a possibility, but the frequency and importance of these are difficult to assess.

The number of LycaenIDae species that occur in Trinidad, but have not yet been collected, is difficult to estimate. Of the 131 definitive LycaenIDae records, six (or 5%) are known from single specimens: *Enos thara*, *Thereus ortalus*, *Megathecla cupentus*, *Nesiostrymon tristis*, *Tmolus venustus*, and *Erora carla* (further unconfirmed species are listed separately). Of the 48 species listed that might occur in Trinidad, some may have been overlooked because they were confused with species that were already known from the island (e.g. species of *Thereus* Hübner, *Kolana* Robbins, *Arzecla* Duarte and Robbins, *Calycopis*, *Strymon* Hübner, *Nicolaea* K. Johnson, *Ministrymon* Clench, *Gargina* Robbins, *Siderus* Kaye). Others are sufficiently large, conspicuous and distinctive that it seems unlikely that they would have been overlooked (e.g. species of *Paiwarria* Kaye, *Mithras* Hübner, *Enos* K. Johnson, Kruse and Kroenlein, *Evenus* Hübner, *Atlides* Hübner, *Arcas* Swainson). More intensive fieldwork will doubtless reveal additional species.

There is little evidence for extinction of Lycaenidae on Trinidad. In fact, with the exception of *Megathecla cupentus* and *Tmolus venustus*, all species in the checklist have been collected in the last 35–40 years. The unique Trinidad specimen of *M. cupentus* is from October 1927. This species is normally found around *Cedrela* P. Browne (Meliaceae), which is widely planted in Trinidad, so it may yet be re-discovered. The unique specimen of *T. venustus* was collected in August 1937, but was only recognized for what it is while preparing this checklist. *Tmolus venustus* is a rare species where it occurs, e.g. there is a single record for Venezuela and two for Colombia.

Two mainland Neotropical countries have recent checklists of Eumaeini: Nicaragua (Robbins et al. 2004) and French Guiana (Faynel 2010; Faynel pers. comm. 2016). Comparing these lists based on only those with full species names, there are 237 species recorded from French Guiana (with three additions to Faynel 2010), 124 from Trinidad and 139 from Nicaragua (although another 73 are expected to occur as they are found both to the northwest and to the southeast of Nicaragua), which combined total 345 different species. The Trinidad fauna has 94 species in common with French Guiana (i.e. 76% of the Trinidad list and 40% of the French Guiana list), 52 in common with Nicaragua (i.e. 37% of the Trinidad list and 41% of the Nicaragua list), and 43 species are common to all three areas (i.e. 35% of the Trinidad list). If the 73 species expected to occur in Nicaragua are added to the analysis, the Trinidad fauna has 70 in common with Nicaragua (i.e. 57% of the Trinidad list and 33% of the Nicaragua list), and 54 species are common to all three areas (i.e. 44% of the Trinidad list). Just 14 species reported from Trinidad (i.e. 7% of the Trinidad list) have not yet been reported from either of the other two countries.

The biogeographic affinities of Trinidad are reasonably straightforward. Brown (1982) divided the forested lowland Neotropical butterfly fauna into major biogeographical regions. As noted, Trinidad is on the extreme southeastern border of the primarily Central American Transandean Region and on the extreme northern border of the Amazonian Region. Not surprisingly, its fauna is a combination of these two regions. Of the 131 species of Lycaenidae that are recorded from Trinidad, one (*Ziegleria hernandezi*) is endemic to the border between the two regions, one is not defined at the species level (*Erora ?subfloreus*), and we have allocated the remaining 129 to one or both regions. Of these, 92 (71%) are widespread, occurring in both regions, 30 (23%) are Amazonian, and seven (5%) are Transandean. In sum, the Trinidad fauna shows a strong Amazonian affinity, with 122 of 131 species (94%) occurring in the Amazonian Region.

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Addendum - Corrections to earlier checklist sections

Unfortunately, in Cock (2014a) and Cock (2014b), listed above, the dates of publication of some volumes of the journal 'Living World, Journal of the Trinidad and Tobago Field Naturalists' Club' were mixed up by the author. Specifically, the 1977–1978 volume was published in 1978 (not 1980 or 1981), the 1979–1980 volume was published in 1980 but the front cover was dated 1978–1979 (as explained in the editorial of the 1981–1982 volume), and the 1981–1982 volume was published in 1982 (not 1981). These errors and the correct citations are listed below. Some of these errors have also been incorporated in Lamas (2016) but will be corrected in the next edition.

In this checklist section:	the paper referred and listed as:	should have been referred to and listed as:
Cock (2014a)	Cock [1981a]	Cock (1982c)
	Cock [1981b]	Cock (1982d)
	ffrench [1980]	ffrench (1978)
	Papworth [1981]	Papworth (1982)
	Rooks [1978]	Rooks (1978)
	Stradling (1980)	Stradling (1978)
	Urich [1980b] (first entry)	Urich (1978a)
	Urich [1980b] (second entry)	Urich (1978b)
	Urich and Boos [1981]	Urich and Boos (1978)
Cock (2014b)	Cock [1981a]	Cock (1982a)
	Cock [1981b]	Cock (1982b)
	Cock [1981c]	Cock (1982c)
	Cock (1982)	Cock (1982d)
	Manuel (1981)	Manuel (1982)

