Linnaeus’s butterflies (Lepidoptera: Papilionoidea and Hesperioidea)

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The names of all the species of butterflies described by Linnaeus under “Papilio” are researched. Of the 305 names treated, 243 (c. 80%) are currently valid as specific (241) or subspecific (2), 29 are junior synonyms, 14 are invalid (one of these applying to a fake), and for 13 the identity is unknown or uncertain. Six species of moths misidentified by Linnaeus as butterflies are cited in the study, but details are not included. One hundred and fifty-two lectotypes have been designated, representing about 56% of the sum of the valid names and junior synonyms. Of these, 99 were selected from specimens in the Linnean Society of London, 52 from Queen Ludovica Ulrica’s collection, Uppsala, and one lectotype is a Petiver specimen from the collection of Sir Hans Sloane. Linnaeus described at least five species, possibly eight, from the literature alone. All Linnaean material examined is documented, as are ‘subsequent’ specimens that are associated with Linnaean material. Synonymy and homonymy are discussed and presented, as are the identities of type localities. Care has been taken to achieve a practical balance between Linnaean and current species identities. Linnaean material studied included specimens from The Linnean Society of London, Museum Ludovicae Ulricae (Uppsala University), the Clerck and De Geer collections in the Naturhistoriska Riksmuseet, Stockholm, and the collection of James Petiver, now part of the collection of Sir Hans Sloane housed in The Natural History Museum, London.

ADDITIONAL KEY WORDS: taxonomy – historic collections – entomology – zoology.

INTRODUCTION

Butterflies are among the most conspicuous and best studied of invertebrates, competing for the attention of biologists with birds, large mammals and flowering plants. Yet although we have much knowledge of the ecology, biogeography, ecological genetics, behaviour and taxonomy of these insects, a comprehensive nomenclatural treatment of the species described by Carolus Linnaeus (1707–1778), the earliest and most famous of taxonomists, is lacking. This lacuna is by no means just a scholarly omission of historical interest, although Linnaeus’s butterflies are subjects worthy of study in their own right. Rather, it represents a gap in the taxonomy of a high profile group of organisms.

Studies on many of Linnaeus’s moths have already been undertaken (on Microlepidoptera by Robinson & Nielsen, 1983; Noctuoidea by Mikkola & Honey, 1993) or are in progress (Geometridae by Honey & Mikkola, in prep.). Several key works on Linnaeus’s butterflies have also been published (see below), but these are not comprehensive and in none of them have lectotypes been designated explicitly. The present study means that the task of revising Linnaeus’s Lepidoptera is substantially complete, with the only group outstanding being the Bombycoidea.

The revision of Linnaeus’s butterflies has its own particular problems, for the popularity of these insects means that they have received much attention during their taxonomic history. The extent of the relevant literature is therefore greater than for other Lepidoptera and there has been a corresponding increase in the complexity of taxonomic and nomenclatural issues.

The primary purpose of this study was to evaluate the actual status of putative type specimens of Linnaeus’s butterflies and link syntypic specimens to available names. Where no specimens have survived, we attempted to determine Linnaeus’s concept of a particular species on the basis of other evidence – particularly the descriptions or illustrations of authors cited by Linnaeus.

We have also expended much effort in attempting
to confirm or otherwise resolve the identity currently accepted for the names of Linnaeus's butterfly species.

It has been particularly important to consider current identities in the case of the butterflies. The great majority of Linnaeus's butterfly species have been divided into subspecies. Many of these subspecies are biologically unsubstantiated and we concur with Parsons (1998) who noted the failure of butterfly taxonomists for the most part to examine variation across the range of a species so as to assess effectively discontinuous variation. However, the names introduced into the nomenclature are usually available and this has imposed the added burden on us of having to determine not only whether or not the currently accepted identity of the species fits the type, but whether this is also true for the nominate subspecies. Since subspecies are geographical races, it has been important to establish the type locality as accurately as possible. Very few of Linnaeus's type localities are particular: most are extremely broad (e.g. "Indiis", which could mean east Asia or the Caribbean islands, or even, perhaps tropical areas more generally); and several are inaccurate.

Because of the popularity of butterflies as a study taxon, the readership of this paper is likely to be wider than that for other Linnaean insects. It is expected to include butterfly taxonomists interested in the nomenclatural basis for many common species; those intrigued by the history of butterfly nomenclature in its own right; and those whose work on butterflies is not primarily taxonomic but brings them into contact with older names and who are curious about the history of their identity. More broadly, we consider that the more names we can typify effectively, the closer we shall get to achieving stability in biological nomenclature, so this work is also intended as a contribution to that greater aim. Although the present work will be by no means the last word on the types of Linnaeus's butterflies, we have at least gathered together much relevant information into one place and focused on linking names to type specimens wherever possible.

The primary sources on which this study was founded were the historic collections and associated literature. In these collections is incorporated the material on which we believe Linnaeus based his descriptions. As is the case for other taxa, Linnaeus frequently included in his descriptions references to specimens described or illustrated by other authors. These references form an integral part of the Linnaean description (e.g. see Stearn, 1957) and material on which the illustrations or descriptions of the other authors was based is syntypic, whether or not it was examined by Linnaeus. Modern collections and literature were used in the process of assessing the current identity of Linnaean names. The figures are grouped on the following pages.

METHODS

Our study was carried out along the lines described by other authors who have revised and curated Linnaean material – particularly the insects (e.g. Day & Fitton, 1978; Day, 1979; Fitton, 1978; Marshall, 1983; Robinson & Nielsen, 1983; and Mikkola & Honey, 1993, these latter authors demonstrating the value of pins and style of specimen-preparation in authenticating Linnaean specimens). Key collections were examined to locate syntypic material. Most specimens were found either in Linnaeus's personal collection, which is housed in the Linnean Society of London, or in the collection of Queen Ludovica Ulrica, which is deposited in the Zoological Museum of the University of Uppsala. We also studied material in the collection of Carl Clerck and Charles De Geer, both housed in the Naturhistoriska Riksmuseet, Stockholm, and the collection of James Petiver, which forms part of the collection of Sir Hans Sloane in The Natural History Museum, London.

The history of the nomenclature of each species was assessed. In several cases, Linnaeus based his description on a mixed series so the potential for taxonomic confusion existed at the outset. Like all systematists, Linnaeus also changed his mind about identities after further study and reflection, and these changes were recorded in his publications subsequent to the original description. Further complications often followed from contrasting and conflicting views on the Linnaean identity by later authors. The popularity of butterflies as a model taxon for many areas of research has meant that the group has been studied by more systematists than is the case with most other taxa, and this has increased the complexity of our task.

A web site containing colour images of Linnaeus's butterfly types is being developed at: www.nhm/entomology/linntypes/linnbutt.htm

DESIGNATION OF LECTOTYPES

We have designated 151 lectotypes. The purpose of these designations is to attach names to type specimens so clarifying the application of the name to the taxon. We have made the designations under the heading Linnaean material examined and have noted our selection under Remarks.

It is rare in generic revisions for more than but a few species to be Linnaean. Moreover, authors of such studies have tended not to spend a great deal of time sourcing original material and old publications and manuscripts, particularly when they have little reason to doubt the modern identity of the species in question. So although lectotypes are usually most appropriately designated in full revisionary works we consider that for historic material, designations are often far better made in works of the present kind. The main justification for this approach is the importance of the
Figures 1–8. *Papilio sensu* Linnaeus. 1, *P. antiochus* (lectotype); 2, *P. apollo* (lectotype); 3, *P. argus* (lectotype); 4, *P. daplidice*; 5, *P. doris* (lectotype); 6, *P. hermione* (lectotype); 7, *P. laomedia* (lectotype of *P. atlites* and *P. laomedia*); 8, *P. leucothoe* (lectotype).
context of the relevant historic collections and literature as a whole. It has been essential in the present work to have appreciated the history of the relevant collections, Linnaeus's methods, and the methods of his contemporaries or of those who succeeded him in working on his species.

NEOTYPES

We have not designated any neotypes although it is likely that several will need to be designated to establish the identities of certain species. Since this work deals primarily with Linnaeus specimens, we feel that selection of neotypes should be made by future revisers. We hope, however, that the present study will provide a guide to the identity of the Linnaean species for which neotype designations are desirable, and that it will form the basis for butterfly taxonomists to make the most appropriate neotype designations.

ARRANGEMENT OF THE TEXT

The structure of the text for each butterfly species broadly resembles that of Mikkola & Honey (1993) in their work on the Noctuoidea described by Linnaeus. We have departed to some extent from the layout of that work to cater for what is likely to be a wider range of readers than for other insect taxa.

Linnaean citations are listed for each species, as are the illustrations by Carl Clerck, who figured many of Linnaeus’s butterflies (see below). The legends to Clerck’s figures often cite the number given to that species by Linnaeus. Although they are not part of the name, we have included, as a reference, these numbers when citing Clerck’s figures. Linnaeus worked closely with Clerck, whose figures appear frequently to have been made from Linnaean specimens. Clerck’s figures have been, therefore, of great value to us.

The subheading ‘Identity’ is placed immediately below the references to each species. It includes what we consider to be the currently accepted identity of the species and, if appropriate, the taxonomic status of the name. The identities of a few species named by Linnaeus remain in doubt, and such cases are noted under ‘Identity’ as nomina dubia.

Six names described by Linnaeus under *Papilio* are actually species of moths. These taxa are listed in the text with the reference to the original description and the identity, as far as it has been possible to resolve, of the moth.

By contrast, there is at least one case where a species described as a moth by Linnaeus (*Phalaena heterocliita* Linnaeus, 1763) might instead be a butterfly (G. Lamas, pers. comm.). Since the present work is founded on Linnaean *specimens*, we have not dealt with such situations for we are not aware of any Linnaean material of butterflies described as moths.

*Material examined* is arranged so that Linnaean specimens, which are cited as *Linnaean material examined*, are distinguished from non-Linnaean specimens, which are listed as *Subsequent material examined*. Linnaean material is subdivided according to depository. ‘Linnaean’ specimens, in contrast with ‘Subsequent’ specimens, are those which we think may reasonably be treated as originals studied by Linnaeus. It is impossible to be sure that all such specimens are syntypic, for material may have been acquired by Linnaeus after publication of the original description. For this reason we prefer to term the material Linnaean rather than syntypic. However, unless there is good reason to doubt it, we view this material as syntypic. Our qualification about the universal type status of Linnaean material has not inhibited us from designating a lectotype to reflect, as best we can, Linnaeus’s concept of a given species. Such designations enable a name to be attached to a particular specimen and thus achieve stability.

Specimens listed under *Subsequent material examined* are mostly considered to be in the LSL and added by Smith. This material was incorporated into the text because although it is not syntypic it includes historical specimens associated with the Linnaean material. It may also prove still to have some syntypes, for we were inclined to include specimens of doubtful Linnaean origin under this subheading.

By taking this approach to these historic specimens, we follow, and support, the stance so robustly adopted by Day & Fitton (1978: 186–188). These authors argued forcefully against the view, purveyed by some writers, that we lack enough evidence to demonstrate the existence of Linnaean syntypic material. Furthermore, based on the quality of insect pins and the way in which the specimens were prepared, Mikkola & Honey (1993: 105–107) reasoned that the Linnean collection is more reliable than had been believed. Consequently, they designated lectotypes for about 87% of the 159 taxa of Noctuoidea described by Linnaeus from specimens. We concur with the opinion of all these authors that while each case should be treated on its merits, there is more than enough information about Linnaeus’s collection, and those collections of his associates, to support the view that we are dealing with material forming the tangible basis of his descriptions. Furthermore, the value of attaching names to specimens when there is no reason to doubt their authenticity as syntypic is of the very greatest benefit in establishing a stable nomenclature.

It should be noted that under *Material examined* are included misidentified specimens that bear the name, in Linnaeus’s handwriting, of the species being discussed. This action contrasts with usual taxonomic
treatments. The approach was adopted so as to ensure that Linnaeus's material is associated under the same name as his labels. Our identifications are noted in square brackets following the specimen citation. Material labelled by Aurivillius and Thunberg is listed under the name bearing the correct identity.

Under Type locality is cited all the information recorded by Linnaeus under what he referred to as "Habitat". Linnaeus often included under this subheading data on some or all of the following categories: locality, collector or collection, larval foodplant and, for those species for which he had personal experience, habitat. To this information we have added, in square brackets, our interpretation of the type locality. Many of Linnaeus's type localities are wrong. In several others, the localities were made in a very general sense. For example, the locality "Indiis" was cited by Linnaeus for many tropical localities.

We have done our best to provide as accurate an interpretation of the type locality as possible. We can be fairly specific about certain localities in Sweden, where Linnaeus had an intimate knowledge of the species, as he referred to several of them, prior to any original description, in some of his early works, such as Ölandas och Gotländska Resa (Linnaeus, 1746) or the first edition of Fauna Suecica (Linnaeus, 1746).

Most other type localities are provisioning or trade ports on the old shipping lanes or their hinterlands. So although the localities as recorded by Linnaeus are often so broad as to have very limited taxonomic meaning, we are at least dealing with a fairly restricted set. Further restriction of localities is helped if the collector is known. Many specimens were collected by Linnaeus's 'disciples', and their travels are usually well documented. Other collectors, such as Tulbagh and Brander, were senior officials in relatively fixed locations – Tulbagh was a Governor of the Cape, in South Africa, and Brander was a Swedish consul in Algeria. Such details, together with information provided to us by colleagues, and a study of the distributions based on modern collections and recent literature, have enabled us to restrict most type localities at least to a much greater degree than given in the original description.

Neotropical localities often proved particularly difficult to restrict. According to G. Lamas (pers. comm.), it is likely that most, if not all, butterflies described by Linnaeus from this region were based on specimens collected in the Antilles and the Guianas. This view accords with that of F. Hemming (unpublished manuscript: Department of Entomology Library (BMNH), manuscript collection: box HEM I 2:5) who stated that the only South American country from which it is known that Linnaeus received or had access to material was Surinam. For mainland species, we have, unless we can be more particular, recorded type localities as being from the Guianas.

A Linnaean type locality cited frequently by Corbet (1941, 1949) as "Ambina" is now called Ambon. We have used the latter name throughout the text for this Indonesian island, which is situated below the southwestern corner of Seram.

The section headed Remarks was used as a vehicle for discussing nomenclatural and identification problems, if any, for each species. In a few cases the process was relatively straightforward; in most it was far more complex. For example, several species were described from mixed series, a situation causing problems of identification from the very start of their taxonomic history. References to other authors cited by Linnaeus are also considered in this section: often it was these citations that introduced what we consider to be misidentifications into the original description. Any changes to the taxonomy by Linnaeus are discussed, as are the actions of those subsequent authors that are of relevance to our analyses. Notable among these subsequent authors are W. F. Kirby, F. O. C. Aurivillius, A. S. Corbet, R. Verity, and F. Hemming. We discuss also the provenance and status of potential syntypic material and note the designation of lectotypes. Reference is made to any rulings by the International Commission on Zoological Nomenclature (ICZN) on matters of nomenclature of Linnaeus's butterfly species. Consideration of the type locality is closely linked with the identity of the nominate subspecies in (the many) polytypic species. Where possible, we have used recent, or relatively recent, works (revisions if they exist), to compare modern with Linnaean identities.

PREVIOUS WORK: A SUMMARY

No comprehensive work to typify Linnaeus's butterflies has been published prior to the present study although there have been numerous papers dealing with issues of types and nomenclature for particular species. A list of the MLU butterflies was published by Thunberg (1804) shortly after the Queen's collection was donated to the University of Uppsala. This work has been useful for gaining an idea of the scope of the collection within a few decades of Linnaeus's death. But only four authors have published substantive and authoritative works on subsets of Linnaeus's butterflies.

The first of these was by Kirby (1870), who produced an annotated list of the species described by Linnaeus. His study was based on a comparison of Linnaeus's written descriptions with non-Linnaean specimens. Kirby doubted the value of the illustrations cited by Linnaeus other than in those species where the descriptions were made from the figures alone. Kirby (1870 and in subsequent works) made considerable
insights into the identities of Linnaeus's butterfly species, but his work was inevitably limited in its impact given that he did not study the Linnaean specimens.

Shortly after Kirby's work was published, Aurivillius (1882) produced a magisterial study on the Linnaean butterfly species represented in the MLU. The text was written in Latin, which makes it less than fully comprehensible to that large number of modern workers less conversant with the language than was the case at Aurivillius's time. However, the layout of Aurivillius’s detailed treatment is such as to make it very accessible. An extensive list of references was given for each species and Aurivillius usually cited a published figure (often of Clerck) that he regarded as matching the Linnaean identity (“fig. typicae”). Aurivillius rarely specified individual specimens as types. However, he was responsible for reconstituting and labelling the MLU material examined by Linnaeus, so he certainly made close reference to the specimens and we have made frequent reference to Aurivillius’s impressive study when treating the MLU species.

The types of Palaearctic butterflies described by Linnaeus were studied by Verity (1913) in a work based on the LSL collection. Although Verity did not examine the material in the MLU, there are few Palaearctic species represented in that collection. Furthermore, the MLU specimens had already been treated in detail by Aurivillius. Verity made numerous useful insights and we have referred to his work on many occasions in the text.

The Indo-Australian species were treated by Corbet in a series of papers published between 1941 and 1949. Corbet’s work included listings of the species with a discussion of those species where problems of interpretation existed. While Corbet certainly studied the specimens in the LSL, he appears not to have examined the MLU material in Uppsala, relying instead on Linnaeus’s descriptions, the Clerck plates and the work by Aurivillius. Corbet made many comments on the location of what he called the type specimen, but he was rarely specific enough about particular specimens to satisfy the requirements for lectotype designation.

KEY COLLECTIONS

LINNAEUS’S COLLECTION

Linnaeus's personal collection is housed in the Linnean Society of London (LSL). Before Linnaeus's death, it included both material collected by Linnaeus himself in Sweden, and also by his students ('disciples') or their associates, from many parts of the world. Subsequently, many specimens were added to the collection following its transfer to England. Most were incorporated by the purchaser, Sir James Edward Smith. The eventual acquisition of the collection by the Linnean Society of London has been well documented (e.g. Jackson, 1890; Day & Fitton, 1978) and will not be repeated here. It is, however, worth noting here that during subsequent curations, the position of the Linnaean labels were probably changed twice, and that originally they were located on the pins of the specimens (Mikkola & Honey, 1993: 107–110).

Linnaeus’s butterflies in the LSL have been curated by MRH as an adjunct to this publication. The specimens have been arranged in the order in which they are treated in the 12th Edition of Systema Naturae. Species described after the 12th Edition have been placed in the order indicated by Linnaeus's annotations of his own copy of this publication.

QUEEN LUDOVICA ULRIKA’S COLLECTION

The other major source of Linnaean material is the collection of Queen Ludovica Ulrika. Throughout the Insecta section of Edition 10 of Systema Naturae, Linnaeus added to some of the descriptions the letters “M.L.U.” (Museum Ludovicae Ulricae). We retain these letters in the present work. Many subsequent authors have interpreted this indication as a reference by Linnaeus to the location of the ‘type’. The manuscript for the catalogue of the MLU collection was, however, written several years prior to its eventual publication in 1764 (Wallin, [1994]). It seems likely, therefore, that Linnaeus intended the letters MLU in the 10th Edition to be a reference to descriptions in the MLU manuscript rather than to suggest that specimens were exclusive to the MLU collection. Under this interpretation, there is no reason to reject the presence of syntypes in the LSL in the case of species cited by Linnaeus as being “M.L.U.”.

The history of the MLU collection was summarized by Wallin [1994]. Brief details are as follows. The collection, originally housed in Drottningholm (near Stockholm), was donated to the University of Uppsala in 1803 by King Gustav IV Adolf, the Queen's grandson, who saw that it was being neglected (see also Aurivillius, 1882: 4). Linnaeus had studied and catalogued this collection. The material was listed in a manuscript by Linnaeus's successors to his chair at the University, namely his son, Carl Linnaeus junior (1741–1783), and his student Carl Peter Thunberg (1743–1828). Thunberg (1804) published this catalogue following the death of Linnaeus junior, his father's immediate successor in the post. This collection is now housed in the Zoological Museum of Uppsala University, a building constructed in the 1920s.

The insect specimens are stored as a separate collection in a series of wooden drawers. Almost every butterfly bears a label on the pin and several labels in the drawers. Thunberg's label is pinned in the drawer and includes the name of the species and
the words "Mus. Gust. Adolph.", which refers to the
donation of the collection to Upsala by Gustav IV
Adolph. Also pinned in the drawer is a red-edged label
added by P.O.C. Aurivillius bearing the name of the
species and "Auriv. 1881", the year prior to the pub-
lication of his work on the Linnaean butterfly material
in the MLU (Aurivillius, 1882). A further label by
Aurivillius is on the pin of the specimen. That label is
black-edged and cites the species name. Each specimen
also bears a further drawer label giving the name
of the species and a unique number of the Uppsala
University Zoological Museum corresponding to that
listed in the catalogue of Wallin (1994). Some other
determination labels have been added by recent re-
searchers in the case of a few specimens.

The only butterfly specimen in the MLU collection
to bear a hand-written Linnaean label is that of caricae.
The specimen is stuck to the label with a waxy glue
typical of that found on several of Linnaeus's speci-
mens, and bears the inscription "caricae". This ob-
servation raises the possibility that some, or even all,
the specimens in the MLU bore Linnaeus's labels but
that these were removed later. The remaining label
may have been overlooked (certainly it is in-
conspicuous) or left because it would have been difficult
to remove since it was glued on.

CARL ALEXANDER CLERCK'S COLLECTION
Clerck (1710-1765), who is referred to frequently in
the text of the present work, illustrated many Linnaean
butterfly species (see also under Literature below).
The history of Clerck's collection after his death was
summarized by Robinson & Nielsen (1983). Until re-
cently the collection was kept in the Botanical Institute
of Bergianska Trädgården, Stockholm, although the
Microlepidoptera were found by E.S. Nielsen among
the Gyllenhall collection in Upsala (Robinson &
Nielsen, 1983: 195). It is still housed in the original
cabinet and drawers and is on extended loan to the
Naturhistoriska Riksmuseet, Stockholm (Persson,
1978).

Linnaean syntypes in the Clerck collection are cited
under the relevant species treatments.

DE GEEER'S COLLECTION
The collection of Charles De Geer (1720-1778), Baron
of Leufsta, is also housed in the Naturhistoriska
Riksmuseet, Stockholm. The history of its fate after
De Geer's death was summarized by Persson, Pont
& Michelsen (1984). We have examined De Geer's
collection and incorporated relevant details, par-
ticularly concerning Linnaean syntypes, in the text.

PETIVER'S COLLECTION
The collection of James Petiver (c. 1663-1718) forms
part of the Sir Hans Sloane collection, which Linnaeus
saw when visiting London, and is housed in The Nat-
ural History Museum, London. His specimens are re-
markable for being pressed between mica sheets, which
are affixed to folios and collectively bound in two
leather volumes. Some doubt remains as to whether it
was Petiver himself who was responsible for preserving
the specimens in this way, or whether the specimens
were so curated after they were acquired by Sloane
(Fitton & Gilbert, 1994, and see that publication for
further details of Petiver's collection as part of the
Sloane collection). One Linnaean lectotype has been
designated from the Petiver collection (see stelenes).

MERIAN MATERIAL (GERNING COLLECTION)
What remains of the butterflies collected by Maria
Sibylla Merian (1647-1717), see also below, were in-
corporated around the middle of the 18th century into
the Gerning collection. This collection is now housed
in Museum Wiesbaden. Linnaeus cited Merian's il-
lustrations in his descriptions of several neotropical
species of butterflies, and so Merian specimens on
which those illustrations were based are types. We
have not examined the Gerning collection, but we have
referred to Merian's illustrations. There appears to
have been only two species (see treatments of bixae
and proteus) where Merian specimens have been desig-
nated as lectotypes. In the case of proteus, we believe
that the designation is incorrect.

SOME SOURCES FOR THE LINNAEAN BUTTERFLIES
Although the origin of much of the Linnaean butterfly
material is unknown a few notable sources are cited
below.

PEHR OSBECK
Osbeck (1723-1805), who was a student of Linnaeus
and a minister in the Lutheran Church, supplied Lin-
naeus with material from China and Java. He obtained
his specimens while acting as a ship's chaplain on a
voyage to the East Indies with the Swedish East India
Company (1750-1752). Osbeck published an account
of his voyage in 1757. Of particular significance to the
present work is the fact that he revised the account,
which was published in German (Osbeck, 1765). An
English translation of the German version appeared
in 1771. Both versions were published after the ap-
pearance of the 10th edition of Linnaeus's Systema
(Linnaeus, 1758). Osbeck was able, thus, to insert
binomial names given to his specimens by Linnaeus.
As a result, we have access to an important collecting locality given by Osbeck to a number of Linnaean syntypes. From the German edition of Osbeck (1765), Corbet (1945: 92, 93) listed those species which can reasonably be inferred to have been collected in the vicinity of Canton, China, or purchased from local collectors in the area. A slightly modified version of this list was made by Francis Hemming (unpublished manuscript: Department of Entomology Library (BMNH): manuscript collection: box HEM I 2.5).

Osbeck's specimens were often pinned on sewing needles, and they are thus particularly distinctive. As a result of his list we have been able to give a type locality, with reasonable precision, to a number of Linnaean butterfly species.

HANS JOHAN NORDGREN

We follow the spelling of the name of this collector typically used by Linnaeus although it was spelled as "Noordgreen" by Jackson (1913) and by Corbet (1949: 193), who presumably followed Jackson. Jackson (1913) noted that Nordgren corresponded with Linnaeus "with regard to advising despatch of amphibia and insects from Java". He supplied specimens from Java collected between 1759 and 1764, so no material was available from him for incorporation to the 10th edition of Systema Naturae. In the Centuria Insectorum, however, Linnaeus mentioned Nordgren in the introduction, so he must have obtained material from Java from him by that time.

The Nordgren species are all on short, slightly striate pins with a smooth round head and are positioned low on the pins. They are all quite mouldy.

ANDERS SPARRMAN

Sparrman (1748–1820) was one of Linnaeus's most travelled disciples (see, for example, Blunt, 1971). Before he became a pupil, he had been a surgeon on a ship of the Swedish East India Company. It was the butterfly specimens collected between 1765 and 1767 during this voyage that are relevant to the present work. A few years later Sparrman joined Captain Cook's ship Resolution.

MORTEN THRANE BRÜNNICH

Brünnich (1737–1823) was Professor of Zoology at Copenhagen University and a correspondent of Linnaeus, whom he supplied with material, particularly from Danish colonies. Linnaeus described four species in which Brünnich was cited as the collector. One was stated to be American (charithonia) and probably refers to the Virgin Islands, and three were said to be from Algeria. Of these three, the locality for one is certainly correct (pirithous), one is incorrect (oileus) – coming from North America, and the third is possibly incorrect (philius).

ERIK BRANDER

Brander (1720–1814) was the Swedish consul in Algiers from 1753 to 1765 (Jackson, 1913). In their work on Linnaeus's Noctuidae, Mikkola & Honey (1993: 107) stated that the pins of Brander specimens were smooth and sharp. Those of Brander's butterflies are also lacquer-covered. The Brander locality was always cited by Linnaeus as "Barbaria".

JOHANN CHRISTIAN FABRICIUS

The Danish entomologist Fabricius (1745–1808) was one of Linnaeus's most famous students. We have examined Fabrician material collected in North America for two species (philenor and turnus). Both specimens are distinctive in that they appear to have been flattened prior to being pinned.

LINNAEAN LITERATURE

The primary literature in this study includes the works of Linnaeus and those publications of other authors cited by Linnaeus. The references made by Linnaeus to the works of other authors form part of the Linnaean description. In the case of some species, indicated by a dagger in his descriptions, Linnaeus had no specimens and relied entirely on the publications, usually illustrations, of other authors (see Linnaeus, 1758: 613, footnote).

LINNAEUS

All published Linnaean citations to each species, original or subsequent, are listed and have been examined. We have referred on numerous occasions to one of Linnaeus's personal copies of Edition 12 of Systema Naturae on which he made extensive annotations. (A microfiche reproduction of this work with an introduction by A. Wheeler was published by The Natural History Museum in association with The Linnean Society ofLondon in 1991.) These annotations include additional references, corrections and changes in the sequence of species. They were often helpful to us in gaining further insight into Linnaean concepts, which sometimes changed, of certain species. References to the annotated version have been made in the text.

JAMES PETIVER

Petiver was a London apothecary and collector of objects of natural history. In his descriptions, Linnaeus
made frequent reference to figures by Petiver in his work entitled *Gazophylaccii Naturae et Artis*, which was published in five volumes between 1702 and 1706 (Searns, 1952). This publication might best be described as a miscellany of natural history with notes and illustrations of the many curiosities that were received by Petiver through his numerous contacts. Several of Linnaeus's references to Petiver figures proved to be misidentifications. We have cited a number of references to Petiver by Linnaeus in the text.

**AUGUST JOHANN RÖSEL VON ROSENHOF**

Linnaeus cited many figures of the miniaturist painter Rösel (1705–1759) (see Higgins, 1979; Luquet, Bonora & Caussanel, 1990 (1991), for details of his life and work). The work of Rösel entitled *Insekten-Belustigung* was issued in parts from 1741. These eventually formed four volumes, dated between the years 1746 and 1761. Besides the many coloured illustrations there is a substantial accompanying text. The figures cited by Linnaeus as by Rösel "app." were published as an appendix to Rösel's work and are by Christian Friedrich Carl Kleemann, Rösel's son-in-law.

**JOHN RAY**

All but one of the Linnaean citations to Ray (1627–1705) in the latter's *Historia Insectorum*, published posthumously in 1710, were to descriptions rather than to figures. Most have been shown to be misidentifications by Linnaeus.

**LOUIS JEAN MARIE DAUBENTON**

Linnaeus (1771) referred to illustrations by Daubenton (1716–1799) as "Aub. Misc." for five species of butterflies he described as new. The history of publication of Daubenton's plates was discussed by Cowan (1967b). The plates referred to as Daubenton's *Miscellanea* are more often cited as Daubenton's *Planches enluminées*, and were published between 1765 and 1783. Those of birds, including some of insects, were also published in Buffon's *Histoire naturelle des Oiseaux*.

According to Cowan (1967b), the authorship of the *Miscellanea* remains in some doubt as the possibility exists that Daubenton's son was responsible for them either wholly or in part.

**MARIA SIBYLLA MERIAN**

Linnaeus made numerous references to the illustrations of the naturalist and artist Merian (1647–1717). Many of these were to her illustrations of plants and insects of Surinam, which were published, with accompanying text, in *Metamorphosis Insectorum Surinamensium* in 1705. What makes the impressive execution of her studies of the plants and insects of Surinam even more remarkable is the demanding journey she made to accomplish the work late in life.

**CARL ALEXANDER CLERCK**

The great importance of the work of the illustrator Carl Clerck in establishing and resolving the identities of Linnaeus's species has already been noted.

Clerck's figures were published in his *Icones* (1759–1764). A detailed history of the execution and fate of the plates was given by Dal (1985). Besides the coloured figures there are several uncoloured plates. In the copy of the *Icones* we have examined in the BMNH, these uncoloured plates have been bound in. There also exist a series of unpublished *coloured* figures, which were available to us in the form of black and white photographic copies. They are not bound into the Icones volume we used in this study. Some of these figures are combined into plates; others are individual drawings. It is worth noting that these plates seem to be more than just diagrammatic representations since many show one wing set back more than the other, suggesting illustration of actual specimens. We compared Linnaeus specimens with the illustrations in each case and comment in the main text on whether we consider that they are representations of actual Linnaean material, both in terms of setting and in wing pattern.

It seems likely that Queen Ludovica's personal copy of the *Icones* included a coloured version of all the plates (Dal, 1985).

**OTHER AUTHORS**

Besides the more frequently cited authors, Linnaeus referred to works by Sloane, De Geer, Geoffroy, Réaumur, Catesby, and Mouffet, demonstrating his extensive knowledge of the literature of the time.

**DISSERTATIONS**

The descriptions of a number of species treated in the text as Linnaean are often attributed, even in recent literature, to his students. It was argued by Stearn (1957) that although academic theses were defended by the students they were written by Linnaeus and that therefore the author should be treated as being Linnaeus. Examples in the present work are the theses of Johansson and Sparmann.

**ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BMNH</td>
<td>The Natural History Museum, London</td>
</tr>
<tr>
<td>LSL</td>
<td>The Linnean Society of London</td>
</tr>
<tr>
<td>MLU</td>
<td>Museum Ludovica Ulrica (housed in the Zoological Museum, University of Uppsala)</td>
</tr>
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ALPHABETIC TREATMENT OF LINNAEUS'S BUTTERFLY SPECIES

ACASTUS LINNAEUS, 1758

*Papilio (Barbarus) acastus* Linnaeus, 1758: 487, no. 186.
*Papilio (Danaus) acaste;* Linnaeus, 1764: 250, no. 69 (incorrect subsequent spelling).
*Papilio (Danaus) acasta;* Linnaeus, 1767: 761, no. 83 (incorrect subsequent spelling).

**Identity.** Unknown (possibly PIERIDAE, see Remarks).

**Material examined.** None.

**Type locality.** "Indiis" [unknown].

**Remarks.** We retain the original spelling for this species despite the changes indicated above. In 1764, Linnaeus cited the original description but altered the name to acaste, but omitted any reference to the original description, citing only the 1764 description.

Kirby (1871: 455, 1877: 792), Aurivillius (1882: 61) and Bridges (1988: 1.1) placed this species as an unrecognised species in the genus "Pieris." We have been unable to locate any Linnaean material, and we accept the current treatment of this species as a nomen dubium.

Although its identity is unknown, *acastus* Linnaeus is a senior primary homonym of *acastus* Cramer, [1775] which is currently a junior subjective synonym of *Myosoria barcastus* (Sepp, 1755) (Hesperiidae).

ACESTA LINNAEUS, 1758

*Papilio (Nymphalis) acesta* Linnaeus, 1758: 479, no. 127.

*Papilio (Nymphalis) acesta;* Linnaeus, 1764: 298, no. 116. [Papilio] acesta 127; Clerck, 1764: pl. 43, fig. 3.

*Papilio acesta;* Linnaeus, 1767: 782, no. 191 (incorrect subsequent spelling).

**Identity.** *Tigridia acesta* (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: none.


**Subsequent material examined**

LSL: 1 ex., with abdomen eaten, labelled "Achilles 752., versus ex descr. e Coll. Linn." [by Smith]; 1♀, pinned upside-down, labelled "no label" [by Tams].

**Type locality.** "Psidio Americes" [South America, probably the Guianas, see Remarks].

ACHILLES LINNAEUS, 1758

*Papilio (Eques) achilles* Linnaeus 1758: 463, no. 32.
*Papilio (Eques) achilles;* Linnaeus, 1764: 211, no. 30. [Papilio] achilles 32; Clerck, 1764: pl. 24, fig. 2.

*Papilio (Eques) achilles;* Linnaeus, 1767: 752, no. 42.

**Identity.** *Morpho achilles* (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: none.


**Subsequent material examined**

LSL: 1 ex., with abdomen eaten, labelled "Achilles 752., versus ex descr. e Coll. Linn." [by Smith]; 1♀, pinned upside-down, labelled "no label" [by Tams].

**Type locality.** "Indiis" [South America, probably the Guianas].

**Remarks.** Described as an MLU species and figured by Clerck. Aurivillius (1882: 98) noted the similarity of the MLU specimen to Clerck's figure, an illustration he cited as typical. Our lectotype designation, above, attaches the name to the Linnaean specimen.

The species is widespread in central and tropical South America (Neild, 1996: 91). The nominate subspecies occurs in the Guianas, not west of the Andes as stated by Neild (1996: 91) (G. Lamas, pers. comm.).

Type species of the genus *Tigridia* Hübner and of the genus *Callizona* Doubleday, a junior objective synonym of *Tigridata.*
typically Linnaean, on balance it seems likely that they are not. One of the specimens in the LSL has a round, red-edged type label and "Achilles, Fide A.S.C. [A. Steven Corbet]" against it, but we do not accept that this is a syntype.

The pin of the lectotype is unusual in being partially lacquered, for lacquering is found normally only in specimens from southern European or African localities. The underside of the specimen figured by Clerck is a very good match, the upper side rather less so. Le Moul [é Real (1962: 247) stated that the type locality of achilles was not the Guianas region but the Rio Tapajos, Brazil. They based this observation on comparison of material from that area with the type. We dispute this view for two reasons. First, Linnaeus's material from the mainland of South America is likely to be from the Guianas (see Introduction); the chance of Linnaeus having received material from the interior of Brazil is remote. Second, the lectotype actually matches closely specimens of achilles in the BMNH that were collected from the Guianas.

Type species of the genus Morpho Fabricius.

ACONTIUS LINNAEUS, 1771
(Figs 25, 26)
Papilio (Danaus) acontius Linnaeus, 1771: 537.

Identity. Catonephele acontius (Linnaeus, 1771) (NYMPHALIDAE).

Material examined. None. [Lectotype designated by Hemming, see Remarks.]

Type locality. "China" [South America, probably the Guianas].

Remarks. The dagger mark after the description indicates that Linnaeus had no specimen(s) of this species. The species was described from the illustrations by Daubenton (Figs 25, 26) cited by Linnaeus as "Aub. misc. t.68. f. 3. 4." (see Cowan, 1967b: 312).

Hemming (1964: 96) selected the figure by Daubenton as representing the lectotype of three species, Papilio acontius Linnaeus, Papilio antiochus Fabricius (a junior primary homonym of P. antiochus Linnaeus) and Catonephele eupalemaena Hübnerr. These three species, the oldest of which is acontius, are, therefore, objective synonyms, although the specimen on which Daubenton based his figure has not been found.

Modern illustrations of this species are given by Jenkins (1985: figs 21–24, in black and white) and Neild (1996: 60, pl. 7, figs 367–370, in colour).

ACTORION LINNAEUS, 1763
(Fig. 37)
Papilio (Plebejus) actorion Linnaeus, 1763a: 26, no. 78.
Remarks. Linnaeus (1767: 786) changed the original spelling, which was cydippe Linnaeus (1761), to adippe. The name adippe is known in Britain as the High Brown Fritillary. Confusion arose when Verity (1913: 182) discovered that the specimen labelled by Linnaeus was a specimen of a closely related species, niobe Linnaeus. To achieve stability, the Commission (ICZN, 1958: Opinion 501) suppressed the name adippe Linnaeus, placing it on the Official Index of Rejected and Invalid Specific Names in Zoology; validated the name adippe (Denis & Schiffermüller, 1775) for this species, placing it on the Official List of Specific Names in Zoology; and designated as neotype of adippe (Denis & Schiffermüller, 1775) a male specimen preserved in the Naturhistorisches Museum, Vienna.

See cydippe 1761.

AEGISTHUS LINNAEUS, 1763
Papilio (Eques) aegisthus Linnaeus, 1763a: 18, no. 49.

Identity. Graphium aegisthus (Linnaeus, 1763) (PAPILOIDAE), a junior subjective synonym of Graphium agamemnon (Linnaeus, 1758).

Material examined. None.

Type locality. “China”.

Remarks. This species was figured on Pl. 6, Fig. 2 of the unpublished (uncoloured) plates by Clerck, but no specimens were located in either the LSL or the MLU. It is regarded as a junior subjective synonym of agamemnon, the name being applicable to tail-less males of the typical race of agamemnon (Rothschild, 1895: 450).

See agamemnon.

AENEAS LINNAEUS, 1758
Papilio (Eques) aeneas Linnaeus, 1758: 461, no. 15.

Linnaean material examined

Subsequent material examined

Type locality. “Asia” [South America, probably Surinam].

Remarks. Although not cited by Linnaeus as “MLU” the species was listed by Thunberg (1804) as being specimens are in the LSL and, since they are subsequent to the original description, they are not synotypic.
present in the MLU collection. It was also mentioned by Aurivillius (1882) and Wallin [1994]. There is no evidence to support a view that the LSL specimen labelled “Aeneas” by Smith is Linnaean, so it has not been selected as lectotype. Nevertheless, the specimen matches the figure in Rösel (1761: 24, plate 2, fig. 2), to which Linnaeus (1758) referred. (Rösel’s plate was published posthumously in volume 4 of Insecten-Belustigung by Kleeman. Volume 4 was published in 1761, so Linnaeus must have seen a plate, perhaps issued in a part, prior to the formal date of publication.) The MLU specimen is here considered to be syntypic and has been selected as lectotype.

The type locality of this polytypic species is probably Surinam. The nominate subspecies was illustrated by Tyler, Brown & Wilson (1994, pl. 57).

**AEROPA LINNAEUS, 1758**

*Papilio (Nymphalis) aeropa* Linnaeus, 1758: 475, no. 105.

*Papilio (Danaus) aeropus*; Linnaeus, 1764: 256, no. 75. [Papilio] aeropa 105; Clerck, 1764: pl. 39, fig. 1.

*Papilio (Danaus) aeropus*; Linnaeus, 1767: 768, no. 128.

**Identity. Lexias aeropa** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**


**Subsequent material examined**

LSL: 1♂ labelled “E. Ind., NEK.”.

**Type locality.** “Asia. Osbeck” [China, Canton].

**Remarks.** The identity of the nominate subspecies of this polytypic species is firmly established from Linnaean material examined, and the type locality is based on Osbeck’s record from Canton (Osbeck, 1765). The distributions of the 21 subspecies are presented by Tsukada & Nishiyama in Tsukada (1982b: 395). The LSL specimen bears Linnaeus’s label and has been selected as lectotype.

The specimens figured by Clerck as agamemnon (pl. 10, fig. 1 of the unpublished (uncoloured) plates) is a misidentification. The species illustrated appears to be an unfinished figure of satius. We have also seen a black and white photograph of what would appear to be a coloured version of that figure, but reversed. Clerck did, in fact, illustrate agamemnon, but it was originally labelled as “Aegistus” and emended, possibly by Linnaeus, to “Agamemnon”. (This figure is not the one labelled “Aegistus” — a “tail-less” form of agamemnon — on the unpublished pl. 6, fig. 2.) We have, again, seen a black and white photographic copy of the
unpublished, coloured figure of the true agamemnon.
See aegisthus.

AGENOR LINNAEUS, 1758

Papilio (Eques) agenor Linnaeus, 1758: 460, no. 13.
(Papilio agenor 13; Clerck, 1759: pl. 15.
Papilio (Eques) agenor; Linnaeus, 1764: 194, no. 13.
Papilio (Eques) agenor; Linnaeus, 1767: 747, no. 14.

Identity. Papilio agenor Linnaeus, 1758 (PAPILIONIDAE), currently considered to be a subspecies of Papilio memnon Linnaeus, 1758.

Linnaean material examined
LSL: 1♀ labelled “13. Agenor” [by Linnaeus], “Agenor 747” [by Smith] on a black sewing needle [typical of Osbeck specimens], here designated as LECTOTYPE [see Remarks]; 1♀ labelled “no label” [by Tams]; 1♂ labelled “Agenor” [by Linnaeus], “Achates Fab. 4.9” [by Smith].

Subsequent material examined
LSL: 1♀ labelled “Marsham 1797” [by Smith]; 1♂ labelled “China, M. of Rock[ingha]m.”.

Type locality. “Asia” [China, Canton].

Remarks. In 1764 Linnaeus gave the additional locality “China” and in 1767 he only listed “China”. The species was listed as having been obtained in the vicinity of Canton by Osbeck (1765).

In the LSL there are two specimens labelled by Linnaeus. The one labelled “13. Agenor”, which fits the original description in that it is without tails and has white in the discal cell of the hindwing, has been selected as lectotype. It was also considered by Corbet (1949: 194) to be the type and matches the upper specimen figured by Clerck.

AGLAJA LINNAEUS, 1758

Papilio (Heliconius) aglaja Linnaeus, 1758: 465, no. 44.

Identity. Name rejected, see pasithoe.

Type locality. “Asia”.

Remarks. Linnaeus used the name aglaja in the same work (1758: 481) for another species (see below). Realizing his mistake (and retaining the name for a Swedish species) he erected the name pasithoe in 1767, repeating the description exactly but placing it in Papilio (Heliconius) rather than P. (Eques) and without any reference back to the original name or description (see Hemming, 1942: 155, and Cowan, 1967a: 188). The name was placed on the Official Index of Rejected and Invalid Specific Names in Zoology by the ICZN (1971: 151).

See pasithoe.

AGLAJA LINNAEUS, 1758

Papilio (Nymphalis) aglaja Linnaeus, 1758: 481, no. 140.
Papilio aglaja; Linnaeus, 1761: 281, no. 1065.
Papilio (Nymphalis) aglaja; Linnaeus, 1767: 785, no. 211.

Identity. Argynnus aglaja (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
LSL: LECTOTYPE ♀, with abdomen partly eaten, labelled “Aglaja” [by Linnaeus], “Aglaja 785.” [by Smith].

Subsequent material examined
1♂ labelled “Turin Giorna”;
1♂, pinned upside-down, labelled “Turin Giorna”.

Type locality. “Viola tricolore” [Sweden, from the 1758 reference to Fauna Suecica (1746)].

Remarks. Linnaeus (1758: 465) also used the name aglaja for an Asiatic species of Pieridae (see above). Later (1767: 755), he introduced the name pasithoe for the Asiatic species but without reference to aglaja (1758: 465). In retaining the name aglaja for the later (Swedish) species, Linnaeus acted as the first reviser. The name Papilio aglaja Linnaeus (1758: 481) was placed on the Official List of Specific Names in Zoology (ICZN, 1971: 151–153). Hemming (1942: 160) referred to “The type” of aglaja, citing the female specimen labelled by Linnaeus. We accept this statement as being a lectotype designation.

See aglaja (1758: 465) and pasithoe.

AJAX LINNAEUS, 1758

Papilio (Eques) ajax; Linnaeus, 1767: 750, no. 32.

Identity. Name rejected.

Linnaean material examined.
LSL: 1♂, without head, labelled “Ajax” [by Linnaeus], “Xuthus 751” [by Smith], [LECTOTYPE of xuthus Linnaeus].
Type locality. "America boreali" [North America].

Remarks. The Commission (ICZN, 1954: Opinion 286) presented a history of the case surrounding this species and ruled that the name *P. ajax* Linnaeus, 1758 should be placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

ALIMENA LINNAEUS, 1758

*Papilio (Nymphalis) alimena* Linnaeus, 1758: 478, no. 121.

*Papilio (Nymphalis) alimena*; Linnaeus, 1764: 291, no. 109.

*Papilio (Nymphalis) alimena*; Clerck, 1764: pl. 32, fig. 1.

*Papilio (Nymphalis) alimena*; Linnaeus, 1767: 780, no. 178.


Material examined. None.

Type locality. "Indiis" [Ambon, according to Corbet, 1941].

Remarks. Described as an MLU species and figured by Clerck. Although the species was listed by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala, it was not cited by Wallin [1994]. Aurivillius (1882: 92) listed the Clerck figure as being typical. Corbet (1941: 14; 1949: 194) considered the type, from an unknown collector, to be from Ambon and housed in the MLU. We have, however, been unable to locate any Linnaean material in either the MLU or the LSL.

The currently accepted identity of *alimena* is exemplified by Tsukada in Tsukada (1985: 337). Most of the subspecies are island forms (see also Parsons, [1908]: 608).

AMALNA LINNAEUS, 1758

*Papilio (Nymphalis) almana* Linnaeus, 1758: 472, no. 89.

*Papilio (Nymphalis) almana*; Linnaeus, 1764: 272, no. 91.

*Papilio (Danaus) almana*; Linnaeus, 1767: 769, no. 132.

Identity. *Junonia almana* (Linnaeus, 1758), a senior subjective synonym of *J. asterie* (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

MLU: 1 ex., without abdomen, labelled "Almana [by Linnaeus], ex descr." [in undetermined hand], "Almana 769." [by Smith], here designated as LECTOTYPE.

LSL: 1 ex., labelled "Almana [by Linnaeus], ex descr." [in undetermined hand], "Almana 769," [by Smith], here designated as LECTOTYPE.

Remarks. Linnaeus (1764) gave the locality as "China". In 1767 he reverted to using "Asia" and, other than adding a Rösel reference, made no change to his original description.

Corbet (1941: 13) viewed *almana* and *asterie* as the dry- and wet-season forms of one species (*almana*), which is how they are treated currently. The conspecificity of these two names may well have been recognized by Thunberg (1804), since although he listed three specimens under the name *almana* in the MLU collection, he made no mention of the name *asterie*.

Corbet (1949: 194) cited the type locality as Canton and the collector as Osbeck, noting that the type was in the LSL. Although the LSL specimen is not particularly characteristic of an Osbeck specimen, *almana* is listed as one of the species that Osbeck obtained while in Canton (Osbeck, 1765) and represents material that Linnaeus received in 1751 (see Linnaeus, 1758: Ratio Editionis). It is therefore certainly sympatric and we have designated it as lectotype. Clerck published two figures under the name *almana* but neither are referred to by Linnaeus.

The nominate subspecies is distributed widely in the Oriental region (see Tsukada & Kaneko in Tsukada, 1985: 352, 353). Illustrations showing variation within Chinese specimens of the nominate subspecies are given by Chou (1994: 576, 577), who noted that this is the only subspecies represented in China.

See asterie.
Papilio (Nymphalis) amathea; Linnaeus, 1764: 288, no. 106.

Identity. Anartia amathea (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined. None.

Subsequent material examined
LSL: 1♀ labelled “Amathea 779” [by Smith]; 1♂ labelled “683”.

Type locality. “Indiis” [South & Central America, probably the Guianas].

Remarks. Described as an MLU species and figured by Clerck. In 1764 Linnaeus gave a description of “varietas” implying that he had seen more than one specimen. Thunberg (1804) did not mention this species as being present in the MLU collection when it was donated to the University of Upsala, nor was it listed by Wallin [1994]. Aurivillius (1882: 90) treated the Clerck figure as typical and identified the species as Anartia amathea. We have not located any material labelled by Linnaeus. The specimen labelled by Smith is a good match for the Clerck figure, but there is nothing to indicate that it is of Linnaean origin.

A modern illustration is provided by D’Abrera (1987: 662).

AMPHINOME LINNAEUS, 1767

Papilio (Nymphalis) amphinome Linnaeus, 1767: 779, no. 176.

Identity. Hamadryas amphinome (Linnaeus, 1767) (NYMPHALIDAE).

Material examined. None.

Type locality. “America meridionali” [probably Surinam].

Remarks. For reasons that are unclear, Linnaeus (1764: 304) erected a new name, camilla, and synonymized amphinome 1758 with it. He gave the habitat (type locality) as “Lonicera caerulea Germaniae” and cited a Petiver reference, which is of an African species, now recognized as Neptis agatha (Stoll). In 1767 Linnaeus repeated the 1764 description, listed amphinome as var β of camilla, and added a Rösel reference. Kirby (1871: 637) did not recognize the species and later (Kirby, 1877) omitted the name. Aurivillius (1882: 103) treated amphinome as a valid species in the genus Neptis, and gave the type locality as Ambon. Ambon was also cited by Eliot (1969: 125), who assigned amphinome to the genus Phaedyma Felder. D’Abrera (1977: 236) provides a modern illustration of the nominate subspecies. See camilla.

ANACARDII LINNAEUS, 1758

Papilio (Danaus) anacardii Linnaeus, 1758: 467, no. 56.

Identity. Salamis anacardii Linnaeus, 1758 (NYMPHALIDAE).

Linnaean material examined

The identity accepted here is as given by Jenkins (1983: 87) and Neild (1996: 86).
on a red-edged label, "Uppsala Univ. Zool. Mus. Linneamlingen nr. 1921, Papilio anacardii", here designated as LECTOTYPE.

Subsequent material examined

LSL: 1 ex., without abdomen, labelled "Anacardii 758., S. Leone, Afzelius".

Type locality. "Anacardio Americas" [West Africa].

Remarks. Listed by Linnaeus (1758) as an MLU species and figured by Clerck. Linnaeus (1764) gave the type locality as "Americas". Later (Linnaeus, 1767), he synonymized, as var. β, his species cyrene (1758: 474), which was presumably based on one or more specimens in his own collection.

The specimen in the LSL is labelled as having originated from Adam Afzelius (1750-1837), one of Linnaeus’s students. We have selected the MLU specimen as lectotype because Afzelius visited Sierra Leone only in 1794 so the LSL specimen, collected well after the original description, cannot be syntypic.

The species is polytypic (see e.g. Vane-Wright, 1979: 40).

Type species of the genus Nessaea Hübner and of the genus Epicallia Erichson, a junior objective synonym of Nessaea.

ANCHISES LINNAEUS, 1758

Papilio (Barbarus) ancaeus Linnaeus, 1758: 486, no. 175.

Papilio (Nymphalis) ancaeus; Linnaeus, 1764: 307, no. 125.

Papilio (Nymphalis) ancaeus; Linnaeus, 1767: 781, no. 184 (incorrect subsequent spelling?).

Identity. Nessaea ancaeus (Linnaeus, 1758), a junior subjective synonym of N. obrinus (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. "Indiis" [probably Surinam].

Remarks. Linnaeus erected the names ancaeus and obrinus for separate species. Subsequently these were recognized as the opposite sexes of a single species. Both sexes were figured by Clerck (1764: pl. 31, figs 2,3) under the name obrinus. Vane-Wright (1979: 38, 39) argued that the name ancaeus should apply to the male specimen and have priority, and that the name obrinus should apply to the female. Later, he reversed his decision on priority and treated obrinus as the senior subjective synonym (Vane-Wright, 1981: 119).

Jenkins (1989: 15) indicated that both ancaeus and obrinus were based on female specimens from Surinam, the syntype(s) of which were said to be in the Swedish Museum of Natural History. This information is incorrect; even if they existed, they would not be in that institute. We have not located any Linnaean material in either the MLU or the LSL.

The species is polytypic (see e.g. Vane-Wright, 1979: 40).

Type species of the genus Nessaea Hübner and of the genus Epicallia Erichson, a junior objective synonym of Nessaea.


Type locality. "Citro Americas" [probably Surinam, see Remarks].

Remarks. Listed by Linnaeus (1758) as an MLU species and figured by Clerck. The MLU specimen shows no trace of the red colouration shown in the Clerck figure, but this is probably due to fading. However, as in the figure, it lacks antennae suggesting that the specimen was the one illustrated by Clerck. We have, therefore, selected it as lectotype. None of the figures cited by Linnaeus in the original description are of anchises (Aurivillius, 1882: 16).

Linnaeus probably based the type locality on Merian’s illustration of a species from Surinam. Although this was a misidentification by Linnaeus, Surinam is the most likely type locality for the nominate subspecies of this polytypic species.
ANTILOCHUS LINNAEUS, 1758

Papilio (Eques) antilochus Linnaeus, 1758: 463, no. 28.

Papilio (Eques) antilochus; Linnaeus, 1764: 207, no. 26.

Papilio (Eques) anthilochus; Linnaeus, 1767: 751, no. 35 (an incorrect subsequent spelling).

Identity. Papilio antilochus Linnaeus, 1758, a junior subjective synonym of I? glaucus Linnaeus, 1758 (PAPILIONIDAE).

Material examined. None.

Type locality. "America septentrionali" [eastern North America].

Remarks. In the MLU publication Linnaeus cited the same locality as in 1758 but with the addition "P. Kalm", the Finnish "disciple" from whom he obtained material from Pennsylvania and Canada. In the original description, Linnaeus (1758) gave two references, one by Catesby from Carolina (which was considered by Rothschild & Jordan (1906: 413) to be a figure of a male of glaucus), and one by Petiver referring to specimens from New England and Virginia. The last locality should almost certainly refer to North Carolina from where the species was known since 1587 (Holland, 1947: 304). It seems likely, therefore, that the type locality for the nominate subspecies of this polytypic species is eastern North America.

See glaucus, turnus.

ANTILOCHUS LINNAEUS, 1767

(Fig. 1)

Papilio (Heliconius) antiochus Linnaeus, 1767: 1068, no. 12.

Identity. Heliconius antiochus (Linnaeus, 1767) (NYMPHALIDAE).

Material examined

LSL 1 ex. labelled "112. Antiopa" [by Linnaeus], "Antiopa 776." [by Smith], here designated as LECTOTYPE; 18 labelled "no label" [by Tams].

Type locality. "Betula, Salice, etiam in Americm. Kalm." [Sweden, from reference to Fauna Suecica (1746)].

Remarks. The specimen labelled by Linnaeus has been selected as lectotype. Verity (1913: 181) suggested a probable American origin of this specimen, given the small size and narrow marginal band of the specimen. It is by no means impossible that material of this species might indeed have come, via Pehr Kalm, from North America. However, there does not appear to be a consistent difference between American and European specimens and so there is no reason to believe that the lectotype is more likely to have come from North America than from Sweden.

ANTIOPA LINNAEUS, 1758

Papilio (Nymphalis) antiopa Linnaeus, 1758: 476, no. 112.

Papilio (Nymphalis) antiopa; Linnaeus, 1761: 277, no. 1056.

Papilio (Nymphalis) antiopa; Linnaeus, 1767: 776, no. 165.


Linnaean material examined

LSL 1 δ, with head missing and abdomen partly eaten, labelled "Antiocha app." [by Linnaeus], "Antiocha append. 1068," [by Smith], here designated as LECTOTYPE; 1 δ labelled "no label" [by Tams].

Subsequent material examined

LSL 1♀, pinned upside-down, labelled "Turin, Giorna."

Type locality. "Betula, Salice, etiam in Americae. Kalm." [Sweden, from reference to Fauna Suecica (1746)].

Remarks. The specimen labelled by Linnaeus has been selected as lectotype. Verity (1913: 181) suggested a probable American origin of this specimen, given the small size and narrow marginal band of the specimen. It is by no means impossible that material of this species might indeed have come, via Pehr Kalm, from North America. However, there does not appear to be a consistent difference between American and European specimens and so there is no reason to believe that the lectotype is more likely to have come from North America than from Sweden.

AOonis LINNAEUS, 1758

Papilio (Nymphalis) aonis Linnaeus, 1758: 472, no. 91.

Papilio (Nymphalis) aonis; Linnaeus, 1767: 769, no. 134.
Identity. Junonia aonis (Linnaeus, 1758), a junior subjective synonym of Junonia lemonias (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. "Asia".

Remarks. Although described by Linnaeus as an MLU species, neither Thunberg (1804) nor Wallin (1994) listed it as being present in that collection. Aurivillius (1882) made no mention of the original description of aonis, referring only to a Cramer figure of aonis under the name lemonias. Butler (1901: 214), acting as first reviser, synonymized lemonias and aonis giving precedence to lemonias. We have not located any Linnaean material and maintain nomenclatural stability by treating the name as a junior subjective synonym of lemonias, although aonis was published on an earlier page (p. 472) than lemonias (p. 473).

It is likely that the material available to Linnaeus was from the same geographical area as that of lemonias, and should therefore be taken to refer to the nominate subspecies of this polytypic species. See lemonias.

APOLLO LINNAEUS, 1758
(Fig. 2)

Papilio (Heliconius) apollo Linnaeus, 1758: 465, no. 41.
Papilio apollo; Linnaeus, 1761: 268, no. 1032.
Papilio (Heliconius) apollo; Linnaeus, 1767: 745, no. 50.

Identity. Parnassius apollo (Linnaeus, 1758) (PAPILIONIDAE).

Linnaean material examined

LSL: 1♂, labelled “Apollo 754.” [by Smith], here designated as LECTOTYPE; 1♀, labelled “no label” [by Tams].


Subsequent material examined

Linnaeus: 1♂, labelled “no label” [by Tams].

Type locality. “Sedo Telephico, Saxifr. Cotyledon. frequens in Svecia” [Gotland, Sweden, see below].

Remarks. Verity (1913: 176) stated that there were three specimens in the LSL and although none of these was labelled by Linnaeus, Verity considered that only one specimen, “a female of large size of the Scandinavian race”, was Linnaean. The pin of this specimen is typically Linnaean, and we have designated it as lectotype (Fig. 2).

The other two specimens he considered to be later additions, from Italy, by Smith. However, since neither of them was labelled by Smith there is no apparent basis for the suggestion that he added them to the collection. Furthermore, there exists considerable size variation across the range of this species, so the suggestion that they are from Italy also remains open to doubt. In fact, the condition of the second female suggests that it is actually Linnaean, and the data have been placed under “Linnaean material examined”, above.

In the original description, Linnaeus cited two of his own earlier works, Fauna Suecica (1746) and Iter gotl.” (1745). In the latter work, Linnaeus gave an exact locality and date for this species: Sweden, Gotland, Torsborgen, 3 July 1741. Contrary to Verity’s statement, (see above), the lectotype is small (forewing length 41 mm), which is characteristic of Gotland specimens of apollo. By contrast, mainland specimens are larger (forewing length above 54 mm). It is reasonable to assume, therefore, that the lectotype is indeed a specimen collected by Linnaeus himself during his Gotland journey, so the type locality is appropriately restricted to this area.

Type species of Parnassius Latreille.

ARCANIA LINNAEUS, 1761

Papilio arcania Linnaeus, 1761: 273, no. 1045.
Papilio (Plebejus) arcaniaus; Linnaeus, 1767: 791, no. 242 (emendation, for agreement of gender).

Identity. Coenonympha arcania (Linnaeus, 1761) (NYMPHALIDAE).

Linnaean material examined

LSL: 1♂, with abdomen partly eaten, labelled “Arcania” [by Linnaeus], “Arcaniaus 791.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1 ex. labelled “no label”; 1♂, pinned upside-down, labelled “Arcanium?, Angl. Hudis, raruis.”
Type locality. "Pratis & Sylvis" [Sweden].

Remarks. Verity (1913: 186) indicated that although Linnaeus made no mention of material being in his collection, there were two specimens in the LSL, which he, Verity, considered to be of Scandinavian origin. There is little evidence to suggest that the unlabelled specimen is Linnaean, and we have selected the specimen that is labelled by Linnaeus as lectotype.

ARCIUS LINNAEUS, 1763

Papilio arcius Linnaeus, 1763a: 26, no. 79. Papilio arcius; Linnaeus, 1763b: 409, no. 79. Pap.[ilio] butes; Clerck, 1764: pl. 46, fig. 6.

Identity. Rhetus arcius (Linnaeus, 1763) (RIODINIDAE).

Material examined. None.

Type locality. Not stated [probably the Guianas].

Remarks. It appears that Linnaeus changed his mind about the name arcius and erected a replacement name, butes (Linnaeus, 1767: 794), which we consider to be unnecessary. The name arcius as used currently (e.g. D’Aubra, 1994: 951) has been retained.

See butes.

ARGIOLUS LINNAEUS, 1758


Identity. Celastrina argiolus (Linnaeus, 1758) (LYCAENIDAE).

Linnaean material examined

LSL: 1 ♂, without abdomen and left hindwing, labelled "153 Argiolus" [by Linnaeus], "Argiolus 790." [by Smith], here designated as LECTOTYPE; 1 ♀ [identity unconfirmed] labelled "no label" [by Tams].

Subsequent material examined


Type locality. "Rhamno Europae, Africæ" [Sweden, from reference to Fauna Suecica (1746)].

Remarks. In the original description of argiolus, Linnaeus (1758) cited two Fauna Suecica descriptions, which later (Linnaeus, 1761) he recognized as two distinct species, argiolus and idas. In the 1761 work was including a reference that was cited in the original description of rubi Linnaeus, 1758. In 1767, Linnaeus stated that idas was the female of argiolus and treated the two names as synonyms. Several other references were cited by Linnaeus (1758), some of which are thought to refer to a different species, icarus Rottemburg, 1775.

This has resulted in confusion of these names by subsequent authors.

As stated by Verity (1913: 188), the LSL houses two syntypes of argiolus, and two syntypes of idas – one of which is a specimen of argiolus. To resolve the confusion over the names, the Commission established the identity of the two species as separate taxa (ICZN, 1954: Opinion 269) based on published genitalia figures, which were reprinted, and Sweden was designated as the Type locality. The specimen bearing Linnaeus’s label “Argus” can be identified as this species by the presence of the foretibial claw-like spine: it is not idas, of the spring brood of this species. We have selected this specimen as lectotype. Later (Verity, 1943: 102), he stated that the type locality was Enfield, England, but this was only because he took the first reference cited by Linnaeus in the original description, in this instance that of Ray, to be the type locality. Higgins & Riley (1975: 259) repeated this assumption. Eliot & Kawazoe (1983: 213) incorrectly cited a “Holotype ♀, EUROPE (Linnaean coll., London). [Gen. vern.]”.

Type species of the genus Celastrina Tutt.

ARGUS LINNAEUS, 1758

(Fig. 3)


Identity. Plebejus argus (Linnaeus, 1758) (LYCAENIDAE).

Linnaean material examined

LSL: 1 ♂ labelled "152. Argus" [by Linnaeus], "Argus 789" [by Smith], here designated as LECTOTYPE; 1 ♂ labelled "no label" [by Tams].

Subsequent material examined


Type locality. "Rhamno Europae, Africae" [Sweden, from reference to Fauna Suecica (1746)].

Remarks. Verity (1913: 190) noted characters showing that the specimen labelled by Linnaeus was a female of the spring brood of this species. We have selected this specimen as lectotype. Later (Verity, 1943: 102), he stated that the type locality was Enfield, England, but this was only because he took the first reference cited by Linnaeus in the original description, in this instance that of Ray, to be the type locality. Higgins & Riley (1975: 259) repeated this assumption. Eliot & Kawazoe (1983: 213) incorrectly cited a “Holotype ♀, EUROPE (Linnaean coll., London). [Gen. vern.]”.

Type species of the genus Celastrina Tutt.
a species in which this structure is absent. In addition, the dark margin of the forewing is typically broad (Fig. 3).

We have designated the specimen labelled “Argus” by Linnaeus as lectotype (Fig. 3) to link formally the name of the species to a specimen. Both argus Linnaeus, 1758, and idas Linnaeus, 1761, were placed on the Official List of Specific Trivial Names in Zoology (ICZN, 1954: Opinion 269).

Type species of the genus Plebejus Kluk. See idas.

ARGYRIUS LINNAEUS, 1768

Papilio (Nymphalis) argyrius Linnaeus, 1768b: 10.

Papilio (Nymphalis) argyrius; Linnaeus, 1769: 502.

Identity. Argyreus argyrius (Linnaeus, 1768) a junior subjective synonym of A. hyperbius (Linnaeus, 1763) (NYMPHALIDAE).

Material examined. None.

Type locality. Canton, China (Sparrman) between 26 August 1766 and 21 January 1767.

Remarks. Listed by Kirby (1871: 156) as a synonym and the male of niphe (=hyperbius Linnaeus). The type locality is the same as that of hyperbius, and represents that of the nominate subspecies of this polytypic species.

Corbet (1949: 193) stated that the location of the type specimen was not known. We have not found any Linnaean material.

ARIADNE LINNAEUS, 1763

Papilio (Nymphalis) ariadne Linnaeus, 1763a: 24, no. 71.

Papilio (Nymphalis) ariadne; Linnaeus, 1763b: 407, no. 71.

Papilio (Nymphalis) ariadne; Linnaeus, 1767: 778, no. 170.


Linnaean material examined

LSL: 1 ex., with abdomen partly eaten, labelled “Ariadne 778.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1 ex., without abdomen, labelled “E. Ind NEK”; 1 ex., without abdomen, pinned upside-down, labelled “E. Ind NEK.”

Type locality. “Java”.

Remarks. Not only was Java cited by Linnaeus in the original description but, in the introduction to that work, he acknowledged Nordgren as the source of material from that island, and in 1767 he specifically mentioned Nordgren as the collector under the entry to ariadne. Although it was not labelled by Linnaeus, the pin and manner of preparation of the specimen labelled “Ariadne 778” by Smith is similar to specimens of other species from Java collected by Nordgren and it has been selected as lectotype.

A modern reference to the distribution of this polytypic species is Tsukada in Tsukada (1985: 214, 215).

Type species of the genus Ergolis Boisdauval.

ARION LINNAEUS, 1758

Papilio (Plebejus) arion Linnaeus, 1758: 483, no. 151.

Papilio arion; Linnaeus, 1761: 283, no. 1073.

Papilio (Plebejus) arion; Linnaeus, 1767: 789, no. 230.

Identity. Maculinea arion (Linnaeus, 1758) (LYCAENIDAE).

Linnaean material examined

LSL: 1♀ labelled “151. Arion” [by Linnaeus], “Arion 789.” [by Smith], here designated as LECTOTYPE; 1♀ labelled “no label” [by Tams].

Type locality. “Europa” [probably Sweden, see below].

Remarks. According to Verity (1913: 189) there were two Linnaean specimens in the LSL, a dark male and a lighter female. Both are in fact females. The specimen labelled by Linnaeus has been selected as lectotype. Later, Verity (1943: 149) inferred that the type locality was Germany, but this was based only on the fact that Linnaeus cited a Rijsel reference. Although not specifically mentioned in the original description, Linnaeus certainly knew this species from Sweden as it was cited as “rare around US” in the second edition of Fauna Suecica (1761: 283). It seems probable, therefore, that although the original type locality was given as Europe, the lectotype is more likely to be of Swedish origin.

The name arion Linnaeus, 1758, was placed on the Official List of Specific Names in Zoology (ICZN, 1958, Opinion 503).

ARSALTE LINNAEUS, 1758

Papilio (Danaus) arsalte Linnaeus, 1758: 469, no. 67.

Papilio (Danaus) ersalte; Linnaeus, 1764: 246, no. 65 (incorrect subsequent spelling).

Papilio (Danaus) arsalte; Linnaeus, 1767: 762, no. 91.
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LINNAEUS’S BUTTERFLIES

Material examined. None.

Type locality. “Indiis” [South America, probably the Guianas].

Remarks. This species was originally described from the MLU collection and was figured by Clerck. It was not listed by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala, and we have not located any Linnaean material.

Despite the absence of Linnaean material, we can be confident of the identity of this species by reference to the illustration of Clerck (1764) (see Aurivillius, 1882: 58).

The type locality is probably the Guianas given that most of the material of species from tropical America available to Linnaeus was from there. Two subspecies of this very variable species were recognized by Evans (1953: 227).

ASCANIUS LINNAEUS, 1768

Papilio (Eques) ascanius Linnaeus, 1768b: 7.

Papilio (Eques) ascanius; Linnaeus, 1769: 500.

Identity. Name rejected. [Pachliopta aristolochiae (Fabricius)] (PAPILIONIDAE).

Material examined. None.

Type locality. “Anchoram ad Insulam Nieuw Bay demisimus” between 16 July 1766 and 22 July 1766 [Meeuwen Island (Gull Island), Java, see Remarks].

Remarks. Corbet (1941: 27) discovered that the name Papilio ascanius Linnaeus, 1768 had long been overlooked for a common Oriental species named P. aristolochiae Fabricius, 1775. There was, therefore, potential for creating considerable nomenclatural disruption. First, the long-used name aristolochiae Fabricius would have become a junior synonym of the unused name ascanius Linnaeus. Second, the South American species ascanius Cramer, [1775], which bears a superficial resemblance to the Oriental species ascanius Linnaeus, would have become a junior homonym of ascanius Linnaeus, and would thus require a new name to have been erected.

To maintain stability, the name ascanius was suppressed and placed on the Official Index of Rejected and Invalid Specific Names in Zoology (ICZN, 1954: Opinion 265).

The type locality was identified by Toxopeus (1951) as Meeuwen Island (known now as Gull Island) in the bay at the western extremity of Java.

ASSIMILIS LINNAEUS, 1758

Papilio (Nymphalis) assimilis Linnaeus, 1758: 479, no. 129.

[...]

Linnaean material examined

LSL: 1♂ labelled “assimilis 129” [by Linnaeus], “assimilis 782” [by Smith], here designated as LECTOTYPE.


Type locality. “Asia” [China, Canton (Osbeck)].

Remarks. P. assimilis was not described as an MLU species. It was, however, mentioned by Thunberg (1804) as being present in the MLU when the collection was donated to the University of Uppsala and it was listed by Wallin [1994].

Aurivillius (1882: 100) cited a figure by Drury as being typical rather than Clerk’s illustration although there is no doubt that both represent assimilis. Although the Clerk figure should be of the MLU specimens, it shows features that could also refer to the specimen in the LSL. Since the Linnean specimen is labelled by Linnaeus as assimilis it has been selected as lectotype.

According to Linnaeus (1764: 300) the type locality is China, which is in accordance with its listing in Osbeck (1765) as having been obtained in the vicinity of Canton. The specimen designated as lectotype is on a typical Osbeck needle.

The nominate subspecies of this polytypic species was illustrated by Chou (1994: 447). It was figured by D’Abrera (1985: 379) but incorrectly placed under the generic name Diagoru Snellen.

Type species of the genus Hestina Westwood.

ASTERIE LINNAEUS, 1758

Papilio (Nymphalis) asterie Linnaeus, 1758: 472, no. 90.

Papilio (Nymphalis) asterie; Linnaeus, 1767: 769, no. 133.

Linnaean material examined
LSL: 1 δ labelled “Asterie 769” [by Smith]; 1 ex. labelled “no label” [by Tams].

Subsequent material examined
LSL: 1 ex., without abdomen, pinned upside-down, labelled “E. Ind., NEK”.

Type locality. “India” [China, Canton (Osbeck), according to Corbet].

Remarks. Cited by Linnaeus (1758) as an MLU species, but not listed in the MLU publication. Corbet (1941: 13) considered asterie and almana to be forms of the same species. Later, (Corbet, 1949: 194), he stated that the type was in the MLU and was from Canton, China (a “co-type” was also supposed to be in the LSL). As this species was originally described as an MLU species, we have selected the specimen in that collection as the lectotype.

See almana.

ATALANTA LINNAEUS, 1758
Papilio (Nymphalis) atalanta Linnaeus, 1758: 478, no. 119.
Papilio atalanta; Linnaeus, 1761: 279, no. 1060.
Papilio (Nymphalis) atalanta; Linnaeus, 1767: 779, no. 175.

Identity. Vanessa atalanta (Linnaeus, 1758) (NYPHALIDAE).

Linnaean material examined
LSL: 1 ex. labelled “119 Atalanta” [by Linnaeus], “Atalanta 779.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined
LSL: 1 δ, pinned upside-down, labelled “Angl. Jones”.

Type locality. “Urtica” [Sweden, from reference to Fauna Suecica (1746)].

Remarks. In the original description, Linnaeus listed no fewer than 15 previously published references to this species. These date back to 1630 and included his own Fauna Suecica (1746) in which he cited the latinized vernacular name “Ammiralis”. Verity (1913: 181) referred to the specimen labelled by Linnaeus, which we have designated as lectotype.

Type species of the genus Vanessa Fabricius.

ATHEMON LINNAEUS, 1758
Papilio (Plebejus) aethemon Linnaeus, 1758: 484, no. 157.
Papilio (Plebejus) aethemon; Linnaeus, 1764: 323, no. 141.
[Papilio] aethemon 157; Clerck, 1764: pl. 37, fig. 2.
[Papilio] aethemon variet.; Clerck, 1764: pl. 46, fig. 3.
Papilio (Plebejus) aethemon; Linnaeus, 1767: 792, no. 243.

Identity. Dynamine aethemon (Linnaeus, 1758) (NYPHALIDAE).

Linnaean material examined

Type locality. “America” [South America, probably Surinam].

Remarks. Described as an MLU species. It was figured by Clerck, once under the name aethemon (pl. 37, fig. 2) and once under the name “aethemon variet.” (pl. 46, fig. 3). Clerck’s treatment was not adopted by Linnaeus, although he cited both figures in the MLU description (1764: 323). Thunberg (1804) mentioned it, under the misspelled name anthemon, as being present in the MLU collection when it was donated to the University of Uppsala, and it was listed by Wallin [1994]. Aurivillius (1882: 113) treated both Clerck figures (female and male respectively) as aethemon.

The only extant specimen is in the MLU and it matches Clerck’s figure of the variety. This specimen clearly represents the same species, and is possibly syntypic. The original Linnaean description, however, undoubtedly refers to the female sex alone and fits the specimen illustrated by Clerck on plate 37, therefore we refrain from selecting the MLU specimen as lectotype.

For a modern figure illustrating the current identity see Neild, 1996: 77.
**ATLITES LINNAEUS, 1763**

*Papilio* (Nymphalis) *atlites* Linnaeus, 1763a: 24, no. 72.


Linnaean material examined

LSL: 1 ex. labelled “Laodamia” [by Linnaeus], “Laomedia 772.” [by Smith], here designated as LECTOTYPE [see also *laomedia*]; 1 ex., with abdomen partly eaten, labelled “no label” [by Tams]; 1 ex., pinned upside-down, labelled “no label” [by Tams].

Type locality. “Asia. Clerck” [see Remarks].

Remarks. Linnaeus (1767: 772) replaced, unnecessarily, the name *atlites* with *laomedia* (see *laomedia*).

Corbet (1949: 196) listed the type locality as Canton, the collector as Osbeck, and the type depository as the LSL. This information may be correct, but the specimen is not on a typical Osbeck needle and the species was not listed by Osbeck (1765). Whatever its source, it bears Linnaeus's label and we have selected it as lectotype. The reference to Clerck in the original description probably means that Clerck was intended to illustrate the species. It would certainly not have meant that he was the collector.

The nominate subspecies of *atlites* is distributed extensively across the Oriental region (see Tsukada & Kaneko in Tsukada, 1985: 350, 351) and there is little doubt that what is currently regarded as the nominate subspecies, rather than the more geographically restricted subspecies *acera* Fruhstorfer, is what Linnaeus described. The nominate subspecies is the only subspecies in China (Chou, 1994: 579).

See *laomedia*.

**AUGIAS LINNAEUS, 1763**

*Papilio* (Plebejus) *augias* Linnaeus, 1763a: 27, no. 80.

*Papilio* (Plebejus) *augias*; Linnaeus, 1764: 287, no. 185, as form *p* of *dime* [an incorrect subsequent spelling].

*Papilio butes*; Linnaeus, 1767: 778, no. 171 as form *p* of *dime* [an incorrect subsequent spelling].

Identity. *Colobura bates* (Linnaeus, 1758) a junior subjective synonym of *C. dime* (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. “Indiis” [South America, probably the Guianas].

Remarks. Although *bates* was not described as an MLU species it was figured by Clerck (the name was misspelled *batis* in the Register). It was synonymized with *dime*, as form *p*, by Linnaeus (1764: 287). Neither *bates* nor *dime* were mentioned by Thunberg (1804) as being represented in the MLU collection when it was donated to the University of Uppsala, nor were they listed by Wallin [1994]. We accept, as did Aurivillius (1882: 90), the action of Linnaeus (1764), as first reviser, and treat *bates* as a junior synonym of *dime* Linnaeus, 1758.

The species is accepted as being from South America. Since most material from this continent studied by Linnaeus came from the Guianas, we have cited this region as probably representing the type locality.

See *dime*.

**BATES LINNAEUS, 1758**

*Papilio* (Barbarus) *bates* Linnaeus, 1758: 485, no. 169.

*Papilio bates*; Clerck, 1764: pl. 36, fig. 3.

*Papilio butes*; Linnaeus, 1764: 287, no. 185, as form *β* of *dime* [an incorrect subsequent spelling].

*Papilio bates*; Linnaeus, 1767: 778, no. 171 as form *β* of *dime* [an incorrect subsequent spelling].

Identity. *Colobura bates* (Linnaeus, 1758) a junior subjective synonym of *C. dire* (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. “Java, China”.

Remarks. In 1767 Linnaeus restricted the type locality to “Java” and added the name of the collector, “Nordgreen”. Corbet (1949: 194) cited the type as being in the LSL and Evans (1949: 394) indicated that the genitalia of the material in the LSL had been checked, citing Corbet (1942: 94) as a reference.

There are two specimens in the LSL, but neither Corbet nor Evans indicated which specimen they considered to be the type. The specimen actually labelled by Linnaeus has had the end of its abdomen brushed, suggesting that its genitalia have been examined. The genitalia are a reasonable match for the figure of *augias* in Evans (1949: pl. 47). This specimen was figured as the type by Corbet & Pendlebury (1956: pl. 29, fig. 10) and we accept this as a valid lectotype designation. The specimen is not a holotype as stated by Parsons ([1998]: 187).

The species is polytypic: Evans (1949: 394) recognized eight subspecies, one of which has been raised to species level (see Parsons, [1998]).
BELIA LINNAEUS, 1767
Papilio (Danaus) belia Linnaeus, 1767: 761, no. 84.

Identity. Anthocharis belia (Linnaeus, 1767) (PIERIDAE).

Linnaean material examined
LSL: 1♀, pinned upside-down, without abdomen, labelled "Belia" [by Linnaeus], "Belia 761." [by Smith], here designated as LECTOTYPE; 1♂, without head or abdomen, labelled "no label" [by Tams].

Type locality. “Barbaria” [Algeria].

Remarks. This species was described from the female sex; the male was described under the name eupheno on the following page. Verity (1913: 178) stated that there were two female specimens in the LSL, one bearing Linnaeus’s label. We have selected the labelled specimen as the lectotype and follow the currently accepted usage, as indicated by Tennent (1990: 15), with belia as the senior name and eupheno Linnaeus as a junior subjective synonym. The specimen and its labels were figured by Tennent (1990: frontispiece, fig. 4).

BETULAE LINNAEUS, 1758

Identity. Thecla betulae (Linnaeus, 1758) (LYCENIDAE).

Linnaean material examined
LSL: 1♀ labelled “146 Betula” [by Linnaeus], “Betula 787.” [by Smith], here designated as LECTOTYPE; 1♂ labelled “no label” [by Tams]; 1♀, pinned upside-down, labelled “no label” [by Tams]; 1♂ labelled “no label” [by Tams].

Subsequent material examined
LSL: 1♀ labelled “Angl. Jones”.

Type locality. “Betula, Pruno spinosa” [Sweden: “Smoandia”, from reference to Fauna Suecica (1746)].

Remarks. Verity (1913: 187) considered that there were two Linnaean specimens in the LSL, a female, which was labelled by Linnaeus, and a male. There are, in fact, five specimens of this species in the LSL, of which four are probably Linnaean. The specimen labelled by Linnaeus, which agrees with the original description, has been selected as lectotype.

BIXAE LINNAEUS, 1758
(Fig. 21)

Identity. Pyrrhopyge bixae (Linnaeus, 1758), a junior subjective synonym of P. phidias (Linnaeus, 1758) (HESPERIIDAE).

Material examined. None. [LECTOTYPE ♂ designated by Hemming, see Remarks.]

Type locality. “America” [South America, Surinam].

Remarks. Linnaeus described bixae from a mixed series. In the original description he also cited two figures, one by Merian and the other by Petiver. Evans (1940) summarized the history surrounding the names bixae and its senior synonym phidias and provided identifications for the various figures cited both by Linnaeus and subsequent authors. His treatment was later formalized by Hemming (1964: 110) who designated the Merian figure (Fig. 21) cited in the original description as the lectotype of bixae. This treatment has been followed by subsequent authors.

Merian’s figure appeared in her work on Surinam insects, so the type locality is accepted as that country. Mielke (1989: 449, figs 1–2, 5) located the Merian specimen in Museum Wiesbaden (i.e. the lectotype) and provided an illustration of it and its genitalia.

Type species of Pyrrhopyge Hübner.
See phidias.

BOETICUS LINNAEUS, 1767
Papilio (Plebejus) boeticus Linnaeus, 1767: 789, no. 226.

Identity. Lampides boeticus (Linnaeus, 1767) (LYCENIDAE).

Linnaean material examined
LSL: 1♂ labelled “Boeticus 789, ex descr.” [by Smith]; 1♀, without abdomen, unspread, labelled “no label” [by Tams], here designated as LECTOTYPE.

Subsequent material examined
LSL: 1♀ labelled “E Ind., NEK”; 1♀, pinned upside-down, labelled “E. Ind., NEK”.

This species is the type species of the genus Thecla Fabricius.
Type locality. "Barbaria" [Algeria].

Remarks. Of the four specimens in the LSL, two are possibly Linnaean. One of these, which is an unlabelled female, is on quite a large lacquer-covered pin and is similar to other specimens from "Barbaria". For this reason, and because it matches the description rather better than the male specimen labelled by Smith, it has been selected as lectotype.

No subspecies have been described of this very widespread migrant species (see Tennent, 1996: 30, who also provided colour illustrations of specimens from north Africa, the type locality).

Type species of the genus Lampides Hübner.

Bolina Linnaeus, 1758

Papilio (Nymphalis) bolina Linnaeus, 1758: 479, no. 124.
Papilio (Nymphalis) bolina; Linnaeus, 1764: 295, no. 113.

Papilio (Nymphalis) bolina; Linnaeus, 1767: 781, no. 188.

Identity. Hypolimnas bolina (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: 1♂ [of bolina] labelled "Bolina" [by Linnaeus], "Bolina 781." [by Smith].

Subsequent material examined

LSL: 1♂ [of misippus], pinned upside-down, labelled "E. Ind., NEK".

Type locality. "India" [see Remarks].

Remarks. Described as an MLU species and figured by Clerck. Aurivillius (1882: 96) identified the Clerck figure as being typical. Although there exists in the LSL a specimen of bolina labelled by Linnaeus, the male specimen in the MLU labelled "Bolina χ" by Aurivillius has been selected as lectotype because it is a better match for the Clerck figure and because the species was described by Linnaeus from the MLU. Corbet (1941) stated that the type was in the MLU, but failed to indicate which of the two specimens present in the MLU was the one in question.

In 1764 the type locality was given as "Indies". Corbet (1941: 14; 1949: 195) considered the type locality of this polytypic species to be Java, a suggestion followed by Ackery, Smith & Vane-Wright (1995: 336). However, Java was only mentioned by Linnaeus from 1763 onwards, by which time he had Javan specimens from Nordgren (1759–64 according to Jackson, 1913, who spelled the name as "Noordgreen") or Sparman (1765–1767), so the original locality has not been effectively established.

There is no modern revision of Hypolimnas so we lack an effective assessment of whether or not bolina is truly polytypic. While several subspecies have been described, their validity (and value) is doubtful (see summary in Parsons, [1998]: 606).

Brassicae Linnaeus, 1758

Papilio (Danaus) brassicae Linnaeus, 1758: 467, no. 58.
Papilio brassicae; Linnaeus, 1761: 269, no. 1035.
Papilio (Danaus) brassicae; Linnaeus, 1767: 759, no. 75.

Identity. Pieris brassicae (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined

LSL: 1♂ labelled "58 Brassicae" [by Linnaeus], "Brassicae 759." [by Smith], here designated as Lectotype.

Subsequent material examined

LSL: 1♂ labelled "Angl. Jones".

Type locality. "Brassica" [Sweden, from reference to Fauna Suecica (1746)].

Remarks. The sexes were confused by Linnaeus in the original description. The male, which was thought by
Linnaeus to be a female, matches the description and has been selected as lectotype.

The name was placed on the Official List of Specific Names in Zoology (ICZN, 1954: Opinion 278) as the type species of Pieris.

**BRISÉIS LINNAEUS, 1764**

*Papilio (Nymphalis) briseis* Linnaeus, 1764: 276, no. 94.

*Papilio (Nymphalis) briseis,* Linnaeus, 1767: 776, no. 139.

**Identity. Chazara briseis** (Linnaeus, 1764) (NYMPHALIDAE).

**Linnaean material examined**

LSL: 1♀ labelled “Briseis” [by Linnaeus], “Briseis 770.” [by Smith], here designated as LECTOTYPE; 1♂, pinned upside-down, labelled “no label” [by Tams].

**Subsequent material examined**

LSL: 1 ex., without abdomen, labelled “Italia”.

**Type locality. “Germania. D. Schreber” [Germany: Halle].**

**Remarks.** This species was described in the MLU work, but it was not figured by Clerck. Verity (1913: 184) stated that there was one obviously Linnaean specimen of German origin. This comment must refer to the specimen labelled by Linnaeus, which is on a pin corresponding reasonably well to those of Schreber and which we have designated as lectotype. It was reported by Scheven (1777) that Schreber collected the specimens from which Linnaeus described this species from Halle, a statement which would appear to confirm the type locality as Germany. However, the species may be considerably less widespread in Germany today than in Linnaeus's time.

**BUTES LINNAEUS, 1767**

*Papilio (Plebejus) butes* Linnaeus, 1767: 704, no. 261 [unnecessary replacement name for arcius Linnaeus, 1763].

**Remarks.** This name was first published as “Pap. Butes” in Clerck (1764: pl. 46, fig. 60). Kirby (1871: 304) accepted that the names assigned to his figures were written by Linnaeus and attributed the name butes to Linnaeus, 1767, an action we follow. The species illustrated was originally named arcius by Linnaeus (1763a).

See arcius.

**C-ALBUM LINNAEUS, 1758**

*Papilio (Nymphalis) c-album* Linnaeus, 1758: 477, no. 115.

*Papilio c-album,* Linnaeus, 1761: 279, no. 1069.

*Papilio (Nymphalis) c-album:* Linnaeus, 1767: 778, no. 168.

**Identity. Polygonia c-album** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: 1 ex. labelled “115 C album” [by Linnaeus], “C album 778.” [by Smith], here designated as LECTOTYPE.

De Geer Collection: 1♀, label in drawer “3, P. C-album. p. 198, Pap. C. Blanc.”.

**Subsequent material examined**


**Type locality. “Grossularia, Humulo, Urtica” [Sweden, from reference to Fauna Suecica (1746)].**

**Remarks.** Verity (1913: 181) indicated that the Linnaean specimen, which we have selected as lectotype, belongs to the form with the dark underside.

**C-AUREUM LINNAEUS, 1758**


*Papilio (Nymphalis) c-aureum,* Linnaeus, 1767: 778, no. 168.

**Identity. Polygonia c-aureum** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: 1 ex., without abdomen, labelled “C aureum” [by Linnaeus], “C aureum 778.” [by Smith], here designated as LECTOTYPE.

**Type locality. “Asia” [China, Canton, collected by Osbeck].**

**Remarks.** This species was not described as an MLU species but it was figured by Clerck on the “unpublished” Suppl. pl. 4, fig. 3. The specimen we have selected as lectotype represents one of those species collected or purchased by Osbeck (1765) in the vicinity of Canton. The nominate subspecies is widespread in China (Chou, 1994: 574).
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CAENEUS LINNAEUS, 1758
Papilio (Plebejus) caeneus Linnaeus, 1767: 796, no. 273 [an incorrect original spelling].

Remarks. The name Papilio caeneus Linnaeus, 1767 was placed on the Official Index of Rejected and Invalid Specific Names in Zoology (ICZN, 1966: 282, Opinion 755).

See cereus.

CALLIOPE LINNAEUS, 1758
Papilio (Heliconius) calliope Linnaeus, 1758: 466, no. 46.

Papilio (Heliconius) calliope; Linnaeus, 1764: 223, no. 42.

Pap.[ilio] calliope 46; Clerck, 1764: pl. 41, fig. 4.

Papilio (Heliconius) calliope; Linnaeus, 1767: 755, no. 46.

Identity. Stalachtis calliope (Linnaeus, 1758) (Riodinidae).

Linnaean material examined


Type locality. “Indiis” [South America].

Remarks. Listed by Linnaeus (1758: 466) as an MLU species and figured by Clerck. There are two specimens in the MLU collection, but only one was listed by Thunberg (1804). The specimen labelled “Calliope 2” has been designated as lectotype because it matches the specimen illustrated by Clerck in having the apical portion of the forewing yellow and orange rather than just orange.

CAMILLA LINNAEUS, 1764
Papilio (Nymphalis) camilla Linnaeus, 1764: 304, no. 122.

Papilio (Nymphalis) camilla; Linnaeus, 1767: 781, no. 187.

Identity. Ladoga camilla (Linnaeus, 1764) (Nymphalidae).

Material examined. None.

Type locality. “Lonicera caerulea Germaniae” [Germany].

Remarks. When Linnaeus described camilla he incorrectly synonymized Papilio amphion with it. P. amphion is now regarded as a valid species.

The identity of camilla and the complex history behind the name was detailed by the Commission (ICZN, 1958: Opinion 562). The name camilla Linnaeus, 1764 (dated incorrectly as 1763 in Opinion 562), was placed on the Official List of Specific Names in Zoology. Following the action of the Commission, the name camilla was revived in its original sense. Despite the complications, the identity of this species is now not in doubt.

It is paradoxical that in the original description, Linnaeus ignored the figure of Petiver (pl. 15, fig. 12), which actually represents camilla. P. camilla is the type species of the genus Ladoga Moore, which is treated by some authors as a junior subjective synonym of Limenitis Fabricius.

See amphion and sibilla.
Objective synonym of *board a ship.*

**Remarks.**

Corbet (1941: 23) identified *canace* as the species misidentified by Linnaeus as *alimena* and stated that the type was in the LSL. Later, he stated explicitly that the Linnaean type was labelled *alimena* in Linnaeus’s handwriting (Corbet, 1942: 92), and we accept this as a lectotype designation. The type locality was given as Canton and the collector as “[Osbeck]” by Corbet (1949: 195), but there seems to be no evidence for this suggestion.

A modern illustration of the nominate subspecies, which is distributed widely across the oriental mainland, is given by D’Aubra (1985: 276); the island subspecies are illustrated by Tsukada in Tsukada (1985, pls 47, 48).

Type species of the genus *Kaniska* Moore.

**Papilio (Danaus) canidia*** Linnaeus, 1768

Type locality. "Insulam Nord Eyland, Feb 9 to Feb 15 1767" [Java, collected by Sparrman].

**Remarks.** Corbet (1949: 195), despite stating that the "habitat given by Linnaeus" was "Nord Eyland", considered the "true habitat" to be Canton, China, and the specimen as having been collected by Sparrman. He also noted that the type depository was unknown. Java is not within the natural range of *canidia* according to Yata in Tsukada (1981: 436). This problem was discussed by Toxopeus (1951) who concluded that although the Sparrman material of *canidia* had probably indeed been collected from "Nord Eyland" (off Sumatra, see Java), it is likely that it had been introduced with vegetables from southern China on board a ship.

**Papilio (Nymphalis) cardamines*** Linnaeus, 1761: 276, no. 1039.

**Identity. Anthocharis cardamines*** (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined

LSL: 1♂ labelled “63. Cardamines [by Linnaeus]. "Cardamines 761" [by Smith], here designated as LECTOTYPE; 1♀ labelled "no label" [by Tams]; 1♀, pinned upside-down, labelled "no label" [by Tams]; 1♂, pinned upside-down, labelled "no label" [by Tams].

Type locality. Sweden [see Remarks].

**Remarks.** It is clear from Linnaeus (1746: 245), a work to which he referred in his original description (Linnaeus, 1768: 468), that he knew both sexes of this dimorphic species. He also gave the locality as "Upalaeae frequens". A year earlier, in *Oländska och Gothländska Resa* (Linnaeus, 1745: 389), he mentioned finding this species among bushes in Torslunda, Öland on 4 June 1741. We therefore accept Sweden as the type locality.

As stated by Verity (1913: 178) there are four Linnaean specimens, two of each sex, of which only one, which we have designated as lectotype, bears Linnaeus’s label.

**Papilio (Nymphalis) cardui*** Linnaeus, 1758: 475, no. 107.

**Cardamines** Linnaeus, 1761: 276, no. 1054.

**Remarks.** When Linnaeus (1767: 768) erected this name, he cited *eurydice* Linnaeus (1763) as, effectively, a synonym. It should be regarded, therefore, as an unnecessary replacement name.

See *eurydice*.

**Papilio (Danaus) cardamines*** Linnaeus, 1758: 468, no. 63.

**Papilio cardamines***; Linnaeus, 1761: 271, no. 1039.

**Identity. Anthocharis cardamines*** (Linnaeus, 1758) (PIERIDAE).

**Type locality.** Sweden [see Remarks].

**Remarks.** It is clear from Linnaeus (1746: 245), a work to which he referred in his original description (Linnaeus, 1768: 468), that he knew both sexes of this dimorphic species. He also gave the locality as "Upalaeae frequens". A year earlier, in *Oländska och Gothländska Resa* (Linnaeus, 1745: 389), he mentioned finding this species among bushes in Torslunda, Öland on 4 June 1741. We therefore accept Sweden as the type locality.

As stated by Verity (1913: 178) there are four Linnaean specimens, two of each sex, of which only one, which we have designated as lectotype, bears Linnaeus’s label.

**Cardamines** Linnaeus, 1758: 475, no. 107.

**Cardamines**; Linnaeus, 1761: 276, no. 1054.

**Papilio (Nymphalis) cardamines***; Linnaeus, 1761: 277, no. 157.

**Identity. Vanessa cardui*** (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: 1♂ labelled “107. Cardui” [by Linnaeus]. "Cardui 774" [by Smith], here designated as LECTOTYPE.

Subsequent material examined

Type locality. "Carduo Europae, Africae" [Sweden, from reference to Fauna Suecica (1746)].

Remarks. The specimen labelled by Linnaeus has been selected as lectotype. This species is extremely widespread and well known.

**CARICAE LINNAEUS, 1758**

Papilio (Plebejus) caricae Linnaeus, 1758: 484, no. 158.
Papilio (Plebejus) caricae; Linnaeus, 1764: 324, no. 142.

[Papilio] caricae 158; Clerck, 1764: pl. 20, fig. 2.
Papilio (Plebejus) caricae; Linnaeus, 1767: 792, no. 244.


Linnaean material examined

Subsequent material examined
LSL: 1♂ labelled "Cassiae 767"; 1♀ labelled "no label"; 1♀ labelled "T. Allen 1797."

Type locality. " Cassia Americae" [South America, possibly Surinam, or the Guianas region more generally, see Remarks].

Remarks. Described as an MLU species, but the figure by Clerck under the name cassiae (Plate 29, fig. 3) does not match the original description and is of urania Linnaeus. The confusion over the name was resolved by Aurivillius (1882: 72), who identified Clerck’s figure 2 of xanthus as representing the true cassiae. The specimen on which that figure was based is in the MLU and has been selected as lectotype. A figure of Merian also cited in the original description represents a different species (Bristow, 1991: 210). The type locality was cited as "?SURINAM" by Bristow (1991: 213) for the nominate subspecies, which occurs also, according to this author, in Guyana, French Guiana, Venezuela and Trinidad.

**CASSUS LINNAEUS, 1764**

Papilio (Danaus) cassus Linnaeus, 1764: 269, no. 88.
Papilio (Danaus) cassus; Linnaeus, 1767: 768, no. 125.

Identity. Tarsocera cassus (Linnaeus, 1764) (NYMPHALIDAE).

Linnaean material examined
LSL: 1 ex., without head or abdomen, labelled "Cassus" [by Linnaeus], "Cassus 768" [by Smith], here designated as LECTOTYPE; 1♂ of cassina Butler ?, unspread, labelled "no label" [by Tams].

Type locality. "ad Cap b. spei. Tulbagh" [South Africa, Cape Peninsula].

Remarks. Although described as an MLU species, there is no specimen in that collection. Nor was cassus listed by Thunberg (1804) as being in the MLU collection.
CENEUS LINNAEUS, 1758

Papilio (Barbarus) ceneus Linnaeus, 1758: 487, no. 181.

Papilio (Danaus) ceneus; Linnaeus, 1764: 271, no. 90.

Papilio (Danaus) caeneus; Linnaeus, 1767: 766, no. 111 (an incorrect subsequent spelling).

Identity. Delias ceneus (Linnaeus, 1758) (PIERIDAE).

Material examined. None.

Type locality. “Indiis” [Ambon, see Remarks].

Remarks. Aurivillius (1882: 78) restricted the name ceneus to Clerck's figure 3 of hyparete. This treatment was followed by Talbot (1928–1937), in his monograph of the genus Delias, and by Corbet (1949: 195), who considered the type locality to be Ambon and the type to be in the MLU. Vane-Wright (1975: 32) accepted this type locality and designated Corbet's putative MLU specimen as lectotype, citing also Clerck's figure of the species. We have been unable to locate any Linnaean material of this species in either the MLU or the LSL and nor was the species listed by Thunberg (1804) as being present when it was donated to the University of Uppsala. The lectotype designation by Vane-Wright is therefore restricted to the Clerck figure (Clerck, 1764, pl. 38, fig. 3).

The species occurs in Ambon and Seram, a recent illustration being given by Yagishita, Nakano & Morita (1993).

CEPHEUS LINNAEUS, 1758

Papilio (Barbarus) cepheus Linnaeus, 1758: 487, no. 183.

Papilio (Danaus) cepheus; Linnaeus, 1764: 252, no. 71. [Papilio] cepheus 183; Clerck, 1764: pl. 43, fig. 4.

Papilio (Heliconius) cepheus; Linnaeus, 1767: 755, no. 54 [as a junior synonym (form β) of horta Linnaeus (1764: 234)].

Identity. Acraea cepheus (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. “Indiis” [West Africa].

Remarks. Linnaeus (1767: 755) treated this “Indiis” species as a junior synonym (form β) of horta Linnaeus (1764: 234) from the Cape of Good Hope, adding “Varietas β forte e loco orta”. However, according to Ackery et al. (1996: 234, 238) cepheus is a good species from West and Central Africa, not a synonym of horta which is from South Africa.

P. cepheus was not described in the original description as an MLU species; nor was it mentioned by Thunberg (1804) as being present in that collection when it was donated to the University of Uppsala. It was, however, illustrated by Clerck. We have not located any specimen matching the figure of Clerck in the MLU or in the LSL. Nevertheless, horta was described as an MLU species and the specimen listed by Thunberg (1804) still exists in the MLU. There is also a specimen labelled by Linnaeus as horta in the LSL along with an unlabelled specimen – possibly of the same species.

The current identity of cepheus follows Pierre [1984: 46], who provided an illustration of the nominate subspecies (and of subsp. bergeriana). This matches the species represented by Clerck's figure. The species occurs in West Africa (see distribution map in Pierre [1984]).

See horta.

CEREUS LINNAEUS, 1767

Papilio (Plebejus) ceneus Linnaeus, 1767: 796 [incorrect original spelling].

[Papilio (Plebejus)] cereus Linnaeus, 1767: Errata.

Identity. Emesis cereus (Linnaeus, 1767) (RIODINIDAE).

Linnaean material examined. None.

Subsequent material examined

LSL: 1♂?, without head, labelled “Ovidius Fab. 4.320, March[ione]ss of Rock[ingha]m”.

Type locality. “Indiis” [South America].

Remarks. This species was described by Linnaeus (1767: 796) under the name ceneus, but was corrected to cereus in the Errata printed at the end of the unpaginated Addenda. The name Papilio cereus Linnaeus, 1767 was placed on the Official List of Specific Names in Zoology (ICZN, 1966: 282, Opinion 755). We have been unable to locate any Linnaean material.

There is a subsequent specimen in the LSL labelled ovidius Fabricius, a junior subjective synonym of cereus
Linnaeus, which matches Linnaeus’s description of ceres, notably in numerous silver spots on the wings.

Type species of the genus Polyctenius Hübner, a junior subjective synonym of Emesius Fabricius.

See caeneus.

CHARITHONIA LINNAEUS, 1767

Papilio (Heliconius) charithonia Linnaeus, 1767: 757, no. 65.

Identity Heliconius charithonia (Linnaeus, 1767) (NYMPHALIDAE).

Linnaean material examined

LSL: LECTOTYPE 1 ex. (♀), with abdomen in a gelatin capsule, labelled “Charitonia” [by Linnaeus], “Charitonia 757.” [by Smith]; 1 ♀ labelled “no label” [by Tams].

Type locality. “America. Brunniche” [probably the Virgin Islands, see Remarks].

Remarks. The two figures cited by Linnaeus in the original description of this species had been previously misidentified by him and had been used as part of his 1758 description of psidii. The spelling in the original description is charithonia, but at the end of Edition 12 of the Systema, in the Nomina Trivialia Papilionum” the name was spelled “Charitonias” as it was on Linnaeus's label on the lectotype. The latter spelling has been accepted by many subsequent authors (e.g. D'Abrera, 1984: 326, Racheli & Racheli (1997: 253), but not by earlier authors such as Kirby (1871: 141), or by Hemming (1933: 223) who designated charithonia as the type species of the genus Heliconius. As the name was not corrected by Linnaeus in the “Errata”, we treat the spelling in the original description as valid and follow ICZN (1956: 45) in which charithonia was placed on the Official List of Specific Names in Zoology (see also Brower, 1994).

The specimen bearing Linnaeus's label was illustrated (together with the label) in Comstock & Brown (1950: fig. 2). We accept this as a lectotype designation.

Based on a statistical study of variation in charithonia, Comstock & Brown (1950: 10) described five subspecies and considered the type specimen to match the race from the Virgin Islands – probably coming from St Thomas. The Virgin Islands was a Danish colony in the time of Linnaeus and Brunniche, and Brunniche is known to have sent material to Linnaeus and corresponded with him (H. Gaonkar, pers. comm.) It seems reasonable, therefore, both on taxonomic and historical grounds, to accept the Virgin Islands as the type locality of charithonia.

Nevertheless, it should be noted that Holzinger & Holzinger (1994: 141) stated that specimens belonging to some of the subspecies are determinable only by reference to their locality data rather than taxonomic features.

Racheli & Racheli (1997) cited the type locality as "America [Puerto Rico]", but without a supporting comment. We have found nothing in the historical literature to support that suggestion.

The distribution of charithonia includes Florida, the West Indies, Mesoamerica and north western South America (Holzinger & Holzinger, 1994: map 36). Localities cited in references by Linnaeus include Montserrat (by Edwards) and Jamaica (by Sloane).

Type species of the genus Heliconius Kluk.

CHRYSSIPUS LINNAEUS, 1758

Papilio (Danaus) chrysippus Linnaeus, 1758: 471, no. 81.
Papilio (Danaus) chrysippus; Linnaeus, 1764: 263, no. 82.
Papilio (Danaus) chrysippus; Linnaeus, 1767: 767: no. 119.

Identity. Danaus chrysippus (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: LECTOTYPE ♂ labelled “81. Chrysippus” [by Linnaeus], “Chrysippus 767.” [by Smith].


Subsequent material examined

LSL: 1 ♂ labelled “E. Ind., Roxburgh”; 1 ex., without abdomen, pinned upside-down, labelled “E. Ind., NEK”.

Type locality. “Aegypto, America” [China, Canton, see Remarks].

Remarks. Although Corbet (1949: 195) referred to the type as being in the LSL, his remarks are not specific enough to determine to which specimen he was referring. However, Corbet & Pendlebury (1966: pl. 29, fig. 3) illustrated as type the Linnaean-labelled specimen from the LSL, and we accept this as a valid lectotype designation.

Neither of the two Linnaean specimens is a particularly good model for the figure given by Clerck (Supplementary plate 5, fig. 2), but of the two the
lectotype is the best match, especially the underside.

Although Linnaeus gave the localities as Egypt and America in the original description, he also cited two works with other localities. One, by Ray, refers to a species from Jamaica and is a misidentification; the other, by Edwards, refers to chrysippus but is from China. In 1764, Linnaeus gave the locality only as Egypt and mentioned the name of Hasselquist, who was in Cairo from July 1750 to March 1751. He also added a reference to the description of Papilio aegyptius Schreber, a synonym of chrysippus.

It is very likely that the lectotype originated in China for two main reasons. First, Linnaeus appears to have correctly identified this species as occurring in China as well as Egypt. Second, the specimen is on a sewing needle similar to those on which Osbeck material was pinned and the species was listed by Osbeck (1765) as having been collected in the neighbourhood of Canton.

This is a widespread migratory species, which is both polymorphic and polytypic in various parts of its range (see, e.g. Smith et al., 1998 for Africa).

**CINXIA LINNAEUS, 1758**

*Papilio (Nymphalis) cinxia* Linnaeus, 1758: 480, no. 137.

*Papilio cinxia*; Linnaeus, 1761: 280, no. 1063.

*Papilio (Nymphalis) cinxia*; Linnaeus, 1767: 784, no. 205.

**Identity.** Melitaea cinxia (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: 10 labelled "137 Cinxia" [by Linnaeus], "Cinxia 784." [by Smith], here designated as LECTOTYPE.

**Subsequent material examined**


**Type locality.** "Veronica, Plantagine, Trifolio, Gramine" [Sweden, Uppsala, from reference to Fauna Suecica (1746)].

**Remarks.** In the original description Linnaeus referred to a number of previously published references, including his own Fauna Suecica (1746). In that work he made the comment "sat frequens in Horto Academico", indicating that it was found frequently in the Botanic garden in Uppsala, which we accept as the type locality. Verity (1913: 182) also assumed that this was the type locality as he stated "The type is a small, but brightly coloured ϕ of the Scandinavian race, and presumably comes from the Botanic Garden of Uppsala". He made no mention, however, of the number of Linnaean specimens in the collection. There is, in fact, only one such specimen, labelled as cinxia by Linnaeus, and this specimen has been selected as lectotype.

**CLEOPATRA LINNAEUS, 1767**

*Papilio (Danaus) cleopatra* Linnaeus, 1767: 765, no. 105.

**Identity.** Gonepteryx cleopatra (Linnaeus, 1767) (PIERIDAE).

**Linnaean material examined**

LSL: 1 δ, without head, abdomen, or left hindwing, labelled "Cleopatra" [by Linnaeus], "Cleopatra 765" [by Smith], here designated as LECTOTYPE; 1 δ labelled "no label" [by Tams].


**Subsequent material examined**

LSL: 1 δ, without head or abdomen, labelled "Turin, Giorna 1794"; 1 δ labelled "Rome, Lady MaGage(?), 5 parels(?), each."

**Type locality.** Barbaria. Brander [Algeria].

**Remarks.** Verity (1913: 180) referred to "A δ, which is obviously Linnaean, and bears his label, unmistakably [sic] belongs to the North African race". This specimen has been selected as lectotype. The specimen and its labels were figured by Tennent (1996: frontispiece, fig. 6).

**CLIO LINNAEUS, 1758**

*Papilio (Heliconius) clio* Linnaeus, 1758: 467, no. 52.

*Papilio (Heliconius) clio*; Linnaeus, 1764: 229, no. 48.

*Papilio (Heliconius) clio*; Linnaeus, 1767: 757, no. 66.

**Identity.** Eresia clio (Linnaeus, 1758).

**Linnaean material examined**


Type locality. "Sophora Americas" [America].

Remarks. Although described by Linnaeus (1758: 467) as an MLU species, *clio* was not figured by Clerck under that name, nor did Linnaeus cite Clerck. Thunberg (1804) listed a specimen under the name *nauplius* as being in the MLU collection when it was donated to the University of Uppsala, but he added a footnote stating "Clio Mus. Catal." That specimen is also listed under the name *nauplius* by Wallin (1994: 35).

The only figure cited in the original description was that of Merian ("Mer. surin. 35.t. 35"). This was a misidentification by Linnaeus as the description definitely does not fit the illustration. The Merian figure has subsequently been determined as *Hyposcada aegle* (Fabricius) (Ithomiinae), but no specimen matching that illustration has been found in Museum Wiesbaden (G. Lamas, pers. comm.).

Cramer (1779: pl. 257, fgs D, E) illustrated what he considered to be *clio*, citing Merian, but the Cramer figure is a very poor match for the species figured by Merian, and may represent *Dismorphia theucharila vitrea* Krüger (G. Lamas, pers. comm.).

Aurivillius (1882: 46) considered the illustration by Clerck (pl. 46, fig. 2) labelled *nauplius* to represent typical *clio* (Clerck's figure 1 of *nauplius* was identified by Aurivillius as typical *nauplius*). The specimen in the MLU collection labelled as *nauplius* by Aurivillius resembles Clerck's figure 2, but the specimen has antennae, whereas the Clerck figure shows them as dotted lines implying that they are absent from the specimen illustrated. Furthermore, Linnaeus never made any reference to the Clerck figures when describing *clio*. Therefore, the specimen in the MLU cannot be regarded as the specimen figured by Clerck as *nauplius*. The evidence points to this specimen being the type of *clio*, and we have designated it as the lectotype of that species.

The name *clio* should properly be regarded as the senior synonym for *clara* Bates.

See *nauplius*.

**CLYTUS LINNAEUS, 1764**

*Papilio* (Nymphalis) *clytus* Linnaeus, 1764; 268, no. 87.

*Papilio* (Danaus) *clytus* Linnaeus, 1767; 768, no. 124.


Linnaean material examined

MLU: 1 ex., without abdomen, labelled "Clytus" [by Linnaeus] "Clytus 788." [by Smith], here designated as LECTOTYPE.

Type locality. "Indiis" [see below].

Remarks. Aurivillius (1882: 96) treated this species as a senior synonym of *Papilio dissimilis* Linnaeus. Corbet (1941: 15) considered that the type should have been in the MLU and from SE China (type locality "Canton, China. Osbeck", Corbet, 1949: 195), but he noted that Aurivillius had been unable to locate any material. No mention was made in the original description of *clytus* as having been described from MLU material; nor was the species listed by Osbeck (1765).

Later, Corbet (1942: 93) wrote that of the 48 specimens described by Linnaeus from the MLU, 31, including what he thought was undoubtedly the type of *clytus*, had been found in the LSL. The specimen in question lacks a Linnaean label but Corbet's description of *clytus* refers to "very faint white inner submarginal lunules on both surfaces of the hind-wing". This is sufficient to identify the specimen to which he was referring. However, the evidence is not sufficient to establish that the specimen is the type of *clytus* although it is almost certainly Linnaean.

We located the specimen that Corbet considered to be the type of *clytus* associated with the labelled specimen of *panope*. However, there seems to be no justification for Corbet's assumption and we retain the specimen as part of the original series of *panope*.

Current usage (i.e. that based on Aurivillius, 1882) for the identity of this polytypic species is found, for example, in Tsukada & Nishiyama in Tsukada (1982b: 287, 288, pl. 73). The nominate subspecies is distributed widely on the oriental mainland.

See *panope*.

**CLYTUS LINNAEUS, 1764**

*Papilio (Danaus) clytius* Linnaeus, 1764; 268, no. 87.

*Papilio (Danaus) clytus*; Linnaeus, 1767; 768, no. 124.


Linnaean material examined

MLU: 1 ex., without abdomen, labelled "Clytus" [by Linnaeus] "Clytus 788." [by Smith], here designated as LECTOTYPE.

Type locality. "ad Cap. b. spei. Tulbagh" [South Africa, Cape of Good Hope].

Remarks. Although described in the MLU work, this species was neither listed by Thunberg as being present in the MLU collection when it was donated to the University of Uppsala, nor by Wallin (1994). Aurivillius (1882: 77) cited a Clerck figure "(ined.) t.12". The
black and white photograph of this plate that we have examined depicts the way in which the lectotype is set (including the fact that the antennae are missing), and we consider that it is a drawing of the actual specimen.

The currently accepted identity (e.g. Pringle et al., 1994: pl. 47) matches the specimen that has been designated as the lectotype.

Type species of *Dira* Hübner.

**COMMA LINNAEUS, 1758**

*Papilio (Plebejus) comma* Linnaeus, 1758: 484, no. 162.

*Papilio comma*; Linnaeus, 1761: 285, no. 1080.

*Papilio (Plebejus) comma*; Linnaeus, 1767: 793, no. 256.

**Identity. Hesperia comma** (Linnaeus, 1758) (HESPERIIDAE).**

Linnaean material examined

LSL: 1♂ labelled “162. Comma” [by Linnaeus], “Comma 793.” [by Smith], here designated as LECTOTYPE; 1♀ labelled “no label” [by Tams]; 1♂ labelled “no label” [by Tams].

**Type locality.** “Europa” [Sweden, see Remarks].

**Remarks.** Verity (1913: 190) stated that there were three Linnaean [LSL] specimens, two males and one female. One of the males and the female are of the northern race – small and dark with prominent quadrangular spaces on the underside. We have designated the male specimen labelled by Linnaeus, which is of the northern race, as lectotype.

The type locality is taken to be Sweden from the reference to *Fauna Suecica* (1746) cited in the original description.

Type species of *Hesperia* Fabricius.

**CRATAEGI LINNAEUS, 1758**

*Papilio (Danaus) crataegi* Linnaeus, 1758: 467, no. 57.

*Papilio crataegi*; Linnaeus, 1761: 269, no. 1034.

*Papilio (Heliconius) crataegi*; Linnaeus, 1767: 758, no. 72.

**Identity. Aporia crataegi** (Linnaeus, 1758) (PIERIDAE).**

Linnaean material examined

LSL: 1♂ labelled “57 Crataegi” [by Linnaeus], “Crataegi 758.” [by Smith], here designated as LECTOTYPE.

De Geer Collection: 1♀, without antennae, labelled in drawer “2. P. Craetegi. [sic] p. 182, P. blanc à nerv. noires”.

**Subsequent material examined**

LSL: 1 ex., without abdomen, labelled “Angl. Jones.”.

**Type locality.** “Pruno, Crataego, Sorbo” [Sweden, see Remarks].

**Remarks.** Among the illustrations cited in the original description, Linnaeus referred to a De Geer figure. There is one specimen (labelled *craetegi* not *crataegi*) in the De Geer collection, which we consider to be syntypic.

We have selected the LSL specimen as lectotype since it bears Linnaeus’s label. It is likely that Linnaeus collected this specimen himself since he referred to this species in his 1745 work – *Öländska och Gothländska Resa*, which was also cited as a reference in the original description. The collecting locality was recorded as Hangvar and the date of collection as 26 June 1741.

Type species of *Aporia* Hübner.

**CUPIDO LINNAEUS, 1758**

*Papilio (Plebejus) cupid0* Linnaeus, 1758: 482, no. 145.

*Papilio (Plebejus) cupid0;* Linnaeus, 1764: 313, no. 131.

*Papilio (Plebejus) cupid0;* Linnaeus, 1767: 787, no. 217.

**Identity. Helicopis cupid0** (Linnaeus, 1758) (RIODINIDAE).**

Linnaean material examined


**Subsequent material examined**


**Type locality.** “Gossypio Americes” [South America].

**Remarks.** Although *cupid0* was not described as an MLU species it was listed in the MLU work. It was not figured by Clerck, and Aurivillius (1882: 107) cited the figure by Cramer (1777, pl. 164, figs D-G) as being typical. We consider the MLU specimen to be syntypic and have selected it as lectotype.

A recent illustration of the nominate subspecies was provided by D’Abrera (1994: 899).

Type species of *Helicopis* Fabricius.
CYDIPPE LINNAEUS, 1761
Papilio (Nymphalis) cydippe Linnaeus, 1761: 281, no. 1066.

Remarks. The name cydippe Linnaeus, 1761, was rejected by the Commission (ICZN, 1958: Opinion 501) and placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

See adippe.

CYDIPPE LINNAEUS, 1763
Papilio (Nymphalis) cydippe Linnaeus, 1763a: 26, no. 76 [usage suppressed, see Remarks].
Papilio (Nymphalis) cydippe; Linnaeus, 1763b: 409, no. 76 [usage suppressed, see Remarks]. [Papilio] cydippe; Clerck, 1764: pl. 36, fig. 1. [Usage suppressed, see Remarks].
Papilio (Nymphalis) cydippe; Linnaeus, 1767: 776, no. 163.

Identity. Cethosia cydippe (Linnaeus, 1767) (NYMPHALIDAE).

Material examined. None.

Type locality. “India”.

Remarks. This name has been involved in the confusion with cydippe Linnaeus, 1761, and adippe Linnaeus, 1758. To resolve the problem relating to those two names, the Commission (ICZN, 1958: Opinion 501) suppressed all uses of the name cydippe Linnaeus for purposes both of priority and homonymy subsequent to 1761 and prior to 1767. By their action, the date of establishment of this species is now 1767.

There still appears to be some confusion over the usage of the name and its correct date: D’Abera (1977: 209) listed cydippe Linnaeus [1767] as a subspecies of chrysippe Fabricius, 1775, and Parsons ([1998]: 620) cited the date as 1763, despite mentioning the ruling by the ICZN.

We have been unable to locate any Linnaean material, but the identity of the species is not in question as it was figured by Clerck.

This species does not occur in India nor indeed on mainland Asia in general. Although there is no direct evidence to substantiate the citation of Ambon by Corbet (1949: 195) as the type locality, we accept it as likely (see Introduction).

CYRene LINNAEUS, 1758
Papilio (Nymphalis) cyrene Linnaeus, 1758: 474, no. 100.
Papilio cyrene; Linnaeus, 1767: 758, no. 74 as var. β of anacardii.

Identity. Salamis cyrene (Linnaeus, 1758) a junior subjective synonym of S. anacardii (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. “Indiis” [Africa].

Remarks. This species appears to have been described from material in Linnaeus’s own collection. However, no specimens have been located. Linnaeus (1767: 758) synonymized it, as var. β, with the so-called “American” species anacardii, but for some reason, although anacardii was described in 1758, he cited only the 1764 reference. The species was treated by Kirby (1871: 192) as a possible synonym of anacardii, presumably following Linnaeus. It was not dealt with by Aurivillius (1882: 50) when he treated anacardii and the name seems not to have been cited in modern works (e.g. Pringle et al., 1994: 117; Ackery et al., 1995).

In the absence of Linnaean material, we consider stability is best maintained by treating cyrene as a junior subjective synonym of anacardii.

CYTHEREA LINNAEUS, 1758
Papilio (Nymphalis) cytherea Linnaeus, 1758: 481, no. 139.

Identity. Adelpha cytherea (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Type locality. “Indiis” [South America].

Remarks. Although not originally described as an MLU species, cytherea was included in that work and was also figured by Clerck. It seems likely that Linnaeus simply omitted the usual designation “MLU” from the 1758 description since the species was mentioned by Thunberg (1804) as being in the MLU when the collection was donated to the University of Uppsala, and it was listed by Wallin [1994].

Aurivillius (1882: 103) noted that Clerck’s figure lacked an orange spot in the anal angle of the hindwing.
Because Aurivillius considered the presence of the spot to be characteristic of this species, he did not cite Clerck's figure as typical. We consider that this was just an omission, as the syntypic specimen in the MLU clearly shows this feature, and we have selected this specimen as lectotype.

A recent illustration of the nominate subspecies of this polytypic species was given by Neild (1996: pl. 3, fig. 114). The species is widespread in Central and tropical South America.

**DAMONE LINNAEUS, 1758**

*Papilio (Danaus) damone* Linnaeus, 1758: 469, no. 69. 
*Papilio (Danaus) damone*; Linnaeus, 1767: 763, no. 93.

**Identity.** Not established.

**Type locality.** "Indiis".

**Remarks.** This species was not recognized by Kirby (1871: 637; 1877: 838), nor was it dealt with by Aurivillius (1882). The original description is very brief and offers little to assist identification of the species. We consider it to be a *nomen dubium* and possibly it should be suppressed.

**DAPLIDICE LINNAEUS, 1758**

(Fig. 4)

*Papilio (Danaus) dapidice* Linnaeus, 1758: 468, no. 62. 
*Papilio (Danaus) dapidice*; Linnaeus, 1767: 760, no. 81.

**Identity.** Pontia dapidice (Linnaeus, 1758) (PIER-DAE).

**Linnaean material examined**

*LSL: 1♂ labelled "62 Dapidice" [by Linnaeus], "Dapidice 760." [by Smith]; 1♂, with genitalia dissected, pinned upside-down labelled "no label" [by Tams], "[LINN SOC., B.M.(N.H.), Rhopalocera, Slide No., P. Ackery 1988, dapidice" [see Remarks]; 1♀, without abdomen, labelled "no label" [by Tams].


**Type locality.** “Europa australi & Africa” [North-west Africa, according to Wagener, 1988: 33, see Remarks].

**Remarks.** Two genetically distinct entities within *dapidice* were recognized by Geiger, Descimon & Scholl (1988). One (true *dapidice*) occurs from France to Morocco, and is found also in Israel and southeastern Turkey, and the other (*edusa* Fabricius) is more easterly occurring in Italy and Corsica through the Balkans and Greece to central Turkey. No morphological characters have been found to distinguish convincingly the two taxa although there is a degree of east–west variation in the valvae, for which the identification value is equivocal (see Wagener, 1988).

While Geiger, Descimon & Scholl (1988) and Wagener (1988) originally treated the taxa as distinct species, in a later study (Porter et al., 1997) it was recommended that they should be regarded as well-differentiated subspecies of *dapidice*. This change was suggested by the finding that there were examples of a greater degree of genetic variation within different populations of pure *dapidice* than between *dapidice* and *edusa* on opposite sides of the hybrid zone north of Genoa in Italy.

Whatever the veracity of this later finding, it remains desirable to establish the identity of the nominate subspecies. We accept the recommendation of Wagener (1988) that since Linnaeus included Africa in his description, and because North African material appears to be of the western taxon, *dapidice* should be established as the western taxon. The two Linnaean females are on typical Linnaean pins bearing traces of lacquer, suggesting that they came from the same source. The presence of lacquer is commensurate with a North African derivation (see Introduction). Wagener treated the “restricted” type locality as North West Africa. However, the male in the LSL, which was dissected by P. Ackery (see Wagener, 1988), has valvae that appear to fit the eastern taxon (*edusa*). This specimen does not seem to be from the same source as the females, and is not certainly Linnaean. Since it is not possible to identify reliably the two taxa using morphological characters, we have not designated the female bearing Linnaeus’s label as lectotype at this stage, although that specimen (Fig. 4) would be the proper choice and not the male in the LSL. It is by no means impossible that distinguishing morphological characters will be found in future, even for the female sex. We are reasonably confident that such characters will indeed confirm the two Linnaean female specimens as representing the western taxon. Should it not, then issues of nomenclatural stability will certainly arise.

Verity (1913: 176) stated that the specimen labelled by Linnaeus was a female of the summer brood and, along with the other two specimens in the LSL, was of the European race. As a result of a Petiver reference being the first citation in the original description, Verity (1947: 175) later recorded the type locality as
Cambridge, England. Neither of these remarks establishes the identity of daplidice.

The generic name Pontia Fabricius was placed on the Official List of Generic Names in Zoology with daplidice as its type species (ICZN, 1954: Opinion 232, p. 268).

**DEIANIRA LINNAEUS, 1764**

Papilio (Nymphalis) deianira Linnaeus, 1764: 282, no. 100.
Papilio (Nymphalis) dejanira; Linnaeus, 1767: 774, no. 154 [incorrect subsequent spelling].

Identity. Lopinga deianira (Linnaeus, 1764) a junior subjective synonym of L. achine (Scopoli, 1763) (NYMPHALIDAE).

Linnaean material examined

LSL: 1♂, without abdomen, pinned upside-down, labelled “Dejanira” [by Linnaeus], “Dejanira 774” [by Smith].


Type locality. “Germania. D. Schreber.” [Germany].

Remarks. Although described as an MLU species and figured by Clerck. The text of the original description fits what is currently accepted as deiphobus, but the Petiver figure cited by Linnaeus (1758) is of P. rumanzovia Eschscholtz (Corbet, 1949: 187). Corbet regarded the type of deiphobus as being “the specimen in the Queen’s Collection”. There are, in fact, two specimens cited as deiphobus by Thunberg (1804) and Wallin (1994: 31) as being in the MLU collection. The male specimen cited above in the material examined, and which matches the Clerck figure, has been selected as the lectotype. The other specimen is listed under mennon.

See mennon.

**DEMOLEUS LINNAEUS, 1758**

Papilio (Eques) demoleon Linnaeus, 1758: 464, no. 35.
Papilio (Eques) demoleus; Linnaeus, 1764: 214, no. 33.
Papilio (Eques) demoleon; Linnaeus, 1767: 753, no. 46.

Identity. Papilio demoleon Linnaeus, 1758 (PAPILIONIDAE).

Linnaean material examined

LSL: 1♀ labelled “Epius Fab., 4.35., ex Ic. Icones.” [by Smith].


The specimen in the MLU does not match the original description and remains unidentified.

**DEIPHOBUS LINNAEUS, 1758**

Papilio (Eques) deiphobus Linnaeus, 1758: 459, no. 6.
Papilio (Eques) deiphobus; Linnaeus, 1764: 188, no. 7.

Identity. Papilio deiphobus Linnaeus, 1758 (PAPILIONIDAE).

Linnaean material examined


Type locality. “Asia” [Ambon, (Corbet, 1949: 187)].

Remarks. Described as an MLU species and figured by Clerck. The text of the original description fits what is currently accepted as deiphobus, but the Petiver figure cited by Linnaeus (1758) is of P. rumanzovia Eschscholtz (Corbet, 1949: 187). Corbet regarded the type of deiphobus as being “the specimen in the Queen’s Collection”. There are, in fact, two specimens cited as deiphobus by Thunberg (1804) and Wallin (1994: 31) as being in the MLU collection. The male specimen cited above in the material examined, and which matches the Clerck figure, has been selected as the lectotype. The other specimen is listed under mennon.

See mennon.

Subsequent material examined
LSL: 1♀ labelled "Bengal, Roxb."; 1♂ labelled "E. Ind, NEK".

Type locality. "Asia" [China, Canton, see Remarks].

Remarks. Listed by Linnaeus in the MLU work and figured by Clerck on pl. 6, fig. 1 of the "unpublished" plates.

The Linnaean descriptions of this species refer to two different taxa. In the original description (Linnaeus, 1758), the type locality was given as Asia. Moreover, the Ehret figure cited is clearly that of the species recognized currently as demoleus. Furthermore, we have seen a black and white photographic copy of an unpublished, coloured version by Clerck (pl. 6, fig. 1), which also is clearly of demoleus. Although Linnaeus never referred to that illustration, it seems reasonable to infer that he did indeed have a specimen of this species, particularly since it was listed as having been obtained by Osbeck (1765) from Canton.

By contrast, the 1764 description with the type locality cited as "Cap. b. Spei. Tulbagh" (i.e. from South Africa), refers to demodocus Esper. The 1767 description is a repeat of that given in 1758 (i.e. for demoleus), with the inclusion of an additional reference to a figure of demoleus by Kleemann from "Ostindia" and the type locality as for the 1764 description (i.e. for demodocus).

Following Linnaeus's 1764 treatment, Aurivillius (1882: 33) considered demoleus to be the African species, and erithonius Cramer the Asiatic species. Although agreeing with Aurivillius’s conclusions, Rothschild (1895: 279) thought it unsatisfactory to use demoleus for the African species, reinstated demoleus as the Asiatic species, and used demodocus for the African species.

Although Corbet (1949: 195) listed the depository as the LSL none of specimens of demoleus bear his type label. There is a red type label adjacent to the specimen labelled "35 Demoleus" by Linnaeus, but this is a specimen of the African species demodocus Esper. The only specimens in the LSL of the true demoleus occur under the name epius Fabricius (labelled by Smith). The species now in the LSL labelled "35 Demoleus" by Linnaeus is of the African species demodocus Esper.

It is labelled "Teligonu" by Linnaeus on the reverse of the label.

The current usage of demoleus as the Asiatic species (see e.g. Tsukada & Nishiyama in Tsukada, 1982b: 300), and as figured by Ehret, is well established. We have maintained stability by selecting the MLU syntype labelled "Demoleus" as lectotype.

This well known polytypic species, which is a pest of citrus, is widely distributed in the Indo-Australian region where five species are recognized (Parsons, [1998]: 258).

DEMOPHILE LINNAEUS, 1763
Papilio (Danaus) demophile Linnaeus, 1763a: 23, no. 66.
Papilio (Danaus) demophile; Linnaeus, 1763b: 406, no. 66.
[Papilio] demophile; Clerck, 1764: pl. 28, fig. 4.
Papilio (Danaus) demophile; Linnaeus, 1767: 761, no. 82.

Identity. Itaballia demophile (Linnaeus, 1763) (PIERIDAE).

Material examined. None.

Type locality. "Indiis" [South America].

Remarks. Linnaeus's concept of "Indiis" often refers to a variety of tropical localities. What is peculiar in this case is that in 1767 he referred to "India orientali" as the type locality for what is a Central and South American species.

In the original description, reference was made to a Clerck illustration of this species despite the fact that Clerck's work was not published until a year later. It is not certain if the specimen illustrated, a female, was from Linnaeus's own collection or from that of the MLU. Thunberg (1804) made no reference to this species being present in the MLU collection when it was donated to the University of Uppsala and no specimen was located in the LSL.

Despite the absence of Linnaean material, we can be confident of the identity of this species by reference to the illustration of Clerck (1764), as indicated by Aurivillius (1882: 174). A modern illustration is provided by D' Abrera (1981: 157).

DEMOPHON LINNAEUS, 1758
Papilio (Eques) demophon Linnaeus, 1758: 464, no. 36.
Papilio (Eques) demophon; Linnaeus, 1764: 215, no. 34.
[Papilio] demophon mas 36; Clerck, 1764: pl. 29, fig. 2.
Papilio (Eques) demophon; Linnaeus, 1767: 753, no. 47.

Identity. Archaeoprepona demophon (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
LSL: 1 ex. labelled “Demophon 753.” [by Smith]; 1 ex. labelled “no label” [by Tams?]; 1 ex., pinned upside-down, labelled “Amphimachus, Fab. 4. 37., ex Ic. Sultz: est omnino Demophon Linn.” [by Smith].


Type locality. “Indiiis” [South & Central America].

Remarks. Described by Linnaeus (1758) as an MLU species. Both the male and the female sexes were treated by Linnaeus and figured by Clerck. Thunberg (1804) listed only one specimen as being in the MLU as did Wallin [1994]. This specimen, which is indeed in the MLU, is a ♀ and clearly does not match the illustration of Clerck. Aurivillius (1882: 35) identified the true demophon on the basis of the description of the male by Linnaeus and the figure of the male by Clerck. He identified the description of the female by Linnaeus as laertes Hübner.

To have designated the female, which is the only extant MLU syntype of this species, as lectotype would have upset the long standing identity of demophon. We considered designating one of the two specimens of demophon in the LSL as lectotype, but are uncertain that they are syntypic. The identity of demophon is based, therefore, on the Clerck figure of the male.

The illustration by Neild (1996: fig. 1106) of a female of the nominate species of this polytypic species matches the typical figure of the male by Clerck.

Type species of the genus Archaeoprepona Frustorfer.

DIO MEDES LINNAEUS, 1758


Identity. Papilio diomedes Linnaeus, 1758 a junior subjective synonym [and of P. ulysses Linnaeus, 1758 (PAPILIONIDAE)].

Linnaean material examined
Type locality. "Indiis" [Ambon, according to Corbet].

Remarks. Although Linnaeus did not cite diomedes as an MLU species in the original description, there is a female specimen in the MLU collection on a typically Linnaean pin, which was identified as P. ulysses Linnaeus by Aurivillius. We have designated this specimen as lectotype.

According to Corbet (1949: 195) the type locality is Ambon.

The species is polytypic (see Parsons, [1998]).

Identity. Colobura dime (Linnaeus, 1758) (NYMPHIONIDAE).

Linnaean material examined. None.

Subsequent material examined
LSL: 1 ex., without head, labelled "Dirce 778., Surin. Voght."

Type locality. "Calidis regionibus" [South America, probably Surinam].

Remarks. We consider dirce to be an incorrect original spelling on the grounds that it is probably a lapsus calami (see the Code; ICZN, 1999: Article 32.5.1). In all Linnaean publications subsequent to the original description, the spelling dime was used and this has been accepted by all later authors.

The original descriptions of dirce (as dirce) and butes (as bates) were published by Linnaeus (1758). Linnaeus cited dirce as an MLU species, but it was not figured by Clerck. Yet bates was figured, although it was not an MLU species. Since Linnaeus (1764) synonymized butes as form β of dirce, it seems likely that Clerck's figure is actually that of dirce and that the name bates was used in error.

Aurivillius (1882: 90) listed dirce as the senior synonym of bates and the two names are treated as synonymous today. It appears, however, that what is now treated as dirce actually consists of two species with extensively overlapping ranges and differing in some external features of the adult and larva (K. Wilmott, pers. comm.). Since there exists no Linnaean material, and because of the taxonomic problem it would probably be appropriate to designate a neotype to fix the identity of dirce. Since research on this matter is continuing, we are reluctant to anticipate the results by designating a neotype in the present work.

In view of the taxonomic complexity over the identity of dirce, the identity of the illustration of the nominate subspecies given by Neild (1996: figs 748, 749) will require confirmation.

Type species of Colobura Billberg.

See bates.

Dissimilis Linnaeus, 1758
Papilio (Nymphalis) dissimilis Linnaeus, 1758: 479, no. 130.
[Observation] dissimilis 130; Clerck, 1759: pl. 16, fig. 2.
Papilio (Nymphalis) dissimilis; Linnaeus, 1764: 301, no. 119.
Papilio (Nymphalis) dissimilis; Linnaeus, 1767: 782, no. 196.

Identity. Chilasa dissimilis (Linnaeus) a junior subjective synonym of P. clitia Linnaeus (PAPILIONIDAE).

Linnaean material examined
LSL: 1♀ labelled "Indiis. Dissimilis" [Linnaeus], "dissimilis 782." [Smith], here designated as LECTOTYPE.


Type locality. "Asia" [China].

Remarks. We have designated as lectotype the LSL specimen. It bears Linnaeus's label.

Type species of the genus Chilasa Moore.

See clitia for priority over dissimilis.

Doris Linnaeus, 1771
(Fig. 5)
Papilio (Heliconius) doris Linnaeus, 1771: 536.

Identity. Laparus doris (Linnaeus, 1771) (NYMPHIONIDAE).

Linnaean material examined
LSL: 1♂ labelled "Ricini" [by Linnaeus], "Doris, Mant. 536, Fab.4.166." [by Smith], here designated as LECTOTYPE.
Subsequent material examined
LSL: 1 ex. labelled "Surin. Voght".

Type locality. "Surinami" [Surinam].

Remarks. There is no material in the MLU, but the fact that no dagger mark exists in the original description suggests that Linnaeus had seen one or more specimens. The specimen (Fig. 5) labelled "Ricini" by Linnaeus is conspecific with the specimen illustrated by Daubenton (under the name "Parasol de Surinam"), which was cited in the original description ("Aub. misc. t.72. f. 1. 2."); see Cowan (1967b: 312). It has been selected as lectotype and matches the description of the male of ricini. Although Linnaeus did not label the specimen as doris, it is clear that the specimen must have been in Linnaeus's collection prior to 1758. Only later (Linnaeus, 1771) did he realize that the specimen represented a species different from ricini.

Six subspecies were recognized by Holzinger & Holzinger (1994: 147).

Type species of the genus Laparus Billberg.

ECHLIPSIS LINNAEUS, 1763

Papilio (Danaus) eclipsis Linnaeus, 1763a: 23, no. 67.

Papilio (Danaus) eclipsis; Linnaeus, 1763b: 406, no. 67.

Papilio (Danaus) eclipsis; Linnaeus, 1767: 765, no. 107.

Identity. This 'species' has long been recognized as a fake. It is, in fact, Gonepteryx rhamni with hand-painted 'eye-spots' on all four wings. The name Papilio eclipsis Linnaeus should be excluded from zoological nomenclature since it is not based on an animal known to occur in nature and thus falls outside the remit of the Code (ICZN, 1999).

Linnaean material examined. None.

Subsequent material examined

Type locality. "America Septentrionali. De Geer".

Remarks. An account of the history of eclipsis is provided by Vane-Wright & Whalley (1985). In the original description Linnaeus cited De Geer, presumably as the person who supplied him with the specimen(s), but he referred also to a Petiver figure. Petiver's collection, part of which consists of two leather bound folio volumes containing pressed butterflies and other insects, was purchased after Petiver's death by Sir Hans Sloane and passed to the British Museum in 1753. It is now housed in The Natural History Museum, London. His specimen of eclipsis does not, however, appear to be there. According to Smith (1819, under the entry to Petiver) after Mr Jones had inspected Petiver's original specimen and 'discovered' that it was nothing more than a hand-painted P. rhamni "The late Dr Grey [sic] indignantly stamped the specimen to pieces". Smith also stated that eclipsis was based solely upon Petiver's figure, but, from the description, Linnaeus was supposed to have received material from De Geer. There are certainly two specimens in the LSL but they are not Linnaean. None was located in the De Geer collection in Stockholm.

Both Petiver and Linnaeus noted the similarity of eclipsis to rhamni (the Brimstone) as can be seen from part of the original description which stated "exactissime Papil. Rhamni". The type locality given for this European butterfly is also clearly incorrect.

ECLIPSIS LINNAEUS, 1763

(Figs 33, 34)

Papilio (Plebejus) echion Linnaeus, 1767: 788, no. 224.

Identity. Tmolus echion (Linnaeus, 1767) (LYC-AENIDAE).

Material examined. None.

Type locality. "America" [West Indies].

Remarks. Linnaeus had no specimen of this species, as indicated by a dagger mark after the description: it was described from the illustrations by Kleemann (Figs 33, 34) cited in the original description as "Roes. add. t. 7, f. 3, 4." The type is, therefore, the specimen from which that figure was produced, i.e. a female holotype. Although this figure was referred to as being by Rösel, it was actually published by Kleemann (1761).

Although the type locality was listed by Linnaeus as "America", it was described by Kleemann as a West Indian butterfly.

The identity of echion follows current usage (e.g. D'Abrera, 1995: 1198, 1199), which is in accordance with the Rösel figure.

Type species of the genus Tmolus Hübner.

ELECTO LINNAEUS, 1763

Papilio (Danaus) electo Linnaeus, 1763a: 21, no. 61.

Papilio (Danaus) electo; Linnaeus, 1763b: 405, no. 61.
Papilio (Danaus) electra; Linnaeus, 1767: 764, no. 101
[an incorrect subsequent spelling].

Identity. Colias electo (Linnaeus, 1763) (PIERIDAE).

Linnaean material examined
LSL: 1♂, unspread, labelled “Electo” [by Linnaeus], “Electra 764.” [by Smith], here designated as LECTOTYPE; 1♂ labelled “no label” [by Tams].

Subsequent material examined
LSL: 1d labelled “Pteridis” [possibly of Colias cmeus]; 2d labelled “Angl. Jones” [possibly of Colias croceus].

Type locality. “ad Cap. b. spei. Tulbagh” [South Africa, Cape of Good Hope area].

Remarks. Linnaeus (1767) appeared to change the name of this species from electo to electra. The names do not have the same derivation (J. Haugum, pers. comm), but, in taxonomic terms, electra should be treated as a subsequent misspelling. We have selected the specimen labelled by Linnaeus as lectotype. The label “Reridis” on one of the specimens listed under Subsequent material examined is written in an unidentified hand. Furthermore, the meaning of the term is unclear. Possibly there is a link with Colias palaeno, as mentioned by Linnaeus (1767: 764). Linnaeus cited the “Habitat” as “Europae Pteride aquilina”, although ferns are not the foodplants of either species.

This polytypic species is widespread in the Afro-tropics with the nominate subspecies occurring in the southern African subregion (Pringle et al., 1994: 280, pls 156, 158).

ELEUS LINNAEUS, 1758
Papilio (Barbarus) eleus Linnaeus, 1758: 486, no. 176.
Papilio (Nymphalis) eleus; Linnaeus, 1764: 312, no. 130.
Papilio (Nymphalis) elea; Linnaeus, 1767: 781, no. 183.

Identity. Adelpha eleus (Linnaeus, 1758) a junior subjective synonym of A. cytherea (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. “Indiis” [tropical America].

Remarks. According to Aurivillius (1882: 106) the name eleus represents the female of the species cytherea Linnaeus. This interpretation has been followed by later authors, although Neild (1996: 39) made no mention of the name eleus under his treatment of cytherea. We have not located any Linnaean material and follow current usage concerning the identity of this species.

ENCEDON LINNAEUS, 1758
Papilio (Barbarus) encedon Linnaeus, 1758: 488, no. 188.
Papilio (Danaus) encedon; Linnaeus, 1764: 244, no. 63.
Papilio (Danaus encedonia; Linnaeus, 1767: 762, no. 90 [incorrect subsequent spelling].

Identity. Acraea encedon (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. “Indiis” [Africa].

Remarks. Although described as an MLU species, encedon was not mentioned by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala and we have been unable to locate any Linnaean material.

It has been confused with other species, particularly encedana Pierre, as explained by Pierre (1976) who discussed in detail the identity of encedon and its relatives. Both encedon and encedana are widespread in Africa, and adults can be distinguished with confidence only by characters of the genitalia. Since there is no extant type material of encedon, doubt remains about the identity of encedon (and encedana) as established by Pierre (1976).

A second subspecies, A. e. rathjensi La Doux, exists in SW Saudi Arabia and Yemen (Ackery et al., 1995: 255).

ENCELADUS LINNAEUS, 1758
Papilio (Danaus) enceladus Linnaeus, 1758: 470, no. 77.
Papilio (Danaus) enceladus; Linnaeus, 1764: 254, no. 73.
Papilio (Danaus) enceladus; Linnaeus, 1767: 766, no. 112.

Identity. Not established (see Remarks).

Material examined. None.

Type locality. “Indiis”.

Remarks. Although described as an MLU species, enceladus was not figured by Clerck and nor did Thunberg (1804) or Wallin (1994) mention it as being present in the MLU collection. No Linnaean material exists.

Aurivillius (1882: 63) considered this species to belong to the genus Euploea, but Linnaeus's descriptions
were insufficient for him to attempt an identification of the species. He suggested that the name should be suppressed, a recommendation made also by Ackery & Vane-Wright (1984: 245), who considered that it should be suppressed for all purposes except homonymy. A case for suppression needs to be made to the Commission.

**ERATO LINNAEUS, 1758**

*Papilio (Heliconius) erato* Linnaeus, 1758: 467, no. 54.

*Papilio (Heliconius) erato*; Linnaeus, 1764: 231, no. 50.

*Papilio (Heliconius) erato*; Linnaeus, 1767: 757, no. 70.


Linnaean material examined


Subsequent material examined

LSL: 1 δ labelled “Cayenne, Paris, 1786.”

Neotype [examined]


Type locality. “Indiis” [South America, Surinam, see Remarks].

Remarks. Problems over the identity of erato were discussed by Turner (1967: 259) leading to a submission (Turner, 1984: 43,44) to the Commission to conserve the name *erato* Linnaeus by designating a neotype (for specimen data see above), and to set aside all previous designations of type specimen. The request to the Commission was accepted in a Ruling (ICZN, 1986: Opinion 1386).

The original description by Linnaeus (1758) could apply to several species of Heliconiinae. The figure by Clerck (1764) of erato was also cited by Linnaeus (1764) as erato. Aurivillius (1882) argued, however, that the 1764 description, which was a very full one, did not apply to the species illustrated by Clerck, but rather represented a senior synonym of *vesta* Cramer [1777]. Cramer’s illustration was cited as typical (“fig. typica”) for *erato* by Aurivillius (although he did not designate the figure as the type, as was stated by Turner, 1984). Turner’s submission to the Commission was based on the value of accepting long-term usage of the name *erato* in the sense of Aurivillius (i.e. as the senior synonym of *vesta* Cramer).

The MLU specimen of *erato* is a very flat specimen (possibly from the same source as *ricini*) on a typical Linnaean pin. The Linnaean specimens under the names *doris* and *erato*, which are labelled respectively “Ricini” and “Erato” by Linnaeus, are also very flat specimens, so it is possible that they too may have come from the same source.

See *doris*.

**ERIBOTES LINNAEUS, 1758**

*Papilio (Barbarus) eribotes* Linnaeus, 1758: 487, no. 179.

*Papilio (Heliconius) eribotes*; Linnaeus, 1764: 233, no. 52.

*Papilio (Danaus) eribote*; Linnaeus, 1767: 766, no. 115 [incorrect subsequent spelling].

Identity. Not established, see Remarks.

Material examined. None.

Type locality. “Indiis”.

Remarks. We have been unable to locate any Linnaean material. Kirby (1871: 637; 1877: 838) treated *eribotes* as an “undetermined species”; Aurivillius (1882: 49, 173) thought that it was a “Dismorphia spec.”, which seems possible from the original description; and Lamas (1995: 358) noted the homonymy of *Papilio eribotes* Linnaeus (1758) with *Papilio eribotes* Fabricius.

The name *eribotes* Linnaeus is a nomen dubium.

**ERYX LINNAEUS, 1771**

*(Figs 27, 28)*

*Papilio (Plebejus) eryx* Linnaeus, 1771: 537.


Material examined. None.

Type locality. “China”.

Remarks. We have not located any Linnaean material. Indeed, Linnaeus may have described this species based only on the illustrations (Figs 27, 28) by Daubenton (“Aub. misc. t. 71. f. 4. 5”, see Cowan, 1967b: 312) and simply omitted the dagger mark, which he used to indicate that he had no specimens.
The identity of this species is exemplified by, for example, D'Abrera (1986: 632) who provides illustrations of the nominate and one other subspecies.

**EUBULE LINNAEUS, 1767**

*Papilio (Danaus) eubule* Linnaeus, 1767: 764, no. 102.

Identity. *Phoebis eubule* (Linnaeus, 1767), currently considered to be a junior subjective synonym of *P. sennae* (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined. None.

Subsequent material examined

LSL: 1 ex., pinned upside-down, with abdomen partly eaten, labelled "Eubule 764."; 1♂ labelled "Eubule?, Cayenne 1786".

Type locality. "Carolina".

Remarks. We have been unable to locate any Linnaean material. The taxon was treated as the North American subspecies of *Phoebis sennae* by Brown & Heineman (1972: 303), and this decision was followed by Hodges et al. (1983). However, we follow Smith, Miller & Miller (1994) who treat *eubule* as a junior synonym of *sennae* (Linnaeus).

See *sennae*.

**EUPHENO LINNAEUS, 1767**

*Papilio (Danaus) eupheno* Linnaeus, 1767: 762, no. 88.

Identity. *Anthocharis eupheno* (Linnaeus, 1767) currently considered to be a junior subjective synonym of *A. belia* (Linnaeus, 1767) (PIERIDAE).

Material examined. None.

Type locality. "Barbaria" [Algeria].

Remarks. The name *eupheno* refers to the male of the species described by Linnaeus as *belia*. Verity (1913: 178) stated that there was no Linnaean specimen.

The identity of this species has now been stabilized and we follow current usage in treating *eupheno* as a junior subjective synonym, and the male, of *belia* (e.g. Tennent, 1996: 15). Two subspecies were recorded from North Africa by Tennent (1996), who illustrated several specimens both of the nominate form and *A. b. androgyne* Leech. The distinction between the two is by no means marked.

**EUPHROSYNE LINNAEUS, 1758**

*Papilio (Nymphalis) euphrosyne* Linnaeus, 1758: 481, no. 142.

*Papilio euphrosyne*; Linnaeus, 1761: 282, no. 1069.

*Papilio (Nymphalis) euphrosyne* Linnaeus, 1767: 786, no. 214.

Identity. *Boloria (Clossiana) euphrosyne* (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: 1♂ labelled "142. Euphrosyne" [by Linnaeus], "Euphrosyne 786." [by Smith], here designated as LECTOTYPE.

Type locality. "Asia" [Africa].

Remarks. Described by Linnaeus as an MLU species and figured by Clerck (although the plate number is 40 not 50 as cited by Linnaeus (1764 & 1767)). However, Thunberg (1804) made no mention of this species being present in the MLU collection when it was donated to the University of Uppsala. The only Linnaean specimen we have located is the one housed in the LSL and this has been designated as lectotype.

Linnaeus (1764) changed the type locality to "Angola", presumably because the Petiver illustration cited in the original description was listed as "Papilio albus Angolensis...". Ackery, Smith & Vane-Wright (1995: 189) recorded the species as occurring throughout much of Africa and Arabia, and recognized six subspecies – including the nominate.
 labelled by Linnaeus and we have designated it as lectotype.

EURYDICE LINNAEUS, 1763

Papilio (Danaus) eurydice Linnaeus, 1763a: 23, no. 65.
Papilio (Danaus) eurydice; Linnaeus, 1763b: 406, no. 65.

Identity. Satyrodes eurydice (Linnaeus, 1763) (NYMPHALIDAE).

Material examined. None (see Remarks).

Type locality. "Philadelphia, De Geer" [see Remarks].

Remarks. Linnaeus (1767: 768) erected an unnecessary replacement name, canthus, for this species. In their work on the description of new sibling species in the eurydice species group, Cardé, Shapiro & Clench (1970: 72) concluded correctly that no Linnaean specimen of this species existed and created a neotype for eurydice. They attributed this name to Johansson, but it is now accepted as being Linnaean. By definition, this specimen is also the neotype of canthus.

The neotype is a male labelled "euridice d, Morris Arboretum, Phila. Co. Pa., 29 June 1967, A.M. Shapiro". Cardé et al. (1970) state "We have added a label identifying the specimen as the neotype of Papilio eurydice Johansson." It is housed in the United States National Museum, Washington, D.C.

Type species of Satyrodes Scudder. See canthus.

EURYPYLUS LINNAEUS, 1758

Papilio (Eques) eurypylus Linnaeus, 1758: 464, no. 37.
Papilio (Eques) eurypylus; Linnaeus, 1764: 216, no. 35.
[Papilio] eurypylus 37; Clerck, 1764: pl. 28, fig. 2.
Papilio (Eques) eurypylus; Linnaeus, 1767: 754, no. 49.

Identity. Graphium eurypylus (Linnaeus, 1758) (PAPILIONIDAE).

Linnaean material examined


Type locality. "Indiis" [Africa].

Remarks. Although it was not described as an MLU species, eurypylus was figured by Clerck. Furthermore, Thunberg (1804) listed a specimen in the MLU, as did Wallin (1994). The MLU specimen is a reasonable match for the Clerck illustration, which Aurivillius (1882: 39) considered to be typical, and we have designated it as lectotype. The specimen in the Linnaean Collection labelled eurypylus by Smith, matches Cramer's eurita [sic] figure B.

Ackery et al. (1995: 386) noted that the species is
highly polymorphic and widespread in African forests below 2000 m. They also listed four valid subspecies, including the nominate. We are unable to be more particular about the type locality.

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**EUTERPE LINNAEUS, 1758**

*Papilio (Heliconius) euterpe* Linnaeus, 1758: 466, no. 49.

*Papilio (Heliconius) euterpe,* Linnaeus, 1764: 226, no. 45.

*Papilio (Heliconius) euterpe,* Linnaeus, 1767: 756, no. 61.


Linnaean material examined


Subsequent material examined

LSL: 1♀ labelled "Euterpe 756., March[ione]ss of Rock- [inghalm]; 1♀ labelled "no label".

Type locality. "America".

Remarks. Listed by Linnaeus as an MLU species, but not figured by Clerck. The only reference to an illustration cited by Linnaeus in the original description is one by Petiver ("t. 4. f. 2."). Linnaeus did not mention this figure in either his 1764 or 1767 descriptions of *euterpe*, but did so (Linnaeus, 1767: 758) in his description of *melpomene*. Clearly, he had changed his mind not only about the identity of this Petiver figure, but also about that of the Petiver figure he had originally used in 1758 when describing *melpomene* (Petiver "t. 6. f. 7.").

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**FERONIA LINNAEUS, 1758**

*Papilio (Nymphalis) feronia* Linnaeus, 1758: 473, no. 95.

*Papilio (Nymphalis) feronia,* Linnaeus, 1764: 283, no. 101.

[*Papilio* feronia 95; Clerck, 1764: pl. 31, fig. 1.

*Papilio (Nymphalis) feronia,* Linnaeus, 1767: 770, no. 140.


Linnaean material examined. None.

Subsequent material examined

LSL: 1♂ labelled "Feronia, Cayenne 1786."

Type locality. "India" [South America, probably the Guianas].

Remarks. The only specimen in the LSL is dated 1786. Jenkins (1983: 58) cited the type locality as unknown, but thought it was probably Surinam.

The identity follows current usage (e.g. Jenkins, 1983: 58; Neild, 1996: 85 and references therein) and the illustration by Clerck. Two poorly defined subspecies were treated by Jenkins (1983: 57) who wrote that a strong case could be made for not recognizing any subspecies of *feronia*. He gave the distribution of the nominate subspecies as the Guianas, Colombia and the whole of the Amazon basin.

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**FIDIA LINNAEUS, 1767**


Linnaean material examined. None.

Subsequent material examined

LSL: 1♂ [of a possible *Neohipparchia* species], pinned upside-down, labelled "Fidia 770.;" 1 ex. [of *fidia*], without abdomen, pinned upside-down, unlabelled.

Type locality. "Barbaria" [Algeria].

Remarks. Verity (1913: 184) stated that Linnaeus never possessed a specimen of this species, but Linnaeus did not signify the absence of material by the usual dagger mark after the description. However, we have not traced any Linnaean material. Verity also noted that the Petiver figure listed by Linnaeus under the name *hermione* represented *fidia*, something that Linnaeus failed to realize.

There are two non syntypic specimens in the LSL. The one labelled "Fidia 770" by Smith is probably a *Neohipparchia* species, the other is unlabelled and may be *fidia* but it is probably not from north Africa since the veins are not marked with white on the underside of the hindwing, a character used to distinguish North African specimens by Tennent (1996: 76). Kudrna (1977: 150) stated that the presence of white-marked veins applies only to some North African populations.
For the currently accepted identity of the nominate subspecies we follow Tennent (1996: 76). Kudrna (1977: 151) designated a (male) neotype from Morocco. The specimen is deposited in the Landessammlungen fur Naturkunde, Karlsruhe and is labelled "Morocco: Middle Atlas: 6500-7200 ft.: Tizi n'Taghzet: 11.-13.ix.1962: Colin Wyatt [leg.]".

Type species of \textit{Pseudotegumia} Agenjo.

\textbf{GALATHEA LINNAEUS, 1758}

\textit{Papilio (Nymphalis) galathea} Linnaeus, 1758: 474, no. 99.

\textit{Papilio (Nymphalis) galathea}; Linnaeus, 1767: 772, no. 147.

\textbf{Identity.} \textit{Melanargia galathea} (Linnaeus, 1758) (NYMPHALIDAE).

\textbf{Linnaean material examined}

LSL: 1♀, without head or abdomen, labelled "99. Galathea" [by Linnaeus], "Galathea 772." [by Smith], here designated as LECTOTYPE.


\textbf{Subsequent material examined}


\textbf{Type locality.} "Gramine Germaniae & australioris Europae" [Europe].

\textbf{Remarks.} Verity (1913: 183) stated that the specimen bearing Linnaeus's label was a large female of the dark form. That specimen has been selected as lectotype. The remaining specimens in the LSL are later British additions by Smith and are smaller and paler.

The MLU specimen of \textit{galathea} is pinned high on a lacquer-covered pin. In general, specimens originating from southern Europe have similar pins, which may explain the reference to "australioris Europae" in the original description. Type species of the genus \textit{Melanargia} Meigen.

\textbf{GLAUCIPPE LINNAEUS, 1758}

\textit{Papilio (Danaus) glaucippe} Linnaeus, 1758: 469, no. 65.

\textit{Papilio (Danaus) glaucippe}; Linnaeus, 1764: 240, no. 59.

\textit{Papilio (Danaus) glaucippe}; Clerck, 1764: pl. 35, fig. 3.

\textbf{Identity.} \textit{Hebomoia glaucippe} (Linnaeus, 1758) (PIERIDAE).

\textbf{Linnaean material examined}

LSL: 1♀ labelled "Glaucippe 762." [by Smith], here designated as LECTOTYPE; 1♂ labelled "Glaucippe β, Fab. 4.198." [by Smith].

\textbf{Type locality.} "Asia" [China, Canton].

\textbf{Remarks.} In 1764 Linnaeus altered the type locality to "China" and in 1767 he cited it as "Asia: China". Although not referred to as an MLU species it was figured by Clerck. However, it was not listed by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala, and we have not found any material of \textit{glaucippe} in the MLU.

There are two specimens in the LSL, although neither is labelled by Linnaeus. This species was one of those collected or purchased by Osbeck (1765) in the vicinity of Canton. The specimens are similar to other Osbeck material and are clearly syntopic. The specimen we have designated as lectotype matches the illustration given by Clerck, and the other fits the description given under "Sexus alter. . ." in 1764.

A large number of subspecies of \textit{glaucippe} have been described, with the nominate occurring in S China, Indo-China, and the Himalayas (Yata in Tsukada, 1981).

\textbf{GLAUCUS LINNAEUS, 1758}

\textit{Papilio (Eques) glaucus} Linnaeus, 1758: 460, no. 9.

\textit{Papilio (Eques) glaucus}; Linnaeus, 1764: 190, no. 9.

\textit{Papilio (Eques) glaucus}; Clerck, 1764: pl. 24, fig. 1.

\textit{Papilio (Eques) glaucus}; Linnaeus, 1767: 746, no. 9.

\textbf{Identity.} \textit{Papilio glaucus} Linnaeus, 1758 (PAPILIONIDAE).

\textbf{Material examined.} None.

\textbf{Type locality.} "America" [eastern North America, see under antilochus].

\textbf{Remarks.} Described by Linnaeus as an MLU species. In the more detailed description of 1764, Linnaeus gave the type locality as "America septentrionali. P. Kalm." and cited the Clerck figure. The species was not listed by Thunberg (1804) or Wallin [1994] and we have not located any specimens.

The species is distributed widely in North America,
with the nominate subspecies occurring in the eastern USA.

Type species of the genus *Euphoeades* Hübner, currently considered to be a junior subjective synonym of *Papilio* Linnaeus.

See *anttiolochus*, *turnus*.

**HECABE LINNAEUS, 1758**

*Papilio (Danaus) hecabe* Linnaeus, 1758: 470, no. 74.

*Papilio (Danaus) hecabe*; Linnaeus, 1764: 249, no. 68.

*Papilio (Danaus) hecabe*; Linnaeus, 1767: 763, no. 96.


Linnaean material examined

LSL: LECTOTYPE $\exists$, of the wet season form, labelled "74. Hecabe" [by Linnaeus], "Hecabe 763" [by Smith]; $1\delta$, of the dry season form, labelled "no label" [by Tams], both on long, black, headless pins typical of Osbeck specimens; $1\delta$, of the dry season form, labelled "differs from the true Hecabe in the black margin not being sinuated" [possibly by Smith], on a short headed pin, possibly contemporary with Linnaeus.

Subsequent material examined

LSL: 2$\delta$, of the wet season form, labelled "E. Ind., N. E. K."

Type locality. "Asia" [China, Canton].

Remarks. In the original description Linnaeus cited Asia as the type locality and also referred to a figure by Petiver. In 1764 he gave the type locality as China, expanded the Petiver reference, indicating that it was of a specimen from Luzon, and added a reference to a figure by Edwards. The species is figured by Clerck on pl. 6, fig. 4 of the "unpublished" supplementary plates (see Dal, 1985). We have also seen a black and white copy of a coloured version of this illustration. In 1767 the type locality was again given as "Asia" and a further reference was added (Gron. Zooph.).

Swinhoe (in Moore, 1905–1910: 52) gave a "Historical Note on the type of Hecabe" restricting it to the Linnaean specimen(s), not the specimen represented by Petiver and Edwards cited in the original description (see also Moore, 1905–1910: 80). Vane-Wright (1975: 34) designated the specimen figured by Corbet & Pendebury (1956: pl. 29, f. 6) as lectotype. However, since Corbet & Pendebury cited this specimen as "type" both on p. 63 and on the legend to the plate, it was they who should be taken to have made the designation (see the Code; ICZN, 1999: Article 74). The lectotype is almost certain to have come from the Canton region given its listing by Osbeck (1765) (and see Corbet, 1949: 195).

This species is distributed over the Oriental, Australian and Afrotropical regions and extends into the eastern Palearctic (Yata, 1995). Eighteen subspecies were recognized by Yata in his detailed revision. He listed the distribution of the nominate subspecies (Yata, 1995: 35) as: Japan, across China, Indo-China, India, Sundaland, Lesser Sundas and New Guinea to Australia. The lectotype, which is a specimen of the wet-season form, was figured by Yata (pl. 16: 3) along with several other specimens of the nominate subspecies.

**HECTOR LINNAEUS, 1758**

*Papilio (Eques) hector* Linnaeus, 1758: 459, no. 2.

*Papilio (Eques) hector*; Linnaeus, 1764: 181, no. 2.

[*Papilio*] hector 2; Clerck, 1764: pl. 33, fig. 1.

*Papilio (Eques) hector*; Linnaeus, 1767: 745, no. 2.


Linnaean material examined


Subsequent material examined

LSL: 1$\exists$ on a smoothly sharpened, slightly striate pin [possibly Linnaean] labelled "Hector 745." [by Smith]; $1\delta$ on a more roughly sharpened but similar pin labelled "Calcutta Randula ?" [by Smith?]; $1\delta$, without abdomen, on a roughly sharpened, slightly smoother pin with no neck labelled "Bailey Hai phai ket[?] 1797" [by Smith?].

Type locality. "Indiis" [probably India, Kerala, see Remarks].

Remarks. Described as an MLU species and figured by Clerck. Originally, Linnaeus gave the type locality as "Indiis", but later he cited it as "India orientalis" (Linnaeus, 1764). Aurivillius interpreted the type locality as Ceylon [Sri Lanka], which was followed by Corbet (1941: 12 and 1949: 195), but Gaonkar (1999: 220) argues that the type material might well have originated from the west coast of Kerala (India). Gaonkar (pers. comm.) points out that there was a Dutch colony in Kerala, which became home to many professional collectors whose activities led to much natural
history material being shipped back to Holland, whereas in Sri Lanka collecting activities were much rarer at the time. Furthermore, hector (and its food-plants) is much less common on the east coast of Sri Lanka than it is in Kerala. The west coast of Sri Lanka was explored much later than Linnaean times. On this interpretation, hector is the only Linnaean species based on material from India.

Illustrations of hector and a modern description were given by D'Abrera (1998: 54,55), who also (p.38) followed the view that the type locality was Sri Lanka. He included (p.40) a reproduction of Clerck's plate illustrating hector.

Type species of the genus Tros Kirby, currently considered to be a junior subjective synonym of Pachliopta Reakirt.

**HECUBA LINNAEUS, 1771**

(Figs 29, 30)

Papilio (Eques) hecuba Linnaeus, 1771: 534.


*Material examined. None.*

*Type locality.* “Cayania” [Surinam/Guianas region, see Remarks].

*Remarks.* The original description bears a dagger mark, indicating that Linnaeus did not have any specimens of this species. It appears to have been described solely from the illustrations (Figs 29, 30) by Daubenton cited by Linnaeus “Aub. misc. t. 19.” (see Cowan, 1967b: 312, and Introduction).

The nominate subspecies was recorded as occurring in Surinam by Le Moul & Réal (1962-3: 152) and the Guianas by D’Abrera (1984: 337). D’Abrera also provided colour illustrations.

**HEDONIA LINNAEUS, 1764**

Papilio (Nymphalis) hedonia Linnaeus, 1764: 279, no. 97.

Papilio (Nymphalis) hedonia; Linnaeus, 1767: 774, no. 153.


*Material examined. None.*

*Type locality.* “Asia” [possibly Ambon, see Remarks].

*Remarks.* Although described in the MLU work, this species was not figured by Clerck.

Corbet (1941: 24) considered that the Petiver figure cited by Linnaeus (1764) did not match the description, and actually represented the race from Luzon. He stated that the original description fitted the Moluccan form. Later he listed Ambon as the type locality and the depository of the type as the MLU collection (Corbet, 1949: 195). We are unable to explain Corbet’s reference to a type specimen since we located no material of hedonia. Nor was any specimen listed by either Thunberg (1804) as being present in the MLU collection when it was presented to the University of Uppsala, or by Wallin (1994).

The distribution of the nominate subspecies is given as Ambon and Seram by Tsukada & Kaneko in Tsukada (1986: 345).

**HELCITA LINNAEUS, 1763**

Papilio (Danaus) helcita Linnaeus, 1763a: 22, no. 62.

*Identity. MOTH. Aletis helcita* (GEOMETRIDAE) (Honey & Mikkola, in prep.).

**HELENA LINNAEUS, 1758**

(Fig. 22)

Papilio (Eques) helena Linnaeus, 1758: 461, no. 18.

Papilio (Eques) helena; Linnaeus, 1764: 199, no. 18. [Papilio] helena 18; Clerck, 1764: pl. 22, fig. 1.

Papilio (Eques) helena; Linnaeus, 1767: 748, no. 19.


Linnaean material examined


*Type locality.* “floribus Arecae Americas” [Java]; see Remarks.

*Remarks.* Linnaeus (1764) recorded the type locality as “America meridionali, in Palma.” Corbet (1949: 195) did not cite the Clerck plate, but only the Merian frontispiece (see Rothschild, 1895: 212 for interpretation of “frontispiece” and the identity of helena). He listed the “true habitat” as Java. The specimen in the MLU, figured by Clerck, is a misidentification by Linnaeus (see Rothschild, 1895: 212) for which the oldest available name is oblongomaculatus (Goze).

Haugum & Low (1982–1985: 242), who gave details...
of the involved taxonomic history of helena, treated the Merian illustration (Fig. 22) as the "type", which we take to constitute a valid lectotype designation. Their action formalized the identity of helena established by Rothschild (1895). They also accepted the type locality as Java.

This species is polytypic (see Haugum & Low, 1982–1985). The nominate subspecies is generally regarded as occurring in Java and the adjacent part of Sumatra (e.g. Tsukada & Nishiyama in Tsukada, 1982b: 213, 214).

HELENUS LINNAEUS, 1758

Papilio (Eques) helenus Linnaeus, 1758: 459, no. 4. [Papilio] helenus; Clerck, 1759: pl. 13, fig. 2.

Papilio (Eques) helenus; Linnaeus, 1764: 185, no. 4.

Papilio (Eques) helenus; Linnaeus, 1767: 745, no. 4.

Identity. Papilio helenus Linnaeus, 1758 (PAPILIONIDAE).

Linnaean material examined

LSL: 1 δ labelled “4 Helenus” [by Linnaeus] “Helenus 745” [by Smith] on a fairly typical, grooved Linnaean pin; 1 δ labelled “helenus” [by Tams?] mounted upside-down on an un-grooved but possibly Linnaean pin (abdomen badly eaten).


Clerck Collection: 1 δ “Helenus 4” (just pinned to the label, to which it was attached with verdigris so has not been removed recently) on a fairly typically Linnaean pin with faint groove.

Type locality. “Asia” [China, Canton].

Remarks. Listed by Linnaeus as an MLU species and figured by Clerck. Although the type locality was originally cited as “Asia”, in 1764 Linnaeus gave it as “India Orientali”. In the 1764 work he also added two references, which were omitted in 1767. Corbet (1941: 12) stated that the type was in the MLU, giving Southeast China as the Type locality. He noted that helenus was one of seven MLU species that are marked in Linnaeus’s personal copy of edition 10 as being present in the Linnaean collection, but dismissed the possibility of these being type specimens. Later (Corbet, 1949), he suggested that Osbeck was probably the collector (at least of the specimens Corbet listed as “co-types”), and listed Canton as the “true habitat”. There are two specimens of helena in the MLU collection, but it is not clear as to which specimen Corbet regarded as the type. The specimen we have designated as lectotype is not on a typical Osbeck needle. Nevertheless, the type locality of helena is indeed likely to be Canton, since the species was listed by Osbeck (1765).

According to Tsukada & Nishiyama in Tsukada (1982b: 310, 311), the distribution of the nominate subspecies of this polytypic species extends from northern India to southern China and the Malay Peninsula.

Type species of the genus Charus Moore is currently considered to be a junior subjective synonym of Papilio Linnaeus.

HELICE LINNAEUS, 1764

Papilio (Danaus) helice Linnaeus, 1764: 243, no. 62.

Papilio (Danaus) helice; Linnaeus, 1767: 760, no. 78 [incorrect subsequent spelling].

Identity. Pontia helice (Linnaeus, 1764) (PIERIDAE).

Linnaean material examined

LSL: 1 η, with abdomen dissected and stored in a separate tube (see Remarks), pinned upside-down, labelled “Hellica” [by Linnaeus], “Hellica 760” [by Smith], here designated as LECTOTYPE, 1 δ labelled “Hellica” [by Smith?].

Type locality. “ad Cap. b. spei. Tulbagh” [South Africa, Cape of Good Hope area].

Remarks. Although described in the MLU work this species was neither figured by Clerck nor listed by Thunberg (1804) as being in the MLU collection when it was donated to the University of Uppsala. We have not located any material in the MLU collection.

The lectotype, which has been designated above, and is in the Linnean Society Collection, bears a label written by Linnaeus as “Hellica”. This spelling matches the citation by Linnaeus (1767) and it may have been deliberate to avoid confusion with helice, another Linnaean species (see below). This specimen was determined by Tams as the “type δ” of Papilio helice. It is clearly Linnaean and the pin is consistent with other specimens collected by Tulbagh. It may have been re-labelled by Linnaeus around 1767, following the published change to helice.
The lectotype was dissected by Tams and the abdomen and genitalia are in a gelatin capsule contained in three glass vials. One of these vials contains the tegumen and the valvae, the second the aedeagus and juxta, and the third the abdomen.

Details and a figure of the nominate (South African) subspecies were provided by Pringle et al. (1994: 298, pl. 179).

**HELIE LINNAEUS, 1758**

*Papilio (Nymphalis) helie* Linnaeus, 1758: 475, no. 103.  
[*Papilio*] helie 103; Clerck, 1764: pl. 34, fig. 3.  
*Papilio (Nymphalis) helie*; Linnaeus, 1767: 773, no. 152.

**Identity.** *Fountainea* sp. Identity uncertain (NYMPHALIDAE).

**Material examined.** None.

**Type locality.** “Asia” [Central & South America].

**Remarks.** We have not located any Linnaean material of this species. There is confusion over the identity of *helie*, as was noted by Comstock (1961: 70 footnote), who even questioned the authorship and identity of the figure by Clerck. Comstock treated the Clerck figure as a misidentification of *helie* Linnaeus and “synonym” of *ryphea* Cramer. The only character that seems to be at odds with *helie* Linnaeus actually being the same species as *ryphea* is the slightly crenulate outer margin of the forewing.

Aurivillius (1882: 179) identified *helie* as a senior synonym, and geographical form, of *glycerium* (Doubleday). He did not accept the identification by Boisduval that the Clerck figure was the female of *ryphea* (Cramer). Aurivillius’s description of Clerck’s figure does not match Linnaeus’s description in certain respects. The most notable difference is that Linnaeus did not mention the presence of the ‘tail’ on the hindwing. A species that matches the Clerck figure perhaps better than both *ryphea* and *glycerium* is *euryype* Felder & Felder, a species easily confused with *ryphea*.

The identity of *helie* remains uncertain.

**HERMIONE LINNAEUS, 1764**

(Fig. 6)

*Papilio (Nymphalis) hermione* Linnaeus, 1764: 281, no. 99.  
*Papilio (Nymphalis) hermione*; Linnaeus, 1767: 773, no. 149.

**Identity.** *Hipparchia hermione* (Linnaeus, 1764) (NYMPHALIDAE), see Remarks.

**Linnaean material examined**

**LSL: LECTOTYPE ω, without abdomen, labelled “Her-**

mione” [by Linnaeus], “Hermione 773.” [by Smith]; 1 ω, without abdomen, pinned upside-down, labelled “no label” [by Tams].

**Type locality.** “Germania” [Germany].

**Remarks.** In the original description Linnaeus cited illustrations by Petiver and Rösel. Petiver’s illustration was based on one or more specimens from Lusitania and is of the species now recognized as *fidia* Linnaeus (Verity, 1913: 183). Rösel’s illustration is of *circe* Fabricius. In 1767, Linnaeus listed *P. fagi* Scopoli, 1763, under the name *hermione*. The two specimens in the LSL represent a third, and, perhaps, even a fourth species.

There has been a long and confused taxonomic history surrounding the species involved under this name (see Verity, 1913: 183; Hemming, 1943: 57). Kudrna (1977: 24), attempted to resolve the problem in his revision of *Hipparchia*. He treated *hermione* and *fagi* as separate species, noting that they were difficult to distinguish on external features, but were separable on characters of the male genitalia. Although both syntypes lack abdomens, he felt able to designate one of them as lectotype for *hermione* (Fig. 6), even though the genitalia could not be examined. Whether this specimen belongs to what is currently understood to be *hermione* or *fagi* remains uncertain. That confusion still exists is evident from the fact that *hermione* is treated as a junior synonym of *fagi* by Tolman (1997: 189).

The statement by Kudrna (1977: 24) that the lectotype “has two labels . . ., both in Linnaean handwriting” is incorrect: one is certainly Linnaean, but the other is Smith’s. The original pin of the lectotype has been broken and replaced by a later addition so is therefore of little value in determining the provenance of the specimen.

Just two subspecies were recognized by Kudrna (1977). He accepted Germany as the type locality of *hermione* and thus of the nominate subspecies.

**Type species of the genus *Hipparchia* Fabricius.**

**HERO LINNAEUS, 1761**

*Papilio (Heliconius) hero* Linnaeus, 1761: 274, no. 1047.  
*Papilio (Plebejus) hero*; Linnaeus, 1767: 793, no. 255.

**Identity.** *Coenonympha hero* (Linnaeus, 1761) (NYMPHALIDAE).

**Linnaean material examined**

**LSL: 1 ex., without head or abdomen, labelled “Philo-**

mela” [by Linnaeus], “Philomelus 768.” [by Smith], without abdomen, pinned upside-down, labelled “no label” [by Tams].

**Type locality.** “Dalekarlia frequentius C. Blom. Up-**

saliae rarius” [Sweden, Dalarna & Uppsala].
Remarks. Linnaeus (1761) cited a description in the 1746 edition of *Fauna Suecia* (1746), but this actually relates to the species described later as *C. tulla* Müller (see Melling in Emmet & Heath, 1989: 282).

Verity (1913: 186) stated that this species was not possessed by Linnaeus. The only specimen of *hero* in the LSL is a specimen labelled by Linnaeus as "Philomelus" (a misspelling of *philo*mel*ea*, which Linnaeus described from Java). We have designated it as lectotype of *hero*. Corbet (1942: 92) discussed the identities of *hero*, *philo*mel*ea* and *lara* (see under *philo*mel*ea*).

The type locality of *hero* is in the northern part of the range of the species (see e.g. Tolman, 1997: 250).

See *philo*mel*ea*.

**HIPPotHOE LINNAEUS**

_Papilio (Heliconius) hippothoe_ Linnaeus, 1761: 274, no. 1046.

_Papilio (Plebejus) hippothoe_; Linnaeus, 1767: 793, no. 254.

Identity. _Palaeochrysophanus hippothoe_ Linnaeus, 1761 (LYCAENIDAE).

Linnaean material examined

LSL: 1♂ labelled "Hippothoe“ [by Linnaeus], "Hippothoe 793." [by Smith], here designated as LECTOTYPE; 1♀ labelled "no label“ [by Tams].

Type locality. [Sweden, Uppsala].

Remarks. Linnaeus (1761) cited the type locality as "apud nos rarissime“ [around us rare], so it should be taken to be Linnaeus’s home town of Uppsala, not Stockholm as suggested by Verity (1943: 65). Verity (1913: 187) stated that there were two LSL specimens, both males of the northern race of this polytypic species. He also noted that the markings of the specimen we have designated as lectotype are slightly aberrant.

Type species of _Palaeochrysophanus_ Verity.

**HORTA LINNAEUS, 1764**

_Papilio (Heliconius) horta_ Linnaeus, 1764: 234, no. 53.

_Papilio (Heliconius) horta_; Linnaeus, 1767: 755, no. 54.

Identity. _Acraea horta_ (Linnaeus, 1764) (NYMPH-ALIDAE).

Linnaean material examined

LSL: 1♂ labelled “Horta“ [by Linnaeus] “Horta 753.” [by Smith]; 1 ex., without head, abdomen and right forewing, labelled “no label“ [by Tams].


Type locality. “ad Cap. b. spei. Tulbagh” [South Africa, Cape of Good Hope area].

Remarks. In 1767, Linnaeus (p. 755) synonymized an "Indiis“ species, *cepheus* Linnaeus (1758: 487), with *horta*, which was described from the Cape of Good Hope area. The two are recognized as separate species, *cepheus* from West and Central Africa (not "Indiis”) and *horta* from South Africa (see, e.g. Ackery et al., 1995: 234, 238).

Apart from the MLU specimen, there exists also a specimen labelled by Linnaeus as *horta* in the LSL together with an unlabelled specimen – possibly of the same species. Although the specimen in the LSL is labelled by Linnaeus, we have designated the MLU specimen as the lectotype since *horta* was originally described as an MLU species. The MLU specimen is one of the few Tulbagh species represented in that collection. It is on a very short lacquer-covered pin.

See *cepheus*.

**HYALE LINNAEUS, 1758**

_Papilio (Danaus) hyale_ Linnaeus, 1758: 469, no. 71.

_Papilio (Heliconius) hyale_; Linnaeus, 1761: 272, no. 1040.

_Papilio (Danaus) hyale_; Linnaeus, 1767: 764, no. 100.

Identity. _Colias hyale_ (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined

LSL: 1♂ labelled “71. Hyale,” [by Linnaeus], “Hyale 764.” [by Smith], here designated as LECTOTYPE; 1♀ labelled “no label“ [by Tams].

Subsequent material examined

LSL: 1 ex. labelled “Angl. Jones“.

Type locality. “Europa, Africa" [Europe].

Remarks. This species was described by Linnaeus from a mixed series (see Aurivillius, 1898a; Bretherton & Emmet in Emmet & Heath, 1989: 89). His citations (Linnaeus, 1758) to Petiver and Ray, both of which refer to Mouffet, are of *croceus* Geoffroy. That of Rösel also refers to *croceus*. The Uddman reference was later used by Linnaeus (1761: 272) in his description of *palaeno*. A reference to Edwards was also included in the 1761 work and the Rösel reference was omitted.
Further complications developed in Linnaeus, 1767, where citations to Scopoli and Geoffroy were added. These probably refer to C. croceus. The reference to Schaffer is to G. rhamni (see Aurivillius, 1898a: 63).

In his personal copy of Edition 12 of the Systema, Linnaeus added to the comment "Affinis nimium Hyales" the phrase "an mas P. Hyales?", which serves to underline the continuing confusion that existed in Linnaeus's mind over the identity of hyale and associated species. These difficulties were well described by Donovan (1798: 57) who based the identity of hyale on the specimen in the LSL, and provided an illustration of the species (pl. 238).

Verity (1913: 179) mentioned two males and a female from the LSL, probably of the summer brood. He did not cite a locality – other than that implicit from the term Palaearctic in the title of the paper. Two of these specimens are Linnaean and we have selected the specimen bearing Linnaeus's label as lectotype.

The "Habitat" cited by Linnaeus in the original description refers to both Europe and Africa. While Linnaeus might have received material (but of illustration of the species (pl. 238).

Verity (1913: 179) mentioned two males and a female from the LSL, probably of the summer brood. He did not cite a locality – other than that implicit from the term Palaearctic in the title of the paper. Two of these specimens are Linnaean and we have selected the specimen bearing Linnaeus's label as lectotype.

The "Habitat" cited by Linnaeus in the original description refers to both Europe and Africa. While Linnaeus might have received material (but of croceus) from North Africa from Brander, we have no evidence that this was so. Moreover, hyale does not occur in Africa. We cannot accept the restriction of the type locality to sites in southern England by Verity & Querci (1923-24: (15)) and referred to by subsequent authors. Their decision was based on the work of Ray, which was cited in Linnaeus's original description but, as shown above, Ray's description was partly based on that of Petiver and therefore also refers to the same species, namely croceus.

**HYLAS LINNAEUS, 1758**

*Papilio (Barbarus) hylas* Linnaeus, 1758: 486, no. 173. ([Papilio] hylas 173; Clerck, 1764: pl. 40, fig. 4 [misidentification].)

*Papilio (Nymphalis) hylas* Linnaeus, 1767: 780, no. 179 [as f. β of leucothoe].


*Material examined. None (see Remarks).*

*Type locality. "Indiis" [China, Canton, according to Corbet (1949), see Remarks].*

*Remarks. Clerck's illustration represents the species described by Linnaeus as telamon and appears to have been figured in error under hylas. We have not located any material labelled hylas by Linnaeus.

There has long been confusion over the names hylas, leucothoe, and perius. The specimen labelled leucothoe by Linnaeus is generally taken to be the species now known as Neptis hylas, the label data of which are cited under leucothoe.

Corbet (1949: 196) listed hylas as one of the species possibly obtained by Osbeck from Canton, SE China. Presumably, Eliot (1969) derived the type locality of SE China from Corbet's work. The species is not listed, however, in Osbeck (1765).

See leucothoe.

**HYPARATE LINNAEUS, 1758**

*Papilio (Danaus) hyparete* Linnaeus, 1758: 489, no. 68.

*Papilio (Danaus) hyparete* Linnaeus, 1764: 247, no. 66 [incorrect subsequent spelling].

*Papilio (Danaus) hyparete* Linnaeus, 1767: 763, no. 92.


*Linnaean material examined. None.*

*Subsequent material examined

**Type locality. "Indiis" [taken to be Java, see Remarks].**

*Remarks. Linnaeus did not mention MLU in the original description. In 1764, he referred to two figures by Clerck (1754-1764), both of which are cited as hyparete in Clerck's "Register". Of these, figure 3 is actually the female referred to by Linnaeus (1764: 247) as "Varietas an Femina?". Aurivillius (1882: 59) restricted the name hyparete to the male (i.e. Clerck's fig. 2), which he annotated as "fig. typica". This treatment was followed by Talbot (1928-1937) in his monograph of the genus Delias. The female illustrated as figure 3 by Clerck is of ceneus (see Aurivillius, 1882: 78).

Corbet (1949: 196) listed the type specimen as a male from Java in the MLU, but neither Thunberg (1804) nor Wallin (1994) cited material and we did not locate any MLU specimens. Java was also given as the type locality and area of distribution of the nominate subspecies by Yata in Tsukada (1981: 349, 351).

We confirm the identification by Aurivillius and other authors. A recent illustration is given by Yagishita, Nakano & Morita (1993).

**HYPERANTUS LINNAEUS, 1758**

*Papilio (Danaus) hyperantus* Linnaeus, 1758: 471, no. 85.
Papilio (Heliconius) hyperantus; Linnaeus, 1761: 273, no. 1043.
Papilio (Danaus) hyperantus; Linnaeus, 1767: 768, no. 127.

Identity. Aphantopus hyperantus (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
LSL: 1 δ labelled “85 Hyperanthus [sic]” [by Linnaeus], “Hyperanthus [sic] 768.” [by Smith], here designated as LECTOTYPE; 1 ♀ labelled “no label” [by Tams].

Subsequent material examined

Type locality. “Europae sylvis” [Sweden from reference to Fauna Suecica (1746)].

Remarks. Verity (1913: 186) stated that there was a male and a female “of the small form with smallish ocelli” in the LSL. The male specimen labelled by Linnaeus has been selected as lectotype.

HYPERBIUS LINNAEUS, 1763

Papilio (Nymphalis) hyperbius Linnaeus, 1763a: 25, no. 75.
Papilio (Nymphalis) hyperbius; Linnaeus, 1763b: 408, no. 75.

Identity. Argyreus hyperbius (Linnaeus, 1763) (NYMPHALIDAE).

Linnaean material examined
LSL: 1 ♀, without head and right forewing, labelled “Niphe” [by Linnaeus], “Niphe 785.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined
LSL: 1 ex. labelled “Marsh[a]m”; 1 ♀, pinned upside-down, labelled “China, M. of Rock[inha]m”; 1 ex. labelled “Jones I, Niphes var. New South Wales.”; 1 ♀, pinned upside-down, labelled “N South Wales”.

Type locality. “ad Cap. b. spei. Tulbagh” [South Africa, Cape of Good Hope area].

Remarks. This species was described in the MLU work (Linnaeus, 1764). A drawing was made by Clerck but not published. Thunberg (1804) listed a specimen under this name as being in the MLU collection and that specimen was also cited by Wallin (1994: 30), who pointed out that it did not refer to Papilio (Nymphalis) hyperbius Linnaeus, 1763. In fact, the MLU specimen is not a specimen of hyperbius Linnaeus, 1764, either, but rather a misidentification of ledo. Aurivillius (1882: 66) cited Clerck’s unpublished drawing, a photographic copy of which is housed in the BMNH Entomology Library. This uncoloured illustration is of indifferent quality but is a reasonable match for what we accept as hyperbius.


Two subspecies were cited by Ackery et al. (1995). The nominate subspecies occurs in the Cape Peninsula and adjacent areas and extends to Oudtshoorn in the east.

Type species of the genus Melampias Hübner.
HYPERMNESTRA LINNAEUS, 1763
Papilio (Nymphalis) hypermnestra Linnaeus, 1763a: 24, no. 69.
Papilio (Nymphalis) hypermnestra; Linnaeus, 1763b: 407, no. 69.
Papilio (Nymphalis) hypermnestra; Linnaeus, 1767: 783, no. 198.

Identity. Elymnias hypermnestra (Linnaeus, 1763) (NYMPHALIDAE).

Linnaean material examined
LSL: 1♀ labelled "Hypermnestra 783., ex descr. opt. est undularis Fab." [by Smith], here designated as LECTOTYPE.

Subsequent material examined
LSL: 1♀ labelled "Marsham 1797."; 1♀ labelled "near Hypermnestra, but differ."

Type locality. "Java".

Remarks. In 1767 Linnaeus cited Nordgren as the collector, which fits the type locality as being Java. Corbet (1949: 193) stated that the type of hypermnestra was in the Linnaean [LSL] collection and we have formally designated the Linnaean specimen as lectotype.

The distribution of the nominate subspecies was given as Java and Bawean by Aoki, Yamaguchi & Uemura in Tsukada (1982a: 176).

IDAS LINNAEUS, 1758
Papilio (Barbarus) idas Linnaeus, 1758: 488, no. 192.

Identity. Unidentified, name suppressed.

Type locality. "Indiis".

Remarks. The name idas Linnaeus, 1758 was rejected (ICZN, 1954: Opinion 269) in favour of idas Linnaeus, 1761, which is a species of Lycaeides (Lycaenidae). It was placed on the Official Index of Rejected and Invalid Specific Trivial Names in Zoology.

See idas Linnaeus, 1761.

IDAS LINNAEUS, 1761
Papilio idas Linnaeus, 1761: 284, no. 1075.
Papilio idas; Linnaeus, 1767: 790 (as synonym [female] of Papilio (Plebeius) argus).

Identity. Plebeius idas (Linnaeus, 1761) LYCAENIDAE.

Linnaean material examined
LSL: 1♀ [of argus], labelled "idas" [by Linnaeus], “Argus fem.” [by Smith]; 1 ex. [of argyronomon Bergsträsser], without abdomen, labelled "no label" [by Tams].

Type locality. “Ericetis” [Sweden, from reference to Fauna Suecica (1746)].

Remarks. The name idas Linnaeus, 1761, is a junior primary homonym of idas Linnaeus (1758: 488), but the latter is a nomen dubium and was suppressed by the ICZN (1954: Opinion 269) (see idas Linnaeus, 1758, above).

In the original description, Linnaeus cited a reference to Fauna Suecica (1746), which he had previously used under the original description of argus. Later (Linnaeus, 1767), he synonymized idas with argus, as form β (the female of the species). There has been considerable confusion over the names idas and argus by subsequent authors. The Commission (also in Opinion 269) ruled on the identity of idas and argus, treating the names as representing distinct taxa based on published genitalia figures. The name idas 1761 was placed on the Official List of Specific Trivial Names in Zoology.

Verity (1913: 189) stated that there were two Linnaean specimens of idas. Although the original description stated "alis ecaudatis caeruleis", the specimen labelled idas by Linnaeus is a female with entirely brown wings. Verity was uncertain if that specimen represented argus or "its near ally" [i.e. idas]. It is, in fact, a specimen of argus, as it possesses the claw-like foretibial spine typical of that species (see illustrations in, for example, Higgins & Riley, 1975). The other unlabelled specimen he considered to be a female of argyronomon Bergsträsser (sensu Staudinger).

By its ruling, the Commission has established the identity of idas, so it would be inappropriate to designate a lectotype – particularly since neither of the two syntypes belong to idas in the Commission's, and thus accepted, sense (e.g. Higgins & Riley, 1975).

See argus.

IDEA LINNAEUS, 1763
Papilio (Danaus) idea Linnaeus, 1763a: 22, no. 63.
Papilio (Danaus) idea; Linnaeus, 1763b: 405, no. 63.
[Papilio] idea; Clerck, 1764: pl. 38, fig. 1.
Papilio (Danaus) idea; Linnaeus, 1767: 758, no. 73.

Identity. Idea idea (Linnaeus, 1761) LYCAENIDAE.
Linnaean material examined
LSL: 1♀ labelled “Idea 758., ex. descr.” [by Smith].

Subsequent material examined
LSL: 1♂ labelled “Marsham, 1797.”

Type locality. “Indiis” [Ambon, see Remarks].

Remarks. Described as an MLU species and figured by Clerck. Although Clerck's illustration was published a year later, it was mentioned in the original description. In 1767 Linnaeus added an additional reference “Edw. av. t. 340”.

Corbet (1949: 196) listed the “type” as being in the MLU and the type locality as Ambon. We have selected the MLU specimen as lectotype.

Identification, distribution and general biology of this polytypic species are summarized by Ackery & Vane-Wright (1984: 238, 239).

IDOMENEUS LINNAEUS, 1758
Papilio (Barbarus) idomeneus Linnaeus, 1758: 464, no. 34.
Papilio (Eques) idomeneus; Linnaeus, 1764: 213, no. 32.

Identity. Caligo idomeneus (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Subsequent material examined
LSL: 1♂, labelled “Idomeneus., Surinam, Voght.”; 1♂, with head missing and abdomen partly eaten, pinned upside-down, labelled “Surin. Voght”.

Type locality. “America meridionali” (South America, probably the Guianas).

Remarks. Described as an MLU species and figured by Clerck. We have designated the specimen in the MLU as lectotype.

The species is polytypic. The nominate subspecies was said to be from the Guianas and Amazonas by D' Abrera (1995: 426), who provided a colour illustration.

See teucer.

IO LINNAEUS, 1758
Papilio (Nymphalis) io Linnaeus, 1758: 472, no. 88.
Papilio (Nymphalis) io; Linnaeus, 1761: 274, no. 1048.
Papilio (Nymphalis) io; Linnaeus, 1767: 769, no. 131.

Identity. Inachis io (Linnaeus).

Linnaean material examined. None.

Subsequent material examined

Type locality. “Urtica, Humulo” [Sweden from reference to Fauna Suecica (1746)].

Remarks. Verity (1913: 181) stated that “no specimen from the Linnean Collection is now in existence”. There
are, however, two specimens in the LSL, but both are attributed to Jones and therefore treated under **Subsequent material examined** as they are not syntypic.

Type species of the genus *Inachis* Hübner.

**IPHICLUS LINNAEUS, 1758**

*Papilio (Barbarus) iphiclus* Linnaeus, 1758: 486, no. 172.

*Papilio (Nymphalis) iphiclus*; Linnaeus, 1764: 311, no. 129.

*Papilio (Nymphalis) iphicla*; Linnaeus, 1767: 780, no. 181 [incorrect subsequent spelling].

**Identity. Adelpha iphiclus** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined.** None.

**Subsequent material examined**

LSL: 1 ex., with abdomen eaten, labelled “Iphiclæa 780., Surin. Voght.”.

**Type locality.** “Indiis” [South America, probably the Guianas].

**Remarks.** Although not described by Linnaeus as an MLU species, *iphiclus* was figured by Clerck (1759–1764: pl. 41, fig. 3). Clerck’s illustration was cited by Linnaeus in his 1764 and 1767 descriptions. He also added a manuscript reference to the figures by Drury (1770 pl. 14, figs 3,4) to his own copy of Edition 12 of the *Systema*.

Aurivillius (1882: 106, 179) disputed the suggestion by Kirby (1871) that Clerck’s figure represented *Adelpha lerna* (Hewitson), and suggested that it was close to the true *iphiclus*, particularly to the form described as *naxia* Felder. Aurivillius cited Drury’s figure as typical of *iphiclus*.

No type material exists, and, although several authors have studied the genus *Adelpha*, the identity of *iphiclus* Linnaeus has not been established. Neild (1996: 39, 40) and G. Lamas (pers. comm.) accept a species distinction between *iphiclus* and *iphicleola* (Bates), but some earlier authors (e.g. Godman & Salvin, 1879–1901: 306) treated them as synonymous.

We are disinclined to fix the identity of this species by designating a neotype because the identity of *iphiclus* has not been established convincingly, and because further work on the taxonomy of the genus is in progress (K. Willmott, pers. comm.).

**IRIS LINNAEUS, 1758**

*Papilio (Nymphalis) iris* Linnaeus, 1758: 476, no. 110.

*Papilio (Nymphalis) iris*; Linnaeus, 1767: 775, no. 161.

**Identity. Apatura iris** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: 1♂ [of *ilia*] labelled “Iris.” [by Linnaeus], “Iris 775.” [by Smith]; 1♂ [of *ilia*] labelled “110 Iris” [by Linnaeus], “Iliæ Fab. 4.110” [by Smith]; 1♂ [of *ilia*] labelled “no label” [by Tams].

**Subsequent material examined**

LSL: 1♂ [of *iris*], pinned upside-down, labelled “no label” [by Tams]; 1♀ [of *iris*] labelled “Iris fæm. rariss., Angl. Jones.”; 1♂ of *iris*, without head or abdomen, labelled “Angl. Huds. . . . [word illegible]”; 1♀ [of *ilia*] labelled “no label”.

**Type locality.** “Quercu Germaniae, Angliae etc. P. Forskål” [restricted to England (ICZN, 1954: Opinion 264, see Remarks)].

**Remarks.** The original description of *iris* is insufficient to distinguish between two nominal species *iris* and *ilia*. However, it has traditionally been accepted that the description referred to the species flying both in Britain and Europe, *Apatura iris*, rather than the purely continental species *A. ilia*. In fact, the only specimens that are identifiable Linnaean, and which are labelled by him as *iris*, belong to the species treated as *ilia*.

Verity (1913: 180) assumed that one of the unlabelled specimens was a Linnaean (i.e. syntypic) specimen of *iris*, but we conclude there is nothing to indicate that this assumption was correct and have treated it as a subsequent addition.

A case was submitted to the Commission to establish the identity of the nominal species *Papilio iris*. The Commission ruled (ICZN, 1954: Opinion 264) that the name *Papilio iris* should apply to the species that occurs in Britain, is known as the Purple Emperor, and is as represented by the figure in South (1906: pl. 29, fig. 1). South’s figure was designated to represent the lectotype, even though the specimen on which it was based could not have been syntypic. The specimen figured is a male but its location is now uncertain.

**IXILION LINNAEUS, 1758**

*Papilio (Barbarus) ixilion* Linnaeus, 1758: 488, no. 19.

*Papilio (Heliconius) ixilion*; Linnaeus, 1764: 230, no. 49 as form β of *thalia* Linnaeus, 1758.

*Papilio (Heliconius) ixilion*; Linnaeus, 1767: 757, no. 67 as form β of *thalia* Linnaeus, 1758.

**Identity. Uncertain: Actinote ixilion** (Linnaeus, 1758) may be a junior subjective synonym of *A. thalia* (Linnaeus, 1758) (see Remarks) (NYMPHALIDAE).
Material examined. None.

Type locality. "Indiis" [South America].

Remarks. Synonymized by Linnaeus (1764: 230) with thalia Linnaeus (1758: 467), as f. b. According to Lamas (1997: 1906: 39) this is a nomen dubium, possibly a synonym of Actinote thalia. We have not located any Linnaean material.

See thalia.

JANASSA LINNAEUS, 1764
Papilio (Nymphalis) janassa Linnaeus, 1764: 294, no. 112.

Papilio (Nymphalis) janassa; Linnaeus, 1767: 781, no. 185.

Identity. Euphaedra janassa (Linnaeus, 1764) a junior subjective synonym of E. medon (Linnaeus, 1963) (NYMPHALIDAE).

Material examined. None.

Type locality. "Indiis" [W Africa, see Remarks].

Remarks. Although described as an MLU species, janassa was not figured by Clerck. The species was not listed by Thunberg (1804) or Wallin [1994] and we did not locate any Linnaean specimens.

Ackery et al. (1995: 409) treated this species as West African and as a junior subjective synonym of Euphaedra medon (Linnaeus, 1763), which was also described as an "Indiis" species.

See medon.

JANIRA LINNAEUS, 1758
Papilio (Nymphalis) janira Linnaeus, 1758: 475, no. 106.

Papilio (Nymphalis) janira; Linnaeus, 1761: 275, no. 1053.

Papilio (Nymphalis) janira; Linnaeus, 1767: 774, no. 156.

Identity. Maniola janira (Linnaeus, 1758) a junior subjective synonym of M. jurtina (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
LSL: 1 ♂ labelled "106 Janira" [by Linnaeus], "Janira 774, mas Jurtinae." [by Smith], here designated as LECTOTYPE.

Subsequent material examined

Type locality. "Europae sylvis" [central Europe].

Remarks. Linnaeus treated janira and jurtina as separate species, but the observation that they are synonyms was made at an early stage in the history of the names (see jurtina). Verity (1913: 184) stated that the specimen labelled by Linnaeus was a male of the central European race. Indeed, Europe rather than North Africa fits the type locality. Verity made no mention of the specimen being the type, but since it is the only Linnaean material of this species we have designated it as lectotype.

See jurtina.

JASIIUS LINNAEUS, 1767
Papilio (Eques) jasius Linnaeus, 1767: Errata [corrected spelling].

Papilio (Eques) jason; Linnaeus, 1767: 749, no. 26. [Incorrect original spelling].

Identity. Charaxes jasius (Linnaeus, 1767) (NYMPHALIDAE).

Linnaean material examined
LSL: 1 ♂ labelled "Jason" [by Linnaeus], here designated as LECTOTYPE; 1 ♂ labelled "Jasius 749" [by Smith].

Type locality. "Barbaria. Brander" [Algeria.]

Remarks. Both specimens in the LSL are on similar lacquer-covered pins and we have selected the specimen bearing Linnaeus's label as lectotype. The specimen and its labels were figured by Tennent (1996: frontispiece, fig. 2).

The name jasius was placed on the Official List of Specific Names in Zoology (ICZN, 1959: 140), and jason (Linnaeus, 1767: 749) was placed on the Official List of Rejected and Invalid Specific Names in Zoology.

The species is polytypic, with the nominate subspecies occurring in North Africa and the Mediterranean (see Henning, 1988: 84,85). According to Linnaeus, the type material was collected by Brander and so is from Algeria (see Introduction).

JASON LINNAEUS, 1758
Papilio (Barbarus) jason Linnaeus, 1758: 485, no. 171.

Papilio (Eques) jason; Linnaeus, 1764: 210, no. 29.

Papilio (Eques) jason; Linnaeus, 1767: 752, no. 38.

Identity. Unknown (see Remarks).

Material examined. None.

Type locality. "Indiis".

Remarks. Kirby (1871: 559) listed jason as a senior synonym of doson (Felder, 1864), but cited Linnaeus
ment and he (Rothschild) considered but differ in details of the genitalia. Papilio (Nymphalis) jatmphae; Papilio (Nymphalis) jatmphae; Papilio eurypylus jason (1764) as the original description. Aurivillius (1882: 31, 37) treated jason as a junior subjective synonym of stelens Linnaeus (1758: 465), but according to Rothschild (1895: 433) this was only a tentative placement and he (Rothschild) considered jason to be a nomen dubium and placed it as a “query synonym” of Papilio eurypylus jason Linnaeus sensu Esper (1798): 237, pl. 58, fig. 5 (Jason sensu Esper was renamed by Felder as doson). Jordan (1909: 98) mentioned that eurypylus and doson are similar on external characters, but differ in details of the genitalia.

Given the uncertainty and the lack of any Linnaean material, we treat jason as a nomen dubium.

**JATROPHAE LINNAEUS, 1763**

Papilio (Nymphalis) jatropheae Linnaeus, 1763a: 25, no. 73.

**Papilio (Nymphalis) jatropheae;** Linnaeus, 1763b: 408, no. 73.

Papilio (Nymphalis) jatropheae; Linnaeus, 1764: 289, no. 107.

Papilio (Nymphalis) jatropheae; Linnaeus, 1767: 779, no. 172.

**Identity. Anartia jatropheae** (Linnaeus, 1763) (NYMPHALIDAE).

Linnaean material examined


Subsequent material examined

LSL: 1 ex., without abdomen, labelled “Jatropheae 779., Cayenne, 1786”.

**Type locality. “Jatropa Americas”** [South America, probably Surinam].

**Remarks.** Although this species was not described as an MLU species it was listed by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala and by Wallin [1994]. We have designated the specimen in question as lectotype. Aurivillius (1882: 91) cited the species but made no additional comments.

Munroe (1942: 1–4) considered that since Merian was cited as a reference in the original description it is probably safe to restrict the type locality to Surinam. However, he made no reference to any type specimen. Silberglied et al. (1979–80: 291) suggested that the name may be “a misnomer based on Merian’s [1705] erroneous larval foodplant association”. (In the papers of Munroe and of Silberglied et al., the name jatropheae was incorrectly attributed to Johansson.)

A colour illustration of this variable species, which is widespread in tropical America, is provided by D’Abrera (1987: 662).

Type species of the genus Anartia Hübner.

**JAVA LINNAEUS, 1768**

Papilio (Danaus) java Linnaeus, 1768b: 12.

**Papilio (Danaus) java;** Linnaeus, 1769: 504.

**Identity. Anaphaëis java** (Linnaeus, 1768) (PIER-IDAE).

Linnaean material examined. None.

Subsequent material examined

LSL: 1 ex., without abdomen, labelled “Coronea Fab. 4.201” [by Smith]; 1 ex., without abdomen, labelled “Marsham 1797”, (see Remarks).

**Type locality. “Javam . . . NORD EYLAND”** [an island off Sumatra, see Remarks; specimen collected by A. Sparrman].

**Remarks.** Linnaeus originally described java in Systema Naturae, Edition 12(3), 1768, where the type locality was given as “India Orientali. Sparman” [sic]. This work was suppressed by the Commission (ICZN, 1978: 376), among them that of Esper (1982: 376), causing, unintentionally, a number of Linnaean types to be suppressed (Fitton, 1978: 376), among them that of Papilio java. As with the names Phalaena altica and P. macrops (see Mikkola & Honey, 1993: 113, 140), Linnaeus published descriptions subsequently, thereby making the names available.

According to Linnaeus, 1768, java was collected by Sparrman between 9 to 15 February 1767, with the locality given as “ad Insulam NORD EYLAND”. Corbet (1949: 196) stated that the locality of the type specimen was not known, and, indeed, no specimens of this species labelled by Linnaeus have been found. Very few specimens collected by Sparrman and described by Linnaeus in 1768 have been located. However, there are two specimens in the LSL labelled as coronea, a junior synonym of java. Although we have listed these above under “Subsequent material examined”, it is possible that the first specimen is of Linnaean origin.

The locality “Nord Eyland” was identified by Tuxopeus (1951) as being an island lying “off the southeastern peninsula of Sumatra, next to the Lampong Districts”.

The species is polytypic, with a variable number of subspecies recognized. The nominate subspecies occurs in tropical America, and the type locality is given as “Javam . . . NORD EYLAND” [an island off Sumatra].
on Java and adjacent islands (Yata in Tsukada, 1981: 432, 433, who incorrectly cited the author of 'Java' as Sparrman, see Introduction).

In most revisions this species is placed in the genus Anaphaeis (often misspelled as Anapheis), which is sometimes treated as a subgenus Belenois Hübner.

JURTINA LINNAEUS, 1758

Papilio (Nymphalis) jurtina Linnaeus, 1758: 475, no. 104.

Papilio (Nymphalis) jurtina; Linnaeus, 1761: 276, no. 155.

Papilio (Nymphalis) jurtina; Linnaeus, 1767: 774, no. 155.

Identity. Maniola jurtina (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: LECTOTYPE ♀ labelled "104 Jurtina" [by Linnaeus], "Jurtina 774. fnm. Janirae" [by Smith].

Subsequent material examined


Type locality. "Gramine Europae, Africæ" [North Africa].

Remarks. Although Linnaeus (1767) referred to the observation "Janiram & Jurtinam copula connexas vid. O. F. Müller", he nevertheless retained the two species as distinct. In his personal copy of Edition 12 of the Systema, however, he made a manuscript emendation combining the two species under the name jurtina, placing janira as form β. Curiously, this alteration was not incorporated by Gmelin in the 13th edition. Fabricius (1787: 44) cited jurtina as a junior synonym of janira, an action that Hemming (1956) considered to be that of the first reviser. Since, as Hemming noted, adoption of this synonymy would have upset long established usage of jurtina as the senior name, the Commission (ICZN, 1958: 177, Opinion 506) gave precedence to the name jurtina.

According to Verity (1913: 184), the specimen labelled by Linnaeus as janira belongs to the north African race of this polytypic species. This view is supported by the fact that the pin is lacquered, which is often the case with specimens from north Africa or southern Europe. We accept Verity's treatment to constitute a valid lectotype designation. The specimen and its labels were figured by Tennent (1996: frontispiece, fig. 8).

See janira.

LAMPETIA LINNAEUS, 1758

Papilio (Nymphalis) lampetia Linnaeus, 1758: 476, no. 109.

Papilio (Nymphalis) lampetia; Linnaeus, 1764: 286, no. 104.

[\textit{Papilio}] lampetia 109; Clerck, 1764: pl. 39, fig. 2.

Papilio (Nymphalis) lampetia; Linnaeus, 1767: 775, no. 160.

Identity. Cupha lampetia (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined


Type locality. "Indi" [Ambon, according to Corbet, 1941].

Remarks. Described as an MLU species and figured by Clerck. Aurivillius (1882: 89) treated the Clerck figure as being typical. Corbet (1941: 14; 1949: 196) noted the type as being from Ambon. The nominate species range is listed as Ambon, Seram and Saporua in a Checklist of nymphalid butterflies of North & Central Maluku (Peggie & Vane-Wright, unpublished). Although the supposedly separate subspecies from Buru is in fact extremely similar in appearance, there seems no reason to doubt that Linnaeus's type came from Ambon. We have compared the specimen designated above as lectotype with material from Ambon, Seram and Buru in the BMNH.

LAOMEDIA LINNAEUS, 1767

(Fig. 7)

Papilio (Nymphalis) laomedia Linnaeus, 1767: 772, no. 145.

Identity. Junonia laomedia (Linnaeus, 1767) [an unnecessary replacement name for J. atlites (Linnaeus, 1763)].

Linnaean material examined

LSL: 1 ex. labelled "Laodamia" [by Linnaeus], "Laomedia 772." [by Smith], [designated as lectotype of atlites, see above]; 1 ex., with abdomen partly eaten, labelled "no label" [by Tams]; 1 ex., pinned upside-down, labelled "no label" [by Tams].
Remarks. When he erected the name laomedia, Linnaeus (1767) cited the original reference to the name atlites. Moreover, the description of laomedia was identical to that of atlites, except for two minor alterations and a change in the type locality from “Asia” to “India orientali.”

Corbet (1949: 196) cited a figure by Clerck from his “unpublished” Supplementary plates (pl. 7, fig. 5) under both the names laomedia and atlites. This unnamed figure matches the currently accepted identity of atlites. We have also seen a black and white photographic copy of a coloured version of this plate, which is labelled “Laodamia” [sic] and is a reasonable match for the specimen that is the lectotype of both laomedia and atlites (Fig. 7).

Hemming (1967: 54) stated that laomedia was treated subjectively on taxonomic grounds as representing the older established nominal species, atlites. We, however, consider it to be an unnecessary replacement name of atlites with, therefore, the same type specimen.

Type species of the genus Aresta Billberg (a junior subjective synonym of Junonia).

See atlites.

LARA LINNAEUS, 1764

Papilio (Plebejus) lara Linnaeus, 1764: 320, no. 138.

Papilio (Plebejus) lara; Linnaeus, 1767: 791, no. 238.

Identity. Leptomyrina (Gonatomyrina) lara (Linnaeus, 1764) (LYCAENIDAE).

Linnaean material examined

LSL: 1 ex., unspread, labelled “Lara” [by Linnaeus], “Lara 791.” [by Smith], here designated as LECTOTYPE.

Remarks. This species was described from the MLU but was not figured by Clerck. Neither Thunberg (1804) nor Wallin [1994] listed it as being in the MLU collection, and we located no specimens there. Aurivillius (1882: 111) cited the figure by Cramer (1779: pl. 270, figs F,G) as being typical, but there are several species that look similar (see Pringle et al., 1994, pl. 122).

The specimen in the LSL is labelled by Linnaeus and pinned with a typical Tulbagh pin. We have selected this specimen as lectotype.

Type species of the genus-group name Gonatomyrina Aurivillius.

LEDA LINNAEUS, 1758

Papilio (Nymphalis) leda Linnaeus, 1758: 474, no. 102.

Papilio (Nymphalis) leda; Linnaeus, 1767: 773, no. 151.

Identity. Melanitis leda (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: 1 ex. labelled “102 Leda” [by Linnaeus], “Leda 773.” [by Smith], here designated as LECTOTYPE.

Remarks. This species was described from the MLU but was not figured by Clerck. Neither Thunberg (1804) nor Wallin [1994] listed it as being in the MLU collection, and we located no specimens there. Aurivillius (1882: 111) cited the figure by Cramer (1779: pl. 270, figs F,G) as being typical, but there are several species that look similar (see Pringle et al., 1994, pl. 122).

The specimen in the LSL is labelled by Linnaeus and pinned with a typical Tulbagh pin. We have selected this specimen as lectotype.

Type species of the genus-group name Gonatomyrina Aurivillius.
Subsequent material examined
LSL: 1 ex. labelled “E. Ind. NEK”; 1 ex., pinned upside-down, labelled “E. Ind. NEK”; 1 δ, pinned upside-down, labelled “no label” [by Tams]; 1 δ, pinned upside-down, labelled “Leda, E. Ind. Roxb.”.

Type locality. “Asia” [see Remarks].

Remarks. The original description refers to more than one specimen since the words “Alter . . .”, “Altera . . .” are used. Furthermore, Clerck illustrated two specimens (Suppl. pl. 7, fig. 1) and we have also seen a black and white photographic copy of a coloured version of these figures. Corbet (1941: 20) stated that the type was not known. He considered that the type material would have come from Ambon since the reddish-brown on the upper surface, mentioned in the original description, fits the subspecies from that island. Later, Corbet (1949: 192, 196) treated the type as being from China, Canton, probably collected by Osbeck, and cited it as being housed in the LSL. We have formally designated the LSL specimen, which bears Linnaeus’s label, as lectotype. This species is not, however, among those listed by Osbeck (1765).

The species is distributed across the Afrotropical and Oriental regions, the nominate subspecies being regarded by, for example, Aoki, Yamaguchi & Uemura in Tsukada (1982a: 157) to be widespread in the orient.

LEILUS LINNAEUS, 1758
Papilio (Eques) leilus Linnaeus, 1758: 462, no. 25.

Identity. MOTH. Urania leilus (Linnaeus, 1758) (URNANIIDAE).

LEMONIAS LINNAEUS, 1758
Papilio (Nymphalis) lemonias Linnaeus, 1758: 473, no. 93.

Papilio (Nymphalis) lemonias; Linnaeus, 1764: 277, no. 95.

Papilio (Nymphalis) lemonias; Linnaeus, 1767: 776, no. 136.


Linnaean material examined.
LSL: 1 δ labelled “Lemonias” [by Linnaeus, “Lemonias 770.” [by Smith], here designated as LECTOTYPE.


Subsequent material examined
LSL: 1 ex., without abdomen, labelled “E. Ind. NEK”; 1 ex., without abdomen, pinned upside-down, labelled “E. Ind. NEK”; 1 ex., pinned upside-down, labelled “M. of Rock[ingham]”.

Type locality. “Asia” [see Remarks].

Remarks. This species was described from the MLU and illustrated by Clerck on one of his unpublished, uncoloured plates (pl. 7, fig. 2), of which we have seen a black and white photographic copy of a coloured version. The specimen in the LSL, which is labelled by Linnaeus, and the material in the MLU, appears to have come from Osbeck, an interpretation based primarily on the pins. All these specimens are, therefore, syntypic. Osbeck almost certainly acquired material of lemonias from the Canton region, since the species is listed by him (Osbeck, 1765).

Corbet (1949: 196) cited the type as being in the Linnaean collection and collected in China, Canton by P. Osbeck. The syntype labelled “Lemonias” by Linnaeus matches the Clerck figure particularly well and it has been selected as lectotype.

The nominate subspecies has a broad distribution in the Oriental region mainland (Tsukada & Kaneko in Tsukada, 1985: 356, 357). See aonis.

LENA LINNAEUS, 1767
(Figs 35, 36)
Papilio (Nymphalis) lena Linnaeus, 1767: 784, no. 206.

Identity. Pierella lena (Linnaeus, 1767) (NYMPHALIDAE).

Linnaean material examined. None.

Subsequent material examined

Type locality. “America meridionali”.

Remarks. The identity of this species follows current usage and is established by the good illustrations of Kleemann (reproduced as Figs 35, 36 of the present
work) that were cited as "Roes. addit." in the original description. This figure matches the illustrations of what D'Abrera (1988: 737) refers to as form lena.

**LEUCOTHOE LINNAEUS, 1758**

(Fig. 8)

Papilio (Nymphalis) leucothoe Linnaeus, 1758: 478, no. 122 [originally spelled leucothoe.]

Papilio (Nymphalis) leucothoe; Linnaeus, 1764: 292, no. 110.

Papilio (Nymphalis) leucothoe; Linnaeus, 1767: 780, no. 179.

Identity. Athyma leucothoe (Linnaeus, 1758), a junior subjective synonym of Athyma perius Linnaeus (NYMPHALIDAE).

Linnaean material examined

LSL: 1♂ [of hylas] labelled "Leucothoe" [by Linnaeus], "Leucothoe 780." [by Smith], 1♀ [of leucothoe], pinned upside-down, labelled "no label" [by Tams], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1 ex. [of leucothoe] labelled "China, M. of Rockingham".

Type locality. "Asia" [China, see Remarks].

Remarks. This species is a subjective synonym of perius Linnaeus, 1758: 471. The senior synonym was fixed as perius by Aurivillius (1882: 68), who acted as the first reviser (see also Hemming, 1967: 65, 66).

There are two specimens in the LSL. These are from the same source and are almost certainly those figured by Clerck (supplementary plate 5, fig. 4). The specimen bearing Linnaeus's label leucothoe is of the species now recognized as hylas. In fact, the two species were treated as synonymous by Linnaeus in 1764. The unlabelled specimen (Fig. 8) is the one on which the description of leucothoe was based (the original description referred to the 7 black-spotted white marks on the hindwing) and, for this reason, we have selected it as lectotype.

The right-hand figure of the Clerck plate was identified by Aurivillius (1882: 68) as perius. (The left hand figure he incorrectly identified (p. 93) as Neptis sappho Pallas.)

Type species of the genus Athyma Westwood.

**LEVANA LINNAEUS, 1578**

Papilio (Nymphalis) levana Linnaeus, 1767: 783, no. 201.

Identity. Araschnia levana (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: 1♂, pinned upside-down, labelled "133 Levana" [by Linnaeus], "Levana 783." [by Smith], here designated as LECTOTYPE.

Type locality. "Urtica Europae australioris. P. Forsskål." [see Remarks].

Remarks. In the original description, the Finn, Pehr Forsskål was cited as the collector. Although Forsskål called at Marseilles on a Danish expedition bound for the East, which left Copenhagen on 4 January 1761 (Hemming, unpublished), this cannot be the type locality since levana does not occur in southern France. Higgins & Riley (1975: 89) gave Germany as the type locality, presumably because that is the type locality of pmrsa, which they treated as a form of levana.

Although Verity (1913: 182) stated that "There is nothing noteworthy about the one typical specimen", the wings are crumpled suggesting that the specimen was not fully emerged when collected and so may have been reared. We have formally designated this specimen as lectotype.

Type species of the genus Araschnia Hübner.

**LIBYE LINNAEUS, 1767**

Papilio (Nymphalis) libye Linnaeus, 1767: 772, no. 146.

Identity. Magneuptychia libye (Linnaeus, 1767) (NYMPHALIDAE).

Material examined. None.

Type locality. "India" [South America].

Remarks. We have not located any Linnaean material of this species. The current identity is given by, for example, D'Abrera (1988: 781).

Type species of the genus Magneuptychia Forster.

**LIGEA LINNAEUS, 1758**

Papilio (Nymphalis) ligea Linnaeus, 1758: 473, no. 97.

Papilio (Nymphalis) ligea; Linnaeus, 1761: 275, no. 1050.

Papilio (Nymphalis) ligea; Linnaeus, 1767: 780, no. 144.

Identity. Erebia ligea (Linnaeus, 1758) (NYMPHALIDAE).
Linnaean material examined

**LSL:** 1♀, without abdomen, labelled "97 Ligea" [by Linnaeus], "Ligea 772." [by Smith], here designated as LECTOTYPE; 1♂ labelled "no label" [by Tams]; 1♂ labelled "no label" [by Tams].

**Type locality.** "Europae sylvia" [Sweden from reference to Fauna Suecica (1746)].

**Remarks.** Verity (1913: 183) noted that there were two specimens of this species in the LSL (a male and a female) that were definitely of Linnaean origin and that the third specimen (a male) was probably also Linnaean. We consider all three to be Linnaean and syntypic, and have designated the specimen bearing Linnaeus's label as lectotype.

The nominate subspecies occurs from eastern Europe to the Urals, including lowland Fennoscandia (e.g. see Higgins & Riley, 1975). *E. ligea dourensis* Strand is found in northern Fennoscandia in mountainous areas.

**LUCINA LINNAEUS, 1758**

*Papilio (Nymphalis) lucina* Linnaeus, 1758: 480, no. 135.

*Papilio (Nymphalis) lucina*; Linnaeus, 1761: 280, no. 1061.

*Papilio (Nymphalis) lucina*; Linnaeus, 1767: 784, no. 203.

**Identity.** *Hamearis lucina* (Linnaeus, 1758) (LYC-AENIDAE).

**Linnaean material examined**

**LSL:** 1♂ labelled "135 Lucina" [by Linnaeus], "Lucina 784." [by Smith], here designated as LECTOTYPE; 1 ex., with abdomen partly eaten, labelled "no label" [by Tams].

**Subsequent material examined**

**LSL:** 1 ex., with abdomen partly eaten, labelled "Angl. Huds.usr.".

**Type locality.** "Europa".

**Remarks.** In 1761 Linnaeus noted that *lucina* was uncommon in the Uppsala area ("apud nos minus frequens"). Verity (1913: 186) stated that there were just two Linnaean specimens. Higgins & Riley (1975: 231) followed Verity (1943: 385) in giving England as the type locality. Verity's citation was based on the first reference given in the original description to Petiver who cited Cambridge and London. The actual type locality is Europe, as given by Linnaeus. The dimensions of the northern race cited by Higgins & Riley (1975) match the length of the forewing of the specimen bearing Linnaeus's label and which we have selected as lectotype (c. 14 mm). The lectotype may be of Scandinavian origin.

**Type species of *Hamearis* Hübner.**

**LYSIPPUS LINNAEUS, 1758**

*Papilio (Plebejus) lysippus* Linnaeus, 1758: 484, no. 160.

*Papilio (Plebejus) lysippus*; Linnaeus, 1764: 332, no. 150.

*Papilio (Plebejus) lysippus* 160; Clerck, 1764: pl. 22, fig. 2.

*Papilio (Plebejus) lysippus*; Linnaeus, 1767: 793, no. 250.

**Identity.** *Riodina lysippus* (Linnaeus, 1758) (RIOD-INIDAE).

**Linnaean material examined**


**Type locality.** "America" [South America, probably the Guianas].

**Remarks.** Described as an MLU species, figured by Clerck, and listed by Thunberg (1804) and Wallin (1994). Aurivillius (1882: 118) cited the Clerck figure as typical. The specimen in the MLU, which matches the Clerck figure, has been designated as lectotype. There do not appear to be any established subspecies. The species was illustrated by D' Abrera (1994: 1088).

**Type species of the genus *Riodina* Westwood.**

**MACHAON LINNAEUS, 1759**

*Papilio (Eques) machaon* Linnaeus, 1758: 462, no. 27.

*Papilio (Eques) machaon*; Linnaeus, 1761: 267, no. 1031.

*Papilio (Eques) machaon*; Linnaeus, 1767: 750, no. 33.

**Identity.** *Papilio machaon* Linnaeus, 1758 (PAPIL-IONIDAE).

**Linnaean material examined**

**MLU:** 1♀ labelled "27. Machaon" [by Linnaeus], "Machaon 750." [by Smith], here designated as LECTOTYPE; 1♂ labelled "no label" [by Tams].

**MLU:** 1♀ labelled "Machaoa α" [by Aurivillius] on a black-edged label, [drawer labelled] "Machaon α" Mus.

Subsequent material examined
LSL: 1♂ labelled "Wroxham, J. Hooker".

Type locality. "Europae Umbellatis & Ruta" [Sweden, from reference to Fauna Suecica (1746)].

Remarks. In the original description Linnaeus (1758) cited numerous published references to this species, including the first edition of Fauna Suecica (Linnaeus, 1746). The species was certainly known to Linnaeus as he mentioned finding it in a gorge in Småland on 21 May 1741. It seems reasonable, therefore, to treat the type locality as Sweden.

According to Verity (1913: 176) the specimen bearing Linnaeus's label is a female of the northern race and we have selected it as lectotype. A second specimen, although of dubious origin, is definitely southern. The third is a later British addition. According to Higgins & Riley (1975) there is little geographical variation in machaon in Europe, although seasonal variation in wing-markings does occur.

Type species of Papilio Linnaeus.

MAERA LINNAEUS, 1758
Papilio (Nymphalis) maera Linnaeus, 1758: 473, no. 96.
Papilio (Nymphales) maera; Linnaeus, 1761: 275, no. 1049.
Papilio (Nymphalis) maera; Linnaeus, 1767: 771, no. 141.

Identity. Lasiommata maera (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
LSL: 1♂ labelled "96. Maeran [by Linnaeus], "Maera 771." [by Smith], here designated as LECTOTYPE; 1♂ labelled "no label" [by Tams].

Subsequent material examined
LSL: 1♂ labelled "no label" [by Tams].

Type locality. "Gramine sylvarum" [Sweden, see Remarks].

Remarks. This species was well known to Linnaeus long before the original description (see Fauna Suecica, 1746). Verity (1913: 185) noted four specimens in the LSL, and we have selected the specimen labelled "96. Maera" by Linnaeus as lectotype. Verity commented that one of the specimens was labelled by Linnaeus as philippus. This is incorrect: the label clearly states phidippus.

The specimens in the LSL were said by Verity (1913: 185) and Verity & Querci (1923–24: 31) to be of what he considered the distinct Scandinavian race and it seems reasonable to conclude that the type locality is Sweden.

See phidippus.

MALVAE LINNAEUS, 1758
Papilio (Plebejus) malvae Linnaeus, 1758: 485, no. 167.
Papilio (Plebejus) malvae; Linnaeus, 1761: 285, no. 1081.
Papilio (Plebejus) malvae; Linnaeus, 1767: 795, no. 267.

Identity. Pyrgus malvae (Linnaeus, 1758) (HEMPERIIDAE).

Linnaean material examined
LSL: 1♂ labelled "167. Malvae" [by Linnaeus], "Malvae 795." [by Smith], here designated as LECTOTYPE; 1♂ labelled "no label" [by Tams].

Subsequent material examined

Type locality. "Malva, Althaea" [Sweden, Sodermanland, Trosa, 16 May 1741].

Remarks. The identity and type locality of malvae were discussed at length by Hemming (ICZN, 1947, Opinion 181): more than one species were included in the original description. Although both Verity (1913) and Hemming established the identity of the species, neither of them designated a lectotype and so we have selected the specimen labelled "167. Malvae" by Linnaeus as lectotype.

In the original description, Linnaeus cited his own earlier references ("Fn. sueen and "It. oel") to the species. The type locality is derived from the latter work (see ICZN, 1947, Opinion 181). Two subspecies were recognized by Higgins & Riley (1975) and Tolman (1997). The nominate subspecies occurs across northern, central and south-eastern Europe.

Type species of the genus Hemiteleomorpha Warren, a junior subjective synonym of Pyrgus Hübner.

MARSYAS LINNAEUS, 1758
Papilio (Plebejus) marsyas Linnaeus, 1758: 482, no. 149.
Papilio (Plebejus) marsyas; Linnaeus, 1764: 315, no. 133.
Papilio (Plebejus) marsyas; Linnaeus, 1764: pl. 41, fig. 1.
Papilio (Plebejus) marsyas; Linnaeus, 1767: 788, no. 223.

Identity. Pseudolycaena marsyas (Linnaeus, 1758) (LYCAENIDAE).

Linnaean material examined

Type locality. "Calidis regionibus" [South America].

Remarks. Although marsyas was not described as an MLU species, it was figured by Clerck and listed by Thunberg (1804) and Wallin (1994) as being present in the MLU collection. Aurivillius (1882: 108) cited the Clerck figure as typical. We consider the MLU specimen to be syntypic and have selected it as lectotype.

DAbrera (1995: 1112) cited the nominate race as being found in Central America, Amazonas, southern Brasil, Paraguay, Uruguay and, questionably, northern Argentina. He also figured the nominate and three other races. However, G. Lamas (pers. comm.) considers that marsyas is not polypytic.

Type species of the genus Pseudolycaena Wallengren.

MATURNA LINNAEUS, 1758
Papilio (Nymphalis) maturna Linnaeus, 1758: 480, no. 136.
Papilio (Nymphalis) maturna; Linnaeus, 1761: 280, no. 1062.
Papilio (Nymphalis) maturna; Linnaeus, 1767: 784, no. 204.

Identity. Hypodryas maturna (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
LSL: 1♂ labelled "136. Maturna" [by Linnaeus], "Maturna 784." [by Smith], here designated as LECTOTYPE; 1♀ labelled "no label" [by Tams].

Type locality. "Corylo, Erica" [Europe].

Remarks. In 1761 Linnaeus noted that this species was very rare around Uppsala ("apud nos rarissime"). Verity (1913: 182) cited two Linnaean specimens, one male and one female, in the LSL. The male specimen labelled by Linnaeus has been designated as lectotype. Given our current knowledge about the distribution of maturna, the Petiver reference included in the original description, which is of a specimen from Lisbon, must refer to a different species.

MEDON LINNAEUS, 1763
Papilio (Eques) medon Linnaeus, 1763a: 19, no. 53.
Papilio (Eques) medon; Linnaeus, 1763b: 402, no. 53. [Papilio] medon; Clerck, 1764: pl. 28, fig. 1.
Papilio (Eques) medon; Linnaeus, 1767: 753, no. 43.

Identity. Euphaedra medon (Linnaeus, 1763) (NYMPHALIDAE).

Linnaean material examined. None.

Subsequent material examined
LSL: 1♀ labelled "Medon 753., S. Leone, Afzelius, Eupalus Fab. 4.48 est eadem species.".

Type locality. "Indiis" [West Africa].

Remarks. Described as an "M.R." [MLU] species with an illustration by Clerck that was cited in the original description.

The species is polypytic. Ackery, Smith & Vane-Wright (1995: 409) listed E. m. medon as West African and as the senior name for janassa Linnaeus, 1764, which was also described as an "Indiis" species. A diagnosis and colour illustrations of the nominate subspecies are provided by Hecq (1997: 25, pls 4.5). Hecq also cited West Africa as the type locality.

MEGERA LINNAEUS, 1767
Papilio (Nymphalis) megera Linnaeus, 1767: 771, no. 142.

Identity. Paralge megera (Linnaeus, 1767) (NYMPHALIDAE).

Linnaean material examined
LSL: 1♂ labelled "12. [in unknown hand] Ægeria" [by Linnaeus], see Remarks, "Megera 77!, nec Aegeria" [by Smith], here designated as LECTOTYPE.

Subsequent material examined
LINNAEUS'S BUTTERFLIES

Type locality. "Austria, Jacquin; Dania, Fabricius".

Remarks. Verity (1913: 185) stated that the specimen of megera in the LSL was labelled "17 aeger." in Linnaeus's handwriting. Our interpretation is that the specimen, which we have selected as lectotype, was labelled "12." and that Linnaeus added the name "Bgeria" to the label at right angles to the number.

Without evidence of the origin of the Linnaean specimen, it is not possible to restrict the type locality. It is known, however, that Fabricius took several insect specimens to Linnaeus in 1765, and the specimen of megera may have been among them. If so, Denmark would be a strong possibility for the type locality. Whatever is the situation, although specimens of the species become paler towards the south of its range, only specimens as far south as Corsica and Sardinia differ clearly from the nominate form (Langer, 1958).

Type species of Lasiommata Westwood.

MELITE LINNAEUS, 1763

Papilio (Heliconius) melite Linnaeus, 1763a: 20, no. 56.
Papilio (Heliconius) melite; Linnaeus, 1763b: 403, no. 56.
[Papilio] melite; Clerck, 1764: pl. 44, fig. 5.
Papilio (Heliconius) melite; Linnaeus, 1767: 755, no. 57.

Identity. Enantia melite (Linnaeus, 1763) (PIERIDAE).

Material examined. None.

Type locality. "Indiis" [probably Surinam].

Remarks. This is a widespread South American pierid that is often incorrectly attributed to Johansson. No Linnaean specimens were located and although Clerck illustrated a male of the species, the figure was not cited in the original description.

The identity of this very variable species is not disputed. Some of the subspecies, including what is taken to be the nominate form, were illustrated by D'Abrera (1981: 98).

MELPOMENE LINNAEUS, 1758

Papilio (Heliconius) melpomene Linnaeus, 1758: 467, no. 55.
Papilio (Heliconius) melpomene; Linnaeus, 1764: 232, no. 51.
Papilio (Heliconius) melpomene; Linnaeus, 1767: 758, no. 71.

Identity. Heliconius melpomene (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined.

LSL: 1 ex., with abdomen partly eaten, labelled "Melpomene" [by Linnaeus], "Melpomene 758." [by Smith], here designated as LECTOTYPE; 1♂ labelled "no label" [by Tams].


Type locality. "America" [South America, probably the Guianas].

Remarks. In the original description of melpomene Linnaeus cited an illustration by Petiver ("t. 6. f. 7."), In both 1764 and 1767 he cited a different Petiver figure ("t. 4. f. 2."), one that had previously been given in the original description of euterpe (see euterpe). The species represented by this figure was later renamed petiverana Doubleday, [1847], and currently is treated as a subspecies of erato (see Holzinger & Holzinger, 1994: 133).

The various subspecies (and forms of subspecies) of this variable, polytypic species were treated and illustrated by Holzinger & Holzinger (1994). The nominate subspecies is widespread on the South American mainland (see Holzinger & Holzinger, pp. 110, 111, and pl. 28), including in the Guianas. It is a good match for the LSL specimen that bears Linnaeus's label and which we have selected as lectotype.

MEMNON LINNAEUS, 1758

Papilio (Eques) memnon Linnaeus, 1758: 460, no. 12.
Papilio (Eques) memnon; Linnaeus, 1764: 193, no. 12.
Papilio (Eques) memnon; Linnaeus, 1767: 747, no. 13.

Identity. Papilio memnon Linnaeus, 1758 (PAPILIONIDAE).

Linnaean material examined.

LSL: 1♂ (with abdomen in a gelatin capsule) labelled "12 Memnon" [by Linnaeus], "Memnon 747" [by Smith] on a long black rusty pin (actually a sewing needle with the eye still intact, although broken) bent over at the top.


Subsequent material examined
LSL: 1♂ labelled “no label” [by Tams]; 1♂ labelled “China, M[archioness] of Rock[ingham]” [these two specimens are on similar pins and may have been from the same source].

Type locality. “Asia” [probably Java, see Remarks].

Remarks. Described as an MLU species and figured by Clerck on the so-called supplementary plates (pl. 8, fig. 1). In 1764 Linnaeus gave the erroneous type locality “Luzonum insulis” [Luzon] and indicated that he had more than one specimen by stating “Varietas forte...”. Thunberg (1804) only listed a single specimen of memnon in the MLU collection although he cited two specimens (α and β) of deiphobus. The β specimen was later identified by Aurivillius (1882: 17) as a specimen of memnon. Aurivillius also considered the Petiver figure and description by Ray cited by Linnaeus in the original description to represent emalthion Hübner (1819), now treated as a junior subjective synonym of rumanzowi Eschscholtz, 1819.

In 1767 Linnaeus changed the locality to “China” and the description was modified to correspond to the specimens from China (“basi paribus 4, subrotundis, rubris, conferitis”). One such specimen is that in the MLU labelled as “Memnon α”, by Aurivillius, but the “true” memnon is the specimen labelled as “deiphobus β”, which we have selected as lectotype. Rothschild (1895: 312) and later Corbet (1949: 186) correctly considered Linnaeus’s reference to China as the type locality to be erroneous. The fact that Linnaeus himself was confused about the identity of this species can be seen in the citation of the Petiver reference, which he listed under both memnon and, six species earlier, deiphobus.

Corbet (1949) cited the “true habitat” [type locality] of memnon as Java, and his action was followed by Tsukada & Nishiyama in Tsukada (1982b: 357). The species is polytypic and the female sex polymorphic.

Type species of the genus Illiades Hübner, currently considered to be a junior subjective synonym of Papilio Linnaeus.

See deiphobus.

MENELAUS LINNAEUS, 1758

(Papilio) menelaus 19; Clerck, 1764: pl. 21, figs 1, 2. Papilio (Eques) menelaus; Linnaeus, 1767: 748, no. 20.

Identity. Morpho menelaus (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Subsequent material examined

Type locality. “America meridionali” [South America, Guianas, possibly Surinam, see Remarks].

Remarks. Although Linnaeus did not annotate menelaus as an MLU species in the original description, it was figured by Clerck, and was listed by Thunberg (1804) and Wallin [1994] as being represented in the MLU collection. The specimen in the MLU was examined by Le Moult & Réal (1962: 202) and said to be the holotype of the nominate subspecies, although it is more appropriate to treat it as the lectotype. Aurivillius (1882: 23) cited the illustrations by Clerck as typical. Clerck’s figures are, indeed, a good match for the lectotype.

Le Moult & Réal (1962) treated menelaus menelaus as a senior synonym of terrestris Butler, the type locality of which is Villa Nova. They considered, erroneously, Villa Nova to be another name for Villa Bella, giving the location as the Bolivian side of the Brazilian-Bolivian border on the Rio Beni (near the Rio Madeira). In fact the two localities are not the same: Villa Nova is the old name for what is now called Parintins, midway between Manaus and Santarem (02°38’S 56°43’W) on the south bank of the Amazon (G. Lamas, pers. comm.). By contrast, what is treated as menelaus menelaus, occurs in the Guianas and northern Brazil area (lower Amazon) (G. Lamas and A. Neild, pers. comm.). This observation fits the view adopted in the present work that Surinam and Guyana are the usual type localities for the species from mainland South America (see Introduction). A locality from
the interior of the South American continent is most unlikely.

The species is polytypic: many subspecies and forms were discussed by Le Moul and Réal (1962). These authors provide photographs (1963, Figs 562, 557) of the lectotype (as holotype) of menelaus. According to Lamas (pers. comm.), there are 31 names that should be treated as synonymous with m. menelaus, including nestor Linnaeus, but terrestris Butler is not among them.

See nestor.

METIS LINNAEUS, 1764
Papilio (Plebejus) metis Linnaeus, 1764: 325, no. 143. Papilio (Plebejus) metis; Linnaeus, 1767: 792, no. 245.

Identity. Metisella metis (Linnaeus, 1764) (HERSEPIIIDAE).

Linnaean material examined

Subsequent material examined
LSL: 1♂ labelled “Midamus, China, M[archioness]. of Rock[inghelm]m.”.

Type locality. “Asia” [China, Canton].

Remarks. In 1764 Linnaeus cited the type locality as “China”. Clerck (supplementary plates, pl. 8, fig. 2) illustrated two specimens of which only the upper figure is of midamus (with a double row of spots on the hindwing). Corbet (1942: 94) stated that the Linnaean [LSL] collection contained the typical specimen of this species. Later (1945: 92) he said that it came from Canton and was obtained by Osbeck. This comment agrees with Osbeck (1765). Still later, Corbet (1949: 186, 196) correctly restricted his concept of the species to the upper specimen figured by Clerck, which shows the characteristic double row of spots on the hindwing. On p. 197 Corbet stated that “the male specimen labelled by Linnaeus in the Linnaean [LSL] Collection is the name-type”. This specimen (Fig. 9) was designated as lectotype by Cowan (1973: 11).

The nominate subspecies of this polytypic species occurs in S China and Hainan (Morishita in Tsukada, 1981: 586, 588). A summary of the taxonomy and general biology is provided by Ackery & Vane-Wright (1984: 217).

MINEUS LINNAEUS, 1758
Papilio (Danaus) mineus Linnaeus, 1758: 471, no. 84. Papilio (Danaus) mineus; Linnaeus, 1767: 768, no. 126.

Identity. Mycalesis mineus (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
LSL: LECTOTYPE ♂, pinned upside-down, without head, labelled “Mineus” [by Linnaeus]; 1 ex. labelled
“Mineus” [by Linnaeus], “Mineus 768.” [by Smith], see Remarks.

Type locality. “China” [Canton].

Remarks. This species was figured by Clerck on the unpublished, uncoloured plates (pl. 7, fig. 3). We have also seen a black and white photographic copy of a coloured version of the relevant plate. There are two specimens in the LSL labelled by Linnaeus as mineus. One of these clearly matches the Clerck figures, the other is of interest because of the style of its labelling. It is very unusual for there to be two specimens of a species with Linnaean labels, but we have come across two examples among the butterflies, this species and the lectotype of philometa (labelled lara by Linnaeus). (Mikkola & Honey (1993: 146) documented a similar case in the noctuid species oleracea.) In both cases the labels of the “second” specimen are identical in terms of handwriting and ink, so were probably produced at around the same time.

Material of this species was collected or purchased by Osbeck (see Osbeck, 1765), so the type locality can reasonably be accepted as Canton (see also Corbet, 1949: 196), which fits the distribution of the nominate subspecies given by Aoki, Yamaguchi & Uemura in Tsukada (1982a: 300).

The specimen labelled “84 Mineus” by Linnaeus was figured by Corbet & Pendlebury (1956: pl. 29, fig. 9) as the type. We accept this as a valid lectotype designation.

**MISIPPUSS LINNAEUS, 1764**

**Papilio (Danaus) misippus** Linnaeus, 1764: 264, no. 83.

**Papilio (Danaus) misippus**, Linnaeus, 1767: 767, no. 118.

Identity. Hypolimnas misippus (Linnaeus, 1764) (NYMPHALIDAE).

Linnaean material examined

LSL: LECTOTYPE 9 labelled “Misippus 767.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1 ex. labelled “E. Ind. NEK”; 1 ex. labelled “Misippus foem?”. 

Type locality. “America” [probably Java, see Remarks].

Remarks. Although described in the MLU work (Linnaeus, 1764), the species was not figured by Clerck. Nor was it mentioned by Thunberg (1804) as being in the MLU collection when it was donated to the University of Uppsala. Aurivillius (1882) found no specimen of misippus in the MLU collection when it was donated to the

University of Uppsala. Aurivillius (1882) found no specimen of misippus in the MLU collection when it was donated to the
The species is polytypic (G. Lamas unpublished). Specimens of the nominate subspecies in the BMNH arrangement, including those from the Guianas, match the lectotype closely. See mopsus.

**MNEMOSYNE LINNAEUS, 1758**

*Papilio (Heliconius) mnemosyne* Linnaeus, 1758: 465, no. 42.

*Papilio (Heliconius) mnemosyne*; Linnaeus, 1761: 269, no. 1033.

*Papilio (Heliconius) mnemosyne*; Linnaeus, 1767: 754, no. 51.

**Identity.** *Parnassius mnemosyne* (Linnaeus, 1758) (PAPILIONIDAE).

Linnaean material examined

LSL: 1♀ labelled “42. Mnemosyne” [by Linnaeus], “Mnemosyne 754.” [by Smith], here designated as LECTOTYPE; 1♀ labelled “no label” [by Tams].


**Type locality.** “Finlandia” [Finland: Tavastia from reference to Uddman, 1753: 27, no. 55].

**Remarks.** Linnaeus (1758) referred to the dissertation by the Finnish entomologist Isaac Uddman (1753) in which Uddman wrote about *Limenitis populi* and *P. mnemosyne*, but not as binomial names. The specimens were collected by Gadd from “montes in Tavastia” [mountains in Tavastland, inland of SW Finland]. The preparation of the lectotype of *mnemosyne* is similar to some other Uddman specimens. The Tavastia population no longer exists, the closest population of *mnemosyne* occurring almost 100 miles away (K. Mikkola, pers. comm.). Uddman noted that the females of *mnemosyne*, as well as those of *apollo*, bear a cartilaginous structure (a sphragis), and mentioned that entomologists still wondered about their function. Certainly the sphragis is conspicuous in the unlabelled specimen in the LSL.

Verity (1913: 176) cited “a male and a female”. In fact, both specimens in the LSL are females.

The identity of this species is established by our selection of the lectotype above. An illustration of the nominate subspecies, and of *P. m. athene*, is given by Higgins & Riley (1975: pl. 3).

**MONUSTE LINNAEUS, 1764**

*Papilio (Danaus) monuste* Linnaeus, 1764: 237, no. 56.

*Papilio (Danaus) monuste*; Linnaeus, 1767: 760, no. 80.

**Identity.** *Ascia monuste* (Linnaeus, 1764) (PIERIDAE).

Material examined. None.

**Type locality.** “Exteris terris” [probably Surinam, see Remarks].

**Remarks.** This species was described in the MLU work, but it was not figured by Clerck. It was neither listed by Thunberg (1804) when the collection was presented to Uppsala University nor cited by Wallin ([1994]), so it would appear that the type is lost.

Aurivillius (1882: 51) treated *monuste* as the senior name for *hippomonuste* Hübner, [1819], but restricted Hübner’s treatment of *monuste* to the male figured on pl. 137, f. 1–2. Butler (1898: 21) disputed the accepted identity of *monuste*, preferring to use the name *Pieris phileta* Fabricius. He considered the 1764 description by Linnaeus to be more appropriate to *Udaina cycnis* but concluded that “The type being lost, it is by far the best plan to let the name lapse unless something perfectly answering to the description can be found”. Talbot (1929) also discussed the identity of *monuste*.

In 1767 Linnaeus changed the type locality from “Exteris terris” [from foreign lands] to “Barbaria”. Comstock (1943) discussed the taxonomic history of the name *monuste* and concluded that the evidence supported the view that Surinam was the most likely type locality for the species, and thus the nominate subspecies.

The distribution of the nominate subspecies of this polytypic species is recorded as Mexico to central Brazil by da Brera, 1981: 145, a range that would fit with a type locality of Surinam or Guyana, as is likely for Linnaeus’s neotropical mainland species.

Type species of the genus *Ascia* Scopoli.

**MOPSUS LINNAEUS, 1758**

*Papilio (Barbarus) mopsus* Linnaeus, 1758: 487, no. 182.

*Papilio (Heliconius) mopsa*; Linnaeus, 1764: 235, no. 54.

*Papilio (Heliconius) mopsa*; Linnaeus, 1767: 756, no. 59 [as f. β of mneme].

**Identity.** *Mechanitis mopsus* (Linnaeus, 1758) a junior subjective synonym of *M. polymnia* (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

**Type locality.** “Indiis” [South America, probably Surinam (see polymnia)].
Remarks. Synonymized by Linnaeus (1767) with mneme (as f. β, but spelled mopsa); however, mopsus is the older name.

Kirby (1877: 840) treated mopsus as a queried synonym of polynia Linnaeus, but Fox (1967: 87), in dealing with M. polynia, failed to make any mention of mopsus. D’Almeida (1978: 104), listed mopsus, with a question mark, as a junior subjective synonym of polynia. G. Lamas (unpublished) regards it, unequivocally, as a junior synonym of polynia, a view that we accept here.

See mneme and polynia.

NAPI LINNAEUS, 1758

Papilio (Danaus) napi Linnaeus, 1758: 468, no. 60.
Papilio (Heliconius) napi; Linnaeus, 1761: 271, no. 1037.
Papilio (Heliconius) napi; Linnaeus, 1767: 760, no. 77.

Identity. Pieris napi (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined

LSL: 1♂, without abdomen and left hindwing, labelled “60. Napi” [by Linnaeus], “Napi 760.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1♀, pinned upside-down, labelled “Marsham 1797”; 1 ex., labelled “no label” [by Tams].


Type locality. “Brassica & affinisus” [Sweden from reference to Fauna Sueca (1746)].

Remarks. In 1767 Linnaeus added China as a locality, but this apparently was based on the misidentification of a specimen that is still in the LSL, of Cepora nerissa (Fabricius).

Verity (1913: 177) stated that there was only one obviously Linnaean specimen, the male type. We have selected this specimen, which bears Linnaeus’s label, as lectotype. Verity noted that another specimen is a later addition. There is a third specimen in the LSL under napi. This is unlabelled and, from an examination of the pin, probably not Linnaean.

There is a specimen in the last drawer of the MLU collection, the details of which are cited above. As this species was not dealt with in the MLU publication, we have not treated it as syntypic.

Several subspecies are listed by Higgins & Riley (1975). The type locality of the nominate subspecies can reasonably be treated as Sweden, given that napi was cited in Fauna Sueca (1746).

NAUPLIUS LINNAEUS, 1758

Papilio (Barbarus) nauplius Linnaeus, 1758: 488, no. 190.
Papilio (Nymphalis) nauplius; Linnaeus, 1764: 309, no. 127.
Pap.[ilio] nauplius 190; Clerck, 1764: pl. 46, figs 1, 2.
Papilio (Nymphalis) nauplia; Linnaeus, 1767: 783, no. 197 [incorrect subsequent spelling].

Identity. Eresia nauplius (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None: see Remarks.

Type locality. “Indiis” [Central & South America, probably the Guianas].

Remarks. There has been a long history of confusion of the names applied to nauplius and its allies. Bates (1864: 192) recognized the illustrations of Stoll represented two species confused under the name nauplius. He identified figs D, E as nauplius Linnaeus and erected the name clara for the species under figs F, G. We consider that this action, which may be that of the first reviser, restricts nauplius to the species illustrated by Clerck as fig. 1.

Aurivillius (1882: 46) regarded Clerck’s figure 2 as typical clia and treated clia Bates as a junior synonym. This action was no doubt based on the assumption that the specimen under nauplius in the MLU actually represented clia.

Higgins (1981: 81, 131) stated that Clerck’s figure 2 and Stoll’s figures F and G [cited, in error, as D–G] were misidentified and should be referred to as clia. He also noted that clia was “based upon the figure by Merian”. This is incorrect (see clia). He considered that the specimen in the MLU under the name nauplia was a specimen of clia and “corresponds in every way with the lower figure in Clerck”. While the species identity is probably correct, the specimen does not correspond to Clerck’s illustration as it has antennae,
which are shown, by broken lines, as lacking in the figure. We therefore do not regard the specimen as syntypic of nauplius, contrary to the statement of Higgins, but we do consider it to be a syntype of clio and have designated it as lectotype of that species, above.

Two subspecies were recognized by Higgins (1981), the nominate being almost certainly from the Guianas, possibly Surinam.

See clio.

**NEAEREA LINNAEUS, 1758**

*Papilio (Nymphalis) neaerea* Linnaeus, 1758: 479, no. 126.

*Papilio (Nymphalis) neaerea;* Linnaeus, 1764: 297, no. 115.

*Papilio (Nymphalis) neaerea;* Linnaeus, 1767: 782, no. 190.


Material examined. None.

Type locality. “Indiis” [South America, probably the Guianas].

Remarks. Aurivillius (1882: 97) listed neaerea as the senior name for tiphus Linnaeus. We have not located any material. The identity of the nominate subspecies of this polytypic species follows current usage, for example by Neild (1996: 74) who noted that it has narrow white bands on the upper surfaces of both forewings and hindwings and appears to fly in the Guianas.

See tiphus.

**NELEUS LINNAEUS, 1758**

*Papilio (Barbarus) neleus* Linnaeus, 1758: 488, no. 187.

*Papilio (Danaus) neleus;* Linnaeus, 1764: 260, no. 79. *[Papilio] nileus 187;* Clerck, 1764: pl. 45, fig. 2 [incorrect subsequent spelling].

*Papilio (Plebejus) neleus;* Linnaeus, 1767: 792, no. 246.


Material examined. None.

Type locality. “Indiis” [South America, probably the Guianas].

Remarks. Although neleus was not described as an MLU species, it was figured by Clerck under the mis-spelled name nileus. Kirby (1871: 580) identified the species as *Entheus neleus* (Linnaeus), a decision followed by Aurivillius (1882), who also cited the figure by Clerck as being typical.

Three subspecies were listed by Evans (1952: 30). The type of the nominate subspecies is assumed to have been collected in the Guianas.

**NESAEA LINNAEUS, 1764**

*Papilio (Nymphalis) nesaea* Linnaeus, 1764: 302, no. 120.

*Papilio (Nymphalis) nesea;* Linnaeus, 1767: 783, no. 199 [incorrect subsequent spelling].


Linnaean material examined

LSL: 1 ex., without abdomen, labelled “Lais Fab. 4.58.” by Smith, here designated as LECTOTYPE.

Type locality. “Asia” [Java, according to Corbet, 1949].

Remarks. Aurivillius (1882: 101) cited the figure of *lais* Cramer (Cramer, 1777: pl. 110, figs A, B) as being typical. Corbet (1949: 193, 196) listed the type as being in the Linnaean [LSL] collection and originating from Java. We have fixed the identity of the species by selecting the specimen as lectotype.

The species is polytypic. The range of the nominate subspecies was given as west Java by Aoki, Yamaguchi & Uemura in Tsukada (1982a: 186, 187). These authors provided several colour illustrations of *E. n. nesaea* (pl. 16) and other subspecies. The illustrations of the nominate subspecies are a good match for the lectotype.

**NESTOR LINNAEUS, 1758**

*Papilio (Eques) nestor* Linnaeus, 1758: 463, no. 30.

*Papilio (Eques) nestor;* Linnaeus, 1767: 752, no. 40.


Linnaean material examined. None.

Subsequent material examined


Type locality. “Punica America” [Guianas region, possibly Surinam].
Remarks. This is the female of *menelaus menelaus* Linnaeus. The type locality is likely to be the same as for *menelaus*.

See *menelaus*.

**NIAVIUS LINNAEUS, 1758**

*Papilio* (Danaus) *niaius* Linnaeus, 1758: 470, no. 76.  
*Papilio* (Danaus) *niaius*; Linnaeus, 1764: 253, no. 71.  
[Papilio] *niaius* 76; Clerck, 1764: pl. 32, fig. 2.  
*Papilio* (Danaus) *niavius*; Linnaeus, 1767: 766, no. 109.

**Identity. Amauris niavius** (Linnaeus, 1758) (NYMPHALIDAE).

**Material examined. None.**

**Type locality. “Indiis” [West Africa].**

**Remarks.** Described as an MLU species and figured by Clerck. However, Thunberg (1804) made no mention of the species being present in the MLU when the collection was donated to the University of Uppsala. Aurivillius (1882: 63) cited the Clerck figure as typical. The type locality of the nominate species of this polytypic species was considered to be West Africa by Ackery *et al.* (1995: 271). The other subspecies come from Ethiopia and southern Africa.

Type species of the genus of the genus *Amauris* Hübner.

**NIABE LINNAEUS, 1758**

*(Figs 10, 11)*

*Papilio* (Nymphalis) *niobe* Linnaeus, 1758: 481, no. 143.  
*Papilio* (Nymphalis) *niobe*; Linnaeus, 1761: 281, no. 1067.  
*Papilio* (Nymphalis) *niobe*; Linnaeus, 1767: 786, no. 215.

**Identity. Argynnis niobe** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

[LSL: 1♂ labelled “Niobe” [by Linnaeus], “Niobe 786.” [by Smith], here designated as LECTOTYPE; 1♀ labelled “Dux” [by Linnaeus].**

**Type locality. “Europa”.**

**Remarks.** Verity (1913: 182) stated that there were two specimens in the LSL, both males of the form lacking silver markings on the underside of the hindwing. He also pointed out that their appearance matched the original description. The form with the prominent silver markings on the under surface of the hindwing was described later as a full species, *eris* Meigen (1828: 64). In this description, Meigen cited a plate by Esper (1777: pl. 18, fig. 4), which clearly shows these silver spots on the underside of the hindwing. Although *eris* Meigen is a junior synonym of *niobe* Linnaeus, the name has frequently been used incorrectly to refer to the form without the silver spots (e.g. by Higgins & Riley, 1975: 93, 94). Linnaeus (1761: 281) provided an even more extensive description of *niobe*, and there is no mention of silver markings, other than those in the small ocelli on the under surface of the hindwing. We have examined the material and confirm that both LSL specimens lack the prominent silver markings (although they do have minute silver markings in the ocelli). The specimen bearing the label “Niobe” written by Linnaeus has been selected as lectotype (Figs 10, 11).

The name *niobe* was placed on the *Official List of Specific Names in Zoology* (ICZN, 1958, Opinion 501).

In Linnaeus’s personally annotated copy of Edition 12 of the *Systema*, p. 786, he placed *niobe* immediately after *adippe*, and added a reference to De Geer (vol. 2, pl. 1, figs 8–9). He also altered the "Habitat" to “in Viola tricolor, Ammiral [sic]”; and stated “Femina forte Adippe, ut De Geer”. De Geer apparently treated *adippe* as the male form (with silver spots) and *niobe* as the female form (without silver spots) of the same species. De Geer also referred to M. Admiral, from whom he received a figure of a larva (“Admiral Ins. Pl 9”).

Type species of the genus *Fabriciana* Reuss.

**NIPHE LINNAEUS, 1758**

*Papilio* (Nymphalis) *niphe* Linnaeus, 1767: 785, no. 208.

**Identity. Argyreus niphe** (Linnaeus, 1767) an unnecessary replacement name for *A. hyperbius* (NYMPHALIDAE). (See Hemming, 1967: 57.)

**Material examined. See *hyperbius* Linnaeus, 1763.**

**Type locality. “China”.**

**Remarks.** Type species of the genus *Argyreus* Scopoli. See *hyperbius*.

**NIREUS LINNAEUS, 1758**

*Papilio (Eques) nireus* Linnaeus, 1758: 464, no. 38.  
*Papilio (Eques) nireus*; Linnaeus, 1764: 217, no. 36.  
[Papilio] nireus 38; Clerck, 1764: pl. 30, fig. 1.  
*Papilio (Eques) nireus*; Linnaeus, 1767: 750, no. 28.

Linnaean material examined

Subsequent material examined
LSL: 1♂ labelled "Nireus 750, Jones Ic. V[?].t.55, S. Leone Afzelius, videtur etiam, Phorbanta L. Mant. 535" [by Smith].

Type locality. "Indiis" [West Africa].

Remarks. Aurivillius (1882: 36, 37) cited Clerck's figure as typical and stated that it matched the type specimen, which is in the MLU ("Specimen typicum omnino cum CLERCKI congruit"). We concur with this view and take Aurivillius's statement to be a lectotype designation.

The type locality of the nominate subspecies was recorded as West Africa by Ackery et al. (1995: 153). These authors recognized two further subspecies, one from southern Africa and the other, which is a highly distinctive, from the Comores.

From Smith's label, it appears that he considered (erroneously) that *nireus* and *phorbanta* were conspecific. *P. phorbanta* is a distinct species, from Réunion.

**NISO LINNAEUS, 1764**

(*Fig. 12*)


Material examined. None.

Type locality. "ad Cap. b. spei. Tulbagh" [South Africa, Cape of Good Hope area].

Remarks. Although described as an MLU species, *niso* was not illustrated by Clerck in his *Icones*. It was, however, figured by him on his "unpublished" plates. Thunberg (1804) made no mention of the species as being represented in the MLU collection when it was donated to the University of Uppsala, nor was it listed by Wallin [1994]. Aurivillius (1882: 125) cited the unpublished figure of *niso* by Clerck as typical and provided a colour copy of the original drawing by Clerck date (pl. 1, fig. 4).

The specimen in the LSL (Fig. 12) is characteristic of Tulbagh material in being on a lacquer-covered pin. It is also a good match for the illustration in Aurivillius's work and has been designated as lectotype.

Two subspecies, including the nominate, were listed by Ackery et al. (1995: 135). There is no reason to doubt the type locality of the Cape for *G. n. niso*.

**OBRINUS LINNAEUS, 1758**


Material examined. None.

Type locality. "India" [South America, Surinam].

Remarks. Described as an MLU species and figured by Clerck. However, Thunberg (1804) made no mention of the species being present in the MLU collection when it was donated to the University of Uppsala. Both Vane-Wright (1979: 38) and Jenkins (1989: 15) gave the type locality as Surinam, and cited respectively type material as being in the MLU and the Naturhistoriska Riksmuseet, Stockholm. Although the type material would only be expected to be in the MLU none, in fact, exists.

Vane-Wright (1979: 38) discussed the taxonomic history and synonymy of the names *ancaeus* and *obrinus* and treated *ancaea* as the senior name. Later (Vane-Wright 1981: 119), he argued that, on the basis of earlier revisers, *obrinus* should be treated as the senior name - a view with which we concur. The identity of this species is not in question. Clerck (1764: pl. 31, figs 2, 3) figured both sexes under the name *obrinus* and it was also illustrated by the above authors and in colour by Neild (1996: pl. 12, figs 544–546).

**OENONE LINNAEUS, 1758**

Papilio (Nymphalis) oenone; Linnaeus, 1767: 776, no. 135.


Linnaean material examined
LSL: 1 ex. [of hierta Fabricius] labelled "oenone sexus" [by Linnaeus].

Subsequent material examined
LSL: 1 ex. [of oenone] labelled "Orithyae var! Fabr., Clelia Cramer, Marsham 1797."; 1 ex. [of hierta Fabricius], without abdomen, labelled "Oenone 770."; 1 ex. [of hierta Fabricius] labelled "Coll. Huds."; 1 ex. [of hierta Fabricius] labelled "E. Ind., NEK".

Type locality. "Asia" [Africa].

Remarks. This species was based on a mixed series, for the figures by Petiver and Edwards referred to in the original description do not match the text. In 1764 Clerck illustrated a species under the name oenone in his supplementary plates (pl. 4, fig. 4). Clerck's figure matches those of Petiver and Edwards. Aurivillius (1882: 80) stated that Linnaeus's description of oenone was of the species described by Cramer (1775: pl. 21, figs D, F) as clelia and that the figures of Petiver and Edwards were of a different species. The more detailed later description of oenone by Linnaeus (1764) appears to fit the species concept of Aurivillius. However, in that description, Linnaeus referred to an illustration by Ehret (1743), which is of the species orithya.

It should be noted that Aurivillius used the name oenone for the species represented by the illustrations (i.e. Linnaeus’s "Varietas Oenones", 1764: 275) and the name clelia for the species that matched the text of the original description. This interpretation was clearly not what Linnaeus had in mind. In current usage, the name hierta Fabricius, 1798, is applied to the species that matches the illustrations of Petiver and Edwards, while oenone is used as the senior name for clelia (see Ackery et al., 1995: 344; Pringle et al., 1994: pl. 107).

There are two subspecies: the nominate is common throughout sub-Saharan Africa; the other is restricted to the Malagasy Republic (Ackery et al., 1995). See orithya.

OILEUS LINNAEUS, 1767
Papilio (Plebejus) oileus Linnaeus, 1767: 795, no. 269.

Identity. Pyrgus oileus (Linnaeus, 1767) (HESPERIDAE).

Linnaean material examined
LSL: 1♀ labelled "Oileus 795., ex descr." [by Smith]; 1♂, without head, labelled "no label" [by Tams]; 1 ex., without abdomen, labelled "no label" [by Tams].

Type locality. "Algiriae. Brunniche" [USA].

Remarks. There are three specimens in the LSL under this name, but it is not clear if they are Linnaean (syntypic) or Subsequent specimens.

Evans (1953: 221) stated that the type, a female, was in the LSL, and marked "Algeria", but that it probably came from Mexico or the USA. There is no specimen marked "Algeria" in the LSL. Four subspecies were recognized by Evans, two of which (the nominate and o. philetas Edwards) were from the USA. P. philetas was listed as a full species in Hodges et al. (1983). Certainly the type locality is reasonably treated as the USA.

ORITHYA LINNAEUS, 1758
Papilio (Nymphalis) orithya Linnaeus, 1758: 473, no. 94.
Papilio (Nymphalis) oritya; Linnaeus, 1764: 278, no. 96 [incorrect subsequent spelling].
Papilio (Nymphalis) orithya; Linnaeus, 1767: 770, no. 137.


Linnaean material examined
LSL: 1 ex. labelled "94. Orithya" [by Linnaeus], "Orithya 770." [by Smith]; 1 ex. labelled "no label" [by Tams].

Subsequent material examined
LSL: 1♂ labelled "E. Ind., NEK".

Type locality. "Indis" [China].

Remarks. This species was described from the MLU, but it was not figured by Clerck. In 1764 Linnaeus gave the type locality as "China" and cited a figure by Rösel in addition to the original Edwards reference. Thunberg (1804) listed three specimens (α, β, and γ) under this name when the collection was donated to the University of Uppsala. Aurivillius (1882: 82) discussed the identity of the MLU material, including the three specimens labelled by Thunberg, and concluded that the series was mixed. Subsequently, he identified and labelled the three Thunberg-labelled specimens as lavinia Cramer (now a synonym of villida Fabricius).

Corbet (1949: 197) listed China, Canton, as the type locality and Osebeck as the collector, and recorded the type as being in the MLU and a co-type in the LSL. The only specimen of orynthia in the MLU collection was labelled by Thunberg as "oenony. var. γ". It has been selected as lectotype, thus establishing the identity of this extremely widespread species (e.g. D'Abrera, 1985: 278; Tsukada & Kaneko in Tsukada, 1985: 360, 361).

Although many subspecies of orynthia have been described, it is by no means clear that they have any biological meaning when the strongly migratory habits of the butterfly are considered. Several specimens from China, the country from which the type is considered to have been collected, have been illustrated by Chou (1994: 578), and the lectotype fits well within the range of variation shown.

ORONTES LINNAEUS, 1763
Papilio (Eques) orontes Linnaeus, 1763a: 19, no. 51.

Identity. MOTH. Alcides orontes (Linnaeus) (URANIIDAE).

PALAENO LINNAEUS, 1761
(Fig. 13)
Papilio (Heliconius) palaeno Linnaeus, 1761: 272, no. 1041.
Papilio (Danaus) palaeno; Linnaeus, 1767: 764, no. 99.

Identity. Colias palaeno (Linnaeus, 1761) (PIERIDAE).

Linnaean material examined
LSL: 1♂ [possibly of alexandra Edwards, see Remarks] labelled "Palaeno" [by Linnaeus], "Palaeno 764." [by Smith]; 1♂ labelled "no label" [by Tams]; 1♀, without abdomen, labelled "no label" [by Tams].

Type locality. "Pteride rarissime Upsaliae, frequentior in Finlandia" [Sweden: South Uppland, Uppsala area (very rare), and (south) Finland (more common)].

Remarks. Verity (1913: 179) stated that the specimen bearing Linnaeus's label of palaeno (Fig. 13) does not belong to that species. It may be of alexandra Edwards.

Despite Linnaeus's statement "in Pteride", the larva of palaeno does not feed on ferns. The suggestion was probably a misinterpretation (J. Haugum, unpublished). The type locality has nearly always been misquoted in the literature, often as Lapland (J. Haugum, pers. comm.).

The species is widely distributed across the Holarctic region, although it does not occur in western Europe. The typical form is paler than the more yellow southerly form.

PAMMON LINNAEUS, 1758
Papilio (Eques) pammon Linnaeus, 1758: 460, no. 8. [Papilio pammon 8; Clerck, 1759: pl. 14, fig. 2.]
Papilio (Eques) pammon; Linnaeus, 1764: 189, no. 8.
Papilio (Eques) pammon; Linnaeus, 1767: 746, no. 8.

Identity. Papilio pammon Linnaeus, 1758 a junior subjective synonym of P. polytes Linnaeus, 1758 (PAPILIONIDAE).

Linnaean material examined
LSL: 1♂ missing right antenna labelled "8 Pammon" [by Linnaeus], "Pammon 746" [by Smith] on a very black rusty pin, here designated as LECTOTYPE.

MLU: 1 ex. labelled "Pammon" [by Aurivillius on a

Clerck Collection: 1 δ labelled "Pammon 8".

Subsequent material examined
LSL: 1 δ labelled “E. Ind., Roxburgh”; 1 δ labelled “Cyrus Fabr. 4, 7, ex descr., E. Ind. NEK”; 1 δ labelled “E. Ind., NEK” [both collected by N.E. Kinderley].

Type locality. "Asia" [China, Canton].

Remarks. In 1764 Linnaeus cited the type locality as "Indiis" instead of "Asia". The type locality is almost certainly Canton since the species was listed by Osbeck (1765) (see also Corbet, 1949: 197).

The specimen selected as lectotype is a male of the sexually dimorphic species polytes Linnaeus.

See polytes.

PANDARUS LINNAEUS, 1758

Papilio (Eques) pandarus; Linnaeus, 1764: 198, no. 17.

Papilio (Eques) pandarus; Linnaeus, 1767: 748, no. 18.

Identity. Hypolimnas pandarus (Linnaeus, 1758), a senior subjective synonym of pipleis Linnaeus (NYMPHALIDAE).

Material examined. None.

Type locality. "India".

Remarks. Corbet (1941: 15) stated that the type specimen of this species was the same as that of pipleis, that it was in the MLU, and that it came from Ambon. The specimen was designated as lectotype of both species by Vane-Wright (1975: 45). Although pandamus and pipleis are regarded as the same species, it seems inconceivable that Linnaeus would have based his descriptions on the same specimen. The more detailed 1764 descriptions for pandarius and pipleis suggest that they refer respectively to male and female specimens of the same species. If that interpretation is correct, then the designation by Vane-Wright of the MLU specimen of pipleis as the lectotype of pandarius is invalid since it is based on non syntypic material. We have been unable to locate any specimens of pandamus labelled by Linnaeus. See pipleis.

PANOPE LINNAEUS, 1758

Papilio (Nymphalis) panope Linnaeus, 1758: 479, no. 196.

Papilio (Nymphalis) panope; Linnaeus, 1767: 782, no. 196.

Identity. Papilio panope Linnaeus, 1758 a junior subjective synonym of P. clytia Linnaeus, 1758 (PAPILIONIDAE).

Linnaean material examined
LSL 1 ex., without abdomen, labelled "131. Panope" by Linnaeus, "Panope 782." [by Smith], here designated as LECTOTYPE; 1 δ labelled "no label" [by Tams].

Type locality. "Asia" [China].

Remarks. Verity (1913: 186) stated that there were two Linnaean specimens of the small northern race in the Linnaean [LSL] collection. To establish the identity of the species, we have selected the specimen labelled by Linnaeus as the lectotype. We assume that the unlabelled Linnaean specimen is the other specimen mentioned by Verity.

Type species of the genus Chortobius [Dunning & Pickard], which is currently treated as a junior subjective synonym of Coenonympha Hübner.
but there appears to be no justification for this statement. We have seen a black and white photographic copy of a coloured version of the Clerck plate, which is a better quality illustration than the rather crude uncoloured figure. While the coloured version is not a particularly good match for the specimen labelled by Linnaeus, it is a better representation for this specimen than the unlabelled specimen considered to be the type by Corbet. We have, therefore, selected the specimen labelled by Linnaeus as the lectotype of \textit{panope}.

\textbf{PANTHOUS LINNAEUS, 1758}

\textit{Papilio (Eques) panthous} Linnaeus, 1758: 461, no. 16.
\textit{[Papilio] panthous} Mas 16 [and] Foem: 16; Clerck, 1764: pl. 18 [and] 19.
\textit{Papilio (Eques) panthous}; Linnaeus, 1767: 748, no. 17.
\textit{1764: pl. 18 [and] 19.}

\textbf{Identity.} \textit{Ornithoptera panthous} (Linnaeus, 1758), a junior subjective synonym of \textit{Ornithoptera priamus} (Linnaeus, 1758) (PAPILIONIDAE).

\textbf{Linnaean material examined}

\textbf{Type locality.} “Indiis” [Ambon, according to Corbet, 1949].

\textbf{Remarks.} In the original description Linnaeus noted \textit{panthous} as an MLU species. In the MLU work, Linnaeus referred to the Clerck figures of both male and female, but the description was based on the female (Fig. 16) (see Aurivillius, 1882: 16). The figures represent two different species. That of the male (Fig. 19) is based on only the second specimen in the MLU collection and is actually a female specimen of \textit{hypolitus} Cramer. In designating the lectotype we accept the treatment by Corbet (1949: 197) and fix the identity of \textit{panthous} as a junior subjective synonym of \textit{priamus}.

See \textit{clytia}.

\textbf{PAPHIA LINNAEUS, 1758}

\textit{Papilio (Nymphalis) paphia}; Linnaeus, 1767: 785, no. 209.

\textbf{Identity.} \textit{Argynnis paphia} (Linnaeus, 1758) (NYMPHALIDAE).

\textbf{Linnaean material examined}
LSL: 1♂ labelled “138. Paphia” [by Linnaeus], “Paphia 785.” [by Smith], here designated as LECTOTYPE.

\textbf{Subsequent material examined}

\textbf{Type locality.} “Urtica” [Sweden, from reference to \textit{Fauna Suecica} (1746)].

\textbf{Remarks.} Verity (1913: 183) noted that a male in the Linnaean [LSL] collection was of northern origin. There is only one Linnaean specimen; this bears Linnaeus’s label, and it has been selected as lectotype.
The nominate subspecies occurs widely in Europe, the other two recognized by Higgins & Riley (1975: 90) being Mediterranean and north African.

\textbf{Type species of the genus \textit{Argynnis} Fabricius.}

\textbf{PARIS LINNAEUS, 1758}

\textit{Papilio (Eques) paris} Linnaeus, 1758: 459, no. 3.
\textit{Papilio (Eques) paris}; Linnaeus, 1764: 184, no. 3.
\textit{Papilio (Eques) paris}; Linnaeus, 1767: 745, no. 3.

\textbf{Identity.} \textit{Papilio paris} Linnaeus, 1758 (PAPILIONIDAE).

\textbf{Linnaean material examined}

\textbf{Subsequent material examined}
LSL 1♂ labelled “China M[archioness] of Rock[ingham]” [by Smith?] on a very rusty black pin with no head; 1♂ unlabelled on an identical pin.

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Type locality. "Asia" [China, Canton].

Remarks. Described as an MLU species and figured by Clerck. In 1764 Linnaeus cited the type locality as "India orientali". Corbet (1941: 12) wrote that Aurivillius "found no specimen remaining in the Royal Museum". However, Thunberg (1804) certainly listed *paris* as being present when the collection was presented to the University of Uppsala. Later, Corbet (1942: 91) stated that "The specimen of *paris* figured by Clerck is certainly the type" but then on p. 93 went on to say that "Of the 48 species described by Linnaeus from specimens stated to be in the Museum of Queen Ludovica Ulrica and reported missing therefrom by Aurivillius, 31 have now been found in the Linnaean Collection [LSL]" including the type of *paris*. Later still, Corbet (1949: 197) listed the type locality as "China, Canton, Osbeck" and stated that the type was in the Linnaean [LSL] collection. The type locality is indeed likely to be Canton since the species was listed by Osbeck (1765). The specimen in the LSL labelled as *paris* by Linnaeus matches the Clerck illustration better than does the specimen in the MLU. The former has been selected as lectotype.

Type species of the genus *Achillides* Hübnern, currently considered to be a junior subjective synonym of *Papilio* Linnaeus.

**PASITHOE LINNAEUS, 1767**

**Papilio** (Heliconius) *pasithoe* Linnaeus, 1767: 755, no. 53.


Linnaean material examined

LSL: LECTOTYPE ♀ labelled "Pasithoe 755., Fab. 4. 179., Porsenna Cram., t. 352 AB." [by Smith].


Type locality. "Asia" [see Remarks].

Remarks. Linnaeus originally described this species under the name *aglaja* (1758: 465), but later, in the same work (p. 481), he used the name *aglaja* for a Swedish species of Nymphalidae (Hemming, 1967: 187). In 1767, Linnaeus erected the name *pasithoe* but without reference back to the 1758 description of *aglaja*. Clerck illustrated this species in his "unpublished" Suppl. pl. 6, fig. 3 (see Corbet, 1949: 194), as *pasitea*, an incorrect spelling, but cited the Linnaean number published in 1758 for *aglaja*.

The species name *pasithoe* was not mentioned by Linnaeus in the MLU work nor by Thunberg (1804) or Wallin (1994). This might suggest that at least some of Clerck's supplementary plates are of specimens in Linnaeus's own collection, but there is a specimen of this species, identified and labelled as *porsenna* by Thunberg, in the last drawer of Lepidoptera in the MLU collection.

Corbet (1949: 197) listed the type as being in the Linnaean collection [LSL] from Canton, China [Osbeck]. Although there is a specimen of *pasithoe* in the LSL, this species was not cited as having been collected or purchased by Osbeck (1765). The specimen in question was illustrated by Corbet & Pendlebury (1956: pl. 29, fig. 1) as the type both of *aglaja* and *pasithoe*, and we accept this as a lectotype designation. For further discussion see Hemming (1942: 155, 1967: 287) and Cowan (1967a: 188).

The distribution of the nominate subspecies given by Yata in Tsukama (1981: 320, 328, 329) is India, Burma, and the Andaman Islands, but not South China.

The name *pasithoe* Linnaeus (1767) was placed on the Official List of Specific Names in Zoology by the ICZN (1971: 151).

See *aglaja*.

**PATROCLUS LINNAEUS, 1758**

**Papilio** (Eques) *patroclus* Linnaeus, 1758: 462, no. 23.

Identity. MOTH. *Lyssa patroclus* (Linnaeus, 1758) (URANIIDAE).

Remarks. Although described as a butterfly, Linnaeus recognized that the antennae were different from those of his other *Papilio* species.

**PELEUS LINNAEUS, 1763**

**Papilio** (Plebejus) *peleus* Linnaeus, 1763a: 26, no. 77. **Papilio** (Plebejus) *peleus*; Linnaeus, 1763b: 409, no. 77. **Papilio** (Plebejus) *peleus*; Linnaeus, 1764: 327, no. 145. **Papilio** (Plebejus) *peleus*; Clerck, 1764: pl. 45, fig. 5. **Papilio** (Plebejus) *peleus*; Linnaeus, 1767: 792, no. 249.


Material examined. None.

Subsequent material examined

LSL: 1♂ labelled "Peleus 792., March[ione]ss of Rock[iingha]m".
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Type locality. "Indiis" [South America].

Remarks. Although Linnaeus originally thought that this species might be the female of pheereclus, he retained it as a good species in the 12th edition (1767).
Aurivillius (1882: 110) treated peleus as a junior synonym of priassus Linnaeus and cited the Clerck figure of peleus as typical for priassus.
Three subspecies were listed by Evans (1952: 33), the nominate subspecies occurring in the Guianas and Trinidad.
Type species of the genus Entheus Hübner.
See priassus.

PERIUS LINNAEUS, 1758
Papilio (Danaus) perius Linnaeus, 1758: 471, no. 79.
Papilio (Danaus) pierius; Linnaeus, 1764: 261, no. 80
[incorrect subsequent spelling].
Papilio (Danaus) perius; Linnaeus, 1767: 766, no. 116.
Identity. Parathymaperius (Linnaeus, 1758) (NYMPHALIDAE).
Linnaean material examined
Type locality. "Indiis".
Remarks. Although described as an MLU species, perius was not figured by Clerck. Thunberg (1804) made no mention of this species as being present in the MLU collection when it was donated to the University of Uppsala. However, both he and Wallin [1994] listed a specimen under the name leucothoe, a species with which the name perius has been confused. This is the specimen that we have designated as lectotype of perius. We consider that Thunberg correctly identified the taxon but was wrong to label it as leucothoe.
Corbet (1949: 196) listed an MLU type and a "co-type" in the LSL and gave the type locality of the "co-type" as Canton and the collector as Osbeck. We have found no such specimen in the LSL, and there is no indication from Osbeck (1765) that he had collected material of perius, only leucothoe. No further information on the type locality has been found, but Linnaeus's use of the term "Indiis" does not conflict with the wide Oriental distribution of the nominate subspecies of perius, as currently understood (e.g. Tsukada & Kaneko in Tsukada, 1985: 496, 497).
See leucothoe.

PHAEDRALINNAEUS, 1764
Papilio (Nymphalis) phaedra Linnaeus, 1764: 280, no. 98.
Papilio (Nymphalis) phaedra; Linnaeus, 1767: 773, no. 150.
Identity. Minois phaedra (Linnaeus, 1764) a junior subjective synonym of M. dryas (Scopoli, 1763) (NYMPHALIDAE).
Linnaean material examined
LSL: 1 δ, without head, pinned upside-down, labelled "Phaedra" [by Linnaeus], "Phaedra 773." [by Smith], here designated as LECTOTYPE.
Type locality. "Germania. D. Schreber" [Germany].
Remarks. In 1767 Linnaeus added the name Papilio dryas Scopoli after the description. We have designated the specimen in the LSL as lectotype.
Type species of the genus Minois Hübner.

PHAETUSA LINNAEUS, 1758
Papilio (Nymphalis) phaetusa Linnaeus, 1758: 478, no. 123.
Papilio (Nymphalis) phaerausa [sic]; Linnaeus, 1764: 293, no. 111.
Papilio (Nymphalis) phaerusa [sic]; Linnaeus, 1767: 780, no. 180.
Identity. Dryadula phaetusa (Linnaeus, 1758) (NYMPHALIDAE).
Linnaean material examined
Subsequent material examined
LSL: 1 δ labelled "Phaerusa 780, Surin: March[ione]ss of Rock[ingham]m"; 1 δ labelled "Cayenne, Paris. 86".
Type locality. "Indiis" [South America].
Remarks. Although described as an MLU species, phaetusa was not figured by Clerck, even on the supplementary plates. Thunberg (1804) listed the species, with the spelling phaerusa, as being present in the MLU collection when it was donated to the University of Uppsala. It was also listed by Wallin [1994]. Aurivillius (1882: 94) cited the Rösel figure, which was
mentioned in the original description, as typical. We
have selected the specimen in the MLU as lectotype.

We accept phuetusa as the correct spelling of this
name, as has been done by most authors, for example,

Type species of the genus Dryadula Michener.

PHALEROS LINNAEUS, 1767
Papilio (Plebejus) phaleros Linnaeus, 1767: 796, no.
272.

Identity. Panthiades phaleros (Linnaeus, 1767) (LYC-
AENIDAE).

Linnaean material examined
LSL: 1 ex., with abdomen partly eaten, labelled “Pha-
eros 796.” by Smith; 1 ex., with abdomen partly eaten,
pinned upside-down, labelled “no label” by Tams.

Type locality. “India” [probably the Guianas].

Remarks. Although we have listed the details of two
specimens under “Linnaean material examined”, nei-
ther specimen is labelled by Linnaeus so their status
as possible syntypes is uncertain. We have, therefore,
not designated a lectotype for this species. An
illustration of phulems is given by Nicolay (1976: 23).

The species occurs in Central and South America
(Nicolay, 1976).

PHEREC LUS LINNAEUS, 1758
Papilio (Plebejus) phereclus Linnaeus, 1758: 484, no.
159.
Papilio (Plebejus) phereclus; Linnaeus, 1764: 326, no.
144.
[Papilio] phereclus 159; Clerck, 1764: pl. 45, fig. 4.
Papilio (Plebejus) phereclus; Linnaeus, 1767: 792, no.
248.

Identity. Panara phereclus (Linnaeus, 1758) (RIOD-
INIDAE).

Linnaean material examined

Subsequent material examined
LSL: 1 ex. [of phidias] labelled “Msenas Fab., 4.347.”; 1 ex. [of phidias], pinned upside-down, without head, labelled “Surin.; Vogt.”

Remarks. Although phereclus was not described as an
MLU species, a specimen under that name was figured
by Clerck. In 1764 Linnaeus cited “VARIETAS α β”, so
it may be assumed that he had seen more than one
specimen, although he made no mention of having
done so in 1767. Thunberg (1804) listed one specimen
as being present in the MLU collection when it was
donated to the University of Uppsala as did Wallin
[1994]. This specimen, which does not match the Clerck
figure, was identified by Aurivillius as Epidesma ur-
sula Cramer, a moth belonging to the subfamily Di-
optinae (Arctiidae). The Clerck figure depicts a
specimen without antennae, which may account for
Linnaeus confusing the MLU specimen with the spe-
cies he described as phereclus.

In the absence of any Linnaean material of this
species, the current identity of phereclus, as a species
of the riodinid genus Panara, is based on the Clerck
figure. Current usage (see, e.g. D’Abrera, 1994: 955)
matches the Clerck figure.

PHIDIAS LINNAEUS, 1758
Papilio (Plebejus) phidias Linnaeus, 1758: 485, no.
164.
Papilio (Plebejus) phidias; Linnaeus, 1764: 334, no.
152.
[un-named] Clerck, 1764: pl. 44, figs 1–2. [Only named
in Register, not on plate.]
Papilio (Plebejus) phidias; Linnaeus, 1767: 795, no.
263.

Identity. Pyrrhopyge phidias (Linnaeus, 1758) (HES-
PERIIDAE).

Linnaean material examined

Subsequent material examined
LSL: 1 ex. [of phidias] labelled “Msenas Fab., 4.347.”;
1 ex. [of phidias], pinned upside-down, without head, labelled “Surin.; Vogt.”
Remarks. This species was described as an MLU species. Clerck figured two specimens under *phidias*, although he named them only in the Register, not on the plate. One of these illustrations (Fig. 2) is a misidentification. Thunberg (1804) mentioned *phidias* as being present in the MLU collection when it was donated to the University of Uppsala and it was listed by Wallin [1994]. The specimens they referred to under this name may be one of the two specimens actually figured by Clerck: it certainly matches Clerck’s plate 42, fig. 2. Butler recognized this specimen as a distinct species and named it *verbena* (Butler, 1869: 272), which is now a junior subjective synonym of *Mysoria barcastus* (Sepp). The specimen of true *phidias* in the MLU collection, which matches Clerck pl. 42, fig. 1, was labelled “Bixae” by Thunberg. The name *phidias* was established as the senior name by Evans (1951: 8), who acted as the first reviser (see Hemming, 1967: 390–391), and treated *bixae* as a subspecies. The MLU specimen labelled “Bixae” has been selected as lectotype of *phidias*.

See *bixae*.

**PHIDIPPUS LINNAEUS, 1763**

*Papilio (Eques) phidippus* Linnaeus, 1763a: 19, no. 52. *Papilio (Eques) phidippus*; Linnaeus, 1763b: 402, no. 52. *Papilio (Eques) phidippus*; Linnaeus, 1767: 752, no. 52.


Linnaean material examined

LSL: 1 ex. [genitalia destroyed] labelled “Phidippus 752. rar.” [by Smith]; 1♂ labelled “no label” [by Tams], here designated as LECTOTYPE; 1 ex. [genitalia destroyed] labelled “no label” [by Tams].

Type locality. “Java”.

Remarks. Linnaeus’s label “phidippus” was, at some stage, transferred to a specimen of *maera*, a species quite different in appearance and housed in a different box (see *maera*). Despite the absence of Linnaean labels, it is likely that all three specimens of *phidippus* are syntypes since the pins and method of preparation are virtually identical and almost certainly originated from the same source. They are also consistent with other specimens from H.J. Nordgren, who supplied Linnaeus with material from Java (see Introduction). The only specimen with its genitalia intact has been designated as lectotype.

The species is polytypic with the nominate subspecies occurring extensively in E Asia, including Java (see Aoki, Yamaguchi & Uemura in Tsukada, 1982a: 414; map, p. 416).

**PHILEA LINNAEUS, 1763**


Linnaean material examined. None.

Subsequent material examined


Remarks. We have been unable to locate any Linnaean material of *philea*, but the identity of this species is not in question. Its accepted current usage was established from the figure by Rösel (1761: pl. 3, fig. 5), which was cited by Linnaeus in his original description. It also matches the illustration of the nominate subspecies given by D’Abrera (1981: 110).

**PHILENOR LINNAEUS, 1771**

(Fig. 14)

*Papilio (Eques) philenor* Linnaeus, 1771: 535.


Linnaean material examined

LSL: 1♂ labelled “Philenor Mant. 535, Fabr. 4, 6” [by Smith] here designated as LECTOTYPE. Subsequent material examined

LSL: 1♀ labelled “Philenor mas, Abb. t. 3, Georgia WJK, 1806” [by Smith].

Type locality. “America. D. Fabricius” [North America].

Remarks. The specimen designated as lectotype (Fig. 14) is pinned, but is also distinctly flattened, as if it had been papered or pressed. The style of preparation is similar to that of *turnus* Linnaeus and others, all of which were cited as having been collected by Fabricius. The nominate subspecies is figured by D’Abrera (1990: 65).
Type species of the genus *Laertias* Hübner, currently considered to be a junior subjective synonym of *Battus* Scopoli.

**PHILIASUS LINNAEUS, 1767**

*Papilio (Plebejus) philiasus* Linnaeus, 1767: 790, no. 233.

**Identity.** Not effectively established (see Remarks).

**Material examined.** None authenticated (see Remarks).

**Type locality.** "Algiriae. Brunniche".

**Remarks.** No authenticated type material of this species exists and its identity has not been established. The current position dates from Vane-Wright (1975: 53), who accepted, provisionally, *philiasus* as a junior synonym of *pirithous* Linnaeus. He cited particularly Kirby (1870: 149, 150; 1871: 351), who treated these names as synonyms, interpreting them as different sexes of the same species, but, by contrast, gave priority to *philiasus*. The name *pirithous* has been used almost exclusively in later literature as the senior name.

Vane-Wright (1975) suggested that as the type locality and collector (respectively Algeria and Brunniche) given in the original descriptions of both *philiasus* and *pirithous* were the same, it was likely that the insects were caught flying together. From this inference he considered Kirby's synonymy to be supported. There is, in fact, considerable doubt about the localities associated with Brunniche (see Introduction), so this interpretation remains speculative.

Although they have apparently been neglected, there are two specimens under the name *philiasus* in the LSL labelled as follows: LSL: 1♀ labelled "Philiasus 790, ex descr." [by Smith]; 1♂ labelled "4.". Both appear to represent the same species. These specimens were identified provisionally as *Strymon bubastus* (Stoll), an identification that has been confirmed by R.K. Robbins (pers. comm.). While Linnaeus's description seems to fit these specimens much better than the species that is called *pirithous*, the pins and the style of setting are peculiar and we do not regard them as syntypic. Therefore, we do not treat *philiasus* as a senior synonym of *bubastus*. Furthermore, even if the specimens should eventually prove to be syntypes, there would be strong reasons for retaining the name *bubastus* to retain stability over *philiasus*, which is not used as the valid name for a species. A further complication lies in the fact that although the type locality of *bubastus* was cited as the Cape of Good Hope, the actual locality was probably Surinam.

See *pirithous*.

**PHILIOCTETES LINNAEUS, 1758**

*Papilio (Eques) philoctetes* Linnaeus, 1758: 465, no. 40.

**Identity.** *Antirrhea philoctetes* (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**


**Type locality.** "Indiis" [South America, probably the Guianas].

**Remarks.** Described as an MLU species and figured by Clerck. Aurivillius (1882: 112) considered the Clerck figure as typical. The species is polytypic: the lectotype, which we have designated above, matches specimens from the Guianas (J. Hall, pers. comm.). A figure of the nominate "race" was provided by D’Abrera (1994: 910).

**PHILIOLES LINNAEUS, 1758**

*Papilio (Plebejus) philoiles* Linnaeus, 1758: 483, no. 155.

*Papilio (Plebejus) philoiles*; Linnaeus, 1764: 321, no. 139.

[†Papilio] philoiles 155; Clerck, 1764: pl. 45, fig. 3.

*Papilio (Plebejus) philoiles*; Linnaeus, 1767: 791, no. 240.

**Identity.** *Mesosemia philoiles* (Linnaeus, 1758) (RIODINIDAE).

**Linnaean material examined**


**Type locality.** "Indiis" [South America, probably the Guianas].

**Remarks.** Described as an MLU species and figured by Clerck. Aurivillius (1882: 112) considered the Clerck figure as typical. The species is polytypic: the lectotype, which we have designated above, matches specimens from the Guianas (J. Hall, pers. comm.). A figure of the nominate "race" was provided by D’Abrera (1994: 910).
Subsequent material examined
LSL: 1 ♂ labelled “Philoctetes 750” [by Smith]; 1 ♂ labelled “no label” [by Tams]. MLU: 1 ♂ labelled “philoctetes” [by whom?]

Type locality. “Indiis” [South America, probably the Guianas].

Remarks. Although it was not described as an MLU species, philoctetes was figured by Clerck and listed by Thunberg (1804) and Wallin [1994]. Aurivillius (1882: 38) cited the Clerck figure as typical. The MLU specimen is likely to have been the specimen figured by Clerck. The figure and the specimen have a similar wing shape and lack antennae. We have designated the specimen as lectotype. There is no Linnaean label on either of the two specimens in the LSL, so, although the possibility cannot be discounted entirely, there is no convincing reason to suggest that they are syntypic.

The name was misspelled as philocletes in DAbrera (1984: 364), who provides colour illustrations.

PHILOMELA LINNAEUS, 1763
Papilio (Danaus) philomela Linnaeus, 1763a: 21, no. 60.
Papilio (Danaus) philomela; Linnaeus, 1763b: 404, no. 60.
Papilio (Danaus) philomela; Linnaeus, 1767: 768, no. 123.

Identity. Ypthima philomela (Linnaeus, 1763) (NYMPHALIDAE).

Linnaean material examined
LSL: LECTOTYPE ♂ labelled “Lara” [by Linnaeus].

Type locality. “Java”.

Remarks. In 1767 Linnaeus added the collector’s name, “Nordgreen”, so establishing the type locality as Java (see Introduction). Corbet (1941: 23; 1942: 92; 1949: 197) discussed the problems surrounding the identity and labelling of this species, lara and hera and stated that the type was from Java and was in the Linnaean [LSL] collection. The statements made by Corbet are sufficient to identify the specimen that he referred to as the type, and we take this to be the lectotype designation. Later, the specimen was illustrated by Corbet & Pendlebury, 1956, pl. 29, fig. 7). The specimen labelled by Linnaeus as “Philomelus” is what is now treated as hera, and of the two specimens labelled lara, one is philomela and the other is lara itself.

The distribution of the nominate subspecies is given as Sumatra, Java and Bali by Aoki, Yamaguchi & Uemura in Tsukada (1982a: 364), the only other subspecies being restricted to a small area near the southern tip of India.

See hero.

PHLAEAS LINNAEUS, 1761
Papilio (Plebejus) phlaeas Linnaeus, 1761: 285, no. 1078.
Papilio (Plebejus) phlaeas; Linnaeus, 1767: 793, no. 252.

Identity. Lycaena philomela (Linnaeus, 1761) (LYC- AENIDAE).

Linnaean material examined. None.

Subsequent material examined

Type locality. “Pratis Westmanniae” [Sweden: Vest- manland].

Remarks. In the original description Linnaeus cited three earlier references. Two of these, those of Merian and Ray, had been used before in the description of virgaureae Linnaeus, 1758.

Verity (1913: 188) stated that there were no extant Linnaean specimens and we have not located any. There is, however, no question of the identity of this common and widespread species.

Type species of the genus Lycaena Fabricius.

See virgaureae.

PHORBANTA LINNAEUS, 1771
(Figs 31, 32)
Papilio (Eques) phorbanta Linnaeus, 1771: 535.

Identity. Papilio phorbanta Linnaeus, 1771 (PAPIL- IONIDAE).

Material examined. None.

Type locality. “Cayenna” [Africa: Bourbon [Reunion]].

Remarks. No dagger mark was printed alongside the original description, which suggests that Linnaeus had material. However, no material was located and it is possible that this species was described only from the illustrations by Daubenton (Figs 31, 32), which were cited by Linnaeus as “Aub. misc. t. 43. f. 1. 2.” (see Aurivillius, 1898b: 475; Cowan, 1967b: 312). Paulian & Viette (1968: 67) stated that the locality given in the original description was erroneous and that the
specimen represented in the Daubenton figure (i.e. the type specimen) was from Réunion, not Madagascar. Their treatment of the identity and type locality was followed by Ackery et al. (1995: 155). See nireus.

PIERA LINNAEUS, 1758
Papilio (Heliconius) piera Linnaeus, 1758: 465, no. 43. [Papilio] piera 43; Clerck, 1764: pl. 36, fig. 4.
Papilio (Heliconius) piera; Linnaeus, 1767: 754, no. 52.

Identity. Haetera piera (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Subsequent material examined
LSL: 1♀, labelled “Piera 754., Surinam Voght.”; 1♂, pinned upside-down, labelled “Ind. Occ., M. of Rocking[ ha]hn.”.

Type locality. “Indiis” [South America, probably Surinam (Lamas [1998]: 135)].

Remarks. Described as an MLU species and figured by Clerck. One specimen was listed by Thunberg (1804) and Wallin [1994] as being in the MLU collection. Clerck’s illustration was cited as typical by Aurivillius (1882: 38). Lamas ([1998]: 135) listed this species as “Sintípos (♂), no localizados [perdidos?]”, presumably being unaware of the MLU specimen. We have selected this specimen as the lectotype.

Illustrations of the male and female of this species were provided by D’Abrera (1988: 739).

Type of pipleis is the female specimen labelled as such in the MLU, and Linnaeus’s description of pandarus has been taken to apply to the male of that species (Kirby, 1871: 225; Aurivillius, 1882: 22, 89; Hemming, 1967: 227).

Material examined. None.

Type locality. “Indiis” [South America, probably the Guianas].

Remarks. In 1764 Linnaeus gave the type locality as “Asia”. Kirby (1871: 432) listed this species, spelled pinthaeus, under the generic name Dismorphia, but later corrected the spelling to pithous (Kirby, 1877: 787). This generic assignment was followed by Aurivillius (1882: 66). The species is best placed in the genus Moschoneura Butler (G. Lamas, pers. comm.).

We have been unable to locate any Linnaean material. The several subspecies, including the nominate, were illustrated by D’Abrera (1981: 87), but under the incorrect spelling, pinthaeus.

This species is the senior name for methymna Godart [1819], the type species of the genus Moschoneura Butler.

PIPLEIS LINNAEUS, 1758
Papilio (Nymphalis) pipleis Linnaeus, 1758: 476, no. 108.
Papilio (Nymphalis) pipleis; Linnaeus, 1764: 285, no. 103. [Papilio] pipleis 108; Clerck, 1764: pl. 26, fig. 2.
Papilio (Nymphalis) pipleis; Linnaeus, 1767: 775, no. 159.

Identity. Hypolimnas pipleis (Linnaeus, 1758) a junior subjective synonym (and the ♀ of H. pandarus (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Type locality. “Indiis” [probably Ambon].

Remarks. Described as an MLU species and figured by Clerck. Corbet (1941: 14, 15) considered the species pipleis and pandarus to be based on the same type specimen, making them objective synonyms. This view was formalized by Vane-Wright (1975: 45) who designated this specimen as lectotype of both. There seems, however, no justification for this action (see pandarus). The type of pipleis is the female specimen labelled as such in the MLU, and Linnaeus’s description of pandarus has been taken to apply to the male of that species (Kirby, 1871: 225; Aurivillius, 1882: 22, 89; Hemming, 1967: 227).
The type locality was listed as Ambon by Corbet (1941), which fits the distribution of the nominate subspecies (Ambon, Serang and Saparua, see D’Abrera, 1977: 224).

Type species of Hypolimnas Hübner. See pandarus.

PIRITHOUS LINNAEUS, 1767
Papilio (Plebejus) pirithous Linnaeus, 1767: 790, no. 235.

Identity. Leptotes pirithous (Linnaeus, 1767) (LYCAENIDAE).

Material examined. None.

Type locality. “Algiriae. Brunniche” [Algeria].

Remarks. We have not located any Linnaean material of this species. The identity of pirithous follows current usage (e.g. Tennent, 1996: 30, pl. 10, figs 28–35).

PITHO LINNAEUS, 1764
Papilio (Plebejus) pitho Linnaeus, 1764: 337, no. 155.
Papilio (Plebejus) pitho; Linnaeus, 1767: 795, no. 266.

Identity. Tarucus pitho (Linnaeus, 1764) a junior subjective synonym (and the 9) of thespis (Linnaeus, 1764) (LYCAENIDAE).

Linnaean material examined
LSL: 1 ex., just remains of hindwings glued to pin, labelled “Pitho” [by Linnaeus], “Pitho 795.” [by Smith], here designated as LECTOTYPE.

Type locality. “ad Cap. b. spei. Tulbagh” [South Africa, Cape of Good Hope area].

Remarks. Although described in the MLU work, this species was not figured by Clerck and nor was it listed by Thunberg (1804) or Wallin [1994]. We have selected the specimen in the LSL, which bears Linnaeus’s label, as lectotype. Aurivillius (1882: 123) identified pitho as the female of the species now recognized as Tarucus thespis (Linnaeus, 1764). T. pitho was treated as a junior synonym of thespis by Ackery et al. (1995: 648).

PLEXIPPUS LINNAEUS, 1758
Papilio (Danaus) plexippus Linnaeus, 1758: 471, no. 80.
Papilio (Danaus) plexippus; Linnaeus, 1764: 262, no. 81.
Papilio (Danaus) plexippus; Linnaeus, 1767: 767, no. 117.

Identity. Danaus plexippus (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined


Subsequent material examined

Type locality. “America septentrionali” [North America].

Remarks. Linnaeus’s original description is interpreted as referring to more than one species, a consequence of which is that considerable confusion has occurred as to which species the name plexippus should best be applied.

After a lengthy and sometimes vituperative history of publication, the matter was resolved when the Commission (ICZN, 1954: Opinion 282 p. 227) designated a neotype establishing the identity of plexippus as the North American Monarch butterfly.

The neotype is a male “taken by H.S. Burnett at Kendall, New York State”. The specimen was figured in Clark, 1941: pl. 71, fig. 1, and is preserved in the United States National Museum, Washington, D.C.

Although the problems were resolved by the action of the Commission, we note that no attempt appears to have been made in the original submission about the possible location of the specimens cited as original illustrations. One of these citations was to Petiver. Wilkinson (1977: 20) stated that his collection included what appeared to be one of Petiver’s specimens of
plexippus. He also stated that the specimen bore the label 526. Whilst this certainly refers to the entry in Petiver's "Musei Petiveriani" it is not the number referred to by Linnaeus when describing plexippus. It is not, therefore, syntypic.

**PODALIRIUS LINNAEUS, 1758**

Papilio (Eques) podalirius Linnaeus, 1758: 463 [as footnote].

Papilio (Eques) podalirius; Linnaeus, 1764: 208, no. 27.

Papilio (Eques) podalirius; Linnaeus, 1767: 751, no. 36.

Identity. *Iphiclides podalirius* (Linnaeus, 1758) (PAPILIONIDAE).

Linnaean material examined
LSL: 1♀ [of *I. podalirius*] labelled "Podalirius" [by Linnaeus], "Podalirius 751." [by Smith].


Subsequent material examined
LSL: 1♀ [of *I. podalirius*] labelled "Gallia merid. 1786."

Type locality. "Europae australis & Africae Brassica" [Italy, Livorno (see below)].

Remarks. Verity (1913: 174) noted that two species, one from southern Europe and the other from North Africa and Spain, were confused under this name, *podalirius* Linnaeus and *feisthamelii* Duponchel. He considered Linnaeus's 1758 description to be invalid and accepted the 1764 description of *podalirius* (with *feisthamelii* as a junior synonym) to be the Spanish and North African species. *Papilio sinon* Poda was treated as the valid name for the European species. This action was contrary to the widely held use of *podalirius* as referring to the European species (excluding Spain).

Later, Verity (1947: 38) used *podalirius* as the valid name for the European species with *sinon* as a junior synonym, presumably accepting *feisthamelii* as the name of the North African species.

The situation was resolved when the International Commission on Zoological Nomenclature under its plenary powers designated the illustration in Ray (1710), a reference cited in Linnaeus's original description, to represent the lectotype of *podalirius* (ICZN, 1954: 331, Opinion 265). The specimen on which Ray's description was based was said by him to be from Livorno, Italy. The action by the Commission established the long-standing application of the name *podalirius* to the European species and Italy as the type locality.

Type species of *Iphiclides* Hübner.

**POLYBE LINNAEUS, 1763**

Papilio (Danaus) polybe Linnaeus, 1763a: 21, no. 58.

Papilio (Danaus) polybe; Linnaeus, 1763b: 404, no. 58.

Papilio (Plebejus) polybe; Linnaeus, 1767: 787, no. 218.


Material examined. None.

Type locality. Not given [South America].

Remarks. The type locality was not given in the original description, the only indication being "----", but in 1767 it was cited as "Indiis. Clerck".

Aurivillius (1882: 173) cited an unpublished figure by Clerck, "(ined.) t. 11 f. 7 (mas)" as matching Linnaeus's description. We have seen a photographic copy of an original illustration of this species by Clerck. We have been unable to locate any Linnaean material but the current concept of *polybe* matches the Clerck illustration.

The species was figured by D'Abrera (1995: 1122/23) who gave its range as Mexico to southern Brazil, Paraguay and northern Argentina.

**POLYCHLOROS LINNAEUS, 1758**

Papilio (Nymphalis) polychloros Linnaeus, 1758: 477, no. 113.

Papilio (Nymphalis) polychloros; Linnaeus, 1761: 278, no. 1057.

Papilio (Nymphalis) polychloros; Linnaeus, 1767: 777, no. 166.


Linnaean material examined
LSL: 1 ex. labelled "113. Polychloros" [by Linnaeus], "polychloros 777." [by Smith], here designated as LECTOTYPE.

Subsequent material examined
LSL: 1♀ labelled "Angl. Jones"; 1 ex., pinned upside-down, labelled "Turin, Giorna."
Type locality. “Pyro, Ceraso, Salice” [Sweden from reference to Fauna Suecica (1746)].

Remarks. In 1761 Linnaeus added “rarius” to the type locality and in 1767 changed this to “frequentissimus Upsaliae 1758” indicating that 1758 must have been a good year for this species, which is a migrant/temporary resident in Sweden. Verity (1913: 181) indicated that the LSL specimen, which we have selected as lectotype, was remarkably small with a pale underside.

The nominate subspecies occurs in Europe. There is another, N. p. erythmmelas Austaut, in North Africa.

Type species of the genus Nymphalis Kluk.

POLYCLETUS LINNAEUS, 1758
Papilio (Plebejus) polycletus Linnaeus, 1758: 485, no. 166.

Papilio (Plebejus) polycletus; Linnaeus, 1764: 336, no. 154.

[incorrect subsequent spelling, correct in Register].

Papilio (Plebejus) polycletus; Linnaeus, 1767: 795, no. 265.

Identity. Hypochrysops polycletus (Linnaeus, 1758) (LYCAENIDAE).

Material examined. None.

Type locality. “Indiis” [Ambon].

Remarks. Although not listed as an MLU species in the original description, polycletus was illustrated by Clerck. Clerck’s figure was cited as typical by Aurivillius (1882: 123). However, Thunberg (1804) did not mention the species as being present in the MLU collection when it was donated to the University of Uppsala, nor was it listed by Wallin (1994). As stated by Aurivillius (1882: 17) the figure by Merian mentioned in the original description actually represents a different species, Papilio androgeus Cramer. The pin of the specimen we have designated as lectotype is similar to that of leilus, which was also described from “Americe”. Although there are a number of subspecies on the Caribbean islands, the nominate subspecies, which occurs on the mainland of South America, does not vary significantly (D’Abera, 1981: 4, 5).

Type species of the genus Battus Scopoli.

POLYDORUS LINNAEUS, 1763
Papilio (Eques) polydorus Linnaeus, 1763a: 18, no. [50], printed as “30”.

Papilio (Eques) polydorus; Linnaeus, 1763b: 401, no. 50.

[incorrect subsequent spelling, correct in Register].

Papilio (Eques) polydorus; Linnaeus, 1767: 746, no. 10.

Identity. Atrophaneura polydorus (Linnaeus, 1763) (PAPILIONIDAE).

Material examined. None.

Type locality. “India” [probably Ambon, see Remarks].

Remarks. The two specimens in the LSL under the name polydorus, which are labelled by Smith, are
specimens of aristolochiae Fabricius, 1775. According to Corbet (1949: 197) the type is supposed to be in the MLU and is from Ambon, collector unknown. Corbet's comment on the assumed type depository is understandable since the original description referred to a figure by Clerck, who illustrated the exotic butterflies in the Queen's collection. However, polydorus was not listed by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala nor by Wallin [1994]. Furthermore, Aurivillius (1882) mentioned no specimens, citing only the illustration of Clerck.

The identity of polydorus is based on the description and Clerck's figure. We have not located any Linnaean material of this species.

The area of distribution of the nominate subspecies of this polytypic species was given by Tsukada & Nishiyama in Tsukada (1982b: 282) as Ambon, Seram, and Obi (see also Parsons, [1998]: 654).

\[ \text{POLYMNIA LINNÆUS, 1758} \]
\[ \text{Papilio (Heliconius) polymnia Linnaeus, 1758: 466, no. 47.} \]
\[ \text{Papilio (Heliconius) polymnia; Linnaeus, 1764: 224, no. 45.} \]
\[ \text{Papilio (Heliconius) polymnia; Linnaeus, 1767: 755, no. 58.} \]

Identity. Mechanitis polymnia (Linnaeus, 1758) (NYMPHALIDAE) (see Brown, 1977, and references, notably by Fox, therein).

Linnaean material examined

LSL: 1♀, with abdomen partly eaten, labelled “Polymnia” [by Linnaeus], “Polymnia 755.” [by Smith].


Type locality. “Surinami” [Surinam].

Remarks. Although described as an MLU species, polymnia was not figured by Clerck. It was, however, listed as being in the MLU collection by Thunberg (1804) and Wallin [1994], and was treated by Aurivillius (1882: 41). We have selected the specimen in the MLU as lectotype. D’Almeida (1978: 105) provided an extensive bibliography to this species and listed the names associated with it.

Linnaeus gave the type locality as Surinam and there is no reason to doubt the veracity of his citation.

The species is a senior subjective synonym of mopsus Linnaeus (G. Lamas, unpublished) and the type species of the genus Mechanitis Fabricius.

See mopsus.

POLYTES LINNÆUS, 1758

Papilio (Eques) polytes Linnaeus, 1758: 460, no. 7. [Papilio polytes 7; Clerck, 1759: pl. 14, fig. 1.]

Identity. Papilio polytes Linnaeus, 1758: 746, no. 5.

Linnaean material examined

LSL: 1♀ labelled [of f. polytes Linnaeus] labelled “7 Polites” [by Linnaeus], “Polytes 746” [by Smith] on a fairly short shiny but rusty pin with no head.


Clerk Collection: 1♀ [of f. stichius Hübner] pinned through a “Memnon 12” label that is above a “Polytes 7” label, therefore probably misplaced.

Subsequent material examined

LSL: 1♀ labelled “Bengal, Dr Roxburgh”; 1♀ [?] without abdomen labelled “E. Ind., NEK” [collected by N.E. Kinderley].

Type locality. “Asia” [southern China].

Remarks. Described as an MLU species and figured by Clerck. There are two specimens in the MLU collection, both of which are listed by Thunberg (1804) and Wallin [1994]. Aurivillius (1882: 11) discussed the question of the identity of these two specimens. One matches the original description and is therefore of the typical form, the other is of f. stichius (Hübner) and is almost certainly the specimen figured by Clerck. Corbet (1949: 186) stated that the figure cited by Linnaeus in the original description (“Ehret. pict. t. 10”) actually represents helenus, not polytes, and said that “one of these
Uppsala butterflies should be regarded as the name type. Unfortunately, he also stated that “the same form, probably the same specimen, is figured in Clerck’s Icones, pl. 14, fig. 1”. This is clearly not the case as the specimen figured is of the form now known as stichius. This interpretation would explain Corbet’s later treatment (1949: 197) when he treated the specimen figured by Clerck as one of the co-types (which it probably is, i.e. the form now known as polytes) with another co-type in the Linnaean [LSL] collection (which happens to be the true polytes). In order to retain stability, and in line with Linnaeus’s original description, we have designated the “β” specimen of polytes (f. polytes) in the MLU as lectotype.

This is a polymorphic and sexually dimorphic species (see Tsukada, Nishiyama & Morishita in Tsukada, 1982b: 344; D’Abrera 1982: 72), the male being described by Linnaeus as pammon. The nominate subspecies is from the southern China mainland.

Type species of the genus Menelaides Hübner, currently considered to be a junior subjective synonym of Papilio Linnaeus.

See pammon.

**POLIUS LINNAEUS, 1758**

Papilio (Nymphalis) populi Linnaeus, 1758: 476, no. 111.
Papilio (Nymphalis) populi; Linnaeus, 1761: 277, no. 1055.
Papilio (Nymphalis) populi; Linnaeus, 1767: 776, no. 162.

Identity. Limenitis populi (Linnaeus, 1758) (NYPH-HALIDAE).

Linnaean material examined

LSL: 1♂ labelled “111 Poliuli” [by Linnaeus], “Poliuli 776. rar.” [by Smith], here designated as LECTOTYPE; 1♀, without abdomen, pinned upside-down, labelled “no label” [by Tams].

Subsequent material examined

LSL: 1♂ labelled “Germany – Mr Hooker.”.

Type locality. “Populi tremula” [probably Fennoscandia, see Remarks].

Remarks. The original description was based on a mixed series. Linnaeus cited four references, the first of which was to Ray. Ray’s description was based on a specimen from Essex, England, and refers to camilla (populi does not occur in Britain). The other three references, which are to populi, all of which were figured, are to works by Uddman, Clerck and Rösel.

Verity (1950) cited Sweden as the type locality, but this is probably based on a subsequent description by Linnaeus (1761). The references to Uddman and Clerck suggest Fennoscandian localities (Finland and Sweden respectively) and that of Rösel, Germany. The specimen bearing Linnaeus’s label, and which we have designated as lectotype, may well have been collected by Linnaeus himself.

Type species of the genus Limenitis Fabricius.

**PRIAMUS LINNAEUS, 1758**

Papilio (Eques) priamus Linnaeus, 1758: 458, no. 1.
Papilio priamus; Linnaeus, 1759: t. 3, f. 203.
Papilio (Eques) priamus; Linnaeus, 1764: 182, no. 1. [Papilio] priamus 1; Clerck, 1764: pl. 17, fig. 1.
Papilio (Eques) priamus; Linnaeus, 1767: 744, no. 1.

Identity. Ornithoptera priamus (Linnaeus, 1758), a senior subjective synonym of panthous Linnaeus (PAP-TIONIDAE).

Linnaean material examined


Subsequent material examined

LSL: 1♂ labelled “Priamus 744 e Coll. D. Houyttyn” [by Smith], 1♂ labelled “Priamus ex dono[?]” D. Marsham” [by Smith].

Type locality. Ambon.

Remarks. Clerck’s figure is a good representation of the specimen in the Queen’s collection in Uppsala. The illustration shows the thoracic mark and indicates that the antennae are missing. Most tellingly, the proboscis is depicted exactly as it appears in the specimen. Corbet (1949: 197) stated that the type was in the MLU, but he did not make a designation. We have designated the specimen in the MLU as lectotype.

In the same year as the original description, Linnaeus published a dissertation (1758, Pandora In-sectorum), also published in the series Amoen. Acad., in which he illustrated this species.

The species was described from Ambon by Vincentius earlier in the eighteenth century (see Haugum & Low, 1978: 96), an author cited by Linnaeus in the original description and supporting the view that the type locality is Ambon.

The species is polytypic, the nominate form occurring in Seram, Saparua and Ambon (see Haugum & Low, 1978: 102).
Type species of the genus *Ornithoptera* Boisduval. See *panthous*.

**PRIASSUS LINNAEUS, 1758**

*Papilio (Barbarus) priassus* Linnaeus, 1758: 487, no. 185.

*Papilio (Plebejus) priassus*; Linnaeus, 1764: 319, no. 137.

*Papilio (Plebejus) priassus*; Linnaeus, 1767: 793, no. 251.


Material examined. None.

Type locality. "Indiis" [South America, probably the Guianas].

Remarks. Although not described as an MLU species, *priassus* was cited by Linnaeus (1764). It was treated by Aurivillius (1882: 67, 110) as the senior name for *talaus* Linnaeus and *peleus* Linnaeus.

We have not located any Linnaean material, and there is no reason to change current usage (e.g. see Evans, 1952: 33, who recognized three subspecies, with the nominate from the Guianas and Trinidad).

See *peleus* and *talaus*.

**PRORSA LINNAEUS, 1758**

*Papilio (Nymphalis) prorsa* Linnaeus, 1758: 480, no. 134.

*Papilio (Nymphalis) prorsa*; Linnaeus, 1767: 783, no. 134.

Identity. *Araschnia prorsa* (Linnaeus, 1758), a junior subjective synonym of *A. levana* (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined. None.

Subsequent material examined

LSL: 1♀ labelled "Prorsa 783., Germany, Bayley.".

Type locality. "Urtica Germaniae" [Germany].

Remarks. Linnaeus was unaware that *prorsa* and *levana* were two forms of the same species. Verity (1913: 182) inferred that Linnaeus had no material of *prorsa*, presumably meaning that he described it from the Rösel figure cited in the original description.

The name *prorsa* is used to identify the second brood specimens of *levana*.

See *levana*.

**PROTESILAUS LINNAEUS, 1758**

*Papilio (Eques) protesilaus* Linnaeus, 1758: 463, no. 29.

*Papilio (Eques) protesilaus*; Linnaeus, 1764: 209, no. 28.

*Papilio (Eques) protesilaus*; Linnaeus, 1767: 752, no. 29.


Linnaean material examined

Subsequent material examined
LSL: 1 ♂ labelled “Protesilaus 752, Allen, 1797.”; 1 ex., without abdomen, labelled “no label”.

Type locality. “America septentrionali” [South America, probably the Guianas].

Remarks. E. protesilaus was treated by Rothschild & Jordan (1906: 413) as one of a complex of similarly patterned species, the members of which are difficult to distinguish on pattern elements alone. Effective identification of the species requires examination of the male genitalia. Linnaeus’s original description (including references cited by Linnaeus) was based on a very mixed series. These facts make the establishment of the identity of protesilaus difficult because the genitalia of the specimen that should most properly be treated as the type cannot be examined since the abdomen is missing.

We agree with Rothschild & Jordan (1906) that neither of the two specimens in the LSL should be accepted as syntypic: we have treated them as subsequent additions, although the possibility of the syntypic status of the unlabelled specimen cannot entirely be discounted. Rothschild & Jordan, however, failed to mention the two specimens in the MLU collection. We consider that these, which are both males, are syntypic. The one listed as β by Thunberg (1804) matches the figure of Clerck, and Clerck’s illustration was cited as typical by Aurivillius (1882: 29). The fact that the specimen in question is a male with its genitalia intact means that there is an opportunity to tie the name of protesilaus to a putative syntype. Since this specimen, which is currently in temporary storage in Uppsala and inaccessible, has not yet been dissected it is not possible to say whether or not it matches protesilaus sensu Rothschild & Jordan (1906). Rothschild & Jordan provide an illustration of the valva of the male genitalia (p. 708, fig. 3), so there is a ready source of comparison.

The most recent treatment of this species is by Tyler, Brown & Wilson (1994: pl. 74) who cite it as Protesilaus protesilaus.

At present, therefore, the identity of protesilaus remains unresolved. In the present work we draw attention to the problem and to the existence of what we think may be, pending future revision, a suitable specimen to be designated as lectotype.

Type species of the genus Protesilaus Swainson.

Papilio (Plebejus) protesilaus; Linnaeus, 1767: 794, no. 259.

Identity. Urbanus protesilaus (Linnaeus, 1758) (HESPERIIDAE).

Linnaean material examined

Subsequent material examined

Type locality. “Gramine Americas”.

Remarks. Described as an MLU species and figured by Clerck. It is clear from the original description that the name proteus is based on a series of syntypes both in the MLU and by reference to Merian. In 1764, Linnaeus described seven different varieties. Clerck
(1764: pl. 42) illustrated three unnamed specimens, which were all listed as *proteus* in the Register to that work. Later, Linnaeus (1767) restricted the name *proteus* to two of the original Clerck figures (pl. 42, figs 1, 3), and cited the other (pl. 42, fig. 2) in his description of *thrax*.

Aurivillius (1882: 119–120) noted that *proteus* was described from a mixed series representing several species. He attempted to identify the seven varieties listed by Linnaeus (1764) with reference to the Clerck figures and “typical specimens”. He concluded that although the original Linnaean description and the figure by Merian could refer to one of several specimens, Linnaeus’s variety “γ” was the *proteus* of contemporary authors. Variety “γ” of Linnaeus, is the specimen cited as β of Thunberg (see Linnaean material examined), and it still exists in the MLU collection. We consider that not only did Aurivillius (1882) fix the identity of *proteus* very effectively, but, by linking it to one of the syntypes in the MLU collection, he designated that specimen as lectotype (ICZN, 1999: Article 74.5).

Steinhauser (1981: 12) stated that the type was lost or destroyed and designated a neotype “to avoid possible future confusion”. This statement is incorrect not only because of the existence of the syntypes of *proteus* in the MLU collection, but also because of syntypic material of Merian housed in the Gerning collection in Museum Wiesbaden (Mielke, 1989: 450). Steinhauser gave no explicit reason for assuming that the types were lost, nor for identifying *proteus* as he did. What is more, his “neotype” represents a species different from the specimen labelled “Proteus β” by Thunberg (G. Lamas, pers. comm.). The identity of *proteus* was further complicated by the designation as lectotype of a Merian specimen housed in Museum Wiesbaden by Mielke (1989: 450, fig 3, 4).

Under the conditions of the Code (ICZN, 1999: Article 75.8), the neotype is required to be set aside in favour of the original material. While Aurivillius’s lectotype designation takes precedence over Steinhauser’s “neotype” and Mielke’s “lectotype”, consideration has to be given to retaining stable usage of the name *proteus* sensu Steinhauser, Mielke and others for what is an important pest of legumes in the neotropics. If necessary, a case should be made to the Commission to set aside Aurivillius’s lectotype in favour of Mielke’s “lectotype”.

Aurivillius’s lectotype of *proteus* possibly represents what is considered today as *Urbanus pronto* Evans, 1952 (O. Mielke, pers. comm., based on examination of an image), but confirmation of this suggestion is required by examining the genitalia. The identity of Steinhauser’s “neotype” also needs to be established. Resolution of these matters is important also because *proteus* is the type species of the genus *Urbanus* Hübner.

Hemming (1967: 433) cited Hübner’s plate [155] as representing *proteus* Linnaeus, but two specimens are figured on that plate. Given the complex identities of the members of this genus, it is impossible to say which, if any, of these illustrations represent *proteus* Linnaeus, or even *proteus* sensu Steinhauser.

See *thrax*.

**PROTUMNUS LINNAEUS, 1764**

*Papilio (Plebejus) protumnus* Linnaeus, 1764: 340, no. 158.

*Papilio (Plebejus) protumnus*; Linnaeus, 1767: 794, no. 258.

**Identity.** *Thestor protumnus* (Linnaeus, 1764) (LYC-AENIDAE).

Linnaean material examined

LSL: 16 labeled “Protumnus” [sic] [by Linnaeus], “Protumnus 794.” [by Smith], here designated as LECTOTYPE.

**Type locality.** “ad Cap. b. spei. Tulbagh” [South Africa, Cape of Good Hope area].

**Remarks.** Although described in the MLU work, this species was not mentioned by Thunberg as being present in the MLU collection when it was donated to the University of Uppsala, nor was it listed by Wallin [1994]. Aurivillius (1882: 126) cited a Clerck figure “(ined.) t. 13, f. 2”. We have seen a photographic copy of this plate. We consider that this illustration is of the lectotype since the figure depicts the way in which the specimen is set. Furthermore, both the figure and the specimen are labelled as “Protumnus” [sic].

The specimen we have designated as lectotype is in the LSL and is consistent with being a Tulbagh specimen since it is on a lacquer-covered pin.

The nominate subspecies occurs in the Cape Peninsula and adjacent areas of the south-western Cape while the two other subspecies listed by Pringle et al. (1994: 140, 141) are found further inland.

**Type species of the genus Arrugia Godman.**

**PRUNI LINNAEUS, 1758**

*Papilio (Plebejus) pruni* Linnaeus, 1758: 482, no. 147.

*Papilio (Plebejus) pruni*; Linnaeus, 1761: 283, no. 1071.

*Papilio (Plebejus) pruni*; Linnaeus, 1767: 788, no. 221.

**Identity.** *Satyrium pruni* (Linnaeus, 1758) (LYC-AENIDAE).
Linnaean material examined
LSL: 1♂ labelled “147 Pruni” [by Linnaeus], “Pruni 788.” [by Smith], here designated as LECTOTYPE; 1♀ [of ilicis] labelled “no label” [by Tams].

Type locality. “Pruno domestica” [Europe].

Remarks. Verity (1913: 186) indicated that there were two Linnaean specimens in the LSL, one male of pruni, the other of ilicis. The former is labelled by Linnaeus and we have selected it as lectotype thus fixing the identity of the species.

Linnaeus (1758) gave the habitat as “Pruno domestica”, with no locality. Verity (1943: 370) cited the type locality as Germany, but this was only an inference because Rösel was the reference listed first in the original description.

**PSIDII LINNAEUS, 1758**

Papilio (Heliconius) psidii Linnaeus, 1758: 466, no. 51.
Papilio (Heliconius) psidii; Linnaeus, 1764: 228, no. 47.
Papilio (Heliconius) psidii; Linnaeus, 1767: 756, no. 64.

Identity. Thyridia psidii (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Type locality. “Americae, Asiae Psidio” [probably Surinam (see Remarks)].

Remarks. Although described as an MLU species, psidii was not figured by Clerck. Aurivillius (1882: pl. 1, fig. 1) identified the butterfly as Xanthocleis psidii (Linnaeus) and illustrated the MLU specimen as “speciminis typici”, which we interpret to be a lectotype designation.

From the two localities given in the original description, either psidii was based on a mixed series or the localities of one or more of the five illustrations cited in the original description were erroneous. The type locality is unclear from Linnaeus’s publications, but, if Aurivillius’s interpretation is valid, the distribution is neotropical. Hemming (unpublished manuscript in BMNH archives) noted that in the area in which this species is known to occur, Linnaeus received or had access to material only from Surinam, and we accept Surinam as the most likely type locality of the nominate subspecies of psidii (see Introduction).

Type species of the genus Thyridia Hübner.

**PYRANTE LINNAEUS, 1758**

Papilio (Danaus) pyranthe Linnaeus, 1758: 469, no. 66.
Papilio (Danaus) pyranthe; Linnaeus, 1764: 245, no. 64 [incorrect subsequent spelling].
Papilio (Danaus) pyranthe; Linnaeus, 1767: 763, no. 98.

Identity. Catopsilia pyranthe (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined
LSL: 1♂ labelled “66. Pyranthe” [by Linnaeus], “Pyranthe 66.” [by Smith], here designated as LECTOTYPE; 1♂ labelled “no label” [by Tams]; 1♂, pinned upside-down, labelled “no label” [by Tams].

Type locality. “Asia” [China, Canton].

Remarks. In 1767 Linnaeus cited the type locality as “Asia: China”. The species is listed as having been purchased or caught in Canton by Osbeck (1765), which supports the statement of Corbet (1949: 198) that the type is in the Linnaean [LSL] collection and is from “China, Canton, [Osbeck]”. We have selected the specimen labelled by Linnaeus as lectotype.

There are two specimens in the Clerck Collection, one labelled “Pyranthe 66” by Clerck. Both are on needles so may have been collected by Osbeck, but there are other specimens on similar needles in the Clerck Collection that are not of Linnaean origin nor, indeed, of Linnaean species.

The nominate subspecies is distributed across the Oriental region (e.g. Yata in Tsukuda, 1981: 261), including in the region of Canton, the type locality.

**PYRENE LINNAEUS, 1764**

Papilio (Danaus) pyrene Linnaeus, 1764: 241, no. 60.
Papilio (Danaus) pyrene; Linnaeus, 1767: 762, no. 86.

Identity. Ixias pyrene (Linnaeus, 1764) (PIERIDAE).

Linnaean material examined
LSL: 1 ex. labelled “Pyrene” [by Linnaeus], “Pyrene 762.” [by Smith], here designated as LECTOTYPE; 1♂, without head, labelled “no label” [by Tams].

Type locality. “China” [Canton].

Remarks. Although described in the MLU work this species was not figured by Clerck and nor was it
Papilio (Plebejus) quercus

mentioned by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala. There is, however, a Linnaean specimen in the LSL, which we have designated as lectotype.

Osbeck (1765) cited material from Canton that was examined by Linnaeus between 1750 and 1757 and so fits the type locality. The distribution of the nominate subspecies was given as South China by Yata in Tsukuda (1981: 280). The map presented in that work shows the range of the nominate subspecies as extending down to Canton.

Type species of the genus Isias Hübner.

**PYRRHUS LINNAEUS, 1758**


**Identity. Polyura pyrrhus** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: 1♂ [of _Polyura athamas_ (Drury, 1770)] labelled "Pyrrhus" [by Linnaeus], "Pyrrhus 749" [by Smith].


**Type locality.** "Indiis" [Ambon].

**Remarks.** Although Linnaeus did not describe _pyrrhus_ as an MLU species, Corbet (1949: 198) stated that the type was in that collection and that it was collected in Ambon. As noted by Smiles (1982: 138), the specimen in the MLU is certainly a syntype and represents the species currently accepted as _Polyura pyrrhus_. The specimen in the LSL also appears to be a syntype, since it bears a label in Linnaeus's handwriting. It is, however, a specimen of _Polyura athamas_ (Drury) and so is misidentified. By designating the MLU specimen as lectotype, we fix the well established identity of _pyrrhus_, which was probably first determined by Butler (1866: 632).

Two subspecies were recognized by Smiles (1982). The nominate occurs on Ambon and several adjacent islands.

Type species of _Polyura_ Billberg.

**QUERCUS LINNAEUS, 1758**


**Identity. Quercusia quercus** (Linnaeus, 1758) (LYCENIDAE).

**Linnaean material examined**

LSL: 1♀, unspread, labelled "Quercus" [by Linnaeus], "Quercus 788." [by Smith], here designated as LECTOTYPE.


**Subsequent material examined**


**Type locality.** "Quercus" [Europe].

**Remarks.** Although _quercus_ was not described as an MLU species, it was mentioned by Thunberg (1804) as being present in the MLU collection when it was donated to the University of Uppsala, and was listed by Wallin [1994]. Aurivillius (1882: 107) correctly identified the MLU specimen as a different thecline, _cyllarus_ Cramer, although he used the name _cyllarissus_ Herbst, which is a junior synonym.

Verity (1913: 187) stated that a "male from the LSL is evidently of European origin". There is only one Linnaean specimen in the LSL, which is labelled by Linnaeus. It is, however, a female, and has been selected as lectotype.

Although no locality was cited in the original description, Verity (1943: 344), followed by Higgins & Riley (1975: 234), recorded it as England, apparently because the first reference given by Linnaeus was by Petiver. The specimen figured by Petiver (pl. 11, fig. 9) probably represents another species of _Theclina, Satyrium w-album_. We prefer to retain Europe as the type locality, as indicated by Linnaeus (1764).

The species is polytypic, the nominate subspecies occurring widely through Europe with the other subspecies restricted to southern Spain and Morocco.

Type species of the genus _Quercusia_ Verity. We follow Shirouzu & Yamamoto (1956) in treating _Quercusia_ and _Neozyphyrus_ Sibatani & Ito (where _quercus_ is sometimes placed) as separate genera.
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RAPAE LINNAEUS, 1758
Papilio (Danaus) rapae Linnaeus, 1758: 468, no. 59.
Papilio (Danaus) rapae; Linnaeus, 1761: 270, no. 1036.
Papilio (Danaus) rapae; Linnaeus, 1767: 759, no. 76.

Identity. Pieris rapae (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined
LSL: 1♂ labelled “59. Rapae” [by Linnaeus], “Rapae 759.” [by Smith], here designated as LECTOTYPE.

Remarks. Verity (1913: 177) stated that the only Linnaean specimen is labelled by Linnaeus and is a first brood male, presumably of Scandinavian origin. We agree with Verity's comments and have designated the specimen as lectotype.

RHAMNI LINNAEUS, 1758
Papilio (Danaus) rhamni Linnaeus, 1758: 470, no. 73.
Papilio (Danaus) rhamni; Linnaeus, 1761: 272, no. 1042.
Papilio (Danaus) rhamni; Linnaeus, 1767: 765, no. 106.

Identity. Gonepteryx rhamni (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined
LSL: 1♂ labelled “Rhamni” [by Linnaeus], “Rhamni 765.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined
LSL: 1♂ labelled “Ricini 756., mas, ex Ic. Roesel, Surinam Voght.”; 1♂, without head, abdomen partly eaten, labelled “no label”.

Type locality. “Rhamno Europae, Africae” [Sweden from reference to Fauna Suecica (1746)].

Remarks. Linnaeus referred to both sexes of this species in Fauna Suecica (1746) and, in 1761, made the comment that it was frequently encountered locally. His familiarity with the species suggests that he personally collected the specimen in the LSL and which we have designated as lectotype.

Two western Palaearctic subspecies are recognized by some authors, one European and one north African. Verity (1913: 179), stated that the Linnaeus specimen was a male of the northern race and this specimen, which we have designated as lectotype, does indeed match the European subspecies.

Type species of the genus Gonepteryx [Leach].

RICINI LINNAEUS, 1758
Papilio (Heliconius) ricini Linnaeus, 1758: 466, no. 50.
Papilio (Heliconius) ricini; Linnaeus, 1764: 227, no. 46.
Papilio (Heliconius) ricini; Linnaeus, 1767: 756, no. 63.

Identity. Heliconius ricini (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Subsequent material examined
LSL: labelled “Ricini 756., mas, ex Ic. Roesel, Surinam Voght.”; 1♂, without head, abdomen partly eaten, labelled “no label”.

Type locality. “Ricino Americae” [South America, probably the Guianas].

Remarks. Although described as an MLU species, ricini was not figured by Clerck. In 1764 Linnaeus gave the type locality as “America meridionali” and referred to both “Mas?” and “Femina?”. Linnaeus added a comment about the male at the end of the original description noting the “purpureas” base to the hindwing. The specimen that matches this description bears Linnaeus's label as ricini, but was misidentified, and is, in fact, doris. Later, he described the male as having a red base to the hindwing upperside, and four basal and one anal red spots on the hindwing underside (Linnaeus, 1764). The current concept of ricini (Holzinger & Holzinger, 1994: 146) matches the identity established by our designation of the lectotype, above.

Two subspecies are recognized by Holzinger & Holzinger (1994), the nominate occurring in Venezuela, the Guianas and Brazil.

See doris.

RUBI LINNAEUS, 1758
Papilio (Plebejus) rubi Linnaeus, 1758: 483, no. 154.
Papilio (Plebejus) rubi; Linnaeus, 1761: 284, no. 1077.
Papilio (Plebejus) rubi; Linnaeus, 1767: 791, no. 237.

Identity. Callophrys rubi (Linnaeus, 1758) (LYCENAIDAE).

Linnaean material examined
SL: 1♀ labelled “154 Rubi.” [by Linnaeus], “Rubi 791.” [by Smith], here designated as LECTOTYPE.
Subsequent material examined

Type locality. “Rubo aculeato” [Sweden from reference to Fauna Suecica (1746)].

Remarks. Verity (1913: 187) referred to a single Linnaean specimen, a female, in the LSL. Although we have, indeed, located only one Linnaean specimen, his comment is not sufficient to be considered as a lectotype designation. We have, therefore, designated it above.

Type species of the genus *Callophrys* Billberg.

**RUMINA LINNAEUS, 1758**

*Papilio (Nymphalis) rumina* Linnaeus, 1758: 480, no. 132.

*Papilio (Nymphalis) rumina*; Linnaeus, 1767: 783, no. 200.


Linnaean material examined. None.

Subsequent material examined
LSL: 1♂ labelled “Rumina 783. Mr Gerning [crossed through], Marsham.”; 1♂ labelled “Turin, Giorna 1794.”.

Type locality. “Europa australi” [southern Europe].

Remarks. There are, as noted by Verity (1913: 176), no Linnaean specimens. The identity of this species is, however, not in doubt.

**SARPEDON LINNAEUS, 1758**


*Papilio (Eques) sarpeon*; Linnaeus, 1764: 196, no. 15 [incorrect subsequent spelling].

*Papilio (Eques) sarpedon*; Linnaeus, 1767: 747, no. 15.


Linnaean material examined
LSL: 1♂ without antennae labelled “Sarpedon” [by Linnaeus], “Sarpedon 747” [by Smith], on a typical Linnaean pin, here designated as LECTOTYPE; 1♂ labelled “no label” [by Tams].


Type locality. “Asia” [China, Canton, according to Corbet (1949), but see Remarks].

Remarks. In 1767 Linnaeus explained the distinction between *sarpedon* and *P. euryrhyphus* Linnaeus.

According to Corbet (1949: 198) the type, which is in the Linnaean [LSL] collection, is from “China, Canton, [P. Osbeck]”. Toxopeus (1951) discussed the question of whether the MLU species was from Java, and concluded that Corbet was correct in citing Canton as the type locality. However, although the species was not listed by Osbeck (1765), the specimen, which we have designated as lectotype, is on a typical Osbeck needle.

The nominate species is widely distributed (see Tsukada & Nishiyama in Tsukada, 1982b: 376, 377).

Type species of the genus *Graphium* Scopoli.

**SCYLLA LINNAEUS, 1763**

*Papilio (Danaus) scylla* Linnaeus, 1763a: 20, no. 57.

*Papilio (Danaus) scylla*; Linnaeus, 1763b: 404, no. 57.

*Papilio (Danaus) scylla*; Linnaeus, 1764: 242, no. 61.

*Papilio (Danaus) scylla*; Linnaeus, 1767: 763, no. 95.


Linnaean material examined
LSL: 1♂ labelled “Scylla” [by Linnaeus], “Scylla 763., rar.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined
LSL: 1♀ labelled “Marsham 1797.”.

Type locality. “Java”.

Remarks. Linnaeus may have forgotten that he first described this species in 1763 for at no time did he cite that date as a reference. However, although they differ slightly from the original, later Linnaean descriptions probably refer to the same taxon. Kirby (1871: 486) also omitted any reference to Linnaeus, 1763a, and incorrectly dated the Amoen. Acad. reference as 1764. Corbet (1949: 198) listed the type as being in the Linnaean [LSL] collection and collected by H.J. Nordgren, who provided Linnaeus with several butterflies from Java (see Introduction), the locality listed by Linnaeus. We have designated this specimen as lectotype.

The nominate subspecies was recorded as being distributed in Java, Bali, Bawean and Lombok by Yata...
in Tsukuda (1981: 259). Several subspecies were recognized by Parsons ([1998]: 276), although the exact number remains debatable.

**SEMELE LINNAEUS, 1758**

*Papilio (Nymphalis) semele* Linnaeus, 1758: 474, no. 101.

*Papilio (Nymphalis) semele;* Linnaeus, 1761: 276, no. 1051.

*Papilio (Nymphalis) semele;* Linnaeus, 1767: 772, no. 148.


Linnaean material examined

LSL: LECTOTYPE ♀ labelled “101. Semele” [by Linnaeus], “Semele 772.” [by Smith]; 1 ♀ labelled “no label” [by Tams].


Type locality. “Europae sylvis” [Sweden from reference to *Fauna Suecica* (1746)].

Remarks. Verity (1913: 184) stated that, although not marked in Linnaeus’s copy of the 10th edition (implying that there was no specimen in his collection), the collection does include a female of the small northern race. The other (unlabelled) female cited above is also possibly Linnaean.

The lectotype was designated by Kudrna (1977: 63) in his revision of the genus *Hipparchia*. Although *semele* is a variable species, Kudrna synonymized many of the subspecies that had been described and recognized only two geographically isolated subspecies from the Mediterranean besides the widespread European nominate subspecies.

The fact that Linnaeus referred to this species in *Fauna Suecica* (1746) suggests that we can accept with confidence Sweden as being the type locality.

**SENNAE LINNAEUS, 1758**

*Papilio (Danaus) sennae* Linnaeus, 1758: 470, no. 72.

*Papilio (Danaus) sennae;* Linnaeus, 1767: 764, no. 103.


Material examined. None.

Type locality. “Cassia Americes” [Jamaica, Surinam, based on the citations to Sloane and Merian in the original description, see Remarks].

Remarks. We have not located any Linnaean specimens of this species, which is the senior synonym of *Phoebis eubule* Linnaeus.

Brown (1929: 7) referred (under the species name *eubule*) to several “races” of this widespread and migratory butterfly. Later, Brown & Heineman (1972) treated *sennae* as the senior name, as do we. The nominate subspecies (*sennae sennae*) was taken to be Antillean, since it was argued that Linnaeus’s type came from Jamaica. The subspecies from the South American mainland, *sennae marcellina* Cramer, differs only slightly from *s. sennae*. The statement by Brown (1929) that Linnaeus’s type comes from Jamaica fails to take into account the reference in Linnaeus’s original description to Merian’s work, which was about insects from Surinam. Thus both Jamaica (from the reference to Sloane) or Surinam should be regarded as the (mixed) type locality. The existence of Brown’s work on *sennae* suggests that it is probably sensible to follow his restriction of the type locality to Jamaica. Whether there is value in treating the Antillean and South American mainland members of this migratory species as different subspecies remains in doubt.

See *eubule*.

**SZBILLA LINNAEUS, 1767**

*Papilio (Nymphalis) sibilla* Linnaeus, 1767: 781, no. 186.

Identity. A replacement name for *Papilio (Nymphalis) prorsa* Linnaeus, 1764. The name *prorsa* is now suppressed (ICZN, 1999: Opinion 1917) and placed on the Official Index of Rejected and Invalid Specific names in Zoology.

Linnaean material examined. None.

Subsequent material examined


Type locality. “Germania” [Germany].

Remarks. The name *sibilla* Linnaeus, 1767, was suppressed (ICZN, 1999: Opinion 1917) for the purposes of the Principle of Priority but not for those of the Principle of Homonymy. Although we have no choice but to accept this decision, we note an anomaly in the Opinion.

Linnaeus (1767) introduced *sibilla* as a replacement name for *prorsa* Linnaeus (1764: 303) a name he had used already (Linnaeus, 1758: 480). As stated under *prorsa* (above), it appears that the description of *sibilla* is based solely on the figure of Rösel (3: pl. 70, fig. 1,
2), which was cited in Linnaeus's description. This figure, which therefore effectively represents the type of *sibilla*, appears to illustrate the male of *camilla* Linnaeus, the northern species of a species pair known popularly as the White Admiral and the Southern White Admiral. Linnaeus himself regarded this figure as only a variety of *camilla*. Linnaeus (1767) also cited a second reference, to Scopoli's description of *Papilio rivularis*, but this was based on a misidentification by him. This name was used for many years as that of the Southern White Admiral, but the true identity of *rivularis* was given by Higgins (1933).

Although Opinion 1917 has closed the case, we dispute the statement of Larsen (1997: 156) that *sibilla* was introduced for the Southern White Admiral and suggest that it would have been more appropriate to treat that name as a junior synonym of *camilla* Linnaeus.

*See camilla and prorsa.*

**SIMILIS LINNAEUS, 1758**

*Papilio (Nymphalis) similis* Linnaeus, 1758: 479, no. 128.

[[Papilio] similis] 128; Clerck, 1759: pl. 16, fig. 3.

*Papilio (Nymphalis) similis*; Linnaeus, 1764: 299, no. 117.

*Papilio (Nymphalis) similis*; Linnaeus, 1767: 782, no. 193.

**Identity. Ideopsis similis** (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

LSL: LECTOTYPE δ [of similis] labelled “Similis 128” [by Linnaeus], “similis 782.” [by Smith]; 1δ [of Parantica agleoides (Felder & Felder)] labelled “no label” [by Tams]; 1δ [of Parantica agleoides (Felder & Felder)] labelled “no label” [by Tams].

Type locality. “Asia” [China, Canton].

**Remarks.** Aurivillius (1882: 99) considered each of the three Linnaean references to refer to a different species, and accepted the true *similis* as the species figured by Clerck. Corbet (1941: 19) determined the specimen in the LSL as *similis* and identified the Petiver figure (“t. 92. f. 13”), one of two illustrations cited by Linnaeus in the original description, as *Danaida limniace orestilla* Fruhstorfer. Later, Corbet (1945: 92) cited the names of several species published by Osbeck, which Osbeck had obtained in China, Canton (Osbeck, 1765). This list included *similis* and the specimens are known to have been in Linnaeus's possession prior to the original description. For this reason we can be confident that the specimen, which is pinned on a typical Osbeck needle, is syntypic. This specimen was illustrated by Corbet & Pendlebury (1956: pl. 29, fig. 5) as the “Type of *Papilio similis* L.”. We have accepted this as a valid lectotype designation.

*Ideopsis similis* is one of a complex of three similar species (discussed by Ackery & Vane-Wright, 1984: 36). Three subspecies were cited by Morishita in Tsukuma (1981: 503), the nominate occurring in S China, Taiwan, Ryukyu and Yaeyama.

Type species of the genus *Radeno* Moore, a junior subjective synonym of *Ideopsis* Horsfield.

**SINAPIS LINNAEUS, 1758**

(Fig. 17)

*Papilio (Danaus) sinapis* Linnaeus, 1758: 468, no. 61.

*Papilio (Heliconius) sinapis*; Linnaeus, 1761: 271, no. 1038.

*Papilio (Danaus) sinapis*; Linnaeus, 1767: 760, no. 79.

**Identity. Leptidea sinapis** (Linnaeus, 1758) (PIERIDAE).

Linnaean material examined

LSL: LECTOTYPE δ, with genitalia dissected, with left forewing missing, labelled “61. Sinapis” [by Linnaeus], “Simapis 760” [by Smith].

Subsequent material examined

LSL: 1δ, without abdomen, labelled “Hungh”; 1δ labelled “Angl. Jones.”; 1δ labelled “no label” [by Tams].

Type locality. “Brassica & affinibus” [Sweden from reference to Fauna Suecica (1746)].

**Remarks.** Verity (1913: 179) indicated that the specimen labelled by Linnaeus as *sinapis* (Fig. 17) was a male of the spring brood and that it “probably ought to be taken as the type”. He also considered the other specimen in the LSL, which bears the locality label “Hung”, to have been labelled by Linnaeus as well, but after 1758, the date of the original description. However, the label does not match Linnaeus’s handwriting so we do not consider this specimen to be part of the type series and have treated it as a “Subsequent” specimen.

There has been confusion as to the identities of *sinapis*, *lathyrus* Hübner and *duponcheli* Staudinger. To resolve the confusion, Hemming & Sheljuzhko (1958: 83) made a submission to the ICZN in which they treated “the lectotype of *Papilio sinapis*” as the lectotype of *lathyrus*. In fact, no formal lectotype designation of *sinapis* had properly been made, and we assume that they were referring to Verity's statement...
about the Linnean specimen. In their ruling, the Commission (ICZN, 1960: 292) treated the submission of these authors as the original reference for the lectotype designation of *lathyri* Hübnner and also assumed that they were correct to treat the specimen as the lectotype of *sinapis*. To create stability, we follow the Commission in viewing the lectotype designation of *sinapis* as dating from Hemming & Sheljuzkho (1958: 83).

The identity of true "*sinapis*" has been the topic of recent discussion in the European literature following the description of the taxon *reali* Reissinger, 1990, a species which appears to be sympatric with *sinapis* over much of its range. Until recently that discussion had been purely speculative as the genitalia of the lectotype had not been examined to discover which of the two "species" was actually *reali* and which was true *sinapis*. The lectotype was dissected by Ackery and matches the species that is widely understood to be *sinapis*.

The name *sinapis* was placed on the Official List of Specific Names in Zoology and was designated as the type species of the genus *Leptidea* (see ICZN 1960: 290 – Opinion 584.)

**SOPHORAE LINNAEUS, 1758**

*Papilio (Danaus) sophorae* Linnaeus, 1758: 471, no. 83.

*Papilio (Danaus) sophorae;* Linnaeus, 1764: 266, no. 85.

*Papilio (Danaus) sophorae;* Linnaeus, 1767: 767, no. 121.

**Identity. Brassolis sophorae** (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**


**Subsequent material examined**

**LSL:** 1 ex., with head missing and abdomen partly eaten, labelled "Spio" [by Linnaeus], "Spio 796." [by Smith], here designated as LECTOTYPE.

**Type locality.** "ad Cap. b. spei. Tulbagh" [South Africa, Cape of Good Hope area].

**Remarks.** Although spio was described as an MLU species, it was not figured by Clerck as a published illustration. However, an unpublished drawing exists, a coloured copy of which was published by Aurivillius (1882: pl. 1, fig. 3) and treated as typical. Thunberg (1804) listed the species as being in the MLU collection when it was donated to the University of Uppsala, as did Wallin [1994]. Aurivillius (1882: 125) identified the specimen in the MLU collection as *Carystus abebalus* (Cramer). We consider that this specimen may have been an addition to the collection by Thunberg. The specimen in the LSL is characteristic of Tulbagh material being on a lacquer-covered pin. It is also an excellent match for the illustration in Aurivillius (1882: plate: fig. 3) and has been designated as lectotype.

**STELENES LINNAEUS, 1758**

(Figs 15, 16)

*Papilio (Eques) stelenes* Linnaeus, 1758: 485, no. 39.

*Papilio (Eques) stelenes;* Linnaeus, 1764: 218, no. 37.

*Papilio (Eques) stelenes;* Linnaeus, 1767: 750, no. 30.

Linnaean material examined
LSL: 1 ♀ labelled “[Söderhafvet] Stelenes” [by Linnaeus], “Stelenes 750,” [by Smith].


Petiver Collection: 1 ex, Volume 1: 37, labelled “1571.52”, here designated as LECTOTYPE.

Type locality. “America” [Jamaica].

Remarks. Described from a mixed series. Three references were cited in the original description, one to Petiver, one to Sloane's Jamaican treatise, and one to Merian's Surinam treatise. The Merian figure quoted in the original description is a misidentification, it actually represents *Papilio dido* Linnaeus, although the reference cited there should have read “2. t. 2” not “3. t. 3.”, which is a sphingid. We have studied the Sloane reference and also Sloane's catalogue of insects, which includes Petiver's Collection. The reference number to *stelenes* matches the number of a specimen, which we have traced, in the Petiver Collection. Although this specimen (Figs 15, 16) is in poor condition relative to the specimen in the LSL, we have selected the Petiver specimen as lectotype for several reasons. First, we are able to tie it, with confidence, to a particular locality (Jamaica). Second, the nominate subspecies was explicitly restricted to Jamaica by Fox & Forbes (1971: 238) in their revision of *Sipmeta*, even if it would appear from their work that they had not examined the original Sloane and Petiver literature nor any of the Linnaean specimens. Third, the Sloane and Petiver references were cited by Linnaeus in the original description. Fourth, by citing Jamaica as the type locality we retain stability by accepting the treatment in the revision by Fox & Forbes.

The figure by Clerck was cited as typical by Aurivillius (1882: 37): it is a good match for the MLU specimen. However, for reasons given immediately above, we have taken a different view of what constitutes the nominate subspecies.

The label on the specimen in the LSL bears not only the name “Stelenes” but also the word “Söderhafvet”, which is old Swedish for southern seas (B. Viklund, pers. comm.). We do not know who wrote this word, nor what it was meant to describe. It is in a different ink and a different hand from the name “Stelenes”.

Four subspecies were recognized by Fox & Forbes (1971). The distribution of *S. s. stelenes* was cited as the Antilles from Jamaica and Hispaniola east and south, but not on Trinidad.

Type species of the genus *Victorina* Blanchard, a junior subjective synonym of *Sipmeta* Hübner.

STRILIDORE LINNAEUS, 1763

*Papilio (Danaus) strilidore* Linnaeus, 1763a: 22, no. 64.

*Papilio (Danaus) strilidore*; Linnaeus, 1767: 795, no. 268.

Identity. Not known.

Material examined. None.

Type locality. “Philadelphia. De Geer”.

Remarks. Although this species was described by Linnaeus in 1763, the name appears to have been omitted both from the MLU work (1764) and the 12th edition (1767) and was not included as a manuscript addition in Linnaeus's own copy of Edition 12 of the *Systema*. Kirby (1871: 637) treated it as an undetermined species. We have been unable to locate any Linnaean material and consider the name to be a nomen dubium.

TAGES LINNAEUS, 1758

*Papilio (Plebejus) tages* Linnaeus, 1758: 485, no. 168.

*Papilio (Plebejus) tages*; Linnaeus, 1761: 286, no. 1082.

*Papilio (Plebejus) tages*; Linnaeus, 1767: 795, no. 268.


Linnaean material examined
LSL: 1 ♀, unspread, without abdomen, labelled “168. Tages” [by Linnaeus], “Tages 795.” [by Smith], here designated as LECTOTYPE; 1 ♀ labelled “no label” [by Tams]; 1 ♀ labelled “no label” [by Tams].

Subsequent material examined

Type locality. “Europa” [Europe].

Remarks. The three specimens in the LSL listed above were noted by Verity (1913: 190). We have selected the specimen that bears Linnaeus's label as lectotype.

Four subspecies were recognized by Evans (1949: 165, 166). The nominate subspecies is widely distributed across Europe.

Type species of the genus *Erynnis* Schrank.
TALAEUS LINNAEUS, 1763

Papilio (Danaus) talaeus Linnaeus, 1763a: 24, no. 70.
Papilio (Danaus) talaeus; Linnaeus, 1763b: 407, no. 70.
Papilio (Danaus) talaeus; Linnaeus, 1764: 259, no. 78.
Papilio [Plebejus] talaeus; Clerck, 1764: pl. 45, fig. 1.
Papilio (Plebejus) talaeus; Linnaeus, 1767: 792, no. 247.

Identity. Entheus talaeus (Linnaeus, 1763) a junior subjective synonym of E. priassus (Linnaeus, 1758) (HESTERIOIDEA).

Material examined. None.

Type locality. “Indiis” [South America].

Remarks. Although described as an MLU species and figured by Clerck, Thunberg (1804) did not mention it as being present in the MLU collection when it was donated to the University of Uppsala; nor was it listed by Wallin [1994]. In the original description, Linnaeus questioned whether this species represented the other sex of neleus. It was in fact later synonymized with priassus Linnaeus, as indicated by Aurivillius (1882: 67), who cited the Clerck figure of talaeus as typical. We have not located any Linnaean material, and base the identity of talaeus on the figure by Clerck. See priassus.

TELAMON LINNAEUS, 1758

Papilio (Barbarus) telamon Linnaeus, 1758: 486, no. 178.
Papilio (Plebejus) telamon; Linnaeus, 1764: 316, no. 134.
Papilio (Plebejus) telamon; Linnaeus, 1767: 788, no. 225.

Identity. Cyrestis telamon (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined
MLU: 1♂, the remains of which are glued to two pieces of card, the left pair of wings and abdomen on one, and the right pair of wings on another, both labelled “Telamon”, [drawer labelled] “Telamon, Mus. Gust. Adolph.” [by Thunberg], “Cyrestis Telamon, Auriv. 1881” [by Aurivillius] on a red-edged label, “Uppsala Univ. Zool. Mus., Linnésamlingen nr. 1958, Papilio telamon”, here designated as LECTOTYPE.

Type locality. “Indiis” [Ambon].

Remarks. Although telamon was not flagged as an MLU species by Linnaeus in the original description, it is included in the MLU work (Linnaeus, 1764). The species was also figured by Clerck, but under the name hylas, in error. Aurivillius (1882: 108) treated the Clerck figure labelled hylas as typical of telamon. Corbet (1941: 16) listed the type as being in the MLU and, as did Aurivillius, treated the species as being represented by Clerck’s figure of hylas. He cited the type locality of the nominate subspecies as being Ambon. We consider the MLU specimen to be syntypic and have selected it as lectotype.

See hylas.

TELEMACHUS LINNAEUS, 1758

Papilio (Eques) telemachus Linnaeus, 1758: 463, no. 31.
Papilio (Eques) telemachus; Linnaeus, 1767: 752, no. 41.

Identity. Morpho telemachus (Linnaeus, 1758) (NYMPHALIDAE).

Material examined. None.

Type locality. “America” [South America, Surinam].

Remarks. Although there is nothing in the original description to indicate that Linnaeus lacked specimens of this species, in 1767 the description is followed by a dagger mark. Therefore it is likely that the dagger mark was omitted from the 1758 work and that telemachus was described solely from the Merian figure that Linnaeus cited.

The various forms of telemachus were discussed by Le Mout & Réal (1962: 160). If we are correct in assuming that the species was described from the Merian figure, the type locality must be Surinam.

TERPSICORE LINNAEUS, 1758

(Fig. 18)
Papilio (Heliconius) terpsichore Linnaeus, 1758: 466, no. 45.
Papilio (Heliconius) terpsichore; Linnaeus, 1764: 222, no. 41 [incorrect subsequent spelling].
Papilio (Heliconius) terpsichore; Linnaeus, 1767: 755, no. 55.

Identity. Uncertain (see Remarks).

Linnaean material examined. None.

Subsequent material examined
LSL: 1 ex., with head missing and abdomen partly eaten, labelled “Violae Fab., 4. 164., E. Ind. NEK.” [by Smith]; 1♂ labelled “902”.

Downloaded from https://academic.oup.com/zoolinnean/article-abstract/132/3/277/2631205 by guest on 11 March 2019
Type locality. “Asia” [India, Madras (see Remarks)].

Remarks. Although described as an MLU species, terpsicore was neither figured by Clerck nor listed by Thunberg (1804) as being present when the MLU collection was donated to the University of Uppsala. We did not locate any material in the MLU.

There is much confusion over the identity of this species. Le Doux (1928: 97) considered Linnaeus’s description to be based solely on the specimen illustrated by Petiver, a view derived from information apparently supplied by N. D. Riley, who, through working at the BMNH, had access to the Petiver material, where it is stored. Three specimens of Acraea exist in Petiver’s bound collection of insects (volume 1, folio number 44) and a further specimen is housed separately in a box (numbered 1486a/CXLV). It seems to us more likely that Linnaeus cited Petiver as an additional reference. This assumption is based on the fact that in 1764 he described both the upper and lower surfaces of the species while Petiver illustrated only the under surface. (The 1764 work was already in manuscript form in 1768.)

Petiver’s description is of a “Papilio” from Fort St George, Madras and was based on several specimens varying in size obtained in November. Petiver’s material forms part of the Sloane collection and the specimens are listed in Sir Hans’s Catalogue of Insects. The catalogue entry for the boxed specimen numbered 1486a is given as “from Surinam by Vincent Aug. Petiver"; there is no mention of Madras.

The Acraea specimens in Petiver’s folio collection bearing the Sloane catalogue number 4348* were said, in the catalogue, to come from “Maryland?”, which is impossible given that the genus is not represented in America. However, it is of great interest that under the following number in the catalogue, 4349, the entry reads “several of the same” and the locality is listed as Fort St George [Madras], which matches the locality in Petiver’s text. These specimens, which we would certainly have treated as syntypic, are, unfortunately, no longer in the Petiver collection. It seems unlikely, therefore, that Riley and Le Doux were referring to a syntypic specimen.

According to Ackery et al. (1995: 246) terpsicore was incorrectly used for the African species now known as Acroa eponina (Cramer). The species has also been treated as conspecific with another African species, Acraea neobule Doubleday, but Henning (1986) stated that the two species are distinct, a treatment that was followed by Ackery et al. These authors and Pierre & Bernaud (1997) followed Aurivillius (1882: 40) in treating terpsicore as the senior name for the Oriental species violae Fabricius, and they considered that this decision was based on comparison of type material. While the type of violae Fabricius is in the Zoological Museum, Copenhagen (H. Gaonkar, pers. comm.), there is no verified syntypic material of terpsicore Linnaeus (see above). Pierre & Bernaud (1997: 406) stated that the type is in the Linnean Society of London. In fact both specimens in the LSL are later additions by Smith. The specimen (of violae) bearing the letters NEK on the label (Fig. 18) refers to it having been collected or donated by Nathaniel Edward Kinderley, a correspondent of Smith. The other specimen appears to be from the same source.

In the absence of authenticated syntypic material, the identity of terpsicore remains, therefore, in doubt, and we view the synonymy of terpsicore and violae as likely but unestablished.

**TEUCER LINNAEUS, 1758**

*Papilio (Eques) teucer* Linnaeus, 1758: 464, no. 33.  
*Papilio (Eques) teucer*, Linnaeus, 1764: 212, no. 31.  
*Papilio (Eques) teucer*, Linnaeus, 1767: 753, no. 44.


Linnaean material examined


Subsequent material examined

LSL: 1♀, labelled “Teucer 754., Marchione[s of Rockingham]”; 1 ex., without abdomen, pinned upside-down, labelled “Teucer, Ind. Coll. Marchione[s of Rockingham]”; 1♂ labelled “Idomenes 753.” [by Smith, see under Remarks]; 1♂, pinned upside-down, unlabelled.

MLU: 1♂ labelled “Teucer” [by Aurivillius] on a black-edged label, [drawer labelled] “Specimen schedula nulla a Thunb. non enumeratum” [by Aurivillius] on a red-edged label, “Uppsala Univ. Zool. Mus., Linnesamlingen nr. 1875, Papilio teucer”. This second specimen is a later addition as only one specimen was listed for the collection by Thunberg in 1804.

Type locality. “Musa America” [probably the Guianas].

Remarks. Although described as an MLU species, teucer was not figured by Clerck. There is one Linnaean specimen of teucer in the MLU. This was listed by Thunberg (1804) and we have designated it as lectotype.
In the original description, Linnaeus cited the same Petiver reference for both _teucer_ and _idomeneus_, although he placed a question mark against the _teucer_ citation. That some confusion over the identity of the two species continued to exist after Linnaeus can be seen (Subsequent material examined, above) from the male specimen in the LSL misidentified as _idomeneus_ by Smith. The type locality was given as “America meridionali” by Linnaeus (1764) and is likely to be the Guianas region.

The species is polytypic. The nominate subspecies was said to be from the Guyanas and Amazonas by D’Abrera (1995: 421), who provided a colour illustration.

See _idomeneus_.

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**THALIA LINNAEUS, 1758**

_Papilio (Heliconius) thalia_ Linnaeus, 1758: 467, no. 53.  
_Papilio (Heliconius) thalia_; Linnaeus, 1764: 230, no. 49.  
[ _Papilio_ thalia ] 53; Clerck, 1764: pl. 43, fig. 2.  
_Papilio (Heliconius) thalia_; Linnaeus, 1767: 757, no. 67.

**Identity.** Actinote thalia (Linnaeus, 1758) (NYMPHALIDAE).

**Linnaean material examined**

LSL: 1♂ labelled “Thalia 757.” by Smith, here designated as LECTOTYPE; 1♂ labelled “no label” by Tams?.

**Type locality.** “Indiis” [South America, probably Surinam (Lamas, 1997) 1996: 45].

**Remarks.** Described as an MLU species and figured by Clerck. Linnaeus (1764: 230) synonymized _thalia_ with _ixilion_ Linnaeus, 1758 (p. 488); the latter he listed as form β. The two names are still considered to be synonymous.  
Thunberg (1804) did not list _thalia_ as being present in the MLU collection when it was donated to the University of Uppsala and nor was it mentioned by Wallin (1994). We did not locate any Linnaean specimens in the MLU.  
Aurivillius (1882: 47) identified the species as “Acraea (Actinote) Thalia” and cited the Clerck figure as typical. Lamas (1997) 1996: 38, 45 noted two male syntypes in the LSL. Neither of the two specimens in the LSL bears Linnaeus’s label. However, although _thalia_ was described by Linnaeus as being in the MLU it would not have been unusual for him also to have had material in his own collection. We therefore follow Lamas in treating the two specimens in the LSL as syntypic and we have selected as lectotype the male specimen labelled by Smith.

_Papilio thalia_ was placed on the Official List of Specific Trivial Names in Zoology and was also designated as the type species of the genus Actinote (see ICZN, 1954: 41, Opinion 214 and covering discussions).

See _ixilion_.

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**THALLO LINNAEUS, 1767**

_Papilio (Heliconius) thallo_ Linnaeus, 1767: 756, no. 62.

**Identity.** MOTH. Chalcosia thallo, a junior subjective synonym of _C. pectinicornis_ Linnaeus, 1758 (ZYGAEINIDAE).

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**THAMYRAS LINNAEUS, 1758**

_Papilio (Plebejus) thamyras_ Linnaeus, 1758: 483, no. 150.  
_Papilio (Plebejus) thamyras_; Linnaeus, 1764: 317, no. 135.  
_Papilio (Plebejus) thamyras_; Linnaeus, 1767: 789, no. 229.

**Identity.** Arhopala thamyras (Linnaeus, 1758) (LYCÆINIDAE).

**Linnaean material examined**


**Type locality.** “Calidioribus regionibus” [Ambon, (Corbet, 1949)].

**Remarks.** Described as an MLU species but not figured by Clerck. However, Thunberg (1804) mentioned _thamyras_ as being present in the MLU collection when it was donated to the University of Uppsala and it is listed by Wallin (1994). Aurivillius (1882: 109, pl. 1, fig. 2) provided an illustration of the type specimen, and Corbet (1949: 198) stated that the type was in the MLU and came from Ambon. The figure by Aurivillius, which is based on the specimen in the MLU, is taken to be a valid lectotype designation.

Evans (1957) recognized five subspecies of this polytypic species.

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**THERO LINNAEUS, 1764**

_Papilio (Plebejus) theroc_ Linnaeus, 1764: 328, no. 146.  
_Papilio (Plebejus) theroc_; Linnaeus, 1767: 787, no. 219.

Linnaean material examined

LSL: 1 ♀, pinned upside-down, labelled "Thero." [by Linnaeus], "Theor 787. Fab. 4.274., an Erosine Fab. 4.266?" [by Smith], here designated as LECTOTYPE; 1 ex. unspread, with abdomen partly eaten, labelled "Theor" [by Linnaeus].

Type locality. "ad Cap. b. spei. Tulbagh" [South Africa, Cape of Good Hope area].

Remarks. Although described in the MLU work, this species was not figured by Clerck. The species was not mentioned by Thunberg (1804) as being present in the MLU when the collection was donated to the University of Uppsala, nor was it listed by Wallin (1804).

Linnaeus described both upper and under wing surfaces of this species, so of the two syntypes which we have located, the one that has been spread has been selected as lectotype.

Two subspecies were recognized by Pringle *et al.* (1994: 175) and Ackery *et al.* (1995: 565): the nominate occurs in coastal regions of the south western Cape; the other in the Cedarberg Mountains of the western Cape.

Type species of the genus *Pseudocapis* Murray, a junior subjective synonym of *Phasis* Hübner.

THESPIS LINNAEUS, 1764

*Papilio (Plebejus) thespis* Linnaeus, 1764: 318, no. 136.

*Papilio (Plebejus) tespis*; Linnaeus, 1767: 791, no. 236 [incorrect subsequent spelling].


Linnaean material examined

LSL: 1 ♀ labelled "Thespis" [by Linnaeus], "Tespis [sic] 791." [by Smith], here designated as LECTOTYPE.

Type locality. "ad Cap. b. spei. Tulbagh" [South Africa, Cape of Good Hope area].

Remarks. Although this species was described in the MLU work, it was not figured by Clerck. Thunberg (1804) did not mention *thespis* as being present in the MLU when the collection was donated to the University of Uppsala, nor was it listed by Wallin (1994). The only Linnaean specimen, which we have selected as lectotype, is on a typical Tulbagh pin.

The species is monotypic and occurs on coastal areas of the Cape Province (Pringle *et al.*, 1994: 239; Ackery *et al.* 1995: 648).

THOAS LINNAEUS, 1771

(Figs 23, 24)

*Papilio (Eques) thoas* Linnaeus, 1771: 536.


Linnaean material examined. None, see Remarks.

Subsequent material examined

LSL: 1 ex. without abdomen labelled "Thoas Mant. 536." [by Smith].

Type locality. "Guadalupa, Surinamo" [South America, Surinam].

Remarks. The presence of a dagger mark following the description of *thoas* indicates that Linnaeus did not have any material of this species, which was described solely from the illustrations of Drury, Daubenton and Seba. These figures were cited in Linnaeus's original description. Rothschild & Jordan (1906: 559) indicated that Linnaeus's description included more than one species. The identity of *thoas*, as accepted by them, was restricted to the illustrations of Drury (see Figs 23, 24) and Seba, not that of Daubenton, which they identified as *crespina* Cramer. They also inferred that the locality "Guadalupa" referred to the Daubenton figure, so the type locality of *thoas* can, with good reason, be restricted to Surinam.

The species is polytypic with several subspecies being recognized by Rothschild & Jordan (1906: 555–561).

THRAX LINNAEUS, 1767

*Papilio (Plebejus) thrax* Linnaeus, 1767: 794, no. 260.


Linnaean material examined

LSL: LECTOTYPE ♀ labelled "Thrax" [by Linnaeus], "Thrax 794." [by Smith]; 1 ex., without abdomen, labelled "no label" [by Tams].

Type locality. "Java".

Remarks. In the original description of *thrax*, Linnaeus cited an unnamed figure by Clerck (1764: pl. 42, fig. 2) that he had included previously in his 1764 description of proteus. Corbet (1941: 25) stated that the
description of thrax did not match Clerck's figure but represented the South American species now known as Talides sinois (Hübner). He also stated that the type was in the LSL, but did not indicate which of the two specimens preserved there was the one in question. The matter of the type was resolved when Corbet & Pendlebury (1956: pl. 29, fig. 8) illustrated, as the "Type of Papilio thrax L.", the male specimen labelled by Linnaeus from the LSL. We accept this as a valid lectotype designation: the specimen is not the holotype as stated by Parsons ([1998]: 160).

The species is polytypic with three subspecies recognized (Evans, 1949: 327). The nominate subspecies occurs from Sikkim to Java and in the Philippines and Sulawesi (Parsons, [1998]).

Type species of the genus Erionota Mabille.

THYRA LINNAEUS, 1764
Papilio (Plebejus) thyra Linnaeus, 1764: 329, no. 147.
Papilio (Plebejus) thyra; Linnaeus, 1767: 789, no. 227.

Identity. Axiocerses thyra (Linnaeus, 1764) (LYCAENIDAE).

Linnaean material examined
LSL: 1♂, pinned upside-down, labelled "Thyra" [by Linnaeus], "Thyra 789." [by Smith], here designated as LECTOTYPE; 1♀ labelled "no label" [by Tams].

Type locality. "ad Cap. b. spei. Tulbagh" [South Africa, Cape of Good Hope area].

Remarks. Although described in the MLU work, this species was not figured by Clerck. Thunberg did not mention thyra as being in the MLU collection when it was donated to the University of Upsala, nor was it listed by Wallin [1994]. We have selected as lectotype the specimen bearing Linnaeus's label. It is typical of Tulbagh specimens with a thickly lacquered pin.

Two subspecies were recognized in Pringle et al. (1994: 214). The nominate is confined mainly to the sand dunes of the Cape coastal areas.

TIMANTES LINNAEUS, 1758
Papilio (Plebejus) timantes Linnaeus, 1758: 483, no. 156.
Papilio (Plebejus) timantes; Linnaeus, 1764: 322, no. 228.
Papilio (Plebejus) timantes; Linnaeus, 1767: 791, no. 241.

Identity. Not known.

Material examined. None.

Type locality. "Indiis".

Remarks. Described as an MLU species but not figured by Clerck. Kirby (1871: 637; 1877: 838) listed it as an undetermined species. Aurivillius (1882: 112, 113) was also unable to establish its identity. In the absence of any other evidence, we continue to treat the name as a nomen dubium. The name should possibly be suppressed.

TIPHUS LINNAEUS, 1758
Papilio (Barbarus) tiphus Linnaeus, 1758: 485, no. 170.
Papilio (Nymphalis) tiphus; Linnaeus, 1764: 308, no. 126.

Papilio (Nymphalis) tipha; Linnaeus, 1767: 776, no. 164 [incorrect subsequent spelling].

Linnaean material examined. None.

Subsequent material examined

LSL: 1♀ labelled “Tipha 776., Marsham.”.

Type locality. “Indiis” [probably the Guianas, see *neoarea*].

Remarks. The figure of Clerck was cited as typical by Aurivillius (1882: 97) who treated *tithonus* as a junior subjective synonym of *neoarea*. In 1767 Linnaeus added a reference: “Edw. au. t. 32”, which was emended by Linnaeus to 33 in his own copy of Edition 12 of the *Systema*, the figure cited in the original description of *neoarea* Linnaeus. He also altered the type locality to “India orientali” and made slight changes to the description. We have been unable to locate any Linnaean material of *tithonus*.

Type species of *Pyrhogyra* Hübner.

See *neoarea*.

*Tithonus* LINNAEUS, 1771

*Papilio* (Eques) *tithonus* Linnaeus, 1771: 537.


Linnaean material examined. None.

Subsequent material examined


Type locality. “Germania. D. Fabricius” [Germany].

Remarks. Like Verity (1913: 185), we have been unable to locate any Linnaean specimens of this species. *Pyronia tithonus* (Linnaeus) was established as the senior synonym of *tithone* Hübner by Hemming (1964: 93).

The identity of this European species is well established (see, e.g. Higgins & Riley, 1975: 210; Tolman, 1997: 240).

*Trite* LINNAEUS, 1758

*Papilio* (Danaus) *trite* Linnaeus, 1758: 469, no. 70.

*Papilio* (Danaus) *trite*; Linnaeus, 1764: 248, no. 67.

*Papilio* (Danaus) *trite*; Linnaeus, 1767: 763, no. 97.


Material examined. None.

Type locality. “Calidioribus regionibus” [warm regions – South and Central America, probably the Guianas].

Remarks. Listed in the original description as an MLU species, but not figured by Clerck. Thunberg (1804) did not cite the species as being present in the MLU collection when it was donated to the University of Uppsala. It was not listed by Wallin (1994) and we have been unable to locate any specimens.

Aurivillius (1882: 59) cited the figure of Cramer (1777: pl. 141, figs C,D) as typical, although fig. D, representing the underside, appears to be too dark. A more recent illustration of the nominate subspecies of this polytypic species is given by D’Abrera (1981: 112). The female illustrated by D’Abrera (p. 113) is a good match for Cramer’s fig. C. We have no reason to dispute the identity of this species established by Aurivillius.

Type species of the genus *Rhabdodryas* Godman & Salvin.

*Troilus* LINNAEUS, 1758

*Papilio* (Eques) *troilus* Linnaeus, 1758: 459, no. 5.


*Papilio* (Eques) *troilus*; Linnaeus, 1767: 746, no. 6.


Linnaean material examined. None.

Subsequent material examined

LSL: 1♀ labelled “Troilus 746, Ilioneus Abb. Jones t.2, Marchioness of Rockingham”; 1♂ labelled “Ilioneus, Abb. t.2, Georgius WJK, 1806”; 1♀ labelled “Marsham 1797”.

Type locality. “Indiis” [eastern N. America, probably Pennsylvania, see Remarks].

Remarks. Described as an MLU species but not figured by Clerck. In the MLU work alone, the type locality was cited as “America septentrionali. P. Kalm.”. Eastern North America is the current view of the distribution of *troilus* (e.g. Hagen & Scriber, 1991). More specifically, Kalm is known to have visited Pennsylvania and Canada in 1747. The most likely type locality for *troilus* is Pennsylvania because the species is rare further north. The species was not listed by Thunberg (1804) or Wallin [1994] so we must assume that the type specimen is either lost or destroyed. The record of *troilus* in the list of Osbeck (1765) as having been...
taken in the Canton area of China was noted by Corbet (1945: 93). No convincing explanation was made for this anomaly: *trocilus* is a North American species.

Two subspecies were listed by Hodges et al. (1983: 50), the more widely distributed nominate subspecies and *P. t. ilioneus* Smith from Florida, accepted as *texanus* Ehrmann by Smith, Miller & Miller (1994).

Type species of the genus *Pterourus* Scopoli, currently considered to be a junior subjective synonym of *Papilio* Linnaeus (although regarded as a distinct genus by Miller & Brown, 1981).

**TULBAGHIA** LINNAEUS, 1764

*Papilio (Nymphalis) tulbaghia* Linnaeus, 1764: 284, no. 102.

*Papilio (Nymphalis) tulbaghia*; Linnaeus, 1767: 775, no. 158.


**Linnaean material examined**

LSL: 1♂ labelled “Tulbagia [sic]” [by Linnaeus], “Tulbaghia 775. rariss.” [by Smith], here designated as LECTOTYPE; 1♀, pinned upside-down, labelled “no label” [by Tams].

Type locality. “ad Cap. b. spei. Tulbagh” [South Africa, Cape of Good Hope area].

Remarks. Although described in the MLU work, this species was not mentioned by Thunberg as being present in the MLU collection when it was donated to the University of Uppsala, nor was it listed by Wallin [1994]. Aurivillius (1882: 88) cited a Clerck figure “(ined.) t.12, f.3”.

We have seen a photographic copy of this plate. We consider this illustration is of the lectotype since the figure depicts the way in which the specimen is set. Furthermore, both the figure and the specimen are labelled as “Tulbagia” [sic].

The specimen selected as lectotype is in the LSL and is on a typical Tulbagh pin, which is extensively covered with brown lacquer.

Monotypic. Type species of the genus *Aempetes* Billberg.

**TURNUS** LINNAEUS, 1771

*Papilio (Eques) turnus* Linnaeus, 1771: 536.


**Linnaean material examined**

LSL: 1♂ labelled “Turnus Mant 536, Fab. 4. 29.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1♂ labelled “[T?] Allen 1797”.

Type locality. “America. D. Fabricius”.

Remarks. Both this species and *philenor* were described by Linnaeus in 1771 from “America. D. Fabricius”. The Linnaean specimens of both species are on identical pins and are distinctly flattened, as if they had been papered or pressed. Although neither is labelled by Linnaeus we see no reason to believe that they are not part of the original material from which Linnaeus described each of the two species. The Linnaean specimen in the LSL has been selected as lectotype.

Type species of the genus *Jasoniades* Hübner, [1819], currently considered to be a junior subjective synonym of *Papilio* Linnaeus (but see Hemming, 1967: 238 for priority of this genus over *Euphoeades* Hübner).

See glaucus.

**ULYSSES** LINNAEUS, 1758


**Linnaean material examined**

LSL: 1♂ labelled “Ulysses 748, rariss.” [by Smith], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1♂ labelled “French Collection. Marsham”.

Type locality. “Asia” [Ambon, according to Corbet, 1949].

Remarks. The species was illustrated by Clerck (1764: pl. 23, fig. 1), whose figure was treated as typical by Aurivillius (1882: 24). Corbet (1949: 198) cited this
illustration as representing the "type or co-type" and also listed it as being in the MLU. It is possible that this specimen is indeed a syntype. However, since MLU was not mentioned in Linnaeus's original description, and because there exists a convincing Linnaean specimen in the LSL that retains its abdomen, that specimen has been designated as lectotype.

In 1764 Linnaeus cited the type locality as "America meridionali". Although not stated in the original description, Corbet (1949: 198) listed the type as coming from Ambon, which we accept as a likely locality.

Parsons ([1998]: 266–267), presumably following Corbet, cited the holotype [sic] as being in the MLU, and stated incorrectly that the specimen of the junior synonym diomedes was absent from the MLU. He also summarized the distribution of the numerous subspecies of this polytypic species.

See diomedes.

URANIA LINNAEUS, 1758
Papilio (Heliconius) urania Linnaeus, 1758: 466, no. 48.
[Papilio] cassiae 82; Clerck, 1764: pl. 29, fig. 3 [see below].
Papilio (Heliconius) urania; Linnaeus, 1764: 225, no. 44.
Papilio (Eques) urania; Linnaeus, 1767: 756, no. 60.

Identity. Tenaris urania (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined

Type locality. "Indiis" [probably Ambon].

Remarks. The names urania and cassiae have been confused. Both Kirby (1871: 117) and Aurivillius (1882: 42) noted that the true urania was represented by Clerck's figure (pl. 29, fig. 3) of cassiae Linnaeus. Corbet (1949: 198) followed this view and added that the type was from Ambon.

The confusion over these two species probably stems from Linnaeus himself. The original description indicates that he probably described urania from his own collection and cassiae from that of the MLU. It appears that the two names, and indeed, the two specimens, have changed places since the specimen of urania, which should have been in the LSL is in the MLU, and the specimen of cassiae, which should have been in the MLU, is in the LSL. The identity of urania has, however, been established for a considerable period of time and we have fixed it by selecting the specimen in the MLU as lectotype. The lectotype requires appropriate conservation work since the right forewing is badly broken.

The species is polytypic with the nominate subspecies said to occur on Ambon and Saparua by D'Abrrera (1977: 292).

See cassiae.

URTCAE LINNAEUS, 1758
Papilio (Nymphalis) urticae Linnaeus, 1758: 477, no. 114.
Papilio (Nymphalis) urticae; Linnaeus, 1761: 278, no. 1058.
Papilio (Nymphalis) urticae; Linnaeus, 1767: 777, no. 167.

Identity. Aglais urticae (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined. None.

Subsequent material examined
LSL: 1 ex. labelled "114 Urticae" [by Linnaeus], "Urticae 777." [by Smith], "Angl. Jones", (see Remarks); 1 ex. labelled "Angl. Jones.".

Type locality. "Urtica vulgarissimus" [Sweden from reference to Fauna Suecica (1746)].

Remarks. Verity (1913: 181) stated that there were no extant specimens in Linnaeus's collection. We agree with this view even though one of the two specimens in the LSL bears a label by Linnaeus. The presence of such a label is usually taken as additional evidence in selecting lectotypes. However, the preparation of both specimens is consistent with that of other British specimens suggesting that Linnaeus's label must have been added to a British specimen at a later date. The presence of an additional pinhole located at the edge of Linnaeus's label is typical of the way in which Linnaeus pinned his specimens and would indicate that the original specimen, as to be expected, was pinned with a larger pin. We have found no extant Linnaean material.

It is clear from his description in Fauna Suecica that Linnaeus (1746: 234) knew adult, pupal and larval stages. He mentioned the almost complete destruction of nettle plants by the larva from observations made in Oland in June 1741.
The identity of this European species is well established.

Type species of the genus *Aglais* Daman.

**VANILIAE LINNAEUS, 1758**

*Papilio (Nymphalis) vanillae* Linnaeus, 1758: 482, no. 144.

*Papilio (Nymphalis) vanillae*; Linnaeus, 1764: 306, no. 124.

*Papilio* (Nymphalis) vanillae; Linnaeus, 1767: 787, no. 216.

**Identity.** *Agraulis vanillae* (Linnaeus, 1758) (NYMPHALIDAE).

Linnaean material examined


Type locality. “Epidendro Vanilla Americus” [South America, probably Surinam].

Remarks. Described as an MLU species and figured by Clerck. We have designated the specimen in the MLU as lectotype.

Michener (1942: 2), when dealing with the various subspecies of *vanillae*, effectively restricted the type locality to Surinam. This action was based, presumably, on the figure by Merian, which was cited in the original description. Linnaeus, however, also cited a figure by Sloane from Jamaica. Although Michener regarded specimens from the Antilles as a different subspecies, he noted that those from Jamaica “approached typical *vanillae*.

Type species of the genus *Agraulis* Boisduval & Leconte.

**VENILIA LINNAEUS, 1758**

*Papilio (Nymphalis) venilia* Linnaeus, 1758: 478, no. 120.

*Papilio (Nymphalis) venilia*; Linnaeus, 1764: 290, no. 108.

**Virgaureae Linnaeus, 1758** (Fig. 19)

*Papilio (Plebejus) virgaureae* Linnaeus, 1758: 484, no. 161.

*Papilio (Plebejus) virgaureae*; Linnaeus, 1761: 285, no. 1079.

*Papilio (Plebejus) virgaureae*; Linnaeus, 1767: 793, no. 253.

**Identity.** Lycaena virgaureae (Linnaeus, 1758) (LYCAENIDAE).

Linnaean material examined

LSL: 1♂ labelled “161 Virgaureae” [by Linnaeus], “Virgaureae 793.” [by Smith], here designated as LECTOTYPE; 1♂ labelled “no label” [by Tams]; 1♂ labelled “no label” [by Tams].

Subsequent material examined

LSL: 1♂, without abdomen, labelled “Germany, Mr. W Hooker.”; 1♀ labelled “Germany, Mr. Hooker.”; 1♀ labelled “Virgaureae, fem.:?”.
Type locality. "Solidagine Virgaurea Europae, Africæ" [Sweden from reference to Fauna Suecica (1746)].

Remarks. The original description of virgaureae was based on a mixed series, which included this species and phlaeas, for the references of Merian and Ray were used later by Linnaeus in the description of phlaeas. Furthermore, of the two Rösel references cited, the first was later used (Linnaeus, 1767: 790) in the description of argus, but it is now thought to represent hippothoe. In 1761, Linnaeus added a reference to a Petiver figure, which almost certainly involved a misidentification since Petiver's illustration clearly shows a specimen with moth-like pectinate antennae and the description states "Phalaena minor...". Verity (1913: 187) noted the presence of three Linnaean specimens in the LSL. We have selected as lectotype the specimen labelled by Linnaeus (Fig. 19).

Three European subspecies were accepted by Higgin & Riley (1975: 244), the nominate being the northern one.

Type species of Heodes Dalman, a junior subjective synonym of Lycæna Fabricius.

**XANTHUS LINNAEUS, 1758**

_Papilio (Danaus) xanthus_ Linnaeus, 1768: 472, no. 87.
_Papilio (Danaus) xanthus_; Linnaeus, 1764: 267, no. 86.

[Papilio] xanthus; Clerck, 1764: pl. 34, fig 1 [fig. 2].
_Papilio (Danaus) xanthus_; Linnaeus, 1767: 767, no. 122.

Identity. Catoblepia xanthus (Linnaeus, 1758) (Nymphalidae).

Linnaean material examined


Type locality. "Calidis regionibus" [probably the Guianas].

Remarks. Described as an MLU species and figured by Clerck. Only figure 1 was mentioned by Clerck in the Register as *xanthus*, but Linnaeus (1767: 767) cited both figures (1 and 2). Aurivillus (1882: 74) considered fig. 1 by Clerck to be typical. The specimen in the MLU matches the figure and has been selected as the lectotype.

Two subspecies were recognized by Bristow (1981), who illustrated both (p. 123). The type locality was said by him (p. 120) to be almost certainly one of the Guianas, a view with which we concur.

Type species of the genus Catoblepia Stichel.

**XUTHUS LINNAEUS, 1767**

(Fig. 20)

_Papilio (Eques) xuthus_ Linnaeus, 1767: corrigenda [correct spelling].

_Papilio (Eques) xanthus_; Linnaeus, 1767: 751, no. 34 (incorrect original spelling, rejected, see Opinion 286).


Linnaean material examined

LSL: 1♂, without head, labelled "Ajax" [by Linnaeus], "Xuthus 751" [by Smith], here designated as LECTOTYPE.

Subsequent material examined

LSL: 1♂ labelled "Marsham 1797"; 1♂ labelled "M. of Rockm."

Type locality. "India orientali" [see Remarks].

Remarks. This species was originally described by Linnaeus as *xanthus*, an incorrect original spelling, corrected to *xuthus* by Linnaeus in the Corrigenda.

Corbet (1949) identified *xuthus* as the species previously described by Linnaeus as *ajax*, a name that could have applied to three different species. The type locality was cited by Corbet (1949: 198) as Canton and the collector as "[P. Osborne]", but the species is not mentioned by Osbeck (1765) as having been collected or purchased by him. It is very likely that the Clerck figure cited by Corbet (1949: 194) for _agamemnon_ is actually an unfinished illustration of this species.

Corbet submitted an application to the Commission to suppress the name _ajax_. By their action, the Commission established the identity of _xuthus_ as the species represented by the Linnaean type specimen of _ajax_. We have formally designated this specimen (Fig. 20) as lectotype. The name _xuthus_ was placed on the _Official List of Specific Names in Zoology_ (ICZN, 1954: Opinion 286) and _xanthus_ (1767: 751) was placed on the _Index of Rejected and Invalid Specific Names in Zoology_.

The nominate subspecies of this polytypic species is widespread in China (see Chou, 1994: 157) so Canton, being a well known Linnaean locality, is likely to be the type locality.
Type locality. "India" [West Africa].

Remarks. In 1764 and 1767 Linnaeus gave the type locality as "India". Although not described as an MLU species, *zetes* was figured by Clerck. However, Thunberg (1804) made no mention of the species being present in the MLU collection when it was donated to the University of Uppsala. Aurivillius (1882: 77) considered the illustrations (Figs 38, 39) published by Clerck (1764: pl. 43, fig. 1) to represent typical *zetes* and this has been accepted by the majority of subsequent authors.

We have been unable to locate any Linnaean material. The nominate subspecies of this polytypic species occurs widely in West Africa (see Ackery et al., 1995: 247).

Linnaean material examined. None.

Subsequent material examined

LSL: 1♂ labelled "Sierra Leone, F. Borone[?]". with associated life history stages.

Type locality. "Zeuxo" [Cape of Good Hope area].

Remarks. Although *zeuxo* was described in the MLU work, it was not figured by Clerck. However, Thunberg (1804) and Wallin (1994) listed it as being present in the MLU collection. Aurivillius (1882: 118) cited a figure by Trimen (1866, pl. 5, fig. 2) as typical.

We consider that both the MLU and the LSL specimens are syntopic. Both specimens are in a poor condition, but the specimen in the LSL is on a typical Tulbagh pin and is labelled by Linnaeus, so we have selected it as lectotype.

The species is monotypic (see Ackery et al., 1995: 569). Illustrations are provided by Pringle et al. (1994: 208, pl. 138: fig. 449).

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