A review of the genus Jamides Hübner, 1819 in Western New Guinea, Indonesia (West Papua and Papua) (Lepidoptera: Lycaenidae)

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Abstract: An overview is given of all species of the genus Jamides Hübner, 1819, occurring in West Papua and Papua. All species are illustrated with the exception of Jamides minor s.l. and Jamides coritus setekwaensis Tite, 1960. Two subspecies are described as new: Jamides philatus kapaurus ssp. nov. and Jamides alecto papuana ssp. nov. Three further taxa of the bochus group are discussed in open nomenclature: Jamides nov. spec. aff. bochus (Stoll, 1782), Jamides sp. cf. seminiger richardi and Jamides sp. aff. seminiger richardi. Jamides purpurata Grose-Smith, 1894 comb. nov. is again raised to species rank, L. philatus aegithus Fruhstorfer, 1916 syn. nov. is regarded as a synonym of Jamides cyta amphissina (Grose-Smith, 1894) and Cupido (Lampides) pseudeuchylas Strand, 1911 syn. nov. is a new synonym of J. coritus coritus (Guérin-Meneville, 1831).

Several type specimens are illustrated, some for the first time and a lectotype is designated for Cupido (Lampides) pseudeuchylas. A few species found outside West Papua and Papua are illustrated for comparison. Names of synonyms are listed only for taxa described from Western New Guinea.

Rangkuman: Gambaran umum diberikan untuk semua spesies dari genus Jamides Hübner, 1819, yang terdapat di Papua Barat dan Papua. Semua spesies diilustrasikan kecuali Jamides minor s.l. dan Jamides coritus setekwaensis Tite, 1960. Dua subspesies digambarkan sebagai subspesies baru: Jamides philatus kapaurus ssp. nov. dan Jamides alecto papuana ssp. nov. Tiga taksa dari grup bochus dibahas lebih jauh dalam nomenklatur terbuka: Jamides nov. spec. aff. bochus (Stoll, 1782), Jamides sp. cf. seminiger richardi dan Jamides sp. aff. seminiger richardi. Jamides purpurata Grose-Smith, 1894 comb. nov sekali lagi dinaikkan ke level spesies, L. philatus aegithus Fruhstorfer, 1916 syn. nov dianggap sebagai sinonim dari Jamides cyta amphissina (Grose-Smith, 1894) dan Cupido (Lampides) pseudeuchylas Strand, 1911 syn. nov adalah sinonim baru dari J. coritus coritus (Guérin-Meneville, 1831). Beberapa type spesimen diilustrasikan, beberapa untuk pertama kalinya dan lectotype ditujukan untuk Cupido (Lampides) pseudeuchylas. Beberapa spesies yang ditemukan di luar Papua Barat dan Papua diilustrasikan untuk perbandingan. Nama-nama sinonim dicantumkan hanya untuk taksa yang dideskripsikan dari New Guinea Barat.

Keywords: Polyommatini, Jamides, Papua New Guinea, New Guinea, taxonomic changes

Abbreviations used

CDFM – Collection De Freina, München CSSK – Collection S. Schröder, Köln KSP – Koleksi Serangga Papua, Universitas Cenderawasih, Waena

NHMUK – The Natural History Museum, London RMNH – Naturalis Biodiversity Center, Leiden SMT – Staatliches Museum für Tierkunde, Dresden USNM – National Museum of Natural History, Smithsonian Institution, Washington, D.C. MfN – Museum für Naturkunde, Berlin

Introduction

Jamides is one of the largest genera within the Polyommatini, currently containing about 60 species, and is considered taxonomically complicated due to the close similarity of many species. A first comprehensive overview was presented by Fruhstorfer (1916), whose results were reflected in Seitz (1923), which was considered the standard work for a long time. Since then, a great number of other papers have been published, dealing specifically with the systematics and taxonomy of the genus and key works include Riley & Corbet (1938) (Malayan species), Eliot in Corbet & Pendlebury (1992), Hirowatari (1986, 1992) and Rawlins et al., 2014 (Maluku and North Maluku).

Except for a publication by Tite (1960), which had the subject of a revision of the euchylas complex, no work has been exclusively devoted to the genus in western New Guinea. Apparently, Tite had considered a revision of the genus Jamides in the 1960s, but this was not carried out (Tennent, 2002: 98). Although the monumental work of Parsons (1998) covers only the Papua New Guinea part, it includes a list of species found in West Papua and Papua and presently gives the best overview of the genus in the broader region.

The currently accepted subgroup taxonomy of Jamides is based on the work of Eliot in Corbet & Pendlebury (1992), including species known from the Malay Peninsula. Based on characters of the wing markings the genus is subdivided into two groups: 1) the bochus group and 2) the celeno group, the latter one being split further into three subgroups: a) cyta, b) celeno and c) elpis subgroup. This grouping has been accepted by most subsequent authors and Hirowatari (1986) was able to confirm it in including characters of the male and female genitalia. Hirowatari (1992) later revised the celeno group and added four more subgroups, containing all species occuring outside of the Malay Peninsula, now also including taxa known from the Papuan Subregion, which are discussed in this paper. Subgrouping of the genus follows Hirowatari (1992).

1) The bochus group

Compared with the much larger celeno group, the bochus group consists of only a few species, usually with blue metallic or purple coloured wing uppersides in the males and dark brown wing undersides. There is no further subdivision of the *bochus* group.

The Jamides bochus group is generally known as taxonomically very complex and several papers have discussed the problems of species delimitation and other systematic issues (Tennent, 2006; 2009). This is mainly due to the rather uniform male genitalia structure which is of little diagnostic value, being very similar in all species, but most helpful in the determination of most other Jamides species. It is also doubtful whether molecular analysis is purposeful, as DNA barcodes appear to differ little among the bochus-group (Wilson et al., 2021).

According to Hirowatari (1992: 44-45), the Jamides bochus-group comprises the following species in Papua and West Papua: Jamides bochus (Stoll, 1782), Jamides purpurata Grose Smith, 1894 and Jamides amarauge Druce, 1891. A slightly different view was taken in Parsons (1998: 447), where Jamides purpurata Grose Smith, 1894 was sunk to a subspecies of Jamides soemias Druce, 1891, which, however, explains the wide distribution of soemias in mainland New Guinea mentioned by subsequent authors. Jamides seminiger cf. richardi is here added to the list of Jamides species occurring in Papua.

Single specimens from New Guinea, which must be placed in the bochus group, can be found in many widely scattered private and museum collections, but it is very difficult to reliably assess these specimens if it is not possible to compare them side by side. Nevertheless, this indicates that - apart from bochus - further species are involved, which are difficult to assign to any known species, especially in regard to isolated female specimens (fig. 78, Jamides sp. indet.).

Jamides bochus (Stoll, 1782)

Papilio bochus Stoll, 1782: 210, pl. 391, figs C, D. [HT, "S. India", Dep.?]

Notes: Distribution of *J. bochus* in New Guinea is not well known and apparently the species is recorded from a few localities only, where it is very rare. The occurrence of a new subspecies of bochus from "Insel Mysore, Korrido" [= Supiori Island] was first mentioned by Fruhstorfer (1916: 40), referring to Grose-Smith (1894: 574), who had recorded specimens from Korrido as well as from Humboldt Bay placing it under Jamides amaranga [sic!].

Fruhstorfer (1916: 40) also listed a "L. bochus subspec. nova" from Roon Island [Wandammen Peninsula], which had been placed with Jamides campanulata Butler, by Grose-Smith (1894: 574). However, the type locality of campanulata (a synonym of J. candrena Herrich-Schäffer, 1869) is Fiji, and it is most unlikely that this species occurs in New Guinea.

Since then, bochus has not been mentioned from West Papua and Papua until Parsons (1998: 447) referred to a small series of historical specimens of the Doherty Collection [1896] from Kapaur (FakFak) and Humboldt Bay in the NHMUK and cleared the locality data for some bochus specimens from Manus Island (Bismarck Archipelago), previously treated as "saemias" by Rothschild (1915). This disjunct distribution leaves a wide gap where bochus has not yet been found, but it is not unlikely that it occurs at least along much of the western coastline of mainland New Guinea.

Insufficient material in collections reflects the tentative assignment and provisional determination of the taxa included here.

Jamides bochus cf. astraptes (C. Felder, 1860) (Figs 1-4)

Lycaena astraptes Felder, 1860: 456 [HT ♂, "Amboin", NHMUK]

Notes: Very rarely, isolated specimens corresponding to the typical *bochus* phenotype, being characterized by steel blue-metallic shining wing-uppersides, can be found in West Papua and Papua (Timika, Misool) that have to be determined as a true bochus form. Based on the few specimens available, variability can hardly be assessed, especially with regard to the width of the wing borders. There are specimens with relatively narrow forewing borders,

their width increasing only slightly from tornus to apex, as well as some with significantly wider wing margins, where the blue of the forewings is greatly reduced.

In the Naturalis collection (RMNH) there is a single, typical bochus male from Misool (figs 1-2), which shows the characteristic metallic-blue colour and is particularly striking due to the very wide, dark forewing margin. It is uncertain whether this is an extreme seasonal form in which the wing margins are widened. However, J. bochus is generally known for the fact that forms of the rainy season have significantly wider wing margins than those of the dry season. In contrast, a specimen from Timika (figs 3-4) shows only slightly broadened forewing margins and is therefore very close to the Maluku forms. In any case, the range of variation with regard to the wing borders seems to be relatively wide, as is also known, for "example", from subspecies from the Moluccas (see 2 different specimens of astraptes from Buru; figs 5-8).

In general, the specimens closely resemble the forms of the Moluccas and do not differ much from specimens from Buru or the Aru Islands (figs 9-10), which is why these are listed here provisionally under astraptes. As only male specimens are available, and females were impossible to assign, it cannot be clarified finally whether a further separation of the specimens from astraptes at subspecies level is justified.

Jamides nov.spec. aff. bochus (Stoll, 1782) (Figs 11-22)

Papilio bochus Stoll, 1782: 210, pl. 391, figs C, D [Type, "Ceilon", Dep.?]

Notes: The specimens from West Papua examined here are strongly reminiscent of *Jamides* bochus, but show a slightly different blue ground-colour than the subspecies known from Maluku. The metallic shine is weaker and the blue is clearly more purple. This has also been observed by Rawlins et al. (2014: 9) who noted that bochus specimens from Aru: "are easily separable from specimens from FakFak (= Kapaur)... New Guinea males are distinctly more purple, with less sheen than the more royal blue colour of Aru specimens". New Guinea females are also more tinged with purple than those from Aru. The Aru populations were assigned to ssp. astraptes (C. Felder, 1860) and the New Guinea race remains without a proper name.

The occurrence of a characteristic Jamides bochus cf. astraptes on mainland NG makes it difficult to assign phenotypically related taxa, such as the specimens under discussion here, as further subspecies of bochus. For this reason the specimens illustrated here are tentatively assigned to a new species, which closely resembles bochus.

Jamides nov. spec. aff. bochus is phenotypically intermediate between true bochus and purpurata and the taxon is unlikely to fall within the variation of bochus astraptes. Compared to purpurata, the blue is much brighter and much less purple. A clear assignment of females is not possible and is provisionally based on identical localities and collecting

Specimens from Kaimana (CSSK) and Supiori are also placed here in the new species, as well as a short series from the NHMUK (FakFak, Humboldt Bay). A single specimen from the Juriaanse collection (RMNH, figs 11-12) and the Rolle collection (NHMUK) from "Neu-Guinea", but without exact locality data, are additionally illustrated (figs 15-16).

[Hermann Rolle (1864-1929) was an insect dealer from Berlin ("Trading Institute Kosmos"), having received much of his material from Heinrich Kühn, who collected in West Papua

(Misool) and the specimen probably derived also from there, and not necessarily from the "Kaiser-Wilhelms-Land" (now northeastern Papua New Guinea).]

Jamides purpurata Grose-Smith, 1894 stat. rev. (Figs 23-34)

Jamides purpurata Grose-Smith, 1894: 574 [HT ♂, "Humboldt Bay", NHMUK] ? *Jamides soemias soemias.* – Parsons, 1998: 447, pl. 69, figs 2021-22. Jamides soemias purpurata. – Parsons, 1998: 447, pl. 69, fig. 2023, pl. 70 fig. 2024; Rawlins et al., 2014: 12, pl. 2, figs 49-51 [HT ♂], 52 [PT ♀, "Simbang, German New Guinea", NHMUK]

Notes: When describing purpurata, Grose-Smith (1894) especially referred to the upperside hindwing pattern which has "no dark band on the inner side of the submarginal row of indistinct spots between the veins; these spots are partially narrowly surrounded with white rings, but very indistinctly so towards the apex". The row of submarginal lunules is regarded as distinguishing character of purpurata, and is also present in the male holotype specimen (fig. 25). It is important to note that there is no dark submarginal band on the hindwing upperside.

Parsons (1998) figures a single male of nominate J. soemias from Papua New Guinea (pl. 69, figs 2021/2022) but no female, a female of J. soemias purpuratus, and only the underside of an aberrant purpuratus male. Remarkably, the illustrated soemias soemias male shows a prominent row of submarginal lunules which are characteristic for purpurata, while in J. soemias such a row of lunules (fig. 37) is never present.

Any evaluation based on these figures is impossible, but Parsons (1998: 448) states in the discussion of soemias that "from a comparison of the holotypes of all 3 taxa [soemias, timon and purpuratus], these were found to be extremely similar". This can be confirmed to some extent, but soemias and purpuratus are morphologically different enough to be not conspecific. Females of both species may be difficult to tell apart, but the holotype males of both species show significant differences. The blue of soemias is much deeper violet and usually there is only one black tornal hindwing spot, which is not outlined with white. The synonymy of purpuratus with soemias as proposed by Parsons (1998) is therefore rejected and purpurata is raised again to species status.

However, as already mentioned above, evaluation of possible purpurata females remains extremely difficult. The holotype male was collected at Humboldt Bay, but the assigned allotype female is from Simbang in the Morobe Province of Papua New Guinea, almost 800 km southeast of Humboldt Bay. It would have been more than a fortunate coincidence if the designated female would represent the true female of purpurata. The situation may only be solved with further topotype females (a possible purpurata female from "Hollandia" is figured in fig. 33).

A small series of male specimens from Jayapura are characterized by a darker, more greyish violet hue of the upperside blue, which are therefore only provisionally included in purpurata, as they morphologically approach J. wananga Wilson et al. 2021 (figs 35-36), which was recently described from northern Papua New Guinea. Unfortunately, the authors did not have any males of purpurata available for side by side illustration and comparison with wananga, with which it flies together. Regrettably, phenotypic separation from wananga was not discussed and is only based on molecular data of three female specimens determined as purpurata from Wanang, which - judging from pictures - seem to include more than just one species. A very unusual specimen from the Upper May River (Sepik Province, PNG), close to the eastern border to Papua is also figured here (figs 70-71). Its

upperside colour reminds of *purpurata*, but is much more purplish and the underside pattern differs strongly as the median forewing band appears as a stepped row of rather rectangular arranged lines. Its taxonomic affinities are unknown.

Jamides nov. spec. aff. bochus has marginal lunules only in space 1b, rarely in space 2 and if present, they are much smaller. The blue is less purple and much more shining.

Jamides seminiger richardi Rawlins et al., 2014 (Figs 41-42, 49-50)

Jamides seminiger richardi Rawlins, Cassidy, Müller, Schröder & Tennent, 2014: 11, pl. 2 figs 43-44, 46, 48 [HT ♂, Kei Kecil, NHMUK]

Notes: Based on a series of 16 $\lozenge\lozenge\lozenge$ and 2 $\lozenge\lozenge\lozenge$ specimens in the NHMUK collection, D'Abrera (1977: 352) determined a taxon as "*J. purpurata* subsp. ?".

These 16 $\lozenge\lozenge\lozenge$ and 2 uniform brown $\lozenge\lozenge\lozenge$ come from West Papua ("Kapaur", 'Dorey Bay" and "Ron Island"), and later a $\lozenge\lozenge$ from Aru and 4 $\lozenge\lozenge\lozenge$ from Kei were also added. Subsequently, the series of Kei and the single male of Aru were later split off and described as *Jamides seminiger richardi* Rawlins et al. in 2014. The remaining specimens from western New Guinea were excluded from the type series.

The type series of *richardi* consists of a total of 5 male specimens, 4 of which are from the Kei Islands, and a single paratype from Aru. Wing colour of the species is described as "deep lustrous blue", but this is not uniform and, in addition to the slightly purple coloured holotype from Kei (figs 41-42), other specimens are characterized by a slightly darker blue colour (fig. 49). On Kei, however, these two forms fly together and therefore it makes sense to regard both as individual variation.

Although the genitalia within the *bochus* group are considered to be of little use in distinguishing related species, a comparison of the specimens from Aru and Kei reveals significant differences: In comparison with Aru specimens a dissected specimen from Little Kei has comparably broad valvae with only a small posterior indentation and a very large, half-dome shaped tegumen (Rawlins et al., 2014: pl. 2, figs 46, 48), which may additionally support a possible differentiation of both. However, the variability of this character is unknown.

Rawlins et al. (2014: 12) note that the \circlearrowleft genitalia of J. seminiger and J. soemias are confirming a close relationship. However, both species are easily separated as phenotypes are very different. While soemias has a violet blue wing colour and a comparably narrow wing margin, nominate seminiger males tend to have very broad dark wing margins. Females of seminiger are completely brown on the upperside, but soemias females show at least some light blue scales in the discal area of fore- and hindwing. Both species were regarded as allopatric by Rawlins et al., seminiger being restricted to Maluku and soemias occurring in PNG as far west as Supiori and Yapen, but based on a reevaluation of the available information, this view has to be corrected.

In western New Guinea, two taxa are present, which resemble *seminiger richardi* very much, but which are without doubt not conspecific, which is confirmed by a comparison of specimens from various mainland localities. As their systematic position remains unresolved, both phenotypes will be described and figured here, but no new names are given:

- a form characterized by dark violet wing colour corresponding to the holotype: determined here as Jamides spec. cf. seminiger richardi, and
- 2) a second form with much darker blue wing colour, corresponding more to paratype specimens, provisionally included in *Jamides* spec. aff. seminiger richardi.

Jamides spec. cf. seminiger richardi Rawlins et al., 2014 (Figs 43-48, 64-65)

Notes: A few specimens of a *Jamides* species from West Papua (Waigeo and Manokwari / Dorey), which phenotypically show little difference to the holotype of seminiger richardi are identified here as cf. seminiger richardi.

The ground colour of the wing upperside in the males is dark purplish-brown, with a wide forewing margin. On the hindwings there is a row of black-centered, submarginal lunules, separated from the purple of the hindwing by a narrow brown band on their inner side. The underside pattern does not differ in any way from that of the holotype of richardi and genitalia (fig. 55) correspond well to the genitalia illustrated of a specimen from Aru (Rawlins et al. 2014: pl. 2 fig. 46), even though the single Aru specimen (fig. 49) is darker blue than the remaining specimens of the type series of richardi. The female of richardi is unknown, but a single female from Baliem Valley (figs 64-65) is tentatively assigned here to the series from Papua as its underside pattern is very close to a specimen from Manokwari (figs 45-46).

The cf. determination follows the intention of Rawlins et al., expressly excluding mainland New Guinea specimens from richardi.

Jamides nov. spec. ? aff. seminiger richardi Rawlins et al., 2014 (Figs 49-63) Jamides purpurata subsp.?, D'Abrera 1971: 352) /2 $\circlearrowleft \circlearrowleft$, 1 \circlearrowleft (see notes). † brunnea (manuscript name) (Lycaenidae). Tennent, 2014: 164, figs 7-12.

Notes: A taxon particularly difficult to assess, known from only a few specimens and which is mainly characterized by a darker blue wing colour compared to the holotype of seminiger richardi.

In addition to some specimens from SW Papua (Boeroe River, coll. RMNH/Leiden, figs 56-57), historical specimens in the British Museum from West Papua and Papua must also be placed here: "Kapaur" (= FakFak), Ron Island (Roon Isl.) "Dorey" (= Manokwari). Originally this series also contained material from Maluku (1 $\stackrel{?}{\circ}$ from Aru and 4 $\stackrel{?}{\circ}$ from Kei) which was subsequently separated from the Papuan specimens and is now forming the type series of seminiger richardi (see above). However, the remaining specimens of the NHMUK collection from western New Guinea were not included as paratypes of richardi and thus remain without taxonomic status. However, Tennent (2014) pointed out that "all of the $\partial \partial$ " in this series are very similar and are indistinguishable from the 37 from the remainder of the western New Guinea mainland".

Apparently, D'Abrera intended to describe the series from western New Guinea as a subspecies of J. purpurata but a formal published description of the Papuan specimens has not been made, although "type specimens" have been identified and labelled with appropriate type labels, bearing the name "brunnea" (shown with a red spot and identified as holotype of "J. purpurata subsp. ?" in D'Abrera, 1977: 352). D'Abrera labelled a female of "brunnea" as holotype, presumably because the "brunnea" males show, apart from size and slightly darker blue colouration, only few differences from purpurata. However, the "HT

brunnea" female (fig. 62) clearly differs from this in having completely brown wing uppersides, while the wing upperside of the *purpurata* "allotype" is violet-blue. As is explained above, it remains unclear whether the female allotype assigned to *purpurata* is actually conspecific with the holotype.

Tennent (2014) has discussed the name "brunnea" at length and regards it as an unpublished manuscript name, but without evaluating its current taxonomic assignment.

Jamides nov. spec. ? aff. seminiger richardi is very close to richardi s.str., but not to the holotype, but much more to the darker blue coloured paratype specimens that occur on Aru but also on Kei. The holotype specimen, on the other hand, is much more purple in colour (fig. 41). The development of the submarginal lunules on the wing upperside, which can either be very well developed or, in extreme cases, are completely obliterated, proves to be particularly variable. In extreme cases, a dark inner band forms on the inner side of the lunules, which are only indicated, and the brown may be reaching further inwards between the veins, which is never the case in purpurata.

The underside pattern is very similar in all 'seminiger' specimens, but some specimens of aff. seminiger show the submarginal band almost touching the crescents of the marginal lunules (fig. 50, 54). It remains unclear whether this is a character that is suitable for differentiation, especially since it has not yet been possible to assign it to a specific phenotype.

The identity of the taxon cannot be fully clarified at this time. It may be a very variable species that is close to *seminiger richardi* or an independent species. It is doubtful whether DNA analysis can lead to unambiguous results, since the barcodes are differing little among the *bochus* group (Wilson et al 2021). A clear classification is impossible without further investigation and - above all - on the basis of breeding programs. In any case, a new description does not appear to be sufficiently justified at this point.

Jamides soemias Druce, 1891 (Figs 37-40)

Jamides soemias Druce 1891: 367, pl. 32, fig. 4-5 [ST \circlearrowleft , Malaita Is., NHMUK]; Rawlins et al., 2014: 12, pl. 2 figs 53-56 [\circlearrowleft and ♀ syntypes].

Notes: Jamides soemias is considered here as distinct species which is not occurring on mainland New Guinea. In the original description, Druce mentioned the following occurrences: Shortlands (Alu), Fauro, Florida (= Nggela Islands) und Malaita, all belonging to the Solomon Islands. Tite (1969) recorded it throughout the Bismarcks, Parsons (1998) added New Ireland and Manus Is. and Tennent (2002) lists further localities throughout the Solomon Islands.

As has already been discussed (see notes concerning *purpurata*), *purpurata* is here not regarded as subspecies of *soemias* as has been proposed by Parsons, whereby the occurrence of *soemias* on mainland New Guinea was based. The male nominate *soemias*-specimen illustrated by him (pl. 69, fig. 2021-22) differs strongly from topotype specimens of *soemias*. I follow Hirowatari (1992) in recognizing *purpurata* as a distinct species.

Parsons (1998) regarded *J. timon* Grose-Smith, 1895 from New Britain (figs 72-77) as another synonym of *soemias*.

Jamides amarauge Druce, 1891

Jamides amarauge Druce, 1891: 366, pl. 31, figs 20-21. [HT \circlearrowleft , "Alu I., near Shortland I., Solomon I.]; Parsons, 1998: 448, pl. 70 fig. 2028-2029, pl. xv [genitalia]

Notes: A most distinctive species. Males have shining metallic, silvery-greenish blue wing uppersides with broad wing borders on the forewing. In the females wing colour is a light blue.

Distribution ranges from the eastern Moluccas (Aru Is.) in the west, across New Guinea to the Solomon Islands, the Bismarck Archipelago and the Torres Strait Islands in northernmost Australia.

Jamides amarauge amandae Rawlins et al. 2014 (Figs 66-69)

Jamides amarauge amandae Rawlins et al., 2014: 12-13, pl. 2 fig. 57-62 [HT ♂, "Aru, Hewitson Coll.", NHMUK]

Notes: Grose Smith (1894) had already mentioned the occurrence of amarauge in West Papua: "a pair from Korrido [= Supiori], and two males and a female from Humboldt Bay" and Tite had separated specimens from New Guinea in the NHMUK collection as "ssp.?" but did not formally describe the subspecies, which was subsequently carried out by Rawlins et al. (2014).

Compared with the nominate race, ground colour of ssp. amandae males is more bluish, much less brilliant and forewing margins are much narrower in both sexes. Wing colour of J. amarauge females is of a much lighter blue than observed in supposed bochus females. Jamides amarauge amandae is widespread in mainland West Papua and Papua.

Recent molecular research suggests that J. amarauge may possibly include more than just one species as specimens from Wanang (Madang Province, PNG) with characteristic amarauge phenotype differed considerably in their DNA sequences from analysed specimens from Gudalcanal, but remarkably, also Gudalcanal sympatric amarauge specimens have shown differing DNA sequences (Wilson et al., 2021).

2) The "celeno group"

a) cyta subgroup

Only two species occurring in western New Guinea, cyta and nitens, are included in this subgroup. Male genitalia are characterized by a sickle-shaped hook on the dorsal arm of the bifid valvae.

Jamides nitens (Joicey & Talbot, 1916) (Figs 79-86)

Lampides nitens Joicey & Talbot, 1916: 80, pl. 8 fig. 5 [HT ♂, "Wandammen Mtns.", NHMUK] Jamides nitens. – Hirowatari, 1992: 45, fig. 20, i-l [male genitalia], stat. rev.; Parsons, 1998: 448; Müller, 2016: 119, fig. 38-43, 51, 57 [holotype and male genitalia]

Notes: The description of J. nitens was based on a single male from the Wandammen Mountains (on the western side of the Cenderawasih Bay), and it was stated by Joicey & Talbot (1916) that the new species is "closely allied to malaguna, Ribbe" from the Bismarck Islands. Ribbe (1899: 228) had proposed that his new variation malaguna probably belongs to amphissina Grose-Smith, 1894 or is just a local variation of amphissina, which is now regarded as subspecies of Jamides cyta (Boisduval, 1832). Both species have a similar underside pattern and especially the series of chevron shaped, submarginal spots are shared characters. It is therefore no surprise that J. nitens was previously regarded as subspecies of cyta.

Parsons (1998) has discussed the distinguishing characters between nitens, cyta and other similar species in detail. Diagnostic characters of nitens are the broken median forewing band, and a small dark marginal spot in space 6, sometimes a weaker, elongated spot in space 7 of the hindwing. As male genitalia structure of both is different (Parsons, 1998: pl. XV, Müller, 2016: figs 47, 51), and the dark subterminal spots form a complete row in cyta, while they are generally present only in spaces 6 and 7 in nitnes, it was raised again to species status by Hirowatari (1992).

Jamides pseudosias (Rothschild, 1915) has a paler blue upperside colour and the pattern of the underside markings differs: the postdiscal line in space 3 is not in line with the line in spaces 4 and 5. Accordingly, in *pseudosias* there is a complete median and a postmedian band composed of rather parallel white lines.

Males from Pegunungan Bintang (Star Mountains; Eastern Papua) and the Jayawijaya Mountains (Kobakma) correspond well with the holotype male from the Wandammen Mountains in West Papua in having only two blackish marginal hindwing spots in space 6 and 7, whereas the spots in spaces 3-5 are not much darker than the underside colour. Occasionally, in some specimens the spots in spaces 3-5 also darkened. Underside colour of females from Papua agrees with the dark colour observed in the males, and there are no examples known of any sexual dimorphism.

In PNG, J. nitens is presently only known from the Telefomin area including the Miyanmin Range (West Sepik, now Sandaun Province). Parsons noted the different underside colour of many *nitens* females from Telefomin and described it as sexually dimorphic (Parsons, 1998). The variable underside colour is vaguely reminiscent of the variation known from seasonal forms of Jamides celeno, but no seasonal variation is known from nitens.

Females are characterized by a generally much paler underside colour than males, but according to Parsons, some may approach the darker underside colour of the males and Müller (2016: 122, figs 41-42) has subsequently illustrated similarly pale coloured males. Obviously, this character seems to vary as does the heavy white suffusion bordering the underside striae, and thus the differences can not be related to sexual dimorphism.

Parsons (1998: 448) stated that "the *nitens* \mathcal{L} is the only species with a broad grey-brown FW costa". This may be true for the Sepik population, but is not the case in most females known from the Sudirman Mountains (Snow Mountains) in central Papua. However, van Mastrigt & Warikaar (2013: 138, 659/660) illustrate a single female from Mokndoma with a broad dark forewing costa. Parsons had seen the series of 8 $\mathcal{Q}\mathcal{Q}$ of *nitens* in RMNH (Leiden), but did not mention that they differ from the Sepik specimens in having a completely blue forewing costa and much narrower wing margins. None of the Leiden specimens shows the pale underside colour of the Sepik population, which may be an example of geographical dimorphism, where the Sepik race is separated from the Papua and West Papua populations by mountain ridges.

Phenotypic differences of the Sepik specimens could be regarded sufficient enough to consider a separation as subspecies if only end members of the phenotype are taken into account, but the occurrence of typical males with dark underside colour within the population and of females with brown costa in the Snow Mountains suggests that it is merely a local morphotype of *nitens*.

Known from the Wandammen Mountains in West Papua and the central mountain Range of Papua (Star Mountains, Snow Mountains, Jayawijaya Mountains).

Jamides cyta (Boisduval, 1832)

Catochrysops cyta Boisduval, 1832: 87 [types not located, "Nouvelle-Irlande"]

Jamides cyta is widely distributed from Myanmar to Australia and New Britain. It shows a remarkably phenotypic plasticity across its range and a large number of 21 subspecies are currently in usage.

Jamides cyta amphissina (Grose-Smith, 1894) (Figs 87-92, 119-120)

Lampides amphissina Grose-Smith, 1894: 577 [HT 3, "Humboldt Bay", NHMUK] Lampides philatus aegithus Fruhstorfer, 1916: 25. [HT ♂, "Waigiu", NHMUK] syn. nov. [figs 119-120]

Lampides philatus amphissina. – Fruhstorfer, 1916: 26.

Jamides cytus. – Parsons, 1998: 449, pl. 70, fig 2037 [the J. 'cyta' male numbered 2035/36 belongs to J. pseudosias (Rothschild, 1915); see Müller (2016)]

Jamides cyta amphissina. – Müller, 2016: 12, figs 25-30 [illustrations of the amphissina types]

Notes: Jamides cyta aruanus (Röber, 1886) closely resembles amphissina. However, the extent of the blue on the hindwings of West Papua amphissina females appears somewhat more extensive than in aruanus Röber, 1886 (figs 93-96), where this tends to be limited to the basal portion of the hindwings, as is well observed in the lectotype. The forewing upperside costa is usually brown in aruanus females and not blue as in amphissina. Also, the marginal lunules on the hindwing upperside are much stronger than in J. cyta aruanus females.

With its series of black triangular, subterminal lunules on the hindwing underside amphissina is superficially resembling J. philatus (Snellen, 1878). However, the forewing underside in cyta females has a large white patch, the submarginal striae are arranged irregularly and the black tornal spots in space 1b and 2 are lined with metallic blue, while there are no blue scales in philatus. In addition, in philatus there is a marginal series of strongly angled lunules, outlined with white.

Fruhstorfer (1916: 26) was the first to purportedly report Jamides philatus from "Holl.-Neu-Guinea" and described ssp. aegithus Fruhstorfer, 1916 from Waigeo as follows: "Sehr nahe amphissina Sm. von Holl. Neu-Guinea aber durchaus heller blau und unterseits lichter grau." However, doubts about an assignment to philatus were justified, especially since Fruhstorfer also confused the species with cyta when assigning other subspecies to philatus, e.g. in amphissina Grose-Smith, 1894, to which direct reference is made in this case. Apart from Bridges (1988), the name aegithus has not been mentioned in the literature since it was first described. Since the holotype of aegithus differs only slightly from amphissina, the taxon is considered a synonym of *J. cyta amphissina*.

Jamides cyta amphissina is widely distributed throughout Western New Guinea, but rather uncommon (FakFak, Manokwari, Nabire, Biak, Supiori, Mimika, Sarmi, Kerom, Jayapura, Waigeo). Recently it has been recorded from Dauan Island in the Torres Strait/northern Australia (Lambkin, 2021).

b) celeno subgroup

Specimens of the celeno subgroup are characterized by the forewing underside markings, where the postdiscal band is continuous from vein 3 to vein 7. Valvae bifid. Jamides celeno is the only species of this group occurring in New Guinea.

Jamides celeno (Cramer, 1775)

Papilio celeno Cramer: 1775: 51, pl. 31, figs C, D [HT ♂, "Sumatra", type not located]

Notes: Jamides celeno is one of the most widespread and common species of Jamides, occurring from India to New Guinea and the Solomons. It is also frequently encountered in West Papua and Papua.

Jamides celeno sundara (Fruhstorfer, 1916)

Lampides celeno sundara Fruhstorfer, 1916 [ST ♂, Banda, NHMUK] Jamides celeno sundara. – Rawlins et al., 2014: 17, pl. 23, figs 111-116 [illustrations of male and female syntypes]

Notes: The records of *Jamides celeno* in New Guinea have been determined by most authors as belonging to ssp. sundara. This goes back to Fruhstorfer, who had already included New Guinea records in sundara in its first description. Rawlins et al. have also assigned the populations of New Guinea to this taxon.

The comparison of syntypes of both taxa, sundara and sandya Fruhstorfer, 1916, showed that the differences between the two subspecies are very small and that males of both can hardly be reliably distinguished from each other. In the females the only difference seems to be the different colouration of spaces 6 to 7 on the hindwing anterior margin. In sandya, spaces 6 to 7 are completely brown, while in *sundara* only space 7 is coloured brown.

The phenotypic characters of the females are therefore decisive for the assignment of the West Papua and Papua specimens to one of the two subspecies mentioned. Females of celeno from West Papua and Papua are predominantly characterized by spaces 6 and 7 being generally brown and there are only a few cases where the brown may be dusted with greyblue scales. Parsons (1998), on the other hand, illustrates a female from PNG in which spaces 6 and 7 are not coloured brown.

The available male specimens from West Papua show a certain variability and thus differ somewhat from sundara specimens from Maluku in that they may develop marginal black spots on the hind wings to varying degrees and that the dark forewing margins are generally narrower. In contrast, they correspond very well to the forms occurring on Bacan, which are already placed with sandya. Marginal hindwing upperside spots may appear in males of all populations and two extreme forms are illustrated in figs 97, 99. The apical forewing border also varies in width.

If the distinction based on the different development of the hind wing coloration in the females should prove to be stable, then the Papuan specimens of celeno should accordingly be assigned to ssp. sandya.

c) aratus subgroup

The aratus subgroup is defined according to characters of the male genitalia, where the posterior margins of the suprazonal sheath of the phallus are spatulate and the dorsal portion of the tegumen is broad.

Jamides aratus (Stoll, 1781)

Papilio aratus Stoll 1781, [in Cramer]: 144, pl. 365, Fig. A, B. [HT ♂, TL: "Ambon", NHMUK]

Jamides aratus aratus (Stoll, 1781) (Figs 105-106)

Papilio aratus Stoll 1781, [in Cramer]: 144, pl. 365, Fig. A, B. [ST 3, TL: "Ambon", NHMUK]

Notes: Superficially very similar to J. aetherialis. However, aratus males have a rather dull white upperside colour, while *aetherialis* is characterized by a more shiny, metallic light blue. Marginal spots on the upperside of the hindwing are not uncommon in aratus males, and the spot in space 2 is usually well developed. In aetherialis the spot in space 2 is generally much weaker and additional marginal spots are usually not present.

Occurrence of nominate J. aratus is more or less restricted to central Maluku (Buru, Seram, Ambon, Obi, Watubela Group) but it is also present on Misool (Rawlins et al., 2014: 25), being biogeographically regarded as belonging to West Papua, even though it still includes many Moluccan faunal elements. Jamides aratus reaches its easternmost end of occurrence on Misool, but was not known from any other West Papuan locality, being there replaced by J. aetherialis. Both species were regarded as allopatric throughout their ranges by Rawlins et al. (2014: 21), but a single male of aratus was recently recorded from Sorong, figured here in fig. 105 which is presently the only known locality where ranges of both species overlap. The Sorong male clearly differs from aetherialis flying at the same locality. The upperside colour is not shiny metallic and the forewing margin is slightly dusted with dark scales. On

the hindwing numerous small marginal spots are present. Assignment to aratus was confirmed by genitalia dissection.

Jamides aetherialis (Butler, 1884)

Lampides aetherialis Butler, 1884: 195 [ST ♂, "Ké Isl.", NHMUK] Jamides aetherialis. - Hirowatari, 1992: 85, fig. 21G-L [male genitalia of nominate subspecies].

Notes: Separation of J. aetherialis and J. aratus has been a problem in the past and numerous historical determinations and records of sympatric occurrence must be doubted. In terms of general distribution in the Indonesian Archipelago, aratus is the species occurring in the west, whereas aetherialis to the east and the boundary between both lies between Eastern Maluku and New Guinea, including the Kei and Aru groups (Rawlins et al., 2014: 22, map 3). If in doubt, the best means for reliable determination are dissections, as valvae of both species differ strongly from each other. The underside hindwing has a marginal series of chevron shaped dark spots (the spot in space 6 usually very prominent).

Superficially, genitalia structure of both taxa, aratus and aetherialis, seems rather similar. However, thevalvae of aratus are shaped as a single large spine, while the valvae of aetherialis are broader and have a spatula like, torn apex.

Jamides aetherialis caerulina (Mathew, 1887) (Figs 107-114)

Lampides caerulina Mathew, 1887: 46 [HT ♂, "Ugi I., Solomon Is", NHMUK] Lampides aetherialis ayrus Fruhstorfer, 1916: 23 [HT ♂, "Triton Bai, Fak-Fak, Schneegebirge", NHMUK]

Notes: The shiny metallic whitish-blue upperside colour is characteristic for males of aetherialis. Rarely a small, black tornal spot can be found in space 2 of the hindwing. Females have a brown forewing margin, which may vary in width. In some female specimens, space 7 of the hindwing is blue as in the males.

Fruhstorfer (1916: 23) stated that his ssp. ayrus was "auch von Nord-Neu-Guinea bekannt", already indicating that aetherialis is a widely distributed species in West Papua: Waigeo, Batanta, Biak, mainland West Papua.

A local race from Kofiau, which was regarded as possible new subspecies by Rawlins et al. (2014: 28) does not show any significant differences from a. caerulina and has to be placed in this subspecies.

Parsons (1998: 450) synonymized ayrus, as he was unable to separate it reliably from ssp. caerulina and specimens from the Solomons and from Papua are indeed remarkably similar. According to Fruhstorfer, the female of ayrus was said to be very close to the female of J. anops Doherty, 1891, however anops is a species confined to Sumba and very different from ayrus concerning genitalia as well as adult phenotype, with a most characteristic underside pattern (Rawlins et al. 2014: 21, pl. 5, figs 167-168).

d) aleuas subgroup

Taxa included in the aleuas subgroup are characterized by the male genitalia, where valvae possess a needle-like costal process.

Jamides philatus (Snellen, 1878)

Cupido philatus Snellen, 1878: 21, pl. 1 fig. 5 [HT, "Bonthain", Sulawesi, types not traced]

Notes: Jamides philatus and cyta are resembling each other but in philatus the forewing postdiscal band is straight and not dislocated at vein 6 and shifted in basad as in cyta. Wing markings between the inner and outer marginal striae are formed as wedge-shaped spots, which is never the case in cyta.

Jamides philatus kapaurus ssp. nov. (Figs 115-118)

urn:lsid:zoobank.org:act: 254E894F-F156-4EDE-87A1-4F82D4C56CC4

Holotype: ♂, Indonesia, West Papua, FakFak, v. 2000 [KSP 65154]

Paratypes: $1 \circlearrowleft 1 \circlearrowleft 1 \circlearrowleft$, as HT $[\circlearrowleft KSP 65155, \circlearrowleft in CSSK]$

Diagnosis and description: Males with the characteristic upperside colour and with a row of dark marginal spots as usual for *philatus*. The black wing borders a thread. Underside pattern not differing from other subspecies. Females rather dusky in general appearance, with light blue wing uppersides and wide wing margins. Hindwing spaces 6 and 7 brown. A complete series of marginal spots outlined with white, reaching from spaces 2-6.

Jamides philatus stresemanni (Rothschild, 1915) females from Buru have space 6 white and prominent white submarginal chevrons crowning the marginal series of white ringed black spots (fig. 121, 122). In ssp. kapaurus the marginal series of spots is crowned by dark brown chevrons and spaces 6 and 7 are completely brown. Jamides philatus emetallicus (Druce, 1895) females (fig. 123, 124) are generally resembling kapaurus but the upperside colour is whitish and not blue. Wing borders are even wider in emetallicus and there is no marginal spot in space 6 of the hindwing.

Distribution: The types have been found in Fakfak, Onin Peninsula, Papua Barat, Indonesia.

Etymology: Named after the type locality Fakfak, which historical name was Kapaur.

Notes: D'Abrera (1971: 255) illustrated a single female from "Kapaur" as "Jamides philatus subsp.?" This specimen (in the collection of the Natural History Museum, London) is labelled as a type and bears one additional label added by Toxopeus, determining it as "philatus Snell. subsp.n. ♀, det. Tox. 1925". Apparently D'Abrera was tempted to describe this subspecies as new, but Tennent (2014:168) has shown that the name "iriana" applied by D'Abrera to this specimen is an unpublished manuscript name. The specimen does not show any differences to the female figured from FakFak (= "Kapaur") in this paper. The series of 6m / 6f which is deposited in London (NHMUK), to which Tennent (2014) referred (Kapaur, Utakwa River and one near to FakFak), may also be assigned to the new subspecies.

Jamides philatus is a widespread species ranging from India to northern and central Maluku, just reaching western Papua, from where the species has so far only been documented with a few specimens. There are no records of philatus in either the KSP (Jayapura) or the RMNH (Leiden) collections.

Jamides aleuas (C. & R. Felder, 1865)

Lycaena aleuas C. & R. Felder, 1865: 268, pl. 33. fig. 15-16 Jamides aleuas. – Tite, 1960: 329; Hirowatari, 1992: 47, 86, fig. 22, E-H [male genitalia]

Notes: Jamides aleuas holds a rather isolated position within Jamides as its underside markings are very different from all other species in the genus. Underside colour is dark brown to black with a white median band on both wings and the usual hindwing pattern is replaced by metallic blue marginal lines and wedge-shaped submarginal lunules. Based on the structure of male genitalia, J. aleuas is the name-giving taxon for the aleuas subgroup (Hirowatari, 1992: 47). Valvae have a thin, spine like dorsal process, reminding of the valvae of *philatus*.

The species is related to *anops* Doherty, 1891 and aside of *philatus*, the only member of the subgroup occurring in New Guinea. In his revision, Tite (1960: 321) had placed *aleuas* in the "Jamides euchylas complex", but already mentioned the differences in shape of the valvae: "...its clasper has the main portion situated ventrally and a thin spine-like process dorsally". Aside of nominate *aleuas*, Tite recognized eight subspecies, ranging from Maluku (Aru Isl.) to Australia (Queensland). In this paper the following subspecies are accepted for western New Guinea:

Jamides aleuas aleuas (C. & R. Felder, 1865); [HT ♂, "Ins. Mysol"]

Jamides aleuas alcas (C. & R. Felder, 1865); [HT ♂, Waigeo]

Jamides aleuas nitidus Tite, 1960; [HT ♂, Upper Aroa R. Brit. N. Guinea]

Jamides aleuas pholes Fruhstorfer, 1916; [no type designation, "mainland New Guinea"]

Jamides aleuas (C. & R. Felder, 1865) (Figs 125-130)

Lycaena aleuas C. & R. Felder, 1865: 268, pl. 33. fig. 15-16 [HT ♂, "Ins. Mysol", NHMUK].

Notes: Both sexes have well developed white median bands on both wings. In the females there is a strong blue suffusion on the forewing including most of the cell, but not reaching the costa. On the hindwing there is some median blue in spaces 1b to 3, thinning out along the white median band. Wing margin in the males is a thread, which differs distinctively from *J. allectus* Grose-Smith, 1894. Underside submarginal markings are metallic blue. Compared with *allectus*, the white upperside hindwing band is relatively narrow and less steeply inclined, so that it ends more closely to the apex than in *allectus*, where it ends centrally on the hindwing costa. This was the main difference used by Parsons (1998) to separate both species.

Distribution of nominate ssp. *aleuas* is restricted to Misool Island.

Jamides aleuas alcas (C. & R. Felder, 1865) (Figs 141-144)

Lycaena alcas C. & R. Felder, 1865: 268, pl. 33, figs 27-28 [no designated type; "Waigiou", NHMUK]

Lampides aleuas arcas [sic!]. – Fruhstorfer: 1916: 31.

Jamides aleuas alcas. – Tite, 1960: 330-331, figs 24-25 [male genitalia].

Notes: Compared to mainland race ssp. *pholes* Fruhstorfer, 1916 with generally much wider white median bands on fore and hindwing in both sexes. In the females, the blue on the forewing is almost reaching the costa and extends to about 2/3 of the forewing length. *Jamides aleuas alcas* is presently known from Waigeo only.

Jamides aleuas pholes (Fruhstorfer, 1916) (Figs 131-142)

Lampides aleuas pholes Fruhstorfer, 1916: 32 [no designated type; "Neu Guinea"]

Notes: This subspecies shows a marked trend towards reduction of the white forewing

bands in the males. There is usually a faintly developed band, but much weaker than in the other subspecies. Not infrequently, the band is very narrow or even completely reduced, so that the forewings are completely blue in some specimens (fig. 133). Occasionally there is a black marginal spot in space 2 on the hindwing. The black margin is a thread, only slightly increasing in width towards the apex.

Females usually with reduced basal blue on forewing and hindwing anal fold and as an exception there are individuals with very weak basal blue (fig. 141), however usually some blue scaling always remains. The median bands are narrower in comparison with the other subspecies.

Fruhstorfer did not give accurate details of the locus typicus in his description ("New Guinea, without exact collecting locality") and referred to the / a type specimen in the Courvoisier collection in Basel. There is no designated type specimen for pholes (Tite, 1960: 331) in the NHMUK and it is also not mentioned by Cassidy (2013), who has revised some lycaenid types of the Courvoisier collection in Basel. Tite had assumed that the description of pholes was based upon a specimen or specimens from "Dutch New Guinea" and accordingly, the range of occurrence was regarded as very wide, including records covering all of West Papua and Papua. As the taxonomic status of *pholes* is not in question and it is easy to recognize, there is no exceptional need for a neotype designation.

The occurrence of pholes on Darnley Island, mentioned by Fruhstorfer, which belongs to the Torres Strait Islands, is far from all other collecting localities, and remains vague. Fruhstorfer refers to Waterhouse, but does not provide a reference (Waterhouse, 1903: 157 " I am not quite sure that our form is typical L. aleuas", specimen deposited in the Macleay Museum). The Australian ssp. coelestis Miskin, 1891, which is endemic to eastern Queensland (and does not reach to Darney Island), differs significantly from ssp. pholes because the white bands on the forewing are much wider. Tite (1960) did not mention Darnley Island in the distribution of aleuas, Braby (2000: 826) has likewise not commented on the questionable occurrence and recent field-work on Darnley Island did not confirm its occurrence (Johnson, pers.comm., 2021).

Jamides aleuas pholes is widely distributed in West Papua and Papua: (Manokwari, Biak, Dorey Bay, Weyland Mtns., Arfak Mtns., Oetakwa River, FakFak) but it is not known how far distribution of pholes spreads eastwards. However, with records from Yahukimo the eastern Central Highlands are reached.

Jamides aleuas nitidus Tite, 1960 (Figs 147-150)

Jamides aleuas nitidus Tite, 1960: 330 [HT ♂, "Upper Aroa R. Brit. N. Guinea", NHMUK]; Parsons: 1998: 450, pl. 70 fig. 2045-46 [non fig. 2047-2049]

Notes: Males are characterized by broad black wing margins, reaching 2-3mm at the forewing apex and the deep blue wing colour, which is much deeper than in nominate aleuas or ssp. pholes. On the hindwing there are usually some dusky marginal spots or the dark border is inwardly slightly irregular in outline, which reminds of allectus. Jamides aleuas nitidus has the marginal cuneiform spots on the hindwing underside whitish-blue, while they are pure metallic blue in allectus and jobiensis.

The white hindwing underside band is almost triangular in shape, being very narrow close to the inner margin of the wing but widening towards the costa (reminiscent of the Australian ssp. coelestis Miskin, 1891).

Jamides aleuas nitidus is not known from West-Papua, even though D´Abrera (1977: 357) mentioned it ("Eastern New Guinea to south-eastern Papua") and it is only included here to illustrate the differences in regard to other mainland NG subspecies. The "aberrant" nitidus-specimen illustrated by Parsons (1998: pl. 70 fig. 2047-48) most likely belongs to another taxon, but without further records it is difficult to understand its taxonomic position. Interestingly, nitidus also resembles ssp. jobiensis and DNA sequencing has to confirm assignment to aleuas or allectus.

Jamides allectus (Grose-Smith, 1894)

Lampides allectus Grose-Smith, 1894: 576, [HT], "Humboldt Bay", NHMUK]

Notes: When discussing the differences between the various subspecies of J. aleuas, Tite (1960: 331) correctly remarked that allectus and jobiensis Tite, 1960 both "stand apart from all the others in their much deeper blue colour, and by the presence of dusky submarginal spots on the upperside of the male hind wing", but still treated both as subspecies of aleuas. Males of both, allectus and jobiensis are considerably darker blue than aleuas and they usually have dark marginal spots on the hindwing upperside, sometimes fusing into a more or less solid border in ssp. jobiensis. Females are without any blue on the upperside. Because of their sympatric occurrence and the obvious phenotypic differences, Parsons (1998: 450) regarded allectus as distinct species, assigning sarmice Fruhstorfer, 1916 [TL "Neu Mecklenburg"] and jobiensis Tite, 1960 [TL Yapen] as subspecies. According to him, a separation of allectus from aleuas is based on the different wing colour as well as on characters of the white upperside band and stronger iridescent blue underside markings in the males, but it appears that the characters concerning the extension of the forewing bands are variable and can not be used to separate both taxa with certainty. Differentiation of the females, especially concerning ssp. sarmice Fruhstorfer, 1916 is simpler as they are lacking any basal blue and have the white bands on both wings broader, almost appearing as a white triangle across both wings (Cassidy, 2013: 138, pl. figs 24-25). Following the suggestion of Parsons (1998: 450), allectus is regarded here as distinct species, including ssp. allectus and ssp. jobienis as valid subspecies. DNA sequencing confirms that both aleuas and allectus have to be regarded as different species (Lohman, pers. comm. 2021).

Jamides allectus allectus (Grose-Smith, 1894) (Figs 151-156, 164)

Lampides allectus Grose-Smith, 1894: 576, [HT \circlearrowleft , "Humboldt Bay", NHMUK]; Grose-Smith & Kirby, 1897: 6, pl. 1 fig. 15-16, pl. 2 fig. 3

Jamides aleuas allectus. – Tite, 1960: 331.

Jamides allectus. - Parsons, 1998: 451.

Notes: In its original description, *allectus* is compared with *aleuas*, and males were said to differ from this taxon mainly in the deeper blue of the upperside and better developed submarginal blue hindwing underside markings. Fruhstorfer (1916: 32) also recognized the more complete submarginal markings and refers to this character as "zusammenhängende Halbmondfleckenserie".

The dark wing margins of the males were described as being narrow on the forewing upperside, but more broadly black on the hindwing, where the inner edge is rather irregular.

The illustration in Grose-Smith & Kirby (1897) is misleading as the male holotype specimen of allectus does not show a solid dark wing margin, but as correctly observed by Tite (1960: 331), the margin is consisting of "dusky marginal spots as in J. coritus". The specimen figured in Parsons (1998: pl. 70 fig. 2050) is reproduced too small to show the characteristic marginal spots, which, however, are also not very well developed in this specimen.

Grose-Smith (1894: 577) described the females as having "both wings dusky brown-black, with a dusky white ill-defined band commencing at the end of the cell of the anterior wings, crossing the inner margin at the middle, and terminating at the inner margin of the posterior wings on its upper third. There are no traces of blue on the upperside." Accordingly, J. allectus females may be reliably separated from aleuas females because of the completely lacking basal blue.

Occurrence of J. allectus is restricted to a few localities and most of the known records derive from Humboldt Bay, Jayapura ("Hollandia"). Van Eecke (1924) has listed a short series of aleuas allectus from Mamberano and Idenburg River (figs 155-156) collected by van Heurn during the Dutch Central New Guinea Expedition (1920-21) to northern Papua and the RMNH collection (Leiden) includes several historical specimens from Araucaria Camp (Jayawijaya Mountains) and Prauwenbiwak (Batavia Camp).

Parsons (1998) illustrated a single specimen of J. allectus from mainland PNG (Pel Pel River in the West Sepik Province), which is the only known record from PNG in the collection of the NHMUK. The dark marginal hindwing spots are slightly reduced in this specimen. Unpublished molecular data of recently collected specimens suggest that allectus is also present at Wanang (pers. comm. Lohman, 2021).

Jamides allectus jobiensis Tite, 1960 (Figs 157-162)

Jamides aleuas jobiensis Tite, 1960: 332 [HT ♂, "Ansus, Jobi", NHMUK]

Notes: When describing J. aleuas jobiensis, Tite (1960: 332) mentioned that specimens of a series from Yapen: "have affinities with allectus yet exhibit differential characters of subspecific importance". As a matter of fact, both taxa are phenotypically similar, but there are characteristic features justifying a subspecific separation.

In contrast to nominate allectus, the blue is deeper and more violet in jobiensis, the dark margins are slightly wider (especially towards the apex), and the white hindwing band is broader. The underside forewing band is almost reaching the inner marginal band of blue lunules at the termen. Except for a few scattered blue scales along the basal veins, females are without any blue areas above.

Only known from Yapen Island.

e) *elpis* subgroup

Jamides alecto (C. Felder, 1860)

Lycaena alecto C. Felder, 1860: 456 [HT ♂, Ambon, NHMUK]

Notes: A widely distributed species. Currently twelve subspecies of alecto are known, ranging from Sri Lanka and India through Sundaland and the Indonesian Archipelago to

Western New Guinea (West Papua), with the nominate race occurring in Central Maluku, including the Kei and Aru Islands.

Jamides alecto papuana ssp. nov. (Figs 165-166, 169-173)

Lampides alecto (dromicus) subsp. Toxopeus, 1930: 140 urn:lsid:zoobank.org:act: 1C08B1D8-4EE2-4AF0-A958-D20275E3C3F7

Holotype: ♂, Indonesia, "NW Ned. Nieuw Guinea, Khadamah, 29 Juni 1949, ex coll. Mus. Bogor", coll. Nieuwenhuis" [RMNH INS. 1300449].

Paratypes: 1 \bigcirc , Sorong [RMNH INS. 1109035]; 1 \bigcirc , Sorong, 4 \bigcirc , Batanta, 7 \bigcirc , Waigeo [all CSSK]; 1 \circlearrowleft , 1 \circlearrowleft , Waigeo, [coll. Okubo].

Diagnosis and description: Male wing upperside colour light sky-blue with a distinctive lilac hue, without any greenish tinge (as is the case in the Maluku races); forewing border width uniformly 2-3 mm, not increasing towards apex. A complete series of marginal lunules on the hindwing upperside, inwardly not bound by a dark band. Underside light brown, with the characteristic *alecto* pattern.

Female with very wide dark wing margin on the forewings (females of nominotypical alecto generally show marginal lunules or a narrow marginal series of stripes on the forewing). In this respect closely resembling alecto females from Halmahera and Bacan, known as ssp. batjana (Toxopeus, 1930) (Rawlins et al. 2014: fig. 210).

Distribution: The few known records are mainly from the western part of West Papua and include Waigeo, Batanta, Salawati and West Papua (Sorong). KSP has one unconfirmed record [KSP 12720] from Pulau Masi-masi (Sarmi; NE of Jayapura) and possibly papuana is occurring throughout Papua.

Etymology: Named after the region where the types have been found.

Notes: The occurrence of Jamides alecto in West Papua has been known since a long time (Toxopeus, 1930: 140) but the local race was never formally separated from *alecto* s.str. or described as distinct taxon.

Toxopeus (1930: 139) includes the form from Waigeo in dromicus (Fruhstorfer 1916), which he suggested is indicating a distribution from Taiwan across the Philippines and Halmahera to Waigeo (Toxopeus 1930: Fig. 12), and interestingly, the blue of the Philippine subspecies matches the West Papuan specimens better than the greenish-blue tinted Maluku specimens.

Waigeo alecto (for which Toxopeus had material available from the "Museum Leiden") is listed in Toxopeus' paper separately from J. alecto batjana (Toxopeus, 1930) as "L. a. (drom.) subsp.", but neither illustrated nor formally described. In any case, specimens of batjana from Halmahera and Bacan (Figs 167-168, 173-174) are phenotypically closer to nominate alecto, which is widespread in Maluku, than to the race flying in West Papua. Apparently, records of true alecto from mainland NG were unknown to Toxopeus, since he placed reverdini Fruhstorfer, 1915 with "(alecto) reverdini", which is a very different taxon (see below).

Parsons (1998: 675) noted the occurrence of alecto in West Papua and Papua in an appendix of New Guinea species and the species was also mentioned by Vane-Wright & De Jong

(2003), but not listed by Hirowatari (1992).

The taxonomic status and reliable assignment of batjana Toxopeus, 1930 is still not fully clarified. Rawlins et al. (2014: 33) were unable to localize the type specimens. D'Abrera (1971) synonymized batjana with alecto. Neither the male holotype collected by Waterstradt ("in coll. Toxopeus"), nor another paratype male from the Berlin collection could be localized (pers. comm. Théo Leger, Berlin), and no specimens were found in the Leiden collection either. In the absence of any type-specimens, Rawlins et al. illustrated a male from a series of alecto from Bacan (ex coll. Doherty, iii. 1892) which is light blue coloured and can be unequivocally assigned to alecto. However, in the explanation of Toxopeus (1930: 160, pl. 3) it is noted that the original of Fig. 8 (= type of batjana) is coloured almost white ("het origineel van fig. 8 is bijna wit"). Without a comparison of the type material, it cannot be conclusively clarified if the taxon matches the specimens assigned by Rawlins et al., even though it is most likely. A confusion with the similar looking J. schatzi (Röber, 1886) is improbable as this species has generally much narrower wing margins than

Tennent (2014: 171) has shown that the specimen illustrated by D'Abrera (1971: 354) as alecto (with a red label indicating type status) has no relation to the alecto-type of Felder (TL of nominate alecto is Ambon). D'Abrera's specimen is from the Doherty collection and was collected at Dorey Bay (Andai, southwest of Manokwari). Apparently, he intended to describe the West Papua population (possibly including Waigeo) as new subspecies as the specimen was labelled as "J. alecto stokesi", which remains an unpublished manuscript name (Tennent, 2014).

Jamides pseudosias (Rothschild, 1915)

Notes: As usual for Rothschild, his description of *pseudosias* is very short: "similar to *osias* Röber, but much deeper blue above. Below it is dark uniform mouse-grey, and the white bands much more distinct". The diagnosis was based on a solitary male from Misool, which was illustrated by Rawlins et al. (2014: pl. 6 fig. 193-194).

Jamides pseudosias pseudosias (Rothschild, 1915) (Figs 201-202)

Lampides pseudosias Rothschild, 1915: 138; [HT ♂, "Misol", NHMUK]. Jamides pseudosias pseudosias. – Rawlins et al., 2014: 32, Figs 193-194 [HT male] Jamides cytus. - Parsons, 1998, pl. 70 fig. 2035-36.

Notes: Aside of the unique male holotype from Misool, Rawlins et al. included specimens from Maluku (ranging from Halmahera and Bacan to Obi and Seram) in the nominate subspecies. The Maluku males do not show any differences, but females from Maluku differ much from the phenotype occurring on mainland New Guinea, being much darker blue and with broader wing margins.

Mainland New Guinea specimens are generally included in ssp. coeligena Joicey & Talbot, 1916. Females of ssp. pseudosias from Misool have never been illustrated and it was not possible to locate any specimens, so it is not clear if they differ from those of ssp. coeligena. Males of both subspecies do not show any differences, but it can not be excluded that the female phenotype of the Maluku race does not correspond with specimens from Misool or ssp. coeligena females. Besides, Maluku females may be assigned to two different forms: a

"dark form" from Halmahera and a "blue form" from the remaining areas (Rawlins et al. 2014: 32).

The specimens of J. pseudosias figured by Müller (2016) from New Ireland and New Britain do not differ from the mainland PNG race. He does not assign the island races to any subspecies, even though they differ much from pseudosias females known from Maluku. The mainland PNG pseudosias coeligena female figured by Parsons (1998: pl. 70 fig. 2060) differs strongly from both Maluku female forms.

Jamides pseudosias coeligena (Joicey & Talbot, 1916) (Figs 175-182)

Lampides coeligena Joicey & Talbot, 1916: 76, pl. 6 figs 2-3 [HT ♂, Humboldt Bay, NHMUK]

Notes: Described from a male from "Humboldt Bay" (now known as Yos Sudarso Bay, with its capital Jayapura "Hollandia") and a female from Biak. Parsons (1998: 451) accepts the classification of D'Abrera, stating that ssp. coeligena is the race of mainland New Guinea, without discussing the differences to the Maluku/Misool specimens. It is a rare species in NG, known from a few specimens only.

Chris Müller regards the long tails of this species as a generally important diagnostic character (pers. comm. 2021).

Jamides reverdini (Fruhstorfer, 1915) (Figs 183-186)

Lampides elpis reverdini Fruhstorfer, 1915: 143 [ST 3, Holl. Zentral Neu Guinea, Kloofbivak,

Lampides elpis cytinus Fruhstorfer, 1916: 20 [HT ♂, Deutsch Neu-Guinea, Sattelberg; Dep. ?] Lampides wandammenensis Joicey & Talbot, 1916: 79, pl. 8 fig. 6 [HT $\stackrel{?}{\circ}$, Wandammen Mtns., NHMUK]

Jamides reverdini. – Müller, 2016: 126, Figs 44, 45, 52, 58 [male genitalia]

Notes: This taxon is based on two syntype males from the Expedition site "Kloofbivak" of the 3rd New Guinea Expedition 1912-1913 (Lorentz River, southwest Papua), preserved in the RMNH, Leiden [one of them bearing a label "elpis reverdini Fruhst." in Fruhstorfer's hand and a small orange "Type" label]. Fruhstorfer mentioned the characteristic male genitalia structure, with the valve having a short, rather stout lateral process. Separation of reverdini from *pseudosias*, may be guided by the different hindwing underside markings, as the shape of the subterminal band in reverdini is composed of rectangular markings whereas markings are triangular in pseudosias (Müller, 2016: 126). The forewing postmedian band in space 6 is shifted inwards so that the outer edge of the band in space 6 is almost touching the inner edge of the band in space 5. The white underside pattern is generally much bolder than in pseudosias and there is no dark submarginal spot in space 7 of the hindwing. In the females, forewing margins are much narrower than in coeligena and there is no dark submarginal band on the inner side of the black marginal lunules on the hindwing upperside.

Joicey & Talbot (1916) stated in their description of L. wandammenensis that their new taxon was "allied to pactolus, Feld., from Amboina". This is certainly based on the rather bold underside markings of reverdini which are also found in Nacaduba pactolus (Felder, 1880).

In the errata and additions to vol. 9 of Seitz (1927: 1114, pl. 147, first row) it is referred to a taxon resembling Jamides limes Druce, 1895 from Borneo: "here we may insert wandamenensis [Sic !] Fruhst. i. l. (147a) from New Guinea, which is unknown to me in nature." The figures in Seitz on pl. 147 are without doubt illustrating specimens of reverdini and the name wandammenensis was misspelled by Seitz. However, Bridges (1988) has copied this mistake and attributed the name "wandamenensis Seitz 1929" to a valid subspecies of Jamides limes. The name wandamenensis is an example of incorrect subsequent spelling and is therefore not an available name (IZCN Art. 33.3) Jamides reverdini is widely distributed but uncommon in West Papua and Papua (FakFak, Humboldt Bay, Kaimana, Yapen).

f) euchylas subgroup

Species of the *euchlyas* subgroup are characterized by bifid valvae and an underside pattern reminding of the genus *Danis*, Fabricius, 1807.

Jamides coritus (Guérin-Meneville, 1831)

Notes: Following the revision of Tite (1960), Jamides coritus comprises three subspecies, nominate coritus, pseudeuchlyas, Strand 1911 and the little-known ssp. setekwaensis Tite, 1960.

Phenotypic assignement of individual species to a subspecies may prove difficult as the individual characters vary and separation is mainly based on the marginal blue streaks in spaces 2 to 4 on the hindwing underside, the width of the wing margins and the extension of marginal black spots on the upperside of the hindwing. Differences in the male genitalia structure are slight, but appear to support the subdivision of Tite. Dissection of arbitrary selected males of coritus coritus and coritus "pseudeuchylas" (= phasis) confirmed minor differences in valvae as has been illustrated by Tite, but there is no distinctive hook at the tip of the harpe in phasis and the spine is much smaller and not as dichotomous as illustrated for coritus coritus.

Jamides coritus coritus (Guérin-Meneville, 1831) (Figs 187-194)

Polyommatus coritus Guérin-Meneville, 1831: pl. 18 fig. 3 [♂ Type, "Dory", not located] Cupido (Lampides) pseudeuchylas Strand, 1911: 471, [LT 3, "Sepik, Hauptbiwak", MfN Berlin] syn. nov.

Lampides euchylas hyphasis Fruhstorfer, 1915: 142 [Type "Sekroe, Mcluer Bay", not located]

Jamides coritus coritus. – Tite, 1960: 327, pl. 21, figs 9-10, text. figs 8, 23. [male genitalia]

Notes: Nominate J. coritus is mainly characterized by the relatively broad wing margins and the conspicuous row of submarginal black spots on the hindwing upperside. An additional feature on the wing underside are the parallel blue submarginal dashes in spaces 2 and 3. This also enables a reliable differentiation from the similar species minor (Rothschild, 1915) and *aruensis* (Pagenstecher, 1884) (Schröder et al. 2017: figs 3-5), but not necessarily from the related subspecies *coritus phasis* Fruhstorfer, 1915.

Strand (1911) had mentioned 2 \circlearrowleft in his description of *Cupido* (*Lampides*) *pseudeuchylas*, but the type material in MfN Berlin consists of a pair from "Sepik, Hauptbivak". His description and illustration is that of a male and so the male specimen is designated here as **lectotype** of *pseudeuchylas* (figs 193-194).

According to Tite, the main phenotypic difference to *coritus coritus* are the additional blue submarginal dashes in space 4 of the hindwing in *pseudeuchylas*, which was however, described as being a most variable character. It remains unresolved why Tite considered the blue dashes in "cellule 4 of the hindwing" as diagnostic character for *pseudeuchylas* as the type specimens do not show them. Both, the lectotye and a female paralectotype do not have any dashes in space 4, but they are apparently present in *phasis* Fruhstorfer, 1916. Therefore *Cupido* (*Lampides*) *pseudeuchylas* is regarded here as synonym of *Jamdies coritus coritus*. **syn. nov.**

Tite (1960) has sufficiently explained the synonymy of *hyphasis* Fruhstorfer with *coritus*, even though the male type specimen from Sekroe seems to be lost. He also stated that a "male paratype from Triton Bay and a female allotype from "SW. New Guinea" were both referrable to *J. aruensis poliamus*". While assignment of the Triton Bay (Kaimana Regency) male to "poliamus" is correct [now *minor poliaemus*], the female doubtlessly belongs to *coritus* s.str.

Jamides coritus phasis (Fruhstorfer, 1916) (Figs 195-200, 204)

Lampides euchylas phasis Fruhstorfer, 1916: 34, [Type: "Insel Roon, Insel Jobi", Dep.?] Jamides coritus pseudeuchylas. – Tite, 1960: 327, text-fig. 7.

Notes: For *coritus* specimens with well developed blue dashes in space 4, which were previously included in *pseudechylas* Strand, the name *Lampides euchylas phasis* Fruhstorfer, 1916 is available. Fruhstorfer has given a detailed description, in which the marginal dashes of the hindwing are mentioned: "Es sind stets sechs intramediane, metallisch glänzende, anteterminale Strichelchen der Hflg. vorhanden" (Fruhstorfer, 1916: 34).

This subspecies seems to be most common in the islands of Cenderawasih Bay and along the northern cost of West Papua and Papua. However, there are also records known from the interior of West Papua (e.g. Arfak Mountains), where it is possibly sympatric with *coritus* s.str., suggesting that both belong to the same taxon, and that the form with the blue dashes in space 4 is merely an end-member of a variable species. Molecular data may clear the relationship of *coritus phasis* and *coritus coritus*.

Jamides coritus setekwaensis Tite, 1960

Jamides coritus setekwaensis Tite, 1960: 329, fig. 6 [HT ♂, Upper Setekwa River, Snow Mtns., NHMUK]

Jamides coritus setakwanensis [sic!]. – Gotts & Pangemanan, 2010: 246-247.

Notes: This is a little-known subspecies of *J. coritus*, occurring at the lower reaches of Setekwa, Utakwa and Eilanden (Pulau) River in the foothills of the Snow Mountains (Sudirman Mountains), mostly collected during the "Wollaston Expedition". Compared to *J.*

coritus s.str., J. c. setekwaensis is characterized mainly by its larger size, narrower wing margins and reduced submarginal spots on the hindwing.

Revised checklist of Jamides species occurring in western New Guinea

The remaining species of Jamides, which are assigned to the euchylas group, are not the subject of this work, as a detailed description has already been given elsewhere (Schröder et al., 2017; Schröder & Saito, 2019). Apart from J. euchylas (Hübner, 1819) (which is restricted to Maluku), this affects the species J. aruensis (Pagenstecher, 1884) and J. minor (Rothschild, 1915).

Jamides bochus group

Jamides bochus cf. astraptes (C. Felder, 1860) Jamides nov. spec. aff. bochus (Stoll, 1782) Jamides purpurata Grose-Smith, 1894 stat. rev. Jamides sp. cf. seminiger richardi Rawlins et al. 2014 Jamides nov. spec. ? aff. seminiger richardi Rawlins et al. 2014 Jamides amarauge amandae Rawlins et al. 2014

Jamides celeno group

cyta subgroup

Jamides nitens (Joicey & Talbot, 1916) Jamides cyta amphissina (Grose-Smith, 1894)

celeno subgroup

Jamides celeno sundara (Fruhstorfer, 1916)

aratus subgroup

Jamides aratus aratus (Stoll, 1781) Jamides aetherialis caerulina (Mathew, 1887)

aleuas subgroup

Jamides philatus kapaurus ssp. nov. Jamides aleuas aleuas (C. & R. Felder, 1865) Jamides aleuas alcas (C. & R. Felder, 1865) Jamides aleuas pholes (Fruhstorfer, 1916) Jamides aleuas nitidus Tite, 1960 Jamides allectus allectus (Grose-Smith, 1894) Jamides allectus jobiensis Tite, 1960

elpis subgroup

Jamides alecto papuana ssp. nov. Jamides pseudosias pseudosias (Rothschild, 1915) Jamides pseudosias coeligena Joicey & Talbot, 1916 Jamides reverdini (Fruhstorfer, 1915)

euchylas subgroup

Jamides coritus coritus (Guérin-Meneville, 1831)

Jamides coritus phasis (Fruhstorfer, 1916) Jamides coritus setekwaensis Tite, 1960 Jamides minor umbriel (Fruhstorfer, 1915) Jamides minor poliaemus (Fruhstorfer, 1915) Jamides minor minor (Rothschild, 1915)

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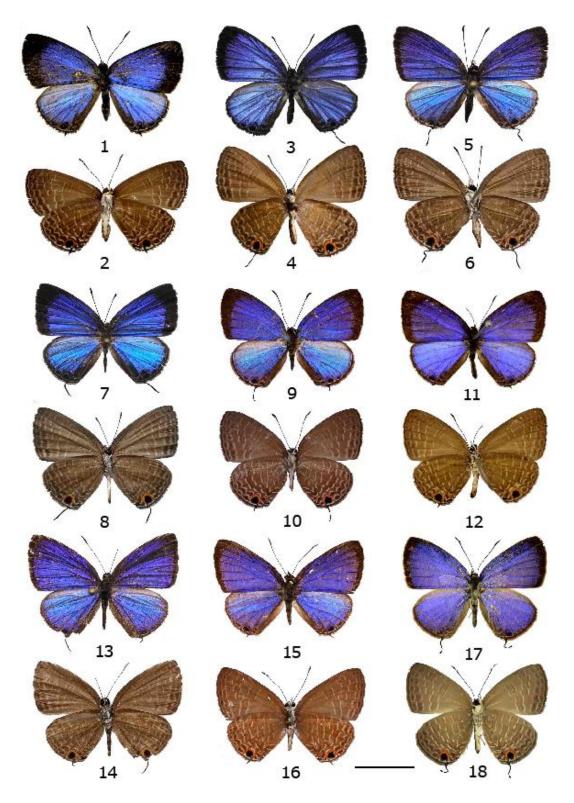
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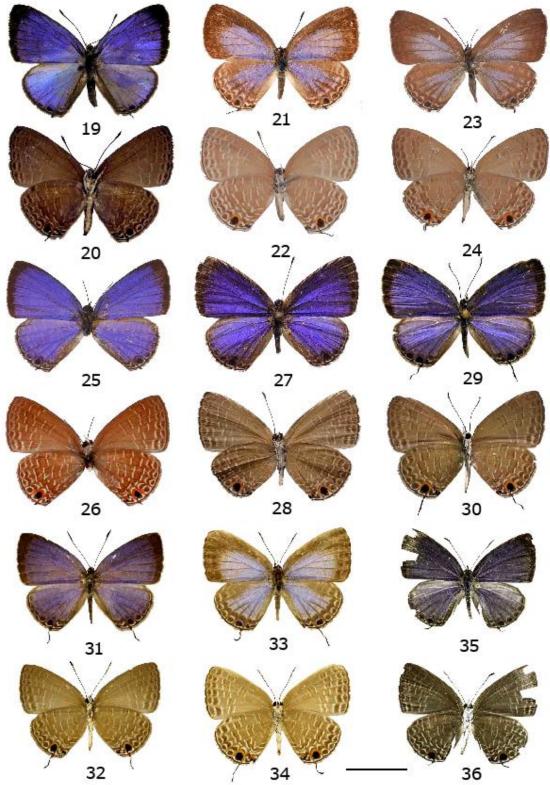
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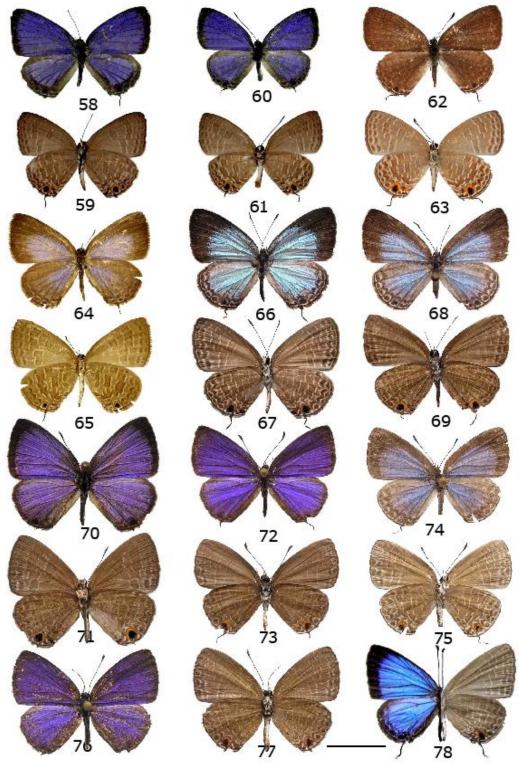
Figs 1-4. Jamides bochus cf. astraptes (C. Felder, 1860) (scale = 1 cm). 1. \circlearrowleft , Misool, Waigama, RMNH INS. 1300408; 2. idem, verso. 3. \circlearrowleft , Timika, Coll. Okubo; 4. idem, verso. Figs 5-8. Jamides bochus astraptes (C. Felder, 1860). 5. \circlearrowleft , Buru, Ramaja Mtns., CSSK; 6. idem, verso. 7. \circlearrowleft , Leksula, south Buru, CSSK; 8. idem, verso. 9. \circlearrowleft , Aru, NHMUK; 10. idem, verso. Figs 11-18. Jamides nov. spec. aff. bochus. 11. \circlearrowleft , "New Guinea", RMNH INS. 1300409; 12. idem, verso. 13. \circlearrowleft , Kaimana, CSSK; 14. idem, verso. 15. \circlearrowleft , "Neu-Guinea", NHMUK; 16. idem, verso. 17. \circlearrowleft , Southwest New Guinea, "R. Boeroe, Boeroegeb." [Negumy Expedition]. RMNH INS; 18. idem, verso.



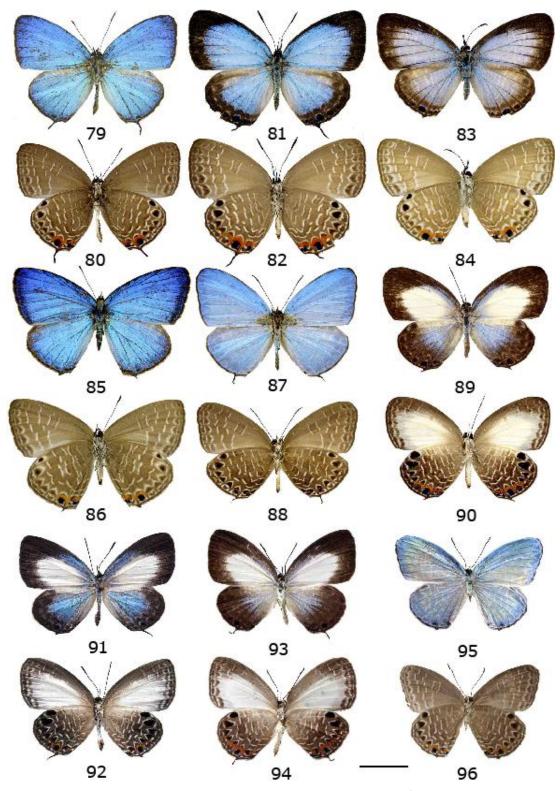
Figs 19-22. Jamides nov. spec. aff bochus (scale = 1 cm). 19. 3, "Kapaur" (FakFak), NHMUK; 20. idem, verso. 21. \bigcirc , "Kapaur" (FakFak), NHMUK; 22. idem, verso. Figs 23-34. Jamides purpurata Grose-Smith, 1894. 23. PT ♀, "Simbang, German New Guinea", NHMUK; 24. idem, verso. 25. HT ♂, "Humboldt Bay", NHMUK; **26.** idem, verso. **27.** \circlearrowleft , Supiori, CSSK; **28.** idem, verso. **29.** \circlearrowleft , Sarmi, Pulau Yamna, KSP12475; **30.** idem, verso. **31.** ♂, "Hollandia", RMNH.INS 1300411; **32.** idem, verso. **33.** ♀, "Hollandia", RMNH.INS 1300434; 34. idem, verso. Figs 35-36. Jamides wananga Wilson et al., 2021. **35.** HT ♂, Wanang, PNG, USNM ENT00711079; **36.** idem, verso.



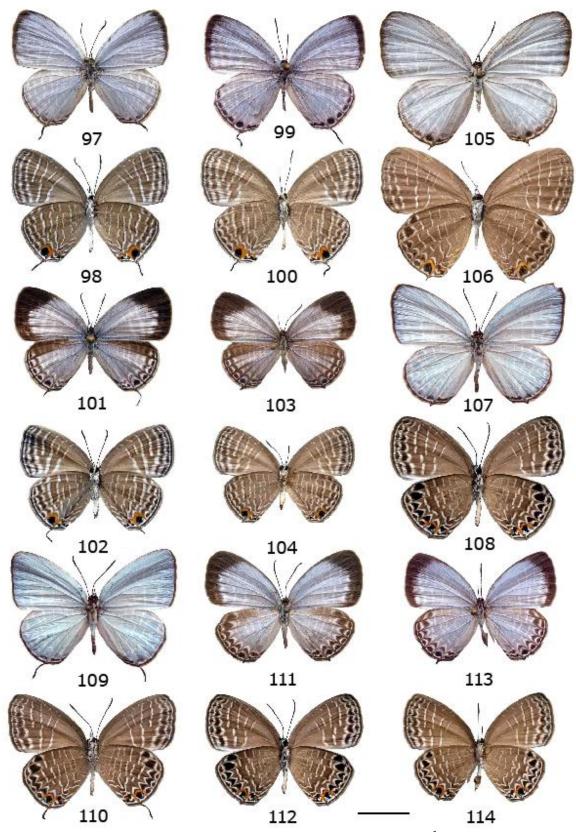
Figs 37-40. Jamides soemias (scale = 1 cm). 37. ♂, Gudalcanal, Solomon Islands, CSSK; 38. idem, verso. 39. ♀, Gudalcanal, Solomon Islands, CSSK; 40. idem, verso. Figs 41-42. Jamides seminiger richardi Rawlins et al. 2014. 41. HT ♂, "Little Kei", NHMUK; 42. idem verso. Figs 43-48. Jamides cf. seminiger richardi Rawlins et al. 2014. 43. ♂, Dorey, NHMUK; 44. idem, verso. 45. ♂, Manokwari, RMNH INS. 1300419, 46. idem verso. 47. ♂, Waigeo, CSSK (gen. praep. # 664, see fig. 55); 48. idem verso. Figs 49-57. Jamides nov. spec. ? aff. seminiger richardi Rawlins et al. 2014. 49. ♂, Aru Is., NHMUK; 50. idem verso. 51. ♂, "Ke Id." (Kei Island), NHMUK; 52. idem verso. 53. ♂, "Kapaur", NHMUK; 54. idem verso. 55. ♂, Waigeo, CSSK (gen. prep. # 664). 56. ♂, "R. Boereoe, Boeroe Geb." (southern Birdshead Peninsula), RMNH INS. 1300410; 57. idem verso.



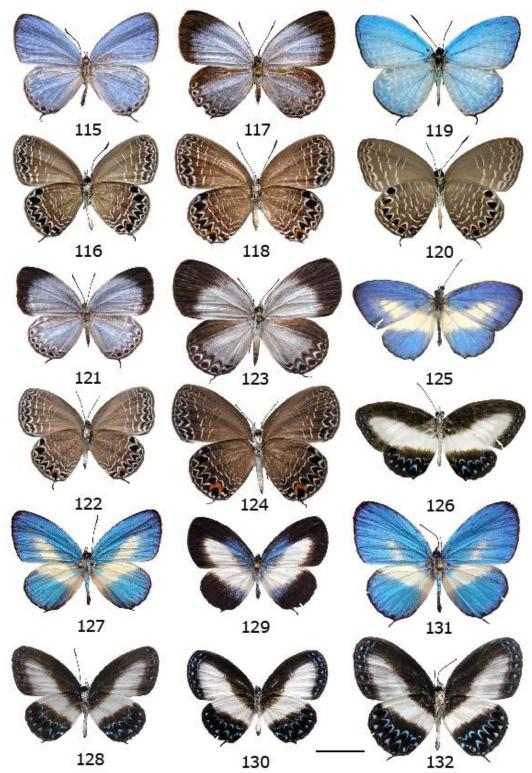
Figs 58-63. Jamides nov. spec. ? aff. seminiger richardi Rawlins et al. 2014 (scale = 1 cm). 58. \circlearrowleft , "Roon", NHMUK; **59.** idem, verso. **60.** \circlearrowleft , "Kapaur", NHMUK ["paratype" of "brunnea"]; **61.** idem, verso. 62. Dorey", NHMUK ["holotype" of "brunnea"]; 63. idem, verso. Figs 64-65. Jamides sp. cf. seminiger richardi Rawlins et al. 2014. 64. ♀, "Baliem Camp, 1938", RMNH INS. 1300436; 65. idem, verso. Figs 66-69. Jamides amarauge Druce, 1891. 66. Sorong, CSSK. 67. idem, verso. 68. Yapen, Ambaidiru, CSSK; **69.** idem, verso. **Figs 70-71.** *Jamides* sp. indet. **70.** \circlearrowleft , Upper May River, PNG, CDFM; **71.** idem, verso. **Figs 72-77.** *Jamides timon* Grose-Smith, 1895. **72.** \circlearrowleft , Lukauko, Bougainville, CDFM; **73.** idem, verso. **74.** ♀, Lavongai, Bismarck Archipelago, CDFM; **75.** idem. verso. **76.** ♂, Lavongai, Bismarck Archipelago, CDFM; **77.** idem, verso. **Fig. 78.** *Jamides* sp. indet., ♀, Merauke, KSP 51486.



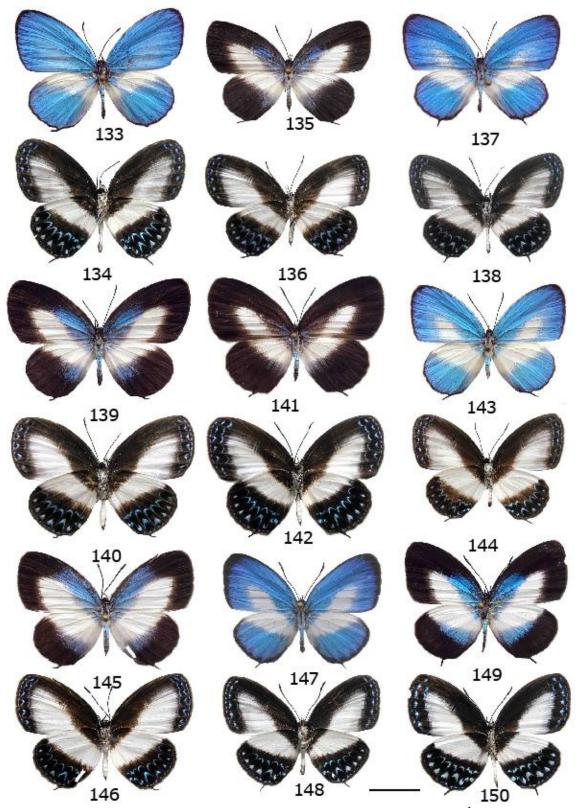
Figs 79-86. Jamides nitens (Joicey & Talbot, 1916) (scale = 1 cm). 79. \circlearrowleft , "Sigi Camp, 1939", RMNH INS. 1300429; 80. idem, verso. 81. \circlearrowleft , "Sigi Camp, 1939"; 82. idem, verso. 83. \circlearrowleft , "Telefomin", RMNH INS. 1300418; 84. idem, verso. 85. \circlearrowleft , "Telefomin", RMNH INS. 1300431; 86. idem, verso. Figs 87-92. Jamides cyta amphissina (Grose-Smith, 1894. 87. \circlearrowleft , "Sigi Camp, 1939", RMNH INS. 1300446; 88. idem, verso. 89. \circlearrowleft , "Biak", RMNH INS. 1300448; 90. idem, verso. 91. \hookrightarrow , Yahukimo, CSSK; 92. idem, verso. Figs 93-96. Jamides cyta aruanus (Röber, 1886). 93. \hookrightarrow , LT "Aru Jnseln", SMT; 94. idem, verso. 95. \circlearrowleft , Para-LT "Aru Jnseln", SMT; 96. idem, verso.



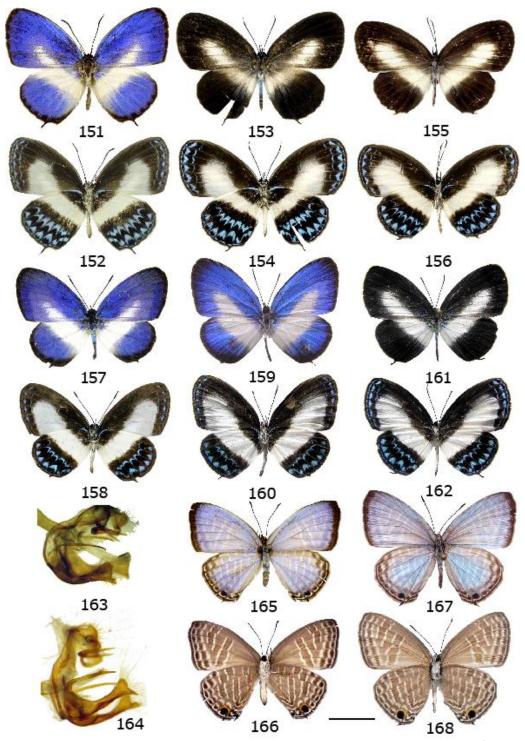
Figs 97-104. Jamides celeno sundara Fruhstorfer, 1916 (scale = 1 cm). 97. \circlearrowleft , Sorong, CSSK; 98. idem, verso. **99.** *♂*, Yapen, CSSK; **100.** idem, verso. **101.** ♀, FakFak, CSSK; **102.** idem, verso. **103.** ♀, Sorong, CSSK; **104.** idem, verso. **Figs 105-106.** *Jamides aratus aratus* (Stoll, 1781). **105.** *3*, Sorong, CSSK; **106.** idem, verso. Figs 107-114. Jamides aetherialis (Butler, 1884). 107. \circlearrowleft , FakFak, CSSK; 108. idem, verso. **109.** \triangleleft , Sorong, CSSK, **110.** idem, verso. **111.** \triangleleft , Sorong, CSSK; **112.** idem, verso. **113.** \triangleleft , FakFak, CSSK; 114. idem, verso.



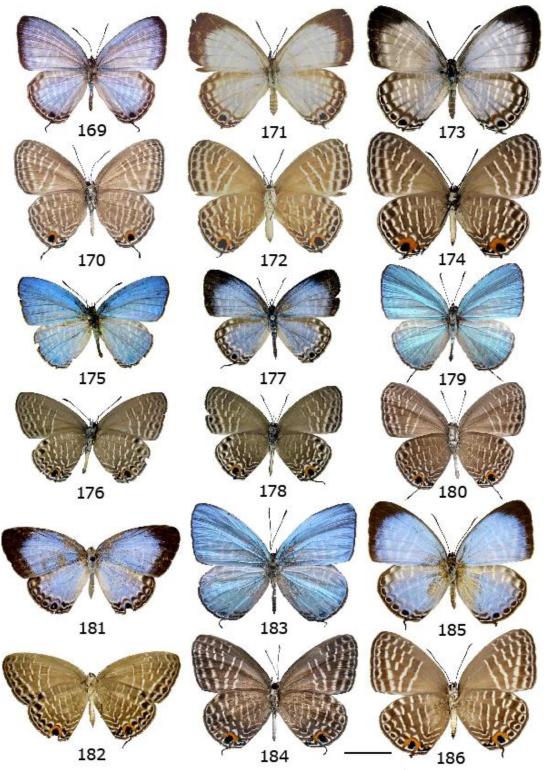
Figs 115-118. Jamides philatus kapaurus ssp. nov. (scale = 1 cm) 115. HT ♂, FakFak, KSP; 116. idem, verso. 117. PT ♀, FakFak, KSP; 118. idem, verso. Figs 119-120. "L. philatus aegithus Fruhstorfer, 1916". 119. HT ♂, "Waigiu", NHMUK; 120. idem, verso. Figs 121-122. Jamides philatus stresemanni (Rothschild, 1915). 121. ♀, Buru, CSSK; 122. idem, verso. Figs 123-124. Jamides philatus emetallicus (Druce, 1895). 123. ♀, Bacan, CSSK; 124. idem, verso. Figs 125-130. Jamides aleuas aleuas (C. & R. Felder, 1865). 125. HT ♂, "Mysol", NHMUK. 126. idem, verso. 127. ♂, Misool, CSSK; 128. idem, verso. 129. ♀, Misool, CSSK, 130. idem, verso. Figs 131-132. Jamides aleuas pholes Fruhstorfer, 1916. 131. ♂, Sorong, CSSK, 132. idem verso.



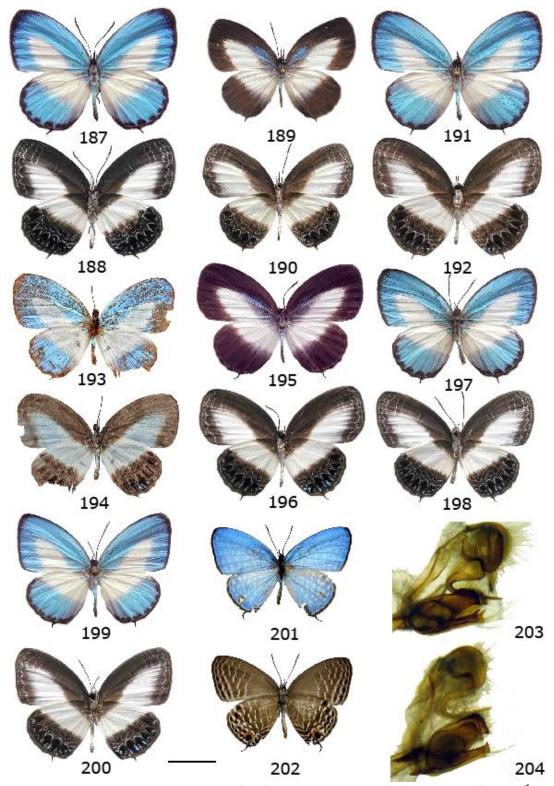
Figs 133-142. Jamides aleuas pholes Fruhstorfer, 1916. (scale = 1 cm) 133. ♂, Timika, CSSK; 134. idem, verso. **135.** ♀, Timika, CSSK; **136.** idem, verso. **137.** ♂, Wasior, CSSK; **138.** idem, verso. **139.** ♀, Timika, CSSK; **140.** idem, verso. **141.** ♀, Sorong, CSSK; **142.** idem, verso. **Figs 143-146.** *Jamides aleuas* alcas (C. & R. Felder, 1865). **143.** ♂, Waigeo, CSSK. **144.** Idem, verso. **145.** ♀, Waigeo, CSSK; **146.** idem, verso. Figs 147-150. Jamides aleuas nitidus Tite, 1960. 147. \circlearrowleft , Bulolo, CSSK; 148. idem, verso. **149.** ♀, Bulolo, CSSK; **150.** idem, verso.



Figs 151-156, 164. Jamides allectus allectus (Grose-Smith, 1894). (scale = 1 cm) 151. ♂, "Hollandia", RMNH.INS 1300414; 152. idem, verso. 153. ♀, "Hollandia", RMNH.INS 1300420; 154. idem, verso. 155. ♀, "Prauwenbivak", RMNH.INS 1300421; 156. idem, verso. Figs 157-162. Jamides allectus jobiensis Tite, 1960. 157. ♂ HT, J. aleuas jobienis Tite, 1960, "Ansus, Jobi", NHMUK 014173967; 158. idem, verso. 159. ♂, Ambaidiru, KSP 47826; 160. idem, verso. 161. ♀, Ambaidiru, KSP 47827; 162. idem, verso. Fig. 163. ♂, Jamides allectus pholes Fruhstorfer, 1916, genitalia, Sorong, CSSK 657. Fig. 164. ♂, Jamides allectus allectus, genitalia, "Pionierbivak", RMNH. INS. 1300435. Figs 165-166. Jamides alecto papuana ssp. nov. 165. ♂, "Khadamah", RMNH.INS 1300449; 166. idem, verso. Figs 167-168. Jamides alecto batjana (Toxopeus, 1930). 167. ♂, Bacan, CSSK (note the greenish tinge on hw up); 168. idem, verso.



Figs 169-173. Jamides alecto papuana ssp. nov. (scale = 1 cm) 169. ♂, Waigeo, CSSK; 170. idem, verso. **171.** ♀, Sorong, RMNH.INS.; **172.** idem, verso. **Figs 173-174.** *Jamides alecto batjana* (Toxopeus, 1930). 173. ♀, "Batchian", NHMUK; 174. idem, verso. Figs 175-182. Jamides pseudosias coeligena (Joicey & Talbot, 1916). 175. SHT, Lampides coeligena Joicey & Talbot, 1916, "Humboldt Bay", NMHUK 014173969; **176.** idem, verso. **177.** ♀ PT, Biak, NHMUK 014173968; **178.** idem, verso. **179.** ♂, Sorong, CSSK; **180.** idem, verso. **181.** ♀, "Nederlands Nieuw Guinea", RMNH.INS 1300424; **182.** idem, verso. Figs 183-186. Jamides reverdini (Fruhstorfer, 1915). 183. 🖒, Yahukimo, CSSK; 184. idem, verso. **185.** ♀, "Araucaria Camp" (Jayawijaya Mountains), RMNH.INS 1300477; **186.** idem, verso.



Figs 187-194, 203. Jamides coritus coritus (Guérin-Meneville, 1831). (scale = 1 cm) 187. ♂, Wasior, CSSK; 188. idem, verso. 189. ♀, FakFak, CSSK; 190. idem, verso. 191. ♂, FakFak, CSSK; 192. idem, verso. 193. LT ♂ "Cupido (Lampides) pseudeuchylas Strand, 1911", "Sepik, Hauptbiwak", MfN. 194. idem, verso. Figs 195-200, 204. Jamides coritus phasis Fruhstorfer, 1916. 195. ♀, Wapoga, CSSK; 196. idem, verso. 197. ♂, Supiori, CSSK; 198. idem. verso. 199. ♂, Nabire, CSSK; 200. idem, verso. Figs 201-202. Jamides pseudosias pseudosias (Rothschild, 1915). 201. ♂ HT, "Misol", NHMUK; 202. idem, verso. 203. Jamides coritus coritus (Guérin-Meneville, 1831). ♂, genitalia, FakFak # CSSK 666. 204. Jamides coritus phasis (Fruhstorfer, 1916). ♂, genitalia, Nabire # CSSK 665.