

NOTA CIENTÍFICA

Invalidation of six neotypes among Neotropical butterflies (Lepidoptera: Hesperidae, Pieridae, Lycaenidae and Nymphalidae).

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A neotype is the name-bearing type of a nominal species-group taxon which has been designated subsequently when no name-bearing type specimen (i.e. holotype, lectotype, syntype or prior neotype) is believed to be extant, and an author considers that a name-bearing type is necessary to define the nominal taxon objectively.

As strongly emphasised by the International Code of Zoological Nomenclature (ICZN 1999), neotypes should be designated only when there is an exceptional need to clarify the taxonomic status or the type locality of a nominal taxon, and when that need is stated expressly and its designation is published with certain strict particulars. Among the latter, an author should state his/her reasons for "believing the name-bearing type specimen(s)... to be lost or destroyed, and the steps that had been taken to trace it or them" (Code, Art. 75.3.4).

Unfortunately, some authors do not take into account these eminently reasonable considerations when designating neotypes and, either through ignorance or indolence, neglect to make substantial efforts to trace the existence of name-bearing types. As a result of this regrettable practice, it is not unusual that some "lost" name-bearing type specimens are occasionally "rediscovered" (e.g. LAMAS 2001).

I report herein six such cases, involving Neotropical butterflies.

Abbreviations used are the following: BMNH – Natural History Museum, London, UK; NHRM – Naturhistoriska Riksmuseet, Stockholm, Sweden; MNHU – Museum für Naturkunde, Humboldt Universität, Berlin, Germany; MPM – Milwaukee Public Museum, Milwaukee,

Wisconsin, USA; RSM – Royal Museum, Edinburgh, UK; SMF – Forschungsinstitut Senckenberg, Frankfurt-am-Main, Germany; USNM – National Museum of Natural History, Washington DC, USA.

1. *Pythonides loxus* Westwood, 1852 (Hesperidae: Pyrginae) (Figs. 1-2)

This name was introduced by WESTWOOD (1852a: pl. 80, fig. 4) for an illustration of a male specimen, without any indication of locality. Later in the same year, WESTWOOD (1852b: 516) transferred the species to his new genus *Phareas*, and implied that *P. loxus* had been based on a specimen of unknown provenance, deposited in the collection of W. C. Hewitson. Westwood's plate 80 was published on 26 April 1852, whereas page 516 only appeared on 12 August 1852 (HEMMING 1941). EVANS (1953: 128) stated he had been unable to find any specimen in Hewitson's collection (which had since been bequeathed to the BMNH), matching Westwood's illustration, and proceeded to designate a male specimen from Venezuela, in the BMNH, as the neotype of *P. loxus*. The neotype established by Evans (fig. 2), and which he stated agreed "...exactly with the figure [of Westwood], and perhaps [was] the real type..." cannot be the true type of *P. loxus*, since it was collected by Paul Hahnel in Venezuela, Carabobo, San Esteban in 1877, 25 years after Westwood's description, and it belonged to Oberthür's, not Hewitson's collection. The neotype bears a label indicating "Neo-type selected to agree with Westwood's figure, since no specimen in Mus. Hew fits the figure".

According to KIRBY (1879), Hewitson's collection contained five specimens of *Leucochitona "ioxus"* (a misspelling of *loxus*; cf. MIELKE 2004), from Mexico and Nicaragua. The male specimen in the BMNH, ex coll. Hewitson, bearing the label "ioxus. 4.", and without locality data, is extremely similar to Westwood's illustration (the original of which was drawn by Hewitson himself), even to the disposition of the forewings, which are somewhat displaced backwards (see fig. 1). Although this individual has the brilliant blue subapical spots on the forewing above slightly shorter than in Westwood's figure, I'm convinced this is the true **holotype** by monotypy of *Pythonides loxus*. Apparently, Evans never examined this particular specimen, which was found among the "duplicate" Hesperidae, and has now been transferred by me to the main Hesperidae collection in the BMNH, and placed in the same drawer containing Evans' invalid neotype. The holotype bears a single label with the following data: "Hewitson Coll. / 79-69 /

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Leucochitonea / ioxus [sic!]. 4." An appropriate label indicating its status as holotype will be added to it. Currently regarded as a species of *Paches* Godman & Salvin (MIELKE 2004).

2. *Tatochila microdice* var. *sterodice* Staudinger, 1899 (Pieridae: Pierinae) (Figs. 3-4)

Described by STAUDINGER (1899: 18), based on a pair (male and female) of worn specimens collected by A. Ohlin in February 1896 at Río Grande, Tierra del Fuego, Argentina, and belonging to the "Zoological Museum" in Stockholm, Sweden, and a very rubbed female, collected by O. Nordenskjöld in late 1895 or early 1896 at Punta Arenas, Magallanes, Chile. ACKERY (1975: 5), relying on erroneous information received by HERRERA & FIELD (1959: 490) from E. M. Hering, designated as neotype for *sterodice* a male specimen from Punta Arenas, deposited in the BMNH (fig. 4), believing the syntypic series had been destroyed during World War II.

In fact, the syntypic series of *sterodice* is deposited in the NHRM. In order to fix the identity of the taxon, I hereby designate as **lectotype** of *Tatochila microdice* var. *sterodice* the single male syntype in the NHRM bearing the following labels: "Typus"; "Type"; "Rio Grand / [illegible] / 1022-2.96"; "Ohlin"; and "Microdice / var. / (sterodice)" (fig. 3). The neotype designated by ACKERY (1975) is thus invalidated. Currently regarded as a subspecies of *Tatochila mercedis* (Eschscholtz) (LAMAS 2004).

3. *Thecla panamensis* Draudt, 1920 (Lycaenidae: Theclinae) (Figs. 5-6)

Described and illustrated by DRAUDT (1920: 801, pl. 158i, figs. [1]-[2]), based on an unstated number of male and female specimens from Panama. Misled by erroneous information published by BAILEY (1947), who asserted that Draudt's types were destroyed during World War II, NICOLAY (1971: 17, pl. 2, figs. 5-6) designated a male neotype, from Panama, Chiriquí, Potrerillos, deposited in the USNM.

I found two male syntypes (both without abdomen) in the SMF. In order to fix the identity of the name, one of them is designated herein as the **lectotype** (fig. 5). It bears the following labels: "SYN- / TYPE"; "Chir[iquí]"; "Coll. / A. Seitz"; "panamensis U[nterseite]"; and "LECTOTYPE ♂ / *Thecla panamensis* / Draudt, 1920 / By G. Lamas, 2003". This is the individual which served as model for Draudt's fig. [1]. The second male (fig. 6) is a paralectotype. Currently regarded as a species of *Symbiopsis* Nicolay (ROBBINS 2004).

4. *Thecla pupilla* Draudt, 1920 (Lycaenidae: Theclinae) (Fig. 7)

Described and illustrated by DRAUDT (1920: 801, pl. 158i, figs. [4]-[5]), based on an unstated number of specimens, of undetermined sex, from "Guyana bis Columbien und Bolivien". Following the erroneous information provided by BAILEY (1947) (see above), NICOLAY (1971: 11, pl. 1, figs. 5-6) designated a male neotype (not female as wrongly indicated in the text) from Brazil, Paraíba, João Pessoa, deposited in the USNM.

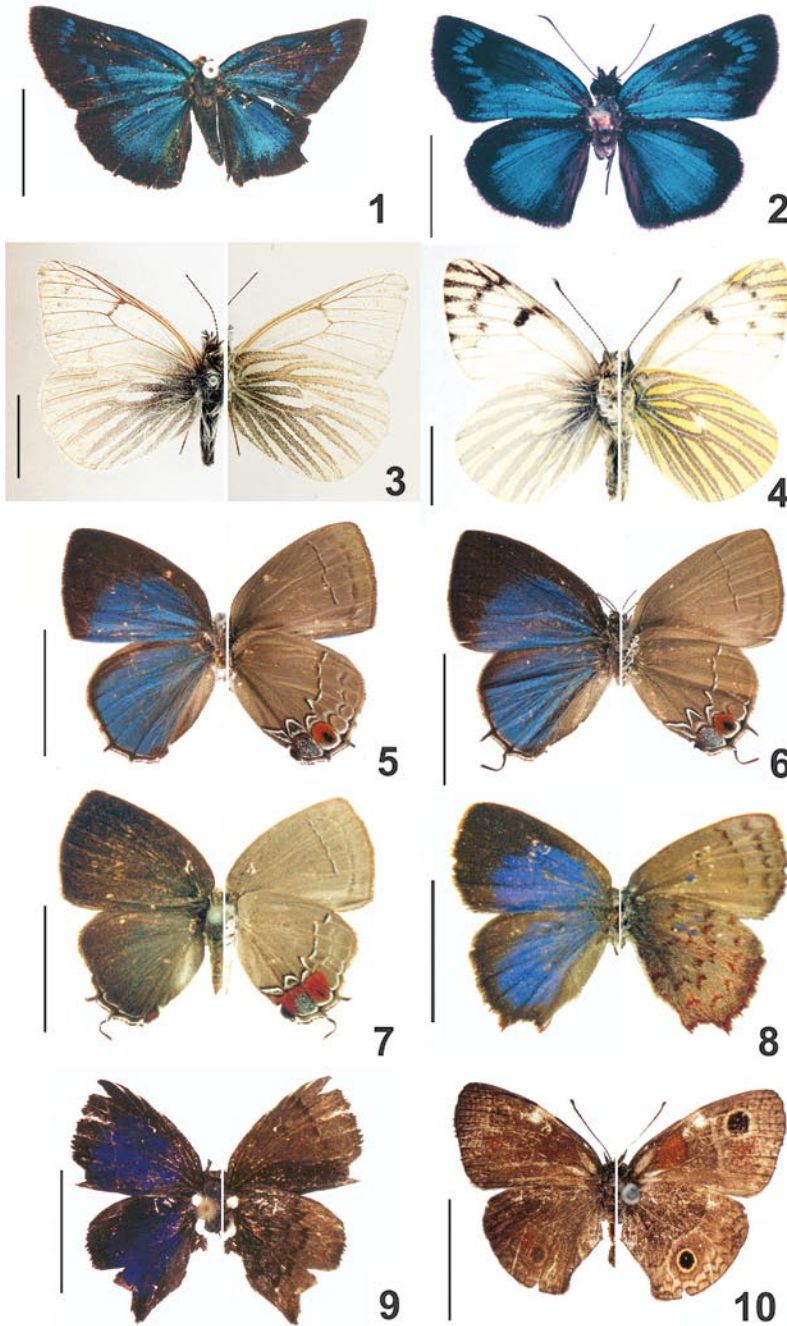
I found one female syntype in the SMF. In order to fix the identity of the name, I designate it as the **lectotype** (fig. 7). It bears the following labels: "SYN- / TYPE"; "801"; "Coll. / A. Seitz"; "pupilla"; and a green oblong label without data. It matches the specimen illustrated in Draudt's fig. [4]. Currently regarded as a species of *Symbiopsis* Nicolay (ROBBINS 2004).

5. *Thecla bilix* Draudt, 1919 (Lycaenidae: Theclinae) (Figs. 8-9)

Described and illustrated by DRAUDT (1919: 759, pl. 153g, fig. [7]), based on a unique "male" (holotype by monotypy) from "Kolumbien, Rio-Aguacatal", which belonged to A. H. Fassel's collection. BÁLINT *et al.* (2006: 418, figs. 3-4), without providing any concrete evidence, were nonetheless "deeply convinced that the original, name bearing holotype, is presumably lost [emphasis mine]", and designated a female neotype from Colombia, Valle [del Cauca], R[ío] Aguacatal, S[an] Antonio, 2200m, which was to be deposited in the Instituto de Ciencias Naturales, Universidad Nacional, Bogotá, Colombia.

I found the **holotype** in the SMF. It is a female specimen (not male as erroneously stated by DRAUDT), in somewhat poor condition, lacking the head, abdomen, and legs. However, the wings are in good condition, and their color pattern and shape correspond very well with the description and illustration provided by Draudt. There is no doubt about the validity of this specimen and its type status. It bears the following labels: "Typus"; "Th mishma / Hewitson"; "bilix"; "Rio Aguacatal / Colomb. W. Codr. [sic!] / 2000 m / Coll. Fassel". Currently regarded as a species of *Rhamma* K. Johnson (ROBBINS 2004).

Among numerous other inaccuracies, BÁLINT *et al.* (2006: 418) claimed that the male of *Rhamma bilix* was unknown, and that they were providing "the first diagnosis of the unknown male phenotype", when in fact ROBBINS (2004: 121) had unambiguously synonymized the name *Radissima esolana* K. Johnson, 1992 under *Rhamma bilix*. *Radissima esolana* was described (JOHNSON 1992: 176, figs. 95, 189) from the unique holotype male (cited as "female" in the caption for fig. 189, and again on p. 240, where a legend is provided



FIGURES 1-8.- 1. *Pythonides loxus* Westwood, male holotype (BMNH), upperside; 2. Same, invalid male neotype (BMNH), upperside; 3. *Tatochila microdice* var. *sterodice* Staudinger, male lectotype (NHRM), left upperside, right underside; 4. Same, invalid male neotype (BMNH), left upperside, right underside; 5. *Thecla panamensis* Draudt, male lectotype (SMF), left upperside, right underside; 6. Same, male paralectotype (SMF), left upperside, right underside; 7. *Thecla pupilla* Draudt, female lectotype (SMF), left upperside, right underside; 8. *Thecla bilix* Draudt, male holotype (SMF), left upperside, right underside; 9. *Radissima esolana* K. Johnson, male holotype (MPM), left upperside, right underside; 10. *Satyrus hysius* Godart, female holotype (RSM), left upperside, right underside. Scale bar = 1 cm.

for fig. 189, further introducing the invalid name "Radissima azura" for *R. esolana*) from "Brazil, Morro d'Martha (actually, Dona Martha, as clearly stated in one of the labels attached to the holotype), Rio de Janeiro State". This locality is undoubtedly false, as no *Rhamma* species occur in southeastern Brazil, and this fact was duly noted by ROBBINS (*op. cit.*) when citing the type locality within quotes. Furthermore, BÁLINT *et al.* (2006: 424) do not accept the synonymy of *esolana* and *bilix*; however, obviously they never examined the holotype of *esolana*, as all four differences they claim exist between *esolana* and the phenotype they described as characterizing the male of *bilix* are spurious. The **holotype** of *esolana* is in the MPM and is illustrated herein in color (fig. 9).

6. *Satyrus hysius* Godart, [1824] (Nymphalidae: Satyrinae) (Fig. 10)

Described by GODART ([1824]: 525), based on an unspecified number of specimens, of unstated sex, from an unknown locality, but presumed by Godart to be "l'Amérique septentrionale". JOHNSON & HEDGES (1998: 49, fig. 2A) designated a male neotype of *hysius* from Haiti, Sud, 10.7 km WNW Les Platons (citadel), Caye Paul, 1120m, deposited in the MPM. They were apparently unaware that GRIMSHAW (1897: 3) had already determined that a female specimen in the RSM, Edinburgh, was "the type" of *S. hysius*.

This individual (fig. 10) bears the following labels: "TYPE"; "hysius"; "Satyrus / hysius / 68"; and "Calisto hysius / Godart / TYPE", and should be regarded as the **holotype** by monotypy, there being no evidence in Godart's original description that implies or requires that more than a single specimen was known to him. GRIMSHAW (1897) offers convincing evidence to support his claim that this is the true holotype of *S. hysius*, which furthermore agrees completely with Godart's detailed original description. Thus, the neotype designated by JOHNSON & HEDGES (1998) is invalid, though its type locality might be adopted for *S. hysius*. Currently regarded as a species of *Calisto* Hübner (LAMAS *et al.* 2004).

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