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Abstract

Reexamination of the dates of publication of the names *Papilio nemausiaca* Esper and *Papilio lachesis* Hübner, has shown that the former was published three years after the latter. Therefore, *Melanargia lachesis* (Hübner, 1790) is reinstated as the valid name for the European satyrine species previously known as *Melanargia nemausiaca* (Esper, 1789).

KEY WORDS: Lepidoptera, Nymphalidae, Satyrinae, Papilio lachesis, Papilio nemausiaca, priority.

Papilio lachesis Hübner, 1790 tiene prioridad sobre Papilio nemausiaca Esper, [1793] (Lepidoptera: Nymphalidae, Satyrinae)

Resumen

Una reconsideración de las fechas de publicación de los nombres *Papilio nemausiaca* Esper y *Papilio lachesis* Hübner, ha demostrado que el primero fue publicado tres años después del segundo. Por ello, *Melanargia lachesis* (Hübner, 1790) es restablecido como el nombre válido para la especie europea de satirino llamada previamente *Melanargia nemausiaca* (Esper, 1789).

PALBRAS CLAVE: Lepidoptera, Nymphalidae, Satyrinae, Papilio lachesis, Papilio nemausiaca, prioridad.

Introduction

In a previous article (LAMAS, 2010: 200), I concluded that the scientific name *Papilio nemausiaca* Esper (currently regarded as a species-group name in the satyrine genus *Melanargia* Meigen, 1828) was one year older than its subjective synonym *Papilio lachesis* Hübner, 1790, and thus reinstated the former as the senior synonym of *lachesis*, contrary to the opinion of BOZANO (2002: 10) and earlier authors (e.g., GAEDE, 1931: 191), who regarded *nemausiaca* as junior to *lachesis*. My conclusion was based on the dates of publication provided by HEPPNER (1981) for Eugen Johann Christoph Esper's work *Die Schmetterlinge in Abbildungen nach der Natur mit Beschreibungen*, issued in the late 18th and early 19th centuries, during a period spanning over three decades. New information suggests that the date of publication in HEPPNER (1981) was incorrect.

History

The name *Papilio nemausiaca* appeared for the first time in print on page 15 of the text, and on the legend for figures 1 and 2 of plate XCVI, which were included in "Hefte" (booklets) 3 and 4 of "Abschnitt" (section) 1, in "Theil" (part) 1, of the "Supplementband" (supplementary tome) to the "Tagschmetterlinge" (Butterflies) volumes I and II of Esper's work. According to HEPPNER (1981:

252), Hefte 3 and 4 included pages 9-60 and plates XCV-CI of the Supplementband, and were published in 1789, presumably based on the date recorded (whether printed or handwritten was not specified) on the original cover(s) ("wrapper(s)") of Hefte 3-4. This 1789 date contradicted the information given by SHERBORN & WOODWARD (1901: 140), who stated that Hefte 3 and 4 had been published in 1793.

Papilio nemausiaca

When Esper introduced the species-group name *nemausiaca*, he was following the Linnean system, and placed it under the genus *Papilio* Linnaeus, 1758, as part of "Phalanx" or "Horde" Nymphales, which included the "Familie" (section) "Nymphales Gemmati", and also under what could be erroneously interpreted as a genus-group name, "Arge". Thus, the full original citation by Esper can be transcribed (following the original typography) as "P[apilio]. N[ymphalis]. G[emmatus]. Arge nemaufiaca", which in modern terms might be mistakenly written as *Papilio* (*Arge*) *nemausiaca*. In fact, Esper did not introduce a new genus-group name, but only wanted to emphasize the close relationship of his new species *nemausiaca* to *Papilio arge* Sulzer, 1776 (currently *Melanargia arge*) and *Papilio galathea* Linnaeus, 1758 (currently *Melanargia galathea*, the type species of the genus *Melanargia*). Therefore, it might be reasonably argued that Esper, by using the name "Arge", was suggesting an embryonic intermediate rank, roughly equivalent to what would eventually be known as a "superspecies" (MAYR, 1942), to group together different species closely related to *Papilio arge*.

Esper described *nemausiaca* based on male and female individuals obtained at Nîmes, Languedoc (Gard), France, and thus gave it the vernacular name "Der Nimesische Papilio Arge". Immediately after *nemausiaca*, Esper described another closely related species from Languedoc, which he named "[Papilio Nymphalis Gemmatus] Arge occitanica" ("Der Languedokische Pap. Arge" in the vernacular), and listed the other four closely related species that he knew at the time: *galathea*; *leucomelas* Esper, 1783 (currently regarded as a junior subjective synonym of *galathea*); *siciliae* (a superfluous "replacement name" for *arge* Sulzer, see below); and *russiae* Esper, 1783.

Actually, besides *nemausiaca* and *occitanica*, names proposed formally for what Esper called "Gattungen" (equivalent to species in modern terminology), he introduced four further names in the text describing *nemausiaca* and *occitanica*: P[apilio]. Clotho, P[apilio]. Lachefis, and P[apilio]. Arge creftenfis (all three on p. 16), and the aforementioned [Papilio Nymphalis Gemmatus] Arge Siciliae (on pp. 18-19). At the start of his description of *nemausiaca*, Esper wrote that he had found, among butterflies closely related to *galathea* and *arge*, two essentially different species, which he was naming after "their places of residence" ("mit dem Beynamen ihrer Wohnplätze"), though he also complained about the unnecessary multiplication of names made by some authors. For instance, he indicated that "Herr Hübner in Augsburg" had renamed the "Russian Arge" (i.e., *Papilio russiae* Esper) as *Papilio clotho*, and another species as *Papilio lachesis*.

The name *Papilio clotho* was first published by Hübner, as a new replacement name for the butterfly Esper had illustrated as Papil[io]. Arge Russiae on his pl. LXXXIV, figs. 1-2, and described as P[apilio]. N[ymphalis]. Gem[matus]. Arge Russiae on page 162 of Heft 8 in volume II of the "Tagschmetterlinge" in his *Die Schmetterlinge in Abbildungen...*, issued in 1783 (HEPPNER, 1981: 252). This new replacement name appeared on page 9 of Hübner's *Der Schmetterlinge Lepidoptera Linnei, Europäisches Heer*, issued anonymously at some unknown date between 1790 and 1793 (HÜBNER, [1790-1793]; HEMMING, 1937: 61); for a facsimile of Hübner's *Der Schmetterlinge Lepidoptera Linnei...* see RILEY & HIGGINS (1969). Hübner's *Der Schmetterlinge Lepidoptera Linnei...* was eventually rejected for nomenclatural purposes by the International Commission on Zoological Nomenclature (ICZN, 1971), ruling that the work was to be treated as not having been published. Thus, the name *Papilio clotho* Hübner was made invalid (although, by an oversight, it was not placed on the *Official Index of Rejected and Invalid Names in Zoology*). Its subsequent citation by Esper on page 16 of the Supplementband, as indicated above, does not make the name available. Later, HÜBNER ([1799-1800]: pl. 42, figs. 190-191; 1805-[1806]: 31) published again the name *Papilio*

clotho, providing illustrations of the butterfly, and making the name available, although it is currently regarded as a junior synonym of *Melanargia russiae* (Esper, 1783) (BOZANO, 2002: 19).

Papilio lachesis

On the other hand, the name *Papilio lachesis* was published by Hübner for the first time on the third part of the second volume of his *Beiträge zur Geschichte der Schmetterlinge*, issued after the 24th November 1790 (HÜBNER, 1790: 70, pl. III, figs. P1-P2; HEMMING, 1937: 45).

By [Papilio] Arge Siciliae Esper meant the "sicilianischen P. Arge", that is, what Sulzer had already described in 1776 as *Papilio arge*, from the island of Sicily, Italy (SULZER, 1776: 144), and is thus an objective synonym of the latter, whereas the name *crestensis*, after the town of Crest in the French province of Dauphiné, was unequivocally introduced by Esper in the synonymy of his *Papilio occitanica*, as he stated that he opted for the latter name because the species had been found not only at Crest but elsewhere too, in Languedoc (Gard), and the island of Sardinia (the latter locality is undoubtedly spurious). Both *siciliae* and *crestensis* are unavailable names, as they have never been raised from synonymy.

When was Papilio nemausiaca published?

Clearly, Esper's citation of the names *Papilio lachesis* Hübner, 1790, and *Papilio clotho* Hübner, [1790-1793] in the text of Hefte 3 and 4 of his Supplementband makes it impossible that those Hefte were published in 1789, as claimed by HEPPNER (1981: 252), and we are thus forced to reexamine this issue. SHERBORN & WOODWARD (1901: 140) stated that the date 1793 they provided was based on evidence published in the "Göttingische gelehrte Anzeigen", a German journal that "...reviewed and listed the books received by the Academy of Sciences at Göttingen" (EVENHUIS, 1997: 33). Indeed, an anonymous reviewer wrote that the Göttingen Academy had received Hefte 3 and 4, consisting of plates XCV-CI and "Bogen" (signatures) B-H (pages 9-60) of Esper's Supplementband in 1793 (ANONYMOUS, 1798: 654). Therefore, Hefte 3-4 must have been issued at some time well after the 24th November 1790 and before their reception in 1793 by the Göttingen Academy. Fortunately, there is some internal evidence in Esper's Hefte 3-4 which allows us to narrow that time gap.

On p. 10 of Hefte 3-4 Esper cites the second volume of Jung's Alphabetisches Verzeichnis der bisher bekannten Schmetterlinge aus allen Welttheilen mit ihren Synonymen, which was published in 1792. Likewise, on p. 31 Esper mentions the discovery of Charaxes jasius (Linnaeus, 1758) (as "Papilio Iasius") in the neighborhood of the city of Nice (France), made by the Italian Lieutenant Leonardo de Prunner, towards the end of September of the previous year 1791 ("...zu Ende des Septembers des abgewichenen 1791ten Jahres..."), meaning that he wrote those words in 1792. Lastly, on pp. 55-56 Esper cites Papilio cassioides (currently Erebia cassioides), a species described from Austria by Hohenwarth in 1792 (in REINER & HOHENWARTH, 1792: 262, pl. 6, figs. 1a-b). Although it has not been possible to ascertain more precisely when in 1792 were the works by Jung and Reiner & Hohenwarth published, this internal evidence supports the 1793 date of reception given by the "Göttingische gelehrte Anzeigen".

Conclusion

Given the internal and external evidence provided above, Hefte 3-4 of Esper's Supplementband must have been issued at some time in either 1792 or 1793, and thus the date of publication of *Papilio nemausiaca* Esper should be cited as [1793]. This means that *Melanargia nemausiaca* (Esper, [1793]) becomes a junior subjective synonym of *Melanargia lachesis* (Hübner, 1790), **reinstated status**.

Table 1 provides a complete list of the new names introduced by Esper in Hefte 3-4 of the Supplementband (ESPER, [1793]), giving their current taxonomic and nomenclatural statuses.

Table I.– List of new names in Hefte 3-4 of of Esper's Supplementband.

Esper's Name	Page / plate	Nomenclatural status	Current valid name
Arachne	12 / 95, figs. 2-3 (nec 1-2)	junior primary homonym	Hipparchia statilinus (Hufnagel, 1766)
Argiades	49 / 101, fig. 5	junior primary homonym	Plebejus argus (Linnaeus, 1758)
Atratus	60 / [104, fig. 1] ²	junior subjective synonym	Erebia manto ([Schiffermüller], 1775)
Bore	22, 37 / 100, fig. 1	junior primary homonym	Oeneis bore (Schneider, 1792)
crestensis	16/—	junior objective synonym	Melanargia occitanica (Esper, [1793])
europaea ¹	20 / —	junior subjective synonym	Boloria euphrosyne (Linnaeus, 1758)
Geticus	51 / [102, fig. 2] ²	junior subjective synonym	Coenonympha oedippus (Fabricius, 1787)
I album	14 / 95, fig. 4	junior subjective synonym	Polygonia vaualbum (Esper, 1780)
Icarius	35 / 99, fig. 4	junior subjective synonym	Polyommatus amandus (Schneider, 1792)
lapponica	21 / 97, fig. 3	junior subjective synonym	Boloria freija (Thunberg, 1791)
nemausiaca	15 / 96, figs. 1-2	junior subjective synonym	Melanargia lachesis (Hübner, 1790)
occitanica	17 / 96, figs. 3-4	available and valid	Melanargia occitanica (Esper, [1793])
Pirata	39 / 100, fig. 3	available and valid	Chazara briseis pirata (Esper, [1793])
Roboris	59 / [103, fig. 5] ²	available and valid	Laeosopis roboris (Esper, [1793])
Siciliae	18 / —	junior objective synonym	Melanargia arge (Sulzer, 1776)
Thalia ¹	— / 97, fig. 2	junior primary homonym	Boloria euphrosyne (Linnaeus, 1758)
Titania	58 / [103, fig. 4] ²	available and valid	Boloria titania (Esper, [1793])

Notes.— ¹ Named P[apilio]. Nymph[alis]. phal[eratus]. Thalia europaea in the text, and [Papilio] Thalia in the plate; ² These plates were published in Hefte 5-6 in 1794 (HEPPNER, 1981: 252).

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