

Breaking a myth concerning the female of *Gonepteryx cleopatra fiorii* from the Greek island of Ródhos and an answer about the integrity of the single known record of a male *Plebejides pylaon* species-group specimen from Mt. Taíyetos, Pelopónnisos, Greece (Lepidoptera: Pieridae; Lycaenidae)

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Abstract. The hitherto considered monomorphic female of *Gonepteryx cleopatra fiorii* Turati & Fiori, 1930 from Ródhos Island, Greece is now shown to be at least dimorphic. The validity of the single known record of a male *Plebejides pylaon* (Fischer de Waldheim, 1832) species-group specimen from Mt. Taíyetos, Pelopónnisos, Greece is discussed and reaffirmed.

Samenvatting. Tot nu toe werd aangenomen dat het wijfje van *Gonepteryx cleopatra fiorii* Turati & Fiori, 1930 uit Rhodos, Griekenland, monomorf was. Dat wordt nu weerlegd omdat er een exemplaar van een tweede vorm werd aangetroffen. De validiteit van de enige bekende waarneming van een mannetje uit de *Plebejides pylaon* (Fischer de Waldheim, 1832) soortengroep in het Taigetosgebergte, Peloponnesos, Griekenland wordt besproken en bevestigd.

Résumé. Les auteurs ont pu démontrer que la femelle monomorphe de *Gonepteryx cleopatra fiorii* Turati & Fiori, 1930, connue de l'île grecque de Rhodes est en effet dimorphique. La validité de la seule mention d'un mâle du groupe de *Plebejides pylaon* (Fischer de Waldheim, 1832) du Mont Taygetos, Grèce, est discutée et confirmée.

Key words: *Gonepteryx – cleopatra – fiorii – italica – Plebejides – pylaon* species-group – Greece – Ródhos Island – Mt. Atáviros – Pelopónnisos – Mt. Taíyetos – Mt. Zíria – Mt. Helmós – Mt. Erímanthos – Mt. Ménalo – Mt. Párnon – dimorphism – locality data validity.

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The females of *Gonepteryx cleopatra fiorii* Turati & Fiori, 1930 from Ródhos Island

Introduction

When this butterfly was described as an insular form [subspecies] of *G. cleopatra* (Linnaeus, 1767) by Turati & Fiori (1930: 199) it was stated that one of its distinguishing characters was the exclusive presence in the female of the lemon-yellow upper side morph, and total absence of the greenish-white one, known to occur in varying number densities in other localities: (“Le ♀♀ a differenza di tutte le altre forme di *cleopatra* che sono bianco verdognole, hanno sul disopra delle quattro ali un colore decisamente giallo limone, tanto da aver l'apparenza di ♂♂ *rhamni*.”). This notion has persisted ever since and the following statements have been made: Bender (1963: 15): “Die ♀♀ [of *fiorii*] unterscheiden sich von allen anderen Formen von *Cleopatra*, die grünlichweiß sind. Alle vier Flügel haben eine zitronengelbe Färbung von solcher Stärke, daß es den Anschein hat, ♂♂ von *rhamni* L. vorliegen zu haben.”; Olivier (1993: 70): “The upperside of the female of *fiorii* is unique: it is lemon yellow, of an intensity rarely attained even by the more extreme ‘*citrina*’ specimens.”; Tolman (1997: 58): “on Rhodes (f. *fiorii* Turati and Fiori), [♀] universally bright yellow”; Pamperis (2009: 122): “Populations on Ródos considered to be a separate subspecies (*fiorii*). Males and females of this subspecies are yellow ...”.

The greenish-white morph of *G. cleopatra fiorii*

During a joint expedition to Ródhos in June 1991 the second author had the good fortune of collecting a single female *G. cleopatra fiorii* (fig. 1) that contradicts this long-held myth. The butterfly was captured on Mt. Atáviros, not too far from the village of Áyios Isídhoros, which is the type locality for this taxon. Its upper side colour is very reminiscent of the greenish-white morph flying in other areas in Greece (fig. 3), differing strikingly from the pure lemon-yellow one of Ródhos (fig. 2), which is very similar to the analogous morph from other Greek localities (fig. 4).

Discussion

The existence of these two morphs within the Ródhos population of *G. cleopatra* does not in any way imply that the validity of ssp. *fiorii* is being questioned by us, as there are a number of other characters by which this validity can be substantiated (a detailed analysis of the differentiating subspecific characters of the *G. cleopatra* complex is given by Olivier (1993: 62–66)). Our only intention is simply to make known that the females of *fiorii* are at least dimorphic, much as they are in other populations and subspecies of *G. cleopatra*, and not monomorphic as has previously been suggested and generally accepted. On the basis of hitherto collected specimens from Ródhos it appears that the female greenish-white upper side morph is indeed very rare, thus accounting for its having escaped notice for such a long period of time.



Figs. 1–4. Upper side of female *Gonepteryx cleopatra* (Linnaeus, 1767) from Greece. 1, 2. *Ssp. fiorii* Turati & Fiori, 1930, Ródhos Island, Mt. Atáviros, near Áyios Isídhoros. 1. Greenish-white morph, 400 m, 11.vi.1995. 2. Yellow morph, 450 m, 27.v.1971. 3, 4. *Ssp. italica* (Gerhard, 1882). 3. Greenish-white morph, Stereá Ellás, near Aráhova, 800 m, 14.vi.1964. 4. Yellow morph, Pelopónnisos, Mt. Erímanthos, 1200–1600 m, 20.vii.1981.

***Plebejides pylaon* (Fischer de Waldheim, 1832)
species-group male specimen from Mt.
Taíyetos**

Introduction

The specimen under consideration was captured by the first author and was shown to Tom Tolman in person during the latter's visit to the author's apartment in Athens. The reaction on the part of Tolman was one of disbelief, aptly expressed later by him in Tolman (1997: 102), stating that: "Records for Taygetos Mts. require confirmation."

The specimen's locality data

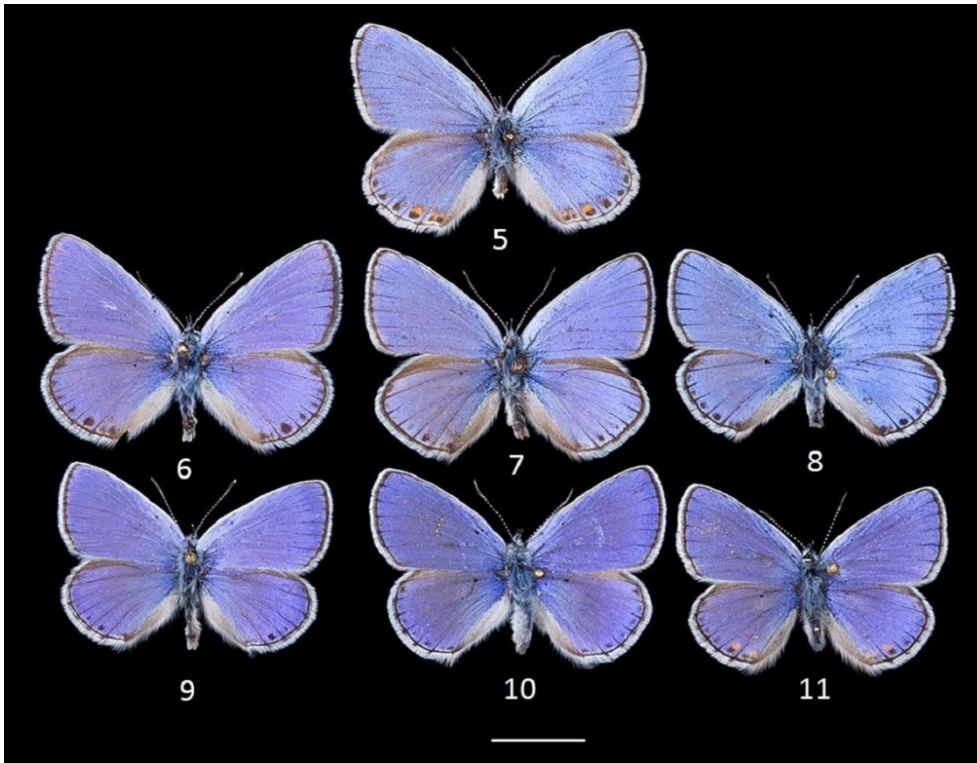
The single fresh male (figs 5, 12) was collected on a very hot morning of 28th May 1968 while it was mud puddling. The exact locality is right above the village of Anavrití, at an altitude slightly above 800 m, at the junction point between the dirt road leading from the village to Mt. Taíyetos and the peripheral dirt road of the mountain itself. Identification was carried out right on the spot, thus precluding the possibility of locality data mix-ups.

Description and comparison to *pylaon* species-group taxa from other localities in Pelopónnisos

As this individual differed somewhat from those from other localities in Pelopónnisos it was deemed necessary to have its genitalia checked. These proved to be typical of the *P. pylaon* species-group, but were never drawn and unfortunately have since been lost. The butterfly's upper side (fig. 5) resembles that of *pylaon* species-group specimens from other localities in Pelopónnisos (figs. 6–11), but its HW possesses a small number of pure orange, somewhat faint submarginal spots near the tornus, extremely rarely also present in populations from other areas as well (fig. 11). On the underside (fig. 12) the ground-colour is lighter than in allotopic Pelopónnisos specimens (figs. 13–18), and is slightly tinged yellow rather than being more-or-less pure light grey. It may also be said that on the whole the underside of the Taíyetos specimen has a somewhat flatter and less contrasting appearance. (These ground-colour differences are rather too subtle to be made clearly evident on the printed colour slides).

The butterfly's apparent extreme rarity

Despite numerous attempts to try and collect more specimens of this butterfly on Mt. Taíyetos, all but one of these proved negative thus far. The single exception is a female captured by Jos Dils of Belgium (pers. comm.), originally deposited in his personal collection and later transferred to Naturalis Biodiversity Center, Leyden. The rarity on Mt. Taíyetos of a taxon, so commonly found elsewhere in Greece, is indeed difficult to explain.



Figs. 5–11. Upper side of male *Plebejides pylaon* (Fischer de Waldheim, 1832) species-group specimens from Pelopónnisos, Greece.

5. Mt. Taíyetos, above Anavrití, ca. 800 m, 28.v.1968.

6. Mt. Zíria, 2000 m, 14.vii.1980.

7. Mt. Helmós, 1300 m, 25.vi.1972.

8. Mt. Párnon, 1200 m, 28.vi.2002.

9. Mt. Panahaikó, 1800–1900 m, 11.vii.1990.

10–11. Mt. Ménalo, 1400–1600 m, 12.vi.2003.

10. HW normal.

11. HW with submarginal orange spots.



Figs. 12–18. Underside of male *Plebejides pylaon* species-group specimens from Pelopónnisos, Greece.

12. Mt. Taíyetos, above Anavrití, ca. 800 m, 28.v.1968.

13. Mt. Zíria, 2000 m, 14.vii.1980.

14. Mt. Helmós, 1300 m, 25.vi.1972.

15. Mt. Párnon, 1200 m, 28.vi.2002.

16. Mt. Panahaikó, 1800–1900 m, 11.vii.1990.

17–18. Mt. Ménalo, 1400–1600 m, 12.vi.2003.

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