Nota lepid. 13 (1) : 8-11 ; 31.III.1990 ISSN 0342-7536

Further data on *Parnassius apollo* LINNÉ, 1758 in the Peloponnesos (Lepidoptera, Papilionidae) (*)

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Summary

A population of *Parnassius apollo* L. from the Peloponnesos, corresponding to ssp. *atrides* DER POORTEN & DILS, 1986, is reported. It flies on Mt. Erímanthos at 2000-2100 m. Some data on its habitat are given.

During the last eighteen years, one of the authors (A. CASALE) intensively explored the greatest part of the main massifs of Greece for entomological and biospeleological purposes. The highest mountains of the Peloponnesos were visited many times and at different seasons : Mt. Taygetos 2407 m, Mt. Kelmos or Aroania 2341 m, Mt. Kyllini 2376 m, Mt. Maenalo 1980 m, Mt. Erímanthos 2224 m. On the latter, which is the most difficult to reach, a small population of *Parnassius apollo* LINNÉ, 1758 was discovered during a collecting trip with Prof. M. OLMI (University of Viterbo, Italy) in July 1983.

Parnassius apollo L. is rather widely distributed and locally common on the mountains of northern and central Greece and many subspecies have been named. However, the systematic status and validity of these subspecies/races have not yet been definitively clarified and merit more careful investigation (see e.g. RACHELI *et al.*, 1983).

The occurrence of *Parnassius apollo* L. in the Peloponnesos (S. Greece) was reported for the first time by PAGENSTECHER(1913), who described *Parnassius apollo peloponnesiacus* on the basis of three males and one female collected by NEUSCHILD "bei Patras in Peloponnes". Though the massifs of the Peloponnesos are currently visited by many lepidopterists to collect rare or endemic species (such as *Agrodiaetus aroanensis* BROWN, 1976), the occurrence of this remarkable and well known butterfly in the southern

(*) Research supported by grants from M.P.I. (40%).

Figs. 1-4. *Parnassius apollo* L., from Greece and Turkey. 1 : ssp. *graecus* ZIEGLER, 1901, GR-Pindos, Katara Pass m 1600, 23.VII.1982, A. FLORIANI leg. ; 2 : idem, GR-Mt. Ghiona m 1800, 8.VII.1988, A. CASALE leg. ; 3 : ssp. *paphlagonicus* BRIK & EISNER, 1938, TR-Bartin, Ahmetusta Pass m 1600, 22.VII.1987, P. F. CAVAZZUTI leg. ; 4 : ssp. *atrides* DER POORTEN & DILS, 1986, GR-Peloponnesos, Mt. Erímanthos m 2000, 17.VII.1983, A. CASALE & M. OLMI leg. (Phot. A. CASALE).

peninsula of Greece had never been confirmed, so that it was considered doubtful or wrong by most recent authors (BRYK, 1935 ; EISNER, 1962). On the latest distribution maps the southern limit of *Parnassius apollo* L. is therefore marked to the latitude of central Greece (CAPDEVILLE, 1978-80).

Finally, in July 1983 a population was rediscovered by A. CASALE and M. OLMI on Mt. Erímanthos. Three years later, DER POORTEN and DILS (1986) described ssp. *atrides* on the basis of a large series of specimens collected somewhere on the Peninsula in July 1985. These authors do not give any chorological data for their find, "because of the commercial popularity of *Parnassius apollo*... as an ecological measure".

We agree with their precaution, particulary because ssp. *atrides* comes from a more accessible locality at low altitude (from 1300 to 1800 m). We think the same prudence is unnecessary for the population living on Mt. Erímanthos at high altitude, in a zone very difficult to find and to reach.

The population of Mt. Erímanthos

Erímanthos is a massif of Mesozoic limestone with the highest peak (Mt. Olénos) at 2224 m. The vegetation above 1000 m up to 1600-1700 m is formed by rather large forests of *Pinus nigra* Arnold and *Abies cephalonica* Loudon.

Above 1700-1800 m, there are large high altitude prairies and grasslands. Near the top, a superficial karsism is well developed ; no deep caves are known.

The few specimens of *Parnassius apollo* L. were observed flying over the stony, steep sides of the mountain below the summit, at 2000-2100 m. This zone can be reached after a march of several hours. At the time of the visit by A. Casale and M. Olmi (17 July 1983), only more or less damaged females were present, of which only two were collected (fig. 4) ; during the same period, the specimens in C. Greece were still relatively fresh.

The specimens from Erímanthos correspond perfectly to ssp. *atrides* Der Poorten and Dils, 1986, which exhibits a number of characters different from the other Greek subspecies. These authors examined a pair from the type series of ssp. *peloponnesiacus* Pagenstecher, 1913, which they found to correspond well with ssp. *graecus* Ziegler, 1901 but differing from *atrides* : it could come from a northern locality and was incorrectly labelled (Der Poorten & Dils, 1986).

Discussion

The rediscovery of *Parnassius apollo* L. in the Peloponnesus is very interesting from the biogeographical point of view. In fact, it demonstrates a deep penetration of the species to the S. Balkans during the last Ice Age, exactly as in the Iberian, Italian and Anatolian Peninsulas. In all these regions *Parnassius apollo* L. has survived to the present ipsothermic age in more or less small, isolated, orophilous populations. On the other hand, it will also be interesting to ascertain whether other populations are still present in other massifs of the Peloponnesus, and to determine their morphological distance from that of Mt. Erímanthos.

Acknowledgements

We would like to express our gratitude to Prof. E. Balletto (University of Turin), Dr. V. Cameron-Curry (Turin), Prof. M. Olmi (University of Viterbo) and Prof. T. Racheli (University of Rome) for their kind assistance in this work.

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Corrigenda to Nota Lep. 12 (4) : p. 355 (WILTSHIRE)

l. 15 : for 15.VI.1936 read : – 15.XI.1936.

l. 17 : after "generation" *delete* "," !