

ON THE OCCURRENCE OF *BOLORIA AQUILONARIS* STICHEL, 1908 (INSECTA: LEPIDOPTERA) IN THE SOUTHWESTERN CARPATHIANS (BANAT, ROMANIA)

Zsolt BÁLINT*, Gergely KATONA

Department of Zoology, Hungarian Natural History Museum

ABSTRACT. Data of 42 *Boloria aquilonaris* Stichel, 1908 specimens, housed in the Hungarian Natural History Museum (Budapest), originating from three localities of the Carpathians in Romania, are given. One of the localities refers to the well known site of the species in Romania, the remaining two are new for the literature.

Key words. Caraș-Severin, historical specimens, old records, Semenic.

INTRODUCTION:

The occurrence of *Boloria aquilonaris* Stichel, 1908 (Lepidoptera: Nymphalidae) in the Western Carpathians of Romania has been discovered in 2006 by Romanian lepidopterists. Via publishing their record they actualized the knowledge of the species regarding the eastern part of the Carpathian Basin (Mihuț and Dincă 2006). They remarked that there was an old record from the mountains Retezat, which had not been confirmed subsequently (see Stănescu 1995; Rákósy, Goia and Kovács 2003).

In the Hungarian Natural History Museum, which has the largest collection of Lepidoptera collected in the Carpathian Basin, there are 58 specimens of *B. aquilonaris* captured in the Carpathians. Amongst them, 42 specimens have been collected in the present day territory of Romania. We are of the opinion that these records have some historical interest. Thus the aims of this short paper are (1) to publish the records, (2) to annotate them and (3) to draw some conclusions.

MATERIALS AND METHODS:

Specimens are listed in alphabetical order according to political counties and the localities involved. Labels are listed verbatim between quotation marks.

RESULTS AND DISCUSSION:

Caraș-Severin, Moldova Nouă (Fig. 1): „Újmoldva, Temes m., 1911.VIII.16., leg. Káldor, coll. Liphay” (male). This record is highly doubtful. In the vicinity of Moldova Nouă at present there is no suitable habitat for the species. Moreover we presume that in the period when the specimen was allegedly collected, there was neither. We know from personal communication of the late Friedrich König (1910–2002) that Káldor’s specimens are often mislabelled (cf. Bálint 1985). The specimen, if it is authentic indeed, probably originates somewhere from the regions of mountain Semenic (see the next record).

Caraș-Severin, Băile Mici ale Vulturilor (Figs. 2-4): „Kis Sas Fördő, Szemenik, 1933. VIII. 2., Liphay B.” (2 males, female). This record is reliable as in the region there are habitats suitable for the species (Cocoș & Cocoș 2002). The locality „Kis-Sas-fördő” (= Băile Mici ale Vulturilor) is situated at Piatra Neidjei (1481 m), cca 5 km south of the peak Semenic, in the southern part of the range between Ciclova and Bozovici.

Suceava, Șaru Dornei (Fig. 5): „Sarul Dornei, 1980.VII.20., leg. Bálint Zs.” (37 males, female). In the year of the record the species was extremely common and several thousand individuals were swarming in the edge of the bog, which was extensively grazed by cattle but nectar sources were available in large quantities (cf. Gorbach 2011). In spite of paying considerable effort no further *B. aquilonaris* population has been discovered in the vicinity (Bálint 1981).

Taking the old Retezat *B. aquilonaris* specimen as reliable the explanation that the “ice-age relicts” are going to disappear in the southern Carpathians seems to be plausible. The old and questionable *Parnassius apollo* (Linnaeus, 1758) data (Bucegi, Retezat: Ruști, Dragomirescu, 1991) fit into this picture.

CONCLUSIONS:

In the Hungarian Natural History Museum there are three locality records of *Boloria aquilonaris* originating from the territory of present day Romania. One refers to the well known population dwelling in Vatra Dornei region (Suceava). Two records originate from county Caraș-Severin. One of them is most probably mislabelled but the other one can be considered as reliable. In the last decades many surprising records have been revealed from the Banat region, some of them supported by historical records or old specimens (see Groza et al. 2015a and 2015b). Hence it is probable, that *B. aquilonaris* will be rediscovered in south-western part of Romania if there will be search concentrating on this species.

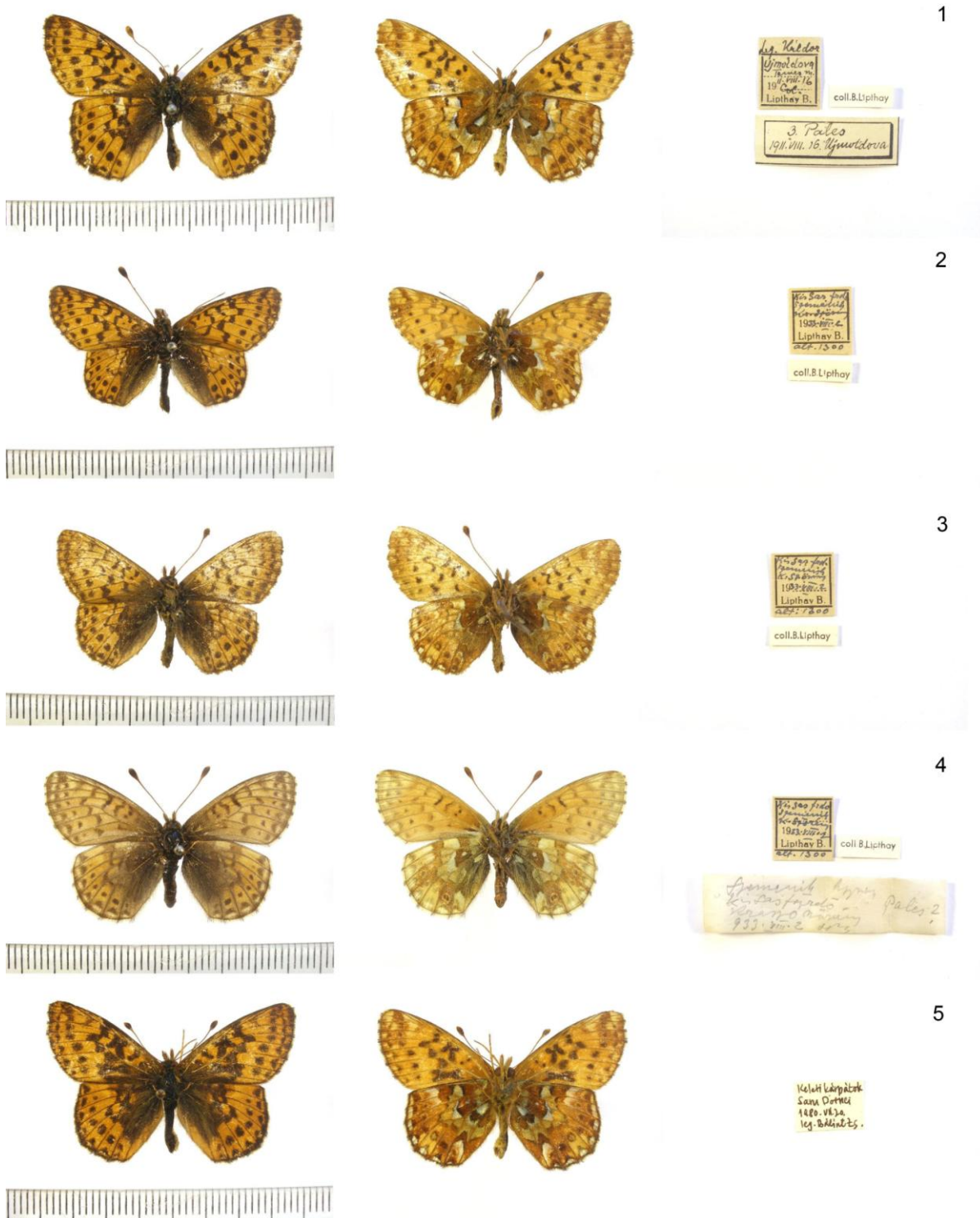


Fig. 1-5: *Boloria aquilonaris* Stichel, 1908 specimens housed in the Hungarian Natural History Museum, collected in Romania, in dorsal (left) and ventral view (middle) with actual labels (right). 1 = male, „Ujmoldova”, 2-3 = males, „Szemenik”, 4 = female, „Szemenik”, 5 = male, „Saru Dornei”. (Photos: Gergely Katona, HHNM)

REFERENCES:

Bálint Zs, Adatok a nagylepkek elterjedéséhez Erdélyben. II, Folia entomologica hungarica, 42, 227–251, 1981.
 Bálint Zs, Plebicula escheri Hübner 1823 in the Carpathian Basin? (Lepidoptera, Lycaenidae), Nota lepidopterologica, 8, 289–292, 1985.

Cocoş O, Cocoş A, The vegetation in the upper Semenic Mountains, Analele Universităţii din Bucureşti, 51, 95–100, 2002.
 Groza B, Vodă R, Hebert P, Vila R, Dincă V, Confined populations of Satyrus ferula and Iolana iolas in the Romanian fauna. http://www.lepidoptera.ro/files/prezentari_SL

- R_2015/Groza_etal_02.pdf (accessed: 13.IV.2016) 2015.
- Groza B, Vodă R, Mancu C, Cuvelier S, Vila R, Dincă V, Potential range expansion for *Allancastris cerisy*, *Melitaea arduinna* and *Libythea celtis* north of the Balkans. http://www.lepidoptera.ro/files/prezentari_SL_R_2015/Groza_etal_01.pdf (accessed: 13.IV.2016) 2015.
- Gorbach VV, Spatial distribution and mobility of butterflies in a population of the cranberry fritillary *Boloria aquilonaris* (Lepidoptera, Nymphalidae), *Russian Journal of Ecology* 42, 321–327, 2011.
- Mihuț S, Dincă V, New data concerning the presence of the species *Boloria aquilonaris* (Stichel, 1908) in the Romanian entomofauna (Lepidoptera, Nymphalidae), *Studia Universitatis Babeș-Bolyai Biologia*, 61, 7–10, 2006.
- Rákósy L, Goia M, Kovács Z, *Catalogul Lepidopterelor României / Verzeichnis der Schmetterlinge Rumäniens*, Societate Lepidopterologică Română, 1–446, 2003.
- Ruști DM, Dragomirescu L, A Revision of *Parnassius apollo* (Linnaeus) (Lepidoptera, Papilionidae) in Romania using Numerical Taxonomy, *Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa"*, 31, 201–218, 1991.
- Stănescu M, The Catalogue of 'Ludovic Beregszászy' Lepidopteran Collection (Insecta: Lepidoptera) *Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa"*, 35, 221–346, 1995.