Note on Lepidoptera from Bulgarian Caves

by Mgr. ANDRZEJ SKALSKI[1]

With plate 68 (I)

The material for this work was collected by the author, in great part, in some caves of Bulgaria during a botanical and zoological excursion organized in 1960 by the Students' Association of Naturalists of the Jagiellonian University.

The Lepidoptera, which are a typically phytophagous group of insects, are represented in caves only as trogloxenes, subtroglophiles, and very rare troglophiles. However, they merit attention as essential components of the parietal assoziation. Unfortunately the niche of the Lepidoptera, in particular that of the Micro-Moths (Microlepidoptera), in the cavernicolous biotope is still little known in many European caves. Only the caves of Rumania are well known in this respect; from this country are listed 25 species of cavernicolous Lepidoptera (50 in the world)[2].

At the time of my visit to Bulgaria I received 4 specimens of Microlepidoptera taken in Bulgarian caves (leg. P. Beron) for determination. These specimens were given to me by Mr. V. Guéorguiev from the Zoological Institut BAN in Sofia and this material is included in this paper also.

Examined material and localities:

Acrolepiidae

ACROLEPIA GRANITELLA Tr.

Temnata Dupka Cave (Lakatnik — Stara Planina Mts.) 18 VIII 1960 3♂.

The species was mentioned from caves in Bulgaria: Baco Kiro cave (Drjanovski Monastir — Stara Planina Mts.) Tuleskov, 1930 (after Guéorguiev, Beron 1962) and Ražiška Cave (Lakatnik, Guéorguiev, Beron 1962) 2 ex 19 X 1939.

Moreover, this species has been recorded from caves in Algiers, France, Spain, Holland, Germany (Wolf 1934—1938) and Rumania (Capuse, Georgescu 1962—1963).

[1] Muzeum w Czestochowie, Czestochowa, Ratusz, Poland.

[2] 16 species from Bulgaria.

ACROLEPIA PULICARIAE Klim.

Kozarskata Cave (Lakatnik — Stara Planina Mts.) 23 VII 1960 3♂ 1♀ leg. P. Beron.

Temnata Dupka Cave (Lakatnik) 18 VIII 1960 9♂ 4♀.

The species was mentioned as numerous in the caves of Rumania (Capuse, Georgescu 1962). It is a new element in the cave-fauna and fauna of Bulgaria.

According to J. Klimesch (1956), who revised the European species of the genus *Acrolepia* Curtis, *A. granitella* Tr. is widely distributed in Central Europe (Germany, Austria, Switzerland, France, Hungary; I found it in Poland) free in nature. Probably *A. pulicariae* Klim. has a similar distribution. The imago of *A. pulicariae* Klim. is rather similar in design and length of the wings to *A. granitella* Tr. fig. 1, 2) but it differs distinctly in the genital armature (fig. 3, 4).[2] These species were not recognized as distinct in 1956, consequently it is possible, that previous cave records of *A. granitella* Tr. apply to *A. pulicariae* Klim. or to other species of this group. This is a problem for further study. In the Temnata Dupka Cave Microlepidoptera were observed in some communities with numerous individuals sitting in small niches and cavities up to 150 m from the entrance. Great number of individuals, were also observed at night. These communities appeared to be homotypical compact aggregations (therefore only a few specimens were taken). But on examining the material I found both species, with *A. pulicariae* Klim. dominant. Similar results were obtained in Rumania. It is a very interesting fact that in Rumanian caves *A. pulicariae* Klim. was observed all year (2 generations, 1 hibernating). In this respect, perhaps, *A. pulicariae* Klim. is one of the typical Microlepidoptera components of the parietal associations, at least in caves of the Balkan peninsula, not *A. granitella* Tr. as biospeleologists have previously concluded (Vandel 1965). These species are phytophagous and represent subtroglophile elements in parietal associations in summer and winter.

Noctuidae.

AUTOPHILA LIMBATA Stgr.

Temnata Dupka Cave (Lakatnik) 18 VIII 1960 2♂, 19 VIII 1960 3♂.

Ražiška Cave (Lakatnik) 19 VIII 1960 1♂.

Species mentioned from cave in Rumania: one female (Căpuse, Georgescu 1962—1963). New element in cave fauna and fauna of Bulgaria. Many specimens, but singletons were observed to about 30 m depth in day only.

[2] For detailed description see J. Klimesch (1956).

TRIPHOSA SABAUDIATA Dup.

This species, very well known from Bulgarian and South European caves, was observed 18—19 VIII 1960 in some caves of Lakatnik region; many specimens, a large number of them in copula. The Lepidoptera formed great homotypical aggregations by day and partly at night.

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SUMMARY

This paper is a report on Lepidoptera collected in 1960 in some caves of the Stara Planina Mountains (Bulgaria). In three caves in the environs of Lakatnik the following species were found: *Acrolepia granitella* Tr., *Acrolepia pulicariae* Klim., *Autophila limbata* Stgr., and *Triphosa sabaudiata* Dup. Two species (*Acrolepia pulicariae* Klim. and *Autophila limbata* Stgr.) are new for both the cave fauna of Bulgaria and fauna of Bulgaria.

ZUSAMMENFASSUNG

Während des Jahres 1960 wurden im Gebirge Stara Planina (Bulgarien) in einigen Höhlen Lepidoptera gesammelt. In der vorliegenden Arbeit werden die Resultate dieser Sammlungen dargelegt. In drei Höhlen bei Lakatnik wurden folgende Lepidopteraarten gefunden: *Acrolepia granitella* Tr., *Acrolepia pulicariae* Klim., *Autophila limbata* Stgr. und *Triphosa sabaudiata* Dup. Die zwei Arten: *Acrolepia pulicariae* Klim. und *Autophila limbata* Stgr. sind für die Höhlenfauna Bulgariens und die Fauna Bulgariens neu.

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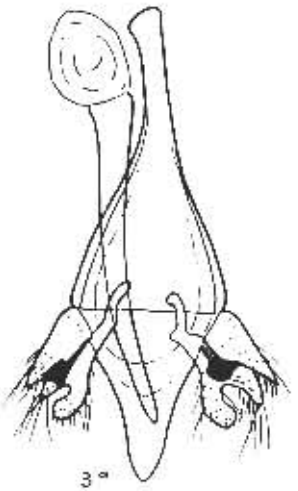
EXPLANATION OF PLATE 68 (I)

1. Fore wing of *A. granitella* Tr. (after Klimesch 1956). Wingspread 14—15 mm. 2. Fore wing of *A. pulicariae* Klim. (after Klimesch 1956). Wingspread 12—12,5. 3. Genital armatures of *A. granitella* Tr. (original) a — male, b — female. 4. Genital armatures of *A. pulicariae* Klim. (original) a — male, b — female.

1

2



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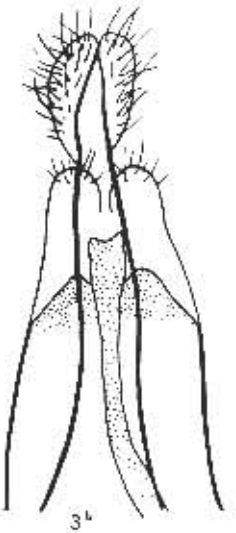

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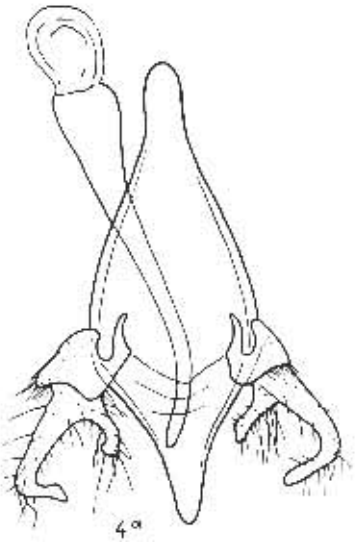

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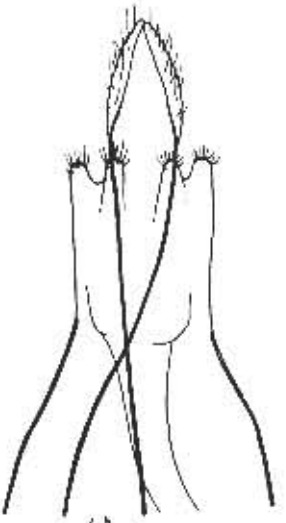

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