SHORT CONTRIBUTION ON THE EARLY SPRING MACROLEPIDOPTERA OF THE REPUBLIC OF MACEDONIA WITH A REPORT OF TWO NEW GENERA AND FOUR NEW GEOMETRIDAE SPECIES FOR THE COUNTRY

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Abstract

Boudinotiana notha (Hübner, 1803), Boudinotiana puella mediterranea Ganev, 1984, Desertobia ankeraria Staudinger, 1861 and Agriopis leucophaearia ([Denis & Schiffermüller], 1775) are reported for a first time from the Republic of Macedonia. The genera Boudinotiana (=Archiearis = Brephos) and Desertobia (=Erannis auct.) are also new for the country. One aberrant of Eriogaster rimicola ([Denis & Schiffermüller], 1775) with unusual flight period is reported. These and some other interesting species are reported and illustrated.

Keywords: Lepidoptera, Geometridae, Lasiocampidae, Noctuidae, aberants, Macedonia, new records.

Introduction

The fauna of the Republic of Macedonia is without doubt very rich and interesting, because of both the geographical position of the country and its physical geography. The fauna of butterflies and skippers is well enough explored and in recent years several local lepidopterists have published articles, with several new species and records for the country. The nocturnal Lepidoptera fauna of Macedonia is, on the other hand, poorly explored and finding a new species for the country is still very easy. Since the collapse of the former “Iron Curtain”, access to other countries after years of being denied travel outside the communist union has meant that Macedonia has been largely neglected in recent decades; prior to this, contemporary taxonomic achievements were not implemented and many complexes of species were not investigated in line with modern taxonomy.

Research in this country is sporadic, not regular, with summer and autumn species better explored. Early spring research is sparse and this explains why widespread species such as Agriopis leucophaearia ([Denis & Schiffermüller], 1775) have not been found and reported until now! The present authors specifically selected the first good, early spring days with the particular intention of looking for Boudinotiana puella mediterranea Ganev, 1984, Desertobia ankeraria Staudinger, 1861 and Chemerina caliginearia (Rambur, 1833) – all species known and well presented in Bulgaria, inhabiting areas not far away from the border with Macedonia. Chemerina
caliginearia was not found, although there are suitable habitats for it at the Demir Kapiya site. The first two species were found in two localities and several other species new for the country were also encountered. In the limited available time of three days and two nights, the authors could not find the third species of Boudinotiana known from the Balkans, which without any doubt is present in Macedonia; nor was it possible to establish the real status of the new species in the country, although they seem to be widely distributed.

Lasiocampidae

Eriogaster rinicola ([Denis & Schiffermüller], 1775)
Middle Vardar river valley near Demir Kapiya Town, 130m, N41°24’12.6”; E022°17’19.2”, 08.iii.2013, maquis on limestone ground, Quercus coccifera, Quercus sp., Paliurus spina-christi, Platanus orientalis, S. Beshkov & V. Gashtarov leg. at lamps and light traps, one male specimen. This specimen (Plate 1, Fig. 1) has incompletely developed hind wings and the forewings have a black elongate discal spot, not the round, white spot exhibited by the typical form. The spring appearance of this late autumn species is surprising. Perhaps low temperatures during the over wintering of the pupa are the reason for the black coloration of the discal spot.

Geometridae

Eupithecia quercetica Prout, 1938 (= buxata Pinker, 1958)
Middle Vardar river valley near Demir Kapiya Town, 130m, N41°24’12.6”; E022°17’19.2”, 08.iii.2013, maquis on limestone ground, Quercus coccifera, Quercus sp., Paliurus spina-christi, Platanus orientalis, S. Beshkov & V. Gashtarov leg. at lamps and light traps (Plate 1, Fig. 2) in large number. Buxus semprevirens which is known as a food plant of this species is well presented in this locality. Eupithecia quercetica seems not to be rare in Macedonia (and Southern and South-Eastern Balkans). It is little known there, because of its early flight period and the lack of researchers.

Boudinotiana notha (Hübner, 1803)
Skopie Region, Treska Gorge, near Glumovo Village, 279m, N41°59’19.8”; E021°19’04.1”, 10.iii.2013, Populus alba forest near river, S. Beshkov & V. Gashtarov leg. during daytime (Plate 1, Fig. 3). New genus and a new species for the Republic of Macedonia. We explored this site searching for Boudinotiana puella mediterranea, found in two sites on the previous two days, but that species was not found, although its presence there seems very possible. Without any doubt Boudinotiana notha will be found in many other localities in the country.

Boudinotiana puella mediterranea Ganev, 1984
Strumitza region, between Kosturino Village and the crossroad to Tri Vodi Village, 421m, N41°22’03.9”; E022°36’14.8”, 08.iii.2013, Populus alba near stream in meadow, S. Beshkov & V. Gashtarov leg. during daytime, two males and one female;
Fig. 1. *Eriogaster rinitola*, male aberrant from early spring.

Fig. 2. *Eupithecia quercetica*, female.

Fig. 3. *Boudinotiana notha*, male.

Fig. 4. *Boudinotiana puella mediterranea*, male.
Fig. 1. *Lycia graecarius*, female from Demir Kapıya.

Fig. 2. *Desertobia ankeraria*, male, Demir Kapıya.

Fig. 3. *Desertobia ankeraria*, male, Gorna Matka.

Fig. 4. *Phigaliothyberia marginaria*, male, Bulgaria, Kozhuh.

Plate 2.

Macedonia, middle Vardar river Valley, near Demir Kapıya, 130m, N41°24'13", E022°17'19" Maquis, 08.III.2013, S. Beshkov & V. Gashtarov leg.
Fig. 1. *Phigaliohybernia aurantiaria*, male, Bulgaria, Levunovo.

Fig. 2. *Erannis defoliaria*, male, Bulgaria, Sofia.

Fig. 3. *Desertobia ankeraria*, male antenna, Gorna Matka.

Fig. 4. *Phigaliohybernia marginaria*, male antenna, Bulgaria, Kozhouh.

Fig. 5. *Phigaliohybernia aurantiaria*, male antenna, Bulgaria Kmetovtzi near Gabrovo.

Fig. 6. *Erannis defoliaria*, male antenna, Bulgaria, Sofia.

Plate 3.
Plate 4. Habitat of *Boudinotiana puella mediterranea* near Veles.
Plate 5. Habitat of Desertobia ankeraria, Gorna Matka.
Fig. 1. *Desertobia ankeraria*, male genitalia, dorsal view, Gorna Matka.

Fig. 2. *Desertobia ankeraria*, male genitalia, lateral view, Gorna Matka.

Fig. 3. *Phigaliohybernia marginaria*, male genitalia, dorsal view, Bulgaria, E Rhodopi, Studen Kladenetz.

Fig. 4. *Phigaliohybernia marginaria*, male genitalia, lateral view, Bulgaria, E Rhodopi, Studen Kladenetz.

Fig. 5. *Phigaliohybernia aurantiaria*, male genitalia, dorsal view, Bulgaria, Levunovo.

Fig. 6. *Phigaliohybernia aurantiaria*, male genitalia, lateral view, Bulgaria, Levunovo.

Plate 6.
Fig. 1. *Erannis defoliaria*, male genitalia, dorsal view, Bulgaria, Sofia.

Fig. 2. *Erannis defoliaria*, male genitalia, lateral view, Bulgaria, Sofia.

Plate 7.

Middle Vardar river valley near Veles Town, Babuna river in its flow in Vardar, 161m, N41°41’14.3”; E021°48’24.1”, 09.iii.2013, galleries of Populus alba (Plate 1, Fig. 4), S. Beshkov & V. Gashtarov leg. (Plate 1, Fig. 4). New species for Macedonia. Without any doubt one more species of this genus – Boudinotiana parthenias (Linnaeus, 1761) will be in Macedonia.

*Lycia graecarius* (Staudinger, 1861)
Middle Vardar river valley near Demir Kapiya Town, 130m, N41°24’12.6”; E022°17’19.2”, 08.iii.2013, maquis on limestone ground, Quercus coccifera, Quercus sp., Paliurus spina-christi, Platanus orientalis, S. Beshkov & V. Gashtarov leg. Males are well attracted to artificial light, but females (Plate 2, Fig. 1) are wingless and can be find during the day at rest on stones.

*Agriopis leucophaearia* ([Denis & Schiffermüller], 1775)
Skopie Region, Treska Gorge, near Gorma Matka Village, 455m, N41°58’18.0”; E021°17’50.1”, 09.iii.2013, Quercus, Juniperus, S. Beshkov & V. Gashtarov leg. at lamps and light traps. New species for the Republic of Macedonia. It seems not to be rare in Macedonia, and perhaps is not reported before because of its early flight period or even because of confusion with *Agriopis bajaria* ([Denis & Schiffermüller], 1775). Even in bad condition both species can be easy split by the male antennae – in *Agriopis bajaria* they have much longer lamellae.

*Desertobia ankeraria* Staudinger, 1861
Middle Vardar river valley near Demir Kapiya Town, 130m, N41°24’12.6”; E022°17’19.2”, 08.iii.2013, maquis on limestone ground, Quercus coccifera, Quercus sp., Paliurus spina-christi, Platanus orientalis, S. Beshkov & V. Gashtarov leg. at lamps and light traps (Plate 2, Fig. 2), seven male specimens; Skopie Region, Treska Gorge, near Gorma Matka Village, 455m, N41°58’18.0”; E021°17’50.1”, 09.iii.2013, Quercus, Juniperus, S. Beshkov & V. Gashtarov leg. at lamps and light traps (Plate 2, Fig. 3), five male specimens. New genus and a new species for Republic of Macedonia. Polymorphic species; there are specimens without (Plate 2, Fig. 2) and with (Plate 2, Fig. 3) discal spots on both fore wings and hind wings. This species is reported so late for Republic of Macedonia (and Bulgaria), because of confusion with species of the genus Phigaliopybernia: *P. marginaria* (Fabricuis, 1777) (Plate 2, Fig. 4) and *P. aurantiaria* (Hübner, 1799) (Plate 3, Fig. 1) or even with Erannis defoliaria (Clerck, 1759) (Plate 3, Fig. 2). Males of Desertobia ankeraria can be easily split from all these species on the shape of the antennae. In *D. ankeraria* male antennae have much shorter lamellae (Plate 3, Fig. 3) than in *P. marginaria* (Plate 3, Fig. 4), *P. aurantiaria* (Plate 3, Fig. 5) and in Erannis defoliaria (Clerck, 1759) (Plate 3, Fig. 6.). The male genitalia
of *D. ankeraria* (Plate 6, Fig. 1 & 2) are also very specific – with rounder valval tips and rounded uncus, valvae reaching beyond the tip of the uncus. In *P. marginaria* (Plate 6, Fig. 3 & 4) and in *P. aurantiaria* (Plate 6, Fig. 5 & 6) the valvae are much longer with pointed apices, the uncus is more elongated and pointed. In *Erannis defoliaria* (Plate 7, Fig. 1 & 2) the uncus is pointed and extends beyond the valva tip. Line drawings of male genitalia of dissected specimens of these taxa are illustrated in Leraut (2009). Brushed male genitalia and male antennae of all these taxa are described and illustrated in Beshkov & Zlatkov (2011). Females are wingless.

**Noctuidae**

*Lithophane ledereri* (Staudinger, 1892) (Plate 8)

Middle Vardar river valley near Demir Kapiya Town, 130m, N41°24’12.6’’; E022°17’19.2’’, 08.iii.2013, maquis on limestone ground, *Quercus coccifera, Quercus* sp., *Paliurus spina-christi, Platanus orientalis*, S. Beshkov & V. Gashtarov leg. at sugaring, more than 20 specimens. *Lithophane ledereri* has very few localities in Macedonia, but it seems not to be rare in low altitude near rivers with the larval food plant – *Platanus orientalis*. It comes to light, but is more frequent at a mixture of red wine and sugar. During the night of 8 March 2014 it was the most common species at sugar bait and was even more numerous than other species attracted at light.

**References**
