

New data about moths fauna (Lepidoptera: Noctuidae) from Kosovo

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Introduction

Family Noctuidae is the most numerous group among the order Lepidoptera. The noctuid moths fly at night. Their body is covered with hairs. The imagoes are photophilous and are gathering around light during nights. They fly with remarkably glossy eyes and therefore strongly resemble owls. Noctuid moths are significant and important pests in agriculture and forestry. Many species are polyphagous and attack numerous cultivated plants. These moths are with wide geographic distribution. Some of them are of great economic importance because of their harmfulness if the measures of their control are missing.

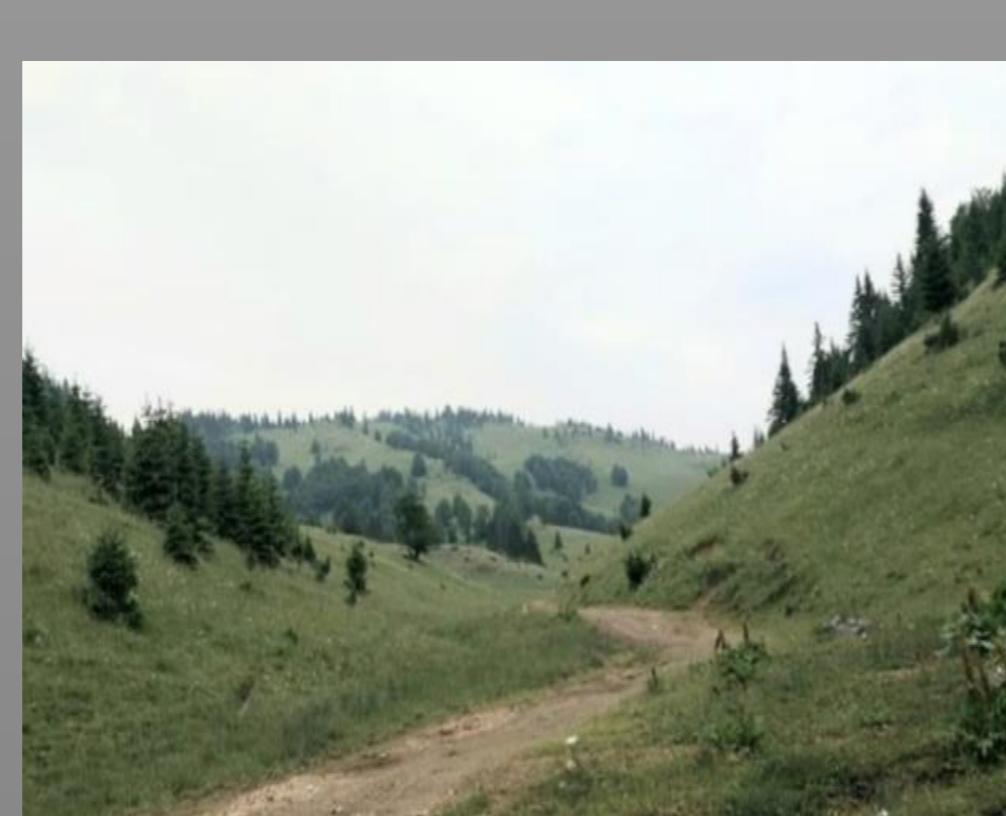
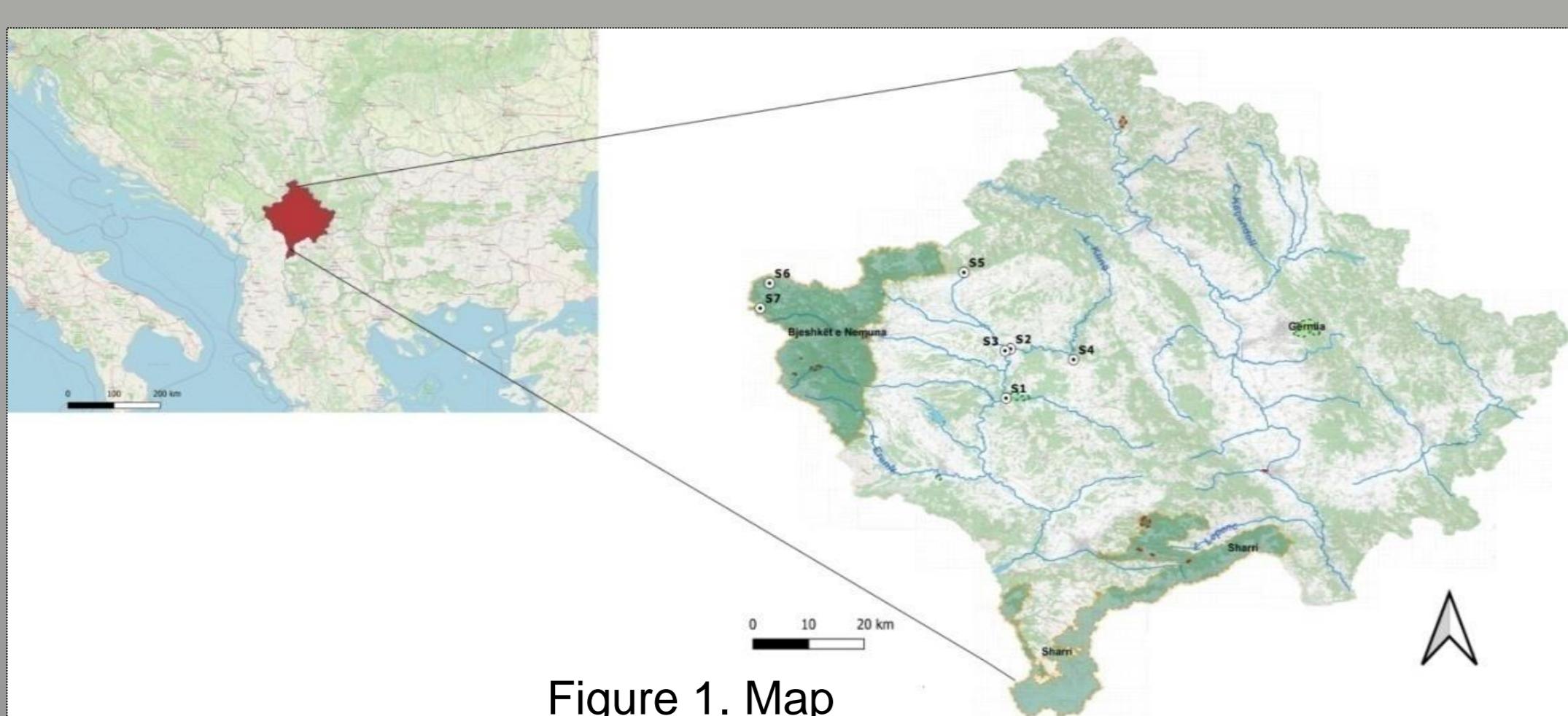
The first recordings of Lepidoptera fauna from Kosovo were published by (Rebel 1913, 1917a), 1917b; Rebel & Zerny 1931) and (Gradojević et al., 1930-31). Later we have some authors who have done research on Lepidoptera fauna in Kosovo, and we have some publications on authors of Lepidoptera Kosovo (Jakšić, 1999, 2016). These studies have so far been incomplete, but partial and fragmentary, so research in this area is needed to obtain accurate data on the taxonomy, distribution and ecology of moths fauna in Kosovo.

Material and Methods

Material was collected by the authors using a light trap, e.g., a 220 W mercury lamp. In a 220 W. petromax lamp. Samples were collected near the light source with an entomological grid. Samples were neutralized by diethyl ether. The material has been prepared, labeled, identified and stored at the Museum of Nature in the Northern Republic of Macedonia. The identification was performed by analyzing the morphological aspects on the basis of determinants: Karsholt & Razowski (1996), Janusz Nowacki the Noctuids (Lepidoptera, Nuctuidae) of Central Europe 1998, Rákosy, L.: Die Noctuiden Rumäniens.

Table 1. Locality data for the 7 sampling stations.

Code	Sampling Stations	Latitude °N	Longitude °E	Altitude m
S1	Mirushë	42.523213	20.569150	398
S2	Tikvesh	42.626053	20.579106	412
S3	Drini i Bardhë	42.622011	20.567077	392
S4	Qabiq,	42.603648	20.715278	537
S5	Istog	42.785749	20.478163	567
S6	Bogë	42.763243	20.057842	1598
S7	Haxhaj	42.711066	20.037702	1275



Results and Discussion

Noctuid specimens were collected in the seven different localities in Kosovo during 2019 (April to July). We found thirty five species, five species are first records for the noctuid fauna of Kosovo: *Hecatera cappa* (Hübner, 1809), *Simyra nervosa* (Denis & Schiffermüller, 1775), *Aegle semicana* (Esper, 1798), *Hecatera bicolorata* (Hufnagel, 1766) and *Mythimna (Hyphilare) congrua* (Hübner, 1817).

Table 2. Systematic list of butterflies of the Noctuidae family in Kosovo collected during April-July 2019. List of Recorded Species

Cod	Species	S1	S2	S3	S4	S5	S6	S7
S1	<i>Colocasia coryli</i> (Linnaeus, 1758)	+	+	+			+	+
S2	<i>Diachrysia chrysitis</i> (Linnaeus, 1758)	+	+					+
S3	<i>Hecatera cappa</i> (Hübner, 1809)*						+	
S4	<i>Autographa pulchrina</i> (Haworth, 1809)							+
S5	<i>Autographa gamma</i> (Linnaeus, 1758)	+				+		+
S6	<i>Aegle kaekeritziana</i> (Hübner, 1799)				+			
S7	<i>Aegle semicana</i> (Esper, 1798) *		+	+	+			
S8	<i>Calophasia lunula</i> (Hufnagel, 1766)	+	+					+
S9	<i>Teinoptera olivina</i> (Herrich-Schäffer, 1852)		+					
S10	<i>Heliothis viriplaca</i> (Hufnagel, 1766)	+	+	+				
S11	<i>Heliothis peltigera</i> (Denis & Schiffermüller, 1775)			+				
S12	<i>Pyrrhia umbra</i> (Hufnagel, 1766)			+				
S13	<i>Cosmia (Calymnia) trapezina</i> (Linnaeus, 1758)	+		+				
S14	<i>Cosmia (Cosmia) diffinis</i> (Linnaeus, 1767)	+	+					
S15	<i>Cosmia (Umia) affinis</i> (Linnaeus, 1767)				+			
S16	<i>Amphipyra (Amphipyra) tragopoginis</i> (Clerck, 1759)	+		+				
S17	<i>Simyra nervosa</i> (Denis & Schiffermüller, 1775) *	+		+				
S18	<i>Mythimna (Mythimna) vitellina</i> (Hübner, 1808)	+	+					
S19	<i>Acronicta (Triaena) psi</i> (Linnaeus, 1758) -	+						
S20	<i>Sideridis (Aneda) rivularis</i> (Fabricius, 1775)			+				
S21	<i>Agrotis exclamationis</i> (Linnaeus, 1758)	+					+	
S22	<i>Hecatera bicolorata</i> (Hufnagel, 1766) *		+					
S23	<i>Ipimorpha retusa</i> (Linnaeus, 1761)		+					
S24	<i>Ipimorpha subtusa</i> (Denis & Schiffermüller, 1775)				+			
S25	<i>Hecatera dysodea</i> (Denis & Schiffermüller, 1775)	+						
S26	<i>Macdunnoughia confusa</i> (Stephens, 1850)	+	+					+
S27	<i>Eremobia ochroleuca</i> (Denis & Schiffermüller, 1775)	+						
S28	<i>Lacanobia (Lacanobia) w-latinum</i> (Hufnagel, 1766)	+						
S29	<i>Craniophora ligustris</i> (Denis & Schiffermüller, 1775)	+		+				
S30	<i>Polyphaenis sericata</i> (Esper, 1787)	+						
S31	<i>Atypha pulmonaris</i> (Esper, 1790)	+				+		
S32	<i>Mormo maura</i> (Linnaeus, 1758)					+		
S33	<i>Dypterygia scabriuscula</i> (Linnaeus, 1758)	+	+		+			
S34	<i>Mythimna (Hyphilare) ferrago</i> (Fabricius, 1787)*	+	+					+
S35	<i>Axylia putris</i> (Linnaeus, 1761)		+			+		

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