

FOUR NEW SPECIES OF NOCTUIDAE (LEPIDOPTERA) FOR THE FAUNA OF SERBIA

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It has been recorded 516 species for the fauna Noctuidae (Lepidoptera) in Serbia until now. The species *Orectis proboscidata*, *Chortodes fluxa*, *Mythimna impura* and *Mythimna alopecuri* present new-founded species for the fauna of Serbia. The species were found in surrounding of Bor (east Serbia). Furthermore, the finding of species *Chortodes fluxa* presents the first one for former Yugoslavia.

KEY WORDS: Noctuidae, Lepidoptera, moths, fauna, Serbia

INTRODUCTION

The former research shows that it has been recorded the five hundred sixteen species of family Noctuidae in Serbia until now. Here are shown several interesting species that have been found in the surrounding of Bor (east Serbia), which have not been recorded until now for the fauna of Serbia.

AREA EXAMINED

The species were found in the surrounding of Bor (east Serbia). The localities of findings are marked on given map with UTM grids (Fig. 1).

The locality Stol is drawn on map with appropriate scale. The locality is marked as (EP99). The altitude is about 850 m.

The locality Brestovačka banja is drawn on map with appropriate scale. The locality is marked as (EP87). The altitude is about 350 m.

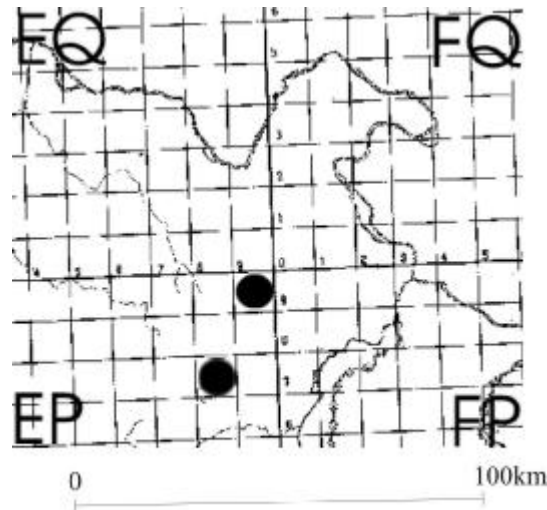


Fig. 1. Locality of finding

RESULTS

The following four species of family Noctuidae were found in the surrounding of Bor (east Serbia):

Orectis proboscidata (H-S). One male (Fig. 2) were found in Brestovačka banja, on July 17, 1999; the first female (Fig. 3) were found on the mountain Stol, on July 06, 2000 and the one more on July 24, 2000, on the same place.

Chortodes fluxa (Hbn.) (=hellmanni Ev.). The three male and one female (Fig. 4), were found in Brestovačka banja on July 17, 1999. One male (Fig. 5) was found on mountain Stol, on July 06, 2000.

Mythimna impura (Hbn.). One male (Fig. 6) was found in Brestovačka banja on August 14, 1997.

Mythimna alopecuri (Boisduval, 1840) (= pseudoalopecuri DeLaever, 1984). Two males were found in Brestovačka banja on August 05, 1999 and one female (Fig. 7) on July 17, 1999. One male (Fig. 8) was also found on the mountain Stol on July 24, 2000.



Fig. 2. *Orectis Proboscidata* H-S. - Male



Fig. 6. *Mythimna impura* Hbn. - Male



Fig. 3. *Orectis Proboscidata* H-S. - Female



Fig. 7. *Mythimna alopecuri* Boisduval - Female



Fig. 4. *Chortodes fluxa* Hbn. - Female



Fig. 8. *Mythimna alopecuri* Boisduval - Male



Fig. 5. *Chortodes fluxa* Hbn. - Male



Fig. 9. *Orectis Proboscidata* H-S.
- Genital preparation, Male

Fig. 2-9. Some morphological and anatomical aspects of four new species of Noctuide.

The above species are determined by genital armatures of male and female specimens, according to key for determination of HACKER, H., (1989) and RÁKOSY, L. (1996). The shown specimens and their genital preparations are deposited in the collection of D. Stojanović, Bor (east Serbia).

DISCUSSION

The species *Orectis proboscidata* (H-S). Distribution: It is the Ponto-Mediterranean species. Rare and local. Found in Hungary, Austria, Romania, Bulgaria, Croatia, Macedonia, Greece and Italy. Bionomy: It is the xerophilous species, occurred on warm and dry rocky habitats. Flight period: IX-VI. The larvae feed on dry leaves. Description of male's genital armature: *Harpae* with elongated *Cucullus*, which *Apex* has an angular extension. On the ventral side *Harpae* ended ovate. *Juxtae* elongated with two foots. There is an elongated groove along *Harpae*. *Uncus* bandlike, narrow. *Vesica* filled with sandy contents (Fig. 9).

The species *Chortodes fluxa* (Hbn.) (=hellmanni Ev.). Distribution: It is the Euroasiatic species, found sporadically in whole Europe, except the Iberian Peninsula and south France. Also recorded in Romania, Bulgaria and Greece. Bionomy: The species occurs in open and sandy habitats: steppes and meadows. Flight period: VII-IX. The larvae feed on leaves *Calamagrostis spp.*, *Carex spp.*, *Elymus spp.* Description of male's genital armature: *Harpae* with *corona* (Fig. 10), cleft; *Cucullus* hairy; *Ampulla* a hand like stump; *Clavus* spatulated; *Uncus* extended to the top and ended into two *crisetae*; *Tegumen* arises into two cones, which inner sides have a long hair. *Aedoeagus* has two sharp teeth on the orifice. *Vesica* with short band of teeth (Fig. 11).

The species *Mythimna impura* (Hbn.). Distribution: It is the Euroasiatic species, which is present almost in whole Europe; recorded in Bulgaria, Romania, in Greece at 1500m in altitude. In the Middle Europe usual and also known in Croatia. Bionomy: Hygrophilous species, occurring in open habitats, marshes, wet meadows. Flight period: V-IX. The larvae feed on *Gramineae*, *Phragmites*. It metamorphoses to pupa in land. Description of male's genital armature: *Harpae* paddled (Fig. 12); *Apex* on the *Cucullus* developed into the small, sharp peak, spine-like; *Clasper* curved; *Ampulla* curved; *Clavus* sharply curved on the top; *Uncus* bandlike; *Vesica* with a long band with very short teeth and a lot of bigger teeth (Fig. 13).

The species *Mythimna alopecuri*. (Boisduval, 1840). Distribution: Euroasiatic- Mediterranean species. The species is very rare and very similar with *Mythimna scirpi* and *Mythimna sicula*.

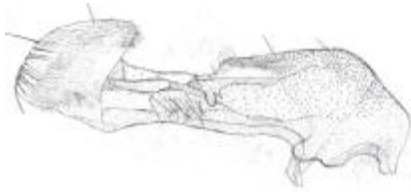


Fig. 10. *Chortodes fluxa* Hbn. - Male

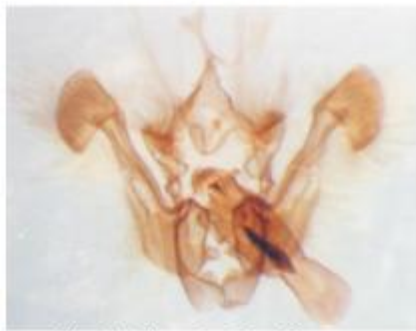


Fig. 11. *Chortodes fluxa* Hbn.
- Genital preparation, Male



Fig. 12. *Mythimna impura* Hbn.
- Harpae and Aedeagus



Fig. 13. *Mythimna impura* Hbn.
- Genital preparation, Male

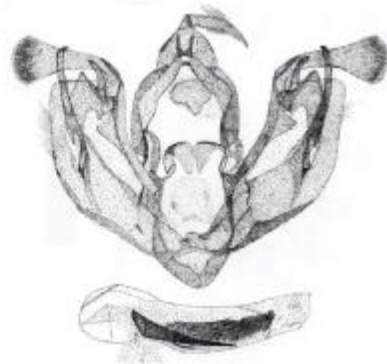


Fig. 14. *Mythimna alopecuri* Boisduval
- Genital preparation, Male



Fig. 15. *Mythimna alopecuri* Boisduval
- Genital preparation, Female

Fig. 10-15. Some morphological and anatomical aspects of four new species of Noctuide.

The species was recorded in south Russia, Turkey, Iraq, Bulgaria, Romania on the coast of Black Sea, France, Greece. In Montenegro it was recorded in Budva at 200-300m in altitude, on May 1, 1973 (a male and a female). It was also recorded in Dalmatia, Vodice, the 50m altitudes on May 2, 1973 (a male).

Bionomy: It is the xerothermophilous species, typical for forest steppes. Flight period: V-X. Description of male's genital armature: *Harpae* a small elongated paddle, *Uncus* bandlike, slightly cygnated. The top of *Cucullus* covered with more rows of small spines, the top of paddle without spines. *Sacculus* elongated into the spine. *Ampula* slightly curved. *Clasper* thick short thumb, between *Ampula* and *Sacculus*, like pyramid with three-sides. *Editum* like slight triangular leaf. *Vesica* with a big *Cornutus* and a numerous spines split into the two groups which meet each other and make right angle. The spines, which follow the line of big *Cornuti* twice longer than the others (Fig. 14). Description of female's genital armature: *Ductus bursae* band-like, *Appendix ductus* several characteristic slanting grooved short *Signa*, projection *Ductus bursae* short. There is a part of longer bandlike *Signa* which rise from *Ductus bursa*. *Bursae copulatrix* like a bubble (Fig. 15).

It is expected that further research will show wider distribution of given species in Serbia and Montenegro.

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**ЧЕТИРИ НОВЕ ВРСТЕ NOCTUIDAE (LEPIDOPTERA) ЗА
ФАУНУ СРБИЈЕ**

Д. Стојановић

И з в о д

У Србији је до сада забележено 516 врста за фауну *Noctuidae* (Lepidoptera). Врсте *Orectis proboscidata*, *Chortodes fluxa*, *Mythimna impura* и *Mythimna alopecuri* представљају новооткривене врсте за фауну Србије. Врсте су откривене у околини Бора (источна Србија).

Откриће врсте *Chortodes fluxa* у Србији, представља и први налаз ове врсте у екс Југославији.

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