



## OCCURRENCE OF THE SATYRINE BUTTERFLY *LASIOMMATA PETROPOLITANA* (FABRICIUS, 1787) CONFIRMED IN CROATIA

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Mihoci, I. & Šašić, M.: Occurrence of the satyrine butterfly *Lasiommata petropolitana* (Fabricius, 1787) confirmed in Croatia. *Nat. Croat.*, Vol. 18, No. 1, 175–180, 2009, Zagreb.

A Northern Wall Brown *Lasiommata petropolitana* (Fabricius, 1787) was found in a closed beech forest beside the mountain trail heading from Mt. Platak to Mt. Snježnik in June 2003. We discuss the ecological characteristics and distribution of this species in Croatia. We are including the Northern Wall Brown as 192nd species on the checklist of butterflies of Croatia.

**Key words:** *Lasiommata petropolitana*, occurrence, Croatian fauna, Lepidoptera, Nymphalidae

Mihoci, I. & Šašić, M.: Okaš sjeverni pjegavac *Lasiommata petropolitana* (Fabricius, 1787) je potvrđen u fauni Hrvatske. *Nat. Croat.*, Vol. 18, No. 1, 175–180, 2009, Zagreb.

Sjeverni pjegavac *Lasiommata petropolitana* (Fabricius, 1787), leptir iz porodice šarenaca, potporodice okaša, pronađen je u bukovoj šumi pored planinskog puta s Platka na Snježnik u lipnju 2003. godine. U radu raspravljamo o dvojbenosti publiciranih nalaza ove vrste u Hrvatskoj i uvrštavamo ga na Popis danjih leptira Hrvatske kao 192. vrstu zabilježenu u hrvatskoj fauni.

**Ključne riječi:** *Lasiommata petropolitana*, leptiri, šarenici, Hrvatska

The satyrine butterfly *Lasiommata petropolitana* (Fabricius, 1787) (Fig. 1) is a Euro-Siberian species with a disjunct distribution in Europe. According to GOTTHARD (1998), in northern Europe (Fennoscandia, Baltic and Russia) *L. petropolitana* is a lowland forest species, while in southern and central Europe it occurs only in higher mountains (the Alps, the Pyrenées, the Carpathians, and in the mountains of the Balkans) at altitudes above 500 meters.

*L. petropolitana* has one generation per year, with adults flying from the end of April till the beginning of August (LEPIDOPTEREN-ARBEITSGRUPPE, 1987; TOLMAN & LEWINGTON, 1997; BENEŠ & KONVIČKA, 2002). According to GOTTHARD (1998) in Scandinavia the species is univoltine and this is true also in the Alps, but in extreme years, some individuals develop directly and fly in September (GOTTHARD, 1998). *L.*



**Fig. 1.** *Lasiommata petropolitana* ♀ (Fabricius, 1787) and the similar *L. maera* ♀ (Linnaeus, 1758).

*petropolitana* is an alpicol species because altitude is a dominant ecological factor, and it is classified in a subformation of montane species that chiefly inhabit woodland biotopes (KUDRNA, 1986). However, as stated by GOTTHARD (1998), in northern Europe *L. petropolitana* is a lowland forest species. The life-cycle of the species has been studied in the laboratory, and the development characteristics are very well known from captivity rearing (GOTTHARD, 1998). The species feed as larvae during different parts of the season, before and after summer solstice, respectively. The species has a larval winter diapause in the Swiss Alps, in contrast to the pupal diapause displayed in the French Alps and in the north. The larvae feed on various grasses from the genera *Festuca*, *Poa* and *Dactylis*, and there is no indication that this differs between the populations (GOTTHARD, 1998).

In published literature *L. petropolitana* (syn: *hiera* auct.) was recorded in Croatia at the end of the 19th and the beginning of the 20th century at a site above Samobor (VUKOTINOVIĆ, 1879; GRUND, 1916), near Vinkovci (KOČA, 1901), somewhere in Dalmatia (STAUDER, 1922) and nowadays above Beli on the island Cres (MICEVSKI & MICEVSKI, 2006). MLADINOV & LORKOVIĆ (1985), Lorković (unpublished manuscript) and STAUDER (1922) assumed that specimens from Samobor, Vinkovci and Dalmatia were misidentified specimens of similar *L. maera*. According to WITHRINGTON & VEROVNIK (2008) the recent finding of the Northern Wall Brown above Beli (Cres Island) is also doubtful (Tab. 1, Fig. 2). The Northern Wall Brown was not considered a member of Croatian fauna by MLADINOV (1973), JAKŠIĆ (1988), VAN SWAAY & WARREN (1999) and <http://www.faunaeur.org/>. No specimens of *L. petropolitana* from Croatia are kept in the butterfly collections of the CNHM Zagreb. According to habitat and ecological preferences (KUDRNA, 1986) we can conclude that all previously published findings of this species are doubtful.

On June, 11th 2003, one female specimen of the Northern Wall Brown was found beside the mountain trail heading from Mt. Platak to Mt. Snježnik at approximately

Tab. 1. Previously published records of *Lasionmata petropolitana* in Croatia.

Species /synonym	Date	Locality	Legator	Reference	Comment
<i>Pararge hiera</i>	–	Samobor	Vormastiny	VUKOTINOVIC, 1879	Doubtful according to MLADINOV & LORKOVIC, 1985 (probably <i>L. maera</i> )
<i>Pararge hiera</i>	–	Vinkovci (Slavonia)	Koča	KOČA, 1901	around Vinkovci, doubtful according to Lorković's unpublished manuscript
<i>Pararge hiera</i>	–	Samobor	Vukotinović	GRUND, 1916	Doubtful according to MLADINOV & LORKOVIC, 1985 (probably <i>L. maera</i> )
<i>Pararge hiera</i>	–	Dalmatia	Skala	STAUDER, 1922	Doubtful according to author (probably ♂ <i>L. maera</i> from Mt. Dinara)
<i>L. petropolitana</i>	September, 11th 2005.	Beli (Cres island)	Micevski & Micevski	MICEVSKI & MICEVSKI, 2006	above Beli, forest clearing
<i>L. petropolitana</i>	–	Cres island	Micevski & Micevski	WITHERINGTON & VEROVNIK, 2008	Doubtful according to authors



Fig. 2. Records of *Lasiommata petropolitana* in Croatia (black triangles – published (doubtful) records, red triangle – a new record).

1200 m a.s.l. in a closed beech forest. One voucher specimen is preserved and placed in the central butterfly collection of CNHM Zagreb, registered as inv. no. 10808. The systematics follows KARSHOLT & RAZOWSKI (1997) and determination using wing morphology was done according to LEPIDOPTEROLOGEN-ARBEITSGRUPPE (1987), HESSELBARTH *et al.* (1995a, 1995b), TOLMAN & LEWINGTON (1997), TUZOV *et al.* (1997) and specimens of *L. petropolitana* collected abroad and stored in CNHM butterfly collections. Discussing the record in wider geographic frame is necessary, as this is a rather isolated population given the known distribution of the species in the former Yugoslavia (JAKŠIĆ, 1988), e.g. there are no records between Slovenian Alps and mountains in central Bosnia and Herzegovina.

After recognizing *Leptidea reali* Reissinger, 1989, *Coenonympha oedippus* (Fabricius, 1787), *Lycaena ottomanus* (Lefébvre, 1830), *Polyommatus (Agrodiaetus) damon* (Denis

and Schiffermüller, 1775), *Hipparchia aristaeus* (Bonelli, 1826) and *Danaus chrysippus* (Linnaeus, 1758) (LORKOVIĆ, 1993, KUČINIĆ *et al.*, 1999; MIHOČI *et al.*, 2005, 2006; MICEVSKI & MICEVSKI, 2006; PERKOVIĆ, 2006) as members of the Croatian butterfly fauna, we are including the Northern Wall Brown as the 192nd species of the butterfly checklist.

## Acknowledgements

We would like to thank the anonymous referee for comments and suggestions.

*Received December 15, 2008*

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## SAŽETAK

### Okaš sjeverni pjegavac *Lasiommata petropolitana* (Fabricius, 1787) potvrđen u fauni Hrvatske

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Sjeverni pjegavac *Lasiommata petropolitana* (FABRICIUS, 1787) je vrsta koja ima disjunktan areal na području Europe. U sjevernoj Europi se pojavljuje na nižim nadmorskim visinama, dok se južnije javlja u višim planinskim područjima (Alpama, Pirenejima, Karpatima, te planinama Balkana) na visinama iznad 500 metara (GOTTHARD, 1998). Prema KUDRNI (1986) vrsta je alpikolna (čimbenik koji određuje njen ekološki status je nadmorska visina), oblika montane vrste koja nastanjuje šumske biotope, osim u sjevernoj Europi (GOTTHARD, 1998).

U lipnju 2003. godine sjeverni pjegavac je pronađen u bukovoj šumi pored planinskog puta koji vodi s Platka na Snježnik na nadmorskoj visini od oko 1200 metara. Dosadašnji podaci o nalazu vrste na otoku Cresu (MICEVSKI & MICEVSKI, 2006) su dvojbeni, o čemu se već diskutira u radu WITHRINGTON & VEROVNIK (2008). Obzirom na biologiju vrste dosadašnji publicirani nalazi u Hrvatskoj (Samobor, Vinkovci, negdje u Dalmaciji) su *a priori* dvojbeni (VUKOTINOVIĆ, 1879; KOČA, 1901; GRUND, 1916; STAUDER, 1922). Pregledom zbirke leptira Hrvatskog prirodoslovnog muzeja u Zagrebu primjerci vrste sjevernog pjegavca iz Hrvatske nisu pronađeni.

Temeljem pronalaska vrste na planinskom putu s Platka na Snježnik uvrštavam ga na Popis danjih leptira Hrvatske kao 192. vrstu zabilježenu u hrvatskoj fauni.