

CONTRIBUTION TO KNOWLEDGE OF THE BUTTERFLIES
OF MT. PAŠTRIK, SERBIA
(LEPIDOPTERA: HESPERIOIDEA AND PAPILIONOIDEA)

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This paper presents data on 98 species of butterflies from Mt. Paštrik (Serbia, Kosovo and Metohija). The distribution of these species in the fauna of Serbia is analyzed.

KEY WORDS: Butterflies, fauna, Paštrik Mt.

INTRODUCTION

Mount Paštrik (1988 m) is situated in the western part of Metohija. Due to its isolated and inaccessible position, it has remained relatively unstudied in the biological sense. From the valley of the Beli Drim (277 m) to the highest peak, this mountain spans an altitudinal range of 1711 m, but it has a profile hardly 6 km in length. Without any springs or watercourses and with well-developed limestone relief and sub-Mediterranean influence in the valley of the Beli Drim (in the area transformed into Vrbničko Lake), the mountain shows specific features unique for Serbia. The geological base is composed of Cretaceous limestones. It has a developed soil series: lithosol on compact limestone and brownized red soil on compact limestone in the region of Gorožup, and typical rendzina on compact limestone and bare rock near the mountaintop. According to the climatic regionalization of Serbia (RAKIĆEVIĆ, 1980), the Drim valley (which lies at the base of Mt. Paštrik) is situated in a region of altered Mediterranean climate. From the base to the top of Mt. Paštrik, there is a series of submontane,

montane, and high–mountain climatic zones. The mountain also has a distinct northeastern area with an intrazonal phytoclimate.

Among the first to analyze the flora of Mt. Paštrik was KOŠANIN (1939), who listed over 700 plant species for the area of Northern Albania and Metohija. The vegetation of Mt. Paštrik is dominated by thermophilous deciduous forests from the alliance *Ostryo–Carpinion orientalis* Horv., 1954. According to KRASNIĆI (1972), this alliance includes the associations *Syringo–Carpinetum orientalis* (Rudski 49 *emend.* B. Jovanović 1953) Mišić 1967, *Dioscoro–Carpinetum orientalis* Blečić *et* Lakušić 1966 and *Corylus colurna* (Blečić 1958) Tomić 2004. REXHEPI & RUŽIĆ (1985) also described the association *Ostryo–Quercetum cerris* from Mt. Paštrik. Among these associations, especially important is the one of low woodland and scrub of oriental hornbeam – *Carpinetum orientalis scardicum* – which also includes the Macedonian oak, *Quercus macedonica* (= *Q. troyana*). This species has been preserved in the area under prominent Mediterranean influence and is of relict character.

First studies on butterflies of Mt. Paštrik were performed in late May and early June of 1918 by associates of the Natural History Museum in Vienna. The results of these studies were published by REBEL & ZERNY (1931). New data were provided by ZEČEVIĆ (2002) 70 years later. Jakšić visited Mt. Paštrik on July 1st and 2nd 1996 in company of the botanists D. Pejčinović and Z. Krivošej. These data were partially published by JAKŠIĆ & RISTIĆ (1999), while a complete overview of collected material is presented in this paper.

MATERIAL AND METHODS

Butterfly specimens were collected in the well–known classical way (with an entomological net). Material was collected on July 2nd 1996 during a field trip with the botanists D. Pejčinović and Z. Krivošej in the area between Gorožup at 590 m a.s.l. (N 42°10' E 20°33', DM 67) and Mereja at 1528 m a.s.l. (N 42°12' E 20°33', DM 67). The collected specimens were prepared and conserved in Jakšić's collection. Nomenclature and taxonomy employed in the paper follow KARSHOLT & RAZOWSKI (1996).

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RESULTS AND DISCUSSION

Altogether 98 species of butterflies (Hesperioidea and Papilionoidea) was recorded. The following list of species contains data obtained from REBEL & ZERNY, 1931 (A); ZEČEVIĆ, 2002 (B); and Jakšić (July of 1996) (C).

Superfamily HESPERIOIDEA

Family Hesperidae

- | | |
|------------------------------------------------------|-----------------|
| 1. <i>Erynnis tages</i> (Linnaeus, 1758) | A |
| 2. <i>Carcharodus lavatherae</i> (Esper, 1783) | A |
| 3. <i>C. floccifera</i> (Zeller, 1847) | A, C (2♂♂, 1♀) |
| 4. <i>Spialia phlomidis</i> (Herrich-Schäffer, 1845) | C (2♂♂) |
| 5. <i>S. orbifer</i> (Hübner, 1823) | A |
| 6. <i>Pyrgus sidae</i> (Esper, 1784) | A, C (1♂) |
| 7. <i>P. malvae</i> (Linnaeus, 1758) | A |
| 8. <i>P. serratulae</i> (Rambur, 1839) | A |
| 9. <i>P. alveus</i> (Hübner, 1803) | B, C (1♂, 1♀) |
| 10. <i>Thymelicus lineola</i> (Ochsenheimer, 1808) | A, C (3♂♂, 3♀♀) |
| 11. <i>Hesperia comma</i> (Linnaeus, 1758) | A |
| 12. <i>Ochlodes venata</i> (Bremer & Grey, 1853) | A, C (2♂♂, 2♀♀) |

Superfamily PAPILIONOIDEA

Family Papilionidae

- | | |
|---------------------------------------------------|---|
| 13. <i>Parnassius mnemosyne</i> (Linnaeus, 1758) | A |
| 14. <i>Iphiclides podalirius</i> (Linnaeus, 1758) | A |
| 15. <i>Papilio machaon</i> Linnaeus, 1758 | A |

Family Pieridae

- | | |
|----------------------------------------------------|----------------|
| 16. <i>Leptidea sinapis</i> (Linnaeus, 1758) | A |
| 17. <i>L. reali</i> Reissinger, 1989 | C (1♂) |
| 18. <i>Anthocharis cardamines</i> (Linnaeus, 1758) | A |
| 19. <i>Euchloe ausonia</i> (Hübner, 1804) | C (1♂) |
| 20. <i>Aporia crataegi</i> (Linnaeus, 1758) | A, C (1♂) |
| 21. <i>Pieris brassicae</i> Linnaeus, 1758) | C (2♂♂, 1♀) |
| 22. <i>P. manni</i> (Mayer, 1851) | A |
| 23. <i>P. rapae</i> (Linnaeus, 1758) | C (4♂♂, 2♀♀) |
| 24. <i>P. ergane</i> (Geyer, 1828) | C (2♂♂, 1♀) |
| 25. <i>P. napi</i> (Linnaeus, 1758) | A, C (1♂) |
| 26. <i>Colias croceus</i> (Fourcroy, 1785) | A |
| 27. <i>C. alfariensis</i> Ribbe, 1905 | C (1♀) |
| 28. <i>Gonepteryx rhamni</i> (Linnaeus, 1758) | A, C (2♂♂, 1♀) |

Family Lycaenidae

- | | |
|-------------------------------------------------|---------------|
| 29. <i>Hamearis lucina</i> (Linnaeus, 1758) | A, B |
| 30. <i>Lycaena phlaeas</i> (Linnaeus, 1761) | A |
| 31. <i>L. virgaureae</i> (Linnaeus, 1758) | A, B |
| 32. <i>L. candens</i> (Herrich-Schäffer, 1844) | A, B, C (2♂♂) |
| 33. <i>Thecla betulae</i> (Linnaeus, 1758) | B |
| 34. <i>Neozephyrus quercus</i> (Linnaeus, 1758) | C (2♂♂, 1♀) |

35. *Callophrys rubi* (Linnaeus, 1758) B
 36. *Satyrium spini* (Denis & Schiffermüller, 1775) A, C (1♂, 3♀♀)
 37. *S. ilicis* (Esper, 1779) A
 38. *S. acaciae* (Fabricius, 1788) A, B, C (3♂♂, 2♀♀)
 39. *Cupido minimus* (Fuessly, 1775) A, B, C (1♂)
 40. *Celastrina argiolus* (Linnaeus, 1758) C (1♂)
 41. *Pseudophilotes vicrama* (Moore, 1865) C (1♂)
 42. *Scolitantides orion* (Pallas, 1771) A
 43. *Glaucopsyche alexis* (Poda, 1761) A
 44. *Maculineaalcon* Denis & Schiffermüller, 1775 A, B
 45. *Plebeius argus* (Linnaeus, 1758) C (4♂♂, 1♀)
 46. *P. idas* (Linnaeus, 1761) C (1♂, 2♀♀)
 47. *P. argyrognomon* (Bergsträsser, 1779) A, B, C (6♂♂, 2♀♀)
 48. *Aricia eumedon* (Esper, 1780) A, B
 49. *A. agestis* (Denis & Schiffermüller, 1775) A, B
 50. *A. anteros* (Freyer, 1838) A
 51. *Polyommatus (Cyaniris) semiargus* (Rottemburg, 1775) A
 52. *Polyommatus dorylas* (Denis & Schiffermüller, 1775) C (4♂♂)
 53. *P. amandus* (Schneider, 1792) A, B
 54. *P. icarus* (Rottemburg, 1775) A, C (1♂)
 55. *P. eroides* (Frivaldszky, 1835) A, C (1♂)
 56. *P. daphnis* (Denis & Schiff., 1775) C (1♂, 1♀)
 57. *Polyommatus (Meleageria) bellargus* (Rottemburg, 1775) A
 58. *P. (M.) coridon* (Poda, 1761), Srebrnkasti plavac A, B
 59. *Polyommatus (Agrodiaetus) admetus* (Esper, 1783) A, B
 60. *P. (A.) damon* (Denis & Schiffermüller, 1775) A, B

Family Nymphalidae

61. *Argynnis paphia* (Linnaeus, 1758) C (1♂)
 62. *A. aglaja* (Linnaeus, 1758) A, C (1♂)
 63. *A. adippe* (Denis & Schiffermüller, 1775) A, B
 64. *A. niobe* (Linnaeus, 1758) C (1♂, 1♀)
 65. *Issoria lathonia* (Linnaeus, 1758) A, C (1♂)
 66. *Brenthis hecate* (Denis & Schiffermüller, 1775) A, C (2♂♂, 2♀♀)
 67. *Boloria (Clossiana) dia* (Linnaeus, 1767) A, C (1♂)
 68. *Vanessa atalanta* (Linnaeus, 1758) A
 69. *V. cardui* (Linnaeus, 1758) A, C (1♀)
 70. *Inachis io* (Linnaeus, 1758) C (1♂)
 71. *Aglais urticae* (Linnaeus, 1758) A
 72. *Nymphalis polychloros* (Linnaeus, 1758) A, C (1♀)
 73. *Euphydryas aurinia* (Rottemburg, 1775) A, C (5♂♂, 4♀)
 74. *Melitaea cinxia* (Linnaeus, 1758) A, B, C (1♂)
 75. *M. athalia* (Rottemburg, 1775) C (1♂)
 76. *Apatura iris* (Linnaeus, 1758) B
 77. *Kirinia roxelana* (Cramer, 1777) C (1♂)
 78. *Lasiommata megera* (Linnaeus, 1767) A
 79. *L. petropolitana* (Fabricius, 1787) A
 80. *L. maera* (Linnaeus, 1758) A
 81. *Coenonympha arcania* (Linnaeus, 1761) A, B, C (1♂, 1♀)
 82. *C. pamphilus* (Linnaeus, 1758) A, C (1♂)
 83. *Pyronia tithonus* (Linnaeus, 1767) A
 84. *Aphantopus hyperantus* (Linnaeus, 1758) B
 85. *Maniola jurtina* (Linnaeus, 1758) A, C (2♂♂, 1♀)
 86. *Hyponephele lycaon* (Rottemburg, 1775) A, C (1♀)
 87. *Erebia medusa* (Denis & Schiffermüller, 1775) A, C (1♀)

88. <i>E. ottomana</i> Herrich–Schäffer, 1847	B
89. <i>E. melas</i> (Herbst, 1796)	A, B
90. <i>E. oeme</i> (Hübner, 1804)	A, B
91. <i>Melanargia galathea</i> (Linnaeus, 1758)	A, C (2♂♂, 1♀)
92. <i>M. larissa</i> (Geyer, 1828)	A, B, C (2♀♀)
93. <i>Satyrus ferula</i> (Fabricius, 1793)	A, B, C (4♂♂, 2♀♀)
94. <i>Hipparchia fagi</i> (Scopoli, 1763)	A, B
95. <i>H. syriaca</i> (Staudinger, 1871)	C (2♂♂, 2♀♀)
96. <i>H. delattini</i> Kudrna, 1975	A, B, C (2♀♀)
97. <i>Brintesia circe</i> (Fabricius, 1775)	B
98. <i>Chazara briseis</i> (Linnaeus, 1764)	A

The presented data show that REBEL & ZERNY (1931) recorded 71 species on Mt. Paštrik, ZEČEVIĆ (2002) 28, and JAKŠIĆ (1996) 52. JAKŠIĆ & RISTIĆ (1999) used the collected material to publish data on two species. This paper presents the first published records of 20 species on Mt. Paštrik: *S. phlomidis*, *L. reali*, *E. ausonia*, *P. brassicae*, *P. rapae*, *P. ergane*, *C. alfacariensis*, *N. quercus*, *C. argiolus*, *P. vicrama*, *P. argus*, *P. idas*, *P. dorylas*, *P. daphnis*, *A. paphia*, *A. niobe*, *I. io*, *M. athalia*, *K. roxelana*, and *H. syriaca*. They bring the total number of butterfly species recorded on Mt. Paštrik to 98. The list of butterfly species of Mt. Paštrik by families is presented in Tab. I.

Table I

Butterfly species on Mt. Paštrik according to families.

Family	Number of recorded species
Hesperiidae	12
Papilionidae	3
Pieridae	13
Lycaenidae	32
Nymphalidae	38
Total	98

The species *Spialia phlomidis* (Herrich–Schäffer, 1845, fam. *Hesperiidae*) is recorded on Mt. Paštrik as new for Serbia, and this remains the only known record of that species in our country.

Studies on the butterflies of Mt. Paštrik are still in the initial phase, and comparison with the adjacent Prokletije and Šar Planina Mountains would not be appropriate due to important biogeographical differences. The most similar mountain to Mt. Paštrik is Mt. Koritnik, but data for that mountain are still insufficient. Both these mountain massifs are especially important from the

biogeographical and faunistic aspects, and they deserve more attention in the near future. The data collected so far represent a significant contribution to knowledge of the fauna of this group of insects.

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ПРИЛОГ ПОЗНАВАЊУ ДНЕВНИХ ЛЕПТИРА ПАШТРИКА,
СРБИЈА
(LEPIDOPTERA: HESPERIOIDEA И PAPILIONOIDEA)

ПРЕДРАГ ЈАКШИЋ

ИЗВОД

На основу података које су дали Ребел и Черни, када је на Паштрику утврђено присуство 71 врсте (REBEL & ZERNY, 1931), Зечевић, који је утврдио 28 врста (ZEČEVIĆ, 2002), и наших података о присуству 52 врсте, сада можемо говорити о присуству 98 врста дневних лептира. Од тог материјала ЈАКШИЋ & RISTIĆ (1999) су раније публиковали податке за две врсте. У односу на постојеће литературне податке у овом раду су по први пут дати подаци за 20 врста са Паштрика:

S. phlomidis, *L. reali*, *E. ausonia*, *P. brassicae*, *P. rapae*, *P. ergane*, *C. alfacariensis*, *N. quercus*, *C. argiolus*, *P. vicrama*, *P. argus*, *P. idas*, *P. dorylas*, *P. daphnis*, *A. paphia*, *A. niobe*, *I. io*, *M. athalia*, *K. roxelana* и *H. syriaca*.

Ови резултати се могу сматрати иницијалним и као такви само указују на фаунистичко богатство простора. Неопходна су даља истраживања да би се употпунило знање о фауни ове групе инсеката.

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