

## A note on the status of the rare species *Kirinia climene* (Esper, 1783) (Nymphalidae) in Serbia

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**Abstract.** In field surveys through eastern Serbia in 2010, two new colonies of *Kirinia climene* (Esper, 1783) were found on Stara Planina Mt. and Svrljiške Planine Mts. These findings, together with an unpublished record from the vicinity of Zaječar, represent valuable new data for the Serbian butterfly fauna. The exact localities and habitat description are provided together with a map of the currently known distribution of *K. climene* in Europe.

### Introduction

*Kirinia climene* (Esper, 1783) ranges from the Middle East (Turkey, Syria, Iraq, Iran), Ukraine, Caucasus, southern Russia to southeastern Europe (Tshikolovets 2003). Towards its western limit, in the Balkan Peninsula, it is known from Romania, Bulgaria, Greece, Macedonia, Albania and Serbia (Tolman & Lewington 2008). The species inhabits small clearings in deciduous or mixed woodlands, keeping close to the forest edge and being fond of resting in the forest canopy (Essayan & Jugan 1993).

In all five of the Balkan countries records are scarce, and *K. climene*'s distribution can be described as fragmented (Fig. 1). Moreover, this appears to be one of those species that very often remain undetected or overlooked due to its lack of prominent colours and markings. A good example of this is the situation with *K. climene* in Bulgaria (Kolev 2003). For a long time a single specimen in the Museum of Natural History in Sofia, collected by Haberhauer in 1896, was the only proof of the existence of this species in the country. Decades passed without new records, so descriptions such as “extremely rare” and “probably extinct” were repeatedly used. It came as a surprise when, between 1990 and 1992, this species was “rediscovered” (Essayan & Jugan 1993), and in the period that followed the species was recorded in several localities in surprising numbers. The situation was similar in Greece, whose fauna has been extensively studied, where the species was first recorded only in the 1970s (Willemse 1977).

The history of the species in Serbia mostly followed the same pattern. For a long time it was known from a single locality only, Mt. Stol (Zečević 2002, Stojanović pers. comm.). Recent entomological surveys provided one additional record from Mt. Rtanj (Jakšić 2008).





Fig. 1. Distribution map of *Kirinia climene* in Serbia and neighbouring countries. Colonies considered extinct are marked in yellow, and new records are in red.

## Results

**Svrliške Planine Mts., Južni Izvor village – 0610899 E, 4805885 N, 34 T, 556 m.** The assumption that *K. climene* is more widespread than previously considered proved to be correct for Serbia in 2010, when the authors, together with Duncan Trew, visited some poorly researched areas and some totally unknown localities. The first new record came on June 22, from the village of Južni Izvor (0610899 E, 4805885 N, 34 T, 556 m). First to be noticed was a mating couple (Fig. 2), and further collecting produced another three males and one female. The same place was revisited on July 3 when only one tattered male was found. The habitat of this butterfly in this location represents an intermediate stage in succession from pasture or agricultural land towards a deciduous forest. The area consists mostly of bushes, interspersed with grass and rock clearings. The surrounding area is being cultivated, and no dense forest is to be found in the vicinity. Somewhat similar habitats were reported from nearby Bulgaria (Kolev 2003) and Macedonia (Franeta pers. comm.), where the butterflies were found in grassy meadows with young trees, surrounded by deciduous forest.

**Mt. Stara Planina, pastures above Rudinje village – 0628256 E, 4795341 N, 34 T, 836 m.** Another locality where *K. climene* was discovered is Stara Planina Mt. This is a large massif spreading through Serbia and Bulgaria and it is known for its exceptional butterfly diversity. The *K. climene* population was discovered on July 9, 2010,





Fig. 2. Mating couple of *Kirinia climene*, Južni Izvor village, 22.vi.2010 (photo M. Đurić).

some 20 km from the first site, in the mountain pastures above the village of Rudinje. The habitat consisted of xerothermic grassland and rocky clearings surrounded by deciduous oak forest (mostly *Quercus petrea*) and some conifer plantations of *Larix* sp. This time, only one male specimen was found resting in the lower parts of an oak tree.

**Zaječar, Beli Breg – 0600939 E, 4864800 N, 34 T, 170 m.** The third finding came as a surprise while second author was browsing through his butterfly collection. The review of the collection resulted in one female labeled “SERBIA, Zaječar, Beli breg; July 16. 2001”. The locality marked that way actually denotes a *Quercus* sp. plantation in Markovo Polje. The surrounding area consists of agricultural land and abandoned meadows, not being mowed for at least 10 years.

## Discussion

Current literature gives an altitude range of 700–1600 m (Tolman & Lewington 2008, Lafranchis 2004), and the new record from above Rudinje (836 m) comes within this range, but the Južni Izvor (556 m) and Zaječar (170 m) fall outside that altitude span, which may require a revision of the cited altitude range. With suitable lowland habitats present throughout eastern Serbia, new records of this butterfly are highly likely.



New records of *K. climene* are important at the national level since the species is included in the Red Data Book of Serbian Butterflies (Jakšić 2003) as rare (R), and is therefore strictly protected in Serbia. At the same time, it is categorized as least concern (LC) in the European Red List of Butterflies (Van Swaay et al. 2010) and not included in European Habitats directive. Although the habitats of the species seem to be widespread and not threatened at the moment in eastern Serbia, the noticeable depopulation in this region will inevitably lead to habitat loss due to disappearance of low intensity grazing. This, in the long run, will result in closed canopy forests dominating the region and in habitat loss for most of the rare butterfly species. An appropriate solution could be an encouragement of traditional agriculture, but is unlikely to be implemented in a foreseeable future due to the political and economic situation in Serbia.

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