

**Kirinia climene (Esper, 1786), new to Greece (Lep., Satyridae)**

by

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**ABSTRACT.** — *Kirinia climene* (Esper, 1786) is recorded from Greece for the first time. A survey of the records of this species in the Balkans is given, as far as could be traced in the literature.

In order to get more information about the Greek insect fauna our family, accompanied by our friend J. Tilmans, spent the summer-holidays of 1976 in this country. Among other areas, part of the Píndhos range was visited. A quite interesting locality proved to be Khrisomiléa, which is a little village at 900 metres altitude on the eastern slopes of the Píndhos range, West of Tríkkala. From this village a forest track leads southwards to a road which connects Tríkkala and Árta. We followed this track from Khrisomiléa over a distance of about 7 kilometres. The area is rich in water, shown by many little streams and abundant vegetation. The surroundings of

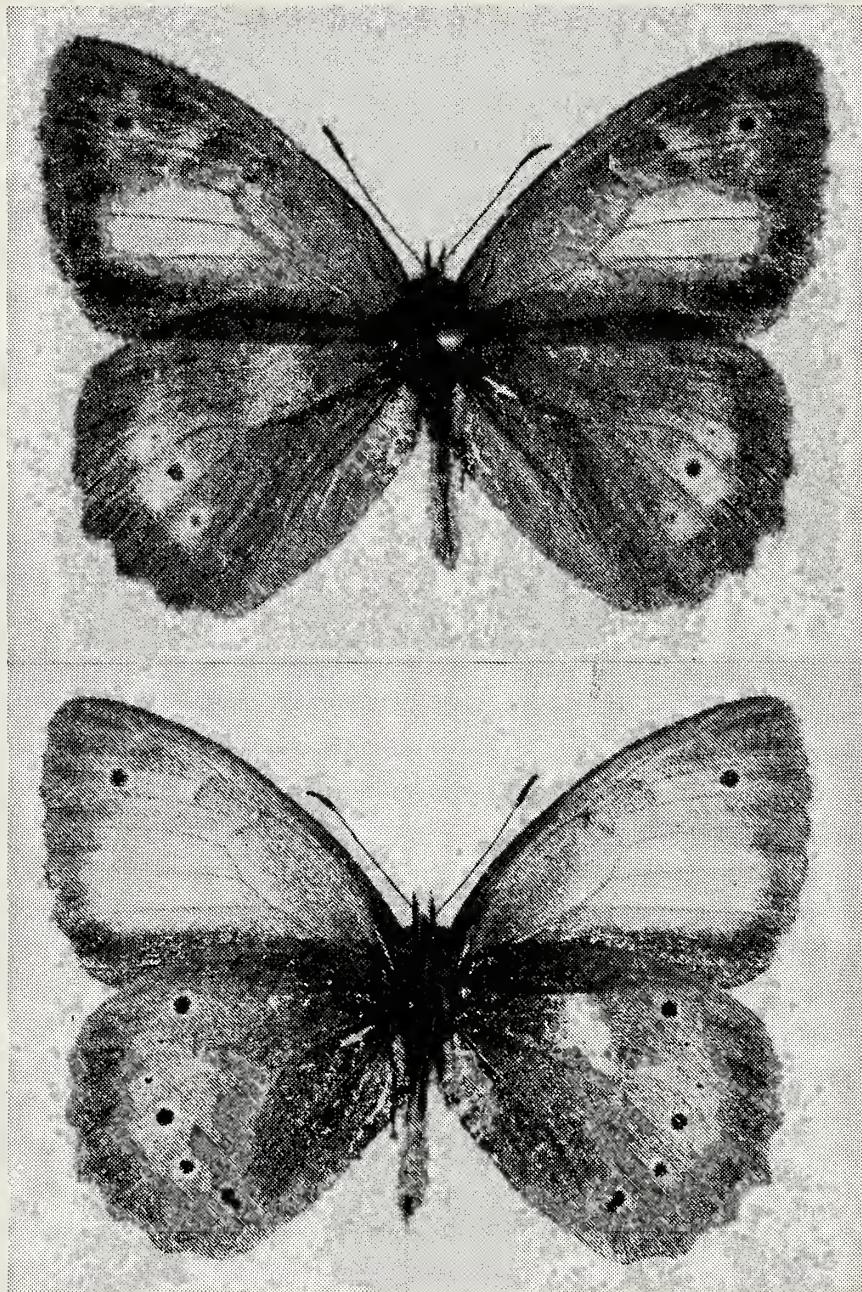


Fig. 1. *Kirinia climene* (Esper), ♂, from Greece, Tríkkala district, Khrisomiléa 900-1200 m, 10.VII.1976; above: upper side; below: under side (length forewing 25 mm).

the village are used by the inhabitants to grow corn and vegetables and, where grasses and flowers are abundant, to graze their sheep and goats. The track goes slightly upward and penetrates, at about 1100 m altitude, a fir wood with clearings covered by ferns.

We observed quite a lot of butterflies, among which were: *Aporia crataegi* (Linnaeus), *Nymphalis antiopa* (Linnaeus), *Brenthis hecate* (Denis & Schiffermüller), *Clossiana dia* (Linnaeus), *Strymonidia w-album* (Knoch), *Heodes virgaureae* (Linnaeus), *Eumedonia eumedon* (Esper), *Philotes baton* (Bergsträsser), *Muschampia tessellum* (Hübner), and *Kirinia roxelana* (Cramer).

Probably because of the large number of specimens collected, one specimen which superficially resembles the last mentioned species, did not attract our attention at the spot. Therefore we were unaware that we had caught a very rare species until the specimen (fig. 1-2) had been set at home.

It could not be identified using the third edition of Higgins and Riley (1975) but in the first edition of their work (1971) a description is given of *Kirinia climene* (Esper) which agrees fairly

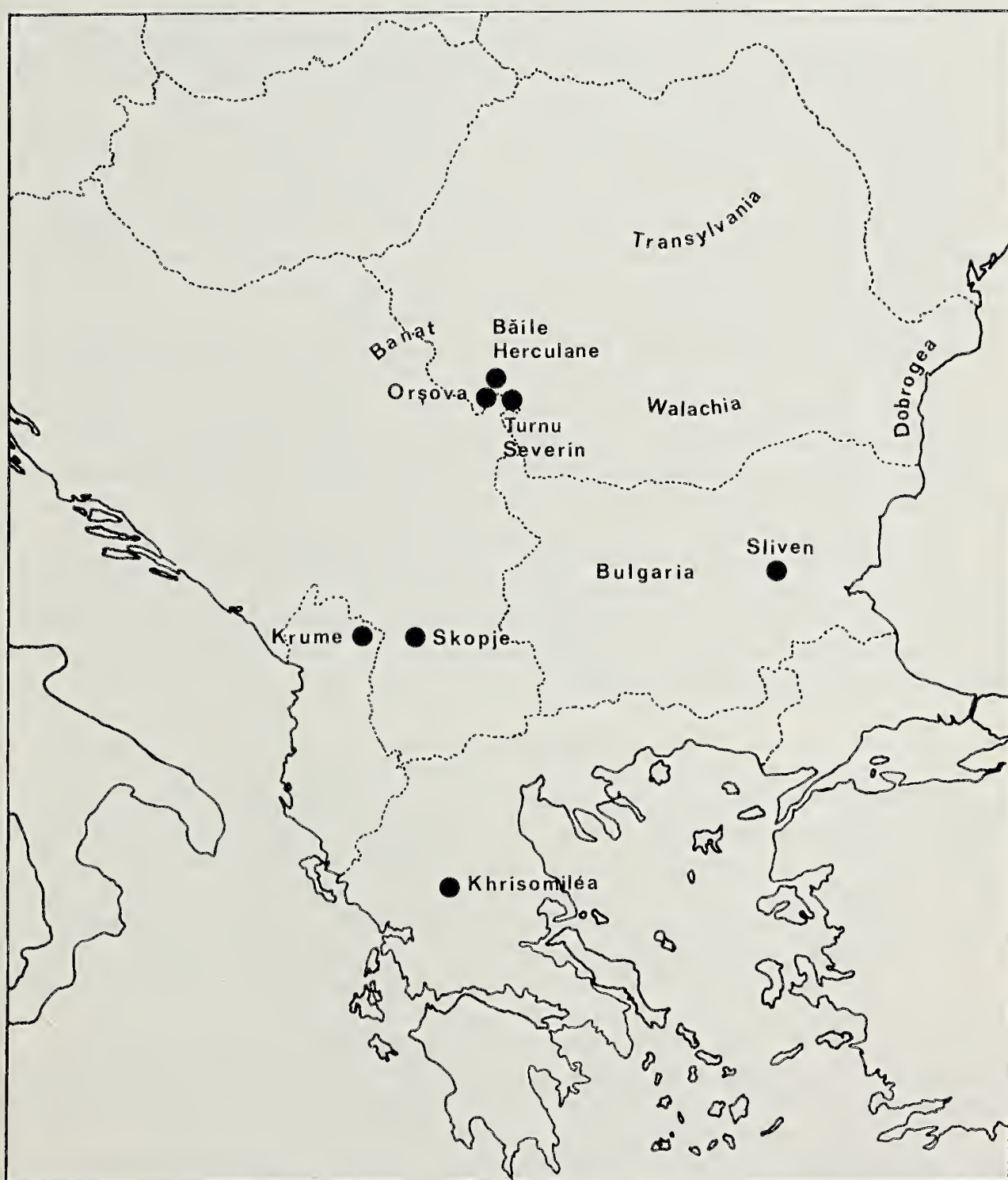


Fig. 2. Localities and regions in the Balkan area from where *Kirinia climene* (Esper) has been reported.

well with our specimen. The identification could be confirmed by comparison with the figures of *Pararge climene* (Esper) given by Seitz (134, pl. 45 c) and Lewis (pl. 204, fig. 3).

*Kirinia climene* was described from the lower course of the Wolga in southwestern Russia. The range also covers south Russia, Armenia, Turkey, probably the Altay area, but little is known about the distribution of this species in the Balkans. Previous records are sometimes obscure or even contradict each other. As far as could be traced *Kirinia climene* has never been recorded from Greece until now.

In the following lines I have brought together all data on the distribution of *Kirinia climene* in the Balkan area available in the literature.

From Yugoslavia the species is recorded from Skoplje [= Skopje] by Rebel & Zerny (1931: 75) but they are not sure about the identification. This locality however is not outside the distribution area as we know it at present.

From Albania only one female is known, captured 8.VIII.1918 at Kruma [= Krume] (Rebel & Zerny, 1931: 75).

Bulgaria, without precise locality, is recorded by Fleck (1901: 40). Rebel (1903: 178) mentions Slivno [= Sliven], quoting Fleck: "Eine erst in den letzten Jahren bei Slivno gemachte Entdeckung Haberhauers, welcher dort aus gekötscherten Raupen einige Falter erzog. Die Stücke sind klein und ziemlich dunkel; sie gehören der Stammform an (det. Rbl)."

From Romania the species has been recorded several times. Rebel (1903: 178), quoting Fleck, mentioned: "Die Art ist westlich bei Orsova [= Orşova] (angeblich auch in Siebenbürgen [= Transylvania], ferner in der Walachei [= Walachia] und Südrussland gefunden worden.....)". Fleck (1901: 40) recorded: "Turn-Severin [= Turnu Severin], Banater Grenze [= Banat] and Siebenbürgen [= Transylvania]". Seitz (1907: 134) wrote "Unterlauf der Donau [= Dobrogea]. Pfitzner (1916: 3) wrote that he did not succeed in capturing *climene* at Herculesbad [= Băile Herculanel], where the species had been found by Mr. Golopenza.

With regards to the distribution in Hungaria, Gozmány (1968: 171) wrote that *Kirinia climene* does not occur in that country. Higgins & Riley (1971: 270) mentioned the species from eastern Hungaria, but this probably refers to the older literature cited above in which for instance Siebenbürgen, Banater Grenze, Herculesbad and Orsova were located in eastern Hungaria.

Regarding the records from the older literature and the specimen from the Píndhos range the distribution of *Kirinia climene* within the Balkan area probably covers Romania, Bulgaria, southern Yugoslavia, Albania and the Píndhos mountains in Greece.

My thanks are due to Mr. B. J. Lempke for confirming the identification of the specimen discussed and for taking the trouble to find and copy some literature on *Kirinia climene* and for his further assistance, to Mr. H. Back and Mrs. Schlbritzky-Padour for helping me to obtain a copy of the publication of Fleck and especially to my father, F. Willemse, for his advise and assistance in the preparation of this paper.

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## The function of swarming in *Blacus* species (Hymenoptera, Braconidae, Helconinae)

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**ABSTRACT.** — The biological function and significance of swarming by the males in some *Blacus* species is discussed. The apparent scarcity of females in the neighbourhood of male swarms is explained by the assumption that mating occurs in late evening or at night.

Swarming is a widely distributed phenomenon, which can be defined as a process of specific assembly wherein sexually matured individuals engage in eurythmic mass hovering and dancing (McAlpine & Munroe, 1968: 1160). Probably the swarm itself is essentially a flight-station, an assembly point controlled by a landmark or „swarm marker” (Downs, 1969: 272). Swarming is well known of the males in at least 26 families of the Diptera, belonging to the suborder Nematocera. Less frequently it is observed in the Ephemeroptera, Neuroptera, Trichoptera, Lepidoptera, Hemiptera, and Hymenoptera. The swarming of parasitic Hymenoptera is exceptional and only observed in the Blacini (Braconidae, Helconinae) and in the Metopiinae (Ichneumonidae).

Swarming by the males of *Blacus* (*Ganychorus*) *ruficornis* (Nees) is considered by Syrjämäki (1976: 68) to be without biological significance and he proposed the hypothesis that their swarming possibly represents a “vacuum or displacement activity in their sexual behaviour”. This hypothesis is based on his observation that all 8077 specimens collected from swarms were males, while ten samples from the nearby vegetation yielded another 102 males and no females. But this observation does not prove there are no females present within a few hours or days after sampling; or that there are no females ready to emerge from their hosts in the litter. Indeed sweeping of swarms often yields males only, but exceptions are less scarce than is supposed by Syrjämäki. For example, a small sample of a swarm of *ruficornis* in late sunlight above a red clover field in Trout Lake (U.S.A., Wisconsin, 20.X.1918; Van Achterberg, 1976: 204) yielded nine males and two females.

König (1967: 113) has given some interesting observations on the swarming of *Blacus*. He quoted an observation by Gersdorf in 1963 that some males separated from a swarm of a *Blacus* species to copulate with one of the females walking on the surrounding vegetation. According to König the swarms are also persistent; even a thundershower could not desintegrate the swarm. As is shown by König in his fig. 1, the emergence of the males of *ruficornis* is somewhat earlier in time than that of the females, as is normal in the parasitic Hymenoptera and, e.g., in the Tipulidae (Binns, 1976: 93). This may explain the difficulty in obtaining the females at the beginning of the swarming season. Additional clues may be given by the pre-mating behaviour of swarming Diptera and of related Braconidae.

McAlpine & Munroe (1968: 1154) reported that in Texas swarms of *Dasiops alveofrons* McAlpine (Lonchaeidae, Diptera) consist almost exclusively of males. The females were rarely seen or collected during the day, but were commonly beaten from bushes at night! As noted by Van Achterberg (1976: 204), *Blacus* (*Ganychorus*) *ruficornis* (Nees) is frequently captured at light. The sexes are both well represented, so this is an indication of nightly activity in males and females of this swarming species of *Blacus*. McAlpine & Munroe cited a second example in the family Lonchaeidae, recording males of *Lonchaea laxa* Collin swarming in sunny openings