

ABSTRACT

The Chequered Blue – *Scolitantides orion* (Pallas, 1771) is a quite widely distributed thermophilous butterfly species. Its distribution area ranges from the Iberian Peninsula, through Central and Southern Europe, reaching up to Central Asia, Tibet and Japan. The disjunct localities are also situated in the southern part of Fennoscandia. Despite of its wide occurrence, *S. orion* is considered rare and local species everywhere. There has been observed a noticeable downward trend both in the number of its posts and the population size in Europe over the last decades. Hence, the species figures in the Red Data Book of European Butterflies with the vulnerable status (VU) and in the Polish Red Data Book of Animals with the endangered status (EN). In Poland, the Chequered Blue has been recorded from a few scattered localities in the southern and eastern part of the country so far. However, some of them are only historical. The aims of the research conducted in 2014-2016 were: to verify data about the species occurrence in the contemporarily known sites; to estimate the population size on the localities (with the mark-release-recapture method - MRR); to conduct the detailed phenology, biology and ethology observations (including i.a. morphological features of developmental stages and food preferences); to know parasitoid and symbiotic insect species of the butterfly and to ascertain the genetic relationship among European populations of *S. orion*. In the results of the conducted research, the species in question has been confirmed at only a half of the posts reported in the past 20-25 years. During the studies only one new locality has been discovered. The current species occurrence in Poland is merely restricted to the Kazimierz Landscape Park. The estimated population size of the Chequered Blue has turned out very low – 109-259 spring generation individuals in the two richest localities in 2015 and 2016 respectively. Furthermore, the second generation of *S. orion* was recorded on the one of the studied sites. This information verify the summer generation appearance under Polish conditions. The research also confirm an extraordinary species sedentism and a weak ability to dispersion. The butterflies was strictly attached to the inhabited biotopes. The longest recorded flight distances have amounted about 300 meters. The observations have shown that imagoes of *S. orion* can use every available nectar plant during its flight period. During the research, eight ant species have been recorded interacting with the species

caterpillars. Three of them has been recorded for the first time. The initial genetic analyses of the *COI* gene fragment (also included data from the GenBank) have shown that the analysed fragment features very low haplotype variability. Polish populations has turned out to be the most related to the Finnish, representing the same *COI* haplotype.

Concluding, the present studies have shown that the Chequered Blue occurs only in a few localities situated on the scarce area within the Vistula Valley and its population size is very low. In addition, the species stations are severely threatened due to the natural succession, human agricultural activities and poaching. The species urgently requires the active protection without which it can be extinct in the space of a dozen years or in a slightly longer period.