

First record of *Anthocharis gruneri* for Serbia (Lepidoptera: Pieridae)

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Abstract. The information about the observation of *Anthocharis gruneri* Herrich-Schäffer, 1851, a new species for the fauna of Serbia, is given and its distribution in the Balkan Peninsula is summarized. Some ecological preferences, the threat status and behaviour of the species are discussed.

Samenvatting. Eerste melding van *Anthocharis gruneri* uit Servië (Lepidoptera: Pieridae). Informatie over de eerste waarneming van *Anthocharis gruneri* Herrich-Schäffer, 1851, in Servië wordt gegeven en de verspreiding in het Balkanschiereiland wordt opgesomd. Enkele ecologische preferenties, de rodelijststatus en het gedrag van deze soort worden becommentarieerd.

Résumé. Première mention d'*Anthocharis gruneri* pour la Serbie (Lepidoptera: Pieridae). Des informations concernant la découverte d'*Anthocharis gruneri* Herrich-Schäffer, 1851 en Serbie sont données et la répartition dans les Balkans est rassemblée. Quelques préférences écologiques, le statut et le comportement de cette espèce sont discutés.

Key words: New records – Preševo – butterflies – endangerment.

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On May 13th 2011 a group of lepidopterists and ornithologists visited a poorly researched region near Miratovac village, south of Preševo at an altitude of about 550 m (42°16'20" N, 21°39'1,6" E). The location represents a relatively small rocky area with a strong submediterranean influence arriving from the south through northern Macedonia. The explored site is covered mainly by fragmented *Quercus pubescens* forests and dry, rocky pastures, but the wider area is predominantly agricultural land.

During this survey, two male specimens of *Anthocharis gruneri* Herrich-Schäffer, 1851 were found flying together with *Leptidea duponcheli*. They were flying slowly, without stopping and always close to the ground. One specimen was photographed and collected for confirmation purposes. During the next survey, at the middle of July, *Iolana iolas*, *Spialia phlomidis*, *Plebejus pylaon* and *Pyrgus serratalae* were found at the same locality. All of these species are considered rare and local butterflies in Serbian fauna (Popović & Đurić 2011).

Anthocharis gruneri is distributed in the southern Balkan Peninsula and the Middle East. On the Balkan Peninsula, the species is reported as common in continental Greece (Thrace, Macedonia, Epirus, Thessaly, Sterea Hellas, Peloponnese) (Pamperis 1997) and Macedonia (Galičica Mt., Radika Valley, Vardar Valley, Vodno Mt., Kozjak Mt.) (Franeta pers. comm., Tolman & Lewington 2008), but it becomes more local in Albania (Tolman & Lewington 2008) and SW Bulgaria (Kožuh, Belasica, Hambar Dere, Ilinden, Gradište, Gospodinci, Razlog) (Abadjiev 2001). There is also a single old record from Hungary (Csiki Mts.); however, the occurrence of this species in the Pannonian plain remains highly doubtful (Bálint & Janáky 1989). In the Middle East the distribution of the species covers most parts of Turkey, Syria, Iraq, Iran, and Transcaucasia (Savela 2008). Based on the nomenclature of Abadjiev & Ganey (1990) and Hesselbarth *et. al.* (1995) the Serbian populations

possibly belong to the nominotypic *Anthocharis gruneri* ssp. *gruneri*.

The species is reported to inhabit very dry habitat with limited vegetation (Pamperis 1997). The caterpillars foodplants are *Aethionema saxatile*, *Aethionema orbiculatum*, *Sisymbrium bilobum*, *Microthlaspi umbellatum* and *Isatis tinctoria* (Ziegler 2005, Savela 2008), of which *Aethionema saxatile* and *Isatis tinctoria* are recorded also from Serbia (Zlatković pers. comm.). This indicates that the butterfly is possibly a permanent resident in Serbia. Thus the site south of Preševo forms the northernmost limit of the known species distribution in Europe. The closest known locality is in Macedonia on Mt. Vodno south of Skopje approximately 40 km to the south.

During the field surveys in this area, no immediate threats for the habitat of *Anthocharis gruneri* were noticed. Agriculture is dominated by small scale farming and is limited to more open areas, grazing is limited due to low quality grassland and abandonment due to depopulation of the area is not yet noticeable. This provides good opportunity for the survival of the species in Serbia, however more detailed surveys of the region and the ecology of the species would be required to establish its threat status.

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Fig. 1.– Google earth map of the explored area. The *Anthocharis gruneri* habitat is marked in red.



Fig. 2.– *Anthocharis gruneri*, Miratovac, Serbia.



Fig. 3.– The habitat of *Anthocharis gruneri*.in Serbia.

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