Ocurrence of *Dahlica sauteri* (Hättenschwiler, 1977) and *D. wockii* (Heinemann, 1870) in Hungary (Lepidoptera: Psychidae)

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Abstract: The goal of the publication is to provide information about the occurrence of *Dahlica sauteri* (Hättenschwiler, 1977) and *Dahlica wockii* (Heinemann, 1870) species in the area of Bakony Mountains range in Hungary. Hitherto these species have not been reported in Hungary. The occurrence of *Dahlica sauteri* (Hättenschwiler, 1977) has so far been known from the Alpine areas of Switzerland, Austria, Germany and France; and somewhat similarly, *Dahlica wockii* (Heinemann, 1870) has so far been reported from Poland, Germany, the Czech Republic and Slovakia. The distinguishing characters of the newly recorded species, plus the related taxon *Dahlica nickerlii* (Heinemann, 1870) are also discussed.

Keywords: Lepidoptera, Psychidae, *Dahlica sauteri*, *Dahlica wockii*, first records, Hungary.

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Introduction

Dahlica sauteri and *Dahlica wockii* belong to the Psychidae family which comprises small and inconspicuous butterflies whose bionomics takes place in body cases, bags. Each species features its specific bag but the bags are sometimes difficult to distinguish. The species of the genus *Dahlica* possesses a bag of three-sided cross-section with one vertex and the sides situated laterally in the lower part. The caterpillars enlarge their bag simultaneously with the growth of their body volume and they also pupate inside. The females of *Dahlica* species feature markedly rudimentary wings.

Dahlica sauteri (Hättenschwiler, 1977)
Solenobia sauteri Hättenschwiler, 1977: 52
Type locality: Switzerland, Lengnau (Aargau)

Its occurrence has been known from the Alpine areas of Switzerland, Austria, Germany and France so far. It occurs there up to the altitudes of 900 meters (Hättenschwiler 1997). In Hungary a bag was found EP 7.3.2014 from which a ♀ female emerged subsequently. On March 17-18th 2015, six bags EP were found from which 4 ♂♂ emerged later on. The specimens were found in the area of the Bakony Mountains, north of Várpalota in the bottom of canyon-type gorges and

valleys at the altitude of about 350 to 370 meters. Among the collecting sites there was also Burok-völgy, what is an about ten kilometers long hard to access canyon, with a very cold bottom stretching from the holiday resort Királyszállás to the villages Isztimér and Bakonykúti. It is an area of mixed forests with beech (*Fagus* sp.), where *Allium ursinum* (Linnaeus, 1753) and *Galanthus nivalis* (Linnaeus, 1891) abound in the spring aspect. The nearest located known site of occurrence so far was the area of Thernberg in Austria (published in Lepiforum e.V, 2014), which is only about 20 km away from the Hungarian border and 150 km away as the crow flies from the new collecting site.

Dahlica wockii (Heinemann, 1870)
Solenobia wockii Heinemann, 1870: 24
Type locality: Poland, Breslau (= Wrocław)

This species has been reported from Poland, Germany, the Czech Republic and Slovakia so far. Three bags of the species were found EP 17.3.2015 in Hungary, from which 2 ♂♂ emerged subsequently. The specimens were collected in the Bakony Mountains range, north of town Várpalota and near village Tés. The area these is featured by beech growths situated in the upper parts of the canyons. The summits of the mountain range are reaching about 370 to 440 meters above sea level.

Remarks on distinguishing characters

The bag of *Dahlica sauteri* is slimmer, more elongate and more pointed on both of its ends before the emergence of imago than the bag of *Dahlica wockii*. On the bag of *D. sauteri,* the tiny stones are attached on the sides, and they are predominantly concentrated in one point while on the bag of *D. wockii* they are unevenly scattered along the entire bag.

The only female of *D. sauteri* having emerged from samples collected in Hungary was very slim at emergence. When magnified by a microscope, the marks occurring on the first four segments behind the head i.e. in the entire lateral side of the thorax and the first segment of the abdomen were compared. There was a different shape of the dorsal side of the mesothorax which is not so prominently bulging in *D. sauteri* as it is in *D. wockii*. Other dissimilar marks were the markings, the shape of the anterior rudimentary wing and the markings of the sclerite parts of the segment with the posterior rudimentary wing in connection with the first segment of the abdomen and its at-height located tergite. By means of comparison with other species of the genus *Dahlica*, it will be possible to observe other dissimilarities also on the sclerite tergites and sternites as well as in the density and coloration of the cilia on the side of the abdomen. However, it is not possible to detect the variability of the species as such on the basis of the single documented

Fig. 1. *Dahlica sauteri* (Hättenschwiler, 1977) ♂; EP 17.3.2015 Várpalota, size 11 mm

Fig. 2. *Dahlica wockii* (Heinemann, 1870) ♂; EP 17.3.2015, Várpalota, size 13,5 mm

Fig. 3. *Dahlica sauteri* ♀; imago, pupal case and her bag; EP 7.3.2014, Várpalota, the length of the preparation ♀ 4,5 mm

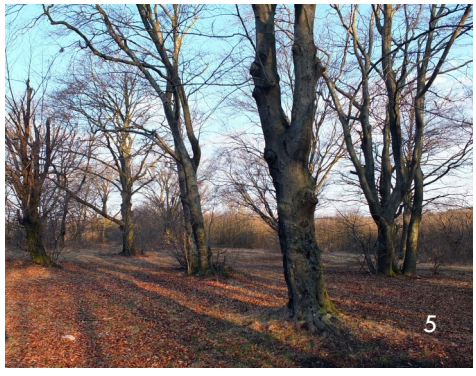

Fig. 6. Localities of *Dahlica sauteri and D. wockii* in Hungary; black line = *D. sauteri;* red circle = *D. wockii* (map by I. Fazekas)

Fig. 4. Habitat of the species *Dahlica sauteri* in the bottom in Burok-völgy TT, Hungary

Fig. 5. Habitat of the species *Dahlica wockii* in the vicinity fork in the road of Várpalota and holiday resort Királyszállás

female specimen. In order to preserve the specimen intact, the copulatory organs were not examined.

The examined males of *Dahlica sauteri* have the very similar markings in the anterior wings as *Dahlica nickerlii*: the scales in the apex and in the outer margin of the anterior wing feature markedly sharp and regular points. But these are mostly blunt in *D. nickerlii,* the central point of the three-pointed scales are often exceeding the marginal ones. An essential feature when distinguishing from *D. nickerlii* are the veins M1 and M2 (Hättenschwiler 1997) on the lower wings which are separated at the root in *D. sauteri*, what has only a slightly smaller wing span compared with *D. nickerlii*.

Dahlica wockii has scales of irregular shape that are broader and up to have four pointed apex. The specimens of *D. wockii* collected in Hungary that emerged represent the darker form with four-pointed scales prevailing. This way, they differ from the specimens found in Slovakia and the Czech Republic where four-pointed scales are less frequent and where specimens featuring the variability ranging from dark to markedly well-defined markings having irregular circles on the wings (Němý 2012).

From March 17th to 18th, other species of the Psychidae family were found together with *D. sauteri* and *D. wockii* in the researched areas. These represented various development stages as well as just their body cases (bags). The list here contains EL. *Narycia duplicella* (Goeze, 1783), last year's bags of *Dahlica triquetrella* (Hübner, 1813), EL. *Dahlica nickerlii* (Heinemann, 1870), a bag of *Siederia listerella* (Linnaeus, 1758), last year's bags of *Taleporia tubulosa* (Retzius, 1783), the bags of *Proutia betulina* (Zeller, 1839) and last year's bags of *Psyche casta* (Pallas, 1767).

The Microlepidoptera fauna of Hungary have been little researched in general and it is to be expected that we will find many more surprises there.

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