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Pilemia tigrina: new and corrected records from the Republic of Moldova, Hungary and Romania (Coleoptera: Cerambycidae)

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Abstract – New records of *Pilemia tigrina* (Mulsant, 1851) from Hungary and Romania are given. The records from the Republic of Moldova are summarised. With 4 figures.

Key words – Banat, Bánság, longicorns, Natura 2000, Tolna Hills

INTRODUCTION

Pilemia tigrina (Mulsant, 1851) (Fig. 1) is a beetle species of community importance (Natura 2000 and Emerald Network) listed in the Annex II of the Habitat Directive, and is strictly protected in Hungary. Monophagous on *Anchusa barrelieri* (All.) Vitman (Boraginaceae), it is sporadic all over its range, which is Southeast Europe and Anatolia. Therefore, any small piece of information about its distribution (Fig. 2) and biology must be important for a better understanding of the species. For the sake of habitats' safety and conservation exact coordinates of the collecting localities are not published here.

DATA OF *PILEMIA TIGRINA* IN THE REPUBLIC OF MOLDOVA

In 2014, *Pilemia tigrina* from Hînceşti was recorded as new to the Republic of Moldova (Csathó 2014); unfortunately, neither the author nor the cited au-

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thors were aware of an earlier record of the species published by Miller & Zubowsky (1917) from the Guberniya (= Governorate) of Bessarabia, a part of the Russian Empire between 1871 and 1917. The specimens were collected

Fig. 1. *Pilemia tigrina* (Mulsant, 1851) on *Anchusa barrelieri* (All.) Vitman at Szekszárd, Hungary (photo T. Németh)

on 24 May (year unknown) at the town Bendery, now Bender, in the Republic of Moldova.

Medvedev & Shapiro (1957) also mentioned *P. tigrina*. The paper was based both on their own collections and previous references. It listed 1,527 beetle species found in the studied area, and in the introduction *P. tigrina* was mentioned among the species with a Mediterranean distribution. It is possible that Medvedev and Shapiro had only known of the record of *P. tigrina* by Miller & Zubowsky (1917) because they wrote only "B." (= Bendery) as the locality of the species.

Derjanschi *et al.* (2016) in the catalogue of Zubowsky's collection gave the following details under *P. tigrina*: "Chişinău, 11.05.1922, 1 spec.; 8–21.05.1923, 2 specs.; 24.05.1926, 1 spec.; Chişinău [Durleşti], 25.05.1924, 1 spec.; Bender, 7.06.1926, 1 spec.". The catalogue is based on the oldest entomological collection in the Republic of Moldova, material of which had been collected in Bessarabia between 1900 and 1940 and housed in the National Museum of Ethnography and Natural History of Moldova.

Fig. 2. Localities of *Pilemia tigrina* (Mulsant, 1851) mentioned in the present paper. 1 = Szekszárd, 2 = Dombiratos, 3 = Battonya, 4 = Şandra, 5 = Peciu Nou, 6 = Chişinău (Durleşti), 7 = Bender, 8 = Hînceşti

NEW RECORDS FROM HUNGARY

Until now, existing populations of *Pilemia tigrina* have been known in Hungary only in Békés and Csongrád counties (southern part of the Tiszántúl) and in the Mecsek Mountains (southern part of Transdanubia). A few specimens were collected in Tolna county, but these are from the 1930s (Hegyessy & Kovács 2003, Hegyessy & Merkl 2014). In the spring of 2016 existence of another population in the Tolna Hills was proved by voucher specimens.

New records – Hungary, Tolna county, Szekszárd, Almási-erdő, loess sward with shrubs, hand-collected, 21.IV.2016, leg. Aranka Grabant, Ottó Merkl, Tamás Németh & Csilla Szabó. – Several specimens were collected from shoots of *Anchusa barrelieri* in full bloom. This is the first record of the species in this town, confirming its occurrence in the Tolna Hills.

Hungary, Békés county, Dombiratos, verge of the road to Kunágota, 28.IV.2016, leg. András István Csathó. – Five individuals were seen on shoots of *Anchusa barrelieri* in full bloom. This is the first record of the species for the settlement.

Hungary, Békés county, Battonya, state borderland, 30.IV.2014, leg. András István Csathó. – One individual was seen on a flowering shoot of *Anchusa barrelieri*, one metre from the frontier. – Only 17 reproductive shoots of the host plant were found at the site, and the plant was absent in the neighbouring area, which proves that the beetle can survive even in very small host plant populations. This is the first record of the species in this part of the settlement.

NEW RECORDS FROM ROMANIA

In 2009 and 2015, *Pilemia tigrina* was found in two localities in Timiş (Temes) county, Banat (Bánság) region, Romania. There are very few earlier data of the species from the lowland part of the Banat. Voucher specimens were not collected, however, some photographs were taken to prove the occurrences of the species.

New records – Romania, jud. Timiş, Peciu Nou (in Hungarian: Újpécs), 18.IV.2009, leg. András István Csathó, Attila Nagy, István Kovács & Réka Kis. – Five individuals were found on flowering shoots of *Anchusa barrelieri* in an old cemetery at the northern edge of the village. This is the first record of the species for the settlement and its environs.

Romania, jud. Timiş, Şandra (in Hungarian: Sándorháza), 8.V.2015, leg. András István Csathó & András János Csathó. – The site is the verge of the national highway #6 in the direction to Lovrin (Loránthalma). Several individuals

were found on shoots of *Anchusa barrelieri* in full bloom, although a swarm of hairy beetles (*Tropinota hirta*) had destroyed most of the flowers.

DISCUSSION

The area of the site at Szekszárd is about 1 ha with 800 to 1,000 individuals of Barrelier's bugloss, *Anchusa barrelieri*, the host plant of *Pilemia tigrina*. The plants were discovered on 22 May, 2011, and the first beetles were seen on 18 May, 2012 by István Zsolt Tóth, but the sighting remained unpublished. Traditionally small gardens and plots of cultivated land used to be separated by verges – narrow stripes of greenery with more or less undisturbed steppe vegetation, regularly cut with scythe. After the cessation of the cultivation of the area the plant and animal species of the steppe have recolonised the abandoned plots from the verges.

In the General National Habitat Classification System (Általános Nemzeti Élőhely-osztályozási Rendszer, Á-NÉR, Bölöni *et al.* 2011) this site (Fig. 3) can be assigned to H5a (closed steppes on loess). The habitat is steadily transformed by the extension of shrubs (therefore, parts of the area can be assigned to P2b,

Fig. 3. The habitat of *Pilemia tigrina* (Mulsant, 1851) at Szekszárd, Hungary: grassland on loess with *Anchusa barrelieri* and spreading shrubs (photo T. Németh)

i.e. dry and semi-dry pioneer scrub) and the invasive trees (*Robinia pseudoacacia*, *Ailanthus altissima*, *Juglans regia*, *Elaeagnus angustifolia*), which form S6 (spontaneous stands of non-native trees). Unfortunately, these shrubs and trees seriously reduce the survival chances of *Anchusa barrelieri* and other protected plant species (*Ajuga laxmannii*, *Erysimum odoratum*).

The recultivation of land for the purposes of industrial size vineyards represents another source of threat, see the enclosed area above the site. The sward is regularly treated with herbicides on both sides of the fence, therefore there is no chance for any plants and thus for *Anchusa barrelieri* to survive there. The existence of this rare patch of land is down to pure luck. (A non-refundable amount of nearly 1 billion HUF was granted by the EU for the establishment of a vineyard and wine production facilities in the immediate vicinity of Szekszárd.)

The localities presented in this paper include verges along roads or the frontier. Our data emphasize the importance of these linear habitats for the survival of the plant and animal species associated with steppe vegetation (Zólyomi 1969).

Fig. 4. The habitat of *Pilemia tigrina* (Mulsant, 1851) at Peciu Nou (Újpécs), Romania: old cemetery with *Anchusa barrelieri* in the foreground (photo A. I. Csathó)

The locality at Battonya falls on the narrow strip along the frontier between Hungary and Romania. Another, earlier record is known also from this strip at Mezőhegyes (Csathó 2009). This verge along the frontier is the longest continuous steppe remnant in the Great Hungarian Plain. It is an outstanding natural habitat with important botanical values, which deserves legal protection. As a consequence of the refugee crisis a border fence is feared to be built on this section of the frontier too. If this takes place it would be important to make the necessary precautions to protect the ancient strip of steppe during the construction of the fence in the borderland.

The record from Peciu Nou (Újpécs) refers to an old cemetery (Fig. 4). In the forest steppe belt, including the Great Hungarian Plain, cemeteries set in the ancient vegetation can maintain populations of rare steppe and forest steppe species, including insects such as *Pilemia tigrina*.

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