

New records of *Pilemia tigrina* (Mulsant, 1851) (Cerambycidae: Lamiinae) from roadside habitats in Bulgaria

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Abstract. New data on the distribution of *Pilemia tigrina* (Mulsant, 1851) in Bulgaria are presented. The species is reported for the first time from Mala Planina Mts. and from several sites along Iskarski Prolom Gorge. It seems that the species is not rare in roadside habitats of the Western Stara Planina Mts., and its distribution is determined by the presence of the host plant *Anchusa barrelieri* (All.) Vitman.

Key words: *Pilemia tigrina*, Bulgaria, roadside habitats

Introduction

According to Danilevsky (2020) the distributional range of *Pilemia tigrina* (Mulsant, 1851) (Cerambycidae: Lamiinae) includes Bulgaria, Hungary, Moldova, Romania, Serbia and Ukraine. For the South European territory of Russia and Armenia the presence of *P. tigrina* is questionable (Danilevsky 2020). The species is monophagous on *Anchusa barrelieri* (All.) Vitman (Boraginaceae) (Tóth *et al.* 2016) and listed in the Annexes II and IV of the Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Council of Europe 1992).

Before the 21st century, the species *P. tigrina* has been collected from a number of localities in Bulgaria: Cherepishki Manastir Monastery (Nedelkov 1905), Sofia (Kantardjieva-Minkova 1934), Varna (Georgiev 2020) and Ivanovo Vill., Shumen Region (Gradinarov 2016). The only known recent locality of the species is situated in Vrachanska Planina Mts., between Lakatnik Railway Station and Milanovo Vill. (Gradinarov 2016, Gradinarov & Petrova 2019). In the present work we report several new localities of *P. tigrina* in Bulgaria, as well new records of the species from known recent locality in Vrachanska planina Mts.

Materials and Methods

The collection of the material and the observations were conducted by the authors in the period from 2019 to 2021 in roadside habitats in the region of Western Stara Planina Mts. All specimens were collected from the host plant *Anchusa barrelieri* or observed on the same plant species. The abbreviations in the text are as follows: DG – D. Gradinarov; YP – Y. Petrova; ex. – specimen/s; obs. – the specimens were observed without collecting. The collected specimens are preserved in the Zoological Collection of Sofia University, Faculty of Biology (BFUS).

Results and Discussion

Pilemia tigrina (Mulsant, 1851)

New records:

Vrachanska Planina Mts.: S of Milanovo Vill., 43°05.429'N 23°23.879'E, 441 m a.s.l., 18.v.2019, 2 ♂♂, 2 ♀♀ (two copulating pairs), DG obs.; the same locality and date, but 43°05.401'N 23°24.074'E, 489 m a.s.l., 2 ex., DG obs.; the same locality and date, but 43°05.516'N 23°23.987'E, 511 m a.s.l., 4 ♂♂, 1 ♀, DG leg.; the same locality, but 43°05.514'N 23°23.995'E, 514 m a.s.l. (Fig. 1A), 25.iv.2021, 2 ♀♀, DG obs.; the same locality and date, but 43°05.624'N 23°23.953'E, 527 m a.s.l., 1 ♀, DG obs.; the same locality and date, but 43°05.793'N 23°23.911'E, 555 m a.s.l., 1 ♂, 1 ♀, DG obs.

Mala Planina Mts.: N of Beledie Han Settlement (Gradets Vill.), 42°54.120'N 23°09.582'E, 826 m a.s.l., 20.v.2020, 13 ♂♂, 6 ♀♀, DG & YP leg.; the same locality, 42°53.678'N 23°09.113'E, 768 m a.s.l., 15.v.2021, 4 ♂♂, 2 ♀♀ (two copulating pairs), DG obs. (Fig. 1E; F); the same locality and date, 42°53.700'N 23°09.098'E, 768 m a.s.l., 1 ♂, 1 ♀, DG obs.; the same locality and date, 42°53.767'N 23°09.085'E, 776 m a.s.l., 2 ♂♂, 2 ♀♀, DG leg., 1 ♂, 2 ♀♀, DG obs.; the same locality and date, 42°53.789'N 23°09.082'E, 779 m a.s.l. (Fig. 1D), 1 ♂, 1 ♀, DG obs.; the same locality and date, 42°54.042'N 23°09.465'E, 811 m a.s.l., 2 ♀♀, DG leg., 3 ♂♂, 3 ♀♀ (two copulating pairs), DG obs.; the same locality and date, 42°54.114'N 23°09.574'E, 825 m a.s.l., 1 ♂, 6 ♀♀, DG leg., 1 ♀, YP obs.; the same locality and date, 42°54.282'N 23°09.613'E, 844 m, 2 ♂♂, DG leg., 1 ♀, DG obs., 1 ♂, 1 ♀ (copulating pair) YP obs.; the same locality, 42°53.767'N 23°09.085'E, 776 m a.s.l., 25.v.2021, 1 ♂, 1 ♀ (copulating pair), DG obs.

Iskarski Proлом Gorge: NE of Eliseyna Vill., 43°04.804'N 23°29.967'E, 333 m a.s.l. (Fig. 1C), 25.iv.2021, 1 ♂, DG leg.; near Eliseyna train station, 43°04.923'N 23°30.223'E, 332 m a.s.l., 25.iv.2021, 1 ♀, DG leg.; NE of Zverino Vill., 43°05.337'N 23°34.647'E, 277 m a.s.l., left bank of Iskar Riv. (Fig. 1B), 25.iv.2021, 2 ♀♀, DG leg.

The new reported localities of the species are within NATURA sites “Vrachanski Balkan” (site code BG0000166, both localities near Eliseyna Vill.), “Dragoman” (site code BG0000322, all sites near Beledie Han Settlement) and “Iskarski prolom – Rzhana” (site code BG0001042, the locality near Zverino Vill.). The locality of the species near Zverino Vill. is situated only about 3 km SW from the Cherepishki Manastir Monastery (the first reported locality of *P. tigrina* in Bulgaria), which confirms the presence of a recent population of the species in this part of the Iskarski Proлом Gorge as well as within the NATURA 2000 site “Iskarski prolom – Rzhana”.

It seems that *P. tigrina* is not rare in the studied regions of the Western Stara Planina Mts., and its distribution is determined entirely (at least in roadside habitats) by the presence of the host plant *A. barrelieri*. In our study all individuals of *P. tigrina* were recovered from roadside habitats. Even in the cases when the host plants were present at a greater distance from the road, the beetles clearly preferred the roadside area. The preference of the species to roadside verges is noted as well by Tóth *et al.* (2016). The roadside habitats may serve as corridors or refugia for insect species, associated with open habitats, but also may act as “ecological traps” due to increased mortality rate (Eversham & Telfer 1994, Milton *et al.* 2015). Additional research is needed in order to determine the proportion of individuals in the populations of *P. tigrina* that use roadside habitats for breeding and the importance of these habitats for the species conservation.

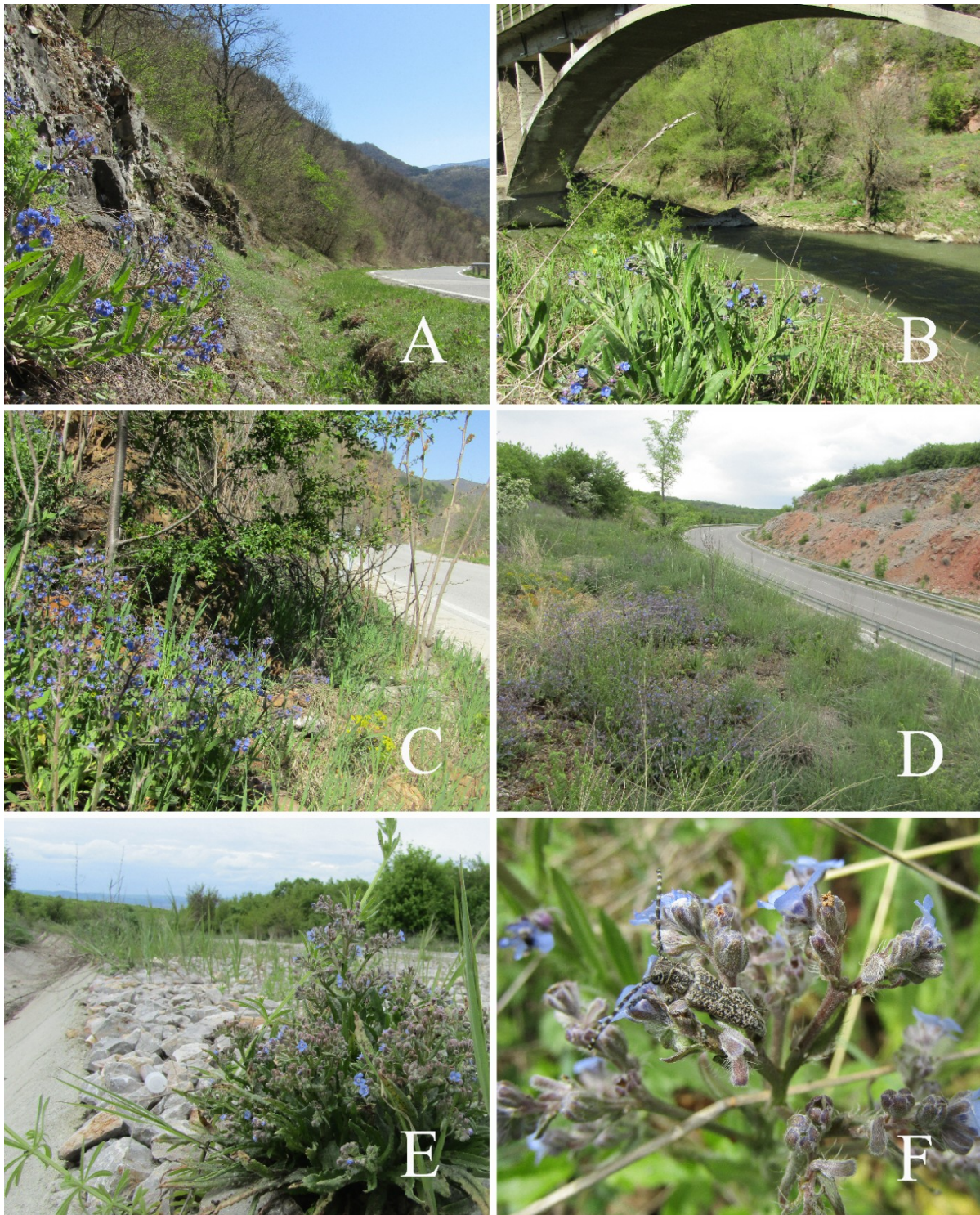


Fig. 1. Habitats and the host plant of *Pilemia tigrina* in Western Stara Planina Mts. A – near Milanovo, 25.iv.2021; B – near Zverino, 25.iv.2021; C – near Eliseyna, 25.iv.2021; D, E – near Beledie Han, 15.v.2021; F – the last locality and date, *P. tigrina* on its host plant.

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