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## New localities of *Tremex magus* (Fabricius, 1787) (Hymenoptera, Symphyta: Siricidae) and *Xeris pallicoxae* Goulet, 2015 in Poland

**Jerzy Borowski\*, Aneta Kazaniecka\*\***

Department of Forest Protection, SGGW, ul. Nowoursynowska 159/34, 02-776 Warsaw, Poland

\*\*\* E-mail address: [jerzy\\_borowski@sggw.pl](mailto:jerzy_borowski@sggw.pl) , [kazaniecka.a@gmail.com](mailto:kazaniecka.a@gmail.com)

\*Corresponding author

### ABSTRACT

The paper presents new data on the occurrence in Poland of a very rare species of horntail *Tremex magus* (F.). One female of this species was caught in the Wielkopolska Lowland, in “Mszar Bogdaniec” nature reserve. The paper also presents historical data on the occurrence of this species in Poland and completes faunistic data on the species of *Xeris* Costa genus.

**Keywords:** *Tremex magus*, *Xeris pallicoxae*, Hymenoptera, Symphyta, Siricidae, faunistic data, Poland

### 1. INTRODUCTION

Below, we show information on the occurrence in Poland one of the rarest horntails - *Tremex magus* (F.). The paper presents both historical and current information on known localities of this species in our country. The latest locality is located in the southern part of Wielkopolska Lowland.

The second part of the work corrects the localities published earlier (Borowski *et al.*, 2019b) which refer to *Xeris spectrum* (L.). Some of them actually belong to the twin species, *Xeris pallicoxae* (Goulet).

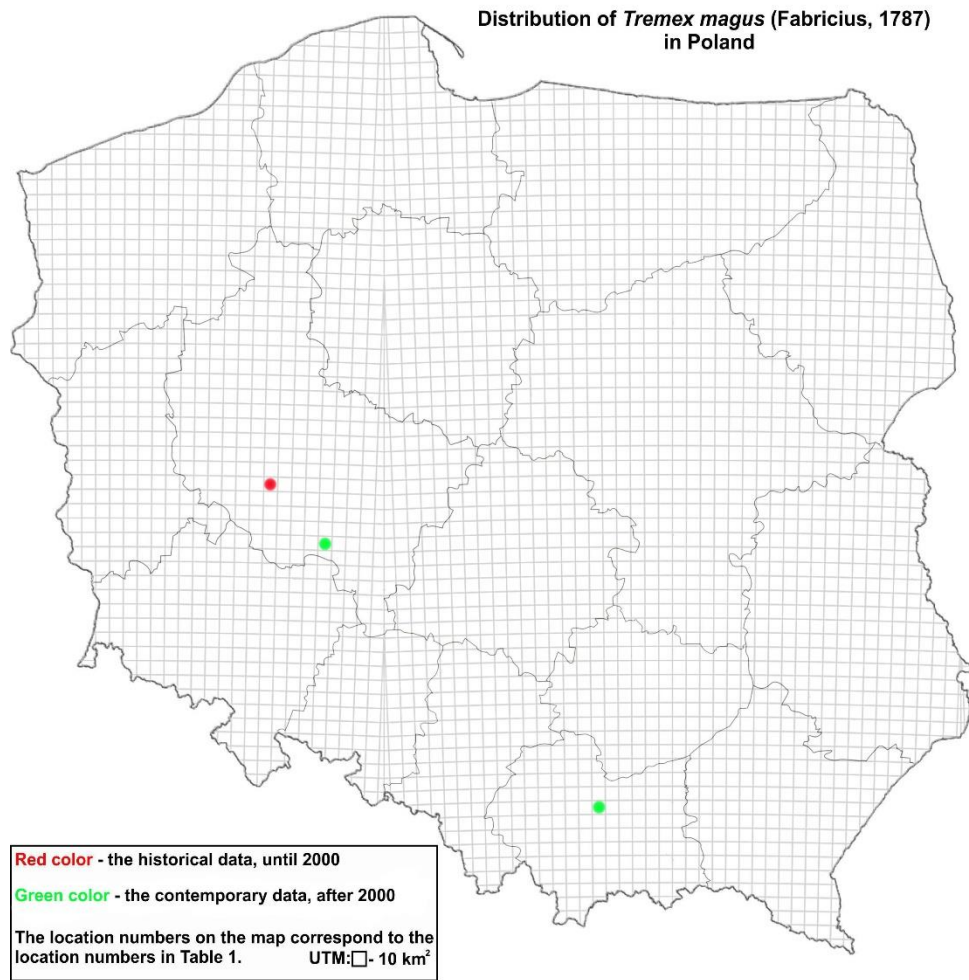
## 2. RESULTS

### 2. 1. *Tremex magus* (Fabricius, 1787)

The species is one of the rarest horntails in central Europe. Most data is based on specimens collected in the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> century. This species was mentioned in 1905 by Dittrich in a paper on the sawflies of Silesia. The author's list of sawflies mentions the occurrence of only one female in the collection and at the same time it reports the lack of accurate location of the specimen collection (Dittrich 1905). Another piece of information concerning the species may be found in the key to identify horntails of Poland (Głowacki 1956). Possibly due to no specific locality in Dittrich's paper, the author claims this species does not occur in Poland. Also another faunistic paper on Polish horntails does not list this species (Bednarz 1960). The first certain data on the occurrence of *T. magus* in Poland is provided by Karg (Karg 1970). The author describes high abundance of the species in Turew (Wielkopolska Lowland), in two localities situated 2 km from each other. Further information on *T. magus* can be found in a book titled "Wood-destroying insects" (Dominik & Starzyk 1983). Apart from the repeated information about the occurrence of this species in Turew, the authors generally list this species from the Sudety Mts. In later papers *T. magus* was included in a list of Polish sawflies (Huflejt 1997 and Skibińska & Chudzicka 2004).



**Fig. 1.** The birch-tree on which the female of *Tremex magus* (F.) was caught.  
Photo by A. Kazaniecka.



**Fig. 2.** Distribution of *Tremex magus* (F.) in Poland.

In 2002 *T. magus* was included in the Red list of threatened animals in Poland in Poland, with DD (Data Deficient) category (Huflejt 2002). Some latest data on the occurrence of *T. magus* in Poland is presented by Piotrowski & Szołtys (2007). While discussing the sawflies of the Upper Silesian Museum in Bytom the authors provide a new locality, namely Kłaj (Niepołomicka Forest), and the data concerns one female caught on 13 June 1954. In 2019 *T. magus* was included in the latest list of Polish horntails (Borowski *et al.*, 2019a).

As for neighbouring countries, the species has been reported from Moravia (including Silesia) and Slovakia by Beneš (1989). When discussing the distribution of European sawflies Liston (1995) does not record this horntail in Poland, at the same time providing that it was caught in Austria, the Czech Republic, Germany, Hungary, Romania and Russia. In a slightly later paper on the occurrence of sawflies in particular countries of Europe (Taeger *et al.*, 2006) the authors also include Armenia, Poland and Ukraine.

As can be seen, the species is rarely mentioned in literature, usually in collective papers, like species lists of particular areas. Below a new locality of *T. magus* in Poland is presented.

- Wilekopolska Lowland, „Mszar Bogdaniec” Reserve, UTM: XT62, 1-30.VI.2019, 1♀, trap on dead *Betula* sp., leg. A. Kazaniecka.

A female of *T. magus* was caught in a compartment trap, hung on a *Fomes formentarius* fruiting body about 1.5 m above the ground. A dead birch-tree about 15 m tall and 23 cm of diameter breast height, which was used to hang the trap, was partly covered with bark, had hard xylem and was situated in a spot exposed to moderate sunshine (Fig. 1).

This spot is the second certain locality of *T. magus* in Poland (Fig. 2) and might be one of the northernmost in all its range of occurrence.

## 2. 2. *Xeris pallicoxae* Goulet, 2015

In the latest faunistic papers on the horntails of Poland (Borowski *et al.*, 2019a and Borowski *et al.*, 2019b) the newest one from *Xeris* Costa genus is missing. Goulet (Goulet *et al.*, 2015) presents a description of a new species of the genus *Xeris* - *X. pallicoxae* – at the same time providing two localities of the species from Poland, namely: generally Silesia and Szczawa (Western Beskid, UTM: DV49).

After verification of materials from the paper by Borowski *et al.*, 2019b all the specimens collected from firs (*Abies* spp.) were found to belong to *X. pallicoxae*, while the specimens collected from spruces (*Picea* spp.) belonged to *X. spectrum* (L.). Below the previously published data is presented after a correction of species.

### *Xeris pallicoxae* Goulet, 2015

#### Mazowiecka Lowland

- Ponty Reserve of T. Zieliński's, UTM: EC20, 15 V - 9 VI 2016, 1♀, inside a trap, leg. M. Miłkowski.

#### Małopolska Upland

- Rogów, UTM: DC24, Arboretum, 21 VI 2013, 2♂♂, 21 VI 2013, 1♀, 18 VI 2014, 1♀, 24 VI 2014, 1♀, on firewood of *Abies alba*, leg. J. Borowski; Zimna Woda Range, 18 VI 2014, 4♂♂, on firewood of *Abies alba*, leg. J. Borowski;

- Łuszczanowice Reserve, UTM: CB87, 1-30 VI 2016, 1♀, a trap on *Abies alba*, leg. M. Skowronek.

#### Roztocze Region

- Obroc, UTM: FB40, 4 VII 2016, 2♂♂, leg. T. Gazurek.

#### West Beskidy Mountains

- Bielsko Biała, UTM: CA51, 20 V 2018, 6♀♀, 62♂♂, on firewood of *Abies alba*, leg. J. Borowski.

### *Xeris spectrum* (Linnaeus, 1758)

#### Mazowiecka Lowland

- Kampinos National Park, Grabina, UTM: DC79, 1-30 VI 2018, 2♀♀, pine forest, leg. D. Marczak;

### Podlasie Region

- Budzisk Reserve, UTM: FE40, 1-30 VI 2019, 3♀♀, leg. A. Kwiatkowski, D. Marczak & K. Szawaryn;

- Czarna Białostocka Forest Inspectorate, Buksztel Forest District, UTM: FE50, div. 117c, 1-30 VI 2019, 3♀♀, leg. A. Kwiatkowski, D. Marczak & K. Szawaryn.

### Małopolska Upland

- Głuchów, UTM: DC33, 13 VI 2013, 2♂♂, 20 VI 2013, 9♂♂, 11 VI 2014, 2♂♂, 30 VI 2014, 2♂♂, 4 VII 2015, 3♀♀, on dead Norway spruce, leg. J. Borowski.

*Xeris pallicoxae* is a widely spread European species with a range from Great Britain to Turkey through almost all European countries. It is biologically connected with fir-trees (*Abies* spp.).

*Xeris spectrum*, biologically connected with spruces (*Picea* spp.), occurs mainly in the countries of central and northern Europe and in Syberia, reaching to the Far East and Japan. According to Goulet & al. it is mainly this species that occurs on pines (*Pinus* spp.), although they admit a possibility of a third one, connected with pines. The subspecies of *X. spectrum* listed by Borowski *et al.*, 2019b in fact belong to other species and so:

*X. spectrum cobosi* Viedma & Suárez, 1961, now is: *Xeris cobosi* and occurs in Morocco only;

*X. spectrum townesi* Maa, 1949, now is a later synonym of *Xeris indecisus* (MacGillivray, 1893) and occurs in Canada and the USA;

*X. spectrum malaisei* Maa, 1949, now is: *Xeris malaisei* Maa, 1949, and occurs in Japan, South Korea, Russia, China and Taiwan.

### 3. CONCLUSIONS

Together with *Xeris pllicoxae*, the Polish fauna is represented by 11 species of horntails and in near future, after the status of a species of *Xeris* genus which inhabits pines (which is common in our forests) the number might increase to 12.

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