

***XYLOMYIA MACULATA* (MEIGEN, 1804) (XYLOMYIIDAE) AND *CTENOPHORA ORNATA* MEIGEN, 1818 (TIPULIDAE) – NEW RECORDS OF RARE SAPROXYLIC FLIES (DIPTERA) FROM TREE HOLES IN POLAND**

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**ABSTRACT:** *Xylomyia maculata* and *Ctenophora ornata* are very rare, threatened species of saproxylic flies in Poland. Data on their occurrence in Poland are very scanty. New records of these both species from south-western Poland are presented.

**KEY WORDS:** cavity, develop, larvae, dead wood, Opole Province.

### **Introduction**

*Xylomyia maculata* (MEIGEN, 1804) and *Ctenophora ornata* MEIGEN, 1818 are very rare species of saproxylic flies within the whole of their European range. Observations of these two species in Poland are very scanty. The only localities of *X. maculata* are: Białowieża Primeval Forest (Sack 1925), Karłowice in Lower Silesia (Soszyński B. – unpubl. in Palaczyk 2004a) and Gliwice-Rudziniec (Dobosz 1994). The last one is regarded as an unnatural spread (Palaczyk 2004a). Not more reports concern *C. ornata*: Świętokrzyski National Park (Kowalczyk and Śliwiński 1988) and “Węże” National Reserve near Wieluń (Palaczyk A. - unpubl. in Palaczyk 2004b), although in recent years number of new records have increased ([www.entomo.pl](http://www.entomo.pl)). Both species are associated with the deciduous forest zone in Europe, moreover *X. maculata* is considered as a relict of primeval forest. They both inhabit deciduous and mixed old forest, with abundance of dead and dying trees. In whole of their European range are threatened with extinction, mostly due to lost of the forest area of primeval character and invasive forest sanitation practices. Presence of dead, dying and hollow trees for those species of Diptera has a substantial importance; the only reports about development come from such microhabitats. Larvae of *X. maculata* were observed under bark and in the rotten wood of: *Quercus*, *Fagus sylvatica*, *Populus*, *Ulmus*, *Acer pseudoplatanus* and *Sorbus*

*aucuparia* (Rozkošny 1992; Soszyński B. – unpubl. in Palaczyk 2004a). The larvae's development of *C. ornata* was recorded in moist, rotten stems of deciduous trees: *Fagus sylvatica*, *Ulmus*, *Acer* and *Prunus*, as well as in tree cavities (Krivosheina 1972, Menier 1973, Savtshenko 1973).

### ***Faunistics***

New localities of *X. maculata* and *C. ornata* were found in the years 2009-2010 in southwestern Poland.

### ***Xylomyia maculata***

LOWER SILESIA: Ładza ad Pokój [UTM: YS03], Opole Province, 5.12.2009, on the edge of mixed coniferous forest being a part of large pinewood. 3 larvae were extracted from a very moist rotten wood in a root zone of a fallen over birch *Betula sp.* Larvae with wood debris were kept in a temperature of 10<sup>o</sup>-15<sup>o</sup>C. On 5<sup>th</sup> of January all material were moved for one week to a room not isolated from external weather conditions. 2 imagines hatched on 7<sup>th</sup> of March (Phot. 1 and 2).

### ***Ctenophora ornata***

UPPER SILESIA: "Srebrne Źródła" National Preserve, Chrzastowice ad Opole [UTM: BB91], Opole Province, 4.07.2010. Forest reserve established to protect old riverine stands *Fraxino-Alnetum*, *Ficario-Ulmetum minoris* and hornbeam *Galio sylvatici-Carpinetum betuli*. One pupa was extracted from a very wet rotten wood inside tree cavity. Tree hole was placed in a decaying sycamore *Acer pseudoplatanus* on the height of 1,9 m above the ground. The pupa was kept in a room at temperature of ca. 20<sup>o</sup>C. 18.07.2010 the imago has hatched (Phot. 3).



Phot. 1. *Xylomyia maculata*, imago.





Phot. 2. *Xylomyia maculata*, larvae.



Phot. 3. *Ctenophora ornata*, hatching imago.

### **Conclusions**

Both observations are valuable records of rare and threatened, saproxylic species of Diptera in Poland. Particularly worth seems to be the report of *X. maculata* – species declining in whole Europe, what's more many localities of only historical value (Rozkošny 1992, Palaczyk 2004a). In order to preserve both species of flies some proposal can be postulated: maintain in productive forest dead and decaying trees and hollow trees. As both flies are associated with old forest of natural character, durability of their population can be strengthened with increase of strictly protected areas in forest, free of forestry activity.

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