



Distribution of a rare crane fly *Ctenophora ornata* Meigen, 1818 (Diptera, Tipulidae) in Poland

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Abstract: New localities of a rare crane fly *Ctenophora ornata* Meigen, 1818 (Diptera, Tipulidae) in Poland are presented. Recent records, especially from western and northern parts of Poland, show that the species is more widespread than previously known.

Key words: Diptera, Tipulidae, *Ctenophora ornata*, new records, Poland

INTRODUCTION

Among the crane flies (Tipulidae), all the species of genus *Ctenophora* Meigen, 1803 are large and often ichneumon or wasp-like. The body is frequently polished and coloured black with large yellow, orange or red markings. The genus comprises ten species in the West Palearctic. So far, five of them have been recorded from Poland and they are classified into the subgenus *Cnemoncosis* Enderlein, 1921: *C. ornata* Meigen, 1818 and *C. factuosa* Loew, 1871 and into the subgenus *Ctenophora* s. str.: *C. flaveolata* (Fabricius, 1794), *C. guttata* Wiedemann, 1818 and *C. pectinicornis* (Linnaeus, 1758) (Skibińska, Chudzicka 2007). All *Ctenophora* species are rare in Poland and are listed in the Red List of Threatened Animals in Poland (Palaczyk et al. 2002). Among the genus *Ctenophora* the rarest is *C. ornata* (Fig. 1) and this species is the only listed in the Polish Red Data Book of Animals with category vulnerable (Palaczyk 2004). *C. ornata* was found in Świętokrzyski National Park from Święty Krzyż (Kowalczyk & Sliwiński 1988) and in the "Węże" forest reserve situated in Załęcze Landscape Park (Palaczyk 2004). In 2010, it was recorded from "Srebrne Źródła" National Preserve, Chrzastowice near Opole [UTM – BB91] (Hebda 2010).

C. ornata occurs in the deciduous forest zone of Europe. It was found in many countries: west of Ireland, Great Britain and Denmark to Spain and northern Italy, in east of the Czech Republic to Greece (including Andros and Corfu), Ukraine and the Turkish province of İçel (Oosterbroek et al. 2006). Surprisingly, the new version of Fauna Europaea (Oosterbroek 2009) does not list this species as present in Poland

MATERIAL

The new records of *Ctenophora ornata* Meigen, 1818 in Poland (Fig. 2) are:

- Nowa Sól (WT43): female and male were attracted to a light in old and abandoned garden, 25 V 2009; one caught and one observed male at sunset, 28 V 2009, leg. et coll. D. Bruder;
- Gruszowa (FA20): one male caught on a light in VI 2007, leg. et coll. J. Mazepa;

- Maciejowice-Cztery Kopce (EC31): one male caught on a light in 27 VII 2005, leg. W. Piątek, coll. M. Bąkowski;
- Kujan near Złotów (XV41): one male was attracted to a light in an abandoned rural park, 6 VI 2007, leg. R. Rosa & R. Ruta, coll. R. Rosa.



Fig. 1. Male of *Ctenophora ornata*, Maciejowice-Cztery Kopce, 27 July 2005, leg. W. Piątek

MORPHOLOGY AND BIOLOGY

By the external characters *C. ornata* (Fig. 1) is the closest to *C. factuosa*. Both species can be easily distinguished by the shape and the size of a spot in the apical part of wings and the coloration of the tibia of hind legs. The spot in the apical part of the wing of *C. ornata* is elongated, continuing broadly to the tip of the wing. The basal half of the tibia of the hind leg is not darkened nor is with darkened ring. The spot in the apical part of the wing of *C. factuosa* is rounded, not reaching the tip of the wing. The basal half of the tibia of the hind leg is darkened or is with darkened ring. Males of both species differ also in the shape of the

hypopygium. The 8th abdominal sternite in *C. ornata* males is enlarged and not closely aligned to the abdomen (Menier 1973, Savchenko 1973, Oosterbroek et al. 2006).

The adults of *C. ornata* fly from May to August, mainly in June and July. Larvae of all *Ctenophora* species develop in decaying wood of deciduous trees, mostly trees of big diameter and at the advanced stage of decay. They usually inhabit old forests, orchards and other habitats with the presence of old, dead and hollow trees. The larvae of this species develop in decaying wood of *Fagus* spp., *Ulmus* spp., *Aesculus* spp., *Acer* spp. and *Malus* spp. (Menier 1973, Savchenko 1973). Thus, presence of dead, dying and hollow trees has a substantial importance for all *Ctenophora* species; the only reports about their development come from such microhabitats.

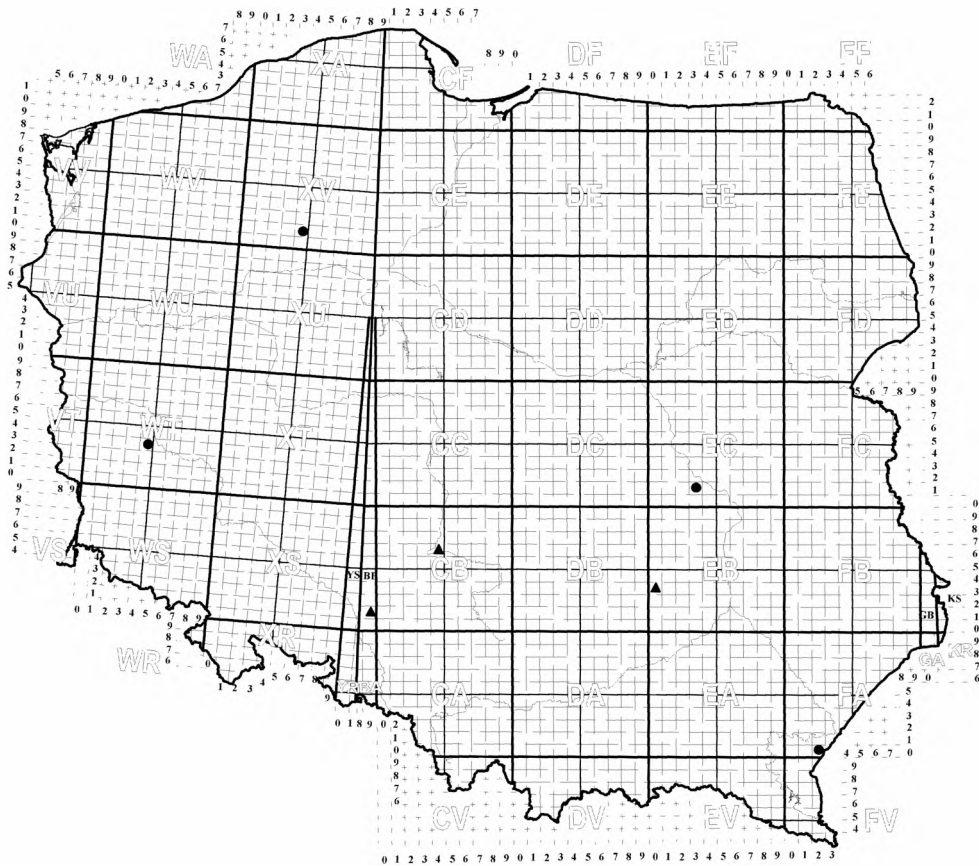


Fig. 2. Distribution of *Ctenophora ornata* in Poland: ● – new records, ▲ – literature data

CONCLUSIONS

In Poland this crane fly species has been hitherto known from south part of the country (Fig. 2). In recent years, the number of new records of this species have increased in Poland.

The new localities (particularly in the western and northern part of Poland) confirm wider occurrence in the country and form the north-eastern corner of the range limit of *C. ornata* in

Europe. Despite the new localities found, the species is still very rare saproxylic fly in Poland. *C. ornata* is threatened with extinction in whole of its European range, mostly due to lost of the forest area of primeval character.

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STRESZCZENIE

[Rozsiedlenie rzadko spotykanej koziulki *Ctenophora ornata* Meigen, 1818 (Diptera, Tipulidae) w Polsce]

Ctenophora ornata Meigen, 1818, z racji rzadkości występowania w naszym kraju, jako jedyna muchówka z Tipulidae została umieszczona w Polskiej Czerwonej Księdze Zwierząt. (Palaczyk 2004). Nowe stwierdzenia *C. ornata*, szczególnie w zachodniej i północnej Polsce, potwierdzają szersze występowanie tego gatunku w naszym kraju jak i w Europie (Fig. 2). Wszystkie okazy zostały zwabione do źródeł światła. W pracy podano również informacje o morfologii i biologii tej saproksylicznej muchówki.

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