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PSEUDOTEPHritis MILLEPUNCTATA (HENNIG, 1939)
(DIPTERA ULIDIIDAE) –
NEW SPECIES IN EUROPEAN FAUNA

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Ruchin A.B., Carr J.F., Dvořák L., Esin M.N., Khapugin A.A. - *Pseudotephritis millepunctata* (Hennig, 1939) (Diptera Ulidiidae) - New species in European fauna.

We report the discovery of *Pseudotephritis millepunctata* (Hennig, 1939) (Diptera Ulidiidae) in Europe (centre of European Russia, Republic of Mordovia) for the first time. Information on identified specimens is given and the habitat of the species is described.

KEY WORDS: Biology, European fauna, Picture-winged flies, *Pseudotephritis millepunctata*.

INTRODUCTION

The family picture-winged flies Ulidiidae Macquart, 1835 is part of the superfamily Tephritoidea. According to the newest comprehensive study (KAMENEVA *et al.*, 2017); the family Ulidiidae includes 875 species. The main biodiversity of this group is concentrated in the New World and Neotropical bioregion. Significantly fewer species from this family live in the Palearctic Region, tropical Africa, Asia, and Oceania (DIAZ-FLEISCHER and ALUJA, 2000; KAMENEVA *et al.*, 2017). The genus *Pseudotephritis* Johnson, 1902 includes seven species. Some of them, such as *P. corticalis* (Loew, 1873) (= *P. trypetoptera* (Hennig, 1939)), *P. millepunctata* (Hennig, 1939), *P. ussuriica* Krivosheina & Krivosheina, 1997, are found in Russia (KRIVOSHEINA and KRIVOSHEINA, 1997; KAMENEVA and KORNEYEV, 2006). Only one species with an unclear taxonomy *P. corticalis* has been indicated in the fauna of Europe to nowadays (BORGERSEN and GREVE, 1989; KAMENEVA and KORNEYEV, 2006; KAHANPÄÄ and WINQVIST, 2014).

MATERIALS AND METHODS

The study has been carried out in the Mordovia State Nature Reserve (Russia, Republic of Mordovia) using crown traps located on *Quercus robur* L. trees. The trap was a five-liter plastic container with a window cut out on one side of it at a distance of 10 cm from the bottom (RUCHIN *et al.*, 2020). The height of the trap was 7 m. A fermenting beer with the addition of honey and sugar was used as bait. Quarter is a

square forestry unit (ca. 1×1 km) surrounded by clearings from south to north and from west to east.

RESULTS AND DISCUSSION

MATERIAL (Fig. 1) - Russia, Republic of Mordovia, 10 km N of Temnikov, Temnikov district, Mordovia State Nature Reserve, quarter 446, 54°43'14.4"N 43°13'29.3"E, mixed forest, crown traps, 1–7.VII.2019 (identified by John F. Carr and N.E. Vikhrev, leg. A.B. Ruchin), 2 ♂♂, 1 ♀ (ZMMU); see label, quarter 446, 54°43'06.9"N 43°13'14.3"E, deciduous forest, crown traps, 2–19.VIII.2019 (leg. A.B. Ruchin, identified by Valery Korneyev), 1 ♂ (in collection of Libor Dvořák); see label, quarter 448 (54°42'31.5"N 43°11'46.5"E), deciduous forest, crown traps, 1–21.VIII.2019 (leg. A.B. Ruchin, identified by Valery Korneyev), 1 ♂ (in collection of Libor Dvořák); quarter 275, 54°47'56.0"N 43°09'52.7"E, mixed forest, crown traps, 2–25.VI.2019 (leg. A.B. Ruchin), 5 ♂♂, 2 ♀♀; quarter 358, 54°46'11.6"N 43°11'12.2"E, pine forest, crown traps, 19–25.VI.2019 (leg. A.B. Ruchin), 3 ♂♂, 3 ♀♀; quarter 408, 54°45'01.8"N 43°12'03.8"E, mixed forest, crown traps, 19.VI–9.VII.2019 (leg. A.B. Ruchin), 1 ♂, 1 ♀♀; quarter 299, 54°47'53.9"N 43°08'44.7"E, mixed forest, crown traps, 2.VI–9.VII.2019 (leg. A.B. Ruchin), 7 ♂♂, 3 ♀♀; quarter 384, 54°45'19.3"N 43°12'35.9"E, mixed forest, crown traps, 2.VI–9.VII.2019 (leg. A.B. Ruchin), 1 ♂, 2 ♀♀; quarter 330, 54°46'37.9"N 43°11'01.6"E, pine forest, crown traps, 2–10.VI.2019 (leg. A.B. Ruchin), 1 ♀; quarter 427, 54°44'33.1"N 43°13'04.9"E, mixed forest, crown traps, 10–19.VI.2019 (leg. A.B. Ruchin), 1 ♂.

DISTRIBUTION - FE Russia, Primorsky Krai, Amur Region (KRIVOSHEINA and KRIVOSHEINA, 2019), FE Russia (HAN, 2013); NE China (KAMENEVA and KORNEYEV, 2006), Republic of Korea (HAN, 2013). It is the first record in Europe.

Fig. I. – General view of *Pseudotephritis millepunctata*, male.

BIOLOGY - There is little information about the species biology. The feeding type of the larvae was not revealed. Larvae are ordinary inhabitants of weakened and dying deciduous trees (*Alnus hirsuta* (Spach) Rupr., *Quercus mongolica* Fisch. ex Ledeb.) (KRIVOSHEINA and KRIVOSHEINA, 2019). We collected data between June and August 2019. At this time, we observed the emerging of adults. Below, there is a description of the biotopes in Mordovia Nature State Reserve, where we caught this species. In the Mordovia State Nature Reserve, the habitats *P. millepunctata* are represented predominantly by mixed pine-birch (*Pinus sylvestris* L. + *Betula pendula* Roth, sometimes with participation of *Populus tremula* L., *Quercus robur*) forests, pine (*Pinus sylvestris*) forests or deciduous (*Quercus robur*) forests.

Mordovia Nature State Reserve is one of the oldest nature reserves in Russia. The large part of the area is also covered with *Pinus sylvestris* forests. However, oak (*Quercus robur*) forests cover small areas in western part of the Protected Areas making them as very important sites for further possible records of *Pseudotephritis millepunctata* there. Recent records of invertebrates from the Mordovia Nature State Reserve (RUCHIN and EGOROV, 2018) confirm its uniqueness, too. In this Protected Area, many insect species were found at the first time for the European Russia (KAZANTSEV *et al.*, 2019), or the whole Russia (TOMASZEWSKA *et al.*, 2018). Thus, the further comprehensive studies may be resulted in new interesting insect records.

ACKNOWLEDGEMENTS

We are grateful to Nikita E. Vikhrev (Russia) and Valery Korneyev (Ukraine) for identification and consulting assistance and M.G. Krivosheina (Russia) for providing literary data.

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