EXECHIA BICINCTA (STÆGER, 1840) – A NEW SPECIES OF FUNGUS GNATS (DIPTERA, MYCETOPHILIDAE) FOR LITHUANIAN FAUNA

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Introduction

More than 1700 species of fungus gnats (insects belonging to families Bolitophilidae, Diadocidiidae, Keroplatidae and Mycetophilidae) are known from Europe (Kurina et al., 2011). Despite the important role of fungivores insects in forest ecosystems, the determinants of their communities are poorly known, and the available data on the role of individual species in trophic relationships are still insufficient. Mushrooms and fungus gnats (Diptera, Mycetophilide, Bolitophilidae) were both associated with three partner species on average (Põldmaa *et al.*, 2015).

The genus *Exechia* Winnertz, 1863 (Diptera, Mycetophilidae, Mycetophilinae) is represented by 44 species in Europe and 18 species in Lithuania (Chandler, 2013; Pakalniškis *et al*., 2006; Gorban *et al.*, 2019).

The aim of this publication is to present records of fungus gnat species new to the Lithuanian fauna, found during the investigation on dead wood inhabitants.

Material and Methods

The research was carried out in Punios Šilas forest, Alytus district (54.539663, 24.050423 (WGS)). Studies of mature trees as microhabitats for specific insect species were carried out. The fruiting bodies of beefsteak fungus (*Fistulina hepatica* (Schaeff.) With. (1792)) were found in the small, deep hollow at the bottom part of the pedunculate oak *Quercus robur* (Linnaeus, 1753). Fungus gnats (5 specimens) were collected directly from the fruiting bodies using the entomological exhauster. The material was collected during field trip by S. A. Davenis and identified in laboratory by J. Rimšaitė. Characters on the male genitalia were utilized for the species identification according to Krivosheina *et al*. (1986). The specimens are deposited in the entomological collection of the Nature Research Centre (Vilnius, Lithuania).

The Record

***Exechia bicincta* (Stæger, 1840)**

Punios Šilas f., 14 08 2019, 3 ♂, 2 ♀ from fruiting bodies of *F. hepatica* (leg. S. A. Davenis) on *Q. robur*. Fig. 1 A–B.

Discussion

Exechia bicincta is a Holarctic species (Jakovlev, Penttinen, 2007; Jakovlev *et al*., 2008), wide distributed almost in whole Europe (except Albania, Belarus, Italy, Greece,

Ireland, Slovakia, Slovenia) (Chandler, 2013), Near East, Russian Far East (Jakovlev, Penttinen, 2007).

The oak, in which stem hole fungus gnats were found was located in mixed forest, where numerus old deciduous trees were growing. *Exechia bicincta* were collected in similar habitats in Finland – an old mansion park with numerous old hollow deciduous trees, mainly lime trees *Tilia* spp., oaks *Quercus.* spp. and maples *Acer* spp. (Jakovlev, Penttinen, 2007).

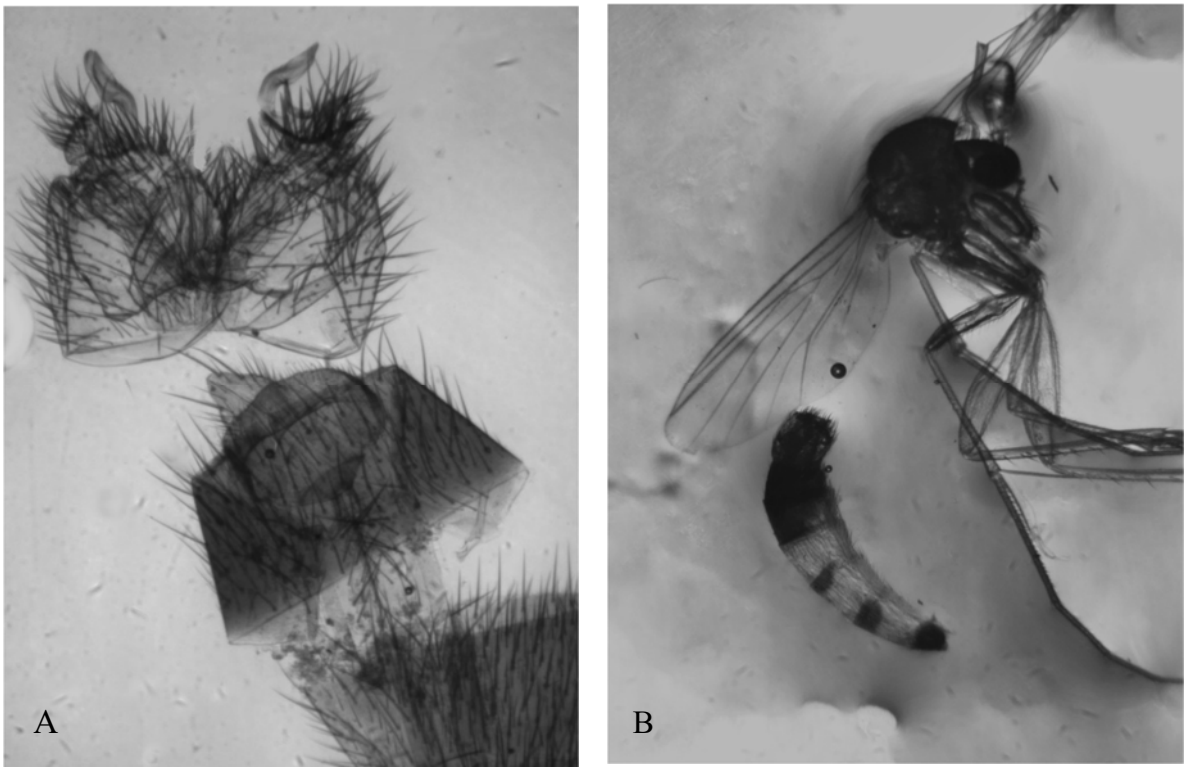

Fig. 1. A *Exechia bicincta* male genitalia, B - *Exechia bicincta* general view.

Larvae of *E. bicincta* are known to develop in soft fruiting bodies of a wide range of epigeal and wood-growing macromycetes. Trophic relations of these fungus gnats with *Boletus impolitus* Fr., *B. subtomentosus* L., *Boletellus pruinatus* (Fr. & Hök) Klofac & Krisai, *Collybia sp.* (Fr.) Staude, *C. acervata* (Fr.) P. Kumm., *Gomphidius viscidus* (L.) Fr., *Hygrophoropsis* sp. (J.Schröt.) Maire ex Martin-Sans, *H. aurantiaca* (Wulfen) Maire, *Mycena galericulata* (Scop.) Gray, *M. inclinata* (Fr.) Quél., *Omphalotus sp.* Fayod, *O. olearius* (Kalchbr.) C. Hahn, *Oudemansiella sp.* Speg., *Pleurotus* sp. (Fr.) P. Kumm., *Pleurotus ostreatus* (Jacq.) P. Kumm, *Pluteus salicinus* (Pers.) P. Kumm., *Russula* sp. Pers., *R. violeipes* Quél., *R. virescens* (Schaeff.) Fr., *Tricholoma* sp. Fries, *T. populinum* J.E. Lange, *Megacollybia platyphylla* (Pers.) Kotl. & Pouzar (Jakovlev, 1994; Jakovlev, Penttinen, 2007; Krivosheina *et al.*, 1986; Ševčik, 2006) have been already established so far.

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Exechia bicincta **(Stæger, 1840) –nauja Lietuvos faunos grybinių uodukų (Diptera, Mycetophilidae) rūšis.**

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Santrauka

Atliekant senų drevėtų medžių entomofaunos tyrimus Punios šile (Alytaus raj.) ant ąžuolo drevėje esančios Ąžuolinės kepenos (*Fistulina hepatica*) vaisiakūnio buvo pastebėti ir sugauti penki grybiniai uodukai priklausantys *Exechia bicincta* rūšiai. Tai nauja rūšis Lietuvos faunai. Literatūros duomenimis šios rūšies uodukų lervos vystosi įvairių grybų vaisiakūniuose, duomenų apie trofinius ryšius su ąžuolinės kepenos (*F. hepatica)* vaisiakūniais nėra.

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