

CALLICERA AENEA (FABRICIUS, 1781) – NEW TO THE FAUNA OF LITHUANIA (DIPTERA: SYRPHIDAE)

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Introduction

Callicera Panzer comprise the genus of large bee-mimicking hoverflies, recognized by the elongate antennae that bear white styles at their tips; apical position of the style is considered as archaic feature, occurring in very few genera of the hoverflies (Thompson & Rotheray, 1998). Species of this genus are not very diverse and rather similar in their appearance (Zimina, 1986; Speight, 1991). Larvae develop several years in soggy or water filled rot-cavities of senescent trees, sometimes very high in the trunk, being saproxylic (Speight, 2018). The forest can still contain many old trees, but if all trees with water-containing cavities are cut down with the sanitary felling, these species cannot occur there; these species are usually confined to the sites where senescent hollow trees are preserved (Reemer *et al.*, 2009).

The genus is represented by six species in the European fauna, but most of the species are recorded in Southern, and, to a less extent, in Western Europe (Zimina, 1986; Speight, 1991). Only two species reach their northern range in southern Scandinavia, and the other two species are distributed northwards to Poland (Renema & Wakkie, 2001). None of the species were recorded in the Baltic States so far (Kuznetzov, 1993; Speight, 2013), and therefore, the first observation is presented herewith.

Material and methods

The material was collected in Dinkiai, Pagėgiai municipality (55.18694, 21.89500). The list of Lithuanian hoverflies was compiled from Pakalniškis *et al.* (2006). The taxonomy and general distribution followed Zimina (1986), Speight (1991), and several supplementary sources (Renema & Wakkie, 2001; Groot *et al.*, 2010; Nedeljković *et al.*, 2015; Prokhorov *et al.*, 2018). The single specimen is deposited in the entomological collection of Nature Research Centre (Vilnius).

Species

***Callicera aenea* (Fabricius, 1781)**

Dinkiai, 23 05 2017, 1♂, captured on flight, at a woodland path (leg. E. Lutovinovas).



Figure 1 (A–B). *Callicera aenea*, recorded from Dinkiai (Pagėgiai munic.): A – dorsal, and B – lateral views (photos: Ž. Pūtys)

Discussion

The fauna of Lithuania is supplemented with a new species of the hoverfly, representing a new genus and a new tribe for our fauna (Pakalniškis *et al.*, 2006). This large and conspicuous hoverfly (Fig. 1[A–B]) is distributed in Southern and Central Europe northwards to southern Scandinavia and Poland, throughout Southern Russia and Southern Siberia to the Pacific coast (Zimina, 1986; Speight, 1991), though the southern and eastern boundaries of the distribution area require reassessment, due to confusion with the similar species (Renema & Wakkie, 2001). These data suggest that *Callicera aenea* is reaching its northern distributional limit in Lithuania. The species is not considered as migratory (Speight, 2018), so it should live permanently in our country. Its rarity and prevalence to the well-preserved status of forests is declared in Sweden (Nilsson *et al.*, 2012), the Netherlands (Reemer *et al.*, 2009), the Czech Republic (Mazánek *et al.*, 2005), and countries of Southern Europe (Groot *et al.*, 2010; Nedeljković *et al.*, 2015; Prokhorov *et al.*, 2018). It is included in the Red list of threatened species of Sweden (Cederberg *et al.*, 2010), and several other countries (Dziocik *et al.*, 2004; Mazánek & Barták, 2005). Therefore, it is suggested here to be listed in the Red Data Book of Lithuania as well, in the category of endangered species.

Recommended measure for the protection of the species is the granting of special status of protection to the trees bearing water-containing cavities, ensuring a constant and an increasing supply of old trees in the future.

Other congener species reaching similar northern latitudes in the continental Europe are *C. aurata* and *C. rufa*. The first one has for a long time been mistakenly treated in synonymy with *C. aenea*, but it is associated with the ancient beech forests, and therefore, is widespread towards the north only in Western Europe, including southern Scandinavia, but is absent in Poland (Renema & Wakkie, 2001). *C. rufa*, however, is associated with the ancient pine forests, and is recorded in Poland, but absent in Scandinavia (Renema & Wakkie, 2001). Considering information on their distribution, *C. rufa* has better chances of being found in our fauna in the future.

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***Callicera aenea* (Fabricius, 1781) – nauja Lietuvos faunos rūšis (Diptera: Syrphidae)**

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Santrauka

Pateikiami duomenys apie pirmą žiedmusės *Callicera aenea* stebėjimą Lietuvoje, šalies vakarinėje dalyje. Tai yra šiauriausia radvietė Rytų Europoje. Žiedmusė yra susijusi su senų medžių šlapiomis drevėmis, todėl kai kuriose šalyse yra saugoma. Siūloma įtraukti į Lietuvos raudonąją knygą, grėsmingos būklės taksonų kategoriją. Jai apsaugoti yra būtina drausti vandens ertmių turinčių medžių šalinimą sanitariniais tikslais. Tai yra vienintelė šios genties rūšis Lietuvoje, tačiau išlieka nedidelė tikimybė aptikti antrą rūšį ateityje.

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