FIRST RECORDS OF *MEGACHILE ROTUNDATA* (FABRICIUS, 1787) AND *ANDRENA FULVA* (MÜLLER, 1766) IN LITHUANIA (HYMENOPTERA: MEGACHILIDAE, ANDRENIDAE)

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Introduction

Over 1500 described species are included in the genus *Megachile* Latreille, 1802, accounting for a third of all bees in the family Megachilidae (Michener, 2007). Bees from this genus can live in various types of habitats (rainforests, deserts, mountains), thus they are found worldwide and are only absent from Antarctica (Gonzalez *et al*., 2012). *Megachile rotundata* are relatively small (60-90 mm), dark grey or black in colour.

Andrena Fabricius, 1775 is the largest genus in the bee family Andrenidae; it consists of about 1500 described species worldwide (Hazir *et al*., 2014), 931 of which are known from the Palearctic region (Gusenleitner & Schwarz, 2002). Most of the genus biodiversity can be found in the Holarctic region; species richness is very small in Africa and *Andrena* bees are not known from Australia, South America or Southeast Asia (Gusenleitner & Schwarz, 2002; Dubitzky 2006; Michener, 2007). Females of *Andrena fulva* are large and colourful (Fitzpatrick *et al*. 2006), with distinct dense reddish-brown dorsal hairs on their thorax and abdomen that contrast with the rest of the body hair that is black to blackish brown. Males are much harder to distinguish from similar *Andrena* species; they have a large tooth at the base of the mandible, second segment of the flagellum is almost the length of third and fourth segments combined (Gusenleitner & Schwarz, 2002) and less dense lighter reddish-brown thorax hairs as well as long white hairs on the clypeus are noticeable on fresh specimens (BWARS, 2011).

The aim of the publication is to document the first-time records of these two bee species in Lithuania.

Material and Methods

The bees were collected using an entomological net by E. Budrys (abbreviated as E.B.), or observed and photographed in the field by Romas Ferenca (R.F.) and Gintautas Steiblys (G.S.). The collected specimen is deposited in the Nature Research Centre (Vilnius, Lithuania).

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Figs. 1–2. 1 – *Megachile rotundata* ♀ (foto E. Budrys); 2 – *Andrena fulva* ♀ (foto R. Ferenca)

List of localities

Locality	Administrative district	Coordinates (LAT, LONG)
Petrašiūnai	Kaunas mun.	54.8932, 24.0220
Šančiai	Kaunas mun.	54.8729, 23.9363
Tirkiliškiai	Kaunas mun.	54.8609, 23.8574
Žaliakalnis	Kaunas mun.	54.9042, 23.9039

List of species

MEGACHILIDAE
***Megachile rotundata* (Fabricius, 1787)** (Fig. 1)
Tirkiliškiai, 12 08 2017, 1♀ (E.B.).

ANDRENIDAE
***Andrena fulva* (Müller, 1766)** (Fig. 2)
Petrašiūnai, 06 05 2021, 1♀ (G.S.); Šančiai, 05 05 2021, 1♀ (R.F.); Žaliakalnis, on flowers of *Prunus cerasifera*, 21 04 2018, 1 ♀ (E.B.).

Discussion

Megachile rotundata is native to eastern Europe and western Asia (Osgood, 1964; Kemp & Bosh, 2000), though it has been introduced to other continents, such as North America and Australia, to be used as a specialist pollinator of alfalfa (Mitchell, 1962; Brewer, 1995; Michener, 2007; Pitts-Singer & Cane, 2011).). In the neighbouring countries, *M. rotundata* has been recorded in Poland (Ptacek, 1982), Belarus (Ascher & Pickering, 2020) and Estonia; in the latter country the species is assessed as near threatened (NT) (eElurikkus, 2020). The species is also found in Finland (Laji.fi, 2021) and Denmark (Holm, 1982). *M. rotundata* is considered as data deficient (DD) according to the IUCN criteria in Europe (Nieto *et al*., 2014) and worldwide (Dewulf & Praz, 2014), thus abundance and distribution of the species need to be further studied to determine its conservation status.

Andrena fulva is widespread in western and central Europe, but has also been found in northern and southern Europe as well as the Balkans, Turkey, Caucasus, Ural and Siberia. Closest previous records to Lithuania were in Kaliningrad Oblast (Russia) and Poland; no data is available in Belarus or Latvia (Rasmont *et al*., 2013; Ascher & Pickering, 2020; Tomozei, 2014; Proshchalykin *et al*., 2017). In Ireland, the species is included in the National Red List as regionally extinct (RE) (Fitzpatrick *et al*. 2006). Abundance, distribution and threats to populations of *A. fulva* need further investigation to assess its conservation status as the species is currently regarded as Data Deficient (DD) in Europe (Nieto *et al*., 2014) and worldwide (Tomozei, 2014).

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Pirmieji bičių *Megachile rotundata* (Fabricius, 1787) ir *Andrena fulva* (Müller, 1766) (Hymenoptera: Megachilidae, Andrenidae) stebėjimai Lietuvoje

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Santrauka

Straipsnyje pristatomos dvi pirmą kartą Lietuvoje aptiktos bičių rūšys: liucerninė bitė-lapkirpė (*Megachile rotundata* (Fabricius, 1787)) ir rūdžiagaurė smėliabitė (*Andrena fulva* (Müller, 1766)), priklausančios atitinkamai pilvarinkių bičių (Megachilidae) ir smėliabičių (Andrenidae) šeimoms. Pateikiamos kiekvienos rūšies sugavimo ar stebėjimo vietos bei datos, individų skaičius ir jų lytis, rinkikai. Abiejų rūšių bitės yra plačiai paplitusios Europoje, jos stebėtos kai kuriose kaimyninėse šalyse, tad jų aptikimas Lietuvoje buvo tikėtinas.

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