TAXONOMIC COMPOSITION OF APOIDEA VISITORS OF SOLIDAGO INFLORESCENCES IN DIFFERENT BIOTOPES IN MINSK

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Introduction. The increasing spread of invasive alien species can lead to significant changes in the functioning of natural ecosystems. Most flowering plants are entomophilous and require insects for successful cross-pollination. Seed production and genetic variation are also influenced by the amount of pollen transferred from flower to flower. Invasive species can decrease native plant density and disrupt already established interactions between native plants and their pollinators (Sun, Montgomery & Li, 2013, p. 2165–2177). The introduction of invasive species into natural biocenoses can lead to significant changes in the species composition of the anthophilic insects complexes. Such an impact on the biodiversity of biocenoses has been proven in many works published in recent years (van Hengstum et al., 2014, p. 4–11).

Among the most active invasive plants are North American species of goldenrod (Solidago). About 20 species of goldenrod are cultivated and able to spread beyond the cultivation areas, naturalize and quickly form dense thickets. Despite good melliferousness and decorative attractiveness, goldenrods are malicious weeds and rather aggressive invaders, characterized by high seed fertility and capability of rapid colonization and transformation of large territories (Moron, 2009).

Rich species composition of goldenrods' visitors may confirm the fact that goldenrods are an attractive food source for a wide range of Apoidea.

Materials and methods. The collection of material was carried out in the summer-autumn period of 2018–2019 from various biotopes in the Minsk region. The insects were collected by hand and fixed in plastic tubes filled with 70 % ethanol. The taxonomic identification of the collected specimens was carried out according to the key for the European part of USSR (Ponomareva, Osychnuk & Panfilov, 1978).

Results. On the goldenrod inflorescences we registered 51 species of Apoidea, belonging to 5 families:

Apidae family: *Apis mellifera* (Linnaeus, 1758), *Bombus lapidarius* (Linnaeus, 1758), *B. laesus* (Morawitz, 1875), *B. terrestris* (Linnaeus, 1758), *B. ruderarius* (Müller, 1776), *B. humilis* (Illiger, 1806), *B. hypnorum* (Linnaeus, 1758), *B. lucorum* (Linnaeus, 1761), *B. semenoviellus* (Skorikov, 1910), *B. pratorum* (Linnaeus, 1761), *B. pascuorum* (Scopoli, 1763), *B. soroeensis* (Fabricius, 1776), *B. pomorum* (Panzer, 1805), *B. hypnorum* (Linnaeus, 1758), *Psithyrus vestalis* (Geoffroy, 1785), *P. rupestris* (Fabricius, 1793), *P. bohemicus* (Seidl, 1838), *P. barbutellus* (Kirby, 1802), *Epeolus variegatus* (Linnaeus, 1758), *E. cruciger* (Panzer, 1799);

Melittidae family: *Macropis europaea* (Warncke, 1973), *Dasypoda altercator* (Harris, 1780);

Colletidae family: *Colletes similis* (Schenck, 1853), *C. collaris* (Dours, 1872), *Hylaeus communis* (Nylander, 1852), *H. annularis* (Kirby, 1802), *H. gracilicornis* (Morawitz, 1867), *H. sigmatus* (Panzer, 1798);

Andrenidae family: *Andrena chrysopyga* (Schenck, 1853), *A. gallica* (Schmiedeknecht, 1883), *A. lepida* (Schenck, 1861), *A. pilipes* (Fabricius, 1781), *A. flavipes* (Panzer, 1799), *A. tarsata* (Nylander, 1848), *A. gravida* (Imhoff, 1832), *A. chrysopyga* (Schenck, 1853);

Megachilidae family: *Heriades truncorum* (Linnaeus, 1758), *Coelioxys inermis* (Kirby, 1802), *Megachile versicolor* (Smith, 1844), *Stelis punctulatissima* (Kirby, 1802);

Halictidae family: *Sphecodes puncticeps* (Thomson, 1870), *S. crassus* (Thomson, 1870), *Halictus quadricinctus* (Fabricius, 1776), *Lasioglossum albipes* (Fabricius, 1781), *L. morio* (Fabricius, 1793), *L. calceatum* (Scopoli, 1763), *L. leucopus* (Kirby, 1802), *H. tumulorum* (Linnaeus, 1758), *L. sexnotatulum* (Nylander, 1852), *L. costulatum* (Kriechbaumer, 1873), *H. maculatus* (Smith, 1848).

Andrena gallica Schmiedeknecht, *Andrena pilipes* F., *Bombus terrestris* L., *Bombus lapidarius* L., *Bombus ruderarius* Müller, *Macropis europaea* Warncke were previously registered on goldenrod inflorescences (Koroteeva, 2019). The rest of these species have been registered as visitors of goldenrods in Belarus for the first time.

Conclusion. On the inflorescences of goldenrods we have registered 51 species of Apoidea belonging to 5 families. Significant richness of species of visitors of goldenrod inflorescences indicates that these plants are extremely attractive source of nectar and pollen for a wide range of Apoidea pollinators.

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