OCCURRENCE OF LEAF GALLS FORMED BY GALL MIDGE *OBOLODIPLOSIS ROBINIAE* LARVAE ON BLACK LOCUST IN GREEN AREAS OF MINSK AND LIDA (BELARUS)

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Introduction. The gall midge, *Obolodiplosis robiniae* (Haldeman, 1847) (Diptera: Cecidomyiidae), is a Nearctic species, damaging the black locust (*Robinia pseudoacacia* L.) (Fabaceae) (Skuhravá, Skuhravý & Csoka, 2007). It was first observed in Italy in 2003 (Navone & Tavella, 2004) and has spread during short period in Europe (Skuhravá, Skuhravý & Csoka, 2007) and East Asia (Yang et al., 2006). In Belarus *O. robiniae* was registered for the first time in 2000s (Petrov, 2019), and at present it is common in all regions of the country where *R. pseudoacacia* grows. The black locust leaf gall midge is a single species of Cecidomyiidae in "Black book of invasive animal species in Belarus" (Alekhnovich et al., 2016).

Gregarious feeding of larvae results in thickening of the margins of the leaflets and their bending downwards, forming the characteristic leaf margin roll galls. They are green in the beginning, but subsequently turn yellow or pink and may darken and dry up. Leaf damage depends on the number of larvae living in the galls; high infestation can cause serious defoliation of trees.

Materials and methods. For each location (yard plantings, linear sidewalk plantings, forest belt green plantings) samples of leaves were randomly collected and placed into plastic bags. The collected samples were taken to the laboratory and analyzed. The total number of leaflets and the number of infested leaflets were counted for each leaf in the sample. Based on this data, obtained during vegetation season in 2020, the infestation ratio for each leaf from each location was estimated as the ratio of infested compound leaves to the total number of compound leaves. The overall ratio of the black locust trees infestation by *O. robiniae* at each location was estimated as a mean infestation ratio of all leaves in the sample from the location.

Results. The infestation ratio of compound leaves of *R. pseudoacacia* varied from 1.75 % to 35.00 %. Within four locations in Minsk, studied during the period of July–August, the infestation ratio of the black locust compound leaves accounted for 2.53–3.85 % (linear sidewalk plantings), 5.20–12.50 %, and 5.88–7.14 % (yard plantings), 1.75–3.57 % (forest belt plantings). In general, the ratio of black locust compound leaves infestation by *O. robiniae* was higher during the period of July–August, and has been declining slightly up to September.

Within four locations in Lida (a major city of the Grodno administrative region), studied during the period of July–August, the infestation ratio of the black locust compound leaves accounted for 3.85–9.43 % (linear sidewalk plantings), 21.62–35.00 %, and 20.00–23.33 % (yard plantings), 3.45–8.33 % (parks).

Conclusion. The black locust leaf gall midge (*Obolodiplosis robiniae* (Haldeman, 1847)) is currently a common alien species of gall-forming insects. In green areas of Minsk and Lida the infestation ratio of compound leaves of the black locust (*Robinia pseudoacacia* L.) varied from 1.75 % to 35.00 % during July–August 2020 in different types of green plantings, such as linear sidewalk plantings, yards, parks or forest belts.

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