



Mlyňany Arboretum
Slovak Academy of Sciences



Dendrological Days in Mlyňany Arboretum SAS 2012

„Recent results from woody plants research and application“

International scientific conference devoted
to the 120th anniversary of the Mlyňany Arboretum SAS

Proceedings of Abstracts

Mlyňany Arboretum SAS,
18 - 19 September 2012

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LIMITATIONS OF INVASIVE BLACK LOCUST GALL MIDGE, *OBOLODIPILOSIS ROBINIAE*

Tóth, Peter – Lukáš, Jozef

TÓTH, P. – LUKÁŠ, J., 2012: Limitations of invasive black locust gall midge, *Obolodiplosis robiniae*. In Proceedings of Abstracts: International scientific conference "Dendrological Days in Mlyňany Arboretum SAS 2012", 18-19 September 2012. Vieska nad Žitavou: Mlyňany Arboretum SAS, p. 82. ISBN 978-80-971113-0-4

The black locust, *Robinia pseudoacacia* L. (*Fabaceae*), a native of eastern North America, was introduced into Europe in the 17th century for ornamental purposes. Black locust exhibited a high competitiveness toward a large number of European tree species. Many insect species that are in some way associated with black locust were recorded worldwide. They represent varied ecological relationships. A variety of new insect pests of black locust were accidentally introduced to Europe. The last invader, gall midge *Obolodiplosis robiniae* (Haldeman) (Diptera: *Cecidomyiidae*), was introduced into Europe in 2003. To record the presence and impact of natural enemies of *O. robiniae*, different locations throughout southern Slovakia were studied during two years. Natural enemies are pervasive in biological communities and are implicated as being keys in biological invasions. Therefore, the aim of this study was to provide the first crude assessment of natural enemies' impact on the outcome of *O. robiniae* invasion. In particular, we investigated: (i) natural enemies' assemblage and their potential efficiency under the natural conditions (ii) plausible predators feeding on galls and subsequently their effects on the gall midge population across the season (iii) parasitism and predation rates. Moreover, the following general hypotheses were tested: (i) that the invading species are attacked by few species of parasitoids; (ii) that the parasitoid species which colonize the new host have a wide rather than a narrow host range; (iii) that exotic species are usually not very attractive for native predators. All of these items will be discussed with a view to highlight limitations of *O. robiniae* spreading.

KEY WORDS: insect, parasitoid, predator, bushcricket, invasions

HUNGARIAN AND FOREIGN LINDEN VARIETIES PHENOLOGICAL EVALUATION

Tóth, Endre György – Sütő-Díószegi, Magdolna – Hrotkó, Károly

TÓTH, E. G. – SÜTŐ-DÍÓSZEGI, M. – HROTKÓ, K., 2012: Hungarian and foreign linden varieties phenological evaluation. In Proceedings of Abstracts: International scientific conference "Dendrological Days in Mlyňany Arboretum SAS 2012", 18-19 September 2012. Vieska nad Žitavou: Mlyňany Arboretum SAS, p. 83. ISBN 978-80-971113-0-4

In Central Hungary at Department of Floriculture and Dendrology, Corvinus University of Budapest Faculty of Horticultural Science in December 2009, using multiple *Tilia* taxa an alley was planted with the aim of comparison of new cultivars occurred in the Hungarian nurseries. The climate is typical of the central Hungarian flatland; yearly average temperature is 11.3°C, total sunshine is 2079 hours per year, and precipitation is 560 mm per year. The soil type is light sandy, lime content is around 2.5 %, soil organic matter is low (0.8 – 0.9 %), pH is 7.7 – 8.1. The *Tilia* taxa are as follows: *Tilia americana* 'Nova', 'Redmond', *Tilia cordata* 'Greenspire', 'Rancho', 'Roelva', 'Savaria', *Tilia x euchlora*, *Tilia x intermedia*, 'Pallida', *Tilia platyphyllos* 'Favorit', 'Rathaus', *Tilia* 'Szent István', *Tilia tomentosa* 'Szeleste', 'Zentai Ezüst'. Comparative evaluation is planned primarily for their site adaptability and stress-tolerance. For the cultivar evaluation we plan to carry out detailed investigations on phenology (date of sprouting, sprouting dynamics, bloom dynamics, leaves drying, coloration of the leaves at the beginning of autumn, leaf fall) and trunk diameter growth. The aim of the research is the selection of the most tolerant taxa.

KEY WORDS: *Tilia* cultivars, phenology, stress tolerance, tolerance to urban conditions, adaptive strategies, urban trees