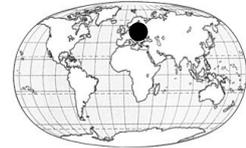


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FECUNDITY OF *LUPINUS POLYPHYLLUS* IN RELATION TO HABITATS AND AGE OF INDIVIDUALS

Lupinus polyphyllus Lindl. (Fabaceae) is a perennial plant species native to North America, that has been introduced to Europe in the mid-19th century. Its cultivation in Lithuania probably started in the beginning of the 20th century and in 1930s it was recorded for the first time as escaped from cultivation. In the middle of the 20th century *L. polyphyllus* was recommended for re-vegetation and re-habilitation of disturbed sandy soils, for fire control belts in forests, as a fodder plant for game animals, or it was simply dispersed for enrichment of the local flora and landscape scenery. Soon this species became naturalized, and its invasion into various types of habitats, mainly on dry sandy soils, started. Nowadays *L. polyphyllus* is a widespread alien species in Lithuania. Like other leguminous plants, make symbiosis with nitrogen fixing bradyrhizobias, thus supplying large amount of nitrogen compounds to the topsoil layer of habitats. In habitats invaded, alterations of soil fertility take place and that triggers fast irreversible changes of plant communities and entire ecosystems. Thus, this highly invasive and competitive species could be ranked as a transformer, which threatens ecosystems and their biodiversity. Populations of *L. polyphyllus* occurring in various types of habitats (forests, meadows, sands, etc.) were investigated. Plant height and inflorescence length were measured; number of shoots, leaves, branches, flowers, pods and seeds were counted. Dependence of development and fecundity of *L. polyphyllus* upon ecological factors is analysed and discussed. Actual age of individual plants of a population was determined applying the method of herbochronology (by annual rings in root xylem). Population age structure and relation of the age of individuals with fecundity and morphological parameters are discussed.

keywords: invasive, population, fecundity, herbochronology