



## MORPHOLOGICAL FEATURES OF *DELPHINIUM SERGII* WISSJUL. EX SITU IN M.M. GRYSHKO NATIONAL BOTANICAL GARDEN

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**Key words:** Ranunculaceae, *Delphinium sergii*, morphological variability, polymorphism, heterophylly, ontogenesis

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*Delphinium sergii* Wissjul. is an endemic of eastern coast of Black Sea. It is listed in Red book of Ukraine with conservation status “vulnerable” (DIDUKH 2009). It grows mainly in eastern part of Ukraine in nature and is not typical for the Kyiv region. It is a perennial plant with bright blue flowers. The individuals of this specie are cultivated in the M.M. Gryshko National Botanical Garden during last 15 years. The results of the study of ontogenetic development and morphological diversity show that *D. sergii* is characterized by heterophylly and common morphological variability of leaf blade. The correlation of degree between leaf blade dissection and their formation and age was established. Dissected leaves are found to be “older” while with entire laminas – “younger”. Formation of different leaves in individuals of the same age states their dependence from lighting, soil moisture, crop density, genetic heterogeneity and plasticity of individuals in different conditions of growth.

We observed a difference in terms of passing through ontogenetic stages among the individuals too. Our investigation established that the individuals of *D. sergii ex situ* can accelerate the ontogenetic development and reach the generative stage for just 2 years. The

juvenile period in some individuals may last for just one growing season. It is noted that under the unfavorable factors (thickened crops, drought, and shading) development of *D. sergii* individuals became slower.

This species can be reproduced both by seed and vegetative. Propagation by seeds is the main way for distribution of these plants. Vegetative reproduction could be realized by particulation of individuals at *g* and *ss* stages. In Kyiv region *D. sergii* is blooming in June-July.

*Delphinium* is well known as such representing the “bee-flowers syndrome”. According to our observations the main pollinators of *D. sergii* in conditions of our botanical garden were *Bombus pascuorum* (Scopoli, 1763), *B. hortorum* (Linnaeus, 1761), *B. lucorum* (Linnaeus, 1761), and *B. lapidarius* (Linnaeus, 1758). The flowers of *D. sergii* were attractive also for bees (*Lasioglossum* sp., *Apis mellifera* (Linnaeus, 1758)) and butterflies of *Ochlodes sylvanus* (Esper, 1778).

### References

DIDUKH Ya.P. (ed.) 2009. Red book of Ukraine. The plant world. Globalconsulting, Kyiv. (In Ukrainian)