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**TAXONOMIC COMPOSITION AND STRUCTURE OF PLANTATIONS OF
DENDROLOGICAL PARK**

OF BEREZNOVSKY FOREST COLLEGE

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Amid rapid climate changes, which are occurring in our planet, biodiversity protection, especially in critical natural geographic regions, is gaining relevance. In 2011 at the Ukrainian Polissya it was started extremely important for the preservation of the environment of this region project "Enabling Climate Change in the management of vulnerable ecosystems, natural protected areas of Polissya, Ukraine".

One of the greatest centres of preservation and distribution of exotic species of woody plants among dendrological parks of Ukrainian Polissya is a dendrological park of Bereznovsky Forest College. This object is situated in Rivne region, where as of 01.01.2015 there are 14 parks attractions of landscape art, a zoo, but botanical gardens is no, so to explore and enrich of dendroflora of Rivne region the research dendrological park is an important scientific and educational base of preservation of wood plants.

The aim of the study was a retrospective analysis of the taxonomic composition of its plantations, analysis of the their distribution of species composition for systematic position, life forms, age and geographical origin.

According to the results of a retrospective analysis of the history of the development of dendrological park of Bereznovsky Forest College, it was found that planting of trees began in 1979 on an area of about 29.5 hectares according to project by a group of specialists of Lviv Forestry Institute. Before this for 15 years, students and teachers college had been growing the planting material for the park, but most exotic species was obtained primarily from seeds that came from 88 botanical gardens and dendrological parks of USSR and 11 foreign

countries. In addition, some collections (*Salix* L., *Populus* L., and others) were obtained from cuttings taken from old specimens in various botanical gardens of Ukraine. Thus it was created a collection of woody plants, which included in 1533 taxa at species.

Analysis the results of the inventory years 1986-2013 revealed that during the development of the park in the taxonomic composition of its plantations were significant negative changes. Number of taxa at species fell by more than three times - 511 taxa remained and they are belong to 95 genera and 32 families. The reason for the quantitative reduction of the taxonomic composition of plantations can be complex factors of natural and anthropogenic, that results in reduction of resistance of woody plants, especially their cultivars to pathogens and insects which common in the park plantations.

In a systematic structure of plantations of researched park the largest by the number of families is the family Rosaceae Juss. (21%). The leading collections are the *Betula* L., *Salix* L., *Spiraea* L. and others which include 30-38 taxa at the species. In the plantations dominated specimens of trees are that were planted at the beginning of laying the park and which is now 30 to 50 years. In the park most species of trees are exotic species, a significant proportion of which comes from North America (23%), Western Europe (16%) and China (12%). The eight species of woody plants listed in the Red Book of Ukraine is growing in the park: *Betula obscura* Kotula, *Taxus baccata* L., *Pinus cembra* L., *Fraxinus ornus* L., *Quercus cerris* L., *Syringa josikaea* J.Jacq. ex Rchb., *Staphylea pinnata* L. and *Larix × polonica* Racib.

At the present stage of the researched Arboretum there needs for comprehensive monitoring of plantations, identifying the causes of degradation of quantitative and qualitative composition, developing of recommendations for effective conservation of rare and exotic specimens of trees of the park, the identification and use of resistant species for planting in terms of Polissya.