

**DYNAMICS OF SOME SPECIES OF WOODY PLANTS
IN THE BOTANICAL GARDEN AT VSU NAMED AFTER P.M. MASHEROV
FOR THE PERIOD FROM 1999 TO 2022**

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Plant communities play a significant role in the life and development of mankind. Their diversity determines the versatile life of everything that exists on the planet. The famous Soviet botanist I.G. Serebryakov classified all plants into groups: woody, semi-woody, terrestrial and aquatic. Each group has its own essential meaning, but in everyday life a person often interacts with woody plants. When landscaping cities and other settlements, various types and varieties of woody plants are often used. Breeders every year bring out more and more new varieties of most woody plants for various purposes. When landscaping, many characteristics of plants are taken into account, both decorative and resistant to gases and various pollution, therefore it is woody plants that most fully meet these goals.

The task of the botanical garden is to study plants and vegetation in order to manage and create new forms that are beneficial to man. To solve this problem, acclimatization and introduction of plants from different regions of growth are carried out in gardens. Thus, the flora is enriched with new valuable species. Therefore, collections of living plants are an integral part of the botanical garden. The collection of woody plants itself is the key and oldest. The purpose of this work is to study part of this collection and compare it with the current situation. The relevance lies in the fact that the collection is constantly changing in view of various situations (cutting down, malicious actions, death of plants, etc.), therefore, it is important to monitor the species and quantitative composition of the plant collection.

Material and methods. We studied the species composition of woody plants and the belonging of species to a particular family. The route method, the method of recording data records, the method of photographing were used.

Findings and their discussion. Quantitative data of some species of woody plants of the botanical garden during the study are presented in Table 1.

Table 1

Family Ericaceae		
View	By 1999	By 2022
Dahurian rhododendron	1	1
Rhododendron yellow	1	1
Rhododendron marigold	1	
Sikhotinsky rhododendron	1	11
Family Fabaceae		
View	By 1999	By 2022
Amorpha shrub	1	1

Bobovnik anagiroidny	1	1
Gorse dyeing	1	2
Caragana treelike	4	3
Caragana arborescens pendula	2	2
Karagana shrub	2	2
Robinia false acacia	2	8
Family Rutaceae		
View	By 1999	By 2022
Amur velvet	19	15
Pteleya three- leafed	1	3
Family Pinaceae		
View	By 1999	By 2022
Prickly spruce	6	6
Spruce Glauka	8	9
Norway spruce	3	3
Korean cedar	4	3
American larch	3	3
European larch	21	21
Siberian larch	14	15
Balsam fir	2	4
White fir	2	2
Vicha Fir	1	2
White fir	4	5
Siberian fir	3	2
Whole-leaved fir		1
Pseudotsuzh Menzies	2	1
Pseudotsuzh Menzies glauka	1	2
Weymouth pine		1
Mountain pine	2	3
Scotch pine		3
Pine Siberian cedar	1	4
Yew berry	3	5

The table shows that the species of the Pine family have been preserved in the same number as in 1999. In some places, a slight difference in species is noticeable, but it is small and therefore not significant. It should be noted that several new species have appeared in this family (solid-leaved fir, Scotch pine, Weymouth pine). A similar situation can be seen in other families, in particular the Rutaceae family and the Legume family. However, in the Legume family there is a species (Robinia false acacia), the growth of which amounted to 6 copies. This increase is explained by the fact that Robinia false acacia is very unpretentious, grows rapidly and reproduces well [3]. In the Heather family, a decrease in the number of some types of rhododendron is noticeable, since this crop is difficult to grow and demanding on soils. The number of Sikhotinsky rhododendron is so large because it is very decorative during flowering and in the botanical garden this species is included in a decorative planting along the border.

Conclusion. As a result of the work carried out, an inventory of some species of the collection of woody plants of the Botanical Garden of VSU named after P.M. Masherov for the period from 1999 to 2022. The quantitative dynamics of these species is shown. New species have also been noted.

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NON-ENZYMATIC ANTIOXIDATIC SYSTEM B EARLY-FLOWERING PLANTS GROWING IN THE CONDITIONS OF THE BOTANICAL GARDEN OF VSU OF P.M. MASHEROV

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Keywords: non-enzymatic antioxidatic system, early-flowering plants, *Állium ursínium*, *Prímula véris*, *Állium schoenoprásium*.

Application of curative herbs and pharmaceutical collecting on their basis in traditional and traditional medicine is especially relevant now that is caused by essential advantage of plants in comparison with chemical medicamentous medicines. The main thing from them – lack of the ghost effects and complex impact on an organism [1].

Early-flowering plants well grow and develop under the poor weather conditions that is bound to their antioxidatic system. Therefore it is important to investigate at these plants the maintenance of indexes of enzymatic and non-enzymatic antioxidatic system for further application on biological objects [2].

The work purpose – to define the maintenance of indexes of non-enzymatic antioxidatic system in water extracts (1:10) leaves of early-flowering plants.

Material and methods. Objects of a research are water extracts of leaves (1:10) early-flowering plants *Állium ursínium*, *Prímula véris*, *Állium schoenoprásium*. Exemplars of plants were selected in groups, growing in the conditions of the Botanical garden of VSU of P.M. Masherov and forest area of Vitebsk.