

Conclusion. The study found that since the 70s of the 20th century, an increase in the average annual air temperature has been recorded, the most significant since 1989, especially in the last decade, the maximum in 2020. The warmest seasons in Vitebsk were the seasons of the climate warming period: winter 2019-2020, spring 2014, summer 2010, autumn 2020.

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**PROTECTED SPECIES OF PLANTS OF THE REPUBLIC
OF BELARUS, STORED IN THE HERBARIA
OF THE DEPARTMENT OF ZOOLOGY AND BOTANICS
OF VSU NAMED AFTER P.M. MASHEROV**

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Keywords: VSU herbarium, Red Book of the Republic of Belarus, Belarusian Lake District, protected plants, herbarium specimens.

The protection of rare plant species is one of the important international and state tasks. In the Republic of Belarus, many plants have already been taken under protection. Preventing the extinction of rare plant species is necessary, first of all, to preserve their gene pool, for the purpose of scientific study, economic, cultural and medical use [1].

To preserve the country's phyto-diversity, regulatory documents have been developed, including the Red Book.

The Red Book of the Republic of Belarus: Plants (2015) contains a list of species of higher vascular plants, mosses, fungi, algae and lichens that are threatened with complete extinction in the country. It contains information about protected species, about the places of occurrence and collection of these plants in Belarus, about the state in recent years and the degree of danger of extinction.

The purpose of the work is to make an inventory of the stock herbarium of the Vitebsk State University named after P.M. Masherov in order to identify the exact number of species of protected plants included in the Red Book of the Republic of Belarus, in the collection of the herbarium; analyze the general condition of herbarium specimens, as well as systematize by categories of protection,

Material and methods. The material for this work was herbarium specimens of protected plant species included in the Red Book of the Republic of Belarus (2015), which are kept in the stock herbarium of the Department of Zoology and Botany of VSU named after P.M. Masherov.

Findings and their discussion. All protected plant species included in the Red Book of the Republic of Belarus are divided into 4 categories of protection:

Category I. Includes taxa with very low or rapidly declining numbers, the conservation of the population is impossible without a set of special measures.

II category. Includes taxa that are currently not under immediate threat of extinction on the territory of the republic, but tend to decrease in number and / or range and a deterioration in status predicted in the near future.

III category. Includes taxa that are not directly endangered, but at risk of extinction in the near future.

IV category. It unites taxa that do not belong to the three previous categories, but are close to them, have an unfavorable tendency in the surrounding territories or are dependent on the implemented protection measures [2].

In the collection of the stock herbarium of the Department of Zoology and Botany of Vitebsk State University named after P.M. Masherov contains samples of all four categories of protection:

Category I – *Viola montana* L., *Daphne cneorum* L., *Lobelia dortmanna* L., *Herminium monorchis* (L.) R. Br., *Orchis militaris* L., *Cladium mariscus* (L.) Pohl.;

II category – *Isoetes lacustris* L., *Nuphar pumila* (Timm) DC., *Aconitum lasiostomum* Reichenb., *Clematis recta* L., *Corydalis intermedia* (L.) Merat, *Quercus petraea* (Mattuschka) Liebl., *Betula nana* L., *Aldrovanda vesiculosa* L., *Rubus chamaemorus* L., *Corallorhiza trifida* Chatel., *Orchis mascula* (L.) L.;

III category – *Nymphaea alba* L., *Delphinium elatum* L., *Corydalis cava* (L.) Schweigg. et Koerte, *Betula humilis* Schrank, *Rhododendron luteum* Sweet, *Saxifraga granulata* L., *Trapa natans* L., *Linnaea borealis* L., *Gentiana cruciata* L., *Cypripedium calceolus* L., *Epipactis atrorubens* (Hoffm. ex Bernh.) Bess., *Gymnadenia conopsea* (L.) R. Br., *Cephalanthera longifolia* (L.) Fritsch, *Carex paupercula* Michx.;

IV category – *Lycopodiella inundata* (L.) Holub, *Huperzia selago* (L.) Bernh. ex Schrank et C. Mart., *Polypodium vulgare* L., *Anemone sylvestris* L., *Trollius europaeus* L., *Pulsatilla patens* (L.) Mill., *Silene baccifer* L., *Cardamine bulbifera* (L.) Crantz, *Lunaria rediviva* L., *Salvia pratensis* L., *Campanula latifolia* L., *Iris sibirica* L., *Gladiolus imbricatus* L., *Festuca altissima* All.

Most of the herbarium specimens of protected plant species were collected by students and teachers of the Department of Zoology and Botany of Vitebsk State University named after P.M. Masherov, and the rest of the samples were transferred from the Institute of Experimental Botany named after V.F. Kuprevich National Academy of Sciences of Belarus.

Conclusion. In general, 98 protected plant species, included in the Red Book of the Republic of Belarus, grow on the territory of the Belarusian Lake District. Of these, 14 species belong to the Ist category of protection, 35 species to the II category, 32 species to the IIIrd category and 17 species to the IVth category of protection [3].

The collection of the herbarium of the Department of Zoology and Botany contains species of protected plants listed in the Red Book of the Republic of Belarus from all four categories of protection. The total number of protected species in the herbarium is 45 species.

All herbarium specimens were systematized according to protection categories, and thus it was found that in the herbarium of the Vitebsk State University named after P.M. Masherov, 6 species of plants belonging to the Ist category of protection, 11 species to the IInd category, 14 species to the IIIrd category and 14 species to the IVth category are stored.

The general condition of herbarium specimens of protected plant species in the herbarium collection can be assessed as good, which is explained by the quality of herbarization and storage conditions. In general, the plants are in satisfactory condition, almost all mounted on sheets of thick paper or thin cardboard of standard size. Plants are attached to the leaves, usually one at a time, but there may be several copies of small plants of the same species. Each herbarium is provided with a printed or handwritten label. The labels indicate: the scientific name of the family and plant species in Russian and Latin, adopted at the time of collection; gathering place; growing conditions; date of collection and the name of the collector who collected and identified the given plant species.

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DYNAMICS OF A COLLECTION OF PLANTS OF THE *ERICACEAE* FAMILY IN THE BOTANICAL GARDEN OF VSU NAMED AFTER P.M. MASHEROV

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Keywords. Collection, family of Ericaceae, introduction test, botanical garden, catalog.

Botanical Garden of VSU named after P.M. Masherov is one of the main centers of introduction in the north of Belarus. The collection of woody plants of the botanical garden is the 4-th largest in the republic. A rather interesting group