

**LIVING COLLECTIONS AND HERBARIUM
OF CENTRAL BOTANICAL GARDENS OF BELARUS (MINSK)**

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CBG was founded in 1932. It is situated in the city of Minsk - the capital of Belarus, and occupies the square of 1.02 sq.km.

Main directions of research work are:

- scientific investigations in the area of introduction, acclimatisation, landscape architecture and environment protection;
- botanical education and information;
- economic botany - the mobilisation of world plant resources for the economical needs.

All above-mentioned activities are based on the collection of living plants. Today our living collections include more than 10,000 names, species, forms and sorts. Collections take more than 70% of Garden's square and include the next groups of plants:

- ornamental plants;
- trees and shrubs;
- rare and endangered species;
- medicine plants;
- fodder and spice crops;
- sub-tropical and tropical;
- non-traditional economic plants for Belarus.

The plants collected in the Garden are the object and the basis of science research. The results of this work are the new scientific and methodical approaches in the sphere of introduction and acclimatisation and selection of plants.

Practical meaning of collections is in their role as the source of enrichment of Byelorussian flora with new species. Moreover, collections are the reservation of plant resources including endangered plants. Our Garden is opened for public from April to October. Practically all its collections are opened for mutual excursions.

The sources of enlarging of collections are the next:

- taking plants just from the wild nature during expeditions;
- international exchange through *Delectus* and *Desiderata*;

During last ten years the number of expeditions was essentially reduced, because of the low finances, so the International exchange now is the main source of refilling of our collections.

More than one half of diversity is the collections of flowering ornamental plants. They are including 5440 taxa. The beginning of this part of collection connected with the name of Dr. N.V. Smolsky, who was Garden's director in the 60-th. This collection includes the next plant groups:

- bulbs;
- perennial plants;
- annual plants;
- beautiful flowering bushes and lians: Syringa, Rosa, Clematis.

The most representative is the collection of Bulbs (Tulipa - 435 taxa and 27 species, Narcissus - 420 taxa, Lilium - 265 taxa) and Iris - 25 species and 345 sorts, perennials (400 species), decorative annuals - 570 species and sorts. The collection of Astilbe represents the half of the world diversity of this genus and includes 70 names. We are proud of the Dahlia collection including 124 sorts from all garden groups, - among them 8 sorts of CBG selection (author is Irene A. Corevko).

The collection of subtropical zone includes near 2200 species from 152 families counting 9000 plants.

The trees and bushes collection in dendrarium covers more than 46 ha. Average age of trees near 50 years. Collection includes 2110 taxa from 59 families and 165 genes. During creation of dendrarium the geographical principle was used. Some parts of represents the flora of such regions as Europe, Far East, Caucasus, Crimea, Siberia, Middle East and North America.

The rich scientific material about the ecology and biology of many species was produced during long-time observations. Also we have created different assortments of plants for using them in different climatic and ecological situations.

The collection of Spice and Aroma plants includes 151 species. The gene Amaranthus is represented by 35 species. The family Vacciniaceae represented by 16 taxa.

And I want to add some more details about the collection of rare and endangered plants of Byelorussian flora. Red book of our state includes 156 species of plants. From 1976 122 species from them were cultivated in the Garden. Modern collection has 92 species, and among them 4 species which are considered as disappeared from the Byelorussian nature, 16 has the first category of protection, 6 has the second category and 42 - the third.

During last 20 years we have observed the behaviour of these plants in the artificial garden environment and found that they don't lose their reproductive possibilities and phenoritm, allowing the full ontogenesis cycle. As the result - some rare plants were proposed and successfully used for the landscape architecture. For example now the plants of 19 rare and endangered plants are used for the green building of Minsk.

It is a well known fact that maintenance of multinomial collections in botanical gardens is connected with great difficulties. Some species cannot be adapted for monoculture and agrocenoses. Cultivating of different plants into the small squares creates good conditions for development and spreading of pathogenic organisms. The factor determining the state of collection is the immunity of the plants. This problem is specific for the cultures, which has economical meaning, for example decorative flowers. We have special laboratory, which study the spreading of ills and pests, and the main ways of projection of plants.

The main information store about the structure of garden's collections and also about the history of introduction process in Belarus *in the Herbarium*. The good sample from herbarium is also the self-

source of new objective knowledge, independent from the purposes of collecting it. The main goals of CBG herbarium are:

- the reflection of systematic and biological diversity of living collections;
- the reliable saving of the samples;
- the accessibility for researchers;

The Herbarium of CBG consists from two parts. The part of cultivated plants and geographical part, where stored plants collected during expeditions and through exchange. The most valuable to our mind is the first part because no any other institution of Belarus has such kind of collection. The number of herbarium samples - 12,000.

The main funds of herbarium were formed under the direction of Anna B. Moiseeva.

The material collected in the cultivated plants section reflects the state of collection of the garden. The herbarium samples have high preparation quality and allow to investigate indications of cultivars.

In the modern circumstances the meaning of the small herbariums collected on the territory of the former Soviet Union increases.

We have 433 pages of *specimina exsiccata* published in middle 60-th by Herbariums St.-Petersburg (LE) and Kiev (KW), among them 80 pages are *specimina authentica* (topo- and autotypuses). Our herbarium hasn't a purpose of reflecting the diversity of Byelorussian flora, because this is the direction covered by MSK Herbarium.

The results of phenology observation are included into databases.

Our Databases were created from 1993. Now we are working under Microsoft Windows 95 in Access 7.0. Our databases include up to 20,000 records about living collections and herbarium.