

ANTHROPOGENOUS IMPACT ON SPECIFIC STRUCTURE OF THE COLCHIS WOOD AS A PART OF FLORA OF THE CAUCASUS

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Subtropical plants of the Black Sea coast of the Caucasus – the most northern region with subtropical climate, are characterized by a big specific variety. The specific variety of the Black Sea subtropics which created exotic southern vegetation of the Black Sea coast of the Caucasus under anthropogenous influence becomes a source of enrichment of specific structure and natural flora of the Caucasus.

Keywords: flora of the Caucasus, Black Sea subtropics, introduction, anthropogenous influence

The nature of the Black Sea coast of the Caucasus from the nonfreezing Black Sea to spurs of Greater Caucasus Range between Novorossiysk and Batumi is peculiar in many respects.

Landscapes of this region arose under the influence of the mountains protecting the coast of the Black Sea, from the continental norths providing preservation of heat and moisture, accumulated by the sea in a zone of the coast [7]. The unique combination of climatic and soil conditions of the area, from the river Psou to a river basin of Shepsi is favorable for growth of subtropical plants in a coastal zone and on some sites of a foothill zone [1].

The environment which provided formation of unique landscapes of a subtropical zone of Krasnodar Krai is favorable for vigorous economic activity of the person. Anthropogenous influence on transformation of structure of flora of the region began with an introduction of plants during development of these territories in the second half of XIX century.

During quite long period of an introduction on the Black Sea Coast there were about 5000 species of subtropical plants, new to the region, among which there are even representatives of tropics [1, 5].

Ecological characteristics of the region left an option behind those types which biological features corresponded to climatic conditions of Black Sea Coast. From the morphophysiological point of view their number, first of all, included the plants capable in this combination of ecological factors to reach blossoming with formation of full-fledged seeds. Quantity of types wood and shrubby the introduced species which reached full acclimatization in the conditions of Black Sea Coast it is rather great. Almost 150 years' experience of an introduction of species of trees and bushes on the Black Sea coast of the Caucasus promoted creation of unique landscapes of a park zone of this

natural greenhouse [1, 5]. As a result, an exotic specific variety of introduced species is successfully combined with representatives of the Caucasian wood as component of this park and green space.

Along with the solution of problems of expansion of specific structure of park plantings, botany and ecologists together with workers of forestry of the region carried out work on enrichment of the green space of Black Sea Coast by representatives of subtropical flora from assortment of park vegetation [4]. Methods of expansion of areas of representatives of cultural flora of the coast were as a result offered and applied in practice of forestry. As a result of acclimatization of the plants attracted to gardening of park territories the specific structure of forest parks of the region was replenished.

It is necessary to carry representatives from North America and the Mediterranean, China, Japan, the Himalayas and Mexico to their number. The highest extent of acclimatization reckon wood and shrubby plants of east and western parts of North America [4]. The majority of views of this continent are of interest to the forest parks of the region having both decorative, and silvicultural value.

A significant amount of views of East Asia, China, Japan, the Himalayas also well adapted for local conditions. Many of them with success are used for expansion of a specific variety of forest parks of Black Sea Coast.

Quite successfully plants of the Mediterranean flora acclimatized and are of interest to enrichment of the local green space valuable breeds.

Researches of views of the Southern American, Southern African continents, and also the Australian and New Zealand types showed that, giving appeal to city parks and squares, they aren't of interest to forest parks on a number of signs of ecological and economic value.

Complexity and strong compartmentalization of a relief, a variety of geological, soil

and climatic factors has considerable impact on nature of distribution of vegetation of Black Sea Coast. As well as in any mountainous area, vertical zoning in distribution of specific structure of vegetation here too takes place [2]. Therefore ecological approach to input of subtropical introduced species in structure of the developed phytocenosis of the region provided success of their inclusion in forest and forest-park massifs. However, as show supervision and analytical approach to evolutionary transformation of vegetable communities, artificial expansion of areas of distribution of the introduced species of plants not always becomes a source of their successful entry into vegetable community of wild flora of the region.

By consideration of evolutionary processes of formation of forest communities it appeared that as the essential moment of these transformations at the level of populations it is necessary to recognize restriction of opportunities of reorganization of their structure when settling of a number of biogeocoenosis by them. Discussing a problem of moving of types, new to the region, taking into account this point of view, it is obviously possible to offer an explanation for so insignificant entry into the developed phytocenosis of types, new to the region, [6].

The analysis of flora of the Sochi Black Sea Coast showed that in its structure 2105 species of wild-growing vascular plants, from 723 stems and 155 familys are registered. From their number of only 27 species of trees and bushes treat the overseas types and forms growing on the Black Sea coast [7].

As show data of dendrologists and our researches, ways of inclusion of new types to structure of local phytocenosis are caused by their biological properties, and also ecological and orographical conditions of the district [5].

The majority of the types which were a part of local vegetable communities have a North American origin and represent 9 species from six familys. From the Mediterranean, East and Central Asia their number included respectively four and six species from nine familys. By one view from seven familys widespread in China, and four types of three familys from Japan also were capable to reproduction and growth in nature without intervention of the person. Australia is presented in this list by one species.

Species of trees and bushes from among introduced species as a part of wild flora of Black Sea Coast

North American continent: *Amfora frutikosa* Fam. Fabaceae, *Vitis Iabrusca* L. Fam. Vitaceae,

Gleditsia triacanthos Fam. Fabaceae, *Acer negundo* L. Fam. Aceraceae, *Liquidambar styraciflua* L. Fam. Hamamelidaceae, *Juglans nigra* L., *Juglans regia* L. Fam. Juglandaceae, *Robinia pseudoacaciae* Fam. Fabiaceae, *Diospyros virginana* L. Fam. Ebenaceae, *Philadelphus coronaries* L. Fam. Hydrangeaceae.

Mediterranean: *Acaceae julibrissin* Durazz. Fam. Fabaceae, *Spartium juceum* Fam. Fabaceae, *Laurus nobilis* L. Fam. Lauraceae, *Ficus carica* L. Fam. Moraceae.

Central and East Asia: *Cidonia oblonga* Mill. Fam. Rosaceae, *Hibiscus siriacus* Fam. Malvaceae, *Hibiscus trionum* Fam. Malvaceae, *Syringa persika* L. Fam. Oleaceae, *Morus alba* L. Fam. Moraceae, *Morus nigra* L. Fam. Moraceae.

China: *Ailanthus altissum* (Mill.) Swingle Fam. Simaroubaceae, *Paulownia tomentosa* (Thun) Steud. Fam. Scrophulariaceae, *Poncirus trifoliata* L. Raf. Fam. Rutaceae, *Trachycarpus ecselsa* H.Wendl Fam. Palmaseae, *Pyracantha coccinea* Roem. Fam. Rosaceae, *Pueraria lobata* Fam. Fabaceae, *Thea sinensis* L. Fam. Theaceae.

Japan: *Cerasus vulgaris* Fam. Rosaceae, *Elacagnus pungens* Thunb Fam. Elacagnaceae, *Eriobortya japonica* Lindl., *Sofora jaubertii* Spach Fam. Fabaceae.

Australia: *Acaceae dealbata* Zinn. Fam. Fabaceae.

In the middle of last century when summing up studying of exotic plant of the wood and shrubby breeds which weren't growing earlier on the Black Sea coast of the Caucasus the opinion on possibility of enrichment of the local woods by valuable exotic planta by creation of uterine plantings by pure one-pedigree groups for receiving seeds of valuable wood exotic plant was expressed [3]. The task of artificial renewal of the woods with simultaneous replacement of minor breeds was set.

For the solution of this problem by artificial landings and crops of seeds ten species of valuable wood plants were allocated. So far from this list as a part of a phytocenosis of the Colchis wood the noticeable place belongs only to a type of *Paulownia tomentosa* Stend. Most likely, it was promoted by the birds extending seeds.

However, as showed our supervision, plentiful formation of full-fledged seeds not always provides moving of the population possessing this quality. The *Cedar Himalaya* which gives a large number of the viable seeds not capable to extend out of growth place limits can serve as an example. Thus, expansion of an area of such types is impossible without the aid of the person.

Studying of specific structure of the trees and bushes which took a certain place in subtropics of Black Sea Coast showed that extent of their moving is connected with biological features of a look. The success of occurrence of types in surrounding them фитоценоз without intervention of the person is defined by possibility of manifestation all inherent in this look the morphophysiological of signs in specific ecological conditions of the region. If to track ways of microevolution of phytocenosis against successions of forest vegetation, it is possible to anticipate possibility of inclusion of new types in forest communities in a certain degree.

So scales of distribution of the types forming edible fruits and seeds can be connected with possibility of their moving by means of birds. The plants breeding seeds ashkeys ensured active, and even aggressive, entry into structure of vegetable communities of a zone of Black Sea Coast. Ability to successful moving was shown also by the types possessing possibility of vegetative reproduction. *Pueraria lobata* (Wild.) Obwi и *Acaceae dealbata* Zinn concerns to them.

The analysis of dendrology, ecological and botanical researches allowed to reveal relationships of cause and effect which promoted ac-

climatization and transition of the introduced types to structure of natural phytocenosis of the Sochi Black Sea Coast.

Thus, subtropical plants of the Black Sea coast of the Caucasus – the most northern region with subtropical climate, are characterized by a big specific variety. The specific variety of subtropical types which created exotic southern vegetation of the Black Sea coast of the Caucasus under anthropogenous influence becomes the source promoting process of enrichment of a specific variety of natural flora of the Caucasus.

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