

РАЗДЕЛ 6. ЭКОЛОГИЧЕСКОЕ ОБРАЗОВАНИЕ И КУЛЬТУРА

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BOTANICAL GARDENS AS OBJECTS OF METROPOLISES FOR ECOLOGICAL TOURISM

Botanical gardens are becoming more important in the planning of modern metropolises and major urban concentrations, because they can function as recreational and educational facilities to the general public in addition to their importance in the environmental aspect of big cities. This paper approaches the issue of the botanical garden in the Ural region and its role in preserving the ecological system.

The growth of the population in the Urals and the urbanization of the region, have caused the withdrawal of the natural landscape and created a burden on the ecosystem, in favor of the recreational, commercial and industrial human activity.

Recreational urbanization has a huge negative impact on the environment, in particular on forestry and its ecosystems, and it has become necessary to consider the idea of making recreational activities less harmful or even beneficial to the ecosystem, by introducing botanical gardens as educational and recreational centers in major cities that can still embrace and preserve the natural environment.

Nowadays, there are many environmental organizations which have introduced different activities (seminars, camps, conferences etc.) into the society for different audiences and age groups, to raise the awareness of real issues challenging the environment and the culture of preserving the ecosystem from the side effects of human settlement, but only direct contact with nature can reveal the importance of the ecosystem and the role of its organisms on the environment and on our daily lives by maintaining the laws of the natural world.

The main objective of ecotourism is to approach the environment from a different perspective to help the society understand it more and reconsider its relationship with the surrounding environment.

Ecotourism has distinguishing characteristics that makes it different from traditional tourism and helps it to achieve the desired objectives of environmental awareness.

Firstly, ecosystem interlinked cognition is impossible without the knowledge of living species of living organisms close by – «the cognition of regional biodiversity is a conditional necessity for mankind to govern itself, not by nature» (Reimers, 1998). Sustainable mechanisms of life on all levels are based on diversity.

The study of biodiversity is connected to different directions of applied ecology, and it is impossible to understand the environmental activity of one of the species without the knowledge of species diversity in the first place.

Spreading and concretization of knowledge on excursions contribute to the formation of the world's view of the biosphere. Ecotourism Specialist must have a unique set of skills and knowledge, to be able to give systematic representations about the elements and organisms of the ecosystem; it is a new field of study.

Secondly, ecotourism offers different activities aiming to inform and entertain the participants and allows them to be creative, and it also helps them to reach the cognitive constructive contact with the environment. For example, such goal setting activities could be the comprehension of the role of any species, or a practical constructional project. Moreover, any kind of activity should be planned with the consideration of its consequences on nature, and it would be even better if we can improve the existing situation at the same time. The direct interaction with nature will help inculcate respect of the environment and reflect positively on the living species, and the number of participants should be proportional to the size of the facility.

Thirdly, a wide range of natural and anthropogenic phenomena affecting the ecosystems can serve as objects of ecotourism; this can be a single tree, a landscape or part of it, forest, meadow, and educational trail of any rank or exemplary farm. They might be in various degrees on both damaged and restored lands, in addition to protected territories.

While planning for the development of ecological tourism, it is important to do an accurate individual evaluation of the permissible anthropogenic loads on the purposed lands.

What is special about ecotourism in a metropolis? In fact, ecotourism is more of a philosophy, where we should consider the basic ideas of such tourism, realize that the economical aspect is not a priority, and to understand that natural observation has a stronger influence on participants than the informational observation.

Botanical gardens and natural parks will provide such great opportunities of such observations.

In the conditions of global urbanization, botanical gardens are in a special category of urban landscapes which has an important value aiming to increase landscape diversity, maintain an ecological framework for cities, and improve the human environment.

The main modern activities of a botanical garden include, plants cultivation, maintaining and breeding cultivars, environmental educational programs, the establishment of gene banks of natural flora, working with herbarium, conducting studies on systemizing ornamentals, horticulture, floriculture, reintegration and conducting studies on the restoration of natural habitats, and finally, programs to qualify teachers (International Agenda for Botanic Gardens in Conservation 2000). However, as objects of ecological tourism, botanical gardens are considered quite rare.

The Botanical Garden of the Ural Federal University is located on the eastern outskirts of the city of Yekaterinburg; it has on its territory areas of natural vegetation cover, and a unique collection of plants and expositions of local and world flora.

On its small area of 8.7 hectares it is possible to visualize all the floristic diversity of the region and even part of the world flora. The exhibition system of plants consists of 640 specimens and varieties belonging to 420 species, 174 genera, 46 families and 31 sets of flowering plants. The collection of the cereal family is represented by 22 genera, 98 species and 118 specimens. The collection of trees and shrubs consists of 545 species and cultivars from 125 genera, belonging to 55

families of woody plants, the collection of rare plants presented 189 species from 137 genera belonging to 34 sets and 49 families. In the composition of the collection of 98 species which belongs to the Red Data Books of different ranks, 36 species of them protected on the territory of Sverdlovsk region, 23 species included in the Red Book of the Russian Federation. The collection of greenhouse plants includes 781 species from 254 genera, 54 families and 35 sets of Embryophyte. Besides, local flora in urbanized territories is a widely used plant of the botanical garden, which is not used only for decoration, but also for the pharmaceutical and food industries, as well as part of the city's emerging commensal communities.

In the botanical garden of UrFU it is worth mentioning that the plants are of multifunctional use, such as *Aconogonon weyrichii* (Fr.Schmidt) Hara, *Helianthus tuberosus* L., *Cephalaria gigantea* (Ledeb.) Bobr and others. In addition to excursion activities in the botanical garden, it is possible and even necessary to implement practical activities in looking after plants, animals and communities in general within the framework of workshops, environmental actions, contests, volunteerism, etc. It is important in this case to use nature as a source of their own creativity.

Tending to ecological systems will provide help to develop personal qualities such as: the responsibility for the preservation of natural systems, tolerance to nature, empathy, understanding the nature of aesthetics, and the adoption of ethical behavior in nature. In the botanical garden of UrFU there is a fixable practice depending on which tourists are involved, whether they are students or the general population, after being familiar with the various elements, tourists can take an active part in the life of the botanical garden, which includes: planting or pruning plants, carrying out weeding, cleaning the territory, etc.

Such practical activities should not be limited only by the summer season. It is possible to carry out winter schools to identify animal tracks, arrangement of troughs and hollow nests, spring- to identify voices of birds and build birdhouses, autumn-planting trees etc.

Botanical gardens which include elements of anthropogenic landscapes are often located on the border of the city. Such modern botanical gardens are not a territory of similar landscapes, but rather a mosaic of individual sections of a different rank.

In the botanical garden of UrFU, the section of the pine forest and arboretum deserves special attention where it is situated on geographical basis, in addition to a small area of cactus, parterre lawn, well maintained flower bed, and even separately growing carnivorous plant.

The development of ecotourism should be implementing the idea of ecological-humanitarian education, thereby contributing to the spirituality of people.

BIBLIOGRAPHY

1. Red Data Book of the Central Urals. – Yekaterinburg: Ural Federal University Press, 1996.
2. International program Botanic Gardens Conservation, 2000.
3. Reimers, N. F. Ecology (theory, laws, rules, principles and hypotheses) // Journal – M. : Rossiya Molodaya, 1994.

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ЭКОЛОГИЧЕСКОЕ СОЗНАНИЕ КАК ПРОИЗВОДНАЯ ЭКОЛОГИЧЕСКОЙ ПОЛИТИКИ ГОСУДАРСТВА

One of the main causes of environmental problems is the consumer consciousness of the population. Business executives often only support projects that bring maximum profit in a short time. Environmental improvement of production has not yet bring significant economic result. This is due to insufficiently developed economic and legal instruments for environmental management. Only the improvement of these instruments at the national level can stimulate the formation of ecological consciousness.

В наше время практически общепризнанным является факт, что одна из главных причин экологических проблем – потребительское сознание человека и общества в целом. На протяжении многих столетий человечество безвозмездно пользовалось природными ресурсами для удовлетворения своих растущих