Main Eco Tourist Routes of Floristic Department of Transcaucasia Humid Subtropics of the Batumi Botanical Garden

Julia Jakeli¹, Nino Memiadze², and Nana Aroshidze³

¹Leading Specialist, Batumi Botanical Garden, Batumi, Georgia; ²PhD in Biology, Batumi Botanical Garden Main Specialist; ³Leading Specialist, Batumi Botanical Garden
E-Mail: juli.jakeli68@gmail.com

Abstract:

Batumi Botanical Garden has great eco-tourist potential. Interest of eco-tourists is mainly focused on relatively untouched natural territories. The article deals with the main eco-tourist routes of the phytogeographical department of Transcaucasia Humid Subtropics of the Batumi Botanical Garden which show almost all the vertical steps of the Colchis vegetation. It gives the visitors general impression on ancient relict Colchis flora and vegetation. For the eco-tourists the phytogeographical department of Transcaucasia Humid Subtropics represents a natural open-air museum that serves conservation of wild life and possesses research, educational, ethno-cultural and recreational importance.

Key Terms: Eco-tourism, routes, endemic, relict.

Introduction:

Batumi Botanical garden arranged in unique natural complex has many visitors all the year round. The main precondition of the growing annual dynamics of visitors are the unique collections of the Garden, fundamental scientific research, improved infrastructure and educational, ecological-tourist potential.

Materials and Methods:

Nature cognition and study (floristic and geobotanical), solution tools of modern problems in environmental protection, analysis and evaluation, effective research of sustainable ecological tourist products.

Results and Discussion:

Interest of eco-tourists is mainly focused on relatively untouched natural territories. It raises ecological culture, respect of natural and cultural-ethnographic values, and protection of biodiversity.

Acquaintance with the vegetation of local, southern Colchis refugium at the Batumi Botanical garden is available at the phytogeographical department of Transcaucasia Humid Subtropics which occupies the north-western part of the Garden. It stretches over 20-35° declension slopes, within 50 -220 m above sea level and comprises small ravines and riverside lowlands with micro-climatic variations. The area is 14 ha with 3 ha represented by natural cenosis of untouched relict Colchis forests. The rest of the territory is covered with introduced plantation of the Caucasian flora. The department is planned in such a way that it is close to the natural Colchis forest with consideration of its characteristic vertical belting and is represented by ligneous as well as herbaceous species.

Five zones can be singled out here: 1. Small-size plots in the riverside lowland part for the representatives of coastal marshy and sandy soil flora; 2. Lower belt deciduous forest, represented mostly by reserves surrounding the department from western and eastern parts; 3. Mountain mid belt deciduous forest (in the middle); 4. Fruit-tree species bordering the forest as well as scattered over the whole territory; 5. Coniferous (upper part of the department) (Batumi Botanical Garden-100).

This is exactly what preconditions the main importance of the department that is its scientific-research, educational, ethno-cultural and recreational importance.
Several tourist routes can be singled out in the floristic department: The main route begins from the stairs with two big specimens of oldest relict species of zelkova (Zelkova carpinifolia) on both sides. We descend to a small lake, pass over a pretty bridge and visit riverbank lowland section represented by the species characteristic to coastal marshy and sandy flora: Osmunda regalis, Carex pendula, Iris pseudocorus, Matteuccia struthiopteris, Trapa colchica, Potamogeton natans, Nymphae alba, Typha angustifolia, Hydrocharis morsus-ranae, Siella erecta, Butomus umbellatus.

Nearby there is a small garden ornamented with decorative plant species: Iris lazica, Epimedium colchicum, E. pubigerum, Paris incompleta, Primula megaseifolia, Dryopteris filix mass, Myosotis sylvestris, Pteris cretica, Paris incompleta, Omphalodes cappadocica, etc. Dark humid stand of box-trees (Buxus colchica) attracts attention; their height reaches 10-12 m; on the right, at the entrance to the gorge there grow many samples of wing-nuts (Pretocarya pterocarpa).

Recreational environment is created at this section of the floristic department – the spring waters of distinguished taste are rewetted, wooden tables and benches are installed; here as well are the miniature exhibits of Ajarian everyday culture represented in wooden ornamented pavilion created on Colchis motifs: well, dwelling house on piles, Tamari Bridge, temporary dwelling houses for summer pastures, cattle shed, barn. All this gives clear impression about the ethnic culture of the local population.

Below the Colchis pavilion there is an artificial stand of elm trees (Ulmus glabra) with fern grove.

In the lower belt deciduous forest reserve one can see 100-300-year-old Fagus orientalis, Castanea sativa, Carpinus caucasica, Tilia caucasica, Laurocerasus officinalis, Osmanthus decorus, Rhododendron ponticum and other specimens. The main aim of conservation and study of biodiversity is to preserve the natural processes in the reserve untouched.

The poly-dominant deciduous forest (the middle part) of the middle belt is represented by broad-leaved trees and evergreen sub forest: Fagus orientalis, Carpinus caucasica, Castanea sativa, Quercus harrtwissiana, Q. pontica, Q. imeretina, Q. dshorochensis, Q. castaneifolia, Cerasus avium, Acer velutinum, Alnus barbata, Diospyros lotus, Sorbus tortinals, Rhododendron ponticum, Laurocerasus officinalis, Taxus baccata, Osmanthus decorus, Frangula alnus, Ilex colchica, Corylus avellana, Rhododendron unggernii, Rh. luteum, Phyladelphe scaucasicus, Staphylea pinnata, Crataegus krytostyl, etc. The spring blooming Epimedium colchica, Iris lazica, Pachyphragma macrophyllum create an evergreen carpet. The lianas Hedera colchica, Smilax exelsa characteristic to the Colchis forest are well distinguished. The abundance of ferns is also remarkable: Phyllitis scolopendrium, Blechnum spicant, Matteuchia struthiopteris, Athyriumfilix-femina, Dryopteris filix mass, Polystichum setiferum, etc. (Dmitriyeva A. A.).

The left-side path leads to the slope of a beautiful stand of the Fagus orientalis and Carpinus caucasica relics. At the top layer of the slope relict and endemic species of dark coniferous and deciduous trees characteristic to Ajara highlands are represented: Picea orientalis, Abies nordmaniana, Quercus pontica, Betula medwedewii. It is the highest peak of the Botanical Garden – 220 m above sea level. Breathtaking view of the Great Caucasus snowy range and the vast and endless space of the Black Sea is stretched from the top.

From here the route descends to the eastern slope covered with the species of xerophytes characteristic to the Ajara floristic region: Quercus harrtwissiana, Q. dshorochensis, Pinus sasnowskyi, Juniperus rufescens, Rhododendron luteum, Cistus salvifolius, Rosa canina, Populus tremula. The endemic species of Hirkan flora Ficus hircana is here as well.

Downwards to the left, on the western slope, there opens the exposition of wild fruit-berries represented by the following plants: Prunus divaricata, Pyrus caucasica, Malus orientalis, Mespilus germanica, Cerasus avium, Diospyros lotus, Sorbus tortinals, Laurocerasus.
*officinalis, Vaccinium arctostaphylos, Staphylea pinnata, Staphylea colchic,* etc.

Through the bladdernut (*Staphylea colchica*) grove we descend to the narrow gorge consisting of a Colchis forest reserve on the right and left sides. This path leads to the ethnographic corner.

From here we can continue the route downwards to the so called Hirkan section that runs along the river and accordingly it is the dampest area of the department. This part of the floristic department presents the species of Tallish Mountain (Azerbaijan), the second refuge of the Caucasus: *Parrotia persica, Buxus hyrcana, Acer hyrcanum.* The route continues along the river and one again gets acquainted with the Colchis forest reserve with the oldest specimens of hornbeam, beech, rhododendron and cherry laurel.

The second route begins from the Upper Park and the petrophious flora section of the local flora. Here, on the artificially made stone-piles of the eastern slope over 100 endemic, relict and rare species characteristic to the forest-rock complexes of the Acharistskali gorge and highland gravel-sand ones: *Allium adzharicum, Anthemis woronowii, Astragalus adzharicus, Alchemilla oxysepala, Berteroa ascendens, Centaurea dmitriewae, Campanula alliariifolia, Ceterach officinarum, Cirsium hypoleucum, Colchicum speciosum, Coronilla orientalis, Draba hispida, Rhododendron smirnowii, Astragalus sommieri, Euphorbia pontica, Vincetoxicum albofianum, Helleborus caucasica, Paeonia macrophylla* and many others. This section is interesting and attractive through all the seasons.

Here also is the testing section for rare wild flora of Transcaucasia where only the rare and endangered species undergo *ex situ* conservation: *Quercus imeretina, Q. castaneifolia, Q. dzhorochechensis, Q. hartwissiana, Parrotia persica, Ostrya carpinifolia.*

Then we descend via wooden stairs to meet the oldest and biggest specimens of wild nuts. At the end of the stairs, along a small river there is a beautiful fern grove. Afterwards the road runs to the alley of the oldest box-trees with the right-hand view of the Colchis forest reserve. Finally, the path leads to the small garden with decorative species and the recreational section.

**Conclusions:**

Thus, in about an hour and a half eco-tourists will get a clear impression on the ancient original Colchis forest flora and vegetation that is so essential in solution of modern environmental problems and bears environmental as well as educational importance.

**Acknowledgements:**

We are grateful to the administration of the Batumi Botanical Garden for the efficient utilization of ecological-tourist production as well as a proper organization of infrastructural works. Our thanks also go to the curators of the Transcaucasia Humid Subtropics floristic department for the conducted research and popularization of eco-educational resources.

**References**

Batumi Botanical Garden- 100. Published by” SACHINO “ Ltd. Tbilisi. 2012
Dmitriyeva A. A. Ajara Plant Directory, vs. 1, 2. Tbilisi, “Metsniereba”, 1990