Conservation of Talish flora and its exposition at Azerbaijan Central Botanical Garden

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The territory of Azerbaijan comprises 86.6 thousand km^2. The richness of the flora of the republic is related with its physical-geographical diversity. There are more than 4500 plants in the Azerbaijan flora, being one of the most important areas of the biodiversity in the world. More than 600 of them are endemic and about 250 are relict species.

CBG founded in 1934 performs scientific research work on the introduction and climate adaptation of decorative, medicinal, ether-oiled and other plants in order to enrich raw-material bases of plant resources. In initial periods of the establishment of the garden the main objectives of the investigations were to enrich the floristic structure of the garden with new decorative and medicinal plant species as well as to arrange the scientific bases for their cultivation. Concerning these problems the main tendencies were based on the selection of prospective kinds, their introduction and study, aimed at gardening Baku city. While arranging the collection of subtropical plants preference was given also to the plants of the Azerbaijan nature as well as the introduction and study of exotic plants. After the establishment of green-houses and hot-houses the tropic plants came to be studied. The territory is 45.7 hectares. At present there is a plant collection of about 2500 species and forms from the local and abroad flora here. The exposition of the garden contains plants from the Eastern and Central Asia, Northern America, The Mediterranean sea coast and The Caucasus and other areas (Bayramov et al. 1987; Ibadli et al 2004; Farzaliyev et al. 2006).

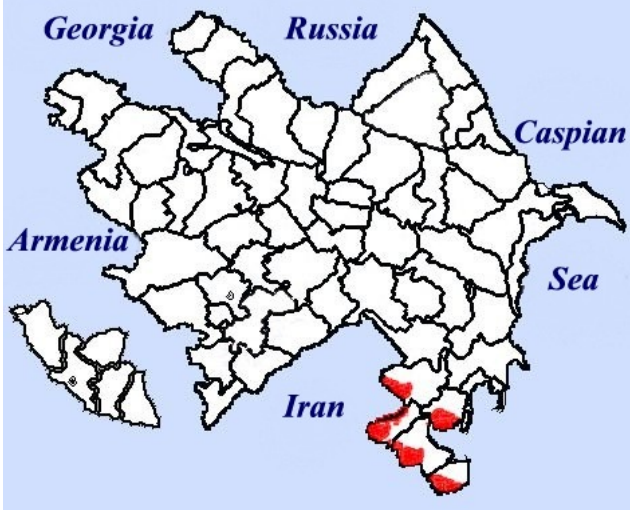

Figure 1. Azerbaijan map. The Talish region is indicated by red color.

The flora of Talish region (Figure 1, red colored area) has been naturally enriched as a result of diversity of physical and geographical conditions, historical development of flora and various impacts, whish are resulted in forming different species of plants including relicts and endemics. This area reserves up to date its relict and endemic biodiversity as the glacial era after Tertiary period had no impact on the inherited ancient remnants (Figure 2). So, Talish floristic exposition makes a great importance in CBG. About 30 endemic

and relict plants, especially tree, bush and geophytes species have been planted here. The perspectives of these species in a new soil climate conditions have been estimated, the agrotechniques methods of cultivation and reproduction of them have been studied during the investigation. And at the same time recommendations on the utilization and conservation of the species in situ, botanical gardens and artificially made plant verdures, reintroduction methods have been completed.

Figure 2. The Talish forests.

Parrotia persica C.A.Mey. is relict species thatare cultivated at Talish floristic exposition, its height approximately 25 meters. It is the main component of mixed Hyrcan forests. Widespread on humidity places, until 300-400 meters in height. In collection 40-50 yearly samples that are 7-8 meters in height keep their specific native form. They are both drought-resisting and frost-resistant. Have decorative importance (Figure 3).

Figure 3. Exposition of *Parrotia persica C.A.Mey.* in the CBG.

Quercus castaneifolia C.A.Mey. is a relict species with decreasing area. It spreads from sea – shore up to 2000 meters. 40-50 yearly samples that are 15-17 meters in height, they are both drought-resisting and frost-resistant at new conditions. It is a distinguishable tree due to fast grow among the oaks.

Figure 4. Exposition of *Gleditsia caspia Desf.* in the CBG

Gleditsia caspia Desf. is an endemic, found at lowland areas and bottom mountain woods. It grows one by one, but usually with groups, 4-16 meters in height. In collection 20 yearly samples that are 10-12 meters in height keep their specific native forms (Figure 4).

Albizzia julibrissin Durazz. is relict and decorative, have a few reserve in nature. They are normal blossoming and bearing fruit in collection are well drought-

resisting on Absheron conditions.

Buxus hyrcana Pojark grows at the bottom and middle mountain zones, in humidity and breakage areas. 45-50 yearly samples are 2 meters in height.

D*anae racemosa (L.) Moench.* is a relict and grows at the bottom and middle mountain zones up to 600 – 700 meters, on rocky areas and steep slopes. In collection 30-40 yearly samples are 1.0-1.5 meters in height. They are spread at woody support both in nature and exposition area.

Diospurus lotus L. is a relict, spread at slopes of mountain with decreasing area. 20 yearly samples are 10-12 meters in height.

Furthermore in the exposition the different species of Talish flora, such as *Hedera pastuchovii Woronow, Pterocarya pterocarpa (Michx.) Kunth ex İ.İljinsk., Zelkowa hyrcana A.Grossh., Acer hyrcanum Fisch.et C.A.Mey., Ficus hyrcana Grossh.* and etc. are also cultivated and studied.

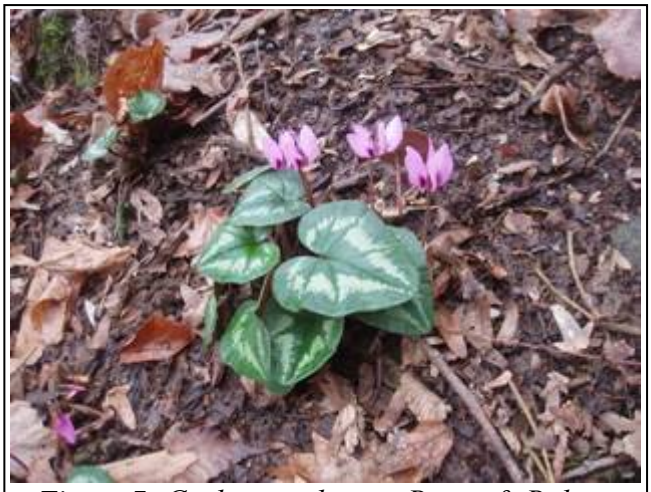

Figure 5. *Cyclamen elegans Boiss. & Buhse.*

The overall number of 163 species of the geophytes identified in the Lenkoran-Lerik region of Azerbaijan is grouped into 30 families and 65 genera. The life forms of region geophytes are distributed as follows: 68 bulbs, 61 tuber roots, 28 rhizomes and 6 corms (Ibadli et al. 2006; Salimov 2006).

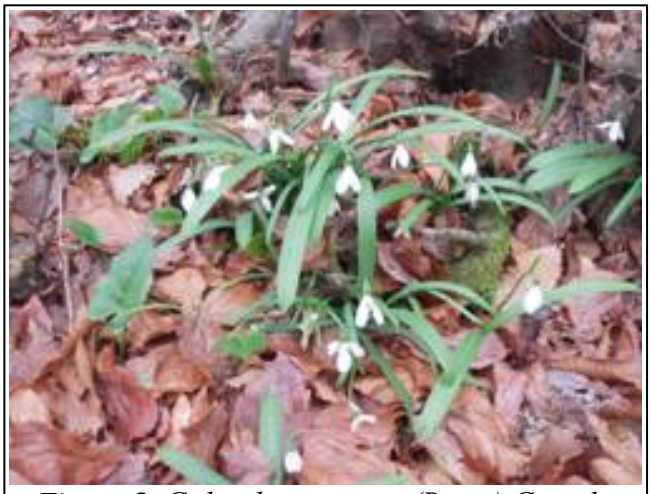

Figure 6. *Galanthus caspius (Rupr.) Grossh.*

The comparative analysis of endemic species of geophytes shows that 18 geophytes species of 560 Caucasian endemic plants and 19 geophytes species of 240 endemic plants of Azerbaijan flora inhabit the above region, such geophytes as *Himantoglossum formosum (Stev.) C. Koch, Ophrys caucasica Woronow ex. Grossh., Paeonia mlokosewitschii Lomak.* and *Allium lenkoranicum Miscz. ex. Grossh., Scorzonera grossheimii Lipsch. & Vass, Ornithogalum hyrcanum Grossh., Crocus caspius Fisch. & C.A.Mey., Cyclamen elegans Boiss. & Buhse.* (Figure 5), *Crocus polyanthus Grossh., Galanthus caspius (Rupr.) Grossh.* (Figure 6)*, Iris helena C. Koch, Fritillaria grandiflora Grossh., Lilium ledebourii (Baker) Boiss., Merendera candidissima Miscz. ex. Grossh.*10 species of geophytes are rare and endangered of this region, so they need to be preserved from certain anthropogenic factors. Their statuses are determined due to International Union for Conservation of Nature and Natural Resources (IUCN).

The methods for preservation and restoration in situ are given. Conditions of plants in exposition are determined on bioecological features, vegetation period, time of flowering and etc. Due to the results some species are referred to perspective usage of them for gardening on Absheron peninsula.

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