



## GARDEN IV. BOTANICAL GARDENS

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In Persia there are only three botanical gardens (*bāg-e gīāh-šenāsi*) in the exact scientific sense of this term. These rather new establishments are described below in chronological order. Other major attempts or projects to establish such gardens will be mentioned subsequently.

The botanical garden of the Faculty of Agriculture (Dāneškada-ye kešāvarzī) of the University of Tehran in Karaj (see faculties of the university of tehran i.). It was started in 1310 Š./1931 on the lands belonging to the former College of Agronomy (Madrassa-ye 'ālī-e felāḥat) on the initiative of the French Julien Gauthier, who had been recruited by the former Department of Agriculture and Industry (Edāra-ye koll-e felāḥat o šenā'at) to teach botany and rural crafts at that school. He was helped in this project by his Persian assistant Esfandiār Esfandiārī. Nearly one hectare of land was allocated for the project. The state greenhouses were transferred from the former Ministry of Public Welfare (Wezārat-e fawā'ed-e 'amma) to the site of the garden and installed there.

The Austrian botanist and agronomist Erwin Gauba (1891-1964), who was recruited in 1312 Š./1933 as director of the institution and botany professor at the Faculty of Agriculture, carried on the project earnestly and systematically until 1320 Š./1941 when he had to leave the country. Under his administration, the garden became a reputable establishment for scientific and educational purposes in the country. The garden's area was expanded and plotted out for



various cultivations; a pond was created for aquatic plants and an artificial hill for special plants was set up in the southern part of the garden; more and more indigenous and exotic plants were cultivated, and, from 1315 Š./1936 on, Gauba made the necessary preparations for carrying out the various studies and experiments requested by various government institutions (e.g., the cultivation of some medicinal plants at the request of the School of pharmacy, the cultivation and study of plants used in insecticides, the study of native *gavans* [*Astragalus* spp./ and exudation process of *katīrā* [gum tragacanth], and the study of some native and exotic latex-producing plants). Gauba's Persian assistants in the direction of the garden were Esfandiār Esfandiārī (1312-14 Š./1933-35), Ḥabīb-Allāh Ṭābetī (1314-16 Š./1935-37), Ṭābetī and 'Ayn-Allāh Behbūdī (1316-18./1937-39), and Behbūdī (1318-20 Š./1939-41).

After Gauba, the administration of the garden (with spells of uncertainty, neglect, mismanagement, and even deterioration partly due to the politico-economic situation of the country) was assumed by the following: Behbūdī (till 1324 Š./1945), Ṭābetī (1324-27 Š./1945-48), Esmā'īl Mīrdāmādī (1327-29 Š./1948-50), Ebrāhīm Dūstdār Moḥammadī (1329-36 Š./1950-57), Ḥosayn Lesānī (1337-46 Š./1958-67), Farhād Abū Żīā' (1346-49 Š./1967-70), Moḥammad-Mahdī Fayyāż (1349-50 Š./1970-71), and Lesānī (from 1350 Š./1971 till the present).

At present the garden covers an area of about 3.8 hectares. It is rich particularly in trees and shrubs which can be grown in the open under the climatic conditions of Karaj, but it is deficient in herbaceous plants. The collection of native and exotic woody plants comprises over 250 species (in a guide to the woody plants of the garden, published in 1352 Š./1973, Fayyāż describes briefly the 245 species that existed in the garden at that time). A greenhouse measuring 7 m x 23.5 m is located to the south of the garden. The garden's collection is supplemented by the rich herbarium of the Faculty of Agriculture; this herbarium (the earliest in Persia) includes over 45,000 plant specimens.

*Nowšahr Arboretum.* The Ārboretom-e Nowšahr (so called because only woody plants are cultivated there) was established in 1336 Š./1957 on the initiative of Ḥabīb-Allāh Ṭābetī, who was then director of the research office of the former Department of Forests (Bongāh-e jangalhā), for carrying out studies in plant ecology and phenology in Persia, particularly, in the north of the country. It covers now 8.5 hectares of plain lands in the *šahrestān* of Nowšahr (Māzandarān) at an elevation of 30 m above sea level and with an annual precipitation of 1329 mm.



During the four years of Tābetī's administration, the arboretum area was divided into 73 parcels for different plant groups, and nearly 400 species of native and exotic trees and shrubs (some of which were introduced in Persia for the first time) were planted there. Tābetī's plans for perfecting the arboretum were followed up by others despite an intervening period (1340-44 Š./1961-65) of neglect, mismanagement and deterioration of the arboretum, during which time many of the cultivated plants were destroyed. However, improvements and progress were gradually made after the management of the arboretum was entrusted to the Research Institute of Natural Resources (Mo'assasa-ye taḥqīqāt-e manābe'-e ṭabī'i) founded in 1344 Š./1965-66 within the former Research Institute of Natural Resources (Wezārat-e manābe'-e ṭabī'i).

An illustrated guidebook, planned in Tābetī's time, was finally published in 1348 Š./1969. This guide (*Fenoloژی-e deraktān o deraktčahā-ye Ārboretom-e Nowšahr*), prepared for visitors to the arboretum, briefly presents some 360 species of native and exotic trees and shrubs planted in the 73 parcels shown in a map. In the booklet Maḥbūba Kātamsāz has presented the results of daily observations during the 1974-79 period concerning the phenology of 299 species and varieties of woody plants in the arboretum—biological phenomena such as growth initiation, full flowering time, and seed ripening time, which are important for afforestation projects and for cultivation.

At present this arboretum, officially named Arboretum of the Research Center of the Caspian Coast (Ārboretom-e Markaz-e taḥqīqāt-e karāna-ye Daryā-ye Māzandarān), is administered by the Research Institute of Forests and Range Lands (Mo'assasa-ye taḥqīqāt-e jangalhā wa marāte'), affiliated with the Ministry of Agriculture. Its collection of 658 species and varieties of woody plants is used, not only for ecological studies, but also for educational purposes.

*The Botanical Garden of Persia (Bāḡ-e gīāh-šenāsī-e Īrān)*. In Āḍar 1347 Š./1968 Moḥammad-Rezā Shah Pahlavī issued a *farmān* for the constitution of a board of trustees for the country's botanical gardens. Accordingly, a board statute (*asās-nāma*) in eight articles was drawn up and a board of trustees selected. In Ordībehešt 1348 Š./1969 the board approved a plan for establishing a dignified, well-equipped botanical garden (named Bāḡ-e gīāh-šenāsī-e Ārīāmeh), measuring 1 x 1 km, about 22 km west of Tehran to the north of Tehran-Karaj highway, and set the execution of this plan as its prime goal. Within a year the garden area was enclosed, a windbreak was set up along the west side, and the



activities for improving the soil, building offices and the like, water supply, planting trees, sowing seeds, creating a rocky hill, digging the ground for artificial lakes, etc., got under way. In 1351 Š./1972, over 45 ha of land were annexed to the garden on its north side.

The administration of the garden was entrusted first to Tābetī (till 1351 Š./1972), and then to M ohammad-Bāqer Čāyčī (till 1357 Š./1978). After the Revolution of 1358 Š./1979, the garden was assigned its present name and was placed under the direct supervision of the director of the Botanical Department (Baḡš-e gīāh-šenāsī) of the Research Institute of Forests and Range Lands. Parvīz Bābākānlū was in charge of the post-revolutionary garden till 1367 Š./1988; he has been replaced by Moṣṭafā Asadī.

The region where the garden is situated is flat with a gentle southerly slope. Alborz mountains form its background in the north. The climate is dry (average annual precipitation is about 250 mm). The temperature may reach up to 43° C in summer and down to -10° C or lower in winter. The natural flora of the region consists in the dry steppe vegetation in Persia, abounding particularly in the *dermana* (*Artemisia herba-alba* Asso).

Construction and improvement work in the garden is ongoing. Three of several excavated ponds are now filled with water. Two man-made hills (the larger one 19 m high) are designed to represent Alborz and Zagros mountains; other hills to represent Himalayan mountains have been set up, but are not planted yet. Five hectares are allocated to the Caspian area forest. The garden also includes a large rock garden with cliff walls and a waterfall, a special section (with sand dunes, a salt lake, and a so-called *wādī*) for desert plants, another section for medicinal plants, large areas planted with trees, a fruit garden, several greenhouses, etc.

The garden's collection, comprising about 2,000 plant species now, is supplemented by a herbarium of the Persian flora which houses now some 100,000 specimens. The garden has also a special library of over 5,000 volumes. A seeds list in English, published annually by the garden, is sent to reputable botanical gardens in the world, with which institutions the garden has established scientific relations since its foundation.

*Other projects.* The relatively small botanic garden which Aḡmad Pārsā (then professor of botany at Tehran University) and later Tābetī attempted (respectively in 1315 Š./1936 and 1325 Š./1946) on the main campus of the



university (where the university mosque was later built) was short-lived. Another ill-fated plan of the university for a botanical garden relates to the one initiated in 1344 Š./1966 on a large piece of land (nearly 3.5 ha in area) in the hamlet Vaşfenār (southwest of Tehran on the road to Sāva) donated by Mrs. Golnār Farmānfarmā'īān to the university; but the planning and planting work stopped in 1348 Š./1969, and in the following year the plants cultivated there (including 170 species of woody plants) were transferred to the then Bāḡ-e gīāh-šenāsī-e Ārīāmehr.

The only noteworthy live project for a new botanical garden in the country is that by Shiraz University, which, after the 1358 Š./1979 Revolution, decided to turn the expropriated famous private Bāḡ-e Eram (q.v.) in Shiraz into a “botanical garden” reportedly for public display and educational purposes. What has actually been done in Bāḡ-e Eram in the past decade may be summarized as follows: the cultivated plants already there have been scientifically labeled, a list of these plants with a map of the garden (20 species of fruit trees, 75 other species of outdoor plants, and 55 species of greenhouse plants) has been published, and the old mansion in the garden has been placed at the disposal of the university’s Law School and of the Center for Studies in Islamic Sciences.

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