



BOTANICAL STUDIES ON IRAN III. PERSIAN STUDIES IN THE WESTERN TRADITION.

iii. Persian Studies in the Western Tradition

Serious interest in modern botany, first as an auxiliary branch of agronomy and then as an independent discipline, developed slowly in the post-Constitutional period in Iran mainly thanks to the sustained enthusiasm and efforts of Aḥmad-Ḥosayn ‘Adl (1277-1341 Š./1898-1962), the first Iranian agricultural engineer to have graduated from a Western institution (Grignon Agricultural School, France). After his return to Iran in 1302 Š./1923, ‘Adl was instrumental in promoting sound agricultural studies and training in this country. He implemented his modern views and plans in various capacities, for instance, as director of the Madrasa-ye ‘Ālī-e Felāḥat o Ṣanāye‘-e Rūstā‘ī (Higher School of Agriculture and Rural Crafts), which was established in 1306 Š./1927 in Karaj (west of Tehran) on his initiative and which was later expanded into the Dāneškada-ye Kešāvarzī-e Karaj (Karaj Faculty of Agriculture), and as a high official of the Edāra-ye Koll-e Felāḥat (General Department of Agriculture, later expanded into the Wezārat-e Kešāvarzī/Ministry of Agriculture in 1320 Š./1941). He also taught botany at that school.

It was during ‘Adl’s tenure that the Austrian botanist and agronomist Erwin



Gaubā (1891-1964), who was to play an inestimable part in the furtherance of botanical studies and exploration in Iran, was engaged in 1312 Š./1933 by the former Edāra-ye Koll-e Felāḥat as director of the Madrasa-ye ‘Ālī-e Felāḥat and as professor of botany there. During his nine years of service in Iran, Gauba, who enjoyed the scientific cooperation of the famous botanist Joseph Bornmüller, devoted himself to collecting and studying plant specimens in Iran, usually in company with his Iranian assistant Esfandiār Esfandiārī (1312-14 Š./1933-35) and his students. With the materials gathered in the Karaj area Gauba established the first herbarium in Iran (see [herbariums](#)). Concurrently he also founded the first botanical garden on the vast compound of the school (see botanical gardens in the Supplement). Another great achievement of Gauba’s was that he succeeded in developing in a considerable number of his students an enduring interest in exploring their country’s flora. Some of his students later made outstanding contributions in the field, among them ‘Ayn-Allāh Behbūdī (1293-1353 Š./1914-75), an untiring plant collector (see the list of his findings in *The Iranian Journal of Botany* 3/1, 1985, pp. 1-8, which includes seven new species and two new varieties named in his honor) and author of *‘Alafhā-ye harza/Weeds and Weed Control of Iran* (Tehran, 15th impression, 1341 Š./1962); Esmā’īl Mīrdāmādī (curator of Karaj herbarium, 1948-58; several publications, including *Gīāh-šenāsī-e jangal* “Forest botany,” Tehran, 1337 Š./1958); and Ḥabīb-Allāh Ṭābetī (Habibollah Sabeti), (his numerous publications include *Deraktān-e jangalī-e Īrān/Determinology [sic] of the Iranian Forest Trees*, Tehran, 1326 Š./1948, *Barrasīhā-ye mīkrošīmīā’ī-e čand gīāh-e kā’ūčū’ī-e Īrān/Recherche microchimique de quelques plantes à latex de l’Iran*, Tehran, 1320 Š./1941; *Senowbar dar Īrān/Le peuplier de l’Iran*, Tehran, 1334 Š./1956; (with L. Emberger) *Forêts denses intertropicales et forêts caspiennes humides*, [Tehran²], 1963; *Barrasī-e aqālīm-e ḥayātī-e Īrān/Études bioclimatiques de l’Iran*, Tehran, 1348 Š./1969; and *Jangalhā, deraktān o derakṭčahā-ye Īrān/Forests, Trees and Shrubs of Iran*, Tehran, 1976). Mention should also be made of Karīm Sā’ī (d. 1331 Š./1953) who, after completing his agricultural training at the Institut National Agronomique in France, contributed much to a better knowledge of forest trees and shrubs as well as to sound forest management in Iran (see his *Jangal-šenāsī* “Forestry,” Tehran, I, 1327 Š./1948, II, 1329 Š./1950).

Contemporaneously with early botanico-agricultural activities at the school in Karaj, courses in botany were introduced into the syllabi of the few new, European-style, secondary schools in Iran (mostly in Tehran), of the Dār-al-Mo’allemīn-e ‘Ālī-e Tehrān (Tehran Teacher Training College; later Dāneš-sarā-



ye 'Ālī-e Tehrān), founded in 1307 Š./1928, and later, with the foundation of Tehran University in 1313 Š./1935, into the syllabus of the *Dāneškada-ye 'Olūm* (Faculty of Science). Raoul Sérigelli, one of the French teachers engaged by the Iranian government to teach modern

sciences in some secondary schools in Tehran and at the University, taught botany and plant physiology to college students in the years 1314-16 Š./1935-37, thereby interesting many students in the pursuit of natural sciences. Prominent among secondary-school botany teachers and textbook writers was Ḥosayn Gol(e)golāb

(1274-1363 Š./1895-1985), who was later appointed professor of botany at the *Dāneškada-ye Pezeškī* (Faculty of medicine), etc., and produced textbooks on

botany for college students (his publications include *Gīāh-šenāsī* "Botany" for junior high schools, Tehran, 1313 Š./1934, and *Gīā (Rāhnamā-ye gīāhī)* "Flora (Guide to Plants)," Tehran, 1340 Š./1961).

Interest in general botany and particularly in the investigation of the Iranian flora was greatly fostered by Aḥmad Pārsā (b. 1286 Š./1907), the first Iranian scholar to have been trained in modern scientific botany (doctoral thesis: Poitiers, 1934: *Contribution à l'étude structurale de quelques dicotylédones xérophiles de l'Iran*), who was appointed professor of botany at Tehran University in 1313 Š./1934. Pārsā and some of his students collected plant specimens (in Arāk, Tafreš, Kermān, Azarbaijan, etc.), with which in 1324 Š./1945 he established a herbarium as part of a national museum of natural science (this collection was transferred in 1333 Š./1954 to the Faculty of Science; see herbariums). These materials were helpful to him in the compilation of his *Gīāhān-e šamāl-e Īrān* (2 vols., Tehran, 1317-18 Š./1938-39) and his *Flore de l'Iran* (in French, 5 volumes plus 7 supplements, Tehran, 1945-59), the first independent comprehensive work on the Iranian flora (the publication of an English revised version of this work by the author and his old colleague Zemolabedīn Maleki/Zayn-al-'Ābedīn Malekī is in slow progress: *Flora of Iran*, Tehran, I, 1978, II, 1986). As a member of the science committee of the former Farhangestān-e Īrān (Iranian Academy; 1314-19 Š./1935-40), Pārsā was also involved in the creation or adoption of a standard Persian botanical terminology (about 110 basic botanical terms were approved during that period; see *Vāžahā-ye now ke tā pāyān-e sāl-e 1319 dar Farhangestān-e Īrān pađīrofta šoda ast* [The neologisms which were accepted in the Iranian Academy by the end of the year 1319], Tehran, 1320 Š./1941).



What is now called the Central Herbarium of Tehran University and housed in the Faculty of Science (with over 35,000 specimens) was founded in 1338 Š./1959 by Šādeq Mobayyen (Sadegh Mobayen, b. 1296 Š./1917?) with the close cooperation of Aḥmad Qahramān (Ghahreman). Beginning in 1940, Mobayyen, who succeeded Pārsā in his chair, also gathered plant specimens, primarily in Azarbaijan, the central desert (Dašt-e Kavīr), Jāz Mūrīān, and the island of Hormoz. The publications of Mobayyen (who retired in 1358 Š./1980) include *Révision taxonomique du genre Acantholimon* (doctoral thesis, Montpellier, 1964; Tehran, 1343 Š./1964), *Guide pour la carte de la végétation naturelle de l'Iran/Rahnamā-ye naqša-ye rūyeši-e Īrān*, with V. Tregubov (Tehran, 1348 Š./1969), and *Rostanihā-ye Īrān. Flor-e giāhān-e āvandī/Flora of Iran. Vascular Plants* (Tehran, vols. I-III, 1358-64 Š./1979-85), the first comprehensive Iranian flora in Persian, partly based on the materials of the Herbarium, which he supervised until 1354 Š./1975. Qahramān (b. 1307 Š./1928; doctoral thesis, Montpellier, 1966: *Étude morphologique et anatomique des Ephédras de l'Iran*), successor to Mobayyen, has made several excursions to remote areas of Iran to collect botanical and photographic materials for his continuing *Flore de l'Iran en couleur naturelle/Flor-e rangīn-e Īrān* in French and Persian, planned in 80 portfolio volumes; vols. I-IX, Tehran, 1978-87).

Botanists and agronomists connected with other Iranian institutions have also helped further botanical studies. Those active in the Mo'assasa-ye Barrasī-e Āfāt o Bīmārihā-ye Giāhī/Plant Pests and Diseases Research Institute, Wezārat-e Kešavarzī o Manābe'-e Ṭabī'i/Ministry of Agriculture and Natural Resources, include the following: Esfandiār Esfandiārī (b. 1288 Š./1909), one of the founders of the herbarium of this Institute (see herbariums), a botanist and mycologist who has extensively studied the mycoflora of Iran and contributed to the indexing of the materials in this herbarium; Mūsā Īrānšahr (Moussa Iranshahr, b. 1302 Š./1923; doctoral thesis, Vienna, 1977: *Die Gattung Cuscuta L. im Iran*), author of many contributions (some published in *The Iranian Journal of Botany*), has made extensive plant collections in Iran, has revised the family Morinaceae and the genus *Anthemis* for K. H. Rechinger's *Flora iranica*, and has been cooperating with this and other herbariums in the identification of their specimens; Maḥmūd Mūsawī (Mahmoud Moussavi) has published *Contribution to the Knowledge of Medicago Species in Iran/Komak-ī dar šenāsā'i-e gūna-ye yonja dar Īrān* (Tehran, 1356 Š./1977) and (with F. Termeh/Terma) *Contribution à l'étude de la végétation automnale du Dasht-e Lut* (in French; Tehran, 1355 Š./1976), and has indexed the Herbarium's specimens of the genus *Trifolium* (1358 Š./1979); Farīda Matīn (Farideh Matine),



who has indexed those of the families Alliaceae and Amaryllidaceae (1353 Š./1974) and Iridaceae (1356 Š./1977).

Botanists and researchers at the Botanical Department of the Mo'assasa-ye Taḥqīqāt-e Jangalhā o Marāte'/Research Institute of Forests and Rangelands (connected with the same Ministry) have also been busy collecting materials for their herbarium, identifying them and occasionally publishing their findings in *The Iranian Journal of Botany*, which is published by the Botanical Department. They include Parvīz Bābākānlū (Babakhanlou, the present director of the Department), Moṣṭafā Asadī Walī-Allāh Moẓaffariān (Valiollah Mozaffarian, author of *The Family of Umbelliferae in Iran. Keys and Distribution/Gīāhān-e kānavāda-ye čatriān dar Īrān. Kelīd-e šenāsā'ī o parākaneš*, Tehran, 1362 Š./1983).

Because of the persistence of popular (Galenic) medicine and pharmacology in Iran, many traditional medicinal plants and plant products as well as locally compounded drugs of plant origin are still available in old-fashioned herbalist's shops (*aṭṭārīs*) and (with modernized presentation) in drugstores (for a partial inventory of the herb drugs available at a Tehran herbalist's, see Salah Ahmad et al., pp. 1-5). The properties and uses of these medicinal plants, which are mostly of indigenous provenience, were empirically described by the Galenic physicians-botanists of the past (see i, above) usually under their Arabic, Greek, or Syriac names, etc. The Dutch scholar J. L. Schlimmer, professor at the *Dār-al-Fonūn* in *Tehran*, was the first to feel the need to identify indigenous herb drugs and their names with their scientific Latin equivalents (his *Terminologie* was lithographed in Tehran in 1874). His example was followed, but much later, by the Iranian botanists Ḥosayn-'Alī Bahrāmī (*Farhang-e gīāhī/Dictionnaire polyglotte des plantes I*, Tehran, 1329 Š./1950?), Esmā'īl Zāhedī (*Vāža-nāma-ye gīāhī . . . /Botanical Dictionary . . .*, Tehran, 1337 Š./1959), A. Pārsā (*Flore de l'Iran VIII*, including an index of Latin names with their vernacular Iranian equivalents where available, Tehran, 1339 Š./1960, pp. 1-212), and Ḥ. Tābetī (*Deraktān-e jangalī-e Īrān*, see above). Yet much investigation and rechecking is needed to compose a comprehensive, scientifically and linguistically accurate inventory of plant names in Iran with the indication of the eventual local medicinal and other uses of the plants concerned. Indeed, a number of modern Iranian scholars (botanists or pharmacologists) have scientifically studied and described some medicinal or commercially important plants and plant products of Iran. The earliest researchers include the following: Mahdī Nāmdār (Mehdi Namdar; doctoral



thesis, Lyon, 1929: *Contribution à l'étude du safran de Perse*), Šādeq Moqaddam (Sadegh Moghadam, doctoral thesis, Paris, 1930: *Les mannes de Perse*), Amīr-Hūšang Neẓāmī (Amir-Houchang Nezamie; doctoral thesis, Dijon, 1939: *Recherches sur les opiums d'Iran*), and Sa'īd E'tešāmī (Saïd Etessami; doctoral thesis, Paris, 1949: *Contribution à la matière médicale de l'Iran*). In more recent times, the botanist-pharmacologist 'Alī Zargarī (thesis, Montpellier, 1960: *Contribution à l'étude de la flore désertique de l'Iraṅ . . .*) has not only been cooperating with different botanical institutions in collecting and identifying plant specimens, but has also compiled a scientific treatise on medicinal plants in general (*Gīāhān-e dārū'ī/Medicinal Plants*, 2nd ed., 3 vols., Tehran, 1345-52 Š./1966-73; 4th ed., I, 1366 Š./1987), which also includes a number of native plants.

Despite the meritorious efforts of foreign and native investigators of the Iranian flora, and notwithstanding the remarkable plant collections already existing inside and outside Iran, owing to the vast size (1,648,000 km²) and varied climatic conditions of the country, which have resulted in a wide range of flora, much more remains to be done for investigating the flora of remote or barely accessible parts of the country, particularly the shores of the Persian Gulf and the Indian Ocean, and parts of the western provinces.

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