

NEW AND INTERESTING PLANT RECORDS FROM NW. IRAN

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The following species are recorded as new to the flora of Iran: *Arenaria rotundifolia*, *Bromus ramosus*, *Campanula hohenackeri*, *Euphorbia macroceras*, *Hydrocharis morsus-ranae*, *Impatiens noli-tangere*, *Minuartia woronowii*, *Orobanche flava*, *Platanthera chlorantha*, *Potentilla porphyrantha*, *Pyrola rotundifolia*, *Sedum caucasicum*, *Silene cephalantha*, and *Thesium compressum*. Additional localities are given for some other rare species. *Castanea sativa* which was not accepted in Flora Iranica as native of Iran, must be considered spontaneous in Gilan. Specimens up to 20 m high and with a stem diameter of 90 cm were recorded in forest of *Carpinus betulus*, *Acer velutinum*, *Gleditschia caspica*, *Diospyros lotus*, etc.

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گونه‌های گیاهی جالب و جدید از شمال غربی ایران
از: اسدی و وندلبو

گونه‌های ذیل بعنوان گونه جدید برای فلور ایران قید میگردد

Arenaria rotundifolia, *Bromus ramosus*, *Campanula hohenackeri*, *Euphorbia macroceras*, *Hydrocharis morsus-ranae*, *Impatiens noli-tangere*, *Minuartia woronowii*, *Orobanche flava*, *Platanthera chlorantha*, *Potentilla porphyrantha*, *Pyrola rotundifolia*, *Sedum caucasicum*, *Silene cephalantha*, *Thesium compressum*.

همچنین ایستگاه‌های جمع‌آوری جدیدی برای بعضی گونه‌های نادر ذکر میشود.
شاه‌بلوط *Castanea sativa* که در فلور ایرانینکا بعنوان گونه بومی ایران پذیرفته نشده بود، بایستی جزو درختان خودرو گیلان مورد نظر قرارگیرد نمونه‌هایی از این درخت با ارتفاع ۲۰ متر و قطر ساقه ۹۰ سانتی متر در جنگل مخلوط ممرز - *Carpinus betulus* افرایلت *Acer velutinum* لیلکی *Gleditschia caspica* کلهو - *Diospyros lotus* و غیره مشاهده شده است.

During collecting trips, mainly in 1974–1975, undertaken by the staff of the herbarium of the Ariamehr Botanical Garden (TARI) to the Iranian provinces of Azarbayejan and Gilan a number of interesting finds were made. Some of these are recorded below. Herbarium material of all enumerated collections is preserved at TARI. Interesting ferns collected on the same trips have been recorded by Wendelbo (1976 p. 11–18).

Adonis wolgensis Stev.

Azarbayejan: 36 km from Ghara-Zia-Oddin to Khoy, near highest pass, 1900 m, steep shady soil slope, near melting snow, Wendelbo & Assadi 19251.

Previously not recorded from Iran. The nearest locality is in Turkey, Erzurum (cf. Davis 1965 p. 142).

Arenaria rotundifolia M. B. ssp. *rotundifolia*

Gilan: E. of Rudbar, mountain above Damesh, 1900 m, mossy cliff in regenerating *Fagus orientalis* forest, Wendelbo & Ala 18187. — Tehran: Alborz Mts., Touchal, S. side, 3000 m, wet meadow, Wendelbo & Cobham 14486. — Semnan: Kuh-e Ghatrī (Kuh-e Abr), N. of Shahrud, 2500 m, in *Quercus macranthera* forest, Wendelbo & Foroughi 12937.

Previously not recorded from Iran (cf. Mc Neill 1963, p. 262). The species is found from Greece through Turkey to the Caucasus.

Atraphaxis suaedifolia Jaub. et Spach

Azarbayejan: Ca 20 km from Tabriz on road to Ahar, 1450 m, Wendelbo & Assadi 17119.

Apparently this species is only known from the type collection "prope Tabriz Aucher Eloy 5272". Forming small, much branched shrubs up to 30 cm high; leaves up to 25 x 2 mm; segments of perigon 3–3.5 mm long, greenish white. The plants were growing on sterile looking soil slopes.

Bromus ramosus Huds.

Gilan: Road from Assalem to Khalkhal, 1100 m, in *Fagus orientalis* forest, Wendelbo & Assadi 18378.

This species can be recognized by the long hairs on the uppermost leaf sheath. The closely related *B. benekenii* (Lange) Trimen has short hairs. *B. ramosus* is not mentioned by Bor (1970) for the Flora Iranica area. According to the distribution map in Meusel et al. (1965, map on p. 41) *B. ramosus* is mainly west- and central-European, extending eastwards to Rumania, Bulgaria, and Greece and with an isolated locality in SE. Turkey. Meusel et al. (l. c.) treat the two related species as subspecies, i. e., *B. ramosus* Huds. ssp. *ramosus* and ssp. *benekenii* (Lange) Hegi. It can be questioned whether the appropriate rank would even be variety or forma. In the Iranian locality mentioned above (no. 18378 and 18378 A) the two taxa were growing together.

Briza media L.

Gilan: Road from Assalem to Khalkhal, near Sefid Poshteh, 1800 m, grazed meadow at margin of *Fagus orientalis* forest, Wendelbo & Assadi 18404.

Bor (1970, p. 15) mentions that this species is likely to occur in Iran, being widely distributed in the Caucasus. Our specimens seem to deviate from typical plants in the scabrid pedicels.

Campanula hohenackeri Fisch. & C. A. Mey.

Azarbayejan: Arasbaran Protected Area, below Veinagh, 500–900 m, Wendelbo & Assadi 17097.

No species of *Campanula* Series *Sibiricae* is recorded from Iran (cf. Rechinger & Schiman-Czeika 1965), but *C. hohenackeri* from Caucasus is mentioned by Fedorov (1957 p. 180) in Flora U. S. S. R. as occurring in N. Iran.

Campanula lactiflora M. B.

Gilan: Road from Assalem to Khalkhal, in for-



Fig. 1. *Atraphaxis suaedifolia* (left; nat. size). — *Arenaria rotundifolia* (right; nat. size).

ested zone, 1300 m, Wendelbo & Assadi 18372, 18373; Lasak Valley, side valley of Kash-e Khaleh, ca 5 km E. of Emamzadeh Ebrahim, 1000 m, Wendelbo & Assadi 18615.

Rechinger & Schiman-Czeika (1965 p. 34) mention two collections, from Gilan and North Persia respectively, neither with exact locality. The above mentioned plants were found in *Fagus orientalis* forest; 18372 and 18615 had pale bluish flowers, whereas they were white in 18373.

Campanula ruprechtii Boiss.

Azarbayejan: Gardaneh Almas, highest pass on road from Assalem to Khalkhal, 2350–2400 m, in somewhat dry alpine meadows, Wendelbo & Assadi 18494.

The plant was described by Boissier (1875 p. 905) on material collected "in alpinis Gilanicus" by Gmelin. The plant does not seem to have been recollected in Iran (cf. Rechinger & Schiman-Czeika 1965 p. 28) but is known from the Caucasus (Fedorov 1957 p. 267).

Castanea sativa Mill.

Gilan: Lasak valley, side valley of Kash-e Khaleh, about 5 km E. of Emamzadeh Ebrahim, 350–750 m, Wendelbo & Assadi 18597.

Browicz (1971 p. 18–19) discarded the records of *Castanea sativa* from N. Iran as unreliable. Already Boissier (1879 p. 1175) listed this species from "Persia borealis" on the authority of Ledebour. Gauba (1939 p. 8) recorded the Persian name "Shah balot" (king of the oaks) and wrote that this species was said to grow wild in the forest, although he himself had only seen it cultivated. Djazirei, (1961, according to Zohary, 1973 p. 568) recorded *Castanea* as occurring in natural forest together with *Carpinus betulus*, *Quercus castaneifolia*, *Ilex aquifolium* (= *spinigera*), *Diospyros lotus*, *Albizzia julibrissin*, *Frangula alnus*, *Acer cappadocicum*, *Acer insigne* (= *velutinum*) in the forest Bala Visroud of Gilan. Sabeti (1966 p. 75) indicated it from the Caspian forests of Shaft, Shafarud

and Aghevar.

It was thought worth while to gather some fresh information on the occurrence of *Castanea sativa* in the Caspian forest. During an excursion to Gilan in July 1975, we went from Shaft in the direction of Emamzadeh Ebrahim, a much frequented holy shrine. About 5 km east of this place we turned south on a good forest road into the densely forested side valley of Kash-e Khaleh. Some cultivated specimens of *Castanea* were seen near the houses of the few scattered cultivated plots in the forest at the bottom of the valley, all rather small trees. The first apparently wild trees were seen in the forest not high above the river together with *Gleditschia caspica* and *Pterocarya fraxinifolia*, at about 350 m altitude. As the new forest road started to climb, trees of *Castanea* become more frequent on the forested hill side, which was partly very steep and without any traces of cultivation. The uppermost specimens were seen at about 750 m altitude. At approximately this level *Fagus orientalis* rather abruptly took over as the completely dominant species. The species we have noted as accompanying *Castanea* are more or less the same as mentioned by Djazirei (l. c.). In addition we saw *Pterocarya fraxinifolia*, *Ficus carica* and *Buxus hyrcanus* (in the lower part of the valley), *Gleditschia caspica*, and *Hedera pastuchowii*. Djazirei mentioned *Castanea* and *Carpinus betulus* as the dominant trees. The forest in Kash-e Khaleh was more of a mixed forest and *Castanea* occurred as scattered specimens. The largest trees of *Castanea* seen were about 20 m high and had a diameter of about 90 cm. None of the trees seemed to carry much fruit. According to a native of the valley the fruits of the wild trees were of poor quality compared to the cultivated ones and as they were rather scarce it did not pay to collect them.

We are in no doubt that *Castanea sativa* is spontaneous in this locality. It must be considered a relic in the Caspian forest, as it was much more widespread in the late Tertiary. The occurrence in Gilan forms the eastern limit of



Fig. 2. *Campanula hohenackeri* (left; x 2/3). — *Campanula ruprechtii* (right; x 2/3).



Fig. 3. *Gentiana caucasica* (nat. size).

the total area of the species.

Botanically the Caspian forests are still not very well explored. It is probable that *Castanea* may be found in other of the many inaccessible valleys of Gilan and perhaps even Mazandaran.

Dictamnus albus L.

Azərbaycan: Arasbaran Protected Area, Kaleibar to Makidi, 1300–1700 m, in scrub forest, Wendelbo & Assadi 16962; Makidi to Veinagh, 1000–1700 m, Wendelbo & Assadi 17056. – Gorgan: Mohammad Reza Shah National Park, forest S. of Tang-e Gol, 700–1000 m, Wendelbo & Foroughi 12801.

Only one locality is mentioned for this species from Iran (cf. Townsend 1966 p. 1), viz. Azərbaycan: Qareh Dagh. As no. 12801 was collected in the eastern end of the Hyrcanian forest there is reason to believe that this species occurs all along the forested zone, but probably as a rather rare plant.

Euphorbia macroceras Fisch. & C. A. Mey.

Gilan: E. of Rudbar, mountain above Damesh, 1900 m, in low, regenerating *Fagus orientalis* forest, Wendelbo & Ala 18196; road from Assalem to Khalkhal 1100–1400 m, frequent in *Fagus orientalis* forest, Wendelbo & Assadi 18376; near Sefid Poshte, 1650–1800 m, *Fagus* forest, Wendelbo & Assadi 18420.

Previously not recorded from Iran. It is indicated as endemic to the Transcaucasia by Prokhanov (1949 p. 455) in Flora of U.S.S.R. Our plants match the description in all parts. In the *Fagus* forest along the Assalem-Khalkhal road it was a frequent plant.

Gentiana caucasica M. B.

Azərbaycan: Gardaneh Almas, highest pass on road from Assalem to Khalkhal, 2350 m, alpine meadow dominated by a small *Alchemilla* species, flowering in October, Wendelbo & Shirdelpur 14909.

The only record from Iran is "Persia borealis, Szovits" according to Schiman-Czeika (1967 p. 19).

Hydrocharis morsus-ranae L.

Mazandaran: Ca 2 km E. of Mahmudabad, –25 m, Uotila 19284 (TARI). – Gilan: Mordabe Pahlavi, mouth of Siah Darvishan river, K. D. & S. F. Kimball (TARI).

Not previously recorded from Iran (cf. Dandy 1971 p. 2). The nearest localities are in the adjacent area of Talysh belonging to the U.S.S.R.

Impatiens noli-tangere L.

Gilan: Road from Assalem to Khalkhal, 1400 m, wet place in *Fagus orientalis* forest, Wendelbo & Assadi 18397.

We have not seen any record of this species from Iran. It is widespread in the Caucasus but apparently not recorded from Talysh (cf. Grossheim 1962 Map 143).



Fig. 4. *Dictamnus albus* (left; x 2/3). — *Euphorbia macroceras* (right; x 2/3).

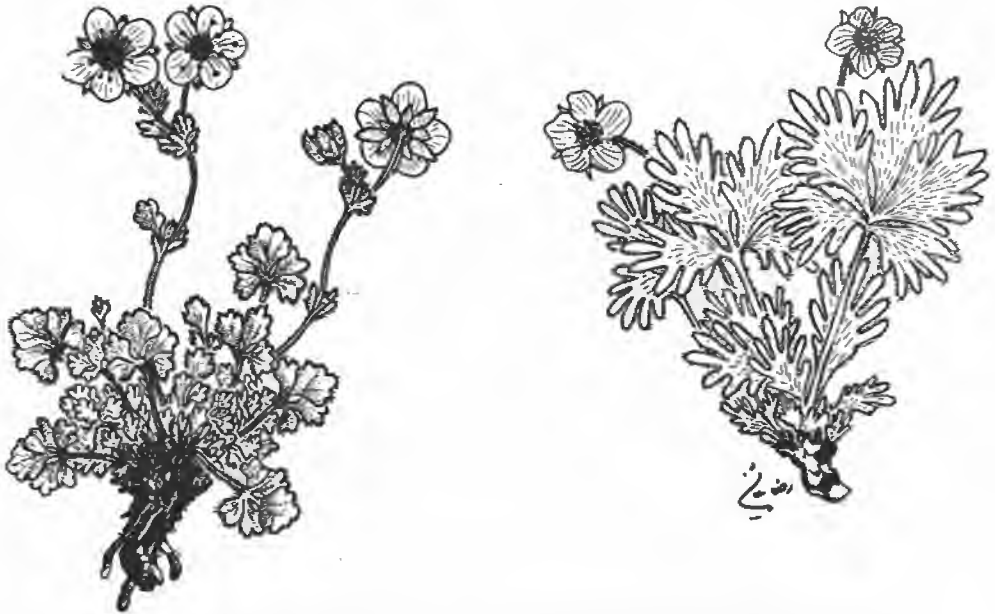


Fig. 5. *Potentilla porphyrantha* (left; nat. size). — *Potentilla petraea* (right; nat. size).

Lemna trisulca L.

Gilan: Mordab-e Pahlavi, -25 m, Wendelbo & Assadi 18360; Nahang River, K. D. & S. F. Kimball (TARI).

This cosmopolite was in Iran previously only known from several localities in the province of Fars.

Minuartia woronowii Shishkin

Azərbaycan: Makou, 1230 m, Foroughi 3871.

New to the flora of Iran (cf. Mc Neill, 1963 p. 368, Map in Fig. 13). Described from the Caucasus and recently also found in NE. Turkey (Mc Neill 1967 p. 62).

Monotropa hypopithys L.

Gilan: Road from Assalem to Khalkhal, below Sefid Poshteh, 1600 m, in *Fagus orientalis* forest, Wendelbo & Assadi 18554. — Gorgan: Mohammad Reza Shah National Park, forest south

of Tang-e Gol, 900–1000 m, Wendelbo & Foroughi 12811; same place, 1100 m., Wendelbo & Cobham 14372.

According to Kfisa (1972 p. 1) this species was previously only known from one locality in Iran, Gorgan: Khairat.

Orobanche flava Mart.

Gilan: Road from Assalem to Khalkhal, below Sefid Poshteh, 1600 m, in *Fagus orientalis* forest, under leaves of *Petasites* cf. *officinalis* Moench., Wendelbo & Assadi 18552.

New to the flora of Iran. It seems to be the south-easternmost locality of this species. The nearest localities are in Transcaucasus (cf. Novopokrovsky 1958 p. 108, in Flora U.S.S.R.).

Platanthera chlorantha Cust. ex Reichenb.

Azərbaycan: Arasbaran Protected Area, from Makidi to Veinagh, 1700–1000 m, in forest Wendelbo & Assadi 17014.



Fig. 6. *Impatiens noli-tangere* (left; x 1/2). — *Pyrola rotundifolia* (right; x 1/2).

New to the flora of Iran. The determination has been confirmed by Dr. J. Renz, Basel. The nearest localities are in the Caucasus.

Potentilla petraea Willd. ex Schlecht.

Azərbaycan: Gardaneh Almas, highest pass on road from Assalem to Khalkhal, 2350–2400 m, Wendelbo & Assadi 18505.

This plant which was described from Iran "in montibus Gilan, Pallas" has never been recollected (cf. Schüman-Czeika 1969 p. 107). We have not seen the original material, but believe that our collection belongs to this species in spite of some differences from the description. In our plant the outer sepals are narrowly ellip-

tic-oblong (not ovate), and the white petals with slender purplish veins are distinctly longer than the sepals (6–7 mm long).

Potentilla porphyrantha Juz.

Azərbaycan: Shabil on E. side of Kuh-e Sabalan, 4200 m, between rocks and cliff ledges, Foroughi & Assadi 13913.

Our material seems to match the description of this species in all characters. The species was previously only known from a rather small area in the Transcaucasus (cf. Grossheim 1952 p. 77, Tab. 10, Fig. 1, Map 97). This new locality extends the area of the species about 200 km to the southeast.



Fig. 7. *Ribes biebersteinii* (left; x 2/3). — *Saxifraga cartilaginea* (right; x 2/3).

Pyrola rotundifolia L.

Gilan: Road from Assalem to Khalkhal, below Sefid Poshteh, 1600 m, in *Fagus orientalis* forest with rather dense undergrowth of *Vaccinium arctostaphylos*, Wendelbo & Assadi 18553.

New to Iran. In fact no species of *Pyrola* was previously reported from Iran (cf. Kiisa 1972). It is interesting to note that also *Pyrola secunda* has been found recently (Frey & Probst, 1977 p. 121). The species seem to be rather rare in

the Caucasus (cf. Grossheim 1967, Map 154). Only sterile leaf rosettes were found.

Ribes biebersteinii Berl. ex DC.

Gilan: E. of Rudbar, mountain above Damesh, 1900 m, in regenerating *Fagus orientalis* forest, Wendelbo & Ala 18204.

According to Schönbeck-Temesy (1967 a p. 3) in Iran this species was known only from Azarbajejan.

***Saxifraga cartilaginea* Willd. ex Sternb.**

Azərbaycan: Gardaneh Almas, highest pass on road from Assalem to Khalkhal, 2350–2400 m, crevices of rocks, Wendelbo & Assadi 18498; Arasbaran Protected Area, Savabi & Rafi 247 (TARI).

A rarely collected species. 18498 had white flowers, 247 had purplish red flowers, otherwise the two collections seem to match each other.

***Saxifraga sibirica* L.**

Azərbaycan: Shahbil on E. side of Kuh-e Sabalan, 2900 m, Foroughi & Assadi 13838; Arasbaran Protected Area, from Makidi to Veinagh, 1700–1000 m, ledges of rock in forest, Wendelbo & Assadi 17029. — Gilan: E. of Rudbar, mountain above Damesh, 1900 m, crevices of rock in *Fagus orientalis* forest, Wendelbo & Ala '8176.

In Iran this species was previously only known from Kuh-e Sahand (cf. Schonbeck-Temesy 1967 b p. 8).

***Sedum caucasicum* (Grossh.) A. Bor**

Azərbaycan: 13 km on road from SE. of Bazargan to Arab-Dizer E. of Bedouli, 1760 m, Wendelbo & Assadi 19244.

New to the flora of Iran. Widespread in the Caucasus.

***Silene cephalantha* Boiss.**

Azərbaycan: Kuh-e Sabalan, 2630 m, Foroughi 6209; Shahbil on E. side of Kuh-e Sabalan, 2800 m, Foroughi & Assadi 13862.

New to the flora of Iran. Previously known from the Caucasus and E. Turkey.

***Thesium compressum* Boiss. & Heldr.**

Azərbaycan: Lake Rezaiyeh, east side, near Haft Chesmeh; together with *Juncus rigidus*. Wendelbo & Shirdelpur 14945.

Previously known from central Anatolia (cf. Boissier 1879 p. 1064).

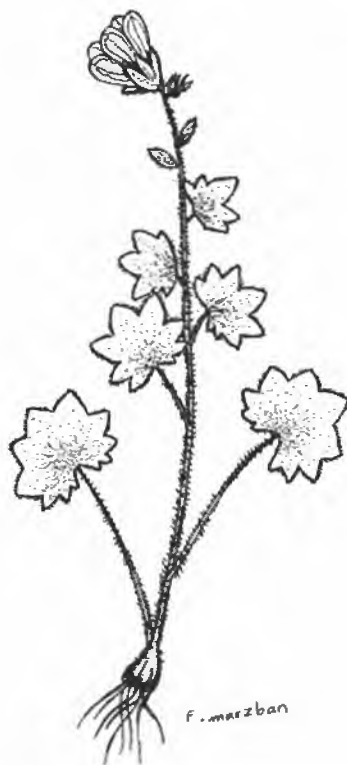


Fig. 8. *Saxifraga sibirica* (nat. size).

***Vaccinium arctostaphylos* L.**

Gilan: Road from Assalem to Khalkhal, 1300 m, in *Fagus orientalis* forest, Wendelbo & Assadi 18385; Lasak valley, side valley of Kash-e Khaleh about 5 km E. of Emamzadeh Ebrahim, 750–1000 m, in *Fagus orientalis* forest, Wendelbo & Assadi 18605.

References

- Boissier, E. 1875: Flora orientalis, vol. 3. — Genevae et Basiliae.
 — 1879: Ibid., vol. 4.
 Bor, N. L. 1970: Gramineae. In K. H. Rechinger (ed.) Flora Iranica no. 70. — Graz.
 Browicz, K. 1971: *Castanea sativa*. Ibid. no. 77: 18–19.

- Dandy, J. E. 1971: Hydrocharitaceae. *Ibid.* no. 80.
- Davis, P. H. 1965: Adonis. In P. H. Davis (ed.) *Flora of Turkey 1*: 140–146. – Edinburgh.
- Djazirei, M. H. 1961: Les formations forestières de l'Iran. – La-Yaarah 11. Tehran. (Not seen).
- Fedorov, A. A. 1957: Campanula. In B. K. Shishkin (ed.) *Flora of the U. S. S. R.* (in Russian) 24: 133–330. – Moskva & Leningrad.
- Frey, W. & Probst, W. 1977: *Pyrola secunda* (Pyrolaceae), new to Iran. – *Iran. Journ. Bot.* 1(2): 121–122.
- Gauba, E. 1939 (1317): Local names of the trees of the Caspian forests (in Persian). – *Révue Agricole Tehran*, no. 6.
- Grossheim, A. A. 1952: *Flora Kavkasa* vol. 5 (in Russian). – Moskva & Leningrad.
– 1962: *Ibid.* vol. 6.
– 1967: *Ibid.* vol. 7.
- Kfisa, B. 1972 a: Monotropaceae. In K. H. Rechinger (ed.) *Flora Iranica* no. 94. – Graz.
– 1972 b: Pyrolaceae. *Ibid.* no. 93.
- Mc Neill, J. 1963: Taxonomic studies in the Alsinoideae II. A revision of the species in the Orient. – *Not. Roy. Bot. Gard. Edinb.* 24: 241–404.
– 1967: *Minuartia*. In P. H. Davis *Flora of Turkey 2*: 38–67. – Edinburgh.
- Meusel, H., Jäger, E. & Weinert, E. 1965: *Vergleichende Chorologie der centraleuropäischen Flora*. – Jena.
- Novopokrovsky, I. V. 1958: Orobanchaceae. In B. K. Shishkin (ed.) *Flora of the U.S.S.R.* (in Russian) 23: 19–117. – Moskva & Leningrad.
- Prokhanov, Y. J. 1949: Euphorbia. *Ibid.*, 14: 304–495.
- Rechinger, K. H. & Schiman-Czeika, H. 1965: Campanulaceae. In K. H. Rechinger (ed.) *Flora Iranica* no. 13. – Graz.
- Sabeti, H. 1966 (1344): Trees and shrubs of Iran (in Persian). – Tehran.
- Schiman-Czeika, H. 1967: Gentianaceae. In K. H. Rechinger (ed.) *Flora Iranica* no. 41. – Graz.
– 1969: *Potentilla*. *Ibid.*, no. 66: 79–114.
- Schönbeck-Temesy, E. 1967 a: Grossulariaceae. *Ibid.*, no. 47.
– 1967 b: Saxifragaceae. *Ibid.*, no. 42.
- Townsend, C. C. 1966: Rutaceae. *Ibid.*, no. 36.
- Wendelbo, P. 1976: An annotated check list of the ferns of Iran. – *Iran. Journ. Bot.* 1: 11–18.
- Zohary, M. 1973: *Geobotanical foundations of the Middle East*. – Stuttgart.