

STUDIES ON THE FLORA OF IRAN, NEW SPECIES AND NEW RECORDS

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Echium khuzistanicum is described as a new species from Iran. *Caesalpinia bonduc*, *Coronopus didymus*, *Dinebra retroflexa*, *Eryngium glomeratum*, *Jurinea multiflora*, *Odontites glutinosa*, *Pteropyrum noeanum* and *Solanum eleagnifolium* are reported as new records to Iran. *Hausknechtia elymaitica*, *Melampyrum caucasicum*, *Rumex ephedroides*, *Sphenoclea zeylanica* are reported as rare and/ or interesting plants from Iran.

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مطالعاتی در بارهٔ فلور ایران

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گونه *Echium khuzistanicum* نامگذاری و شرح داده می‌شود. علاوه بر این گونه‌های زیر برای اولین بار از ایران گزارش می‌گردند.

Caesalpinia bonduc, *Coronopus didymus*, *Dinebra retroflexa*, *Eryngium glomeratum*, *Jurinea multiflora*, *Odontites glutinosa*, *Pteropyrum noeanum*, *Solanum eleagnifolium*.

بعلاوه جمع‌آوری‌های جدیدی از گونه‌های زیر که به‌ندرت از ایران جمع‌شده و یا جزء گونه‌های کمیاب می‌باشند، ذکر می‌گردد.

Hausknechtia elymaitica, *Melampyrum caucasicum*, *Rumex ephedroides*, *Sphenoclea zeylanica*.

INTRODUCTION

The author among the Iranian plants in the herbarium of Research Institute of Forests and Rangelands (TARI) has come across to 8 new plant records and a new species for the flora of Iran. Also, some rarely known and/or interesting material have been recollected from Iran. The new species is described and the new records are reported in this paper. Materials are deposited in the herbarium of Research Institute of Forests and Rangelands (TARI).

NEW SPECIES AND NEW RECORDS

Caesalpinia bonduc (L.) Roxb. (Fig. 1).

Baluchestan: Iranshahr, Sarbaz to Parud, ca. 800 m. V. Mozaffarian 72371.

The genus *Caesalpinia* is new to the flora of Iran. *C. bonduc* was previously known only from Pakistan in the Flora Iranica area (Rechinger 1986). It is widely distributed in the tropics of the old and the new world.

Coronopus didymus (L.) Sm.

Khuzestan: Masjed Soleyman, Lali, ca. 300 m, Moradi 72372.

Coronopus didymus is new to the flora

of Iran, this species in K. H. Rechinger (ed.) Flora Iranica (Hedge 1968, p.72, 73) is known from Afghanistan and Pakistan. It seems to be indigenous in S. America and introduced to the other parts of the world.

Dinebra retroflexa (Vahl) Panz.

Khuzestan: Ramhormoz, 130 m, V. Mozaffarian 72256.

According to C. C. Townsend (ed.) Flora of Iraq (Bor 1968, p. 432), general distribution of *D. retroflexa* is palestine, Egypt, Arabia, S. Iran, Afghanistan, W. India, Tropical Africa and S. Africa. But Bor (1970) in K. H. Rechinger did not include it in the Flora Iranica.

Echium khuzistanicum Mozaffarian, sp. nov. (Fig. 2).

The new species differs from *E. plantagineum* L. in ca. 13 mm calyx length at anthesis (not 7-9 mm), basal leaves oblong-lanceolate (not broadly ovate or narrowly elliptic), corolla ca. 14-16 mm long (not 19-32 mm).

E. khuzistanicum also, differs from *E. judaeum* Lacaita, by having homomorphic long bristle hairs with a tubercle at the base (not heteromorphic short and sparse long spreading tuberculed hairs).

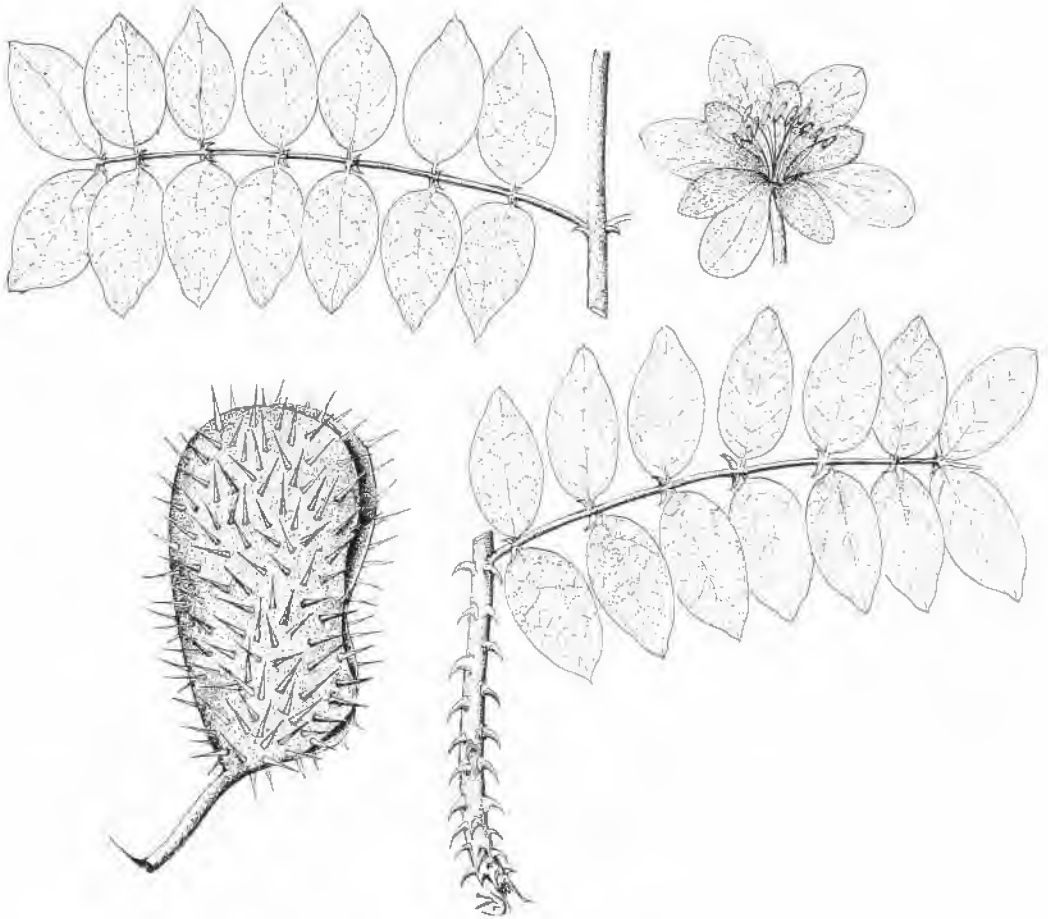


Fig. 1. *Caesalpinia bonduc* (x0.63); flower (x1.9); fruit (x0.63).

Plantae annuae vel biennae, \pm pilis homomorphis tuberculatis setosis. Caules basi ramosi, ca. 50 cm alti. Folia basalia cum petiolo ca. 15 cm longa, et 2.5 cm lata, oblongo-lanceolata, basin versus plerumque attenuata. Folia caulina breviora, sessilia, oblonga vel ovato-oblonga, cordata, sensim amplexicaulia. Inflo-

rescentia ramosa, terminalis, pedunculata, multiflora, deinde elongata. Calyx \pm 13 mm longus, a corollis \pm aequantis vel usque ad $3/4$ corollam attingens, dentibus lanceolatis. Corolla ca. 14-16 mm longa, apicem versus dilatata, violascenti-coerulea, glabra, in apicem parce tenuissime pilosa. Filamenta corollam longiora et exserta.

Nuculae \pm 3 mm longae, ca. 2 mm latae, tuberculatae.

Typus. Khuzestan: ca. 20 km from Ahvaz to Andimeshk, ca. 50 m, 25.6.1993, Mozaffarian 72181 (hol. TARI).

Annual or biennial, with homomorphic \pm tubercle-based bristles. Stems usually branched at the base, up to 50 cm long with tubercled hairs. Basal leaves including short petiole up to 15 cm long and 2.5 cm wide, oblong-lanceolate, often attenuate into a short petiole; cauline leaves smaller, sessile, oblong to ovate-oblong, cordate at the base, slightly amplexicaule. Inflorescence much-branched, mainly terminal, pedunculate, elongated in fruit, many-flowered. Calyx up to \pm 13 mm long, \pm equal or about 3/4 as long as corolla; calyx teeth lanceolate. Corolla 14-16 mm long, much expanded in the upper part, bluish-violet, glabrous except for the fine long hairs in the upper part. Stamens longer than the corolla, exserted. Nutlets 3x2 mm, tuberculate.

***Eryngium glomeratum* Lam.**

Khuzestan : Eizeh, between Payan and Susan 900 m, V. Mozaffarian 72133.

E. glomeratum was not recorded by



Fig. 2. *Echium khuzistanicum* (x0.45); flower (x2.7); fruit (x0.63).

Pimenov & Tamamschian (1987) in K. H. Rechinger, Fl. Iranica from Iran. General distribution of the species is Creta, Insulae Aegaeae, Anatolia, Syria, Palaestina, Libanon, Iraq and Arabia.

Jurinea multiflora (L.) B. Fedtsch. (Fig.3)
Azarbaiejan : Saghez, between Sonnate and Divandarre, Kuh-e Ghaleh, top of the mountain between Bashmagh and Jafarabad, 2300 m, V. Mozaffarian 70061.

According to Danin & Davis (1975) in Flora of Turkey, general distribution of the species is from E. Anatolia to C. Asia. But, Rechinger & Wagenitz in Flora Iranica doubtfully recorded it from Iran.

Odontites glutinosa (M.B.) Benth. (Fig. 4)
Azarbaijan: Kaleybar, Nabijan (Arasbaran), 2400 m, Yousefy 6818 (Tabriz, Herbarium of Agriculture College).

O. glutinosa is new to Iran. According to Hedeg (1978) in Flora of Turkey, general distribution of the species is Balkans, Crimea, Armenia and Georgia.

Pteropyrum noeanum Boiss. & Meisner (Fig. 5).

Khuzestan: Ca. 60 Km from Andimeshk to



Fig. 3 *Jurinea multiflora* (xo. 45); flower (x1.7).

Malavi, around Jelugir, ca. 1000 m, V. Mozaffarian 72206.

P. noeanum is new to Iran. This species according to Rechinger & Schiman-Czeika (1968) in Flora Iranica is an endemic species in Iraq. A frequent species on gypsum soil in S.W. of Iran around Darrehshahr to Salehabad and Eylam.

***Solanum eleagnifolium* Cav.**

Yazd: Chahafzal, 950 m, Mirvakili 753.

Solanum eleagnifolium is a weed distributed and / or introduced in many parts of the world (see Schönbeck-Temesy 1972).

RARE AND INTERESTING PLANTS

***Haussknechtia elymaitica* Boiss.**

Chaharmahal-e Bakhtiary: Lordegan to Sarkhon, Tange Naphon, 1700 m, Mozaffarian 58252, 54975; Fars: Nurabad, Doushman Ziary region, Darreh Gorg to Korekan, 2400 m, Mozaffarian 71390, 45734; Kohgilouye and Boirahmad: Yasuj, near Abshar 2200-2500 m, Assadi & Abouhamzeh 46246, 46288.

H. elymaitica is a late flowering plant and locally frequent, especially in *Quercus brantii* forests of Southern Zagros mountain chains. It has not been collected



Fig. 4. *Odontites glutinosa* (x0.6); flower (x3).

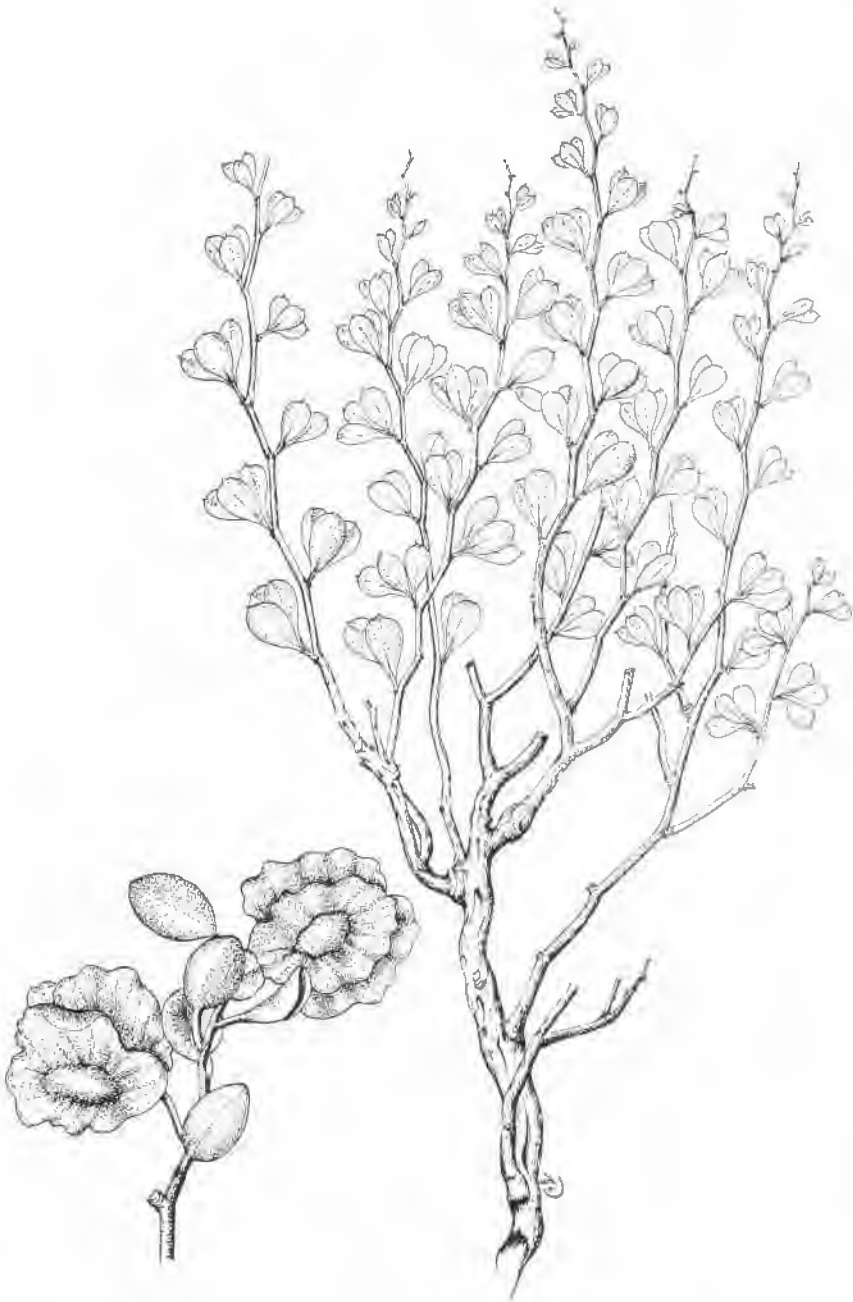


Fig. 5. *Pteropyrum noeanum* (x0.7); fruiting branch (x2.5).

after Haussknecht original collection.

Melampyrum caucasicum Bunge

Azarbaijan: Marand, Zunuz, between Zunuzagh and Kuhkamar, 2200 m, Mozaffarian 72374.

M. caucasicum, formerly once collected by Knap from Sahand mountain in N.W. Iran. Knap's specimen was not seen by the author of Flora Iranica (Rechinger 1981).

Rumex ephedroides Bornm.

Lorestan: between Khorramabad and Malavi, 330 m, Mozaffarian 62184, 72203 A; Khuzestan: Behbahan, Marun river bed, 350 m, Mozaffarian 62996; Chaharmahal-e Bakhtiari: Shahr-e Kurd, Naghan, Jaaman, 1900 m, Mozaffarian 57361; Eylam: road of Eylam to Evan, Fattahi; Lashkarboloki & Hamzee 38.

R. ephedroides is a late fruiting species among the Iranian species of the genus *Rumex*. It is locally frequent on steep slopes and cliff walls of the rivers in SW. of Iran.

Sphenoclea zeylanica Gaertn

Khuzestan: Ahvaz, between Albagi and Pole Rudkhane Shawor, ca. 80 m, Mozaffarian 72216.

S. zeylanica is a late flowering plant, growing in wet places, this plant was not collected after Haussknecht's collection from Shush in Khuzestan (Podlech 1971). Podlech l. c. has not seen apparently Haussknecht's specimen in treating Flora Iranica.

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