

## NEW SPECIES AND NEW PLANT RECORDS FROM IRAN

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*Bupleurum ghahremanii*, *Centaurea paradoxa*, *Gypsophila rupestris*, *Myopordon damavandica* and *Salvia Jamzadii* are described as new species. *Ambrosia artemisifolia*, *Aruncus vulgaris*, *Cleome turkemana*, *Leersia oryzoides*, *Monochoria vaginalis*, *Rorippa islandica* and *Tanacetum zahlbruckneri* are reported as new records to the flora of Iran.

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گونه‌ها و گزارشات جدید از ایران

از: ولی‌اله مظفریان

گونه‌های *Gypsophila*, *Centaurea paradoxa*, *Bupleurum ghahremanii*

، *Myopordon damavandica* ، *Salvia Jamzadii* ، *rupestris* به‌عنوان گونه‌های

جدید نامگذاری و شرح داده می‌شوند.

گونه‌های *Cleome turkemana*, *Aruncus vulgaris*, *Ambrosia artemisifolia*

*Tanacetum*, *Rorippa islandica*, *Monochoria vaginalis*, *Leersia oryzoides*,

*zahlbruckneri* برای اولین بار از مناطق مختلف ایران گزارش داده می‌شوند.

## INTRODUCTION

The author during several excursions to different parts of Iran and working in the herbarium of Research Institute of Forests and Rangelands and other herbaria in Iran has come across some new plant records and new species for the flora of Iran. The new species are described and the new records are explained. All the herbarium materials are preserved in TARI.

## NEW SPECIES

### ***Bupleurum ghahremanii* Mozaffarian, sp. nov.**

Perenne, nanum, caulis fere ad basin ramosus, ramis patentibus subsimplicibus. Tota planta glabra, 5-30 cm alta. Folia basalia spatulata vel oblongo-elliptica,  $\pm$  cartilaginea, longe petiolata, ad basin dilatata vaginata, 5-nervia, 1.5-4.5 x 0.4-0.8 cm; caulina bracteosa, linearo-lanceolata vel deficiente. Umbella radii valde inaequalia, 5-11, 5-20 mm longa. Bracteae 5, valde inaequales, 2-8 mm longae, lanceolatae vel linearo-lanceolatae. Bracteolae 5, linearo-lanceolatae vel lanceolato-ovatae, trinerviae, a umbellulis floriferis aequantes vel paulo breviores. Petala flava, glabra. Fructus 1-1.5 mm longus, juga prominentia, pruinosa.

*Typus.* Mazandaran, ca. 50 km from Tunekabon to Jennatrudbar and Chorte, Garasbe-sar alpine pasture, 1850 m, 22.6.1989, V. Mozaffarian & A. Ghahreman. (holotypus TARI);

Idem 8436 (TUH).

Perennial, glabrous, short stemmed, 5-30 cm high, branching from base, branches spreading to erect, more or less simple. Basal leaves spatulate to oblong-elliptic  $\pm$  cartilagineous, gradually tapering at base to rather long petioles and a rather wide sheath, 5-nerved, 1.5-4.5 x 0.4-0.8 cm. Lower cauline leaves linear-lanceolate, upper part of the stem with bracteolate leaves or without leaves. Umbels 5-11 rayed, very unequal, 5-20 mm. Bracts 5, very unequal, 2-8 mm long, lanceolate to linear-lanceolate. Bracteoles 5, linear-lanceolate to lanceolate-ovate, trinerved, equal or shorter than flowering umbellules. Petals yellow, glabrous. Fruits 1-1.5 mm long, prominently ridged, pruinose.

The new species is very close to *Bupleurum aitchisonii* (Boiss.) Wollf. distributed in Afghanistan and Pakistan, but it differs from it in the shape of basal leaves, number of stems, number of bracts and bracteoles, and number of umbel rays.

### ***Centaurea paradoxa* Mozaffarian, sp. nov.**

Plantae perennes. Caulis ca. 6 cm altus, erectus, simplex, sulcatus, ad medium usque circiter foliatus, superne subnudus, monocephalus. Folia in vivo fere carnosa, in sicco crasse rigide coriacea, basalia et caulina inferiora petiolata, magna, petiolo incluso 20-30 cm longa, pinnatisecta, segmenta lateralia utrinque 4-6, ir-

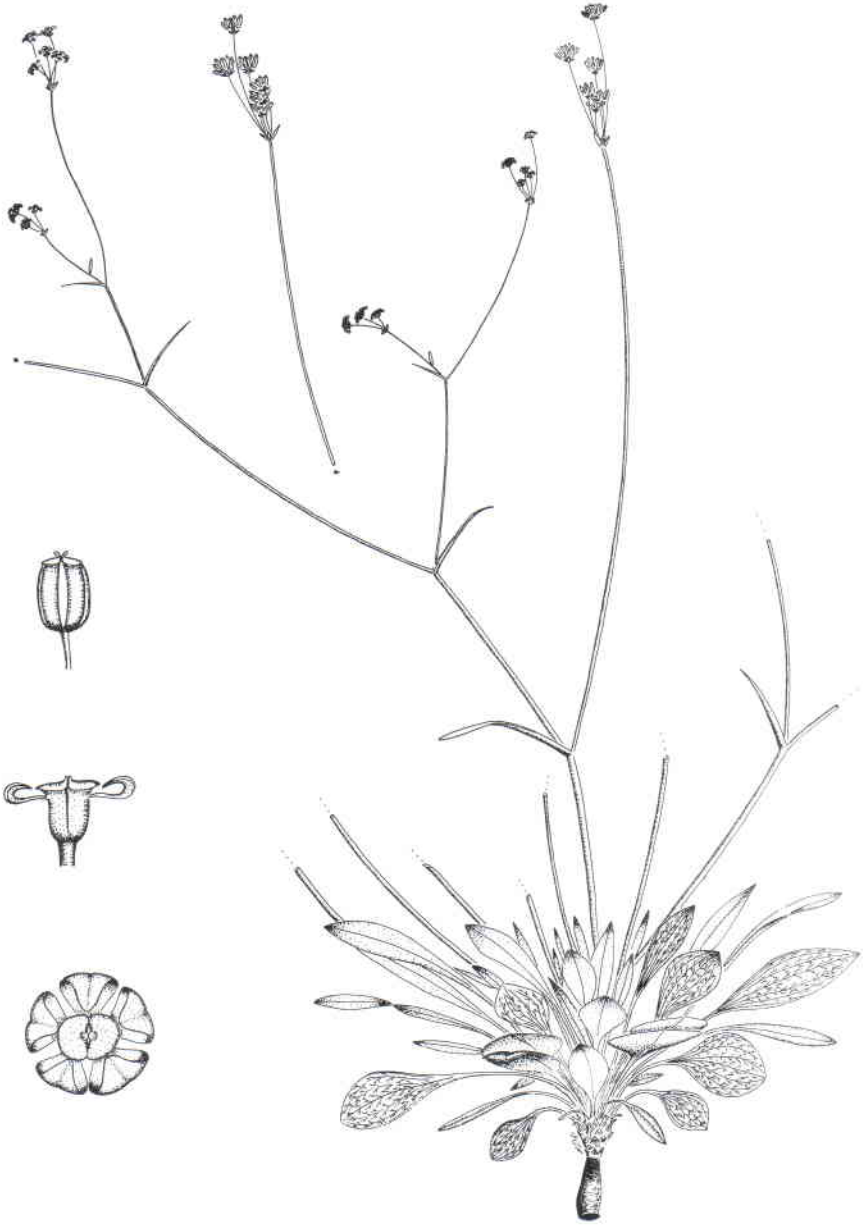


Fig.1. *Bupleurum ghahremanii* (x 0.53; flowers x 12.7; fruit x 4.8).



Fig.2. *Centaurea paradoxa* (x 0.31; flower & phyllary x 1).

regulariter dentata, folia caulina similia sed minora. Involucrum globosum 4-6 x 5 cm. Phylla multiseriata, in sicco brunneo-straminea, coriacea, firma, laevia; appendices parvae, subulatae, mucronulatae 5-7 mm longae, integrae. Flores valde numerosi, roseo-purpurei, 4 cm longi, tubo quam limbo longiore in tertiam partem superiores dilatato, ceteris filiformi; lacinis ca.1 cm longis. Achenia immatura quadrangularia, ca.6 mm longa; pappus 6-16 mm longus; setae  $\pm$  plumosae.

*Typus.* Lorestan: Malavi to Eslamabad road, ca.5 km from Buluran to Eslamabad, 1330 m, 9.5.1988, V. Mozaffarian 64381 (holotypus TARI).

Perennial. Stems several, simple, erect, ca. 60 cm high, sulcate, monocephalous, only with basal and median stem leaves; upper part of the stem without leaves. Leaves in living state fleshy and in dry state leathery; basal and lower stem leaves petiolate, large, including petiole 20-30 cm long, pinnatisect, with about 4-6 irregularly-dentate lateral segments; upper leaves similar to the basals, but smaller. Involucre hemispherical, 4-6 x 5 cm; phyllaries multiseriate, in dry state brownish-straw coloured, leathery, smooth; appendages subulate-mucronate, 5-7 mm long, entire. Flowers numerous, purple-rose, 4 cm long, filiform in 3/4 of its length, dilated in remainder part; limb  $\pm$  1 cm long. Achenes 4-angled, ca. 6 mm long in young state. Pappus 6-16 mm long,  $\pm$  plumose.

The new species is with no close relative in

Flora Iranica groups (cf. G. Wagenitz 1980), the distinctive characters of the species are: monocephalous stems, big capitula and big rosette leathery leaves.

***Gypsophila rupestris* Mozaffarian, sp. nov.**

Glabra, densissime pulvinata, Convexos perduros usque ad 20 cm diametro. Caules floriferi usuque ad 3-4 cm longi, numerosi, tenues, glabrescentes. Folia prateritus triquetra, annotini lineaira  $\pm$  cylindraco-clavata, ad basim dialatato-vaginata usque ad 12 mm longa, carnosa, acuta, mucronulata. Inflorescentiae dichotomae terminales pro parte maxima 3-florae; pedicellis calicibus brevioribus. Calyx conicus; inter costas purpurascens, membranaceus, ad medium lobatus; dentibus triangularibus acutis praeditus. Petalis albis, triangularibus, emarginatis, calicibus sesquilogioribus. Capsula calyce breviora. Ovula  $\pm$  12.

*Typus.* Hamadan: Hamadan to Saveh, Ca. 5 km from Tajarak to Nubaran, Gardaneh Doukhan 1600-1700 m, 5.6.1988, V. Mozaffarian 64530. (holotypus TARI); Tehran: Arak, Kumijan, Kuh-e Vafs, 2100-2500 m, 5.9.1984, V. Mozaffarian 63728.

Glabrous, perennial, pulvinate ca. 20 cm diameter. Stems numerous, thin, up to 3-4cm, mostly 3-flowered. Last year leaves triangular; this year leaves linear  $\pm$  cylindric-clavate, at the base with widened-sheath, up to 12 mm

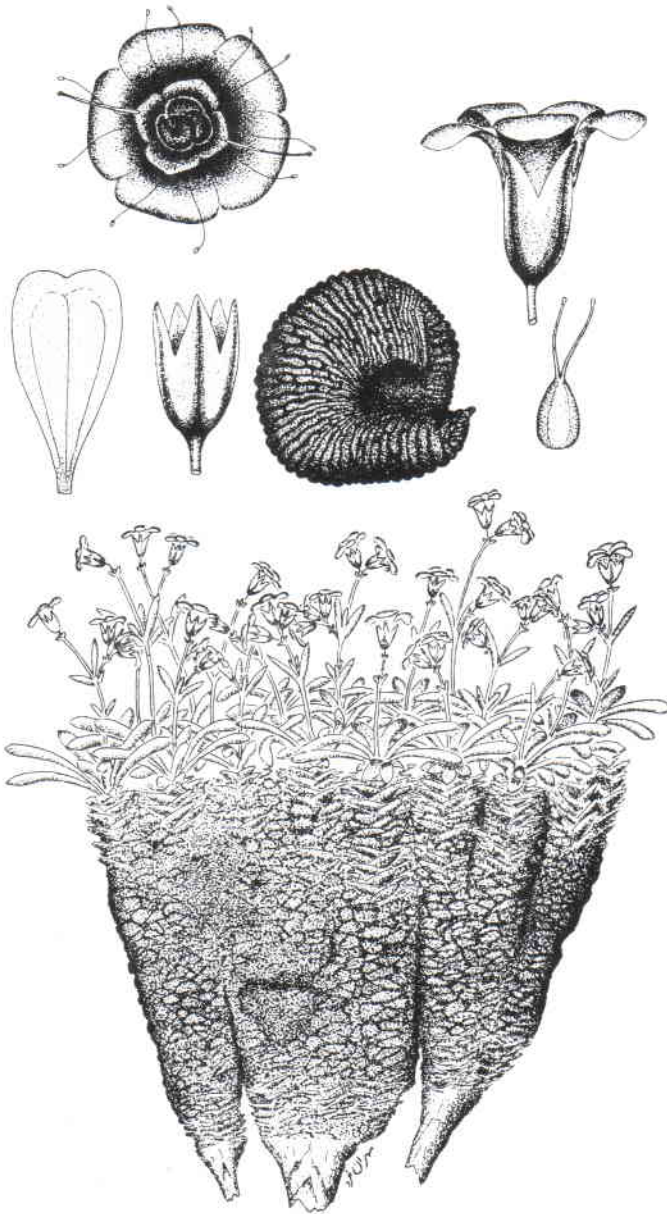


Fig.3. *Gypsophila rupestris* (x 1.6; flowers, calyx, ovary & petal x 5.6; seed x 28).



long, fleshy, acute, mucronulate. Inflorescence terminal dichasium. Pedicels shorter than the calyx, calyx obconical with purplish membranaceous intervals and triangular-acute teeth. Petals white, triangular-emarginate, 1.5 time as long as the calyx. Capsule shorter than the calyx. ovules  $\pm$  12.

The new species belongs to the Sect. *Exscape* Williams. By a glance very similar to *Gypsophylla aretoides* Boiss, *G. imbricata* Rupr. and *G. pulvinaris* Rech. f., but it differs from them in leaf shape, flowering stem and shape of seeds.

***Myopordon damavandica* Mozaffarian, sp. nov.**

Herbae perennes, pulvinato-caespitosae, multicaules, laxe arachnoideo-tomentosae, collo residuis petiolorum foliorum basalium obtecto. Caulis erectus vel ascendens, 4-10 cm altus, foliatus vel subnudus, folia basalia petiolata, pinnatifida vel pinnatipartita, ad margine acarne-spinulata. Folia caulina deminuta. Involucrum oblongo-campanulatum, 25-30 mm longum, laxe canescente-tomentosum; phylla 4-5 seriata,  $\pm$  4 mm lata, coriacea, virentia, striata, appendiculata; appendices atrobunaeae, acuminatae, interiore rostratae, ad margine hyalino-membranaceae. Receptaculum foveolatum, subnudum. Corolla ad apicem violacea, ad basim alba, in sicco purpurascens, 17-20 mm longa; tubus quam limbus fere aequantes; laciniae 4-5 mm longae. Achenia matura ignota.

*Typus.* Tehran: Damavand, Daryach-e Tar, 3700 m, 15.8.1985, V. Mozaffarian & Mohammadi 49273 (holotypus TARI).

Dwarf perennial, caespitose-pulvinate, many-stemmed sparsely arachnoid-tomentose, fibrous collar from the dead leaf petioles present. Stem erect or ascending, 4-10 cm high, leafy or leafless. Basal leaves petiolate, pinnatifid to pinnatipartite with yellowish small spines at the margin, upper stem leaves reduced. Involucre oblong-campanulate, 25-30 mm long, loosely canescens-tomentose; phyllaries 4-5 seriate,  $\pm$  4 mm width, leathery, greenish, striate, appendiculate, appendage dark-brown, acuminate, inner most ones beaked, hyaline-margined. Receptacle  $\pm$  glabrous, foveolate. Flowers in living state violet at upper part and whitish at base, in dry state purpleous, 17-20 mm long. Corolla tube  $\pm$  4-5 mm long, lobed. Mature achene unknown.

The new species differs from *Myopordon hyrcanum* (Bornm.) Wagenitz in herbaceous habitat (not erinaceous), basal leaves which are yellowish with small spines at the margin and larger capitula.

***Salvia jamzadii* Mozaffarian, sp. nov.**

Perennis, caudex suffruticosa, caules 75-90 cm longi, erecti, inferne glabri, superne glanduloso-pilosi. Folia plurima basalia, ovato-lanceolata, 9-15 x 1.5-3 cm, basi cuneata, margine minute serrata, petioli ciliati 2-3 cm longi, indivisa vel aliqua pinnata, lobi laterali 1-2. Ver-



Fig.4. *Myopordon damavandica* (x 1.2).



ticillastri 2-4 flori, distantes. Bractee ovato-acuminatae, 1-2 cm longae, glanduloso-pilosae. Pedicelli 2-3 mm longi. Calyx campanulatus, 12-13 mm longus in statu fructiferi 15 mm longus, glanduloso-pilosus. Corolla alba, 25-30 cm longa, tubus annulatus, labium superius rectum. Nux spherica.

*Typus.* Iran: Chaharmahal-e Bakhtiari, Lordegan to Dasht-e Armand, Margin of Karoon river, 1150 m, 29.5.1986, V. Mozaffarian 54660 (holotypus TARI); Chaharmahal-e Bakhtiari: Lordegan, Monj, Badamestan, Kuh-e Badamestan, N. of Bon-e gerd 1500-2350 m, 30.5.1986, V. Mozaffarian 54715.

Perennial with woody rootstock, stems erect, 75-90 cm high, ribbed, almost glabrous below, glandular pilose above. Leaves mostly basal, ovate-lanceolate, 9-15 x 1.5-3 cm, cuneate at base, the margins minutely serrate, petiols 2-3 cm long, ciliate, simple or some leaves pinnate, with 1-2 lateral lobes. Verticillasters 2-4 flowered, all distant, bracts ovate-acuminate, 1-3 cm long, densely glandular pilose. Pedicels 2-3 mm long. Calyx campanulate, 12-13 mm long, to 15 mm in fruiting stage, glandular-pilose with dark stipitate glands; upper lip tridentate, lower lip with two teeth. Corolla white, 25-30 mm long, annulate; upper lip straight. Nutlets rounded.

The new species differs from *S. suffruticosa* Montbret & Aucher ex Benth. in leaves which are mostly basal, simple and some with one to two lateral lobes; Stem not woody, very glandular pilose in upper part. Also it differs from *S. bracteata* Banks. & Soland. in stem which is

glabrous in lower part; leaves mostly simple; verticillasters with less flowers and colour of corolla.

## NEW RECORDS

### *Ambrosia artemisiifolia* L.

Gilan: Bandar-e Anzali, Bashman, ca.20 m, 12.10.1989, H. Nazarian (Jahad Staff) 67992 TARI.

The genus and species is new to the flora of Iran. General distribution of the species is in North America. Naturalized or spontaneous in Europe, probably it is introduced to Iran as a weed.

### *Aruncus vulgaris* Rafin

Mazandaran: Ca.40 km from Tunekabon to Jennat-Rudbar and Chorte, 1250 m, 22.6.1989, V. Mozaffarian and A. Ghahreman 67810 TARI and 8467 TUH. A new genus and species record for Iran.

### *Cleome turkemena* Bobrov

Khorassan: 19 km SE. of Kalat-e Naderi, 950 m, 24.6.1987, Joharchi s.n.(Mashhad University Herbarium).

New species record for Iran. According to Hedge & Lamond (1970) in K.H. Rechinger



Fig.5. *Salvia jamzadii* (x 0.56).

Flora Iranica the species is endemic in Turcomania.

**Leersia oryzoides** (L.) Swartz

Gilan: Bandar-e Anzail ca.-25 m, 12.10.1988, V. Mozaffarian 66255 (det. B. Hamzehee).

New genus and species record for Iran. According to N.L. Bor (1970) in K.H. Rechinger Flora Iranica general distribution of the species is temperate regions of Europe, Asia and Africa, probably it is introduced to Iran.

**Menochoa vaginalis** Presl.

Gilan: Rudsar, Amlash, Khareshtum village, ca. 40 m, 19.7.1989.

The family, genus and species is new to Iran. According to Shahina A. Ghazanfar (1977, p.3) in Flora W. Pakistan, general distribution of the species is SE. Asia to China, Japan and throughout Malaysia.

Probably it has been introduced to Iran as a rice field weed.

**Rorippa islandica** (Oeder) Borbas

Gilan: Bandar-e Anzali, ca. -20 m, 26.4.1988, V. Mozaffarian 65154; Bandar-e Anzali, Mor-dab, Siah-darvishan, ca.-20 m, 14.7.1975 Wendelbo & M. Assadi.

The species is new to the flora of Iran. It was recorded from Talish, Afghanistan and Pakistan in K.H. Rechinger Flora Iranica vol. 57 p. 216.

**Tanacetum zahlbruckneri** (Nab.) Grierson

Azarbaiejan: Maku, Gharhghaj, 1920 m, 29.5.1989, Maku Jahad staff 67939 TARI.

The species is new to the flora of Iran. According to A.J.C. Grierson (1975, p.273) it is an endemic species of Turkey.

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