

NEW FINDINGS OF THE GENUS MALVA L. (MALVACEAE) IN IRAN

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The genus *Malva* L. (*Malvaceae*) is studied taxonomically in Iran, including key to the species, new records, new combination and synonyms.. *M. verticillata* L. and *M. aegyptia* L. are reported as new name for the flora of Iran. *M. leonardi* I. Riedl is distinguished as a synonym of *M. verticillata*. *M. iljinii* I. Riedl and *M. leiocarpa* Iljin treated as synonym of *M. aegyptia* L. var. *aegyptia*. *M. armeniaca* Iljin is considered as a variety of *M. aegyptia*. Seven species are recognized from Iran and the relationships between closed species are discussed. Geographical distribution patterns are given.

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یافته‌های جدید در جنس پنیرک **Malva L.** از ایران

منیژه پاکروان

بررسی تاکسونومیکی بر روی جنس پنیرک در ایران انجام گرفته است. از مجموعه گونه‌هایی که از ایران شناخته شده است. نام *M. verticillata* L. برای اولین بار برای فلور ایران گزارش می‌شود و *M. leonardi* I. Riedl مترادف با آن تشخیص داده شد. *M. iljini* و *M. leiocarpa* مترادف با *M. aegyptia* var. *aegyptia* تشخیص داده شدند. همچنین *M. armeniaca* به سطح واریته‌ای از *M. aegyptia* کاهش یافت. کلید شناسایی و ارتباط گونه‌های نزدیک و پراکندگی جغرافیایی گونه‌ها بیان شده است.

INTRODUCTION

The genus *Malva* comes from North temperate regions, which has about 30 species in the world. Riedl has mentioned 10 species from Iran (Riedl 1976). During the study of *Malvaceae* family for the Flora of Iran (Assadi 1983), new insights in taxonomy of *Malva* in Iranian area resulted. Based on this study the necessary taxonomic consequences are published in this short paper.

RESULTS

Key to the species

- 1- Leaves deeply lobed, lobes secondary divided; epicalyx 2
 1. *M. aegyptia* L.
 - Leaves with shallow rounded lobes, sometimes nearly entire; epicalyx 3 2
- 2- Petals 3-4 times as long as calyx segments or more
 2. *M. sylvestris* L.
 - Petals not more than 2.5 times longer than calyx or hardly longer than it 3
- 3- Inflorescence glomerate, with short peduncle
 3. *M. verticillata* L.
 - Inflorescence not glomerate with short or long peduncle 4
- 4- Epicalyx ovate to elliptic-lanceolate, 3-4 mm wide
 4. *M. nicaeensis* All.
 - Epicalyx linear, not more than 2 mm wide 5
- 5- Carpel with ± dense hairs on the back
 - 7- *M. neglecta* Wallr.
 - Carpel smooth on the back or with sparse hairs 6
- 6- Flowering calyx somewhat glabrous or furnished below and above with stellate hairs, carpel dentate at the margin
 - 5- *M. parviflora* L.
 - Flowering calyx glabrous below, ciliate around the margin of sepal, carpel not dentate at the margin 6- *M. pusilla* Smith.

Malva rotundifolia L. (nom. ambig.) and *M. microcarpa* Pers. are regarded as synonyms of

M. pusilla Smith. and *M. parviflora* L. var. *microcarpa* (Pers.) Fiori & Paol. respectively.

New names for Iran

M. verticillata L., Spec. Plant. 689(1753).

Syn.: *M. leonardi* I. Riedl, Fl. Ir. 120: 20 (1976).

Selected specimens. Bushehr: Farsi Island, Sangari & Tehrani 25931-IRAN; Dayyer-Nakhilu Island, Sangari & Tehrani 25933-IRAN; Hormozgan: Jazirehe Hengam, Eskandari 31147-IRAN; Khuzestan: Mahshahr to Genaveh, 12 km, E Soveyreh, Iranshahr & Terme 14988-IRAN.

A new name for the flora of Iran. Previously it was known from the Gulf of Kuwait cited by Rechinger (Rechinger 1964), Afghanistan and Pakistan. I. Riedl (1976) have characterized *M. leonardi* by having wide sinus between the leaf lobes. The type specimen of *M. leonardi* and photo of the type of *M. verticillata* and other specimens were studied. The characters were mentioned for *M. leonardi* are observable on *M. verticillata* and therefore they are regarded as synonyms.

M. aegyptia L. Spec. Plant. ed. 1: 869(1753).

M. aegyptia L. was described from Egypt and is distributed to SE Europe, SW Asia and neighbouring countries of Iran, also it grows in some parts of Caucasus and Turkmenistan. Iljin recognized 2 separate species from the complex as *M. leiocarpa* Iljin and *M. armeniaca* Iljin. These species said to differ in carpel and hairs on the staminal tube. *M. armeniaca* has hairs on the back of carpel and retrose hairs on the staminal tube. But *M. leiocarpa* has smooth carpel and staminal tube has hairs. *M. leiocarpa* has been recorded from Turkmenistan, Turkestan, Transcaucasus, Khorasan and Azarbaijan in Iran (Riedl 1976). The type materials have not been seen but the specimens that collected from near the type localities were studied. Both species are closely related to *M. aegyptia* which has smooth carpel and sparse hairs on the staminal

tube (like *M. leiocarpa*), and they share the same area. Also in South of Iran some specimens of the group were studied. These specimens should actually be *M. aegyptia* which is distributed from North Africa to South of Iran. Characters of these specimens match very well with the characters of *M. leiocarpa* from northern Iran and therefore *M. leiocarpa* is considered as a synonym of *M. aegyptia*. Moreover the differences between *M. armeniaca* and *M. aegyptia* (smooth carpel and sparse hairs on the staminal tube in the latter species) aren't enough for Keeping *M. armeniaca* as a separate species or subspecies, then it is decreased to a variety level. Therefore, *M. aegyptia* has two varieties in Iran: *M. aegyptia* L. var *aegyptia* with a wide distribution and var. *armeniaca* with a limited distribution. (north of Iran, Transcaucasus and East of Caucasus). So it is concluded that *M. aegyptia* entered to Iran from southern boundaries and then to northern Iran and Europe.

Malva aegyptia L. var *armeniaca* (Iljin) Pakravan, **comb. nov.**

Syn.: *M. armeniaca* Iljin, Not. Syst. Leningrad 4: 26 (1923).

Type. Armenia, Szovits, (LE, W).

Specimen seen. Azerbaijan: Moghan, below Aslanduz, 320 m, Olfat 109.

--var. *aegyptia*

Syn.: *M. aegyptica* Boiss., Fl. Or. 1: 818 (1876) p.p; *M. leiocarpa* Iljin, Not. Syst. Leningrad 4: 26 (1923) non *M. leiocarpa* Philippi (1893); *M. Iljini* I. Riedl Fl. Ir. 120: 16.

Type. Habito in Aegyptio.

Selected specimens. Golestan: 26 km Inche-Borun to Maraveh Tappe, 110 m, Assadi & Maasoumi 55369-TARI; Gilan: near Ghezal Ozan river, near Sorkhe-Dizakj country, 1600

m, Assadi & Shah-Mohammady 60209- TARI; Khorssan: 72 km Ashkhaneh from Maraveh Tappe, near Garmab, 680 m, Assadi & Maasoumi 55612-TARI; Khuzestan: Susangerd, Bustan, Mish-dagh mt. area, 120 m, Mozaffarian 62856-TARI; Hormozgan: Bandar Abbas, 25 km Kahurestan to Bastak, 200m, Mozaffarian 49677-TARI.

DOUBTFUL SPECIES

Malva flexouosa Hornem. is mentioned by Riedl (Riedl 1976) from Mazandaran province (Neka, Djavan-Moghaddam 13924-E) but I haven't found any specimen with tomentose carpel as *M. flexouosa*. Iranian specimen that cited by I. Riedl (Riedl 1976) was seen, it has glabrous carpel and distinguished as *M. nicaeensis*. Then *M. flexouosa* doesn't enter to Iran and its distributional patterns limited to Afghanistan.

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