

NEW SPECIES AND NEW RECORDS OF ALCEA FOR THE FLORA OF IRAN

M. Pakravan & A. Ghahreman

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The new species *Alcea ghahremanii* is described from NW of Iran and two species are new records for the flora of Iran. They are including *Alcea arbelensis* from West and *A. kopetdaghensis*, from NE of Iran. Geographical distribution of the species are discussed.

Maneezhe Pakravan, Alzahra University P.O. Box 14515-794, Tehran, Iran.
Ahmad Ghahreman, Faculty of Science, University of Tehran, Tehran, Iran.

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یک گونه جدید و گزارش‌های جدید از جنس *Alcea* برای فلور ایران

منیژه پاکروان و احمد قهرمان

گونه *Alcea ghahremanii* به عنوان گونه جدید از آذربایجان معرفی می‌شود و با داشتن برچه‌های بدون باله و گل‌آذین خوشه‌گرن از گونه‌های نزدیک خود مثل *A. fasciculiflora* و *A. flavovirens* مجزا می‌شود. گونه‌های زیر برای اولین بار از ایران گزارش می‌گردند. *Alcea arbelensis* Boiss. & Hausskn., *A. kopetdaghensis* Iljin. گونه اول از غرب و شمال غربی و گونه دیگر از استان خراسان جمع‌آوری شده‌اند. انتشار گونه‌های مورد بحث قرار می‌گیرد.

INTRODUCTION

The species of the genus *Alcea* (*Malvaceae*) are widely distributed through SW Asia. This genus has almost 70 species in the world and 34 species in Iran (Pakravan 2001). In the course of 4 years research on the taxonomy of the genus *Alcea*, many specimens of several herbaria (W, BM, P, JE, E, TARI, IRAN, TUH) were studied. This article contains one new species and two new records for the flora of Iran.

NEW SPECIES

***Alcea ghahremanii* Pakravan & Assadi, sp. nov.**

Planta biennis vel perennis, ramosa, usque ad 150 cm alta. Caulis striatus, ut folia laxe pilis stellatis tectus ut videtur subglaber esse. Folia inferiora longissime petiolata; petioli 8-15 cm longi; lamina usque ad basin in laciniis 7 acutis, angustis divisa, supra glabra, subtus pilis stellatis obsita. Inflorescentia in parte inferiore paniculata, ceterum ramosa. Pedicelli usque ad 25-30 mm longi. Flores bini vel terni. Involucrum laciniarum 6-7, triangulares, in dimidio inferiore connatae, 1/3 longitudinis calycis attingentes, pilis stellatis brevissimis appressis obsitae. Petala sulphurea, calyce 2.5-3 plo longiora. Fructus e carpellis 26-28 compositus; carpella 5-6 mm longa, exalata, in dorso obtuse plana, pilis stellatis, in lateribus profunde foveolato-rugosa, breviter pilosa.

Typus. Iran, Azerbaijan: Mianeh, 1700 m, 27. Jun. 1994, Attar and Dadju 18044 (holotypus TUH).

Biennial or perennial. Stem numerous, ca. 150 cm long, nerved, together with leaves covered by lax stellate hairs or almost glabrous. Lower leaves with longer petiole; petiole 8-15 cm long; blade deeply divided to 7 acute lobes; upper side glabrous; lower side covered with stellate hairs. Inflorescence in lower part thyrsoïd, in upper part raceme; pedicels ca. 25-30 mm long. Cyme 2-3 flowered. Epicalyx

with 6-7 triangular lobes, connate up to the middle, ca. 1/3 as long as calyx, covered with appressed short stellate hairs. Corolla yellow, about 2.5-3 times as long as calyx. Fruit with 26-28 carpels; carpels 5-6 mm long, wingless, flattened on the back, with dense stellate hairs; lateral side rugose with short hairs.

Alcea ghahremanii is closely related to *A. flavovirens* (Boiss. & Buse) Iljin, but differs from it by having wingless carpels (winged in *A. flavovirens*) and thyrsoïd inflorescence (raceme in *A. flavovirens*). It is also related to *A. fasciculiflora* Zohary but differs from it by having yellow flowers (pink in *A. fasciculiflora*) and wingless carpels (winged in *A. fasciculiflora*).

NEW RECORDS TO IRAN

***Alcea arbelensis* Boiss. & Hausskn.**

Kermanshah: near Gahvareh, 1600 m, Assadi 78746; Lorestan: ca 40 km S of Doroud at Bisheh, 1250-1600 m, Assadi & Mozaffarian 37006; Chaharmahal-e Bakhtiari, road from Lordegan to Dourahan, Pol-e Abvanak, 1800 m, Mozaffarian 54910.

This species was originally described from Iraq and it was not included in Flora Iranica (I. Riedl 1976). But it is a widespread species and distributed from West to NW of Iran.

The flower color was described as sulphur but it is cream in type specimen. It could have been white in fresh condition, but turned to cream in dry condition. Moreover Townsend (1980) described flower color as cream, yellow and pink.

***Alcea kopetdaghensis* Iljin**

Khorassan: Ghuchan, Emam-gholi to Bajgiran, Tang-e close to Darebadam, 1480 m, Mozaffarian & Maassoumi 79137.

A new record for the flora of Iran. Previously it was known only from the type location (Iljin 1949).

The flowers described as solitary or paired in original description but in this specimen flowers are two or three in the lower part of raceme and single or paired in upper part of raceme. Moreover the flower color are described as pink , and lilac in dry condition. But there is a polymorphism in the flower color, which varies from white to pink.

The back of the carpel is described as flat in the original description, but in this specimen it is somewhat keeled. It seems this character varies in age, somewhat keeled in young but flat in old stage.

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Fig. 1. *Alcea ghahremanii* (x 0.56); carpel (x 2).