

NEW RECORDS AND INTERESTING TAXA OF EUPHORBIACEAE FROM IRAN (KHORASSAN PROVINCE)

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Two new records of the genus *Euphorbia* is reported for the Flora Iranica area and flora of Iran. These species are *E. rosularis* and *E. franchetii* from north of Khorassan province. Also *E. turczaninowii*, *E. helioscopia* L., *E. cheirolepis*, *E. osyridea* and *Chrozophora gracilis* are interesting taxa and are reported as new records for the flora of Khorassan.

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Key words. *Euphorbia*, *Chrozophora*, new records, Interesting taxa, Iran, Khorassan.

گزارش‌های جدید و جالب از خانواده *Euphorbiaceae* از ایران و خراسان

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گونه‌های *E. franchetii* و *Euphorbia rosularis* برای اولین بار برای منطقه فلور ایرانیکا و فلور ایران گزارش می‌شوند. این گونه‌ها از نواحی شمال استان خراسان جمع‌آوری شده‌اند. همچنین گونه‌های *E. turczaninowii*, *E. helioscopia*, *E. cheirolepis* و *E. osyridea* و *Chrozophora gracilis* گزارش‌های جدید و جالب برای استان خراسان هستند. این گیاهان از نواحی مختلف این استان جمع‌آوری شده‌اند.

INTRODUCTION

In a taxonomic revision of the genus *Euphorbia* and *Chrozophora* belong to the family of *Euphorbiaceae* in NE-Iran in Khorassan province two species *Euphorbia rosularis* and *E. franchetii* were identified and are reported as new records for the flora of Iran. Also the species *E. turczaninowii* was collected from south of Khorassan and according to Flora Iranica this species has not been reported from Iran. Three species *E. helioscopia*, *E. cheirolepis* and *E. osyridea* have not been reported from NE-Iran and are reported for the first time from different regions of Khorassan province (Rechinger & Schiman-Czeika 1963). Herbarium specimens are preserved in Ferdowsi University of Mashhad Herbarium (FUMH).

NEW RECORDS TO IRAN

Euphorbia rosularis A. Theod.

Khorassan: Chenaran: Golmakan, Cheshmeh-Sabz, 2300 m, Ayatollahi & Zangooei 22585 (FUMH). Mashhad: Zoshk, Binalood mountains, 2200 m, Joharchi & Zangooei 21323 (FUMH); Kang, Binalood mountains, 2100 m, Faghihnia & Zangooei 27607.

This species has not been reported in Flora Iranica area (Rechinger & Schima-czeika, l. c.). In the Flora of USSR (Hill 1949) has been formerly known as an endemic of Turkmenistan and is recorded for the first time for the Flora Iranica area and the flora of Iran. In identification of *E. rosularis* characters like shape and color of leaves and creeping stem base are used.

Euphorbia franchetii B. Fedtsch.

Khorassan: Quchan: Goozanlou mountains, 1650 m, Faghihnia & Zangooei 27486 (FUMH); Bajgiran, Baba-Aselmeh, 1600 m, Faghihnia & Zangooei 22251 (FUMH)' Azhdar Kuh, 1300 m, Joharchi, & Zangooei, 23235 (FUMH). Daregaz: Between Shekarab &

Tandooreh, 2000 m, Raffei & Zangooei 29109 (FUMH).

In Flora Iranica (Rechinger & Schimaczeika 1963) this species was reported from Turkmenistan, Afghanistan and Pamir-Alaj and it is a new record for the flora of Iran.

INTERESTING TAXA FROM KHORASSAN

Euphorbia turczaninowii Kar. & Kir.

Khorassan: Sabzevar, Between Parvand and Parvand mountains, 800 m, Faghihnia & Zangooei 32455 (FUMH); Gonabad, Beymorgh to Ahangaran, 900, Faghihnia & Zangooei 22984 (FUMH); Nodeh-Pashang, 900 m, Raafei & Zangooei 28337 (FUMH); 35 Km of N Gonabad, 850 m, Raafei & Zangooei 25133 (FUMH); Qayen, Between Hajiabad and Mohammadabad, 1100 m, Raafei & Zangooei 25619 (FUMH)' Between Mohammadabad and Ahangaran, 1000 m, Joharchi 34114 (FUMH)' Zirkuhe Qayen, between Ahangaran bala and Ahangaran Paeen, 1050 m, Joharchi & Zangooei 23282 (FUMH).

This species has been formerly known as an endemic of Turkmenistan and was recorded for the first time from the Touran Protected Area for the Flora of Iran (Rechinger 1977) and now is reported for the first time from S-Khorassan. *E. turczaninowii* is simply distinguished from the closest species *E. densa* on the basis of leaf form and characters of seed coat.

Euphorbia helioscopia L.

Khorassan: Daregaz, Rahne, 1200 m (FUMH); Mashhad, Between Passakuh and Tabad kuh, 1400 m, Faghihnia & Zangooei 24977 (FUMH); Neishabour, Soumaea, 1350 m, Faghihnia & Zangooei 20912 (FUMH); Qayen: near to Ghanate-Shaheek, 1450 m, Zokaei 375 (FUMH); Kashmar, W-Kashmar, Quchpalang mountains 1350 m, Faghihnia & Zangooei 26668 (FUMH); Birjand, Aminabad,

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Fig. 1: *Euphorbia rosularis* (x 0.67); fruit and seed (x 3.3).

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Fig. 2: *Euphorbia franchetii* (x 0.67); fruit and seed (x 6.7).

1900 m, Faghihnia & Zangooei 24977 (FUMH); W-Birjand, Recat-Sofla, 1560 m, Zokaei & Ghorashialhossaini 419 (FUMH); Nehbandan, Shousf, 1450 m, Faghihnia & Zangooei 21512 (FUMH); Tabas, Cheshmeh Deh-Cheerouk, 1250 m, Zokaei 734 (FUMH); NW-Naiband, between Parvadeh and Ab-baneh, Faghihnia Salehi 1999 (FUMH); S-Deyhook, Peykuh, 750 m, Raafei & Zangooei 26182 (FUMH); NE-Naiband, Zadgah, 1100 m, Joharchi & Zangooei 11934 (FUMH).

E. helioscopia as a new record is reported from S & N-Khorassan. This species in Flora Iranica is reported from N, W & S Iran.

Euphorbia Cheirolepis Fisch. & Mey.

Khorassan: Sabzevar, between Parvand and Parvand mountains, 800 m, Faghihnia & Zangooei 32462 (FUMH); Torbat-Heydarieh, between Faizabad and Bajestan, 1000 m, Hojjat & Zangooei 28401 (FUMH); Sarakhs: Doulatabad, 300 m, Joharchi 19193 (FUMH); between Doulatabad and Nouroozabad 340 m, Akhani & Zangooei 24534 (FUMH); Qayen: between Hajiabad and Mohammadabad, 1100 m, Raafei & Zangooei 25625 (FUMH).

E. cheirolepis in Flora Iranica has been reported from S Iran and is recorded for the first time from NE, NW, C & S Khorassan province.

Euphorbia osyridea Boiss.

Khorassan: Torbat-Jam, Miansara mountains, 1300 m, Joharchi 34036 (FUMH); Qayen, Zirkuh, Hajiabad, Dehno, 1000 m, Joharchi & Zangooei 15959 (FUMH); Between Dezg and Ahangaran, 1500 m, Joharchi & Zangooei 17366 (FUMH); Birjand, Makhoonik, 1600 m, Raafei & Zangooei 28278 (FUMH).

E. osyridea previously only in Flora Iranica was reported from S Iran and is recorded as a new report from W & S Khorassan.

Chrozophora gracilis Fisch. & Mey.

Khorassan: Sarakhs: Doulatabad, 300 m, Joharchi 9194 (FUMH); Sabzevar, between Parvand and Parvand mountains, 800 m, Faghihnia & Zangooei 32443 (FUMH); Qayen, between Hajiabad and Mohammadabad, 1100 m, Raafei & Zangooei 25604 (FUMH); Hemmatabad, 980 m, Raafei & Zangooei 25653 (FUMH).

Its main distribution area for this species is in Turkmenistan and Uzbekistan where it is always found on sandy Places. *Ch. Gracilis* has been previously only reported from sandy area SE Siah-Kuh and for second time is recorded from S, NE & NW Khorassan. In this species ovary and fruit thickly covered with stellate hairs (Rechinger & Wendelbo 1976).

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