

معرفی *Cousinia elymaitica* (تیره کاسنیان) به عنوان گونه جدید از غرب ایرانفریده عطار<sup>۱\*</sup>، ولی الله مظفریان<sup>۲</sup> و منصور میر تاج الدینی<sup>۳</sup>

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**چکیده.** گونه *Cousinia elymaitica* به عنوان گونه جدید از غرب ایران گزارش می شود. این گونه به واسطه شکل رویشی، گلبرگ های ارغوانی و برگ های ساقه آغوش در بخشه *Pugioniferae* قرار دارد. نزدیک ترین خویشاوند آن، *C. macroptera* است. نقشه پراکنش به همراه تصاویری از این گونه ارائه شده است.

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*Cousinia elymaitica* (Cardueae, Asteraceae) a new species from west of IranFarideh Attar<sup>1\*</sup>, Valiollah Mozaffarian<sup>2</sup> & Mansour Mirtadzadini<sup>3</sup>

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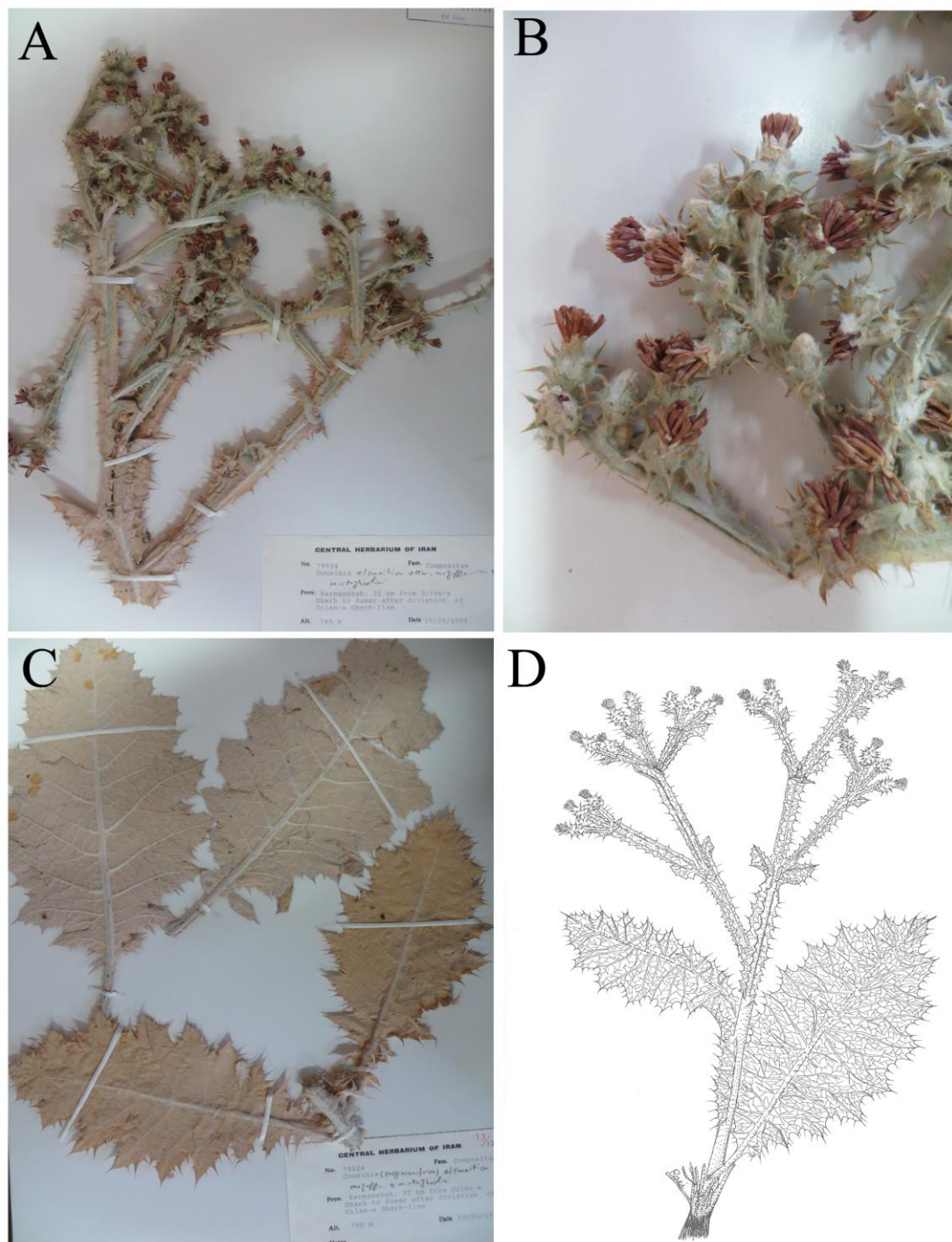
**Abstract.** *Cousinia elymaitica*, which has been collected from western Iran, is described in this paper as a new species. This new species has been assigned to the sect. *Pugioniferae* on the basis of its habit, purple corolla and decurrent leaves. Its closest related species is *C. macroptera*. A distribution map and an illustration of the related specimens have also been provided.

**Keywords.** Asia, Compositae, endemic, flora of Iran, new taxon

## INTRODUCTION

*Cousinia* Cass. is the third largest genus of the family Compositae with approximately 700 species in the world (Attar & Ghahreman, 2006; Attar & Djavadi, 2010). A large number of *Cousinia* species are distributed in the Irano-Turanian region. *Cousinia* is artificially divided into 43 sections (Attar & Djavadi, 2010) in Iran. The largest section is *Cynaroides* Bunge with 75 species and the smallest sections are *Decumbentes* Rech.f. and *Harazensis* Rech.f., each with only one species.

During collections of *Cousinia* specimens in the last 20 years, an interesting specimen was found from the west of Iran, being described as new species here. *Cousinia elymaitica* is related to the sect. *Pugioniferae* Bunge by having purple corolla, winged stems, smooth bristles, spreading phyllaries and large basal leaves. Section *Pugioniferae* has 15 species (Rechinger, 1972; Attar & Mirtadzadini 2009; Assadi, 2009) of which 13 taxa are distributed in Iran.



**Fig. 1. A-D:** Photos and Illustration of *Cousinia elymaitica*, from holotype (Mozaffarian 79524).

The related taxon to the new species is *C. macroptera*, which is distributed in NW Iran, E Turkey, and S Transcaucasus.

#### MATERIALS AND METHODS

During the study of about 100 specimens of section *Pugioniferae* collected deposited in TUH and TARI, an interesting specimen was found

which could not be assigned to previously known species of this section in Iran. Therefore, this specimen is introduced as the new species for the science.

#### RESULTS AND DISCUSSION

*Cousinia elymaitica* Attar, Mozaff. & Mirtadz., *sp. nova* (Fig. 1. A-D).



Fig. 2. E-F: Photos of *Cousinia macroptera*.

**Holotype:** Kermanshah Province: 32 km from Gilan-e Gharb toward Sumar, after division of Gilan-e Gharb and Ilam, 740 m, 10.6.1999, Mozaffarian 79524 (TARI).

**Description:** Monocarpic, up to 35 cm high, white-araneose. Stem corymbose above, continuously winged. Leaves more or less discolored, whitish below, broadly lobed, with spines up to 5 mm long; midrib broad, prominent; lower leaves broad elliptic, 18-24×10-12 cm; cauline leaves decurrent, forming decurrent lobed-spinose wings. Capitula 16 mm in diam. (including bracts), more or less 20-flowered, densely araneose; involucre ovate, constricted above, more or less with 40 phyllaries; bracts ovate, attenuate toward apex, acute; outer and median bracts spreading; inners erect; bristles smooth. Corolla purple, 11-12 mm long; limb 6-7 mm long; lobes 2-3 mm long; anther tube concolored. Achene brown, obovate, longitudinally membranose-striate, membranous-dentate above, shallowly rugose; pappus caducous

**Diagnosis:** Differs from *C. macroptera* in following characters: size of capitulum (6-8 mm not 8-10 mm); flower number (15-25 not 50); leaf color (indistinctly discolored not distinctly discolored); bract tip (acute, not spiny), stem wing width (narrow oblong-continue, not wide, attenuate toward base) (Figs. A-D).

**Diagnose:** Differt ab *C. macroptera*: capitulum 6-8 mm (non 8-10 mm), flores 15-25 (non 50), folia indistincte discoloria (non distinct discoloria), apex bracteae acutae (non spinosae), alae caulium continue anguste oblongarum (non basin versus late attenuatarum).

**Taxonomic remarks:** *Cousinia elymaitica* belongs to the sect. *Pugioniferae* by smooth bristles, color of corolla, decurrent leaves and exappendiculate spreading bracts. *Cousinia macroptera*, by having large oval rosette leaves, capitulum shape and bracts, is the characteristic species among the other members of the section. The new species can be compared with *C. macroptera*, which is presented in NW Iran. Although the type locality of the new species is far from the distribution area of *C. macroptera*, it is close to *C. macroptera* by having large rosette leaves, similar size and shape of bracts and large basal leaves (Figs. E and F). The new species is separated from *C. macroptera* by the size of capitulum, the number of flowers, the color of basal leaves and stem leaves.

## CONCLUSION

*Cousinia*, as the second largest genus of Iran flora, consists of several complex species and unidentified taxa. More comprehensive morphological, micromorphological and molecular

approaches are needed for identification and delimitation of these taxa.

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## REFERENCES

- Assadi, M.** 2009. Four new species of the genus *Cousinia* Cass. (Asteraceae) from Iran. – Iran. J. Bot. 15: 36-44
- Attar, F. and Ghahreman, A.** 2006. A synopsis of sect. *Cynaroides* (*Cousinia*, Compositae), distribution, patterns and diversity centers. – Rostaniha 7: 315-342.
- Attar, F. and Djavadi, S.B.** 2010. A Taxonomic revision of *Cousinia*, Sect. *Cynaroides* (Asteraceae, Cardueae) in the Flora of Iran. – Iran. J. Bot. 16: 130-184.
- Attar, F. and Mirtadzadini, M.** 2009. Two new species of *Cousinia* Cass. Sect. *Pugioniferae* Bunge

(Asteraceae, Cardueae) from east and southeast of Iran. – Iran. J. Bot. 15: 146-152

- Rechinger, K.H.** 1972. Compositae, Cynareae I, *Cousinia*. – In: Rechinger, K.H. (ed.), Flora Iranica. Vol. 90. Akademische Druck- und Verlagsanstalt. Graz. 330 pp.
- Rechinger, K.H.** 1979. Compositae, Cynareae III, *Cousinia*. – In: Rechinger, K. H. (ed.), Flora Iranica. Vol. 139a. Akad. Druck- und Verlagsanstalt. 248 pp.
- Tscherneva, O.V.** 1962. *Cousinia* Cass. – In: Schischkin B. K. and Bobrov F.G. (eds.), Flora of the USSR. 27: 135-442.

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