

STUDIES ON THE GENUS COUSINIA CASS. (COMPOSITAE) IN IRAN

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This study has been based on the examination of many new collections from Zagros mountains. *Cousinia kermanshahensis* is described from Kermanshah province. It is compared with the closest relative. Due to the collection of new materials, poor descriptions of *Cousinia sefidiana* and *C. disfulensis* are completed. *Cousinia hakkarica* and *C. algurdina* are new reports from NW. Iran. *Cousinia wettesteiniana* is separated from *C. canescens* as a distinct species. Distribution map is given for some of the species.

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مطالعاتی بر جنس کوزینیا (خانواده کاسنی) در ایران

این بازنگری بر اساس بررسی تعدادی جمع‌آوری جدید از سلسله جبال زاگرس انجام شده است. از بین این نمونه‌ها، یک گونه از کرمانشاه به عنوان گونه‌ای جدید به نام *Cousinia kermanshahensis* شرح داده شده و با نزدیکترین وابسته خود مورد مقایسه قرار می‌گیرد. شرح‌های دو گونه به نامهای *C. sefidiana* و *C. disfulensis* که در فلورها به صورت ناقص ارائه شده بودند، تکمیل می‌گردند. گونه‌های *C. algurdina* و *C. hakkarica* که به ترتیب از عراق و ترکیه شناخته شده بودند، برای اولین بار از شمال غرب ایران گزارش می‌گردند. همچنین گونه *C. wettesteiniana* که مترادفی از گونه *C. canescens* شناخته شده بود، به عنوان گونه‌ای مستقل تأیید می‌شود. پراکنش جغرافیائی گونه‌ها نیز بحث شده است.

INTRODUCTION

In the course of studies on the genus *Cousinia* Cass. sect. *Cynaroideae* some new and interesting plants were found. In this paper a new species is described, descriptions of two species are completed, two species are reported from Iran for the first time and a former synonymy is known as a distinct species.

NEW SPECIES

Cousinia kermanshahensis Attar, Ghahreman & Assadi, sp. nov.

Biennis monocarpica; radix fusiformis. Caulis 20 cm altus, glaber, tenuiter striatus, a basi vel a medio divaricate ramosus, interrupte alatus. Tota planta minutissime glanduloso-punctata, lucida. Folia coriacea, reticulato-nervosa, nervis tenuiter prominentibus, margine sinuato-spinoso-ciliata, glabra, subtus appresse araneoso-tomentosa; folia basalia sessilia, lanceolata, 5x1 cm, pinnatilobata; folia caulina media obovato-oblonga, breviter decurrentia; folia summa decrescentia, a capitulis remota. Capitula singula, terminalia, spinis patentibus inclusis usque 5 cm diametro, absque spinis 2.5 cm, 40-50-flora. Involucrum globosum, superne constrictum; phylla ± 40, appendiculata, coriacea, glabrescentia; appendix late triangularis, auriculata, acuminata, deflexa vel patens; phylla exteriora 1-3 mm longa; appendix 3-7 mm longa, basi 2-5 mm lata, margine crebre spinuloso-ciliata; phylla intermedia 5-12 mm longa; appendix 10-25 mm longa, 6-15 mm lata, margine spinulosa, acuminata; phylla interiora 10-12 mm longa; appendix 7-15 mm longa, 4-10 mm lata, margine integra, vel rarissime spinulosa; phylla intima exappendiculata, usque 15 mm longa, prominentia, attenuata. Receptaculi setae leaves, usque 13 mm longae. Corolla lactea, 18-21 mm longa; tubus limbo paulo brevior; lacinae 3-5 mm longae; filamenta 4 mm longa; antherarum tubus lacteus, glaber; antherae

basi 2.5 mm longae caudatae. Achaenia matura non visa.

Typus. Kermanshah: Eslamabad-e Gharb: Mahidasht: Boujan pass, 1300 m, Attar & Mirtazoddini 19810 (holotypus TUH). – *Paratypus.* Kermanshah: 35 km from Eslamabad-e Gharb on road of Ahvaz, Ghalajeh mountains, 1550 m, Shushtari & Tavakoli 2525 (TARI).

Habitat. Oak forest (*Quercus brantii*).

Monocarpic biennial, with fusiform root. Stem 20 cm high, glabrous, narrowly striate, divaricately branched from base or median, interruptedly winged. All plant glandular-punctate, shining. Leaves coriaceous, margin sinuate-spinulose-ciliate, glabrescent above, appressed arachnoid-tomentose below; nervation reticulate, prominent; basal leaves sessile, lanceolate, 5x1.5 cm, pinnatilobed; cauline median leaves obovate-oblong, shortly decurrent; uppermost leaves distant from capitulum. Capitulum single, terminal, 5 cm in diam. (including spines), 2.5 cm (without spines), 40-50-flowered. Involucrum globular, constricted above; bracts more or less 40, appendiculate, coriaceous, glabrescent; appendages broadly triangular, auriculate at the base, acuminate at the apex, spreading or deflexed; outer bracts 1-3 mm long; appendages 3-7 mm long, 2.5 mm wide, margin with numerous spinules or cilia; median bracts 5-12 mm long; appendages 10-25 mm long, 6-15 mm wide, spinulose at the margin, acuminate; inner bracts 10-12 mm long; appendages 7-15 mm long, 4-10 mm wide at the base, margin entire or rarely spinulose; innermost bracts exappendiculate, up to 15 mm long, exserted, attenuate. Bristles of receptacle smooth, up to 13 mm long. Corolla milky, 18-21 mm long; tube slightly shorter than the limb, lobes 3-5 mm long. Filaments 4 mm long; anther tube milky, glabrous; anther with 2.5 mm tail at the base. Matured achene unknown.

Cousinia kermanshahensis differs from *C.*



Fig. 1. *Cousinia kermanshahensis* (x 6.8)

disfulensis Bornm. in number and colour of flowers (40-50 and milky, not 70 and pink), anther tube (milky, not pink), length of corolla (18-21 mm long, not 23 mm), height of plant (20 cm high, not 35 cm).

COMPLETED DESCRIPTIONS

Cousinia disfulensis Bornm. in Koeie, Danish Scient. Invest. Iran 4, Biter. SW. Iran 1: 23 (1945).

Capitula \pm 70 flora; phylla \pm 40. Receptaculi setae laevae, usque 20 mm longae. Corolla in vivo rosea, in sicco lactea, 23 mm longa, tubo limbum circiter aequante; laciniae 4.5-6 mm longae. Antherarum tubus concolor, glaber. Achaenia ignota.

Typus. Lurestan: 60 km North of Dezful, Shahbazan, 1200 m, Koeie, 793, B and C.

Specimen seen. Lurestan: Khorramabad, mt. Sefid, 1700 m, Veiskarami 26304-TUH.

Habitat. Oak forest (*Quercus brantii*).

Cousinia disfulensis Bornm. is placed in *C. jacobsii* Rech. f. and *C. kermanshahensis* group.

This group is distinguished by having fusiform root and few foliate bracts.

Cousinia sefidiana (Pau) Rech. f., Anales Jardin. Botanico de Madrid, 47 (2): 371 (1990).

Syn.: Cousinia cymbolepis Boiss. var. *sefidiana* Pau, Trab. Mus. Nac. Cienc. Nat. Ser. Bot. 14: 40 (1918).

Capitula 50-60 flora; phylla 100-140. Receptaculi setae scabridulae, usque 19 mm longae. Corolla purpurea; limbus tubo longior; laciniae 3-5.6 mm longae. Antherarum tubus purpureus, glaber. Achaenia 5.2x2.5 mm, oblonga, basi attenuata, subrugulosa, longitudinaliter striata, brunnescentia, maculata, superne marginato-denticulata; pappus 3.7 mm longus, scaber.

Typus. Bakhtiari: mountains around Karun river, mt. Sefid, 3000 m, Martinez, de la Escalera s.n., Ma.

Specimens seen. Bakhtiari: Lordegan: Sarkhun, Shalil to Doab-e Bazoft and Karun river, Mozaffarian 54903 (TARI); Khuzestan: Dehdez to Karun river, around Lirsiah, 1000 m, Mozaffarian 74482 (TARI).

Habitat. Stony mountains.

This species is placed in the complex of *Cousinia cymbolepis*, *C. calocephala* and *C. kopi-karadaghensis*. The closest species to it, is *Cousinia cymbolepis*. Differences between *C. sefidiana* and *C. cymbolepis* are in the number of flowers (50-60, not 100), length of corolla (25-23 mm long, not 24-25 mm long), appendages of median bracts (12 mm long, triangular with auriculate base, not 17 mm long and rhomboid).

Geographical distribution of *C. sefidiana* is restricted to southwest of Iran, but other species is from Markazi province.

NEW RECORDS

Cousinia hakkarica Hub.-Mor., in Notes R. B. G. Edinb. 32: 54 (1972).

Azarbaijan: Urmieh: road of Ghasemlu valley to Oshnavieh, bifurcation of Ziveh, 1800 m, Mozaffarian, 70031 (TARI).

Type specimen was collected by Davis in 1966 from Hakkari mountains (SE. Anatoli).

Cousinia algurdina Rech. f., Anz. Math.-Nat. Kl. Osterr. Akad. Wiss. 101: 344 (1964). Azarbaijan: near Tabriz, 10km from Basmenj to Lighvan, 1800 m, Mozaffarian, 30533 (TARI).

This species is related to *C. wettesteiniana*, but differ from it in having following characters: appendages of bracts spreading, corolla 25 mm long.

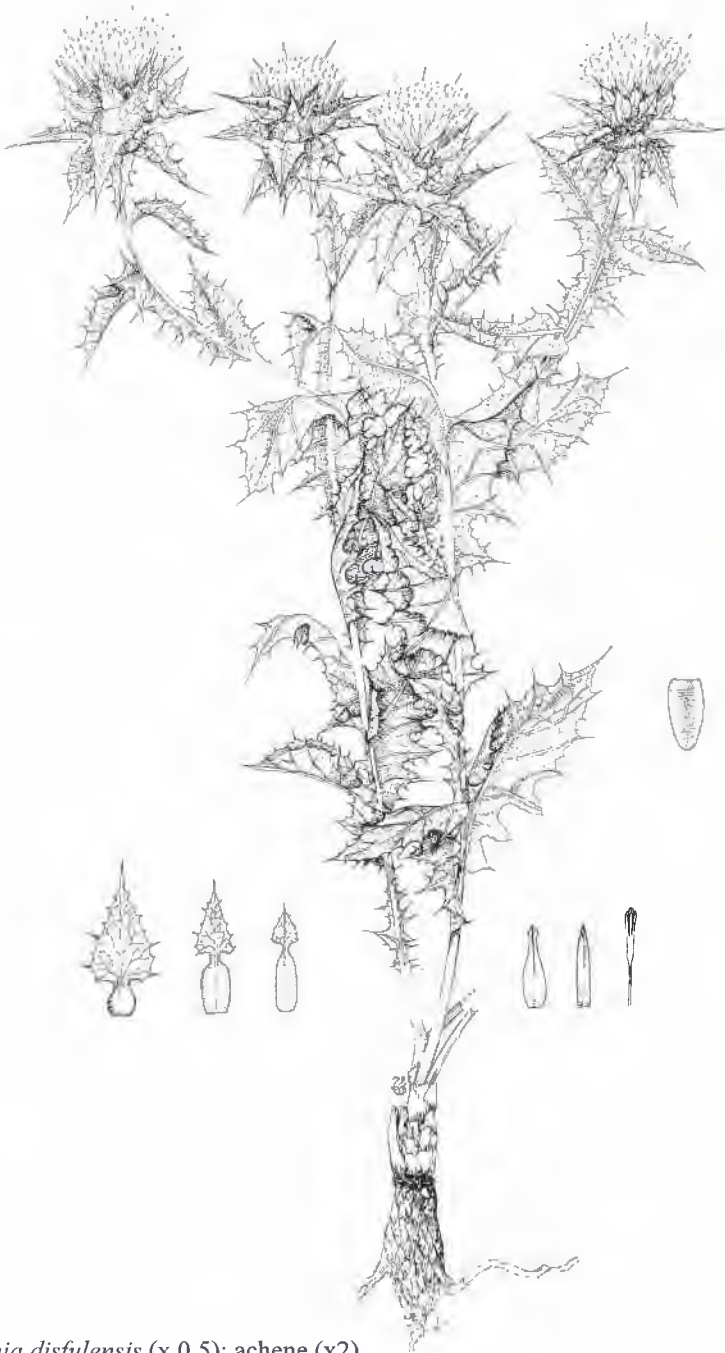
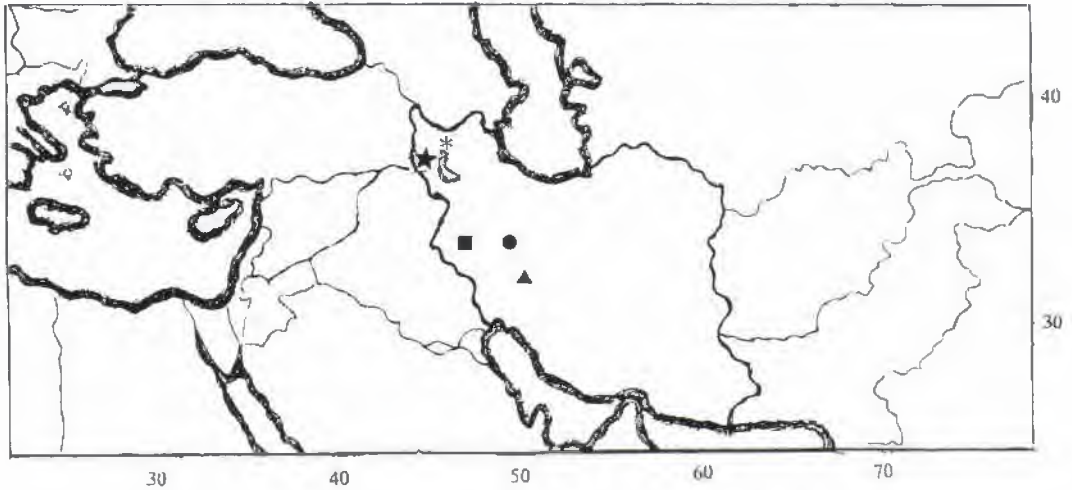


Fig. 2. *Cousinia disfulensis* (x 0.5); achene (x2)



Fig. 3. *Cousinia hakkarica* (x0.5); bracts and flower (x1); achene (x5).

Map 1. *Cousinia kermanshahensis* ■; *Cousinia disfulensis* ●; *Cousinia sefidiana* ▲; *Cousinia algurdina* *; *Cousinia hakkarica* ★



EXCLUDED SYNONYMY *Cousinia wettsteiniana* Bornm.

Cousinia wettsteiniana Bornm. was regarded as a synonymy of *C. canescens* DC. by Rechinger (1972). Specimens of this group in TARI herbarium were studied. There seemed two species belonged to the complex. One of the specimens with purple flowers and greyish-canescens habit (Turkey: Bitlis, southern slope of Cambus mountains, 2000 m, Mc Nil, 617), fits well to the description of *C. canescens*. The others (E. Azarbaijan: Marand, between Zonuz and Zonuzagh, 1750 m, Ghahreman & Attar, 21343-TUH; Tabriz, mt. Sahand, Esparkhan, Attar & Dadju, 18038; NW Marand, between Kushksaray and Erelan, Assadi &

Shahsavari, 65432-TARI; near Tabriz, 10 km from Basmenj to Lighvan, 1800 m, Assadi & Mozaffarian, 30533-TARI; Marand, Ivoghli, Kushksaray to Erelan, Ghahreman & Mozaffarian, 9776-TUH; 35km North of Marand, after Miab village, Kiamaki Dagh mountain, 1800 m, Assadi & Olfat, 68558-TARI; Tabriz: mt. Sahand, Esparkhan, 2650 m, Mozaffarian, 64324-TARI. -W. Azarbaijan: Urmieh, Mavana, mt. Hakki, W Darreh Rash mountain, 2400 m, Mozaffarian, 74886-TARI; Urmieh, Qushchi pass, Mozaffarian, 70086-TARI; Urmieh, Khosh Kuh to Jermi, 2500 m, Mozaffarian, 69907-TARI) with cream flowers and greenish-glabrous habit fitted well to the description of *C. wettsteiniana*. Therefore the group are regarded as two distinct species.

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Reference

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