

A NEW SPECIES OF COUSINIA SECT. COUSINIA FROM NW IRAN

S.B. Djavadi, F. Attar & Z. Najafi

Djavadi, S.B., Attar, F. & Najafi, Z. 2007 08 01: A new species of *Cousinia* sect. *Cousinia* from NW Iran. –Iran, Journ. Bot. 13(1): 43-46. Tehran.

Cousinia azerbaidjanica (sect. *Cousinia*) from Azerbaijan province is described as a new species to science and illustrated. Morphological differences between this species and its closest relatives *C. tabrisciana* and *C. orientalis* are also discussed.

Seyyedeh Bahereh Djavadi (corresponding author), Botany Department, Iranian Plant Protection Research Institute. P.O. Box 1454, Tehran 19395, Iran. E-mail: sb_djavadi@hotmail.com – Farideh Attar and Ziba Najafi, Central Herbarium of Tehran University, Department of Biology, Tehran University, Tehran, Iran.

Key words. *Cousinia azerbaidjanica*, *Cousinia* section *Cousinia*, Asteraceae, Azerbaijan, Iran.

گزارش گونه جدیدی از جنس **Cousinia** (سکسیون *Cousinia*) از شمال غرب ایران

سیده باهره جوادی، فریده عطار و زبیا نجفی

گونه گونه *Cousinia* از بخش *Cousinia* به عنوان گونه جدیدی از استان آذربایجان شرح داده می‌شود. تصویر و نقشه پراکنش آن نیز ارایه می‌گردد. همچنین ارتباط آن با نزدیکترین گونه‌ها مورد بحث قرار می‌گیرد.

Introduction

Cousinia Cass section *Cousinia*, with 66 species, is represented by 40 species in Flora of USSR (Cherneva 1997), 22 species in Flora of Turkey (Huber-Morath 1975) and 10 species in Flora Iranica (Rechinger 1972). Iran shares two species with USSR (*C. chlorocephala* C. A. Mey. and *C. microcephala* C. A. Mey.) and one species (*C. urumiensis* Bornm.) with Turkey. *C. brachyptera* DC. is found both in Turkey and USSR. *C. aleppica* Boiss. have been recorded in to the Flora of Turkey and Flora of Lebanon & Syria (Bouloumoy 1930).

According to Flora Iranica (Rechinger 1972, 1979), out of 10 species cited from this area, six species, namely, *C. hamosa* C. A. Mey., *C. seidlitzii* Bunge, *C. tabrisciana* Bunge, *C. tenuifolia* C. A. Mey. and *C. wilhelminae* Rech. f. are entirely endemic to NW Iran. *C. hohenackeri* Fisch. & C. A. Mey. and *C. lomakinii* C. Winkl. are mentioned from Talish and Armenia respectively. With refering to Flora Iranica and Flora of the USSR, in general distribution of *C. chlorocephala* C. A. Mey., only the name of Iran has bee mentioned, without exact locality.

All the species belonging to this section have these correlated morphological characters: Perennial, root-collar much thickened. Stem usually short, corymb-shaped branched. Leaves usually leathery, spiny-lobed

to pinnatisect-pinnatipartite, sessile or shortly decurrent, usually loosely arachnoid-woolly, ± glabrescent and greenish above, densely white-tomentose below, more rarely white-tomentose or glabrous on both sides. Heads solitary at the ends of branches or congested in the inflorescences, 12-40 flowered; involucral bracts 40-75, with small erect-spreading or reflexed terminal spine. Flowers yellow. Anther tube yellow or rarely pink. Receptacle bristles smooth.

In the Flora of USSR, the sect. *Cousinia* are divided to two subsections: subsection Irano-Turkestanicae Takht. with 28 species is exclusively eastern and distributed in Central Asia, while, 12 species that belong to subsection Irano-armeniaca are western and confined to Caucasus and S. Transcaucasus (Cherneva 1997). With considering the species distributed in Turkey and Iran, it is concluded that, most of the components in this section are widespread in western areas of generic distribution of the genus *Cousinia*.

In reviewing of herbarium specimens ("IRAN") belong to sect. *Cousinia*, a specimen that was already identified as *C. tabrisciana* Bunge, is now studied in detail. As this specimen really differs from *C. tabrisciana* Bunge and its other closest relative, *C. orientalis* (Adams) C. Koch, we treat it as a distinct species.

Cousinia azerbaidjanica Djavadi, Attar & Najafi, sp. nov. (Fig. 1).

Type: Iran: Azerbaidjan, Marand to Makou, 80 km Marand, 1000 m, 8.6.1971, Iranshahr, 9288-IRAN (holotype IRAN).

Perennis, basi lignescens, pluricaulis, collo parce residues petiolorum parce squarroso-comoso et gossypino. Tota planta glaberrima, ramosa, tota longitudine foliata. Caulis ca. 20 cm altus, dense flaviglandulosus. Folia coriacea, concoloria, utrinque glabra, glanduloso-punctata, parce araneosa; nervatura reticulato-pennata, utrinque prominens; folia basalia petiolo \pm 2 cm longo suffulta, lamina spinis inclusis 12 x 3-3.5 cm, lanceolata, spinoso-lobata, lobis in spinam terminalem tenuem rigidam vulnerantem usque ad 4 mm longam excurrentibus, sinubus inter lobos latis, breviter spinoso-lobatis; folia caulina inferiora basalibus similia oblonga, sessilia, decurrentia; folia caulina superiora sensim decrescentia, quam inferiora angustiora; folia summa capitulis \pm approximata. Capitula numerosa, 2-5-na \pm approximata, 10 flora; involucrum basi rotundatum superne paulo attenuatum, spinis inclusis 6 mm diametro, flavescens, ab initio glabrum; phylla \pm 60, lanceolato-subulata, in spinam terminalem in phyllis omnibus rigide erecto-patulam excurrens, margine minute serrulato-ciliata; phylla intima erecta, apiculato-mucronulata, margine distincte spinuloso-serrulata. Receptaculi setae laeves. Corolla flava, 10 mm longa, tubo 2.5 mm, limbo 7.5 mm longo. Antherarum tubus roseus, glaber. Achaenia 1.5 x 1 mm, glaber, superne subdenticulata, longitudinaliter costata.

Perennial, rootstocks woody, root-collars white-tomentose, with remnants of petioles of old leaves. Stems about 20 cm high, branched above, leafy, along with small yellow sessile glands. Leaves leathery, green, glandular and very loosely arachnoide on both sides; nervation reticulate-pinnate, prominent on both surfaces; basal leaves 12 x 3-3.5 cm, with short petioles (\pm 2 cm long), lanceolate, spinose-lobed, with prickly teeth, spines 4 mm long; lower leaves similar to basal, oblong, sessile, decurrent; upper leaves gradually reduced, narrower than lower leaves; uppermost leaves very close to heads. Heads numerous, congested to 2-5,

shortly peduncled, 10-flowered; involucre rotundate at base, attenuate above, including spines 6 mm indiam, yellow, glabrous; bracts \pm 60, lanceolate, awl shaped, sharp pointed to erect-spreading spines, serrulate-ciliate at the margins; inner ones erect, apiculate-mucronulate, spinolose-serrate at the margins. Bristles of receptacles smooth. Corolla yellow, \pm 10 mm long; tube \pm 2.5 mm long. Anther tube pink, glabrous. Achene 1.5 x 1 mm, glabrous, dentate above, longitudinally ribbed.

Diagnostic characters. The new species is very close to *C. tabriziana* Bunge, but is clearly distinguishable by the following characters: leaf very loosely arachnoide, but soon becoming green and shinning on both sides, densely glandular (not arachnoid and \pm glabrescent above, densely white tomentose below), number of flowers per capitula 10 (not 15-20), capitula size (including spines) 6 mm in diam. (not 6-10 mm), involucre glabrous (not arachnoid), Achene 1.5 x 1 mm (not 3.5 x 1.5). Also, referring to the Flora of USSR (Cherneva 1997), the new species shows the closest affinity to *C. orientalis* (Adams) C. Koch, but differs well by these characters: stem with small yellow sessile glands (not white cob-webby), heads including spines 6 mm wide, 10-12 mm long (not 9-10 mm wide, probably excluding spines, 20-25 mm long), achene 1.5 mm long (not 5 mm long).

It is noticeable that, as the type specimen of *C. orientalis* (Adams) C. Koch has not been observed by the authors, it is only contented to the description written for this species in the Flora of USSR (Cherneva 1997).

On the basis of Flora Iranica (Rechinger 1972), the new species is also similar to *C. lomakinii* C. Winkl., because in both the species, stems and involucre are glabrous, and leaves are finely glandular and green on both sides (concolor). But, they are different by the following characters: heads usually congested 2-5 (not solitary), number of flowers per capitula 10 (not 25-30), bracts with erect-spreading spines (not spread-recurved).

Distribution and Habitat. Endemic to NW Iran (Azerbaidjan province). Known only from one locality.

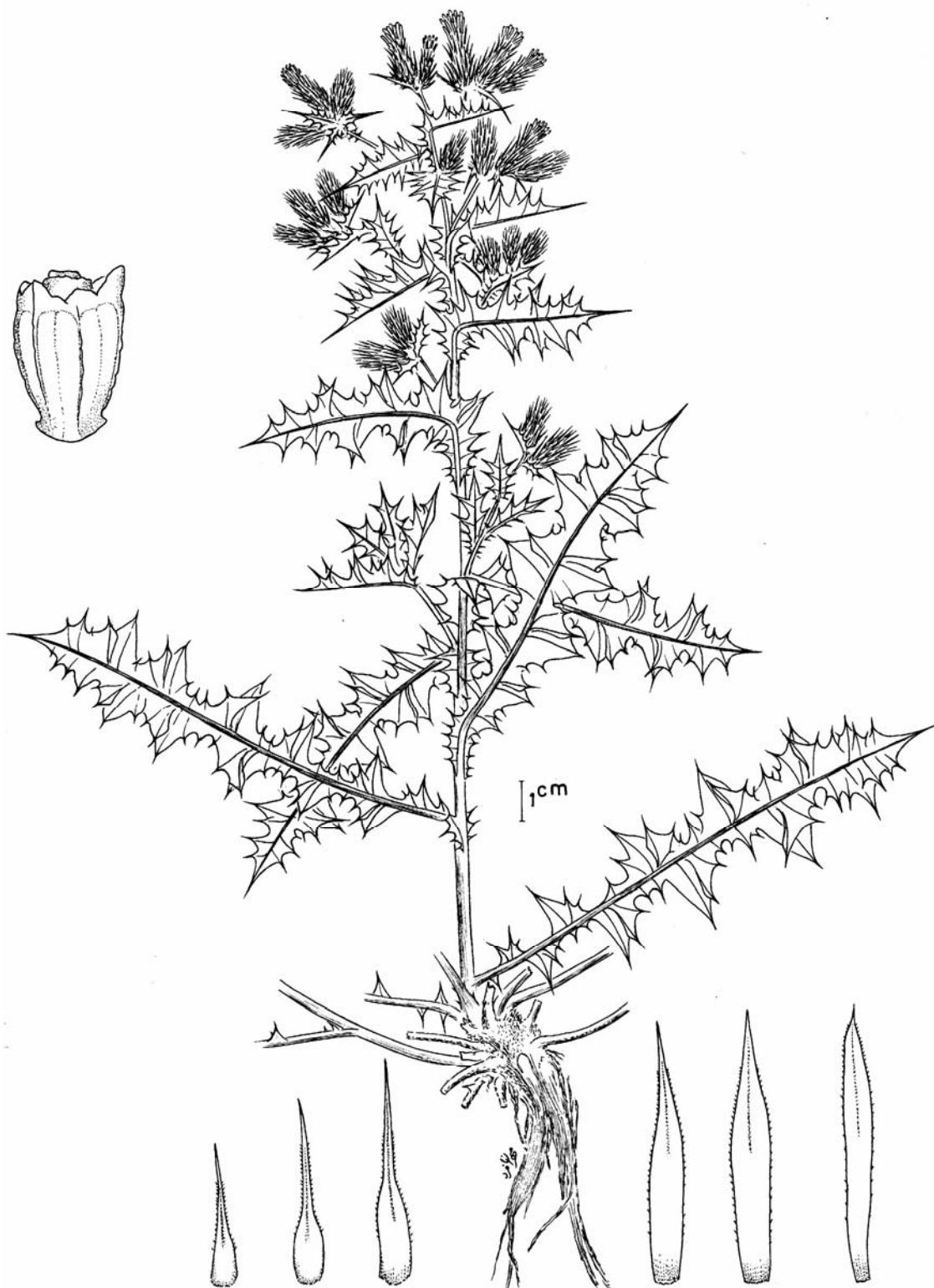


Fig. 1. *Cousinia azerbaidjanica*; bracts (x6); achene (x30).

AKNOWLEDGMENT

The authors are sincerely grateful to Dr. M. Iranshahr for the valuable guidance in reviewing the manuscript and also for editing the Latin diagnose. We are also grateful to Mr. M. Mehranfar for drawing the illustration.

References

- Bouloumoy, L. 1930: Cousinia. In V. Freres (ed.), Flore du Liban et de la Syrie: 194-195. (in French).
- Cherneva, O.V. 1997. Cousinia. pp. 135-442. In: B.K. Shishkin and E.G. Bobrov (eds). Flora of the USSR, XXVII. Moscow, 1962, Leningrad (Translated from Russian).
- Cherneva, O. V. 1962: Cousinia in B. K. shishkin and E. G. Bobrov Flora of the USSR vol. 27 (translation published in 1997 by Bishen Singh mahendra Pal Singh, India).
- Huber-Morath, A. 1975: Cousinia. pp. 329-353. In: P.H. Davis (ed.), Flora of Turkey and the East Aegean Islands, No. 5: 329-353.
- Rechinger, K.H. 1972: Cousinia. in: K.H. Rechinger (ed.), Flora Iranica, no. 90. -Graz-Austria.
- Rechinger, K. H. 1979: C ousinia. pp.108-153. In: K. H. Rechinger (ed.), Flora Iranica, no. 139A: 108-153. - Graz-Austria.