Cousinia kilouyensis (Asteraceae, Cardueae), a new endemic species from SW Iran

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Abstract


Cousinia kilouyensis, from the SW Iranian province of Boyer Ahmadi va Kohkilouyeh, is described as a species new to science and illustrated. It belongs to C. sect. Leiocaules, which is easily recognized by entirely glabrous, ivory white stems, shining, glabrous, not-decurrent leaves, small heads with few flower and few, lacerate, acuminate-spinose involucral bracts. The new species is compared with the morphologically nearest species, C. quettensis from Afghanistan and Pakistan and C. beauverdiana from Kerman province, Iran.

Additional key words: Compositae, Cousinia sect. Leiocaules, taxonomy

Introduction

The genus Cousinia Cass., with more than 600 species (Rechinger 1986; Susanna & Garcia-Jacas 2006), is one of the most diverse genera in Central and SW Asia. Most of its species are centred in the mountainous region spanning from Tien Shan and Pamir-Alay westwards across Afghanistan and Iran to Turkey (Rechinger 1986; Knapp 1987; López-Vinyallonga & al. 2009). Many of its species, over 200, occur in Iran (Attar & Ghahreman 2006).

During the study and revision of the material of Cousinia in the Herbarium of the Ministry of Agriculture (IRAN) and the Tehran University Herbarium (TUH), two specimens collected in the province of Boyer Ahmadi va Kohkilouyeh, a rather poorly investigated area, did not match the descriptions of any known species. Closer investigation revealed that the material represents a hitherto undescribed species of C. sect. Leiocaules Bunge.

Cousinia sect. Leiocaules is represented so far by nine species in the Flora SSSR (Tscherneva 1962), by only one species (C. boisieri Buhse) in Turkey (Huber-Morath 1975) and by 13 species in the Flora Iranica (Rechinger 1972, 1979), of which five species, C. arctoidifolia Bunge, C. beauverdiana Bornm., C. chrysandra Bornm. & Gauba, C. muehensis Rech. f. and C. tetocephala Bornm. & Gauba, are endemic. Iran shares only one species each with Turkey (C. boisieri Buhse) and the former USSR (C. antonowii C. Winkl.).

Cousinia kilouyensis Djavadi & Attar, sp. nov.

Holotype: Iran, Boyer Ahmadi va Kohkilouyeh, Yasouj to Ardakan (Sepidan), Vazag village (in mountains), 2050-2350 m, 26.7.1987, Termeh, Delghandi & Tehrani 52828 (IRAN).

Differt a Cousinia quettensis Rech. f. foliis omnibus concoloribus, utrinque glaberrimis, lucidis, flavescenti-viridibus (nec discoloribus, supra viridibus, mox fere complete glabrescentibus, subtus dense appresse persistentem albo-tomentosis); differt a C. beauverdiana Bornm. corolla rosea (nec flavida), phyllis regulariter imbricatis, apice erecto-patentibus (nec recurvis).
Fig. 1. *Cousinia kilouyensis* – A: habit; B: involucre; C: involucral bracts; D: immature achene. – Scale bars: A, C = 10 mm, B = 5 mm, D = 1 mm; drawn from Termeh & al. 52828, IRAN.
Yellowish green perennial herb, rootstock woody, covered with wooly hairs. Stem more than 100 cm high, erect, ivory white, entirely glabrous, divaricately branched in upper half, forming a longish corymbose synflorescence. Leaves rigid, leathery, yellowish green, shining on both surfaces, sparsely glandulose beneath, venation pinnate-reticulate, obviously prominent on both sides; basal leaves rosulate, including petiole and spines 35–40 x 6 cm, lamina lanceolate-oblung in outline, attenuate towards the petiole, prickly sinuate-lobate, lobes triangular, alternately large and small, with c. 5 mm long, rigid spines at the margin, midrib thick, c. 5 mm wide, prominent on upper surface; lower stem leaves similar to the basal leaves; middle stem leaves sessile, cordate-auriculate at base, not decurrent; upper leaves small, almost entire, spinulose along margin, the uppermost much diminished, and, below the capitula, bract-like. Capitula solitary, c. 25-flowered. Involucre campanulate, rounded at base, c. 2.5 cm long, 1.5 cm wide, of c. 30 regularly imbricate, 8-seriate, acuminate–spinose bracts with lacerate margin in the upper half or third; outer and median bracts shorter than the inner bracts, erecto-patent, ovate to narrowly ovate, completely glabrous, green, yellowish at margin, with prominent midrib excurrent into a spine to 4 mm long, inconspicuously longitudinally ribbed; inner bracts narrowly ovate to narrowly spathulate, floccose, yellowish, purplish in the centre, brownish scarious at apex; innermost bracts almost linear, erect, brownish. Receptacular bristles smooth. Flowers with corolla pink, c. 17 mm long, limb 8 mm, tube 9 mm and lobes 2 mm long; another tube pink, glabrous. Mature achenes unknown. – Fig. 1.

Etymology. — The specific epithet refers to the province Boyer Ahmadi va Kohkilouyeh in SW Iran.

Distribution. — The species is known only from a small area in the mountains of the SW Iranian province Boyer Ahmadi va Kohkilouyeh (Fig. 2) near the town of Sepidan (former Ardakan), where it was found at altitudes above 2000 m.

Additional specimen seen. — Boyer Ahmadi va Kohkilouyeh, 5 km from Ardakan (Sepidan) to Yasouj, 20.7. 2000, Ghahreman, Attar & Mehdigholi 25177 (TUH).

Relationship and delimitation. — The new species belongs to Cousinia sect. Leiocaules, which is characterized by (1) entirely glabrous, ivory white stems, (2) shining, glabrous, not-decurrent leaves, and (3) small, few-flowered capitula with an involucr 15-20(-25) mm in diameter (including spines), of rigid, laterally usually spinose, apically attenuate bracts. Cousinia kilouyensis is morphologically nearest to C. quettensis Rech. f., known from Afghanistan and Pakistan, by sharing the erect, tall, completely glabrous stems divaricately branched in upper half, the leaf shape and size, the campanulate, c. 10 mm wide involucre, and the number and shape of involucral bracts. C. quettensis differs clearly, however, by discolorous leaves, which are green above and persistently white-tomentose beneath.

The new species can also be compared with Cousinia beauverdiana Bornm., another species of the section, confined to a limited area in the province of Kerman. The latter species differs by its yellow corolla and reflexed instead of erecto-patent involucral bracts.

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References


Djavadi & Attar: *Cousinia kilouyensis* from SW Iran