

# TWO NEW SPECIES OF THE GENUS ACANTHOLIMON BOISS. (PLUMBAGINACEAE) FROM IRAN

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*Acantholimon bakhtiaticum* and *A. mirtadzinii* are described as new species from Iran. *A. bakhtiaticum* belongs to the section *Microstegia* and seems to be most closely related to *A. austro-iranicum*. *A. mirtadzinii* is from the section *Acantholimon* and is similar to *A. demawenticum*. The new species are compared with close affinities.

*Acantholimon* sect. *Dracogyna* Mobayen is regarded as a synonym of *Acantholimon* sect. *Microstegia* Bornm., the name *Dracogyna* is a superfluous name.

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دو گونه جدید از جنس *Acantholimon* در ایران

مصطفی اسدی

دو گونه *Acantholimon bakhtiaticum* و *A. mirtadzinii* از ایران نامگذاری و معرفی می‌گردند. گونه *A. bakhtiaticum* متعلق به بخش *Microstegia* sect. و گونه *A. mirtadzinii* متعلق به بخش *Acantholimon* sect. است. گونه *A. bakhtiaticum* با گونه *A. austro-iranicum* قرابت زیادی دارد، لیکن در پوشش کرکی و شکل و اندازه برگک با آن تفاوت فاحشی دارد. گونه *A. mirtadzinii* با گونه *A. demawenticum* شبیه است. تفاوت عمده دو گونه در تعداد گل‌های سنبلچه، شکل و اندازه برگه و برگک و همچنین ساقه است.

بخش *Acantholimon* sect. *Dracogyna* به عنوان مترادف بخش *Acantholimon* sect. *Microstegia* در نظر گرفته می‌شود، نام *Dracogyna* یک نام غیرضروری و اضافی است.

## Introduction

In a revision of the genus *Acantholimon* for the Flora of Iran (Assadi 1989), some new findings came to light. In this paper two new species are described and a new synonym at sectional level is introduced.

### *Acantholimon bakhtiaticum* Assadi, sp. nov. (Fig. 1).

Planta caespitosa, plus minusve densa, glabra sed sparse glandulis flavo-brunneis oblecta. Folia densa, dimorpha; vernalia ca. 13 mm longa, 1.5 mm lata, linearia, apice spinosa, reflexa, persistentia; aestivalia ca. 20 m longa, 1 mm lata, acicularia, ad basin lata et amplexicaulia, viridia. Caules florifera ca. 45 mm longa, caespitem valde superantia, foliis 2, 3-5 mm longis, subulatis, margine anguste membranaceis, ad basin amplexicaulibus. Inflorescentia capitata, usque ad 20 mm longa, obconica, spiculis 2-5. Spiculae uniflorae. Bractea 6-7 mm longa, subulata, viridis, margine membranacea, Bracteolae ca. 10 mm longae, inaequales, subulatae, virides, margine membranaceae. Calyx 12 mm longus, fauce ciliatopilosus; limbus ampliatus, infundibuliformis, albus, venis purpureis vix excurrentibus, margine denticulatus; tubus extus sparse pilosus. Petala 15 mm longa, spathulata, versus basem plus minusve unguiculata, rosea. Stamina petalis breviora; Antherae 1.4 mm longae; filamenti basem versus appanati. Stigma antheras aequans, obliqua. Ovarium fusiformis.

*Typus.* Bakhtiari, Lordegan, Sabzkuh, 2110 m, 10.6.1996, Fattahi & Gholamian 5352 (holotypus TARI).

Plant thorny cushioned, more or less dense. Leaves dense, dimorphic. Spring leaves ca. 13 mm long and 1.5 mm broad, linear, spiny at the tip, flexed, persistent. Summer leaves ca. 20 mm long and 1 mm broad, acicular, broad and amplexicaul at the base, green. Flowering stems including inflorescence ca. 45 mm long,

clearly overtopping the cushion, with 2 leaves: leaves 3-5 mm long, subulate, narrowly membranous at the margin, amplexicaul at the base. Inflorescence capitate, up to 20 mm long, obconic, with 2-5 spikelets. Spikelets 1-flowered. Bracts 6-7 mm long, subulate, green with membranous margin, turned outwards at the apex. Bracteoles ca. 10 mm long, unequal, subulate, green, membranous toward the base at the margin. Calyx 12 mm long, funnel shaped above, ciliate hairy at the throat inside, tube with scattered hairs outside; limb white with purple veins shortly exceeding the calyx margin, denticulate at the apex. Petals 15 mm long, spathulate, more or less clawed toward the base, pink. Stamens shorter than the petals; anthers 1.4 mm long; filaments broadened toward the base. Stigma as long as the anthers, oblique. Ovary fusiform.

The new species due to the presence of ciliate hairs at the throat of calyx and capitate inflorescence is obviously from the section *Microstegia* Bornm. (syn. sect. *Dracogyna* Mobayen, **syn. nov.**) It is very well characterized among the species of this section by having scattered yellowish brown glands, curved green relatively long bracts, subulate bracteoles etc. It seems to be most closely related to *A. austro-iranicum* Rech. f. & Schiman-Czeika but differs from it by the following characters. Presence of yellow brown glands, subulate much longer bracts, subulate green bracteoles. In *A. austro-iranicum* glands absent, bracts ovate-orbicular ca. 3-4 mm long, bracteoles oblong and broadly membranous at the margin.

It is worth mentioning that the section *Microstegia* Bornm. was described as a new section by Bornmuller (1910), with *A. microstegium* Bornm. as the only species belonging to it. The section *Dracogyna* was described by Mobayen (1964), *A. tomentellum* Boiss. var. *microstegium* (Bornm.) Mobayen (syn. *A. microstegium* Bornm.) was included

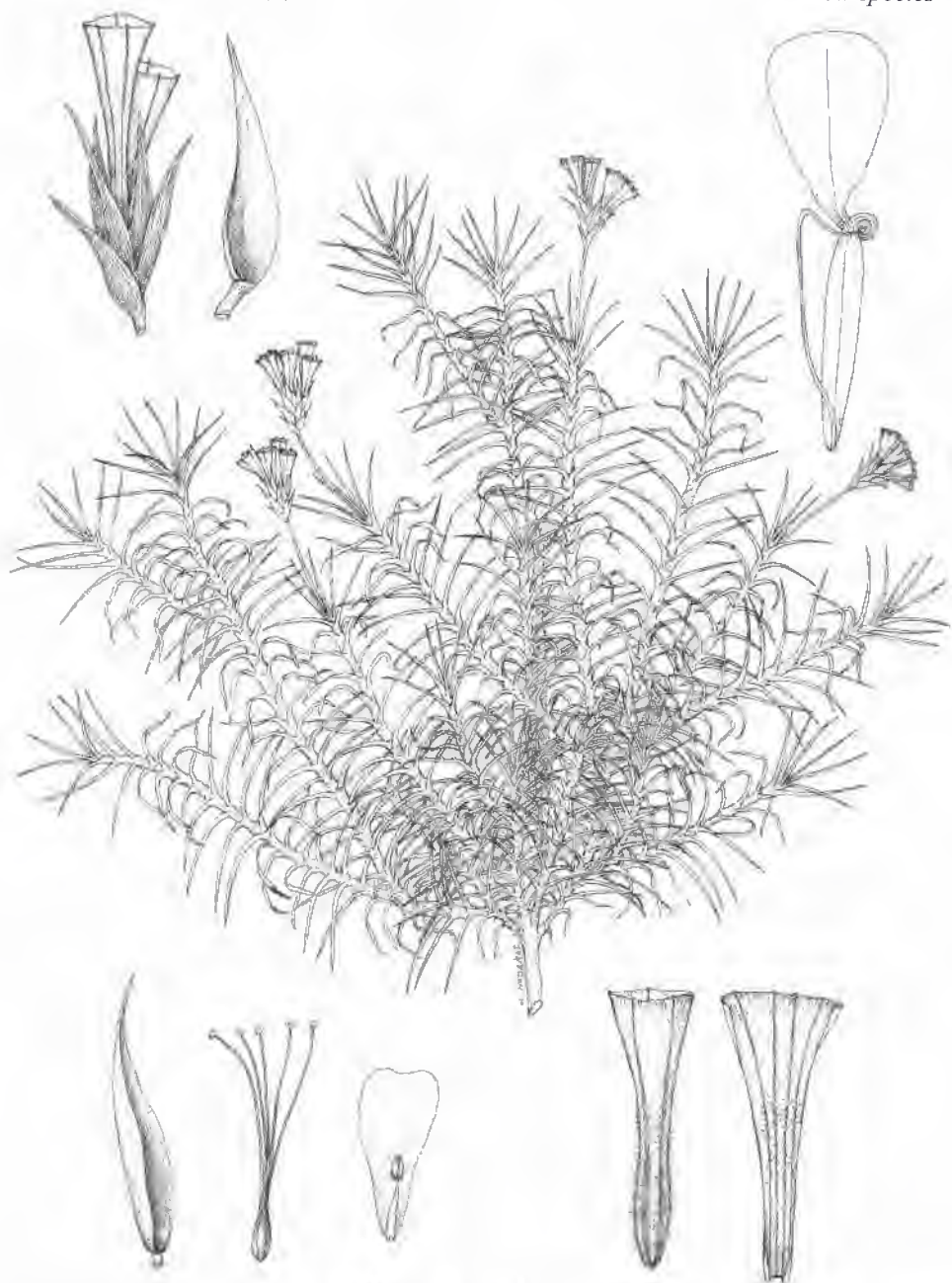


Fig. 1. *Acantholimon bakhtiaricum* (x 0.63): spikelet and gynoecium (x 2.5); bract, bracteole (lowr), calyx and petal (upper in age, lower young) (x 4.4).

as one of the species of it, therefore the name of the sect. *Dracogyna* is superfluous. However, Rechinger & Schiman-Czeika (1974) accepted the section *Dracogyna* and introduced the species *A. schahrudicum* Bunge as its lectotype.

***Acantholimon mirtadzadini* Assadi, sp. nov.**, (Fig. 2).

Planta caespitosa, parte pubescentia vel pilosa. Folia annotina cuprea, densa. Folia vernalia foliis aestivalis vix breviora sed monomorpha, persistentia; folia aestivalia usque ad 25 mm longa, 2 mm lata, plana vel triangularia, viridia vel flavo-viridia, apice acicularia, ad basin plana et amplexicaulia. Caules usque ad 3 cm longa, caespite aequantes vel vix superantes. Inflorescentia capitata, obovata vel flabellata, ca. 1.5 cm longa, spiculis 1-3. Spicula 1 cm longa, 2-3 flora. Bractea ca. 3 mm longa, ovata, acuta, mucrone breve, margine membranacea et purpurea. Bracteolae usque ad 5, inaequales, 7-8 mm longae, calyce vix superantes, oblongae sed versus bases attenuatae, apice rotundatae, purpureae, extus pilosus, nervis purpureis margine attingentes, apice undulatus. Petala ca. 6 mm longa, calyce breviora, spathulata, pallida, emarginata. Stamina petalis breviora; antherae 0.9 mm longae; filamenta plana. Stigma antheras aequantia, capitata.

*Typus.* Iran, Kerman prov., SE Shahdad, Hanza, Takht-e Sartashtak, 18.6.2002, Mirtadzadini 83220 (holo. TARI).

Plant thorny-cushioned, pubescent at the base of leaves, hairy on the calyx tube. Leaves of the former year coppery; spring leaves similar to the summer leaves but somewhat shorter, persistent. Summer leaves up to 25 mm long, 2 mm broad, flat or triangular at cross section, green or greenish yellow, spiny at the apex, broad and amplexicaul at the base. Stems up to 3 cm long, equalling or somewhat overtopping the cushion,

glabrous. Stem leaves 1, 3.5 mm long, subulate, acicular at the apex, amplexicaul at the base. Inflorescence capitate, obovate or flabellate, ca. 1.5 cm long, with 1-3 spikelets. Spikelets 1 cm long, 2-3 flowered. Bract ca. 3 mm long, ovate, acute, shortly mucronate, green with membranous and purple margin. Bracteoles up to 5, unequal, 7-8 mm long, shortly exceeding the calyx tube, oblong, narrowed toward the base, rounded at the apex, purple, membranous at the margin. Calyx ca. 10 mm long, broadened and purple in upper third, pilose outside, undulate at the apex. Petals ca. 6 mm long, shorter than the calyx, spathulate, pale, emarginate at the apex. Stamens shorter than the petals; anthers 0.9 mm long; filaments rather flat. Stigma capitate.

The new species belongs to the section *Acantholimon* and is similar to *A. demawendicum* Bornm. It however differs from it by having glabrous stems, bracts ca. 3 mm long and shorter than the calyx tube and rounded at the apex, spikelets 2-3. In *A. demawendicum* stems pilose, bracts 8-9 mm long, longer than the calyx, spikelets up to 8 in number.

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### References

- Assadi, M, 1989: Plan of the Flora of Iran. - Tehran.  
 Bornmuller, J. 1910: *Acantholimon microstegium* Bornm., species nova sectionis novae Persica. - Feddes Repert. 8: 547 (1910).  
 Mobayen, S. 1964: Revision taxonomique du genre *Acantholimon*. -Tehran.  
 Rechinger, K. H. & Schiman - Czeika, H. 1974: Plumbaginaceae in K. H. Rechinger Flora Iranica, no. 108. -Graz.



Fig. 2. *Acantholimon mirtadzadini* (x 1.5); spikelet (x 5); gynoecium (x 5); petal (x 4).