

TWO NEW SPECIES OF THE GENERA JURINEA AND SCROPHULARIA FROM SOUTHEAST OF IRAN

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Scrophularia kermanica and *Jurinea mobayenii* are new species from SE Iran, Kerman Province. *J. mobayenii*, is compared with its close relatives, i. e. *J. meda* and *J. sharifiana*. *Scrophularia kermanica* is characterized from the other species by the following characters: leaves divided, capsule conical with uneven surface, flowers without staminode, stamens long.

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Key words. *Scrophularia*, *Jurinea*, new species, Iran.

معرفی دو گونه جدید از جنس های *Jurinea* و *Scrophularia* از جنوب شرقی ایران

احمد قهرمان و سید منصور میرتاج الدینی

در طی مطالعه فلور منطقه گوغر کرمان در قالب پایان نامه کارشناسی ارشد مؤلف دوم، دو گونه جدید از جنس *Jurinea* و جنس *Scrophularia* مشاهده شد. گونه *J. mobayenii* از بخش *Bellae* به دو گونه *J. meda* و *J. sharifiana* نزدیک است. گونه *S. kermanica* با داشتن برگهای منشعب، کپسول هرمی درشت و ناهموار، گلهای بدون استامینود و دارای پرچمهای طویل از سایر گونه ها مشخص می شود.

INTRODUCTION

Among the about 400 plant species collected from the Gugher area in SE. Kerman for acquiring M. S. degree of the second author, two new species from the genera *Jurinea* and *Scrophularia* were observed. These new species are described.

Scrophularia kermanica

Ghahreman & Mirtadzadini, **sp. nov.**

Perennis, herbacea, 50-70 cm alta, e rhizomate caules plures orientes, tota fere minute glandulosa. Caules subteretes, inferne obtuse quadrangulares, basi squamoso-foliati. Folia alterna, raro inferiora \pm opposita, viridia, laxe glanduloso-pubescentia; laminae 2-3 cm longae, irregulariter pinnatifidae, segmentis anguste linearibus. Inflorescentia bracteata, thyrsoida, multiflora, pedunculis 1-2.5 cm longis. Bracteae linearo-subulatae, 1-12 mm longae. Calycis laciniae ovatae, obtusae, glandulosae, albo-marginatae, 0.9-1.2 mm longae, 0.8-1 mm latae. Corolla purpureo-rubescens, urceolata, ad 4.5 mm longa, lobis subaequalibus. Stylus exsertus, ad 5.5 mm longus. Stamina exserta, ad 6 mm longa. Filamenta glabra. Staminodium nullum. Capsula glabra, pyramidata,

reticulato-rugosa, 7-10 mm longa, 4.5-6 mm lata. Semina nigra, scrobiculata ad 1.3 mm longa et 0.6 mm lata.

Typus. Kerman: Gugher, Gonbadan, 2600 m, 29.5.1995, Mirtadzadini 19502 (holotypus TUH).

Perennial, herbaceous, 20-50 cm high, rhizomatus, almost totally finely glandular. Stems several, somewhat terete, obtusely 4-angled at the base. Leaves alternate (in lower part \pm opposite), green, loosely glandular pubescent; blade 2-3 cm long, irregularly pinnately lobed; segments linear. Inflorescence in a multiflowered panicle, bracteate. Peduncle 1-2.5 cm long. Bracts linear to subulate, 1-12 mm long. Calyx lobed; lobes ovate, obtuse, glandular, margin white, 0.9-1.2 mm long, 0.8-1 mm wide. Corolla purple to red, urceolate, up to 4.5 mm long, with subequal lobes. Styles exserted to 5.5 mm long. Stamens exserted, up to 6 mm long; filaments glabrous. Staminodium absent. Capsule 7-10 mm long, 4.5-6 mm wide, glabrous, pyramidal, reticulate-rugose. Seeds black, scrobiculate, up to 1.3 mm long and 0.6 mm wide.

This species is distinguished from near related species by its pyramidal capsules, very long and exserted

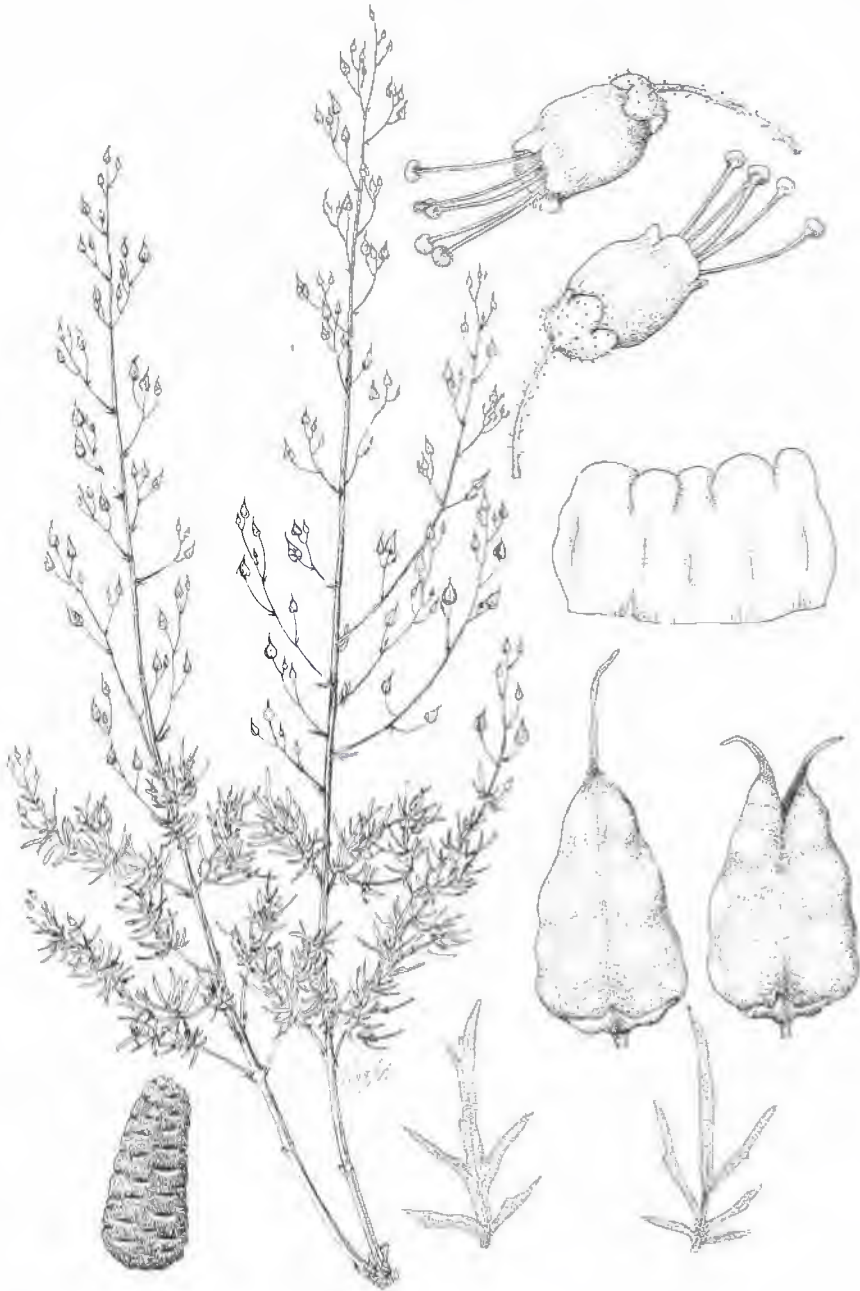


Fig. 1. *Scrophularia kermanica* (x0.4); leaf (x1.8); flower (x4.5); fruit (x4.5); seed (x18).

stamens, having no staminodium and unique leaves.

Jurinea mobayenii Ghahreman & Mirtadzadini, **sp. nov.**

Perennis, 20-30 cm alta, non indurata. Caulis simplex, raro ramosus, subscapiformis, laxe lanatus et glandulosus, in tertia parte inferiore foliatus. Folia patentia, sessilia, lineari-oblongata, apice acuta vel obtusa, 30-40 mm longa, 3-5 mm lata, supra purpurascens, laxe lanata et glandulosa, subtus viridia, dense lanata et glandulosa, margine revoluta, integra, raro late remote sinuato-dentata. Folia superiora deficientia vel minuta, laxa, linearia, 3-5 mm longa et c. 1 mm lata. Capitula singula, terminalia; involucrium semiglobosum, basi umbilicatum, ca. 20 mm longum, ca. 10 mm latum. Phylla purpurascens, albo-lanata et laxe glandulosa; exteriora linearia; interiora anguste triangularia apicem versus sensim longe attenuata. Corolla purpurea, ca. 20 mm longa, involucrio subduplo longiora. Achaenia glabra, cinereo-brunnea, indistincte quadrangularia, basi angustiora, 2.5-3 mm longa, seriato-longitudinaliter squamuloso-scabrida, margine superiore denticulata; pappus plumosus,

brunneo-suffusus, 10-15 mm longus.

Typus. Kerman: Gugher, Gonbadan, 2600 m, 29.5.1995, Mirtadzadini, 19501 (holotypus TUH).

Perennial, 20-30 cm high, not woody. Stem simple, rarely branched, scape-like, loosely woolly and glandular, leafy at below. Leaves 3-5x30-40 mm, spreading, sessile, linear-oblongate, acute or obtuse, on the upper side purplish, loosely woolly and glandular, on the lower side green, densely woolly and glandular, margin revolute, entire, rarely broadly sinuate-dentate; upper leaves reduced or small and scattered, linear, 3-5 mm long, ca. 1 mm wide, Head solitary, terminal. Involucre subspherical, in the base navel-like, about 20 mm long and 10 mm wide. Involucral bracts purplish, with white woolly hairs and loose small glands; inners linear; outers narrowed, triangled. Corolla purple, ca. 20 mm long. Achenes glabrous, ash grey to brown, indistinctly 4-angled, narrow at the base, 2.5-3 mm long, with longitudinal scaly-rough rows, upper margin denticulate. Pappus feathery, tinged brown, 10-15 mm long.

Jurinea mobayenii is related to *J. meda* and *J. sharifiana* which are compared in table 1.

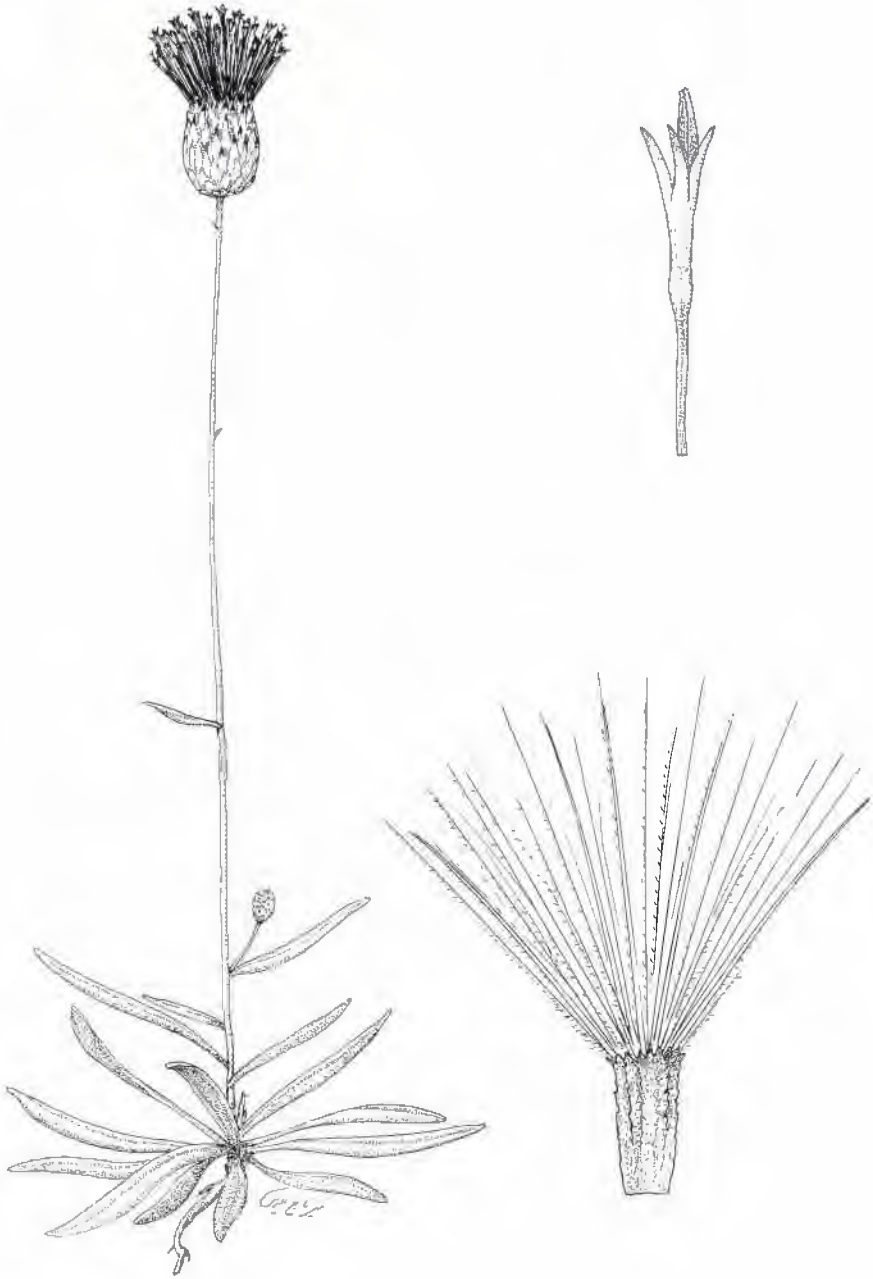


Fig. 2. *Jurinea mobayenii* (x0.6); flower (x1.8); Achene (x6).

Table 1. Comparison of *Jurinea mobayenii* and two closely related species: *J. meda* and *J. sharifiana*

Characteristics	<i>J. meda</i>	<i>J. mobayenii</i>	<i>J. sharifiana</i>
height (cm)	20-30	20-30	10-18
base of plant	hardened	not hardened	hardened
indumentum	cobwebby to tomentose	somewhat woolly	floccose to woolly
leaves	at below half	at below third	rosette
pappus	feathery and probably white	feathery and tinged brown	scabrous and white
corolla length	± 20 mm	±20 mm	± 14 mm