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A NEW SPECIES OF THE GENUS *SIBBALDIA* (ROSACEAE) FROM SOUTH EAST ASIA

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Abstract

During a world wide taxonomic revision of the genus *Sibbaldia* of the family Rosaceae, a new species *Sibbaldia unguiculata* sp. *nova* was discovered from South East Asia. This species is characterized by its moss-like habit, ternate leaves, which are equally tomentose on each surface, Inflorescence a congested compound dichasia, two opposite bracts. Distinctly clawed petals, which are hairy at the margin.

A taxonomic key is provided to separate this species from the closely related species.

Illustration of habit, with floral parts and a picture of holotypes is also given.

Introduction

The genus *Sibbaldia* was first described by Linnaeus (1753). It is placed in the Potentilleae by Hutchinson (1964) and is closely allied to *Potentilla*. Rajput *et al*., (1997) reviewed all the species. The main distribution of *Sibbaldia* is in S.E. Asia, only one species occurring in Europe and North America. The genus is of little economic importance, although according to McVean (1964) *Sibbaldia* is a reliable indicator of soil type, growing only in those which have a rather higher calcium status, than those formed from the poorest rocks. During a world wide taxonomic revision of this genus a new species was discovered which is described here.

Description of new species

Sibbaldia unguiculata M.T.M. Rajput & Syeda Saleha Tahir
(Figs. 1 & 2)

Herba tomentosa compacta caulorhiza lignosa. Folia trifoliata palmatiaque tomentose in superficiebus ambabus, flares brace is duobus oppoitis in dichasia congesta decompositia disposita. Sepala fere tomentosa in superfiebus ambabus. Petala unguiculata ciliata. Torus Occultus.

Holotype: Pakistan, Lahul District, Chenab Valley, 13000 ft. 2-viii- 1980. Erica Clark s.n. (BM 013168) Picture of holotype is given in Fig. 1.

Compact, moss-like tomentose perennial herb from a woody root stock. Stem basis covered with persistent leaf bases. Leaves trifoliolate. Petioles 4-5 mm long, sulcate, tomentose with spreading hairs, stipules membranaceous, 3-7 x 2.5-3 mm, with 3 paralled unbranched veins, mostly glabrous except for a few hairs at the margins: stipule auricles membranceous, 23.5 x ca. 1.0 mm. sharply acute at the apices, with 1 distinct vein, glabrous. Leaflets 3, sessile or with petiolutes to 3 mm. long, not articulated at the base, all of ± equal size 4-7.5 x 3-6 mm. obovate-elliptical, the apices with 2-5 glandular-tipped teeth, tomentose on both surfaces, with spreading glandular hairs; veins distinct.

Inflorescence a congested compound dichasiumas. Flowers 5-numerous, perfect, the pedicles 1.5-2.2 mm, tomentoes; bracts 2, opposite and leaflike, with leafy stipules, lanceolate, 3-6.2 x 0.8 1.5 mm, tomentose on both surface. Epicalyx lobes 5, 1.5-2.2 x ca. 0.3 mm, tomentose abaxially, glabrous adaxially, greenish to purple, tips glandular. Sepal lobes 5, greenish purple 4-4.5 x 1- 1.5 mm., lanceolate, narrower at the base, distinctly veined, tomentose abaxially, sparsely tomentose adaxially. Petals 5, clawed, yellow or creamy-white, 3-4.5 x 1-1.5 mm, veined, slightly hairy at the margins. Stamens 5, antisepalous; filament ca. 0.5 mm, anthers ca. 0.5 x ca. 0.2 mm. oblong, narrower at the base; style subterminal, 1-1.8 mm. mostly purple, glabrous; stigma ca. 0.1 mm. across, capitate.

Altitude 3962 m; flowering period August. The specific epithet refers to the clawed petals found in this species. This species is known only from the type locality. Illustration depicting plant habit and floral parts in given in Fig. 2.

Taxonomic remarks

Sibbaldia unguiculata is characterized by its moss-like habit, temate leaves, which are equally tomentose on each surface; inflorescence a congested compound dichasia; two opposite bracts; sepal lobes tomentose on both surfaces; distinctly clawed petals which are hairy at the margins, and an invisible receptacle disc.

Having trifoliolate leaves, it shows some resemblance to *S. procumbens* L., S. *tenuis* Handel-Mazzetti, *S. tetrandra* Bunge, *S. sikkimensis* (Prain) Chatterjee and *S. perpusilloides* (Smith) Handle-Mazzetti. But this new species of *Sibbaldia* can be separated from these species by its inflorescence and petals. A key is provided here to help separate this species from the closely related species.

Taxonomic Key to the related species of *Sibbaldia* Linn.

1. Flowers 4-merous …… *S. terandra Bunge*

* I. Flowers 5-merous

2. Leaves lobed ……..… *S. perpusilloides* (W.W. Smith) Handel-Mazzetti

*2. Leaves not lobed.

3. Petals purple; leaf-margin completely dentate.

Leaf hairs yellowish …….. *S. sikkimensis* (Prain) Chatterjee

*3 Petals yellow, creamy-white, or pinkish; leaf margin entire, only the apex dentate; leaf dentate; leaf hairs grey

4. Sepal lobes tomentose on both surface; Petals distinctly clawed …… *S. unguiculata* Rajput & Tahir sp. *nova*

*4. Sepal lobes glabrous inside, tomentose outside, Petals not clowed

5. Petals yellow or creamy-white ovate-elliptical flowers 5-13 together; stipule auricles sharply acute …….. *S. procumbens* Linn.

*5. Petals pink, linear or linear-oblong, flowers 1-2 together; stipule auricles acuminate …… *S. tenuis* Hand-Mazzetti

Fig. 1. Picture of the Holotype of *Sibbaldia unguiculata* sp.nov. (Pakistan, Lahul District, Chenab Valley) 13000 ft., 2-viii – 1980, Erica Clark sn. (BM 013168).

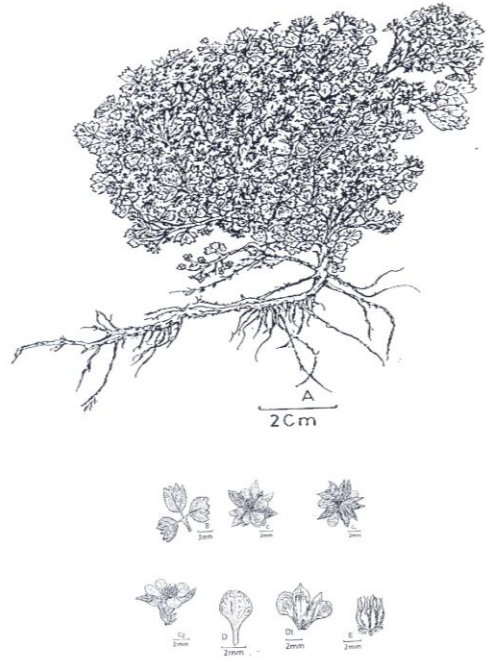

Fig. 2. Illustration of *Sibbaldia unguiculata* sp.nov., A, plant habit; B, leaf; C, flower (Ventral view); C_1 flower (dorsal view); C_2 flower (side view); D, petal; D_1 L.S of flower; E, Carpels and Stamens.

This species is quite distinct from *S. procumbens*, though *S. procumbens* and S. *unguiculata* are found growing together in the same area. Erica Clark collected *S. procumbens* and S. *unguiculata* in 1980 from Lahul, Chenab Valley, at the same time and this has helped in determining the novelty of the new species.

The data provided in the citation of the holotype are from the label, on the specimen (BM 013168) at the Natural History Museum, London. In attempting to pin point the locality on a map, it became apparent that an error had been made. Lahul or Lahaul District and the Chenab Valley are both in northern India, not in Pakistan, Lahul in some literature is spelt as Lahaul and is a town of Kangra District of Himachal Pradesh State, India, borderd by the Chamba (upper Chenab) on the west, Kashmir on the north, Spilt valley in the east, and Kulu in the South. Moreover, Lahul comes under the Himalayan Valley drained by the Chandra (upper Chenab) River.

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