



## **Potentilla gobica (Rosaceae), a remarkable new species from SW Mongolia**

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### Abstract

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*Potentilla gobica* is described as a species new to science from the summit region of the Baytik Shan massif in the SW Mongolian-Chinese borderland. It is characterized by digitate leaves and an entirely glabrous surface, except for small ± sessile glands, of all plant parts. Only one other species entirely lacking eglandular hairs was so far known worldwide, the E Siberian and Mongolian *P. sanguisorba*, which has, in contrast, pinnate leaves.

Key words: cinquefoil, taxonomy, Mongolian-Chinese borderland, Baytik Shan massif.

The western and southwestern part of Mongolia represent one of the old evolutionary centres of *Potentilla* in Asia. In the course of the past 60 years, 17 new species have been described from Mongolia, nine of which are endemic and eight extending to adjacent regions. Most of them are hybrid species. Altogether 56 *Potentilla* species (including hybrid species) are known from Mongolia. Worthy of attention are especially those species that are morphologically isolated and without any apparent close relationship, which are thus rather unlikely of hybrid origin. This is the case of *P. ikonnikovii* Juz., *P. laevipes* Soják and *P. inopinata* Soják. Of the subendemics described as early as in the 19th century, *P. astragalifolia* Bunge and *P. (Schistophyllidium) imbricata* Kar. & Kir. refer to this category. The species described here as new from the SW Mongolian-Chinese borderland also belongs to this category.

### *Potentilla gobica* Soják, sp. nov.

Holotypus: Southern Mongolia, Dsungarian Gobi, Great Gobi B Strictly Protected Area, scree slopes in summit region Baytag Bogd mountain, 2500 m, 45°0.62'N, 92°2.51'E, 2003, *H. von Wehrden* (HAL) – Fig. 1.

Planta omnino – glandulis parvis exceptis – glaberrima. *Glandulae* sessiles vel brevissime stipitatae, coloratae vel sordidae, numerosae. *Caules* 2-3-phylli. *Folia* basalia digitata, quinata et ter-

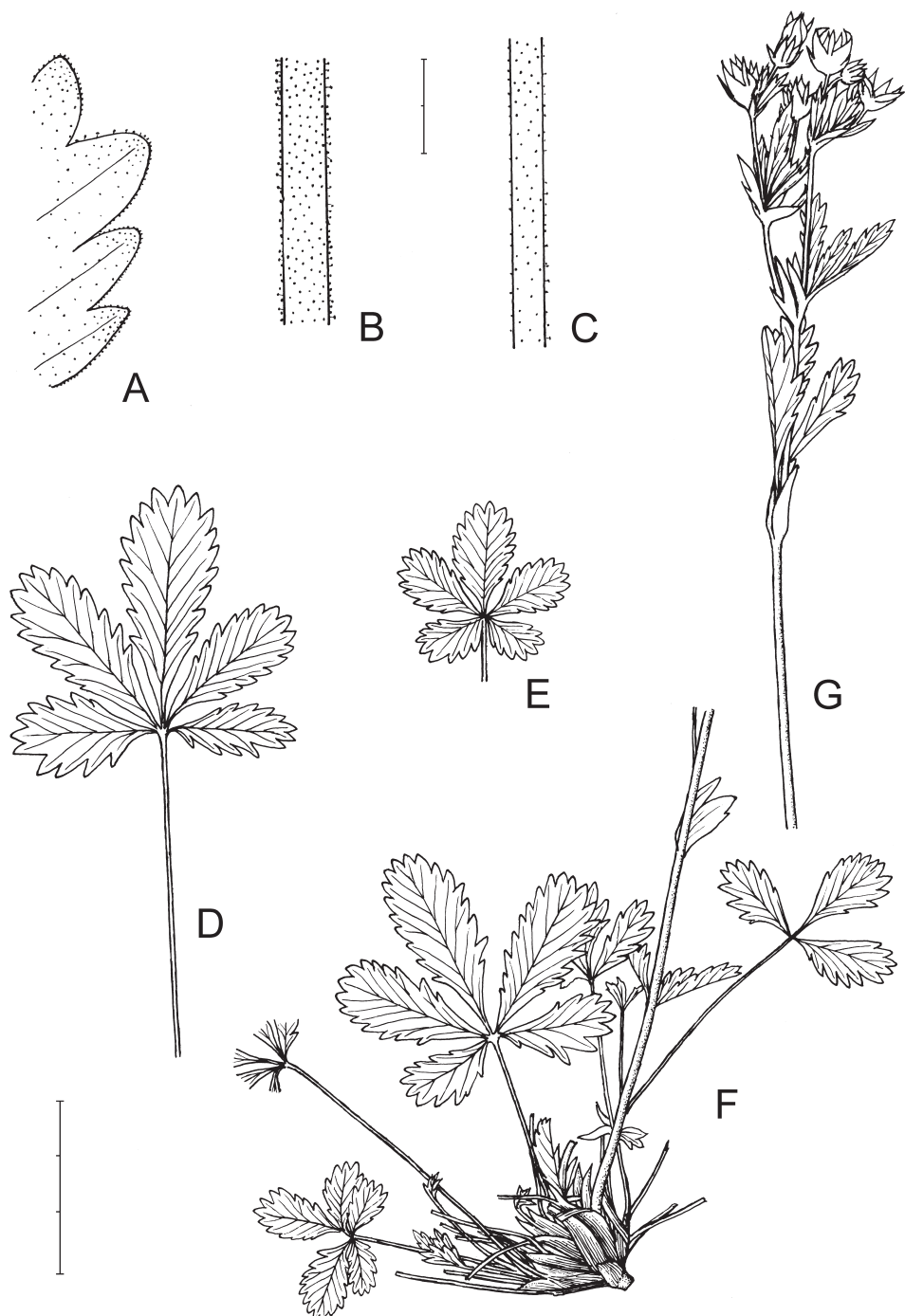


Fig. 1. *Potentilla gobica* – A: leaflet margin; B: stem; C: petiole; D-E: basal leaves; F: lower part of the plant; G: upper part of the stem. – Scale bar: A-C = 2 mm, D-G = 3 cm; after the type drawn by the author.

nata immixta. *Foliola* dentibus utrinque 7-9 parum profundis praedita. *Episepala* sepalis breviora. *Petala*  $\pm$  6 mm longa. *Stylus* 0.8-1 mm, basi valde intumescens et papillosus.

Species generis una, quae folia quinato-digitata et simul pilis eglandulosis omnino absentibus memorabilis.

Whole plant (i.e. dead stipules, petioles, leaflets, stems, hypanthia, calyces and receptacles) totally glabrous except for small glands. *Glands* sessile or very shortly stipitate, reddish brown or honey-coloured or dirty, numerous. *Stems* 20-27 cm high, erect, with 2-3-leaves. *Basal leaves* digitate, 5-foliolate, with ternate leaves admixed; terminal (middle) *leaflet* cuneate-obovate or cuneate elliptical, 1.5-4  $\times$  0.8-1.8 cm, with 7-9 pairs of teeth; teeth obtuse, of middle size, incision between the teeth reaching to  $\frac{1}{4}$  of the blade width. *Inflorescence* subcontracted,  $\pm$  9-10-flowered. *Episepals* oblong, obtuse, 3.5-5.5  $\times$  1-1.8 mm, shorter than sepals. *Sepals* long-triangular, obtuse, 5-7  $\times$  2.5-3 mm. *Petals* emarginate,  $\pm$  6 mm, shorter than sepals. *Anthems* 0.5-0.6 mm long. *Style* 0.8-1 mm long, strongly thickened at the base, conspicuously papillose. *Achenes* 1.5-1.6 mm, dark brown, slightly sculptured.

*Distribution.* – *Potentilla gobica* was found in the summit region of the Gobi high mountain range Baytik Shan (= Baytag Bogd) on the border of the Dzhunghar basin (Junggar Pendi) in the borderland of SW Mongolia and Xinjiang, China. No other collections than the type are known at present.

*Relationship.* – *Potentilla gobica* is one of the most remarkable species of the genus. Excepting small glands, all parts of the plant are entirely glabrous. Even the receptacle is not hairy. Until now, only one *Potentilla* species entirely lacking eglandular hairs was known, *P. sanguisorba* Willd. ex D. F. K. Schldt. from E Siberia and Mongolia. The latter species has, however, pinnate leaves, while those of *P. gobica* are digitate. A relationship between these two species is highly improbable and the similar type of indumentum is apparently the result of convergent development.

If we determine *Potentilla gobica* using the keys to the species of *Potentilla* in Mongolia by Grubov (1982) and Soják (1986), we are led to *P. desertorum* Bunge. From the latter the new species differs by the absence of eglandular hairs and large glands on the whole plant. It is possible that both species are remotely related. If we accept the division of the genus by Juzepczuk (1941), then *P. gobica* belongs to *P. sect. Rivales* Poeverl.

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