

Notes on *Potentilla* L. (Rosaceae) of Altai. 4. A new hybrid from South Siberia

Заметки о лапчатках (*Potentilla*, Rosaceae) Алтая. 4. Новый гибрид из Южной Сибири

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Ключевые слова: nothospecies nova, *Potentilla* sect. *Multifidae*, *Potentilla* sect. *Tanacetifoliae*, Altai Republic.

Summary. A new nothospecies of *Potentilla*, *P.* × *habievii* from South Siberia is described and illustrated. It is an intersectional hybrid purportedly between *P. multifida* (*P.* sect. *Multifidae*) and *P. exuta* (*P.* sect. *Tanacetifoliae*).

Аннотация. Приводится описание и иллюстрация нового для науки нотовида из рода *Potentilla*. Собранный на территории Южной Сибири *Potentilla* × *habievii* представляет собой межсекционный гибрид *P. multifida* (*P.* sect. *Multifidae*) × *P. exuta* (*P.* sect. *Tanacetifoliae*).

Introduction

During a field study of the Altai mountain country (AMC) floristic composition, and a subsequent analysis of material referred to the genus *Potentilla* L. in the South-Siberian Botanical Garden herbarium (ALTB, Barnaul), we found several specimens of taxon new to science. The hybrid was found in SE Altai (Ukok plateau, South-Chuya ridge) and likely originated from *P. multifida* L. We believe that the second parent of this hybrid is *P. exuta* Soják, which grows in mountains of Central Asia (south-east), Siberia (south) and Mongolia since both *P. exuta* and *P. multifida* grow in close proximity to *P.* × *habievii*. Below the taxon is described and illustrated.

Description of the new taxon

Potentilla × *habievii* Kechaykin, **nothosp. nova**; *Potentilla* sect. *Multifidae* (Lehm.) A. Nelson × *P.* sect. *Tanacetifoliae* (Lehm.) Juz. (Fig.).

Type: “Russia, Altai Republic, Kosh-Agach district, Ukok plateau, Muzdy-Bulak river valley below Muzdy-Bulak lake, 49°18'18"N, 87°41'29"E, 2400 m, 5 September 2001, A. I. Shmakov et al. SAK 239” (ALTB; iso – ALTB, B, HAL).

Additional specimens seen (paratypes): “Russia, Altai Republic, Kosh-Agach district: Ukok plateau, low stream of Argamdgi river (middle), 49°16'52"N, 87°49'39"E, 2260 m, 28 Jul 2013, S. V. Smirnov, A. A. Kechaykin. MKD 863” (ALTB!); “ibid., Kara-Chad gorge over Kara-Chad lake, 49°15'57"N, 87°42'49"E, 2400–2500 m, 28 July 2013, S. V. Smirnov, A. A. Kechaykin. MKD 803” (ALTB!); “ibid., upper reaches of Kalguty, left bank, highland tundra. 49°22'N, 88°05'E, 2450 m, 28 July 2011, D. A. German et al.” (ALTB!); “ibid., pass between Usay-Zhumaly rivers, 49°29'16"N, 88°07'43"E, 2700–2800 m, 15 July 2014, A. I. Shmakov et al. ASHK 17” (ALTB!); “ibid., Kalguty river valley, over Argamdgi river mouth (east), meadow, 49°17'57"N, 88°02'54"E, 2392 m, 17 July 2014, A. I. Shmakov et al. ASHK 193” (ALTB!); “ibid., left bank of river Kara-Chad, NE slope of Bertek mountain, 49°15'12"N, 87°40'51"E, 2600–3000 m. 18 July 2014, A. I. Shmakov et al. ASHK 234 et 268” (ALTB!); “ibid., right bank of Kalguty river, pass southward of Karsulu pass, 49°22'34"N, 87°45'49"E, 2303 m. 20 July 2014, A. I. Shmakov



Fig. *Potentilla* × *habievii*. – Scale bar: 2 cm. – Drawn by K. S. Shcherbinin based on type material from Altai: A. I. Shmakov et al. SAK 239.

et al. ASHK 321” (ALTB!); “Russia, Altai Republic, Kosh-Agach district, South-Chuya ridge, Elangash river basin, Turoy river valley in middle stream, 49°48’N, 88°05’E, 2650 m, 24 July 2008, A. I. Shmakov et al. CHAR 2186” (ALTB!).

Description: Caudex multiheaded, covered with dark-brown remains of decayed stipules. Stems in number 5–35, arciform from base, rarely erect, 15–35 cm high, reddish-purple, occasionally greenish, poorly leafed; covered with short (less 1 mm) bent and curved hairs and small glandules; sometimes absolutely bare at lower part, dichotomously branched on top or from middle (rarely). Basal leaves 5–17 cm long, with 3–4 pairs of leaflets, stem leaves with 2 pairs of leaflets, and the uppermost ones are ter-

nate. Petioles covered with rare short straight and bent hairs and sporadic glandules, rarely almost bare. Leaflets 0.5–3 cm long, incised at both sides almost to midrib to 2–4 linear segments with edges reflected downwards, the lowest pair of leaflets usually dissected in 2–3 segments. Leaflets abaxially sparsely whitish-tomentose (tomentum well visible in young leaves; old leaves lack it), appressed silky hairy along veins and scatterly glandulose throughout; adaxially green or becoming reddish in autumn, covered with rare bent short hairs and glandules, rarely glabrous. Stipules of basal leaves brown or light brown with oblong acute auricles, glabrous or on lower face covered with sporadic appressed hairs and glandules. Stipules of stem leaves greenish or reddish, with wide acute auricles, dissected in 2–4 segments, rarely entire, below covered with multiple appressed or patent bent hairs and glandules, above glabrous or with sporadic glandules. Inflorescence loose, dichotomously branched, 4–8-flowered. Flowers 1–1.5 cm in diam., on thin pedicels, often recurved by the end of anthesis. Calyx reddish-violet or green, covered with crowded bent hairs and multiple glandules. Sepals triangular, acutate, somewhat longer than the episepals, linear or lanceolate, obtuse. Petals bright-yellow, rarely pale-yellow, obcordate, sinuate, 4–6 mm long, almost twice as long as the sepals. Stamens 20, anthers small, to 0.8 mm, on short filaments. Mature nutlet 1.2–1.8 mm long, bright-brown, slightly sculptured. Styles to 1 mm long, thin, with slightly widened stigma and base.

Distribution: According to the currently available material, the distribution area of this hybrid is restricted to the highlands of the Altai Republic: Ukok plateau and South-Chuya ridge.

Relationship: The described hybrid is the result of crossbreeding between *P. multifida* and *P. exuta*. It differs from the first parent by 3–4-paired laminas (while *P. multifida* has only two pairs of leaflets), the presence of glandular hairs, looser inflorescence often with drooping calyx, dissected stipules and large obcordate petals exceeding sepals. From the second parent *P.* × *habievii* differs by a tomentose indumentum, often mixed with the silky hairs, larger leaves, dissected into segments to the midrib, almost twice narrower segments 2–3 times longer than those of *P. exuta*.

Etymology: The species is named in honor of Grigoriy Gaynullaevich Khabiev, border guard of

the Russian Federation, who gave every possible assistance to the authors during their fieldwork in the area.

Remarks: *P. exuta* occurs sporadically on the Ukok plateau (Kechaykin, 2012a, b) and not so frequently as, for example, *P. multifida*, but almost always grows near *P. × habievii*, as we observed. *Potentilla kryloviana* Th. Wolf is the closest relative to *P. exuta*, but it rarely occurs on the Ukok plateau. Typical forms of *P. kryloviana* have only 2–3 pairs of leaflets, incised halfway or three-quarter of the way to the midrib, petioles and stems horizontally and squarrosely downy, glandules mostly stalked, yellow, large.

Potentilla exuta has 4–5-paired laminas intermixed with some 3- and 6-paired, leaflets usually more deeply incised, petioles and stems mostly ap-

pressed-downy, the glandules small, whitish or colorless, short-stalked or sessile.

We have studied 30 herbarium sheets (vouchers) of *P. × habievii*, collected from several points at different times and in different phases of growth. All of these samples had 3–4-paired laminas, appressed-downy petioles and stems, small, short-stalked colorless glandules, i. e. characters inherited from *P. exuta*.

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