

50. MICROPHYSA Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci.
Saint-Petersbourg 2: 115. 1844.

泡果茜草属 pao guo qian cao shu

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Herbs, perennial, rhizomatous. Raphides present. Stems rough. Leaves and leaflike stipules of middle stem region in whorls of 4, without domatia, sessile or subsessile. Inflorescences terminal, thyrsoïd, corymbose, cymes pedunculate, several to many flowered, bracteate but bracteoles strongly reduced. Flowers sessile to pedicellate, remarkably small, bisexual, monomorphic. Calyx limb obsolete. Corolla white, funnel-shaped, glabrous; lobes 4, valvate in bud. Stamens 4, inserted on upper part of corolla tube, exerted; filaments short; anthers dorsifixed. Ovary (hypanthium) with 2 cells, each with 1 erect ovule inserted at base of placenta; stigma 2-lobed, exerted. Fruit indehiscent or tardily schizocarpous, dry, with pericarp leathery and inflated (i.e., bladderlike) and usually including both seeds at dispersal; seeds small, ellipsoid-oblong or plano-convex, grooved on ventral (i.e., adaxial) side; testa membranous; endosperm corneous; embryo curved; cotyledons leaflike; radicle terete, hypogynous.

One species: NW China, Kazakhstan, Uzbekistan.

Microphysa was originally described as *Asperula elongata*. Its subsequent generic separation by Schrenk (Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 2: 116. 1844) was justified by its peculiar fruit structure. Only much later, Ehrendorfer et al. (Fl. Iranica 176: 161–258. 2005) postulated that *Microphysa* (as well as *A. platygalium* and *A. maximoviczii*: see under *Galium*), in spite of their funnel-shaped corollas, phylogenetically belong to *G.* sect. *Platygalium* (usually with rotate corollas), a section to which they correspond in all remaining essential characters. In the aberrant fruit of *Microphysa* the two parts of the inferior ovary do not develop into separate mericarps, each with its own pericarp, but remain united within a ± inflated leathery and common pericarp. Nevertheless, this peculiar development is not limited to *Microphysa* but, according to personal observations (F. Ehrendorfer), also occurs sporadically within populations of the *G. boreale*-*G. rubioides* group (corresponding to the series *G. ser. Rubioidea* Pobedimova and *G. ser. Borealia* Pobedimova within *G.* sect. *Platygalium*; cf. Pobedimova et al., Fl. URSS 23: 345–354. 1958). Thus, on the basis of available evidence, the single species of *Microphysa* should be placed into *G.* sect. *Platygalium*.

Considering that *Microphysa* was separated as a monotypic genus by Pobedimova (loc. cit.) and by H. S. Lo (in FRPS 71(2): 318. 1999), and that DNA-analytical proof for its transfer to *Galium* sect. *Platygalium* is still lacking, the genus is maintained here provisionally. Furthermore, its possible future transfer will make a new species name necessary, because “*elongata*” has been used already for another taxon within *Galium*.

1. *Microphysa elongata* (Schrenk) Pobedimova in Schischkin,
Fl. URSS 23: 286. 1958.

泡果茜草 pao guo qian cao

Asperula elongata Schrenk in Fischer & C. A. Meyer,
Enum. Pl. Nov. 1: 58. 1841; *Microphysa galioides* Schrenk.

Herbs, perennial, erect, rhizomatous. Stems 30–50(–70) cm tall, with 4 scabrous angles. Leaf blade drying subleathery, linear-lanceolate, lanceolate, or narrowly oblong, 30–60 × 3–5(–12) mm, glabrous except antrorsely aculeolate along margins and veins abaxially, base acute, margins thinly revolute, apex acute or obtuse; vein 1, distinct, secondary veins not visible. Inflorescence corymbose, with scabrous axes, inconspicuously bracteate. Ovary ellipsoid, 1.5–2 mm, glabrous. Corolla funnel-shaped, 2.5–3 × 3.5–4 mm, lobed to ca. 1/2 length or slightly more; tube 1.2–1.5 mm; lobes elliptic-oblong, shortly acuminate. Fruit 3–4 mm in diam., vesicular, smooth to granulate; seeds ca. 1 × 1 mm. Fl. and fr. May–Jul.

Meadows, banks of rivers and lakes, foothills and lower mountains. Xinjiang (Chabuhaer) [Kazakhstan, Uzbekistan].

Fl. China 19: 216–217. 2011.