

## A NEW SOLENANTHUS (BORAGINACEAE) FROM CHINA

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ABSTRACT. A remarkable new species, *Solenanthus hupehensis* R. Mill (Boraginaceae, tribe Cynoglosseae) is described from northern Hubei province, China. Very low-growing and with a deeply lobed corolla, it represents a major eastward extension of the known range of *Solenanthus* Ledeb. and has little close affinity with the SW and C Asian species of the genus.

### *Solenanthus hupehensis* R. Mill, sp. nov.

Species humillima, sine affinitatibus proximis, corolla ad basem limbi in lobos anguste obovatos divisa distincta. A *S. minimo* Brand (species iranica) foliis ovatis subcordatis strigoso-pubescentibus (non angustissime linearibus argenteo-tomentosis), corolla calyce longiore in sicco pallide rosea (non coerulea), fornicibus ad summum tubi affixis valde recedit. A *S. circinnato* Ledeb. (species per Asiam temperatam maximam partem Sinam includens distributa) habitu humili, foliis multo minoribus, scapis floriferis folio unico inflorescentiam subtendenti excepto nudis, corollis pallide roseis (non caeruleis) limbo fere ad basem in lobos obovatos diviso, antheris nigrescentibus (non flavescentibus) differt.

Herba perennis, humilis, radicibus nigrescentibus tenuibus ad 60 mm longis e caudice brevi exorientibus. *Folia radicalia* numero c.5, petiolata (petioli 20-40 mm longi, parce hispidi, ad bases latiores, membranacei); lamina late ovata, 16-23 × 11-14 mm, basi leniter cordata, apice breviter apiculata (apiculo c.0.5 mm, obtuso), superne subtusque sat dense antrorse strigoso-pubescentes pilis inaequalibus. *Scapi floriferi* e caudice 2-4, ad bases vaginati, c.40-50 mm alti, 1-1.5 mm diam., adpresse pubescentes, folio unico anguste lanceolato subter inflorescentiam excepto nudi. *Inflorescentia* (paulo juvenis) arcte condensata pseudocapitata, scorioidea, c.10 mm diam. *Pedicelli* floriferi veteres c.4.5-6 mm longi, antrorse pubescentes. *Calyx* c.3.5 mm longus, fere ad basem in lobos lineari-lanceolatos c.3 × 0.8 mm fissus. *Corolla* in sicco pallide rosea (ad apices loborum colore paulo intensiore), 4.5-5.5 mm longa, tubo c.2 mm, lobis 2.5-3.2 × c.1 mm, anguste obovatis, obtusis. *Fornices* minuti, subquadrati, c.0.3 × 0.3 mm, ad summum tubi corollae inserti, apice paulo bilobi. *Filamenta* paulo infra fornices affixa, c.3-3.5 mm longa, e corolla breviter sed distincte exserta. *Antherae* nigrescentes, 0.4 × 0.2 mm, ovoideae, medifixae; grana pollinis cremaea. *Stylus* e corolla exsertus, c.6 mm longus, antheras superans. *Nuculae* ignotae. *Fl.* Mar.  
Type: China. Hubei (Hupeh): Ou-pan-chan [near Xueping (Hsüeh-p'ing)], 600 m, 14 iii 1910, *Rev. P. C. Silvestri* 3368 (holo. K).

This remarkable little plant is included in *Solenanthus* Ledeb. on account of its inflorescence type and small corollas with faucal appendages and exerted stamens having small ovoid medifixes. However, it differs from practically all other species of *Solenanthus* in its very low-growing

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habit, and in the limb of the corolla being lobed almost to the very base, rather than to halfway or less. Moreover, the faucal scales are situated at the top of the corolla tube (as in some species of *Rindera* Pallas), rather than being about halfway down. Indeed, it may even be worthy of generic status, but until more specimens, including fruiting material, are collected it seems inadvisable to formally describe one for it.

The plant has lain neglected in herbaria since Pampanini (1911, p. 176) wrote up Silvestri's collection (the main set of which is at FI) and commented '... la mancanza di esemplari in frutto non mi permette di identificare con precisione la pianta.'—merely identifying it as '*Solenanthus* sp.' It is so distinct, however, that it unquestionably represents a hitherto undescribed species. If correctly classified in *Solenanthus* (which only the collection of fruiting material could confirm), it represents a major eastward extension of the range of that genus, species of which occur across temperate Eurasia from the Tien Shan and Himalayas, through Soviet C Asia and Afghanistan to Iran and Turkey, the Balkans, Crimea, Italy and Spain. *S. circinnatus* Ledeb. (widespread from Turkey E to Tien Shan) is apparently the only other species of the genus known to occur in China.

In his paper on his new genus *Sinojohnstonia*, Hu (1936, pp. 202–203) quotes from a letter of I. M. Johnston stating that '... the 2–3 species of *Craniospermum*, the so-called *Moltkia parviflora* of the Indian Himalaya, and your new genus are the only borages of Central and Eastern Asia with long exerted stamens.' Although the habit drawing of *Sinojohnstonia plantaginea* Hu in *Iconographia Cormophytorum Sinicorum* 3: t. 5079 (1974) somewhat resembles Silvestri's plant, it lacks a scale and an examination of the type specimen (China: Sichuan: S of Kuan Hsien, iv 1930, *F. T. Wang* 20517, iso. E) shows that they are quite different taxa. *S. plantaginea*, a member of the tribe Eritrichieae, is a much taller plant about 300 mm high, with much larger, long-petiolate leaves which are more deeply cordate than in *Solenanthus hupehensis*, and with a distinctly acuminate apex. The flowers are said to be green and are arranged in a  $\pm$  1-sided raceme. The corolla is included in the calyx (which in fruit is somewhat ventricose with suberect lobes) but the stamens are considerably more exerted than in *S. hupehensis*. The species described here certainly could not be accommodated in *Sinojohnstonia* in spite of the fact that its fruit is unknown. *Craniospermum* Lehm. (c.4 species in Siberia, Mongolia and N China) is even more different: it has narrowly linear to linear-spathulate leaves and corollas with a longer tube and lacking faucal scales. Thus, until fruiting material is collected it seems best to consider the new species a very distinct, anomalous member of *Solenanthus*.

The type locality of 'Ou-pan-chan' cannot be found on the 1:525,000 map of Hupeh province in the *Times Atlas of China* (Geelan & Twitchett, 1974: t. 58–59). It is, however, marked on Pampanini's 1:500,000 map of Silvestri's collecting localities (1911, p. 188, fig. 26), being situated SW of 'Nang-tciang' (Nanzhang) and SE of 'Pao-kang-sien' (Baokang). The village of Xueping (Hséh-p'ing on Times Atlas map: 31°39'N 111°35'E) seems nearest to the site of 'Ou-pan-chan'. Banjiao is also a possibility, although less likely, being situated further south than the distances from identifiable localities would suggest and on what appears to be a different tributary of the Han river.

## REFERENCES

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