

Saxifraga daqiaoensis (Saxifragaceae), a new species from Guangdong, China

Fa-Guo Wang, Yu-Shi Ye & Fu-Wu Xing*

South China Botanical Garden, Chinese Academy of Sciences, 510650 Guangzhou, China
(*corresponding author's e-mail: xinfw@scbg.ac.cn)

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Saxifraga daqiaoensis F.G. Wang & F.W. Xing *sp. nova* (Saxifragaceae) grows on moist rocks in evergreen secondary forests on limestone mountains in the Guangdong province of China. It is morphologically most similar to *S. mengtzeana*.

Key words: new species, *Saxifraga*, Saxifragaceae, taxonomy

Saxifraga (Saxifragaceae) is a large genus of about 500 species widely distributed mainly in alpine areas of Asia, Europe, North America and Andean South America (Webb & Gornall 1989, Pan 1992, Pan *et al.* 2001, García-Maroto *et al.* 2003). About 216 species including 139 endemics are indigenous to China (mostly in the alpine areas in the southwest and in Qinghai and Gansu Provinces). The latest sectional classification of *Saxifraga* (Gornall 1987) divides the genus into 15 sections. Since this date molecular sequence data (Soltis *et al.* 1996) has demonstrated that section *Irregulares* is the basal clade within the genus and that the members of section *Micranthes* and allied taxa require removal from the genus.

During an expedition to limestone mountains around the town of Daqiao (Ruyuan city, Guangdong Province), as part of the project funded by the National Natural Science Foundation of China, some specimens of *Saxifraga* were collected near a cave. Since they cannot be placed in any of the previously described taxa, they are described below as a new species.

***Saxifraga daqiaoensis* F.G. Wang & F.W. Xing *sp. nova* (Fig. 1)**

Species affinis S. mengtzeanae, sed caulibus, foliis basalibus margine, petiolis, ramis inflorescentium, pedicellis, sepalisque glabris, foliis basalibus margine sine lobatis, inflorescentiis 17–27-floribus, petalis 2 longioribus linearibus 18–22 mm longis, trinerviis, margine glabris differt.

TYPE: China. Guangdong Province, Ruyuan County, Daqiao town, on moist rocks nearby a grotto, altitude 250 m, 9.III.2005 Wang Fa-guo *et al.* 988 (holotype IBSC; isotype IBSC).

ETYMOLOGY. The specific epithet is derived from the name of the county where the material of *S. daqiaoensis* was collected.

Rhizomatous perennial herbs; 12–18 cm tall. Rhizomes rather short. Stem glabrous. Basal leaves: petiole 4–13 cm long, glabrous; blade peltate, nephroid to orbicular, 3–6.4 × 3.8–8 cm, thickly coriaceous, apex obtuse, base cordate, margin remotely shallowly dentate or subentire,

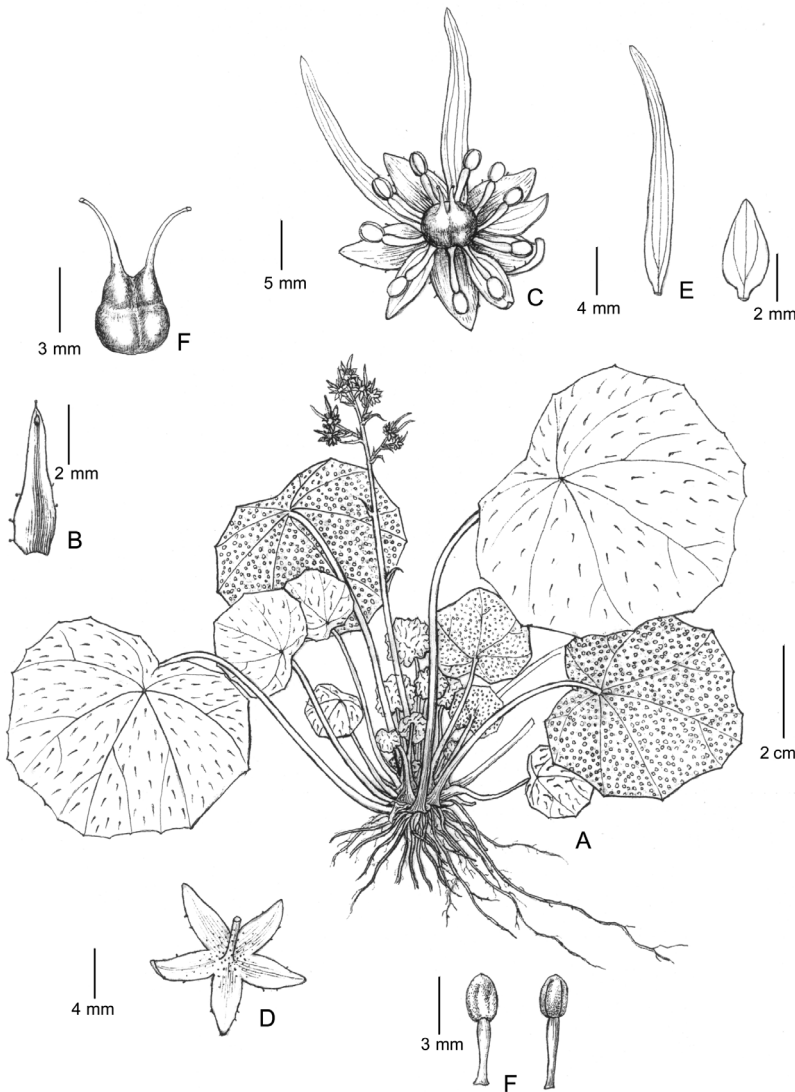


Fig. 1. *Saxifraga daqiaoensis* (from the holotype, drawn by Yunxiao Liu). — **A:** Habit. — **B:** Cauline leaf. — **C:** Flower. — **D:** Sepal. — **E:** Petal. — **F:** Stamen.

glabrous, adaxial surface sparsely hispid, hairs ca. 4 mm long, abaxial surface glabrous, with brown spots. Cauline leaves few, lanceolate to ovate, ca. 4×1 mm, margin glandular ciliate. Inflorescence paniculate, 8–17.5 cm, 17–27-flowered; branches 0.2–0.5 cm, glabrous, 1–3-flowered; pedicels slender, 0.2–0.4 cm, glabrous. Sepals 5, narrowly ovate, ca. 4×1 mm, glabrous on both surfaces and margin, veins inconspicuous. Petals 5, white; shorter 3 petals triangular-ovate, $3.5\text{--}4 \times$ ca. 2 mm, 3-veined, base rounded to cordate, with a claw, claw ca. 1 mm long, apex acute to shortly acuminate; longer 2 petals linear, $18\text{--}22 \times$ ca. 3 mm, 3-veined, apex obtuse, base

gradually contracted into a claw, claw ca. 2 mm long, margin glabrous. Stamens ca. 6 mm long; carpels 2, connate under the middle part. Ovary epigynous, ovoid, ca. 4 mm long; styles divergent, ca. 1.6 mm long. Flowering from March to May.

Saxifraga daqiaoensis is known only from the type locality in Guangdong Province. It grows on moist rocks nearby a cave in evergreen secondary forests on limestone mountains at 150–350 m above sea level, associated with *Anisocampium sheareri*, *Selaginella moellendorffii*, *Equisetum debile*, *Guihaia argyrata*, *Camellia lapidea*, *Primula kwangtungensis*, *Cyrtomium*

Table 1. Diagnostic characters of *Saxifraga daqiaoensis* and *S. mengtzeana*.

Characters	<i>S. daqiaoensis</i>	<i>S. mengtzeana</i>
Stem	glabrous	glandular piliferous
Basal leaves	leaf blade nephroid to orbicular, 3–6.4 × 3.8–8 cm, thickly coriaceous, margin remotely shallowly dentate or subentire, apex obtuse, adaxial surface sparsely hispid ca. 4 mm long, abaxial surface glabrous; petiole glabrous	leaf blade ovate to broadly so, papyraceous, 1.5–7.6 × 1.2–6 cm, margin lobed, apex acute, adaxial surface glabrous, abaxial sparsely hispid; petiole densely glandular piliferous
Inflorescence	8–17.5 cm, 17–27-flowered; branches 0.2–0.5 cm, glabrous	ca. 8.7 cm, 16–18-flowered; branches 2.4–5 cm, glandular pubescent
Pedicels	0.2–0.4 cm, glabrous	1.3–3 cm, glandular pubescent
Sepals	glabrous on both surfaces and margin; veins un conspicuous	abaxially and marginally glandular hairy; veins 3
Petal	longer petal linear, as long as the longest one, longest petal linear, 18–22 × ca. 3 mm, 3-veined, apex obtuse, margin glabrous	longer petal narrowly ovate, ca. 9 × 2.2 mm, apex acuminate; longest petal sub lanceolate, ca. 19 × 3.4 mm, 8-veined, margin sparsely denticulate
Habitat	limestone	forest or slopes

fortunei, *Cyclosorus aridus*, *Polygala caudata*, *P. latouchei*, *Ardisia crenata*, *Eurya daqiaoensis*, *Eurya chinensis*, etc.

Saxifraga daqiaoensis resembles *S. mengtzeana* (Pan 1992, Gornall *et al.* 2000) from Guangdong, Sichuan and SE Yunnan Province in having a peltate basal leaf blade with brown spots on the abaxial surface, no foliar embryos in sinus adaxially, and few cauline leaves that are lanceolate to ovate. A morphological comparison of *S. daqiaoensis* and *S. mengtzeana* is given in Table 1.

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