

Additional Notes on the Scrophulariaceae of China

Hong De-yuan

Laboratory of Systematic and Evolutionary Botany, Institute of Botany,
Chinese Academy of Sciences,
Xiangshan, Beijing 100093, People's Republic of China

ABSTRACT. Two species, *Pterygiella suffruticosa* Hong and *Scrophularia lhasaensis* Hong, and one subspecies, *S. chasmophila* W. W. Smith subsp. *xizangensis* Hong, are described as new from southwestern China. In addition, four new combinations are proposed in the genera *Triphysaria* and *Mazus*: *T. chinensis* (Hong) Hong, *M. pumilus* (Burman f.) van Steenis var. *wangii* (Li) Chin, *Mazus pumilus* (Burman f.) van Steenis var. *delavayi* (Bonati) Chin, and *Mazus pumilus* (Burman f.) van Steenis var. *macrocalyx* (Bonati) Chin.

The following new taxa and combinations are proposed to make the names available for the forthcoming account of the Scrophulariaceae in volume 18 of the *Flora of China*.

***Pterygiella suffruticosa* Hong, sp. nov.** TYPE: China. SW Sichuan: Muli, Ninglang, Chongtianhe, 2000 m, 27 Sep. 1983, *Qinghai-Xizang Expedition 14400* (holotype, PE; isotype, PE). Figure 1.

A ceteris speciebus differt habitu fruticoso et caulibus teretibus.

Shrubs, ca. 1 m tall. Stems terete, gray, 5–7 mm thick; shoots densely pilose. Leaves opposite, sessile, linear-elliptic, 3–5 × 0.3–1 cm, densely puberulent on both surfaces, base cuneate, margin entire, apex acute. Spikes terminal; lower bracts similar to upper leaves in shape and size, gradually decreasing in size upward. Pedicels up to 3 mm long, pilose. Calyx 1.3–1.5 cm long, puberulent, cleft to middle, slightly 2-lipped; lobes subulate-deltoid. Corolla yellow or pale pink, 1.4–1.6 cm long; upper lip galeate, entire; lower lip 3-lobed, middle lobe acute, lateral ones rounded, lanose in 2 vertical patches. Pistil hairy; ovary ellipsoid; style ca. 8 mm long.

Pterygiella Oliver, which is endemic to China, consists of five species, all of which are annuals, though *P. bartschioides* Handel-Mazzetti is also a biennial. This new species, *P. suffruticosa*, is readily distinguished from all by its shrubby habit.

Paratypes. CHINA. Yunnan: E of Lijiang, banks of the Yangtze River, *Rock 10469* (A); Mengtze, in ravine, 1400 m, *Henry 9141* (A).

***Scrophularia lhasaensis* Hong, sp. nov.** TYPE: China. Xizang (Tibet): Lhasa, hills W of Lhasa and beyond Trisum, 4500 m, on rocks, 1 Sep. 1942, *F. Ludlow & G. Sherriff 9053* (holotype, A).

Scrophulariae chasmophilae W. W. Smith affinis, sed a qua foliis majoribus, 1.7–4.5 cm longis, 1–2.7 cm latis, integris, corolla minore, ca. 10.5 mm longa, lobis postici labii angustis, 2 mm latis, non imbricatis.

Caespitose perennials, less than 15 cm tall, glandular with multicellular hairs throughout except for corolla, stamens, and pistil. Rhizomes ca. 9 mm thick. Stems several, with 1 or 2 pairs of scaly leaves in lower part, branched in upper part. Leaves opposite; petiole 2–3 mm long or upper leaves sessile; leaf blade ovate to ovate-orbicular, 1.7–4.5 × 1–2.7 cm, base rounded or nearly truncate, margin entire or rarely scarcely serrate, apex obtuse or acute. Cymes 2, terminal, forming an inflorescence of 4 flowers; peduncle ca. 1.2 cm long; bracts linear. Pedicel 2–3 mm long. Calyx ca. 5 mm long, glandular-pilose, cleft nearly to base; lobes linear-oblong, obtuse at apex, ca. 1.8 mm wide. Corolla greenish yellow, ca. 10.5 mm long, urceolate, glabrous on both sides; upper lip ca. 3.8 mm long, ca. 2.3 mm longer than lower lip; lobes ca. 2 mm wide, not overlapping; lower lip ca. 2 mm long. Stamens slightly exceeding corolla tube in height, glabrous; staminode clavate. Pistil including the style ca. 8.5 mm long, glabrous, ovary gradually attenuate at apex into style.

Scrophularia lhasaensis is most closely related to *S. chasmophila* W. W. Smith and *S. przewalskii* Batal. From these, it differs in having larger leaves 1.7–4.5 cm long and 1–2.7 cm wide, entire or subentire leaf margins, smaller corollas ca. 10.5 mm long, and narrower (ca. 2 mm), nonoverlapping lobes of upper corolla lips.

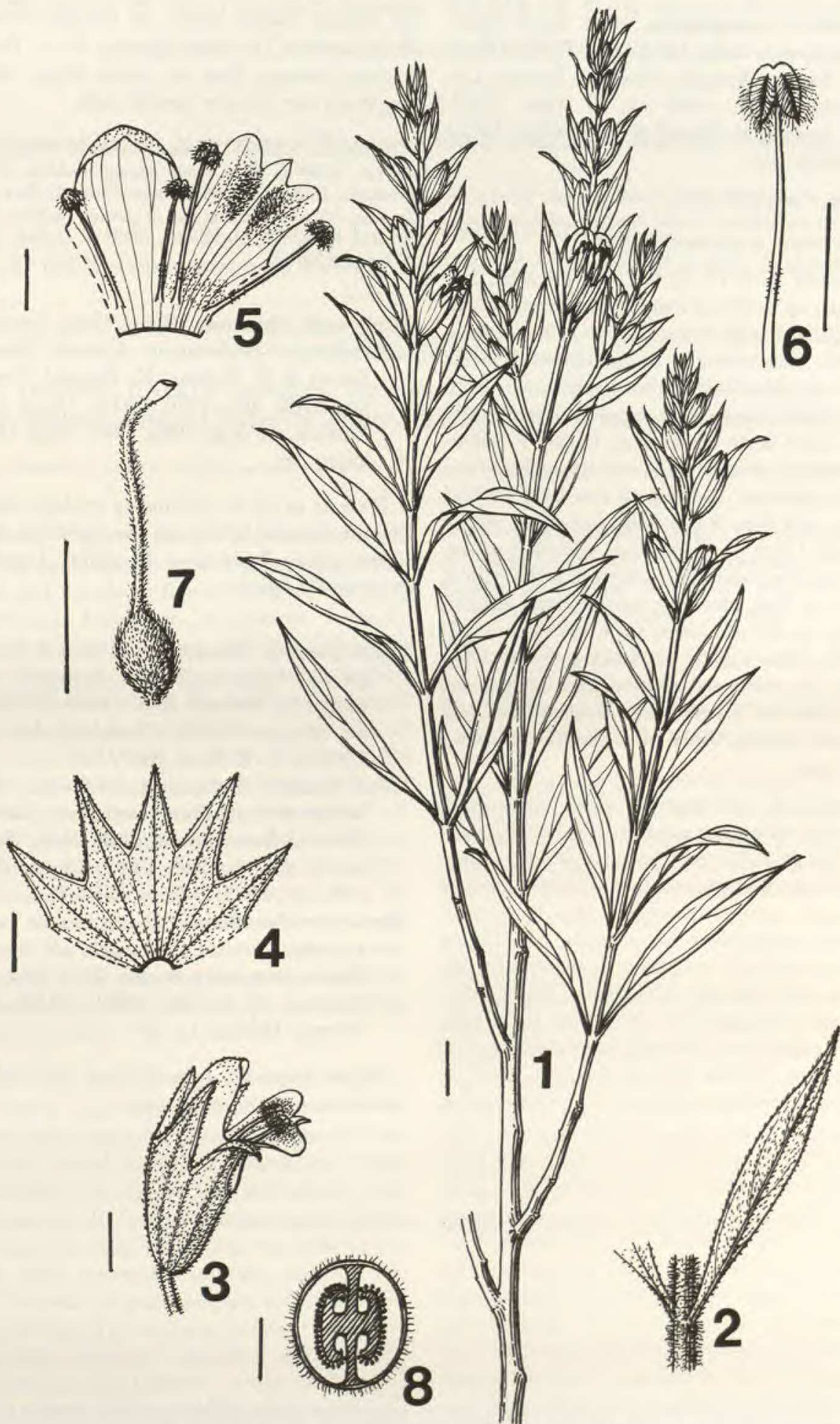


Figure 1. *Pterygiella suffruticosa* Hong. —1. Upper part of plant. —2. Node showing indumentum. —3. Flower. —4. Opened calyx. —5. Opened corolla. —6. Stamen. —7. Pistil. —8. Cross section of ovary. Scale: 1 cm in 1 and 2; 5 mm in 3–7; 1 mm in 8. Drawn by Zhang Tai-li.

Scrophularia chasmophila W. W. Smith subsp. **xizangensis** Hong, subsp. nov. TYPE: China. SE Xizang: Nyingchi (Kongbo, Deyuan La), among rocks, 4300 m, 5 June 1947, *F. Ludlow, G. Sherriff & H. H. Elliot 15153* (holotype, A).

A subsp. *chasmophila* differt corolla majore, 1.8–2.2 cm longa, foliis majoribus, 1.3–2.7 longis, 1–2.2 mm latis, manifeste serratis et staminodio obovato.

Perennials up to 15 cm tall. Roots several, 2–3 mm diam., up to 60 cm long. Stems glabrous, with several pairs of scaly leaves. Leaves in 2 or 3 pairs, rhomboid, ovate-orbicular or fan-shaped, 1.3–2.7 × 1–2.2 cm, pilose with multicellular hairs on both surfaces, base rounded or truncate, margin coarsely dentate, apex acute or rounded. Cymes 1–3-flowered, terminal on main stem and upper branches; peduncle glabrous, less than 5 mm long. Pedicel glabrous, less than 5 mm long, sometimes with 2 bracteoles. Calyx ca. 6 mm long, glandular pilose; lobes ovate-lanceolate, apex acute. Corolla yellow, 1.8–2.2 cm long, glandular outside, tube tubular; upper lip ca. 6.5 mm longer than lower lip, ca. 8.5 mm wide; lobes slightly overlapping, lateral lobes of lower lip wider and shorter than middle one, middle lobe ca. 2 mm long. Stamens included; staminode obovate. Ovary ca. 2 mm long; style ca. 1.4 cm long.

Scrophularia chasmophila subsp. *chasmophila* differs from subspecies *xizangensis* in having smaller corollas up to 1.5 cm long, smaller leaves up to 1.8 cm long, inconspicuously and sparsely serrate leaf margins, and clavate staminodes. In contrast, subspecies *xizangensis* has corollas 1.8–2.2 cm long, leaves 1.3–2.7 cm long with coarsely dentate margins, and obovate staminodes. Furthermore, subspecies *xizangensis* is restricted to Xizang, whereas subspecies *chasmophila* is distributed in northwestern Yunnan and southwestern Sichuan. The two subspecies are separated by three gorges,

the Yarlung Zangbo River, the Nujiang (Salween) River, and the Lancang (Mekong) River. The differences between them are rather sharp, and the new taxon may deserve specific rank.

Paratypes. CHINA. **Xizang:** Nyingchi (Kongbo, Nyima La), 3800 m, deep shade among boulders in damp situations, *Ludlow, Sherriff & Taylor 5142* (A), Ba La, Pasum Chu, 4500 m, scree at foot of glacier, *Ludlow, Sherriff & Elliot 13996* (A), Lusha Chu, 3800 m, *Ludlow, Sherriff & Taylor 4769* (A).

Triphysaria chinensis (Hong) Hong, comb. nov. Basionym: *Orthocarpus chinensis* Hong, in Tsoong & H. P. Yang, *Fl. Reipubl. Popularis Sin.* 67(2): 405. 1979. TYPE: China. Hubei: Xinshan, 10 Sep. 1926, *Chen Yung s.n.* (holotype, N).

There is so far no convincing evidence that the Chinese material belongs to any American species of the genus *Triphysaria*. Therefore, I prefer to maintain the species.

Mazus pumilus (Burman f.) van Steenis var. **wangii** (Li) Chin, comb. nov. Basionym: *Mazus wangii* Li, *Brittonia* 8: 37. 1954. TYPE: China. Yunnan: Fo-Hai (Menghai), July 1936, 2500 m, *C. W. Wang 76071* (A).

Mazus pumilus (Burman f.) van Steenis var. **delavayi** (Bonati) Chin, comb. nov. Basionym: *Mazus delavayi* Bonati, *Bull. Herb. Boissier*, ser. 2. 8: 530. 1908. TYPE: China. Yunnan: a-Pin-tzé, 1885, *Delavay 1518* (P).

Mazus pumilus (Burman f.) van Steenis var. **macrocalyx** (Bonati) Chin, comb. nov. Basionym: *Mazus macrocalyx* Bonati, *Bull. Herb. Boissier*, ser. 2. 8: 529. 1908. TYPE: China. Yunnan: *Ducloux s.n.* (P).

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