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# *Desideria mieheorum* (Brassicaceae), a New Species from Tibet

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ABSTRACT. The new Tibetan *Desideria mieheorum* (Brassicaceae) is described and illustrated. It differs from the closely related *D. flabellata* by having slender styles 5–7 mm long, entire stigmas, blue petals, and 10 to 16 ovules per ovary. *Desideria flabellata* has obsolete styles, prominently 2-lobed stigmas, purple petals, and 14 to 24 ovules per locule.

*Key words:* Brassicaceae, China, *Desideria*, Tibet.

*Desideria* Pampanini is a genus of 11 species distributed in the Himalayas and adjacent central Asia (Al-Shehbaz, 2001). From its nearest relatives, *Eurycarpus* Botschantzev, *Christolea* Cambessèdes, and *Leiopora* (C. A. Meyer) Dvorák, *Desideria* is easily distinguished by having its fruits rectangular in cross section, dentate leaves, valves with prominent marginal veins, and valve apices persistently united with the replum. A detailed account of these genera is presented in Al-Shehbaz (2001) and is not repeated here. China has eight species (two endemic) in *Desideria* distributed in Qinghai, Tibet (Xizang), and Xinjiang autonomous regions (Zhou et al., 2001).

The new species was discovered among a collection of 52 mustards kindly sent by Georg and Sabine Miehe (University of Marburg, Germany) for determination. It is named in their honor and in recognition of their extensive collections of alpine Tibetan plants.

**Desideria mieheorum** Al-Shehbaz, sp. nov. TYPE: China. Tibet (Xizang): Chang La, N of Sangsang, 29°41′N, 86°43′E, pioneer on frost debris, 5480–5600 m, 15 Sep. 2003, *Georg & Sabine Miehe 03-112-21* (holotype, MO). Figure 1.

Herba perennis dense pilosa. Folia late obovata vel spathulata, 1.5–3 × 0.7–1.5 cm, dentata. Racemi 5–9-flori; pedicelli fructiferi tenues, 0.8–2.5 cm longi. Sepala oblonga, dense pilosa, 5–6 × 1.5–2 mm; petala caerulea, late spathulata, 10–13 × 3–4 mm; ovula 10–16. Fructus lanceolati vel laneolato-lineari, 1.5–4 cm × 5–8 mm, compressi, dense pilosi; septum completum; stylus 5–7 mm longus, glaber; stigma integrum; semina ovata, 2.5–3 × 1.5–2 mm, biseriata; cotyledones accumbentes.

Perennial herbs 5–15 cm tall, densely pilose throughout; trichomes simple, straight, 1–2 mm long; caudex thick, covered with leaf remains of previous years; stems simple. Leaves basal and cauline, not fleshy; petiole 2–4.5 cm long, pilose; leaf blade broadly obovate to spatulate, 1.5–3 × 0.7–1.5 cm, pilose, base cuneate to attenuate, margins dentate, apex acute. Racemes 5- to 9-flowered, ebracteate; fruiting pedicels slender, ascending, straight to curved, 0.8–2.5 cm long, spreading pilose. Sepals free, oblong, 5–6 × 1.5–2 mm, often persistent to fruit maturity, densely pilose, base not saccate, margins membranous; petals blue, broadly spatulate, 10–13 × 3–4 mm, apex obtuse; claw 6–7 mm long; filaments blue, slightly dilated at base, median pair 5–6 mm long, lateral pair 3–4 mm long; anthers oblong, 1–1.3 mm long; ovules 10 to 16 per ovary. Fruit lanceolate to lanceolate-linear, 1.5–4 cm × 5–8 mm, strongly flattened parallel to septum; valves densely pilose, distinctly veined; septum complete, membranous; style slender, 5–7 mm long, glabrous; stigma entire; seeds dark brown, ovate, 2.5–3 × 1.5–2 mm, biseriate, minutely reticulate; cotyledon accumbent.

*Desideria mieheorum* is readily distinguished from all species of *Desideria* by its slender styles 5–7 mm long. In the remaining species, the style

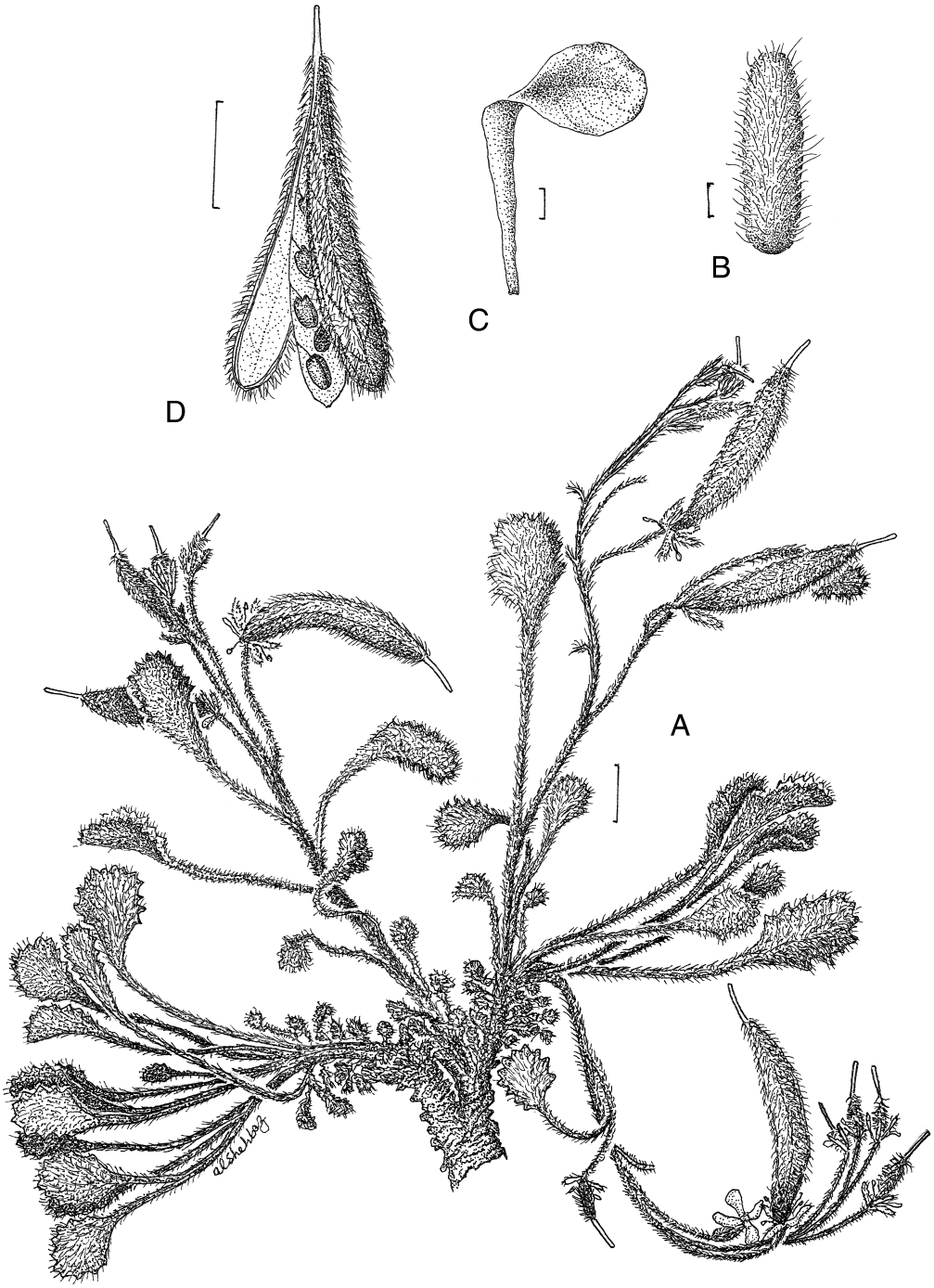


Figure 1. *Desideria mieheorum* Al-Shehbaz. —A. Plant. —B. Sepal. —C. Petal. —D. Dehisced fruit. Scale: A, D = 1 cm; B, C = 1 mm. Drawn by Al-Shehbaz from the holotype (*G. & S. Miehe 03-112-21,* MO).

is obsolete or rarely (as in *D. haranensis* Al-Shehbaz and *D. baiogoinenis* (K. C. Kuan & Z. X. An) Al-Shehbaz) reaches 1 to 1.5 mm in length. The new species is most closely related to *D. flabellata* (Regel) Al-Shehbaz, which it resembles in having similar flower and fruit size, pilose indumentum consisting of long simple trichomes, ebracteate racemes, and leaves obovate to broadly spatulate. It

differs by having slender styles 5–7 mm long, entire stigmas, blue petals, and 10 to 16 ovules per ovary. By contrast, *D. flabellata* has obsolete styles, prominently 2-lobed stigmas, purple petals, and 14 to 24 ovules per locule.

As in all other species of *Desideria*, *D. mieheorum* has fruits that readily detach at maturity from the fruiting pedicels. The fruits have papery valves that readily dehisce at base but remain united with the replum at apex. Therefore, the detached fruit acts as a dispersal unit, and it releases the seeds as it tumbles on the ground.

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Literature Cited

Al-Shehbaz, I. A. 2001. A review of gamosepaly in the Brassicaceae and a revision of *Desideria*, with a critical evaluation of related genera. Ann. Missouri Bot. Gard. 87: 549–563.

Zhou, T. Y., L. L. Lu, G. Yang & I. A. Al-Shehbaz. 2001. Brassicaceae. *In:* Z. Y. Wu & P. H. Raven (editors), Flora of China 8: 1–193. Science Press, Beijing, and Missouri Botanical Garden, St. Louis.