

**62. SCHULZIA** Sprengel, *Neue Schriften Naturf. Ges. Halle* 2(1): 30. 1813, nom. cons.,  
not *Shultzia* Rafinesque (1808).

苞裂芹属 bao lie qin shu

Pu Fading (溥发鼎 Pu Fa-ting); Mark F. Watson

Herbs perennial, glabrous. Tap root cylindric. Stem conspicuous, erect, or obsolete, base clothed in fibrous remnant sheaths. Basal leaves petiolate, sheaths dilated, white and membranous at margins; blade 2–3-pinnate; ultimate segments linear-lanceolate or linear. Umbels compound, terminal and lateral; rays stout, subequal or unequal; bracts and bracteoles 2–3-pinnate; umbellules many-flowered. Calyx teeth minute or obsolete. Petals white, obovate, base cuneate, apex with small incurved lobule. Stylopodium conic; styles erect, divergent or reflexed. Fruit oblong-ovoid or ovoid, slightly compressed laterally; ribs narrow, slightly winged; vittae 3–4 in each furrow, 4–8 on commissure. Seed face plane. Carpophore 2-parted.

About four species: C Asia, Himalayan region; four species in China.

1a. Rays subequal; bracteoles nearly as long as or exceeding umbellules.

2a. Leaves 3-pinnate; bracteoles 2–3-pinnate, nearly equal to umbellules ..... 1. *S. crinita*

2b. Leaves 2-pinnate; bracteoles 3-lobed or 1-pinnate, subequal or exceeding flowering umbellules ..... 2. *S. dissecta*

1b. Rays unequal; bracteoles subequal or shorter than umbellules.

3a. Leaves 2–3-pinnate; rays of terminal umbel stout, elongate; bracteoles entire, 2–3-lobed or pinnate ..... 3. *S. prostrata*

3b. Leaves 3-pinnate; rays of terminal and lateral umbellules subequal; bracteoles 2-pinnate ..... 4. *S. albiflora*

**1. *Schulzia crinita*** (Pallas) Sprengel, *Neue Schriften Naturf. Ges. Halle* 2(1): 30. 1813.

长毛苞裂芹 chang mao bao lie qin

*Sison crinitum* Pallas, *Acta Acad. Sci. Imp. Petrop.* 2: 250. 1779; *Athamanta crinita* (Pallas) Ledebour; *Carum crinitum* (Pallas) Koso-Poljansky.

Plants 10–45 cm. Rootstock rather thick, branched. Stem single, striate, little-branched or unbranched. Basal leaves petiolate; blade oblong, 6–12 × 1.5–2.5 cm, 3-pinnate; ultimate segments linear, 2–3 × 0.5–1 mm. Cauline leaves gradually reduced upward. Umbels 1–3, rarely more, 4–8 cm across; bracts 2–3-pinnate, nearly as long as rays; rays 12–15, stout, subequal; bracteoles numerous, similar to bracts, nearly as long as umbellules. Calyx teeth obsolete. Styles erect or divergent after flowering, ca. 2 mm, 2–3 times as long as stylopodium. Fruit oblong-ovoid, 3–4 × 1.5–2 mm; vittae 3–4 in each furrow, 4–8 on commissure. Fl. and fr. Jul–Aug.

Mossy forests, among shrubs in alpine meadows; 2500–2900 m. Xinjiang [Kazakhstan, Mongolia, Russia (Siberia)].

**2. *Schulzia dissecta*** (C. B. Clarke) C. Norman, *J. Bot.* 76: 231. 1938.

苞裂芹 bao lie qin

*Trachydium dissectum* C. B. Clarke in J. D. Hooker, *Fl. Brit. India* 2: 672. 1879.

Plants 5–30 cm, slender. Stem simple or 1–2-branched at base. Leaves 2-pinnate; ultimate segments linear, 1–2 × 0.5–0.8 mm. Umbels 1–3 cm across; bracts oblong or oval, apex pinnatifid; rays 10–20, 1–3 cm, subequal; bracteoles 5–7, similar to bracts, subequal or exceeding flowers; umbellules 8–20-flowered. Calyx teeth obsolete. Fruit ovoid, brown with pale ridges when mature, 2–3 × ca. 0.75 mm, slightly compressed dorsally; ribs filiform or obscure; vittae 3–4 in each furrow, 4–8 on commissure. Fl. and fr. Aug–Oct.

High-altitude semi-stable screes; 5100–5300 m. S Xizang (Rongbuk N of Qomolangma Feng, Yadong) [Bhutan, Nepal, Sikkim].

**3. *Schulzia prostrata*** Pimenov & Kljuykov, *Bot. Zhurn.* 75(1): 94. 1990.

天山苞裂芹 tian shan bao lie qin

Plants ca. 10 cm. Stem short, unbranched. Leaves petiolate; blade oblong-lanceolate in outline, 2–3-pinnate; primary pinnae 3–5 pairs; ultimate segments lanceolate or linear, 2–3 × ca. 1 mm, acute. Terminal umbels 12–15 cm across, lateral umbels 3–4 cm across; bracts 3–5, entire or apex 2–3-lobed; rays of terminal umbel 5–13, very stout, elongate, 8–13 cm, unequal and diffuse; bracteoles 5–10, apex 2–3-lobed or pinnate, rarely entire. Calyx teeth minute or obsolete. Fruit broadly ovoid, ca. 3 × 1.5–2 mm, tuberculate; vittae 2–3 in each furrow, 6 on commissure. Fl. and fr. Jun–Aug.

Alpine meadows; 2500–3200 m. Xinjiang (Tian Shan) [Kyrgyzstan].

This species was misidentified in FRPS (55(1). 203. 1979) as *Trachydium tianshanicum* Korovin, which is distributed in C Asia.

**4. *Schulzia albiflora*** (Karelin & Kirilov) Popov, *Fl. Almaat Gos. Zapovedn.* 35. 1940.

白花苞裂芹 bai hua bao lie qin

*Chamaescidium albiflorum* Karelin & Kirilov, *Bull. Soc. Imp. Naturalistes Moscou* 15: 360. 1842.

Plants 20–30 cm. Stem usually obsolete, branches spreading-ascending from the base. Leaves oblong-lanceolate, 3-pinnate; ultimate segments linear-lanceolate or linear, 2–4 × 0.5–1 mm. Umbels numerous, 3–7 cm across; bracts numerous, 2-pinnate, similar to leaves, nearly as long as rays; rays 10–20(–30), 1.5–3 cm, unequal; bracteoles similar to bracts, nearly as long as pedicels. Calyx teeth obsolete. Fruit oblong-ovoid, ca. 3 × 1 mm; vittae 3 in each furrow, 8 on commissure. Fl. and fr. Jul–Aug.

Alpine meadows, grassy slopes; 2700–4600 m. Xinjiang [Kazakhstan, Kyrgyzstan, Russia (Siberia), Tajikistan].

