

58. SIUM Linnaeus, Sp. Pl. 1: 251. 1753.

泽芹属 ze qin shu

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

Herbs perennial, aquatic or along water margins, glabrous throughout. Roots fascicled, fusiform or fibrous. Stem solitary, striate, branched, rooting at lower nodes. Basal leaves petiolate, sheathing; leaf blade 1-pinnate; pinnae sessile, remote. Umbels compound, terminal and lateral; bracts and bracteoles present, usually recurved; rays spreading-ascending. Calyx teeth conspicuous or minute, often unequal. Petals white, obovate or subround, base cuneate, apex notched with small incurved lobule, outer petals in umbellule sometimes enlarged (radiant). Stylopodium short-conic; styles divergent or reflexed. Fruit ovoid or ellipsoid, slightly compressed laterally, glabrous; ribs prominent, corky-thickened or obscure; vittae 1–3 in each furrow, 2–6 on commissure. Seed face plane. Carpophore 2-cleft to base.

About ten species: Africa, Asia, Europe, North America; five species (one endemic) in China.

- 1a. Calyx teeth lanceolate or minute (E, N, and NE China) ..... 1. *S. suave*
- 1b. Calyx teeth minute or inconspicuous (SC and W China).
  - 2a. Plants slender, 5–15 cm; rays 2–3 ..... 5. *S. frigidum*
  - 2b. Plants stout, 30–90(–150) cm; rays (8–)10–20(–30).
    - 3a. Basal leaf pinnae 2–4 pairs; rays 10–15 ..... 4. *S. sisaroideum*
    - 3b. Basal leaf pinnae 2–6 pairs; rays 8–30.
      - 4a. Plants 30–60(–80) cm; leaflets 0.5–1 cm broad ..... 2. *S. medium*
      - 4b. Plants 70–150 cm; leaflets, 0.8–2 cm broad ..... 3. *S. latifolium*

1. *Sium suave* Walter, Fl. Carol. 115. 1788.

泽芹 ze qin

*Apium cicutifolium* (Schrenk) Benth & Hooker ex Forbes & Hemsley; *Cicuta dahurica* Fischer ex Schultz; *Sium cicutifolium* Schrenk; *S. formosanum* Hayata; *S. nipponicum* Maximowicz.

Plants 60–120 cm, stout. Root fibrous or fascicled, fusiform. Leaf blade oblong or ovate, 6–25 × 7–10 cm; pinnae 3–9 pairs; leaflets lanceolate or linear, 10–40 × 3–15 mm, margin serrate. Upper leaves smaller, 3-lobed or entire, sessile on expanded sheaths. Umbels 4–8 cm across, terminal on stem and branches; bracts 6–10, lanceolate or linear-lanceolate, 3–15 mm, entire or incised; rays (8–)10–20, 1.5–3 cm, unequal; bracteoles 5–10, linear-lanceolate, 1–3 mm, entire; umbellules 10–20-flowered; pedicels 3–5 mm. Calyx teeth triangular-lanceolate or minute triangular, 0.5–2 mm. Fruit ovoid, ca. 3 × 2 mm, ribs prominent, corky, thickened, narrowly winged; vittae 1–3 in each furrow, 2–6 on commissure. Fl. Jul–Aug, fr. Sep–Oct.

Damp grasslands, marshlands, streamsides. Hebei, Heilongjiang, Jilin, Liaoning, Nei Mongol, Ningxia, Shandong, Taiwan [Japan, Korea, Russia; North America].

This species has reputed medicinal value. *Sium ninsi* Thunberg (Fl. Jap. 118. 1784), known from Korea, Japan, and SE Russia, is likely to occur also in SE Heilongjiang and E Jilin. The upper part of the plant is morphologically similar to *S. suave* but can be distinguished by the long-petiolate, ternate uppermost cauline leaves (vs. sessile in *S. suave*).

2. *Sium medium* Fischer & C. A. Meyer in Fischer & Avé-Lallemant, Index Sem. Hort. Petrop. 9: 19. 1843.

中亚泽芹 zhong ya ze qin

Plants 30–60(–80) cm. Roots fibrous. Basal petioles 6–15 cm; blade oblong-ovate, 12–20 × 5–13 cm; pinnae 3–5 pairs;

leaflets oblong-lanceolate, 2.5–6 × 0.5–1 cm, margins serrate. Upper leaves similar to basal, smaller, sessile, pinnae 2 pairs on expanded sheaths. Umbels 3.5–5 cm across; peduncles 7–10 cm; bracts 8–9, linear or lanceolate, 5–13 mm, entire; rays 15–23, 0.8–19 mm, unequal; bracteoles 9–10, linear, 3–4.5 mm, shorter than pedicels, entire; umbellules 8–20-flowered; pedicels 2–5 mm. Calyx teeth minute, triangular, ca. 0.2 mm. Fruit ellipsoid, ca. 3.2 × 2 mm; ribs filiform, thinly corky; vittae 1–2 in each furrow, 2–6 on commissure. Fl. Jul–Aug, fr. Sep–Oct.

Marshlands, lake margins, streamsides. Xinjiang [Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan].

3. *Sium latifolium* Linnaeus, Sp. Pl. 1: 251. 1753.

欧泽芹 ou ze qin

Plants 70–150 cm. Roots fibrous. Submerged leaves 2–3-pinnate; ultimate segments linear. Aerial leaves 1-pinnate; pinnae 2–6 pairs, leaflets lanceolate or oblong, 4–7(–16) × 0.8–2 cm, margins serrate. Upper leaves reduced, smaller; leaflets linear-lanceolate or linear. Umbels 6–12 cm across; peduncles elongate; bracts 2–6, linear-lanceolate, 3–5 mm, entire; rays 8–10(–30), 1.5–2.5 cm, unequal; bracteoles several, similar to bracts, 5–6 mm; umbellules 15–25-flowered; pedicels 2–3 mm. Calyx teeth minute, ca. 2 mm. Styles ca. equal to stylopodium, reflexed. Fruit ellipsoid, ca. 3 × 2 mm; ribs filiform, thin-corky; vittae 3 in each furrow, 2–5 on commissure. Fl. Jul–Aug, fr. Sep–Oct. 2n = 20.

Marshlands, stream banks; 400–500 m. Xinjiang [Kazakhstan, Russia; C Asia, Europe; introduced in Australia].

4. *Sium sisaroideum* de Candolle, Prodr. 4: 124. 1830.

拟泽芹 ni ze qin

*Sisarum sisaroideum* (de Candolle) Schischkin ex Krylov.

Plant 50–100 cm. Root fibrous. Stems erect with creeping

underground shoots. Leaves 1-pinnate; leaflets 2–4 pairs, ovate-lanceolate, 2–7 × 1–3 cm, margins serrate-dentate. Upper leaves smaller, leaflets lanceolate. Umbels 3–5 cm across; peduncles elongate; bracts 5–7, lanceolate-linear, 0.5–2 cm, margins white scarious; rays 10–15, 1.5–2.5 cm; bracteoles similar to bracts; umbellules ca. 20-flowered; pedicels 2–5 mm. Calyx teeth triangular, minute, ca. 0.2 mm. Fruit ovoid, ca. 4 × 2.5 mm. Fl. and fr. Jul–Aug.

Forests, meadows, marshes, river banks, stream banks; 100–1300 m. Xinjiang [Afghanistan, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Uzbekistan; C and SW Asia].

**5. *Sium frigidum*** Handel-Mazzetti, *Symb. Sin.* 7: 719. 1933.

滇西泽芹 dian xi ze qin

*Chamaesium frigidum* (Handel-Mazzetti) R. H. Shan ex F. T. Pu.

Plants 5–15 cm, slender. Roots fusiform or tubers, rootstock 1–3 cm. Stem sometimes rooting at lower nodes. Leaf blade oblong or lanceolate, 1–4 × 0.5–1 cm, 1-pinnate; pinnae 3–5 pairs, remote, ovate-lanceolate, 2–8 × ca. 4 mm, entire or 1–3-crenellate. Upper leaves much reduced, pinnae 2–3 pairs, linear or reduced to bladeless sheaths. Umbels 1–2 cm across, terminal or lateral; peduncles 2–7 cm; bracts 1, linear-lanceolate, ca. 3 mm, or absent; rays 2–3, 5–10 mm, unequal; bracteoles 1–2, similar to bract, 0.5–1.5 mm, shorter than pedicels, or absent; umbellules 3–5(–9)-flowered; pedicels 2–4 mm. Calyx teeth minute, triangular, ca. 0.15 mm, caducous. Stylopodium flattened; styles reflexed. Fruit ovoid, ca. 2.1 × 2.3 mm; ribs filiform, corky, obscure; vittae 2–3 in each furrow, 4 on commissure. Fl. Jul–Aug; Aug–Sep.

• Forests, damp alpine meadows, marshy areas; ca. 3500 m. NW Yunnan (Zhongdian).

This rather little-known taxon is recorded only from a few collections. It was recently suggested that it is conspecific with *Apium ventricosum* H. de Boissieu (*Bull. Soc. France*, 53: 425. 1906), but the generic placement of these taxa is still unclear.

