

61. OENANTHE Linnaeus, Sp. Pl. 1: 254. 1753.

水芹属 shui qin shu

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

Dasyloma de Candolle; *Phellandrium* Linnaeus.

Herbs, perennial, glabrous. Roots fibrous or fusiform to ovoid tubers. Stems erect, branching, decumbent, weakly diffuse or stoloniferous, hollow, angular, striate, rooting at basal nodes. Basal and lower leaves petiolate, wholly sheathing; blade 1–4-pinnate, homomorphic or heteromorphic to the cauline leaves. Umbels compound, loose, terminal and axillary or leaf-opposed; bracts absent, or occasionally 1; rays 4–15(–30); bracteoles numerous. Calyx teeth prominent, lanceolate, nearly as long as stylopodium. Petals white or pale pink, obovate, base cuneate, apex emarginate, with small incurved lobule, outer petals in umbellule usually enlarged (radiant). Stylopodium conic; styles elongate, erect or divergent, sometimes reflexed in fruit. Fruit ovoid or subglobose, slightly compressed dorsally or laterally, glabrous; dorsal and intermediate ribs slightly thickened, corky, or somewhat protruding, filiform, subequal; lateral ribs dilated, subtriangular, corky; vittae solitary in each furrow, 2 on commissure. Seed face plane. Carpophore obsolete.

Between 25 and 30 species: Africa, Asia, Europe, North America; five species in China.

- 1a. Dorsal and intermediate fruit ribs thickened, corky; leaves homomorphic, ultimate segments ovate or rhombic-ovate, 2–6 × 1–2 cm 1. *O. javanica*
- 1b. Dorsal and intermediate fruit ribs slightly thickened, corky, or somewhat protruding, filiform; leaves homomorphic or heteromorphic, ultimate segments linear, lanceolate, rarely ovate or rhombic-ovate, smaller, 1–3 × 0.5–1 cm.
 - 2a. Peduncles 0.5–1(–2) cm, or obsolete; ultimate segments rhombic-ovate, rarely lanceolate 2. *O. benghalensis*
 - 2b. Peduncles 2–25 cm; ultimate segments linear, lanceolate, rarely rhombic-ovate.
 - 3a. Leaves 1-pinnate, pinnae mostly reduced, rachis only with a few subulate and remote pinnae 3. *O. hookeri*
 - 3b. Leaves 1–4-pinnate, pinnae not reduced.
 - 4a. Leaves 1–2-pinnate, ultimate segments linear, 20–40 × 1–2 mm, rarely rhombic-ovate 4. *O. linearis*
 - 4b. Leaves 3–4-pinnate, linear, minute, 2–3 × 1–2 mm 5. *O. thomsonii*

1. *Oenanthe javanica* (Blume) de Candolle, Prodr. 4: 138. 1830.

水芹 shui qin

Plants 10–80 cm. Roots fibrous. Stems decumbent. Basal petioles 5–10 cm; blade oblong-ovate, 1–2-pinnate; ultimate segments ovate or rhombic-ovate, 5–50 × 5–20 mm, margins serrate. Cauline leaves gradually reduced upwards, smaller, becoming sessile on expanded sheaths. Umbels 3–5 cm across; peduncles 2–16 cm; bracts absent, or occasionally 1, linear, 3–11 mm; rays 6–16(–30), 1–3 cm, subequal or unequal; bracteoles 2–8, linear, 2–4 cm, as long as pedicels; umbellules ca. 20-flowered; pedicels 1.5–4 mm. Calyx teeth ca. 0.5 mm. Styles patent, 1.2–2 mm. Fruit subglobose or ovoid, ca. 2.5 × 2 mm; dorsal and intermediate ribs slightly corky-thickened.

Grassland at forest margins, marshlands, water meadows, lakeshores, river banks, muddy stream banks, shallow water; 600–4000 m. Throughout China [India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Nepal, New Guinea, Pakistan, Philippines, Russia, Thailand, Vietnam].

The complex nomenclatural history reflects the taxonomic problems with these morphologically very variable, widespread plants. Leaf morphology is particularly variable, and the size and shape of the leaves of the subsp. *javanica* converge with subsp. *rosthornii* in Malaysia and adjoining areas. Outside China, some authors have a broader species concept for *Oenanthe javanica*, including *O. benghalensis* and *O. linearis* within it. Further work over a wide geographic area is needed to resolve the classification.

- 1a. Rays subequal, 1–3 cm; bracteoles linear; fruit subglobose 1a. subsp. *javanica*
- 1b. Rays unequal, 2–6 cm; bracteoles

lanceolate; fruit ovoid 1b. subsp. *rosthornii*

1a. *Oenanthe javanica* subsp. *javanica*

水芹(原亚种) shui qin (yuan ya zhong)

Sium javanicum Blume, Bijdr. Fl. Ned. Ind. 5: 881. 1826; *Dasyloma javanicum* (Blume) Miquel; *D. subbipinnatum* Miquel; *Falcaria javanica* (Blume) de Candolle; *Oenanthe decumbens* Koso-Poljansky; *O. javanica* subsp. *stolonifera* (Roxburgh) Murata; *O. kudoii* Suzuki & Yamamoto; *O. normanii* Metcalf; *O. stolonifera* (Roxburgh) de Candolle; *O. stolonifera* var. *javanica* (Blume) Kuntze; *O. subbipinnata* (Miquel) Drude; *Phellandrium stoloniferum* Roxburgh.

Plants slender. Umbels 3–5 cm across. Rays subequal, 1–3 cm. Bracteoles linear. Fruit subglobose. Fl. Jun–Jul, fr. Aug–Sep. 2n = 20.

Marshlands, lakeshores, muddy stream banks, shallow water; 600–3000 m. Throughout China [India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Nepal, New Guinea, Pakistan, Philippines, Russia, Thailand, Vietnam].

The shoots and leaves comprise the dietary herb “shui qin” of traditional Chinese medicine.

1b. *Oenanthe javanica* subsp. *rosthornii* (Diels) F. T. Pu, Novon 8: 70. 1998.

卵叶水芹 luan ye shui qin

Oenanthe rosthornii Diels, Bot. Jahrb. Syst. 29: 498. 1900; *O. alatinervis* Y. Y. Qian; *O. pterocaulon* S. L. Liu et al.

Plants stout. Umbels 3–7.6 cm across; rays unequal, 2–6

cm; bracteoles lanceolate. Fruit ovoid. Fl. Aug–Sep, fr. Oct–Nov.

Grassland at forest margins, marshes, water meadows, river banks; 1400–4000 m. Fujian, Guangdong, Guangxi, Guizhou, Hunan, Sichuan, Taiwan, Yunnan [Thailand].

This variety has reputed medicinal value.

2. *Oenanthe benghalensis* (Roxburgh) Kurz, J. Asiat. Soc. Bengal 2: 115. 1877.

短辐水芹 duan fu shui qin

Seseli benghalense Roxburgh, Fl. Ind., ed. 1832, 2: 93. 1832; *Dasyloma benghalense* (Roxburgh) de Candolle; *D. glaucum* de Candolle.

Plants 15–60 cm. Roots fibrous. Stems usually erect, angular, branched from base. Basal petioles 1–4 cm; blade triangular-ovate, 1–2-pinnate; ultimate segments rhombic-ovate, rarely lanceolate, 5–20 × 1–5 mm. Upper leaves smaller, sessile, 1-pinnate, pinnae rhombic ovate or lanceolate. Umbels 0.5–3.5 cm across; peduncles short, 0.5–1(–2) cm, often leaf-opposed, or obsolete; bracts absent; rays 4–10, 0.5–1 cm; bracteoles numerous, linear, as long as pedicels, umbellules 8–15-flowered; pedicels 0.5–2 mm. Calyx teeth ca. 0.4 mm. Styles 1.4–1.8 mm. Fruit ovoid, 2.5–3 × 1.5–2 mm; dorsal and intermediate ribs slightly thickened, corky. Fl. May–Jun, fr. Jun–Jul.

Moist ground at forest margins, muddy banks, irrigation ditches; 500–1500 m. Guangdong, Sichuan, Yunnan [N India].

This species has reputed medicinal value. It is very similar to, and possibly not distinct from, *Oenanthe javanica* (see the comment under the latter species); the two differ in umbel and fruit characters.

3. *Oenanthe hookeri* C. B. Clarke in J. D. Hooker, Fl. Brit. India 2: 697. 1879.

高山水芹 gao shan shui qin

Plants 40–80 cm, slender. Stems decumbent, scarcely branched, rooting at lower nodes. Leaves mostly reduced, 1-pinnate, fistular; pinnae few, remote on the rachis, subulate, 5–15 × 0.5–1 mm. Umbels 1.5–3 cm across; peduncles elongate, 5–8 cm; bracts absent, or occasionally 1, linear, 0.5–2.5 cm; rays 4–8, 0.5–1.5 cm, unequal, sometimes pubescent; bracteoles 3–5, linear, 3–3.5 × ca. 0.5 mm, unequal; umbellules 15–20-flowered; pedicels 2–3 mm, unequal. Calyx teeth ca. 0.6 mm. Styles ca. 0.6 mm. Fruit ovoid, ca. 2 × 1.5 mm; dorsal and intermediate ribs protruding, filiform. Fl. Jun–Jul, fr. Aug–Sep.

Moist places at forest margins, alpine marshlands, wet meadows, streamsides; 2500–4600 m. W Sichuan, S Xizang, NW Yunnan [Bhutan, India, Nepal].

4. *Oenanthe linearis* Wallich ex de Candolle, Prodr. 4: 138. 1830.

线叶水芹 xian ye shui qin

Plants 30–70 cm. Roots fibrous or fusiform. Stems decumbent, rooting at lower nodes, unbranched or few-branched above. Leaves heteromorphic, lower petioles 1–10 cm; blade triangular-ovate, 3–7 × 2–5 cm, mostly 1-pinnate, rarely 2-pinnate; ultimate segments linear, 20–40 × 1–2 mm, rarely rhom-

bic-ovate or lanceolate, 5–30 × 2–5 mm. Upper leaves sessile, 1-pinnate; pinnae linear, 10–40 × 1–3 mm. Umbels 2–4(–5) cm across, often leaf-opposed; peduncles 2–10 cm; bracts absent, or 1, linear; rays 3–12, 1.5–3 cm, unequal; bracteoles 3–8, linear or linear-lanceolate, 3–6 mm, unequal; umbellules 8–20-flowered; pedicels 1.5–4 mm. Calyx teeth ca. 0.5 mm. Styles ca. 2 mm, reflexed. Fruit ovoid, ca. 2 × 1.5 mm; dorsal and intermediate ribs filiform. Fl. May–Jul, fr. Jul–Aug.

Open forests, Moist shade under shrubs and trees, grassy valley slopes, marshlands, grassy places near water; 800–3000 m. Chongqing, Guizhou, Hubei, Sichuan, Taiwan, Xizang, Yunnan [India, Indonesia, Laos, Myanmar, Nepal, Vietnam].

Some authors consider both varieties conspecific with *Oenanthe javanica* (see the taxonomic note under that species).

- 1a. Pinnae of lower leaves mostly linear, entire; fruit dorsal and intermediate ribs filiform 4a. subsp. *linearis*
- 1b. Pinnae of lower leaves rhombic-ovate, margins incised or laciniate; fruit dorsal and intermediate ribs slightly thickened, corky 4b. subsp. *rivularis*

4a. *Oenanthe linearis* subsp. *linearis*

线叶水芹(原亚种) xian ye shui qin (yuan ya zhong)

Oenanthe dielsii H. de Boissieu; *O. javanica* (Blume) de Candolle subsp. *linearis* (Wallich ex de Candolle) Murata; *O. sinensis* Dunn.

Plants slender. Lower leaves 1-pinnate, rarely 2-pinnate; pinnae linear, 20–40 × 1–2 mm, narrowly lanceolate or rhombic-ovate, 5–30 × 2–5 mm. Fruit dorsal and intermediate ribs mainly filiform.

Moist shade under shrubs and trees, marshes, grassy places near water; 800–3000 m. Chongqing, Guizhou, Hubei, Sichuan, Taiwan, Xizang, Yunnan [India, Indonesia, Myanmar, Nepal, Vietnam].

This variety has reputed medicinal value

4b. *Oenanthe linearis* subsp. *rivularis* (Dunn) C. Y. Wu & F. T. Pu in W. T. Wang, Vasc. Pl. Hengduan Mts. 1: 1332. 1993.

蒙自水芹 meng zi shui qin

Oenanthe rivularis Dunn, J. Linn. Soc., Bot. 35: 496. 1903.

Plants stout. Lower leaves almost 1-pinnate; pinnae rhombic-ovate, 15–30 × 5–10 mm, margins incised to laciniate. Fruit dorsal and intermediate ribs slightly thickened, corky.

• Open forests, grassy valley slopes, marshlands; 1100–2500 m. Guizhou, Sichuan, Yunnan [Laos].

Recent records from Laos require confirmation. This variety is used in Guizhou and Yunnan as a regional substitute for “shui qin,” a dietary herb of traditional Chinese medicine (see *Oenanthe javanica*).

5. *Oenanthe thomsonii* C. B. Clarke in J. D. Hooker, Fl. Brit. India 2: 697. 1879.

多裂叶水芹 duo lie ye shui qin

Plants 20–50 cm, weak, diffuse. Roots fascicled or fibrous. Stems slender, creeping, branched. Leaves homomorphic, 3–4(–5)-pinnate; primary pinnae 5–7 pairs; ultimate segments short linear, 2–3 × 1–2 mm. Umbels 3–8 across, frequently leaf-op-

posed; peduncles elongate, 2.5–10 cm; bracts absent; rays 4–12, 1.5–3.5 cm, unequal; bracteoles 5–7, linear, 1.5–4 mm; umbellules 15–20-flowered; pedicels 3–5 mm, unequal. Styles ca. 1 mm, reflexed. Fruit subglobose, ca. 2×1.5 mm; dorsal and intermediate ribs protruding, filiform. Fl. Jul–Aug, fr. Sep–Oct.

Moist shaded areas among shrubs and trees, marshy meadows, moist grasslands, river banks, streamsides; 1000–3500 m. Chongqing, Guangdong, Guizhou, Hubei, Jiangxi, Sichuan, Xizang, Yunnan [Bhutan, India, Myanmar, Nepal, Sikkim, ?Vietnam].

- 1a. Leaves 3–4(–5)-pinnate; ultimate segments linear, $2-3 \times 1-2$ mm 5a. subsp. *thomsonii*
1b. Leaves 2–3-pinnate; ultimate segments linear, $5-20 \times ca. 1$ mm 5b. subsp. *stenophylla*

5a. *Oenanthe thomsonii* subsp. *thomsonii*

多裂叶水芹(原亚种) duo lie ye shui qin (yuan ya zhong)

Oenanthe caudata C. Norman.

Stems creeping. Leaves 3–4(–5)-pinnate; ultimate segments short, linear, $2-3 \times 1-2$ mm.

Marshy meadows, moist grasslands, streamsides; 1800–3500 m. Guangdong, Guizhou, Hubei, Jiangxi, Sichuan, Xizang, Yunnan [Bhutan, India, Myanmar, Nepal, Sikkim].

This variety has reputed medicinal value.

5b. *Oenanthe thomsonii* subsp. *stenophylla* (H. de Boissieu) F. T. Pu, Novon 8: 71. 1998 [“*stenophyllum*”].

窄叶水芹 zhai ye shui qin

Oenanthe thomsonii var. *stenophylla* H. de Boissieu, Bull. Herb. Boissier, sér. 2, 3: 843. 1903; *O. dielsii* H. de Boissieu subsp. *stenophylla* (H. de Boissieu) C. Y. Wu & F. T. Pu; *O. dielsii* var. *stenophylla* (H. de Boissieu) H. de Boissieu.

Stems erect. Leaves 2–3-pinnate; ultimate segments linear, $5-20 \times ca. 1$ mm.

• Moist shaded areas among shrubs and trees, river banks; 1000–2500 m. Chongqing, Sichuan [?Vietnam].

Recent records from Vietnam require confirmation. This variety has reputed medicinal value in C China.

