

3. RODGERSIA A. Gray, Mem. Amer. Acad. Arts, n.s., 6: 389. 1858.

鬼灯檠属 *gui deng qing shu*

Pan Jintang (潘锦堂); James Cullen

Herbs perennial. Rhizomes usually transversely elongating, thick, scaly. Leaves long petiolate, palmately, pinnately, or subpinnately compound; leaflets 3–9(or 10), base subsessile, margin doubly serrate, apex usually shortly acuminate. Inflorescence a paniculate cyme, ebracteate, many flowered. Sepals (4 or)5(–7), spreading, white, pink, or red. Petals usually absent, very rarely 1, 2, or 5 vestigial ones present. Stamens 10(–14). Ovary subsuperior, rarely semi-inferior, 2- or 3-loculed; placentation axile; ovules many; styles 2 or 3. Capsule 2- or 3-valved.

Five species: E Asia, Himalayas: four species (two endemic) in China.

Rodgersia nepalensis T. A. Cope ex Cullen was recorded from Xizang by Pan (in C. Y. Wu, Fl. Xizang, 2: 517–518. 1985). This species might well occur in W Xizang, but no specimens from China have been seen by the present authors; further study is required.

- 1a. Sepals pinniveined, veins not confluent at apex, or arcuate and pinnate veined, veins not or partly to completely confluent at apex; leaves palmately compound, with 3–7 leaflets.
 - 2a. Leaflets 3(–5)-lobed at apex, glabrous adaxially; sepals 5–7, sparsely glandular hairy abaxially and at margin, glabrous adaxially, pinniveined, veins not confluent at apex, apex acuminate 1. *R. podophylla*
 - 2b. Leaflets not lobed at apex, sparsely subsessile glandular hairy adaxially; sepals (4 or)5(or 6), shortly glandular hairy and pilose abaxially and at margin, glabrous or sessile glandular hairy adaxially, arcuate and pinnate veined, veins not or partly to completely confluent at apex, apex shortly acuminate 2. *R. aesculifolia*
- 1b. Sepals arcuate veined, veins confluent at apex; leaves pinnately or subpinnately compound, with 3–9(or 10) leaflets.
 - 3a. Basal and proximal cauline leaves pinnate, usually with 3 terminal leaflets and 6 or 7 lateral, usually opposite, rarely alternate leaflets; sepals sparsely tawny paleaceous hairy abaxially, glabrous adaxially 3. *R. sambucifolia*
 - 3b. Basal and proximal cauline leaves subpinnate, usually with 6–9 leaflets, of which terminal ones 3–5, verticillate ones 3 or 4; sepals tawny pubescent and subsessile glandular hairy abaxially, sparsely subsessile glandular hairy adaxially only near base 4. *R. pinnata*

1. *Rodgersia podophylla* A. Gray, Mem. Amer. Acad. Arts, n.s., 6: 389. 1858.

鬼灯檠 *gui deng qing*

Rodgersia japonica A. Gray ex Regel.

Herbs 60–100 cm tall. Rhizomes transversely elongating, thick. Stems glabrous. Basal leaves palmately compound; petiole 15–30 cm, pilose, both sheathlike and long ciliate at base; leaflets 5(–7), subobovate, 15–30 × 10–25 cm, apex 3–5-lobed; lobes pilose abaxially along veins, glabrous adaxially, margin serrate, apex acuminate. Cauline leaves alternate, smaller than basal ones. Panicle terminal, 15–30 cm, many flowered; branches and pedicels densely paleaceous hairy, hairs sometimes with glandular heads. Sepals 5–7, white, subovate, ca. 2.1 × 1.1 mm, abaxially and marginally sparsely glandular hairy, adaxially glabrous, pinniveined; veins not confluent at apex, apex acuminate. Petals absent. Stamens usually 10, ca. 4 mm. Carpels 2, proximally connate; ovary subsuperior, ovoid, ca. 1.5 mm; styles ca. 1.3 mm. Capsule many seeded. Fl. Jun–Jul. 2n = 30. Shaded slopes. Jilin, Liaoning [Japan, Korea].

2. *Rodgersia aesculifolia* Batalin, Trudy Imp. S.-Peterburgsk. Bot. Sada 13: 96. 1893.

七叶鬼灯檠 *qi ye gui deng qing*

Herbs 0.8–1.2 m tall. Rhizomes transversely elongating, columnar, 3–4 cm in diam., pale purple inside. Stems angular, subglabrous. Leaves palmately compound; petiole 15–40 cm, sheathlike and long hairy at base; leaflets 5–7, obovate to oblanceolate, 7.5–30 × 2.7–12 cm, herbaceous or thinly leathery, abaxially long pilose along veins, adaxially sparsely subsessile glandular hairy along veins, base cuneate and sessile, margin doubly serrate, apex shortly acuminate. Pleiochasium paniculate, ca. 26 cm; branches and pedicels white paleaceous hairy and sparsely glandular hairy. Sepals (4 or)5(or 6), spreading, subtriangular, 1.5–2 × ca. 1.8 mm, abaxially and marginally pilose and shortly glandular hairy, adaxially glabrous or subsessile glandular hairy, veins arcuate and pinnate, not or partly to completely confluent at apex, apex shortly acuminate. Stamens 1.2–2.6 mm. Ovary subsuperior, ca. 1 mm; styles 2, 0.8–1 mm. Capsule ovoid, rostrate. Seeds many, brown, fusiform, 1.8–2 mm. Fl. and fr. May–Oct. 2n = 60.

Forests, forest margins, scrub, meadows, rock clefts; 1100–3800 m. SE Gansu, ?Hebei, W Henan, W Hubei, S Ningxia, Shaanxi, Sichuan, Xizang, Yunnan [Myanmar].

- 1a. Leaflets herbaceous 2a. var. *aesculifolia*
- 1b. Leaflets thinly leathery 2b. var. *henrici*

2a. *Rodgersia aesculifolia* var. *aesculifolia*

七叶鬼灯檠(原变种) *qi ye gui deng qing* (yuan bian zhong)

Rodgersia platyphylla Pax & K. Hoffmann.

Leaflets herbaceous. Sepals 5(or 6), adaxially glabrous or with 1–3 subsessile glandular hairs; veins arcuate and pinnate, not or partly to completely confluent at apex.

• Forests, scrub, meadows, rock clefts; 1100–3400 m. SE Gansu, W Henan, W Hubei, S Ningxia (Jingyuan Xian), Shaanxi, Sichuan, Yunnan.

2b. *Rodgersia aesculifolia* var. *henrici* (Franchet) C. Y. Wu ex J. T. Pan, Acta Phytotax. Sin. 29: 189. 1991.

滇西鬼灯檠 *dian xi gui deng qing*

Astilbe henrici Franchet in Prince Henri d'Orleans, Du Tonkin aux Indes, 378. 1896; *Rodgersia henrici* (Franchet) Franchet.

Leaflets thinly leathery. Sepals (4 or)5(or 6), adaxially more subsessile glandular hairy; veins arcuate, confluent at apex.

Forests, forest margins, scrub, alpine meadows; 2300–3800 m. Xizang, W Yunnan [Myanmar].

3. *Rodgersia sambucifolia* Hemsley, Gard. Chron., ser. 3, 39: 115. 1906.

西南鬼灯檠 *xi nan gui deng qin*

Herbs 0.8–1.2 m tall. Stems glabrous. Leaves pinnately compound; petiole 3.4–28 cm, brown long pilose at base; leaflets 3–9(or 10), obovate or oblong to lanceolate, 5.6–20 × 1.7–9 cm, abaxially pilose along veins, adaxially strigose or glabrous, base cuneate, margin doubly serrate, apex shortly acuminate. Basal and proximal cauline leaves usually with 3 terminal leaflets and 6 or 7 lateral, usually opposite, rarely alternate leaflets. Pleiochasium paniculate, 13–38 cm; branches 5.3–12 cm, densely paleaceous hairy; pedicels 2–3 mm, densely paleaceous hairy. Sepals 5, subovate, ca. 2 × 1.5–1.8 mm, abaxially sparsely tawny paleaceous hairy, adaxially glabrous, apex shortly acuminate. Petals absent. Stamens ca. 3 mm. Carpels 2, proximally connate, ca. 3 mm; ovary semi-inferior; styles 2. Fl. and fr. May–Oct. $2n = 60^*$.

• Forests, scrub, meadows, rock clefts; 1800–3700 m. W Guizhou, SW Sichuan, N Yunnan.

1a. Leaflets strigose adaxially 3a. var. *sambucifolia*

1b. Leaflets glabrous adaxially 3b. var. *estrigosa*

3a. *Rodgersia sambucifolia* var. *sambucifolia*

西南鬼灯檠(原变种) *xi nan gui deng qin* (yuan bian zhong)

Spiraea holorrhodantha H. Léveillé.

Leaflets strigose adaxially. Fl. and fr. May–Oct.

• Forests, scrub, meadows, rock clefts; 1800–3700 m. W Guizhou (Weining Yi-Hui-Miao Zu Zizhixian), SW Sichuan, N Yunnan.

3b. *Rodgersia sambucifolia* var. *estrigosa* J. T. Pan, Acta Phytotax. Sin. 29: 189. 1991.

光腹鬼灯檠 *guang fu gui deng qing*

Leaflets glabrous adaxially. Fl. and fr. May–Aug.

• Forests, rock clefts on slopes; 2000–3700 m. SW Sichuan (Yanbian Xian), N Yunnan (Huiize Xian, Lijiang Naxi Zu Zizhixian).

4. *Rodgersia pinnata* Franchet, Nouv. Arch. Mus. Hist. Nat., sér. 2, 10: 176. 1888.

羽叶鬼灯檠 *yu ye gui deng qing*

Herbs 25–150 cm tall. Stems glabrous. Leaves subpinnately compound; petiole 3.5–32.5 cm, base brown long pilose. Basal and proximal cauline leaves usually with 6–9 leaflets, among which terminal ones 3–5, verticillate ones 3 or 4; distal cauline leaves with 3 leaflets; leaflets elliptic or oblong to narrowly obovate, 6.5–32 × 2.7–12.5 cm, abaxially brown pilose along veins, adaxially glabrous or strigose, base gradually narrowed, margin doubly serrate, apex acuminate. Pleiochasium paniculate, 12–31 cm, many flowered; branches 3.5–22 cm, paleaceous hairy, sometimes also shortly glandular hairy; pedicels 1.5–3.5 mm. Sepals 5, subovate, 2–2.7 × ca. 2 mm, leathery, abaxially tawny pilose and subsessile glandular hairy, adaxially sparsely subsessile glandular hairy near base, veins 3, arcuate, confluent at apex, apex shortly acuminate. Petals absent. Stamens 10, 2.8–4 mm. Carpels 2, ca. 3 mm, connate at base; ovary subsuperior; styles 2. Capsule purple, ca. 7 mm. Fl. and fr. Jun–Aug. $2n = 60^*$, ca. 75*.

• Forests, forest margins, scrub, shaded grassy slopes, alpine meadows, rock clefts; 2000–3800 m. Guizhou, E and S Sichuan, Yunnan.

1a. Leaves glabrous adaxially 4a. var. *pinnata*

1b. Leaves strigose adaxially 4b. var. *strigosa*

4a. *Rodgersia pinnata* var. *pinnata*

羽叶鬼灯檠(原变种) *yu ye gui deng qing* (yuan bian zhong)

Astilbe pinnata (Franchet) Franchet.

Leaf blade glabrous adaxially.

• Forests, forest margins, scrub, alpine meadows, rock clefts; 2400–3800 m. Guizhou, E Sichuan (Wushan Xian), Yunnan.

4b. *Rodgersia pinnata* var. *strigosa* J. T. Pan, Acta Phytotax. Sin. 29: 189. 1991.

伏毛鬼灯檠 *fu mao gui deng qing*

Leaflets strigose adaxially.

• Shaded grassy slopes; ca. 2000 m. S Sichuan (Meigu Xian).

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