

1. **TOFIELDIA** Hudson, Fl. Angl., ed. 2, 157 [“175”]. 1778.

岩菖蒲属 *yan chang pu shu*

Chen Xinqi (陈心启 Chen Sing-chi); Minoru N. Tamura

Herbs perennial, with a short, ascending rhizome. Leaves basal or nearly so, 2-ranked, basally equitant, sword-shaped, laterally flattened. Scape erect, slender, apically with a many-flowered raceme or rarely a spike. Flowers bisexual, arising from axils of bracts, small, often subtended by 1 cupular or rarely 3 nearly free bracteoles. Perianth segments 6, free or basally connate, persistent. Stamens 6, often free, sometimes connate at base or inserted at base of perianth segments; anthers ovate, basifixed or subdorsifixed, introrse to latrorse. Ovary superior, usually ovoid, 3-lobed apically, stipitate or sessile; ovules numerous; septal nectaries often present. Styles 3, rather short, with introrse stigmas. Fruit a septicidal capsule, 3-loculed, sometimes folliclelike due to very deep clefts. Seeds small, usually linear to oblong.

About 20 species: mainly in subarctic, temperate, and subtropical regions of the N hemisphere; three species (two endemic) in China.

Although Tamura (in Kubitzki, Fam. Gen. Vasc. Pl. 3: 389. 1998) placed *Tofieldia* in the Nartheciaceae, Wu Zhengyi (editor’s note) believes it should be treated in the segregate family Tofieldiaceae, as was done by Takhtajan (Diversity Classific. Fl. Pl. 478. 1997).

- 1a. Style nearly as long as anthers; capsule globose, 2–2.5(–3) mm in diam., apically scarcely or slightly 3-lobed, with persistent, conspicuously thickened stigmas; pedicel 0.5–0.8 mm at anthesis 1. *T. coccinea*
- 1b. Style obviously longer than anthers; capsule ellipsoid or obovoid, apically 3-lobed to 3-parted, with persistent stigmas not thickened; pedicel (1–)1.5–12 mm at anthesis.
 - 2a. Seeds without a white, longitudinal band; pedicel (1–)1.5–3(–7) mm; capsule horizontal to nodding 2. *T. divergens*
 - 2b. Seeds with a white, longitudinal band on 1 side; pedicel (3–)5–12 mm; capsule suberect 3. *T. tibetica*

1. ***Tofieldia coccinea*** Richardson in Franklin, Narr. Journey Polar Sea, 736. 1823.

长白岩菖蒲 *chang bai yan chang pu*

Tofieldia fauriei H. Léveillé & Vaniot; *T. nutans* Willdenow; *T. taquetii* H. Léveillé & Vaniot.

Leaves 2.5–7(–8) cm × 2–3(–4) mm, rather rigid, margin scabrous, apex acuminate, veins inconspicuous. Scape 5–16 cm, with 1 or 2 short, linear leaves in proximal part. Racemes 7–30 mm, densely many flowered. Flowers horizontally spreading or more often nodding; pedicel 0.5–0.8 mm at anthesis, elongate to 1.5–2(–3.5) mm in fruit; bracteole 1, cupular, apically 3-lobed, rarely to 3-fid. Perianth segments white or slightly tinged with pink or rarely purple, oblanceolate-oblong, 2–3 × ca. 0.5 mm. Stamens protruding from or rarely equaling perianth. Ovary ovoid, scarcely 3-lobed apically. Styles rather thick, ca. 0.4 mm, nearly as long as anthers. Capsule nodding, globose, 2–2.5(–3) mm in diam., apically scarcely or slightly 3-lobed, with persistent styles 0.5–0.8 mm and stigmas conspicuously thickened. Seeds nearly linear-fusiform, rarely ellipsoid, (0.8–)1 mm, without a white, longitudinal band. Fl. Jul–Aug, fr. Aug–Sep. $2n = (20), 30, (32)$.

Meadows, wetlands, crevices of rocks or cliffs; 1800–2400 m. Anhui, S Jilin [Japan, Korea, Mongolia, Russia; North America].

2. ***Tofieldia divergens*** Bureau & Franchet, J. Bot. (Morot) 5: 157. 1891.

叉柱岩菖蒲 *cha zhu yan chang pu*

Tofieldia brevistyla Franchet; *T. esquirolii* H. Léveillé; *T. labordei* H. Léveillé & Vaniot; *T. tenella* Handel-Mazzetti; *T. yunnanensis* Franchet.

Leaves 3–22 cm × 2–4 mm, rather rigid, margin scabrous, apex acuminate, veins inconspicuous. Scape 8–35 cm, usually with 1 or 2 linear leaves in proximal part. Racemes 2–10 cm,

many flowered. Flowers ascending to slightly nodding; pedicel (1–)1.5–3(–7) mm at anthesis; bracteole 1, cupular, apically slightly 3-lobed. Perianth segments white, narrowly oblanceolate to narrowly elliptic, 2–3 × 0.4–0.5 mm. Stamens protruding from perianth. Ovary oblong-ovoid, ca. 3 mm, 3-lobed to 3-fid apically. Styles rather slender, 0.5–1 mm, obviously longer than anthers. Capsule horizontally spreading to nodding, obovoid-triangular or ellipsoid, ca. 3 × 2 mm, apically 3-fid to 3-parted, with persistent styles 1–1.5 mm and stigmas scarcely thickened. Seeds linear-fusiform, ca. 1 × 0.5 mm, without a white, longitudinal band. Fl. Jun–Aug, fr. Jul–Sep.

• Crevices on rocks or cliffs, moist grassy slopes, forests; 1000–4300 m. W Guizhou, SW Sichuan, Yunnan.

3. ***Tofieldia tibetica*** Franchet, Nouv. Arch. Mus. Hist. Nat., sér. 2, 10: 95. 1887.

岩菖蒲 *yan chang pu*

Tofieldia iridacea Franchet; *T. macilenta* Franchet; *T. setchuenensis* Franchet.

Leaves 5–20 cm × 3–7 mm, rather rigid, margin scabrous, apex acuminate, veins inconspicuous. Scapes 10–30(–38) cm, with 1 or 2 linear leaves in proximal part. Racemes ca. 15 cm, many flowered. Flowers ascending or nearly so; pedicel (3–)5–12 mm at anthesis; bracteole 1, cupular, apically 3-lobed. Perianth segments white, narrowly oblanceolate-oblong, 2–3 × 0.4–0.5 mm. Stamens protruding from perianth. Ovary oblong-ovoid, ca. 2.5 mm, 3-lobed apically. Styles slender, ca. 1 mm, obviously longer than anthers. Capsule suberect, obovoid-ellipsoid, 2.5–3 × ca. 2 mm, apically 3-lobed, with persistent styles (0.3–)1–1.5 mm and stigmas scarcely thickened. Seeds linear-fusiform, ca. 1 × 0.5 mm, with a white, longitudinal band on 1 side. Fl. Jun–Jul, fr. Jul–Sep.

• Cliffs, crevices on rocks along valleys, thickets, moist grassy slopes; 700–2300 m. Guizhou, EC Sichuan, NE Yunnan.

