

## LINACEAE

亚麻科 ya ma ke

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Herbs or shrubs. Stipules small or absent. Leaves alternate or rarely opposite, simple; leaf blade margin entire. Inflorescences cymes or racemes. Flowers bisexual, regular. Sepals (4 or)5, distinct or basally connate, imbricate, persistent. Petals as many as and alternate with sepals, distinct or basally connate, convolute, basally often clawed, with 2–5 extrastaminal nectary glands or a disk. Stamens (4 or)5 or 10(or 15), in 1 whorl, alternate or opposite sepals, often some reduced to staminodes; filament bases connate into a tube. Ovary superior, with 2–5 carpels or seemingly 4–10-loculed by intrusion of a false septum, with 1 or 2 ovules per locule, placentation axile; styles as many as carpels, filiform, distinct or basally connate; stigmas subcapitate. Fruit usually a septicidal capsule or a drupe. Seeds with straight oily embryo and thin endosperm.

Fourteen genera and ca. 250 species: worldwide but mostly in temperate regions; four genera and 14 species (one introduced) in China.

Huang Chengchui, Huang Baoxian & Xu Langran. 1998. Linaceae. *In*: Xu Langran & Huang Chengchui, eds., *Fl. Reipubl. Popularis Sin.* 43(1): 93–108.

1a. Shrubs or small trees.

2a. Petals yellow; ovary 6(–8)-loculed by intrusion of a false septa; styles 3(or 4); capsule splitting into 6(–8)

mericarps ..... 1. *Reinwardtia*

2b. Petals white; ovary 4- or 5-loculed; styles 4 or 5; capsule 4- or 5-valvate ..... 2. *Tirpitzia*

1b. Herbs.

3a. Leaves sessile; leaf blade linear to lanceolate, 1- or 3-veined from base; petals usually blue, rarely white or yellow;

styles 5; capsule with 10 1-seeded mericarps ..... 3. *Linum*

3b. Leaves petiolate; leaf blade elliptic, ovate, or elliptic-lanceolate, pinnately veined; petals pink or rarely white;

styles 3; capsule 1-seeded ..... 4. *Anisadenia*

### 1. REINWARDTIA Dumortier, Commentat. Bot. 19. 1822.

石海椒属 shi hai jiao shu

Shrubs. Stipules minute, subulate, caducous. Leaves alternate. Inflorescences axillary and terminal cymose fascicles or flowers solitary and axillary. Sepals 5, lanceolate, persistent, margin entire, apex acuminate. Petals 4 or 5, yellow, much longer than sepals, confluent, fugacious. Stamens 5, hypogynous, basally connate; staminodes 5, alternating with and inserted between stamens; glands 2–5, adnate to staminal ring. Ovary 3(or 4)-celled, cells 2-loculed by intrusion of a false septum, with 1 ovule per locule; styles 3(or 4), filiform, distinct or basally connate; stigmas subcapitate. Capsule splitting into 6(–8) 1-seeded mericarps. Seeds with a membranous wing.

One species: E, S, and SE Asia.

1. *Reinwardtia indica* Dumortier, Commentat. Bot. 19. 1822.

石海椒 shi hai jiao

*Kittelocharis trigyna* (Reichenbach) Alefeld; *Linum cicanobum* Buchanan-Hamilton ex D. Don; *L. repens* Buchanan-Hamilton ex D. Don; *L. trigynum* Roxburgh (1799), not Linnaeus (1753); *Macrolinum trigynum* Reichenbach; *Reinwardtia trigyna* (Reichenbach) Planchon.

Shrubs, to 1 m tall. Branches gray, glabrous. Petiole 0.8–2.5 cm; leaf blade elliptic to obovate-elliptic, 2–8.8 × 0.7–3.3 cm, papery, base cuneate, margin entire or crenate, apex

acute to subrounded and with an apiculate tip. Flowers 1.4–3 cm in diam. Sepals 0.9–1.2 × ca. 0.3 cm, distinct. Petals yellow, 1.7–3 × ca. 1.3 cm, distinct but basally confluent. Stamens ca. 1.3 cm; anthers ca. 2 mm; staminodes subulate. Styles 3 or 4, 0.7–1.8 cm. Capsule globose, splitting into 6 or 8 mericarps. Seeds reniform. Fl. and fr. Apr–Jan.

Forests, mountain slopes, thickets, along trails, ravines, often in calcareous soil; 500–2300 m. Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Sichuan, Yunnan [Bhutan, N India, Kashmir, Laos, Myanmar, Nepal, Pakistan, Thailand, Vietnam].

This species is grown as an ornamental. The branches and leaves are used medicinally.

### 2. TIRPITZIA H. Hallier, Beih. Bot. Centralbl. 39(2): 5. 1921.

青篱柴属 qing li chai shu

Shrubs or small trees. Leaves alternate, shortly petiolate. Inflorescences axillary or terminal cymes. Sepals 5, persistent. Petals 5,

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white, basally with a narrow long claw confluent with other claws almost into a tube; lobes broadly obovate, patent. Stamens 5; filaments basally slightly expanded and connate into tube; staminodes 5, subulate, alternating with stamens. Ovary glabrous, 4- or 5-loculed with 2 ovules per locule; styles 4 or 5, as long as stamens; stigmas capitate. Capsule long ellipsoid, ovoid-ellipsoid, or ovoid, septical, 4- or 5-valvate. Seeds with a membranous wing.

Three species: China, N Thailand, Vietnam; two species in China.

- 1a. Leaf blade papery to thickly papery; ovary 4-loculed; styles 4; capsule 4-valvate ..... 1. *T. sinensis*  
 1b. Leaf blade leathery; ovary 5-loculed; styles 5; capsule 5-valvate ..... 2. *T. ovoidea*

**1. *Tirpitzia sinensis*** (Hemsley) H. Hallier, *Beih. Bot. Centralbl.* 39(2): 5. 1921.

青篱柴 qing li chai

*Reinwardtia sinensis* Hemsley, *Hooker's Icon. Pl.* 26: t. 2594. 1898; *Tirpitzia candida* Handel-Mazzetti.

Shrubs or trees, 1–5 m tall. Branches brown to gray, glabrous, with pale elliptic lenticels. Petiole 0.7–1.6 cm; leaf blade elliptic, obovate-elliptic, or ovate, 3–8.5 × 2.8–4.5 cm, papery to thickly papery, midvein abaxially convex and adaxially flat, secondary veins slightly convex on both surfaces, base broadly cuneate to rounded, margin entire, apex obtuse to acute. Inflorescences terminal or axillary cymes, ca. 4 cm; bracts broadly ovate. Pedicel 2–3 mm. Sepals 5–9 × 2–3.8 mm. Petals white; claw 2–3.8 cm; blades 1–2 × 0.6–1.5 mm. Filament tube 2–4.8 mm. Ovary 4-loculed; styles 4; stigmas capitate. Capsule long ellipsoid to ovoid, 1–1.9 cm, 4-valvate. Seeds usually 2 per locule, with a membranous wing. Fl. May–Aug, fr. Aug–Mar.

Mountain slopes, along trails, often in calcareous soil; 300–2000 m. Guangxi, Guizhou, Yunnan [Vietnam].

The branches and leaves are used medicinally.

**2. *Tirpitzia ovoidea*** Chun & F. C How ex W. L. Sha, *Guihaia* 2: 189. 1991.

米念芭 mi nian ba

Shrubs 0.5–4 m tall. Branches brown to gray, glabrous, with pale elliptic lenticels. Petiole 5–10 mm; leaf blade elliptic, ovate, or rarely obovate-elliptic, 2–7 × 1.2–3.5 cm, leathery, midvein abaxially convex and adaxially flat, secondary veins slightly convex on both surfaces, base broadly cuneate to subrounded, margin entire, apex obtuse to slightly concave. Inflorescences terminal or subterminal cymes; bracts broadly ovate. Pedicel 2–3 mm. Sepals 5–7 × 2.5–3.5 mm, apex obtuse. Petals white; claw 2–3.5 cm; blades 1.5–2 × 1.2–1.5 mm, apex obtuse. Filament tube ca. 2.5 mm. Ovary 5-loculed; styles 5, longer than stamens; stigmas subcapitate. Capsule ovoid-ellipsoid, 1.1–1.6 × 5–7 mm, 5-valvate. Seeds with a membranous wing. Fl. May–Oct, fr. Oct–Nov.

Sparse forests, valleys, rock crevices in forests, often on calcareous mountain slopes; 300–2000 m. Guangxi [Vietnam].

The branches and leaves are used medicinally.

### 3. *LINUM* Linnaeus, *Sp. Pl.* 1: 277. 1753.

亚麻属 ya ma shu

Herbs, annual, biennial, or perennial, rarely woody at base. Stems erect, with a tough cortex, glabrous or rarely pubescent. Stipules small or absent. Leaves alternate or opposite, simple, sessile, with 1 or 3(or 5) veins from base, margin entire or sometimes denticulate and sometimes apically with glandular trichomes. Inflorescences cymes or scorpioid cymes. Flowers bisexual, regular, sometimes heterostylous. Sepals 5, imbricate, persistent, margin entire and sometimes with glandular trichomes. Petals 5, red, white, blue, or yellow, fugacious, longer than sepals, contorted, base clawed. Stamens 5, alternate with sepals; filament bases connate; staminodes 5, dentiform. Ovary 5-loculed or appearing 10-loculed by intrusion of false septa, with 2 ovules per locule; styles 5, filiform; stigmas capitate. Capsule splitting into 10 segments. Seeds compressed, shiny, with mucilaginous testa.

About 180 species: temperate and subtropic regions; nine species (one introduced) in China.

The greatest species diversity is in the Mediterranean region.

- 1a. Petal margin with glandular trichomes.  
 2a. Flowers yellow; sepals much exceeding capsule ..... 1. *L. corymbulosum*  
 2b. Flowers mauve, bluish purple, purplish red, or sometimes almost white; sepals clearly shorter than capsule.  
 3a. Annuals or biennials; petals ca. 2 × as long as sepals ..... 2. *L. stelleroides*  
 3b. Perennials; petals 3–4 × as long as sepals ..... 3. *L. heterosepalum*  
 1b. Petal margin without glandular trichomes.  
 4a. Annuals, cultivated; false septa ciliate ..... 4. *L. usitatissimum*  
 4b. Perennials, wild; false septa not ciliate.  
 5a. Flowers heterostylous ..... 5. *L. perenne*  
 5b. Flowers homostylous.  
 6a. Leaves 1-veined; pedicels slender, decumbent or nodding.

- 7a. Upper cauline leaves dense, margin plane; usually with long nonflowering shoots; pedicel usually decumbent ..... 6. *L. amurense*  
 7b. Upper cauline leaves sparse, margin revolute; nonflowering shoots rudimentary; pedicel usually nodding ..... 7. *L. nutans*  
 6b. Leaves 1–5-veined; pedicels erect or ascending.  
 8a. Leaves 1- or 3-veined; sepals 3–4 mm ..... 8. *L. pallescens*  
 8b. Leaves 3- or 5-veined; sepals 5–7 mm ..... 9. *L. altaicum*

**1. *Linum corymbulosum*** Reichenbach, Fl. Germ. Excurs. 834. 1832.

长萼亚麻 chang e ya ma

Annuals 10–30 cm tall. Taproot pale, slender. Stems simple, erect, glabrous or sparsely pubescent, corymbosely branched apically from middle or sometimes branched at base and decumbent. Leaves alternate, narrowly lanceolate, 1–1.5 cm × 1–2 mm, nearly glabrous, 1-veined from base, margin slightly denticulate, apex acuminate to obtuse. Flowers axillary or opposite a leaf, solitary or in broad cymes, homostylous. Pedicel subequalling leaves or slightly shorter, erect. Sepals lanceolate, 4–6 × 1–1.5 mm, 2 × as long as capsules, 1-veined, basal margin glandular-ciliate. Petals yellow, long obovate, 6–8 × ca. 2 mm, base gradually narrowed into claw, apex obtuse. Capsule pale yellowish brown, globose-ovoid, 2–3 × ca. 1.5 mm. Seeds pale yellowish brown, elliptic, ca. 1 mm. Fl. Jun–Aug, fr. Jul–Oct.  $2n = 18$ .

Sandy and gravelly floodplains, flat areas in deserts or on low mountains. Xinjiang [Afghanistan, Kazakhstan, Pakistan, Russia; N Africa, SW Asia, Europe].

**2. *Linum stelleroides*** Planchon, London J. Bot. 5: 178. 1848.

野亚麻 ye ya ma

Annuals or biennials, 20–90 cm tall. Stems cylindrical, erect, glabrous, woody at base, corymbosely branched above middle. Leaves alternate, linear, linear-lanceolate, or narrowly lanceolate, 1–4 cm × 1–4 mm, both surfaces glabrous, 3-veined from base, base attenuate, margin entire, apex acuminate, acute, or obtuse. Flowers solitary or numerous in broad cymes, ca. 1 cm in diam. Pedicel 0.3–1.5 cm. Sepals oblong to broadly ovate, 3–4 mm, base 3-veined, margin membranous and with black stipitate glands. Petals blue, bluish purple, or pink, obovate, to 9 mm, base gradually narrowed, apex erose. Stamens as long as styles. Styles distinct or basally connate. Capsule subglobose, 3–5 mm in diam., septicidal. Seeds oblong, 2–2.5 mm. Fl. Jun–Sep, fr. Aug–Oct.  $2n = 20$ .

Mountain slopes, along trails, wastelands; 600–2800 m. Gansu, Guangdong, Guangxi, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Jiangsu, Jilin, Liaoning, Nei Mongol, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan [Japan, Korea, Kyrgyzstan, Russia (Far East), Tajikistan, Turkmenistan, Uzbekistan].

**3. *Linum heterosepalum*** Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 2(2): 433. 1873.

异萼亚麻 yi e ya ma

Perennials 20–50 cm tall. Root woody, sturdy. Stems several, erect, glabrous or with grayish yellow to almost white scalelike trichomes. Leaves alternate, dense, linear-lanceolate to narrowly lanceolate, 1.5–3 cm × 2–5 mm, glabrous, 3- or

5-veined from base, base rounded, margin apically with reddish brown glandular trichomes, apex obtuse to acute. Inflorescences terminal, cymose, with 4–8 flowers. Flowers heterostylous. Pedicel ± as long as sepals, erect, sturdy. Sepals 5–8 mm; outer sepals lanceolate to ovate-lanceolate, herbaceous, margin glandular-ciliate, apex acute; inner sepals broadly ovate to rotund-ovate, at least 1 with margin glandular-ciliate. Petals blue to purple, long obovate, 3–4 × as long as sepals, base gradually narrowed into a claw, apically with a clear limb. Capsule yellowish brown, globose to oblate, 0.8–1.2 cm. Seeds pale yellowish brown, flattened ellipsoid, ca. 5 × 1.5 mm. Fl. Jun–Jul, fr. Jul–Aug.

Flat areas on mountains, xeric thickets. Xinjiang [Kazakhstan, Kyrgyzstan].

This species is grown as an ornamental.

**4. *Linum usitatissimum*** Linnaeus, Sp. Pl. 1: 277. 1753.

亚麻 ya ma

*Linum humile* Miller.

Annuals 30–120 cm tall. Stems simple, cylindrical, erect, woody at base, apically corymbosely branched. Leaves alternate, linear, linear-lanceolate, or lanceolate, 2–4 cm × 1–5 mm, 3(or 5)-veined from base, base attenuate, apex acute. Flowers axillary, solitary or in broad cymes, 15–20 mm in diam. Pedicel 1–3 cm, erect. Sepals ovate to ovate-lanceolate, 5–8 mm, 3(or 5)-veined from base, nonglandular, margin entire or ciliate, apex acute to acuminate. Petals blue, rarely white or red, obovate, 0.8–1.2 cm. Styles distinct; stigma linear-clavate. Capsule globose, 6–9 mm in diam., septicidal, with 10 seeds. Seeds brown, oblong, flattened, 3.5–4 mm. Fl. Jun–Aug, fr. Jul–Oct.  $2n = 30$ .

Cultivated throughout China except Hainan and Taiwan, sometimes naturalized [origin uncertain but possibly the Mediterranean region and/or parts of W Asia and W Europe, widely cultivated].

This species is used for fiber and oil.

**5. *Linum perenne*** Linnaeus, Sp. Pl. 1: 277. 1753.

宿根亚麻 su gen ya ma

*Linum sibiricum* Candolle.

Perennials 20–90 cm tall. Taproot sturdy. Stems erect or ascendant, branched from base, woody at base. Leaves alternate, linear to linear-lanceolate, 2–4 cm × 1–5 mm, 1(or 3)-veined from base, base attenuate, apex acute. Flowers numerous, in racemose cymes, ca. 2 cm in diam., heterostylous. Pedicel 1–2.5 cm, erect or slightly excurved. Sepals ovate, 3.5–5 mm, 5- or 7-veined, margin entire; outer 3 sepals with apex acute; inner 2 sepals with apex obtuse. Petals blue to bluish purple, obovate, 1–1.8 cm. Styles distinct; stigma capitate. Capsule subglobose,

3.5–8 mm in diam., septicidal. Seeds brown, elliptic, flattened, 3.5–4 × ca. 2 mm. Fl. Jun–Aug, fr. Jul–Sep.  $2n = 18$ .

Dry mountain slopes, sparse thickets, grasslands, dry plains, sandy and gravelly floodplains; below 4100 m. Gansu, Hebei, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Xinjiang, Xizang, Yunnan [Mongolia, Russia; W Asia, Europe].

**6. *Linum amurense*** F. G. C. Alefeld, Bot. Zeitung (Berlin) 25: 251. 1867.

黑水亚麻 hei shui ya ma

Perennials 25–60 cm tall. Roots with a taproot. Stems several, erect, base woody, branched apically from middle, with long nonflowering shoots. Leaves alternate, linear to linear-lanceolate, 1.5–2 cm × ca. 2 mm, 1-veined from base, margin plane, apex acute. Flowers in sparse cymes, numerous. Pedicel slender, excurved in fruit. Sepals ovate to elliptic, 4–5 mm, base 5-veined, apex with a mucro. Petals bluish purple, obovate, 1.2–1.5 × 0.4–0.5 cm, base cuneate, apex rounded. Filaments auriculate at base. Styles connate at base. Capsule subglobose, ca. 7 mm in diam., septicidal. Seeds brown, ellipsoid, flattened. Fl. Jun–Jul, fr. Aug.

Grasslands, sandy and gravelly floodplains, dry mountain slopes; 600–4000 m. Gansu, Heilongjiang, Jilin, Nei Mongol, Ningxia, Shaanxi [Russia (Far East)].

**7. *Linum nutans*** Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg 26: 430. 1880.

垂果亚麻 chui guo ya ma

*Linum baicalense* Juzepczuk.

Perennials 20–40 cm tall. Roots with a taproot. Stems several, erect, base woody and with scalelike leaves, branched above middle, nonflowering shoots rudimentary. Cauline leaves alternate, linear to linear-lanceolate, 1–2.5 cm × 1–3 mm, glabrous, 1-veined from base, margin slightly revolute. Flowers numerous in cymes, ca. 2 cm in diam. Pedicel slender, nodding in fruit. Sepals ovate, 3–5 × 2–3 mm, base 5-veined, margin membranous, apex acute. Petals blue to bluish purple, obovate, ca. 1 cm, base cuneate, apex rounded. Stamens ± as long as styles. Styles distinct. Capsule subglobose, 6–7 mm in diam., septicidal. Seeds oblong, ca. 4 × 2 mm. Fl. Jun–Jul, fr. Jul–Aug.

Sandy grasslands, dry mountain slopes; 600–4000 m. Gansu, Heilongjiang, Jilin, Nei Mongol, Ningxia, Shaanxi, S Xizang (Yadong) [India (Sikkim), N Mongolia, Russia (E Siberia)].

**8. *Linum pallescens*** Bunge in Ledebour, Fl. Altaic. 1: 438. 1829.

短柱亚麻 duan zhu ya ma

Perennials 10–30 cm tall. Taproot sturdy. Stems several, erect or basally decumbent, simple or apically branched, base woody and with scalelike leaves, nonflowering shoots usually present and with dense narrow leaves. Cauline leaves alternate, linear, 0.7–1.5 cm × 0.5–1.5 mm, 1- or 3-veined from base, base attenuate, margin revolute, apex acute. Flowers solitary or in cymes, ca. 7 mm in diam. Sepals ovate, ca. 3.5 × 2 mm, apex obtuse and with a mucro; outer 3 sepals 1- or 3(or 5)-veined. Petals white to blue, obovate, ca. 2 × as long as sepals, base cuneate, apex rounded and retuse. Stamens ± as long as styles. Capsule subglobose, ca. 4 mm in diam., septicidal. Seeds brown, elliptic, flattened, ca. 4 × 2 mm. Fl. Jun–Aug, fr. Jul–Sep.

Dry mountain slopes, sandy and gravelly floodplains, wastelands; 500–1200 m. Gansu, Qinghai, Shaanxi, Xinjiang, Xizang [Kazakhstan, Kyrgyzstan, Mongolia, Russia, Tajikistan].

**9. *Linum altaicum*** Ledebour ex Juzepczuk, Fl. URSS 14: 113. 1949.

阿尔泰亚麻 a er tai ya ma

Perennials 30–60 cm tall. Roots sturdy. Stems several, caespitose, erect, glabrous, branched above middle, base woody. Leaves densely alternate, linear to narrowly lanceolate, 2–2.5 cm × 2–2.5 mm, glabrous, 3- or 5-veined from base, apex acuminate to acute. Flowers several in sparse cymes. Pedicel longer than leaves, erect. Outer sepals broadly ovate to elliptic-ovate, 5–7 × ca. 2 mm, apex acute; inner sepals with margin membranous, apex obtuse. Petals blue to bluish purple, obovate, ca. 3 × as long as sepals, base attenuate into a claw, apex rounded to retuse. Stamens ± as long as styles. Capsule yellowish brown, subglobose, 6–7 × 4–5 mm. Seeds oblong, ca. 4 × 3 mm. Fl. Jun–Jul, fr. Jul–Aug.

Mountain meadows, flat or sparse thickets; 600–4000 m. Xinjiang [Kazakhstan, Kyrgyzstan, Mongolia, Russia (W Siberia), Tajikistan].

#### 4. ANISADENIA Wallich ex C. F. W. Meissner, Pl. Vasc. Gen. 2: 96. 1838.

异腺草属 yi xian cao shu

Herbs, perennial. Stipules subulate, asymmetric, veins adaxially slightly elevated. Leaves alternate, simple; leaf blade leathery or papery, margin entire or serrate. Inflorescences terminal, spikelike racemes; bracts 2, subulate. Flowers bisexual, regular. Sepals 5; outer 3 sepals with spreading gland-tipped bristles; inner 2 sepals glandular. Petals 5, convolute, fugacious, clawed. Stamens 5, hypogynous; filaments basally connate; staminodes 5, alternating with stamens; glands usually 3 with 1 larger, adnate to staminal tube. Ovary 3-locular, with 2 ovules per locule; styles 3. Capsule 1-seeded, surrounded by persistent sepals. Seed oblong; embryo green; cotyledons plano-convex.

Two species: Bhutan, China, NE India, N Myanmar, Nepal, N Thailand; two species in China.

- 1a. Stem pubescent; leaves scattered along stem but more concentrated and larger basally; leaf blade adaxially pilose; flowers ca. 12 mm in diam. .... 1. *A. pubescens*  
 1b. Stem glabrous; leaves clustered apically on stem with none along stem; leaf blade adaxially glabrous; flowers 6–8 mm in diam. .... 2. *A. saxatilis*

**1. *Anisadenia pubescens*** Griffith, Itin. Pl. Khasyah Mts. 54. 1848.

异腺草 yi xian cao

Perennials 15–40 cm tall. Stem prostrate at base, often much branched, pubescent, basally woody. Stipules 4–7 × ca. 1 mm, close with base on one side, auriculate, glabrous. Leaves scattered along stem but more concentrated and larger basally; petiole 0.2–1 cm, longer basally on stem, short to almost absent apically on stem; leaf blade elliptic to ovate, 0.9–4.5 × 0.5–2.5 cm, both surfaces pilose but abaxially more densely so, base broadly cuneate, margin entire, apex acute and mucronate. Inflorescence a spikelike raceme, 4–11 cm; peduncle densely pubescent; bracts ca. 2 × 0.5 mm. Flowers ca. 1.2 cm in diam. Pedicel to 2 mm, densely pubescent. Sepals 5, lanceolate, ca. 6 × 1 mm, glaucous, persistent; outer 3 sepals with spreading gland-tipped bristles. Petals 5, white to whitish mauve; claws 1.2–2 cm. Filaments basally connate into a ca. 5 mm tube; staminodes filiform. Ovary glabrous; style ± as long as sepals. Capsule oblong, ca. 3 mm, membranous. Fl. Jun–Sep.

Forests, thickets, mountain slopes, along trails; 1200–3200 m. SE Xizang (Médog), Yunnan [Bhutan, NE India].

**2. *Anisadenia saxatilis*** Wallich ex C. F. W. Meissner, Pl. Vasc. Gen. 2: 96. 1838.

石异腺草 shi yi xian cao

Perennials 30–40 cm tall. Stem prostrate at base, robust, always simple, glabrous. Leaves clustered apically on stem with none along stem; petiole 0.5–2.5 cm; leaf blade elliptic-lanceolate, 3.5–7 × 1.5–2.5 cm, abaxially sparsely pubescent and glaucous, adaxially glabrous, base broadly cuneate, margin entire or obscurely waved or crisped, apex acuminate. Inflorescence terminal, a spikelike raceme, 4–14 cm. Flowers 6–8 mm in diam. Pedicel to 1 mm. Sepals lanceolate, 4–5 mm. Petals pink to whitish, 7–9 mm, apically emarginate. Ovary glabrous; style ± as long as sepals. Capsule oblong, ca. 3 mm, membranous.

Mountain slopes; 1800–2500 m. NW and W Yunnan (Gongshan, Tengchong) [Bhutan, NE India, N Myanmar, Nepal, N Thailand].