

3. CERATOSTIGMA Bunge, Enum. Pl. China Bor. 55. 1833.

藍雪花屬 lan xue hua shu

Valoradia Hochstetter.

Shrubs, shrublets, or perennial herbs. Stems erect or spreading, rarely sublianos, branched, usually strigose. Leaf blade margin with incurved hairs. Inflorescences terminal or axillary, subcapitate to capitate, with 2 to many spikelets; spikelets usually 1-flowered; bracts herbaceous; bractlets 2, membranous. Calyx tubular, herbaceous along ribs, membranous between ribs except at base, usually split between ribs by fruiting time. Corolla salverform, extended beyond calyx, limb rotate, lobes obovate to obdeltate. Stamens hypogynous or adnate to corolla base; anthers oblong-linear, slightly exerted. Ovary oblong-ovoid to ellipsoid, slightly 5-angular or 5-sulcate, apex conical. Style 1, apically 5-branched; stigma on inner side of style branches, covered with stalked or sessile capitate glands.

Eight species: E Africa, Asia; five species in China.

- 1a. Bud scales rigid, linear to needlelike; bark of old stems fissured and exfoliating; leaves (0.3–)3–6 mm wide 1. *C. ulicinum*
- 1b. Bud scales absent or scalelike; bark not fissured; leaves (6–)8–30(–54) mm wide.
 - 2a. Corolla less than 2 cm; calyx 6.5–9.5(–10.5) mm; plants shrubby.
 - 3a. Plants evergreen; leaves densely strigose; hairs on young shoots red-brown to dark yellow-brown 2. *C. griffithii*
 - 3b. Plants deciduous; leaves glabrous or sparsely strigose, if densely strigose then hairs on young shoots grayish white or pale yellow 3. *C. minus*
 - 2b. Corolla 2.2–2.8 cm; calyx 10–15(–18) mm; plants suffrutescent.
 - 4a. Bud scales present at base of some branches; calyx lobes 4–4.5 mm 4. *C. willmottianum*
 - 4b. Bud scale absent; calyx lobes ca. 2 mm 5. *C. plumbaginoides*

1. *Ceratostigma ulicinum* Prain, J. Bot. 44: 7. 1906.

刺鳞藍雪花 ci lin lan xue hua

Shrublets deciduous, 5–20(–60) cm tall. Stems often basally branched; bark of older branches fissured and exfoliating; nodes without a ringlike scar; branchlets red-brown, slender, densely minutely hispid. Bud scales linear to almost needlelike, rigid. Leaf blade obovate-lanceolate, oblanceolate, or sometimes linear, 0.8–2.2(–2.6) cm × (0.3–)3–6 mm, glabrous or abaxial surface slightly minutely hispid along midrib, base cuneate, margin minutely hispid, apex acute to acuminate and with a small awn. Inflorescences terminal or axillary, subcapitate, with spikes usually 10-flowered or more; bracts lanceolate, 7–8.5 × ca. 2 mm; bractlets lanceolate, 4–5 × ca. 1 mm. Calyx brownish red, 7–8 × ca. 1.5 mm; lobes ca. 1 mm, apically puberulent. Corolla blue, 1.1–1.3 cm; lobes lanceolate-obovate, ca. 5 × 2–2.5 mm, apex acute to obtuse. Anthers blue, 1.4–1.8 mm. Ovary ovoid. Style branches extending beyond anthers. Capsule ca. 4.5 mm. Seed dark brown. Fl. Jun–Oct, fr. Aug–Nov.

Sunny slopes; 3300–4500 m. S Xizang [Nepal].

2. *Ceratostigma griffithii* C. B. Clarke in J. D. Hooker, Fl. Brit. India 3: 481. 1882.

毛藍雪花 mao lan xue hua

Shrubs evergreen, 40–130 cm tall. Stems many branched; branches hard, without ringlike scars, pith reduced; young branches densely strigose; hairs rust colored to brown, attenuate from conical base, usually mixed with 6–12-rayed stellate hairs. Bud scales scalelike. Leaf blade spatulate, obovate, or subrhombic, (1.5–)2–5(–7.6) × (0.8–)1–2.2(–2.9) cm, both surfaces densely and uniformly strigose, base abruptly constricted and then becoming attenuate, apex acute. Inflorescences terminal or axillary, 5–20-flowered; bracts oblong-lanceolate to oblong-

ovate, 6–7.5 × 2–2.8 mm; bractlets lanceolate, 5–7.2 × 1.5–2 mm. Calyx (7–)8–9.5(–10.5) × ca. 1.5 mm, sericeous between ribs and mixed with a few stellate hairs. Corolla 1.5–1.9 cm, tube purple; lobes blue, obdeltate, 6–7 × 4.5–5 mm, apex emarginate and triangularly mucronate. Anthers blue, ca. 2 mm. Ovary ovoid. Style branches equal in length to anthers. Capsule ca. 6 mm. Seed dark brown. Fl. Aug–Dec, fr. Sep–Jan.

Warm valleys; 2200–2800 m. SW Xizang [Bhutan].

3. *Ceratostigma minus* Stapf ex Prain, J. Bot. 44: 7. 1907.

小藍雪花 xiao lan xue hua

Shrubs deciduous, 30–150 cm tall. Stems many branched; branches without ringlike scars, pith reduced; branchlets densely strigose; hairs white or pale lemon yellow, abruptly attenuate from ellipsoid base, sometimes less than 1 mm, occasionally mixed with 3–6-rayed stellate hairs. Bud scales scalelike. Leaf blade obovate, spatulate, or subrhombic, 2–3 × (0.6–)0.8–1.6 cm, abaxially densely strigose, rarely only along midrib, adaxially glabrous or sparsely strigose, sometimes strigose-hirsute, base attenuate, apex obtuse or rounded, rarely acute or mucronate. Inflorescences terminal and (5–)7–13(–16)-flowered or axillary and 1–9-flowered; bracts oblong-ovate, 4–5 × ca. 2.5 mm, apex acute; bractlets ovate to oblong-ovate, 4.5–5 × 1.5–2 mm, apex acuminate. Calyx 6.5–9 × ca. 1.5 mm; lobes ca. 1.5 mm, with slender appressed hairs along ribs of exposed part or rarely mixed with stellate hairs. Corolla 1.5–1.7(–1.9) cm, tube purple; lobes blue, obdeltate, 6–7 × 4–5 mm, apex emarginate and filiform-mucronate. Anthers blue to purple, 1.4–1.6(–2) mm. Ovary green, ovoid. Style branches exerted. Capsule ovoid, (2–)6.5 mm. Fl. Jun–Oct, fr. Jun–Nov.

* Valleys; 1000–4800 m. S Gansu, W Sichuan, E and S Xizang, N Yunnan.

Medicinal.

4. *Ceratostigma willmottianum* Stapf, Bot. Mag. 140: t. 8591. 1914.

岷江蓝雪花 min jiang lan xue hua

Herbs perennial, deciduous, rhizomatous, to 2 m tall. Rhizomes rooting at nodes just below ground. Branches spreading, fragile, pith equal or wider than surrounding xylem, nodes with ringlike scars; branchlets sparsely strigose. Bud scales scalelike. Petiole basally clasping, often forming ringlike scars after falling; leaf blade obovate-rhombic, ovate-rhombic, or rarely obovate, (1.5–)2–5 × (0.8–)1.2–1.8(–2.5) mm, usually lanceolate below inflorescence, base cuneate and attenuate into petiole. Inflorescences terminal or axillary, 3–7-flowered, sometimes crowded to capitate; bracts ovate-oblong to oblong, 6–8(–10) × 2–3.5 mm; bractlets ovate to oblong, 5–7 × ca. 3 mm. Calyx 1–1.5 × ca. 1 mm, sparsely strigose and with a few stellate hairs along ribs, lobes 4–4.5 mm. Corolla 2–2.6 cm, tube red-purple; lobes blue, obdeltate, 9–11 × 6.5–7 mm, apex emarginate and mucronate. Stamens ± as long as corolla tube; anthers purple, ca. 2 mm. Ovary ovoid. Style branches extending beyond anthers. Capsule ca. 6 mm. Seed black. Fl. Jul–Oct. fr. Jun–Nov.

* Warm valleys at forest edges or in thickets; 700–3500 m. Gansu (Wen Xian), W Guizhou, S and W Sichuan, SE Xizang, E and N Yunnan.

Medicinal.

5. *Ceratostigma plumbaginoides* Bunge, Enum. Pl. China Bor. 55. 1833.

蓝雪花 lan xue hua

Plumbago larpentae Lindley; *Valoradia plumbaginoides* (Bunge) Boissier.

Herbs perennial, 20–30(–60) cm tall. Rhizomes branched, ca. 2–3 cm in diam., with a brown scale at each node; scales ovate, clasping. Stems slender, simple or branched, without bud scales, sparsely minutely hispid toward apex. Leaf blade broadly ovate to obovate, (2–)4–6(–10) × (0.8–)2–3(–5.3) cm, glabrous or glabrescent, base attenuate to abruptly constricted and then becoming attenuate, apex short acuminate to occasionally obtuse. Inflorescences terminal or axillary, (1–)15–30-flowered or more; bracts lanceolate to oblong; bractlets ovate, apex acute and apiculate. Flowers heterostylous. Calyx (1.2–)1.3–1.5(–1.8) cm × 1.5–2 mm, sparsely strigose along ribs; lobes ca. 2 mm. Corolla 2.5–2.8 cm, tube red-purple; lobes blue, obdeltate, ca. 8 × 8 mm, apex emarginate and narrowly triangular mucronate. Stamens slightly exerted; anthers blue, ca. 2 mm. Ovary ellipsoid. Styles included in short-styled forms, exerted beyond anthers in long-styled forms. Capsule pale yellowish brown, ellipsoid-ovoid, ca. 6 mm. Seeds red-brown. Fl. Jul–Sep, fr. Aug–Oct. $2n = 14$.

* Rocky places, often in foothills. Beijing Shi, Henan, Jiangsu, Shanxi, Zhejiang.

Ornamental.

