

8. DIARTHRON Turczaninow, Bull. Soc. Imp. Naturalistes Moscou 5: 204. 1832.

草瑞香属 cao rui xiang shu

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*Stelleropsis* Pobedimova.

Annual or perennial herbs, or small deciduous shrubs. Leaves alternate; leaf blade elliptic, linear, or lanceolate, herbaceous. Inflorescence usually terminal, sometimes apparently axillary, laxly racemose to capitate, without involucre. Flowers bisexual, small, 4(or 5)-merous. Calyx reddish, white, or green; tube persistent, slender, urceolate, funnel-shaped, or cylindrical, contracted and articulate at apex of ovary; lobes 4, erect and slightly spreading. Petaloid appendages absent. Stamens as many as or twice as many as calyx lobes, in one or two series, opposite to calyx lobes when in one series; filaments absent; anthers oblong, included. Disk annular, oblique, sometimes tiny or absent. Ovary ± stipitate, glabrous, 1-loculed; style excentric or subterminal, short; stigma subclavate, thick. Fruit dry, enclosed by persistent calyx base; pericarp thin, glossy black.

Sixteen species: C and SW Asia, SE Europe (European Russia); four species in China.

The authors have accepted the view of Kit Tan (Notes Roy. Bot. Gard. Edinburgh 40: 219–220. 1982) that the difference in habit used to separate the annual herbs of *Diarthron* sensu stricto from the perennial herbs traditionally placed in *Stelleropsis* and the small shrubs in the C Asian genus *Dendrostellera* (C. A. Meyer) Tieghem are outweighed by the similar 4-merous flowers and ebracteate inflorescences combined with the continuous range of variation in habit.

- 1a. Calyx tube 2–4 mm; annual herbs, mainly branched well above base, roots not thickened; hypogynous disk very reduced or absent; inflorescence terminal, lax, elongated, spikelike.
- 2a. Calyx green or light green, lower part of tube not ribbed, lobes obovate-elliptic; stamens 4 or 5 in 1 series ..... 1. *D. linifolium*
- 2b. Calyx white, lower part of tube ribbed, lobes linear; stamens 8 in 2 series ..... 2. *D. vesiculosum*
- 1b. Calyx tube 8–12 mm; small shrub or perennial herb, if herbaceous or suffrutescent then with stems rarely branched above base and roots often thickened; hypogynous disk present, annular; inflorescence a compact raceme, spike, or head, sometimes grouped into panicles, sometimes apparently axillary.
- 3a. Inflorescence elongated; leaf blade 5–10 mm wide; calyx tube 8–10 mm ..... 3. *D. altaicum*
- 3b. Inflorescence capitate; leaf blade 3–5 mm wide; calyx tube 10–12 mm ..... 4. *D. tianschanicum*

1. *Diarthron linifolium* Turczaninow, Bull. Soc. Imp. Naturalistes Moscou 5: 204. 1832.

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*Thesium chanetii* H. Léveillé; *T. glabrum* Schindler.

Herbs annual, erect, 10–40 cm tall. Stem usually single, branched from above base, erect, lower part pale purple, otherwise pale green, terete, slender, glabrous. Leaves alternate, rarely opposite; petiole absent or to 0.6 mm; leaf blade paler abaxially, linear to narrowly lanceolate, 0.7–1.5 × 0.1–0.3 cm, herbaceous, both surfaces glabrous, base cuneate, margin slightly revolute, sometimes sparsely white ciliate, apex obtuse-rounded; midrib conspicuous abaxially, slender, obscure adaxially; lateral veins obscure. Inflorescences terminal, racemose. Pedicel ca. 1 mm, swollen at apex. Calyx green; tube cylindrical, 2.2–3 mm, slender, exterior glabrous or sparsely sericeous; lobes 4, erect or slightly spreading, ovate-elliptic, ca. 0.8 mm, apex acuminate. Stamens 4(or 5), inserted above middle of calyx tube; filament short, ca. 0.5 mm; anthers broadly ovate, very small, included within calyx tube. Disk obscure. Ovary ellipsoid, ca. 0.8 mm, glabrous, stipitate; style filiform, 0.8–1 mm; stigma clavate, slightly swollen. Drupe black, ovoid or conic, ca. 2 × 1.1 mm, enclosed in persistent calyx; pericarp membranous, glabrous. Fl. May–Jul, fr. Jun–Aug. 2n = 18.

Sandy places; 500–1400 m. Gansu, Hebei, Jiangsu (Tongshan), Jilin, Shaanxi, Shanxi, Xinjiang [Mongolia, Russia].

2. *Diarthron vesiculosum* (Fischer & C. A. Meyer) C. A. Meyer, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 1: 359. 1843.

囊管草瑞香 nang guan cao rui xiang

*Passerina vesiculosa* Fischer & C. A. Meyer, Bull. Soc. Imp. Naturalistes Moscou 12: 170. 1839; *Diarthron carinatum* Jaubert.

Herbs annual, erect, ca. 50 cm tall. Stem usually single, densely branched from above base, erect, lower part purplish red, otherwise pale green, terete, slender, glabrous or sparsely puberulous when young. Leaves alternate; petiole very short or absent; leaf blade linear to linear-lanceolate, 0.7–1.2 × 0.2–0.3 cm, herbaceous, both surfaces glabrous, base broadly cuneate, margin not revolute, apex obtuse-rounded; midrib obscure on both surfaces or slightly visible abaxially; lateral veins obscure. Inflorescences terminal, racemose or spicate, ca. 3.5 cm, usually slightly white pubescent or glabrous. Pedicel very short, 0.5–1 mm, articulate at apex. Calyx white; tube cylindrical, 3–3.5 mm, slender, lower part conspicuously ribbed; lobes 4, slightly spreading, oblong-linear, ca. 0.4 mm, apex obtuse. Stamens 8, both whorls inserted above middle of calyx tube; anthers subellipsoid, ca. 0.2 mm; included within calyx tube. Ovary ellipsoid, stipitate; style filiform, long. Drupe light red, ovoid or conic, ca. 2 mm, glabrous, enclosed in persistent calyx. Fl. and fr. Jun–Aug. 2n = 18.

Sandy places; 600–900 m. Xinjiang (Gongliu, Tacheng, Xinyuan) [Afghanistan, NW India, Kazakhstan, Pakistan, Russia (including European part); SW Asia].

**3. *Diarthron altaicum*** (M.-A. Thiébaud ex Persoon) Kit Tan, Notes Roy. Bot. Gard. Edinburgh 40: 219. 1982.

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*Stellera altaica* M.-A. Thiébaud ex Persoon, Syn. Pl. 1: 436. 1805; *Passerina racemosa* Wikström; *Stelleropsis altaica* (M.-A. Thiébaud ex Persoon) Pobedimova; *Wikstroemia altaica* (M.-A. Thiébaud ex Persoon) Domke.

Herbs perennial, 20–50 cm tall. Rhizome woody, brown. Stems many, clustered, erect, unbranched, base slightly woody, with many leaf scars. Leaves alternate, closely spaced; petiole 1–1.5 mm; leaf blade elliptic, 2–2.5 × 0.5–1 cm, herbaceous, both surfaces glabrous, base cuneate, rarely obtuse-rounded, margin slightly revolute, apex obtuse or acute; midrib conspicuous; lateral veins 3–5 pairs, proximal pair usually longer, sometimes visible on both surfaces. Inflorescences terminal, spicate, at first short but later elongated, 3–7 cm. Flower fragrant. Calyx reddish; tube cylindric, 8–10 mm, slender, exterior glabrous; lobes 4, broadly lanceolate, 5–6 × 2.5–3 mm, apex acuminate. Stamens 8, the 2 whorls inserted 1–1.5 mm apart, upper whorl in throat; filaments short; anthers oblong, (0.8–)1.5 mm, base and apex retuse; upper ones slightly exerted from calyx tube. Disk oblique, entire, enclosing stipe of ovary. Ovary ellipsoid, stipitate, pubescent distally; style ca. 1 mm; stigma globose. Drupe dark green, obconic, glabrous, enclosed in persistent calyx. Fl. May–Jun, fr. Jul–Aug.

Sunny and dry slopes, sandy places. Xinjiang [Russia (Siberia); C Asia].

**4. *Diarthron tianschanicum*** (Pobedimova) Kit Tan, Notes Roy. Bot. Gard. Edinburgh 40: 220. 1982.

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*Stelleropsis tianschanica* Pobedimova, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. nauk S.S.S.R. 12: 153. 1950.

Herbs perennial, 15–30 cm tall. Rhizome woody, yellowish brown or light brown. Stems 10–20, erect, unbranched, herbaceous or slightly woody near base, glabrous; leaf scars green, small. Leaves alternate; petiole ca. 1 mm; leaf blade oblong-elliptic to narrowly elliptic, 1.4–2 × 0.3–0.5 cm, herbaceous, both surfaces glabrous, base broadly cuneate, margin slightly revolute or not, sparsely white ciliate, apex acute or slightly acuminate; midrib conspicuous, flattened on both surfaces or raised abaxially; lateral veins 3–5 pairs, second proximal pair

usually longer, ± visible on both surfaces. Inflorescences terminal, capitate or shortly racemose, to 1 cm, 15–20-flowered. Pedicel short, 1–2 mm, articulate at apex, glabrous. Calyx reddish; tube funnel-shaped-cylindric, 9–12 mm, articulate, contracted above ovary after anthesis, exterior glabrous; lobes 4, narrowly ovate or ovate-lanceolate, 5–7 × 1.5–2.2 mm, apex obtuse. Stamens 8, upper whorl on and slightly below throat; filaments short; anthers oblong, ca. 1 mm, base and apex retuse. Disk annular, oblique, enclosing base of ovary, margin usually toothed. Ovary ellipsoid, ca. 1.3 mm, brown pilose above middle or at apex, stipitate; style filiform, short; stigma globose. Drupe green, ellipsoid, enclosed in persistent calyx. Fl. Jun, fr. Aug.

Sunny and dry slopes, sandy places; 1700–2000 m. Xinjiang (Zhaosu) [C Asia].

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