

26. DICLIPTERA Jussieu, Ann. Mus. Natl. Hist. Nat. 9: 267. 1807, nom. cons.

狗肝菜属 *gou gan cai shu*

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Diapedium K. D. Koenig.

Herbs, diffuse, annual, biennial, or perennial [or sometimes shrubs], with cystoliths; young stems \pm 6-angled in cross-section. Leaves petiolate; leaf blade margin entire or subsinuate. Inflorescences of cymes in leaf axils or in terminal spikelike thyrses or panicles of thyrses. Flowers subtended by an involucre of several pairs of bracteoles (= cymule); outermost pair equal or unequal in size, usually concealing inner pair(s), calyx, and base of corolla. Calyx deeply 5-lobed; lobes narrow, equal, apex acute. Corolla pink, resupinate 180° by torsion of tube; tube slender, widened apically, limb 2-lipped; lower lip (in upper position) 3-lobed, lobes ascending cochlear in bud; upper lip (in lower position) entire or emarginate. Stamens 2, exerted from mouth of corolla; anthers 2-theous; thecae unequally inserted to superposed, base mucous; staminodes absent. Stigma 2-cleft. Capsule substipitate or stipitate, 2–4-seeded; retinacula present; placenta with retinacula separating elastically and rising from inner capsule wall at dehiscence. Seeds lenticular, papillate, lacking trichomes.

About 100 species: tropical and temperate regions worldwide; four species (two endemic) in China.

- 1a. Outer bracteoles oblong-lanceolate to oblanceolate, greater than $2 \times$ as long as wide.
2a. Outer bracteoles oblong-lanceolate, 5–7 mm, sparsely covered with white or grayish trichomes or glabrescent; corolla ca. 0.5 cm 1. *D. bupleuroides*
2b. Outer bracteoles oblanceolate, 10–14 mm, densely covered with yellow trichomes; corolla ca. 1.5 cm 2. *D. induta*
1b. Outer bracteoles elliptic, subcircular, or obovate, less than $2 \times$ as long as wide.
3a. Corolla pale purple, 1–1.2 cm; outer bracteoles $0.5\text{--}1.3 \times 0.3\text{--}0.8$ cm 3. *D. chinensis*
3b. Corolla pinkish red, ca. 1.8 cm; outer bracteoles $1.5\text{--}2 \times 1\text{--}1.5$ cm 4. *D. elegans*

1. *Dicliptera bupleuroides* Nees in Wallich, Pl. Asiat. Rar. 3: 111. 1832.

印度狗肝菜 *yin du gou gan cai*

Dicliptera roxburghiana Nees var. *bupleuroides* (Nees) C. B. Clarke.

Herbs to 50 cm tall. Stems sulcate, pubescent. Petiole 5–10 mm; leaf blade ovate, $3.5\text{--}7 \times 1.8\text{--}2.8$ cm, glabrous or with 2-celled trichomes, secondary veins 4 or 5 on each side of midvein, base cuneate, margin subentire, apex acuminate. Inflorescences axillary and subsessile or sometimes terminal and shortly pedunculate, cymes, many flowered; peduncle 3–5 mm; bracts lanceolate, 2–3 mm; outer bracteoles green, oblong-lanceolate, $5\text{--}7 \times$ ca. 2 mm, abaxially pubescent, base cuneate, margin entire and ciliate, apex mucronate; inner bracteoles green with yellowish margin, lanceolate, ca. 4×1.5 mm. Calyx ca. 3 mm; lobes subulate, pubescent. Corolla ca. 5 mm, outside pubescent; lip in lower position orbicular, ca. 1.5×1.5 mm; lip in upper position oblong, ca. 2×1 mm, 3-lobed, lobes ovate and ca. 0.3×0.3 mm. Staminal filaments ca. 2 mm; anther thecae spherical. Ovary pilose at tip; style ca. 3 mm. Capsule ca. 3 mm, pilose at tip. Seeds ovate in outline, ca. 1 mm, papillate. Fl. Nov–May, fr. Dec–Jun. $2n = 26$.

Roadsides, forests, shady places; 800–1900 m. Guizhou, Sichuan, Yunnan [Cambodia, India, Laos, Myanmar, Thailand, Vietnam].

2. *Dicliptera induta* W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 10: 175. 1918.

毛狗肝菜 *mao gou gan cai*

Herbs to 60 cm tall. Stems sulcate, densely yellow hirsute especially along sulcae. Petiole 5–12 mm, yellow tomentose;

leaf blade ovate, $3\text{--}4 \times 1.5\text{--}2.5$ cm, both surfaces yellow tomentose especially along veins, secondary veins 3–5 on each side of midvein, base broadly cuneate to subrounded, margin entire, apex acute. Inflorescences axillary, each of 1 or 2 cymes; peduncle 2–3 mm, yellow hirsute; bracts linear-subulate, ca. 5 mm, tomentose; outer bracteoles dark green, oblanceolate, $10\text{--}14 \times 2\text{--}4$ mm, unequal, rigid, both surfaces tomentose especially toward base, base cuneate, apex acute and shortly mucronate; inner bracteoles linear-lanceolate, 8–10 mm, pilose, apex acuminate. Pedicel ca. 1 mm. Calyx ca. 5 mm; lobes linear, pilose, apex acute. Corolla pink, ca. 1.5 cm, pilose; tube basally slender, white pilose; lip in lower position ca. 4 mm, 2-lobed; lip in upper position ca. 3 mm, 3-lobed, lobes ovate. Staminal filaments ca. 6 mm, glabrous; anther thecae spherical, ca. 1 mm. Ovary minutely pilose; style ca. 1.2 cm, minutely pilose. Capsule ca. 4 mm, pilose. Seeds ovate in outline, ca. 2 mm, papillate. Fl. Aug–Sep, fr. Oct–Nov.

• Wastelands; 400–700 m. Yunnan.

3. *Dicliptera chinensis* (Linnaeus) Jussieu, Ann. Mus. Natl. Hist. Nat. 9: 268. 1807.

狗肝菜 *gou gan cai*

Justicia chinensis Linnaeus, Sp. Pl. 1: 16. 1753; *Diapedium chinense* (Linnaeus) K. D. Koenig & Sims; *Dicliptera burmanni* Nees; *D. roxburghiana* Nees.

Herbs 30–80 cm tall, annual or biennial. Stems ridged, basally diffuse, apically erect, glabrous except for pubescence on young branches and nodes. Petiole to 0.5–3 cm, puberulent; leaf blade ovate-elliptic, $2\text{--}8 \times 1.5\text{--}4$ cm, abaxially sparsely puberulent along veins, adaxially glabrous, secondary veins 4 or 5

on each side of midvein and abaxially slightly prominent, base cuneate to attenuate and decurrent onto petiole, margin entire or slightly sinuate, apex shortly acuminate to acute. Inflorescences each of (1–)3 or 4 pedunculate cymes from upper leaf axils, 1–4 cm; inflorescence bracts subulate to linear to oblanceolate to obovate, 3–7.5 × 0.3–1 mm; peduncle 2–5 mm; cymules usually 3 or 4 per cyme; outer bracteoles elliptic to obovate, 5–13 × 3–8 mm, unequal, abaxially puberulent, 3-veined, margin ciliate, apex acute and mucronate; inner bracteoles linear, ca. 5 mm, abaxially hirsute, apex acuminate. Pedicel 0.5–3 mm, puberulent. Calyx ca. 5 mm; lobes linear, equal, margin hirsute, apex acuminate. Corolla pale purple, 1–1.2 cm, outside puberulent; tube slender, ca. 6 mm, ca. 1.5 mm wide; limb 2-lipped; lip in lower position ovate, ca. 5 × 3 mm, apex entire; lip in upper position oblong, ca. 4 × 1.5 mm, shallowly 3-lobed. Stamens inserted near apex of corolla tube; filaments ca. 4 mm, glabrous; thecae spherical, ca. 1.2 mm in diam., parallel. Ovary pilose at tip; style ca. 1.4 cm. Capsule broadly ellipsoid, ca. 6 mm, puberulent, 4-seeded, apex apiculate. Seeds circular in outline, ca. 2 mm in diam., covered with apically barbed papillae. Fl. Sep–Jan, fr. Nov–Feb. $2n = 26$.

Streamsides, trailsides; below 1800 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Sichuan, Taiwan, Yunnan [Bangladesh, India, Vietnam].

This species is used medicinally.

4. *Dicliptera elegans* W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 10: 174. 1918.

优雅狗肝菜 you ya gou gan cai

Dicliptera mairei Benoist.

Herbs 60–120 cm tall. Stems erect, branched, slender, sulcate, sparsely pubescent. Petiole 0.5–1.5 cm, sulcate, pubescent; leaf blade ovate to ovate-lanceolate, 4–8 × 2–5 cm, abaxially pale gray and sparsely pubescent, adaxially green, densely covered with cystoliths, and densely brownish pilose on midveins but otherwise sparsely pubescent with few large-celled white trichomes, secondary veins 4–6 on each side of midvein, base broadly cuneate and decurrent onto petiole, margin entire or sinuate, apex acuminate. Inflorescences axillary, each of 2 or 3 cymes; peduncle to 7 cm, white tomentose; inflorescence bracts linear, 7–10 × 1–2 mm, puberulent; cymules 3–6 per cyme; outer bracteoles subcircular to obovate, 1.5–2 × 1–1.5 cm, unequal, abaxially with cystoliths and pilose, palmately 3- or 5-veined, base rounded, apex mucronate; inner bracteoles linear-lanceolate, 5–7 × ca. 1 mm, abaxially puberulent, apex acuminate. Pedicel 0.5–2 mm. Calyx 6–7 mm; lobes linear-lanceolate, outside puberulent, apex acuminate. Corolla pinkish red, ca. 1.8 cm, outside pubescent; tube slender; limb 2-lipped. Staminal filaments ca. 5 mm, glabrous; anther thecae spherical, ca. 1 mm, inserted at slightly different levels. Ovary slightly pilose. Capsule ca. 6 mm, light yellow pilose. Seeds light brown, circular in outline, ca. 1.5 × 1.5 mm, compressed, yellowish papillate. Fl. Aug–Oct, fr. Oct–Dec.

• Forest margins, thickets, roadsides; 600–2000 m. Sichuan, Yunnan.

Dicliptera mairei was incorrectly reduced to *D. induta* by C. C.

Hu (FRPS 70: 238. 2002).

Fl. China 19: 462–463. 2011.