

106. AMPHICARPAEA Elliot ex Nuttall, Gen. N. Amer. Pl. 2: 113. 1818
[“*Amphicarpa*”], nom. cons.

两型豆属 liang xing dou shu

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Herbs, twining. Leaves pinnately 3-foliolate. Inflorescence axillary, racemose, sometimes with apetalous cleistogamous flowers at base or 1–3 in axils of lower leaves, nodes not swollen but sometimes more than 1-flowered. Bracts persistent or deciduous. Calyx tubular, 4- or 5-lobed. Corolla longer than calyx; petals subequal; standard obovate or obovate-elliptic, glabrous, base clawed, with inconspicuous auricles; keels slightly curved. Stamens diadelphous; vexillary stamen free; cleistogamous flowers with only 3–5 anthers. Ovary sessile or subsessile, with sheathing disk at base; ovules many; style glabrous; stigma small, terminal. Legumes of 2 types: normal and underground; normal legumes linear-oblong, dehiscent, compressed, unjointed, few seeded; underground legumes usually orbicular or ellipsoidal, indehiscent, 1-seeded. Seeds subglobose or ovoid; hilum short, lateral; aril not developed.

About five species: tropical Africa, E Asia, North America; three species (two endemic) in China.

- 1a. Perennial herbs; stipules 6–8 mm; leaflets papery or thickly papery 2. *A. ferruginea*
- 1b. Annual herbs; stipules 3–5 mm; leaflets membranous or nearly so.
 - 2a. Bracts ovate or elliptic to broadly elliptic; terminal leaflet rhomboid-ovate or oblate-ovate, apex obtuse, sometimes with mucro 1. *A. edgeworthii*
 - 2b. Bracts linear; terminal leaflet ovate to broadly ovate, apex acute 3. *A. linearis*

1. *Amphicarpaea edgeworthii* Benth in Miquel, Pl. Jungh. 231. 1852.

两型豆 liang xing dou

Amphicarpaea bracteata (Linnaeus) Fernald subsp. *edgeworthii* (Benth) H. Ohashi; *A. edgeworthii* f. *aidzuensis* Matsuda; *A. edgeworthii* var. *japonica* Oliver; *A. japonica* (Oliver) H. Ohashi; *A. trisperma* (Miquel) Baker; *Falcata comosa* (Linnaeus) Kuntze var. *japonica* (Oliver) Makino; *F. edgeworthii* (Benth) Kuntze; *F. japonica* (Oliver) Komarov; *Shusteria trisperma* Miquel.

Herbs, annual, 0.3–1.3 m tall. Stems slender. Stipules lanceolate or ovate-lanceolate, 3–4 mm, densely pubescent; petiole 2–5.5 cm; stipels extremely small, usually deciduous, narrowly triangular; petiolules usually 2–3 mm; leaflets papery or almost membranous; terminal leaflet rhomboid-ovate or oblate-ovate, 2.5–5.5 × 2–5 cm, both surfaces sparsely yellowish brown villous, base rounded, broadly cuneate or nearly truncate, apex obtuse or sometimes with mucro; lateral leaflets usually obliquely ovate or ovate-rhombic, dimorphic. Upper inflorescences axillary, shortly racemose; bracts almost membranous, ovate to elliptic, 3–5 mm. Cleistogamous flowers often present. Normal flowers: pedicel 1–2 mm. Calyx tubular, 5–7 mm, 5-lobed; lobes unequal, sparsely pubescent, apex acuminate. Corolla purplish or white; petals subequal; standard obovate, 1–1.7 cm; wings oblong, with long stipes and acute auricles at base; keels similar to wings. Ovary hairy. Cleistogamous flowers underground, sessile; style curved. Legumes dimorphic: those of normal flowers oblong or obovate-oblong, 2–3.5 × ca. 0.6 cm, compressed, 2–5-seeded; legumes of cleistogamous flowers elliptic or suborbicular, 1–4-seeded. Seeds reniform-orbicular, 2–4 × 2–3 mm; hilum short. Fl. and fr. Aug–Nov. $2n = 40$.

Mountain slopes, roadsides, fields, grasslands; 300–3000 m. Anhui, Fujian, Gansu, Guizhou, Hainan, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Nei Mongol, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [India, Japan, Korea, Russia, Vietnam].

2. *Amphicarpaea ferruginea* Benth in Miquel, Pl. Jungh. 231. 1852.

锈毛两型豆 xiu mao liang xing dou

Amphicarpaea edgeworthii Benth var. *rufescens* Franchet; *A. ferruginea* f. *pauciflora* Pampanini; *A. rufescens* (Franchet) Y. T. Wei & S. K. Lee.

Herbs, perennial. Stems almost robust. Stipules oblong to broadly ovate, 6–8 mm, hairy; petiole 4–12 cm; stipels obvious, linear; petiolules 2–5 mm, densely yellowish brown villous; leaflets papery or thickly papery; terminal leaflet usually ovate or ovate-elliptic to broadly elliptic, 3.5–8.5 × 2–4 cm, both surfaces densely yellowish brown villous, basal veins 3, lateral veins 4–6 on each side, slender, base rounded or broadly cuneate, apex with mucro; lateral leaflets obliquely ovate. Cleistogamous flowers not recorded. Racemes 3–7 cm, pubescent; flowers 2–5 clustered; bracts elliptic, deciduously pubescent. Flower 1.5–2 cm; pedicels 2–4 mm, minutely villous. Calyx tubular, 6–8 mm, 5-lobed; lobes unequal, apex with mucro or shortly acuminate, pubescent. Corolla red or purple; petals subequal; standard obovate-elliptic, ca. 1.2 cm, with short stipe; wings elliptic, base with long stipes and acute auricles, apex obtuse; keels similar to wings. Ovary linear, stipitate, with sheathlike disk at base, 2- or 3-ovuled; style glabrous; stigma capitate. Legume elliptic, 2–3 × 0.6–0.9 cm, slightly inflated, clothed with yellowish brown pubescence, base acuminate, apex beaked. Seeds (1 or) 2 or 3, blackish gray, reniform, ca. 5 × 3 mm. Fl. and fr. Aug–Oct.

• Roadsides, open fields; 2300–3000 m. Sichuan, Yunnan.

3. *Amphicarpaea linearis* Chun & T. C. Chen, Acta Phytotax. Sin. 7: 23. 1958.

腺毛两型豆 xian mao liang xing dou

Herbs, annual. Stems slender, densely hirsute, glabrescent. Stipules linear to linear-lanceolate, 4–5 mm; petiole 4.5–8 cm; stipels small, subulate; petiolules 2–3 mm, hirsute; leaflets membranous or nearly membranous; terminal leaflet ovate to

broadly ovate, 4.5–6 × 3–3.5 cm, both surfaces sparsely adpressed deciduous hirsute, basal veins 3, lateral veins 4 or 5 on each side, slender, base rounded or nearly truncate, rarely broadly cuneate, apex with acute mucro; lateral leaflets obliquely ovate, much smaller. Cleistogamous flowers not recorded. Racemes axillary, 3–7.5 cm; peduncle 1.5–3 cm; bracts linear, 4–5 mm, hairy. Pedicels short, ca. 1 mm. Bracteoles ca. 1.5 mm. Calyx tubular-campanulate, almost glabrous, 5–6 mm, 5-lobed; lobes unequal, lowest one longest. Corolla blue; standard ca. 1 cm; wings and keels with long slender stipes. Anthers small, almost orbicular. Ovary linear, 9-ovuled. Fruit not seen. Fl. Jan.

- Roadsides, open fields. Hainan, Yunnan.

