

115. PHASEOLUS Linnaeus, Sp. Pl. 2: 723. 1753.

菜豆属 *cai dou shu*

Wu Delin (吴德邻 *Wu Te-lin*); Mats Thulin

Twining or erect herbs, often with hooked hairs. Stipules basifixed, persistent, not produced below point of insertion. Leaves pinnately 3-foliolate; stipels present. Racemes axillary, flowers at swollen nodes. Bracts and bracteoles persistent or deciduous. Calyx 2-lipped, upper pair of teeth connate, lower lip 3-toothed. Corolla yellow, white, red, or purple; petals clawed; standard suborbicular, reflexed, sometimes with appendages at base; wings obovate or oblong, adherent to keel; keel linear, beak long, spirally coiled through 1–5 turns. Stamens diadelphous. Style spirally coiled through at least 360°; stigma oblique. Legumes linear or oblong, subterete or compressed. Seeds 2 to many, oblong or reniform; hilum shortly linear, estrophiolate.

About 50 species: native to tropical America; three species (all introduced) in China.

- 1a. Bracteoles inconspicuous, shorter than calyx tube 3. *P. lunatus*
1b. Bracteoles conspicuous, longer than calyx tube.
2a. Inflorescences shorter than leaves; legumes linear-oblong, slightly curved, not broadened toward top 1. *P. vulgaris*
2b. Inflorescences longer than leaves; legumes falcate-oblong, broadened toward top 2. *P. coccineus*

1. *Phaseolus vulgaris* Linnaeus, Sp. Pl. 2: 723. 1753.

菜豆 *cai dou*

Annual herbs, twining or suberect. Stems pubescent or glabrescent when old. Stipules lanceolate, ca. 4 mm; leaflets broadly ovate or obovate-rhombic, lateral ones oblique, 4–16 × 2.5–11 cm, pubescent, base rounded or broadly cuneate, margin entire, apex acuminate. Racemes shorter than leaves, usually several flowered at top of rachis. Bracteoles ovate, usually as long as calyx or slightly longer, persistent. Calyx cup-shaped, 3–4 mm, upper lip emarginate. Corolla white, yellow, violet, or red; standard 9–12 mm wide; wings obovate; keel ca. 1 cm, apex spirally twisted. Ovary pubescent. Legumes linear-oblong, 10–15 × 1–1.5 cm, slightly curved and turgid, glabrous, beaked. Seeds 4–10, white, brown, blue, or variegated, oblong or ensiform, 0.9–2 × 0.3–1.2 cm. Fl. Apr–Jul.

Cultivated. Throughout China [native to tropical America; widely cultivated everywhere].

This species is used as a vegetable.

Phaseolus vulgaris var. *humilis* Alefeld is a variety frequently cultivated in Guangdong.

2. *Phaseolus coccineus* Linnaeus, Sp. Pl. 2: 724. 1753.

荷包豆 *he bao dou*

Phaseolus multiflorus Willdenow.

Perennial herbs, twining, usually annual crop in temperate zone. Stems pubescent or glabrous. Stipules small, inconspicuous; leaflets ovate or obovate-rhombic, 7.5–12.5 × 7.5–12.5 cm or more, pubescent or glabrous on both surfaces, apex acuminate or slightly obtuse. Racemes longer than leaves, several flowered at top of rachis. Bracteoles oblong-lanceolate, ca. as long as calyx or slightly longer. Calyx broadly campanulate, glabrous or sparsely pilose; teeth shorter than tube, upper lip triangular. Corolla generally scarlet, occasionally white or variegated (red and white), 1.5–2 cm. Legumes falcate-oblong, (5–)16(–30) × ca. 1.5 cm. Seeds deep purple with red spots, black, or red, rarely white, broadly oblong, 1.8–2.5 × 1.2–1.4

cm. Fl. Apr–Jul.

Cultivated. Guizhou, Hebei, Heilongjiang, Henan, Jilin, Liaoning, Nei Mongol, Shaanxi, Shanxi, Sichuan, Yunnan [native to tropical America; widely cultivated elsewhere].

This species is used for food and as an ornamental.

3. *Phaseolus lunatus* Linnaeus, Sp. Pl. 2: 724. 1753.

棉豆 *mian dou*

Annual or perennial herbs, twining. Stems pubescent or glabrous. Stipules triangular, 2–3.5 mm; leaflets ovate, 5–12 × 3–9 cm, lateral ones often oblique, sparsely pubescent along veins or glabrous on both surfaces, base rounded or broadly cuneate, apex acuminate or acute. Racemes axillary, 8–20 cm. Bracteoles elliptic, shorter than calyx tube, with 3 elevated veins when dry. Calyx campanulate, 2–3 mm, pubescent. Corolla white, yellowish, or reddish; standard 7–10 × 5–8.5 mm, apex emarginate; wings obovate; keel apex twisted for 1–2 turns. Ovary pubescent. Legumes falcate-oblong, 5–10 × 1.5–2.5 cm, compressed, apex beaked, 2–4-seeded. Seeds white, purple, or other color, subrhombic or reniform, 12–13 × 8.5–9.5 mm. Fl. spring to summer.

Cultivated. Fujian, Guangdong, Guangxi, Hainan, Hebei, Hunan, Jiangxi, Shandong, Yunnan [native to tropical America; widely cultivated elsewhere].

The seeds of this species are used for food.

