

165. LATHYRUS Linnaeus, Sp. Pl. 2: 729. 1753.

山黧豆属 shan li dou shu

Bao Bojian (包伯坚); Gregory Kenicer

Herbs annual or perennial. Stem erect or climbing by means of tendrils, winged or wingless. Leaves paripinnate, with rachis terminating in a branched or simple tendril or a bristle, rarely phyllodic or reduced to modified stipules; stipules sagittate or semisagittate, usually smaller than leaflets, sometimes large and leaflike; leaflets 1- to many paired, elliptic, ovate, ovate-oblong, lanceolate, or linear; veins parallel, pinnate, or reticulate. Inflorescence an axillary, pedunculate, 1- to many flowered raceme. Calyx campanulate, unequally or equally toothed; teeth not leaflike, at least 2 teeth less than $2 \times$ as long as tube. Corolla purple, pink, yellow, or white, sometimes crimson, brick red, or orange. Staminal tube not oblique at apex; filaments filiform or distally dilated. Style linear or distally dilated, dorsally compressed, pubescent on upper side. Legume laterally compressed, dehiscent. Seeds 2 to many.

About 160 species: mainly in Asia, Europe, and North America, with some South American endemics; 18 species (three endemic, three introduced) in China.

The yellow-flowered species of SE China are a particularly difficult and poorly understood group, represented by only limited gatherings.

- 1a. Leaves without tendril at apex (aristate).
 - 2a. Stem slightly winged; leaflets with 3(–5) parallel veins 13. *L. komarovii*
 - 2b. Stem wingless; leaflets with reticulate veins.
 - 3a. Corolla purple-red; stipules linear or spurlike (subulate) 8. *L. vaniotii*
 - 3b. Corolla orange-yellow or yellow; stipules leaflike (more than 3 mm wide).
 - 4a. Leaflets ovate or elliptic 6. *L. gmelinii*
 - 4b. Leaflets linear to linear-lanceolate 7. *L. krylovii*
- 1b. Leaves with simple or branched tendril at apex.
 - 5a. Stem winged (more than 1 mm).
 - 6a. Leaves with 1 pair of leaflets; style twisted.
 - 7a. Raceme 5–15-flowered 17. *L. latifolius*
 - 7b. Raceme 1–3(or 4)-flowered.
 - 8a. Leaflets ovate-oblong or elliptic; corolla 20–30 mm; legume wingless 16. *L. odoratus*
 - 8b. Leaflets lanceolate to linear; corolla 12–15(–24) mm; legume winged at sutures 15. *L. sativus*
 - 6b. Leaves with more than 1 pair of leaflets; style not twisted.
 - 9a. Stipules similar to leaflets, 35 mm or longer; leaflets oval to oblong 2. *L. pisiformis*
 - 9b. Stipules less than 35 mm; leaflets linear, linear-lanceolate, or elliptic-lanceolate.
 - 10a. Leaflets with pinnate or subparallel veins, stipules without reflexed basal spur 11. *L. palustris*
 - 10b. Leaflets with 5 prominent parallel veins, stipules with reflexed basal spur 12. *L. quinquenervius*
 - 5b. Stem wingless.
 - 11a. Leaves with 1 pair of leaflets.
 - 12a. Corolla yellow; stipules sagittate 18. *L. pratensis*
 - 12b. Corolla purple-red; stipules semisagittate 14. *L. tuberosus*
 - 11b. Leaves with more than 1 pair of leaflets.
 - 13a. Stipules large, subequaling or equaling leaflets; leaflets ovate to broadly ovate 1. *L. davidii*
 - 13b. Stipules obviously smaller than leaflets.
 - 14a. Leaflets large, 9–12 cm, ovate-lanceolate, strongly caudate at apex 9. *L. caudatus*
 - 14b. Leaflets less than 9 cm, not strongly caudate at apex.
 - 15a. Stem procumbent; stipules sagittate 5. *L. japonicus*
 - 15b. Stem erect; stipules semisagittate.
 - 16a. Longest calyx tooth equaling tube 11. *L. palustris*
 - 16b. Longest calyx tooth shorter than tube.
 - 17a. Leaflets narrowly elliptic or narrowly ovate; corolla yellow 10. *L. anhuiensis*
 - 17b. Leaflets elliptic, ovate, or oblong; corolla pink or purple.
 - 18a. Plant 20–30 cm high; raceme 2–5-flowered 3. *L. humilis*
 - 18b. Plant 80–100 cm high; raceme 9–11(–13)-flowered 4. *L. dielsianus*

1. *Lathyrus davidii* Hance, J. Bot. 9: 130. 1871.

大山黧豆 da shan li dou

Herbs perennial, with tuberous roots, 1–1.8 m tall. Stem strong, erect or decumbent, glabrous, wingless, hollow in lower parts. Leaves with strong, branched tendrils; stipules large,

often similar to leaflets, semisagittate, ovate, 40–60 mm, entire or sometimes dentate at base; leaflets (2 or)3- or 4(or 5)-paired, usually ovate, 40–70 × 50–110 mm, glabrous, with reticulate veins, margin entire, apex mucronate. Raceme subequaling leaf, 10–40-flowered. Calyx campanulate, ca. 5 mm, glabrous, shortly toothed. Corolla yellow, maturing to orange, 1.5–2 cm; standard elliptic, with claw; wings subequaling standard, auriculate at base. Ovary linear, glabrous. Legume orange-brown, linear, 8–15 cm. Seeds purple-brown, broadly oblong, smooth. Fl. May–Jul, fr. Aug–Oct.

Forest margins, scrub forests, slopes; below 1800 m. Anhui, Gansu, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jilin, Nei Mongol, Shaanxi, Shandong, Shanxi [Japan, Korea, Russia].

2. *Lathyrus pisiformis* Linnaeus, Sp. Pl. 2: 734. 1753.

大托叶山黧豆 da tuo ye shan li dou

Herbs perennial, to 2 m tall. Stem erect, glabrous, winged. Leaves with branched tendril at apex; stipules large, ovate or elliptic, 35–65 mm, glabrous, often with dentate basal lobe; leaflets 3–5-paired, narrowly ovate, ovate-lanceolate, or elliptic-lanceolate, 55–90 × 20–30 mm, glabrous, with subparallel veins. Raceme 8–14-flowered. Calyx campanulate, ca. 12 mm, glabrous, unequally toothed. Corolla red-purple; standard ca. 13 mm, retuse at apex, often with darker venation; wings auriculate at base; keels ca. 12 mm. Ovary linear, glabrous. Legume dark brown, ca. 4.5 × 5.5 mm. Seeds light yellow, oblate-spherical, smooth. Fl. May–Jun, fr. Jul–Aug.

Forests, valleys, riverbanks; 1100–1500 m. Xinjiang [Russia; C and E Europe].

3. *Lathyrus humilis* (Seringe) Sprengel, Syst. Veg. 3: 363. 1826.

矮山黧豆 ai shan li dou

Orobis humilis Seringe in Candolle, Prodr. 2: 378. 1825; *Lathyrus altaicus* Ledebour.

Herbs perennial, 20–30 cm tall. Stem slender, erect, sometimes branching, puberulent, wingless. Leaves paripinnate; tendril weakly branched or simple; stipules foliose, semisagittate, 10–16 mm, dentate; leaflets (2 or)3- or 4-paired, ovate or elliptic, 15–30(–50) × 10–20 mm, glabrous or abaxially puberulent, with reticulate veins. Raceme shorter than leaf, 2–5-flowered. Calyx campanulate; longest tooth ca. 1/2 length of tube. Corolla purple-red, 1.5–2 cm; standard orbicular, with claw; wings and keels auriculate at base. Ovary linear, glabrous. Legume linear, 4.3–5 cm. Seeds red-brown, elliptic, smooth. Fl. May–Jul, fr. Aug–Sep.

Forest margins, scrub forests, hill grasslands; below 2500 m. Gansu, Hebei, Heilongjiang, Jilin, Liaoning, Nei Mongol, Shanxi, Xinjiang [Korea, Mongolia, Russia].

4. *Lathyrus dielsianus* Harms, Bot. Jahrb. Syst. 29: 417. 1900.

中华山黧豆 zhong hua shan li dou

Lathyrus davidii Hance var. *roseus* C. W. Chang; *L. wilsonii* Craib.

Herbs perennial, 80–100 cm tall. Stem erect, glabrous,

wingless. Leaves with simple or branched tendril; stipules obliquely ovate, toothed, on upper leaves often lanceolate, entire; leaflets (2 or)3- or 4(or 5)-paired, ovate to ovate-lanceolate, 35–55(–65) × 13–20(–35) mm, glabrous, with reticulate veins. Raceme shorter than or subequaling leaf, 9–11(–13)-flowered. Calyx campanulate, 7–8 mm, glabrous, shortly toothed; longest tooth shorter than tube, 1.5–2 mm. Corolla pink or purple, 1.8–1.9 cm; standard orbicular, with claw; wings obovate, auriculate at base. Ovary linear, glabrous. Legume brown, linear, 5.5–8 cm. Seeds elliptic, ca. 5 mm, smooth. Fl. May–Jun, fr. Jul–Aug.

• Forests, slopes, riverbanks. Chongqing, Hubei, Shaanxi, Shanxi, Sichuan.

5. *Lathyrus japonicus* Willdenow, Sp. Pl. 3: 1092. 1802.

海滨山黧豆 hai bin shan li dou

Pisum maritimum Linnaeus, Sp. Pl. 2: 727. 1753; *Lathyrus aleuticus* (Greene ex T. G. White) Pobedimova; *L. japonicus* var. *aleuticus* (Greene ex T. G. White) Fernald; *L. japonicus* subsp. *maritimus* (Linnaeus) P. W. Ball; *L. japonicus* var. *maritimus* (Linnaeus) Kartesz & Gandhi; *L. japonicus* f. *pubescens* (Hartman) H. Ohashi & Tateishi; *L. japonicus* subsp. *pubescens* (Hartman) Korobkov; *L. japonicus* var. *pubescens* (Hartman) Karlsson; *L. maritimus* Bigelow (1824); *L. maritimus* (Linnaeus) Fries (1835); *L. maritimus* var. *aleuticus* Greene ex T. G. White; *L. maritimus* f. *pubescens* (Hartman) Saelán; *L. maritimus* subsp. *pubescens* (Hartman) C. Regel; *L. maritimus* var. *pubescens* (Hartman) X. Y. Zhu; *L. maritimus* var. *velutinus* Fries; *P. maritimum* var. *pubescens* Hartman.

Herbs perennial, 15–50 cm tall. Stem stoloniferous, creeping, wingless. Leaves with branched or simple tendril; stipules sagittate, 10–30 mm, glabrous; leaflets 3–5-paired, long elliptic or obovate, 25–33 × 11–18 mm, glabrous, with reticulate veins visible on both surfaces. Raceme shorter than leaf, 2–5-flowered. Calyx campanulate, 9–10(–12) mm, glabrous; teeth unequal, longest tooth 5–6 mm. Corolla purple, ca. 21 mm; standard orbicular, with claw; wings narrowly obovate, occasionally white. Ovary linear, glabrous or rarely hairy. Legume brown or purple-brown, compressed, ca. 5 cm, glabrous or puberulent. Seeds subglobose. Fl. May–Jul, fr. Jul–Aug.

Seashores. Hebei, Jiangsu, Liaoning, Shandong, Zhejiang [widely distributed on coasts of temperate Asia, Europe, North America, and South America (Chile)].

Plants glabrous or slightly hairy have been called *Lathyrus japonicus* f. *japonicus*, whereas plants obviously hairy have been called *L. japonicus* f. *pubescens*. The two forms are sympatrically distributed in China and elsewhere. Although widely recognized, they appear to intrograde, so they are not formally recognized in this account. Plants with white wings and keels have been described as *L. japonicus* f. *albiflorus* Miyabe & Tatewaki (Trans. Sapporo Nat. Hist. Soc. 14: 185. 1936).

6. *Lathyrus gmelinii* (Fischer ex Candolle) Fritsch, Sitzungsber. Kaiserl. Akad. Wiss., Math.-Naturwiss. Cl., Abt. 1, 104: 516. 1895.

新疆山黧豆 xin jiang shan li dou

Orobis gmelinii Fischer ex Candolle, Prodr. 2: 378. 1825; *Lathyrus laevigatus* (Waldstein & Kitaibel) Grenier subsp. *gmelinii* (Fischer ex Candolle) Hendrych; *L. luteus* (Linnaeus) Moench var. *gmelinii* (Fischer ex Candolle) Reichenbach.

Herbs perennial, 60–150 cm tall. Stem erect, glabrous, wingless. Leaves aristate at apex; stipules foliose, semisagittate, 15–30 × 4–10 mm, glabrous, toothed; leaflets 3- or 4-paired, ovate, elliptic, or long elliptic, rarely lanceolate, 30–60(–90) × 10–50 mm, glabrous, with pinnate veins. Raceme longer than leaf, 7–12-flowered, glabrous. Calyx campanulate, ca. 1 cm, glabrous; longest tooth ca. 2 mm. Corolla orange-yellow, 2.5–3 cm; standard ovate, with claw; wings obovate, auriculate at base. Ovary linear, ca. 1.8 cm, glabrous. Legume brown, linear, 6–8 cm. Seeds light brown, smooth. Fl. May–Jul, fr. Jul–Aug.

Forests, riverbanks; 1400–2400 m. Xinjiang [Russia].

This and a number of other Eurasian taxa may represent entities in *Lathyrus laevigatus*, from which they are poorly distinguished.

7. *Lathyrus krylovii* Sergievskaya, Sist. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1933(3–4): 3. 1933.

狭叶山黧豆 xia ye shan li dou

Lathyrus laevigatus (Waldstein & Kitaibel) Grenier subsp. *krylovii* (Sergievskaya) Hendrych.

Herbs perennial, 60–80 cm tall. Stem erect, glabrous, wingless. Leaves aristate at apex; stipules semisagittate, lanceolate or linear, 10–25 × 3–7 mm; leaflets 2–4-paired, linear to linear-lanceolate, 50–130 × 3–16 mm, glabrous, with pinnate veins. Raceme longer than leaf, 2–4-flowered. Calyx campanulate, ca. 8 mm, glabrous; longest tooth ca. 1.5 mm. Corolla yellow, 2–5 cm; standard orbicular, ca. 2.7 cm, with claw; wings narrowly obovate, auriculate at base. Ovary linear, glabrous. Legume brown, linear, 8–9 cm. Seeds elliptic, 3–4 mm. Fl. Jun–Jul, fr. Aug–Sep.

Hill forests; ca. 1800 m. Xinjiang [Russia].

8. *Lathyrus vaniotii* H. Léveillé, Repert. Spec. Nov. Regni Veg. 7: 230. 1909.

东北山黧豆 dong bei shan li dou

Herbs perennial, 40–70 cm tall. Stem erect, glabrous, wingless. Leaves aristate at apex; stipules semisagittate, subulate, occasionally linear, falcate with a short (ca. 2 mm) basal spur, 5–15 × 1–3 mm; leaflets glaucous-gray abaxially, dark green adaxially, (2 or)3- or 4(–6)-paired, lanceolate or narrowly lanceolate on lower stem leaves, narrowly ovate, rarely oblong on upper stem leaves, 40–60 × 15–25 mm, glabrous, with reticulate veins, apex shortly mucronate. Raceme 4–8-flowered. Calyx campanulate, ca. 11 mm, glabrous; longest tooth ca. 4 mm. Corolla purple-red, 1.8–2.5 cm; standard ca. 21 mm, with claw; wings equaling standard, ovate. Ovary linear, glabrous. Fl. May–Jun.

Forested slopes. Heilongjiang, Jilin [Korea].

9. *Lathyrus caudatus* Z. Wei & H. P. Tsui, Bull. Bot. Res., Harbin 4(1): 49. 1984.

尾叶山黧豆 wei ye shan li dou

Herbs perennial, to 120 cm tall. Stem strong, erect, branched, sparsely glandular, wingless. Leaves with simple or weakly branching tendril; stipules semisagittate, linear-lanceolate, 12–18 × 1.5–2 mm; leaflets 4- or 5-paired, ovate-lanceo-

late, 90–120 × 25–40 mm, glabrous, with 5 prominent veins, strongly caudate at apex. Raceme ca. 10 cm, many flowered. Calyx campanulate; teeth unequal, longest tooth ca. 7 mm. Corolla light yellow, 1.8–2 cm; standard orbicular, with claw; wings slightly shorter than keels. Ovary linear, glabrous, brown glandular. Legume linear, 6–8 cm, brown glandular. Seeds 8–12.

• Scrub forests; 100–200 m. Zhejiang (Jiande).

This species is known only from the type gathering.

10. *Lathyrus anhuiensis* Y. J. Zhu & R. X. Meng, Acta Phytotax. Sin. 24: 402. 1986.

安徽山黧豆 an hui shan li dou

Lathyrus henanensis S. Y. Wang.

Herbs perennial, 80–120 cm tall. Stem erect, much branched, glabrous, wingless. Leaves 10–30 cm, mucronate or with a simple tendril at apex; stipules semisagittate, 8–15 × 2–5 mm; leaflets 3–8-paired, narrowly elliptic or narrowly ovate, 30–70 × 10–30 mm, glabrous, with pinnate veins, margin entire. Raceme subequal or shorter than leaf, ca. 10-flowered. Calyx campanulate, unequal; longest tooth ca. 1/5 length of tube. Corolla yellow, 14–18 mm; standard broadly obovate, with claw; wings shorter than standard, obovate, subequaling keel. Ovary linear, ca. 11 mm, purple-brown glandular hairy; style curved inward. Legume light brown, linear, 6–8 cm. Seeds brown, oblong. Fl. May–Jul, fr. Jun–Sep.

• SE Anhui (Xuancheng), Henan.

This species is known from few gatherings: from the type gatherings of the species and its synonym *Lathyrus henanensis* (neither of which were available for this revision). Two incomplete specimens collected by Augustine Henry may represent additional gatherings of this: *Aug. Henry 6595* (BM) and a specimen dated 1889 (K).

11. *Lathyrus palustris* Linnaeus, Sp. Pl. 2: 753. 1753.

欧山黧豆 ou shan li dou

Herbs perennial, 15–100 cm tall. Stem climbing, branched, pubescent or glabrous, winged or unwinged. Leaves with simple or branched tendril at apex; stipules semisagittate, 12–25(–30) × 2–10 mm; leaflets 2–4-paired, linear to broadly lanceolate, without reflexed basal spur, 30–60 × 4–10(–15) mm, pubescent, veins pinnate or subparallel, abaxially prominent. Raceme longer than leaf, (2 or)3- or 4(–10)-flowered. Calyx campanulate, unequally toothed; longest tooth equaling tube. Corolla purple, 13–15(–20) mm; standard obovate, with claw; wings shorter than standard, obovate and longer than keels. Ovary linear. Legume linear, 3–4 cm, beaked at apex. Fl. and fr. Jul–Sep.

Marshes, wet meadows, a weed of rice fields; sea level to 3500 m. Gansu, Hebei, Heilongjiang, Hubei, Jiangsu, Jilin, Liaoning, Nei Mongol, Qinghai, Shanxi, Sichuan, Xinjiang, Xizang, Yunnan, Zhejiang [Japan, Korea, Mongolia, Russia; Europe, North America].

Lathyrus palustris is widely distributed in the N temperate zone in Europe, Russia, E Asia, and North America. It is a highly variable taxon with many entities described from it, although few of these stand up to

scrutiny. East Asian specimens are often referred to *L. palustris* subsp. *pilosus*, but this is based purely on pubescence, a character with no other correlates. Consequently, we treat pubescent individuals at the varietal level. This species is often confused with *L. quinquenervius*. See under that species for the distinguishing characters.

- 1a. Stem wingless (subsp. *exalatus*
H. P. Tsui) 11c. var. *exalatus*
1b. Stem winged (subsp. *palustris*).
2a. Leaves with branched tendril;
leaflets 2–4-paired; raceme
(2 or)3- or 4(or 5)-flowered;
plants pubescent 11a. var. *pilosus*
2b. Leaves with unbranched, short
tendril; leaflets 1- or 2(or 3)-paired;
raceme 1- or 2(–4)-flowered;
plants puberulent or glabrous ... 11b. var. *linearifolius*

11a. *Lathyrus palustris* var. *pilosus* (Chamisso) Ledebour, Fl. Ross. 1: 686. 1843.

毛山黧豆 mao shan li dou

Lathyrus pilosus Chamisso, Linnaea 6: 548. 1831; *L. palustris* subsp. *pilosus* (Chamisso) Hultén.

Plants pubescent. Stem winged. Leaves with branched tendril; stipules semisagittate; leaflets 2–4-paired. Raceme (2 or)3- or 4(or 5)-flowered.

Gansu, Hebei, Heilongjiang, Hubei, Jiangsu, Jilin, Liaoning, Nei Mongol, Qinghai, Shanxi, Sichuan, Yunnan, Zhejiang [Japan, Korea, Mongolia, Russia].

Glabrous plants with the characteristics of *Lathyrus palustris* var. *pilosus* can be referred to the typical variety, *Lathyrus palustris* var. *palustris*, but such individuals have not been reported from China.

11b. *Lathyrus palustris* var. *linearifolius* Seringe in Candolle, Prodr. 2: 371. 1825.

线叶山黧豆 xian ye shan li dou

Plants puberulent or glabrous, 10–40 cm tall. Stem usually narrowly winged. Leaves with short, simple tendril at apex; stipules linear; leaflets 1- or 2(or 3)-paired, linear, rarely elliptic-lanceolate. Raceme 1- or 2(–4)-flowered.

- Sichuan, Yunnan.

Plants of *Lathyrus palustris* from the mountains of Sichuan and Yunnan appear as depauperate specimens of the European *L. palustris* var. *palustris*, having reduced numbers of leaflets and flowers. This is morphologically consistent with Seringe's *L. palustris* var. *linearifolius* from Denmark and Switzerland, but it is unclear if these are convergent traits or represent a genuine disjunction. Pending molecular evidence, we treat these SW Chinese specimens under *L. palustris* var. *linearifolius*. Specimens of *L. quinquenervius* are sometimes labeled *L. palustris* var. *linearifolius*, but *L. quinquenervius* is a far larger plant with parallel veins in the leaflets and linear, acute stipules with a falcate basal spur.

11c. *Lathyrus palustris* var. *exalatus* (H. P. Tsui) X. Y. Zhu in X. Y. Zhu et al., Legumes China, 204. 2007.

无翅山黧豆 wu chi shan li dou

Lathyrus palustris subsp. *exalatus* H. P. Tsui, Bull. Bot. Res., Harbin 4(1): 54. 1984; *L. palustris* f. *exalatus* H. P. Tsui; *L. palustris* f. *pubescens* H. P. Tsui; *L. palustris* var. *pubescens* (H. P. Tsui) X. Y. Zhu.

Plants glabrous to pubescent. Stem wingless. Stipules large, 12–25(–30) × 2–8 mm; leaflets usually broadly lanceolate, 30–60 × 5–10(–15) cm, veins subparallel. Raceme lax, (2 or)3–8(–10)-flowered.

- Shanxi, Sichuan, Xinjiang, Xizang, Yunnan.

Pubescent plants have been separated at the form and varietal levels, but close observation shows a continuum from glabrous to puberulent to pubescent individuals, with no clear separation into two groups. Consequently, we treat this as a single variety under the subspecies.

12. *Lathyrus quinquenervius* (Miquel) Litvinov in Komarov & Alissova-Klobukova, Opred. Rast. Dal'nevost. Kraia 2: 683. 1932.

山黧豆 shan li dou

Vicia quinquenervia Miquel, Ann. Mus. Bot. Lugduno-Batavi 3: 50. 1867.

Herbs perennial, 20–80 cm tall. Stem erect or clambering over surrounding vegetation, rarely branched, winged. Leaves with simple tendril; stipules linear, with reflexed basal spur, often falcate, 7–23 × 0.2–2 mm; leaflets 1- or 2(or 3)-paired, elliptic-lanceolate or linear-lanceolate, 35–80 × 5–8 mm, pubescent, with 5 stiff, prominent parallel veins, rigid when dry. Raceme 5–8-flowered. Calyx campanulate, pubescent; longest tooth equaling tube. Corolla purple-blue or purple, sometimes with white wings and keel, (12–)15–20 mm; standard orbicular, with claw; wings narrowly obovate, auriculate at base. Ovary densely hairy. Legume linear, 3–5 cm. Fl. May–Jul, fr. Aug–Sep.

Forests, hill slopes, roadsides; below 2500 m. Gansu, Hebei, Heilongjiang, Henan, Hubei, Jiangsu, Jilin, Nei Mongol, Qinghai, Shandong, Shanxi, Sichuan [Japan, Korea, Russia].

This species is often confused with *Lathyrus palustris* but can be distinguished by the five strong, parallel veins in long, slender leaflets. The linear, acute stipules with a reflexed basal spur, the strong wings on the stems, and the simple tendrils also aid in identification.

Herbarium specimens are often mislabeled as *Lathyrus palustris* var. *linearifolius*.

13. *Lathyrus komarovii* Ohwi, J. Jap. Bot. 12: 329. 1936.

三脉山黧豆 san mai shan li dou

Orobus alatus Maximowicz, Prim. Fl. Amur. 83. 1859; *Lathyrus alatus* (Maximowicz) Komarov (1904), not Tenore (1811), nor Smith (1813); *O. vernus* Linnaeus var. *alatus* (Maximowicz) Regel.

Herbs perennial, 40–70 cm tall. Stem erect, rarely branched, glabrous, narrowly winged. Leaves aristate at apex; rachis narrowly winged; stipules semisagittate, 15–25 × 3–8(–12) mm, rarely dentate; leaflets (2 or)3–5-paired, narrowly ovate to oblanceolate, glabrous, with 3(–5) parallel veins raised abaxially and sunken adaxially, apex acuminate. Raceme shorter

than leaf, 3–8-flowered; bracts membranous, persistent. Calyx campanulate, glabrous; longest tooth ca. 5 mm, equaling tube. Corolla purple, 13–18 mm; standard orbicular, with claw; wings shorter than standard, auriculate at base. Ovary linear, glabrous. Legume black-brown, linear, 3.7–4.5 cm, glabrous. Seeds brown, subglobose, smooth. Fl. May–Jun, fr. Jun–Aug.

Forests, grasslands. Heilongjiang, Jilin, Nei Mongol [Korea, Russia].

14. *Lathyrus tuberosus* Linnaeus, Sp. Pl. 2: 732. 1753.

玫红山黧豆 mei hong shan li dou

Herbs perennial; rhizomes bearing small tubers. Stem 30–120 cm tall, erect, glabrous, wingless. Leaves with simple or branched tendril at apex; stipules semisagittate, 5–20 × 1–4 mm; leaflets 1-paired, elliptic, oblong, or obovate, glabrous, with parallel veins. Raceme 2–7-flowered. Calyx campanulate, 6–7 mm; longest tooth shorter than tube. Corolla purple-red, 1.5–2 cm; standard subovate, with claw; wings obovate, auriculate at base. Ovary linear; style twisted. Legume brown, linear, 2–4 cm, glabrous. Seeds brown, elliptic, tuberculate. Fl. Jun–Aug, fr. Aug–Sep.

Water meadows, riverbanks; 500–2400 m. Xinjiang [Kazakhstan, Russia; Europe].

15. *Lathyrus sativus* Linnaeus, Sp. Pl. 2: 730. 1753.

家山黧豆 jia shan li dou

Annual herbs, 30–50(–70) cm tall. Stem suberect, glabrous, winged. Leaves with tendril at apex; rachis winged; stipules semisagittate, 18–25 × 2–5 mm; leaflets 1-paired, lanceolate to linear, 18–25 × 2–5 mm, with parallel veins, margin entire. Raceme 1(or 2)-flowered; rachis 3–6 cm. Calyx campanulate, subequally toothed, 2–3 × as long as tube. Corolla white, blue, or pink, 12–15(–24) mm. Ovary linear; style twisted. Legume subelliptic, 2.5–3.5(–4) cm, 2-winged along sutures. Seeds smooth. Fl. Jun–Jul, fr. Aug.

Cultivated as a fodder crop in N China, casual elsewhere [widely cultivated and naturalized; of uncertain origin].

16. *Lathyrus odoratus* Linnaeus, Sp. Pl. 2: 732. 1753.

香豌豆 xiang wan dou

Annual herbs, 50–200 cm tall. Stem climbing, much branched, somewhat hairy, winged. Leaves with branched tendril at apex; rachis winged; stipules semisagittate; leaflets 1-paired, ovate-oblong or elliptic, 20–60 × 7–30 mm, with pinnate veins, rarely subparallel veins, margin entire. Raceme longer than leaf, 1–3(or 4)-flowered. Calyx campanulate, equally toothed and longer than tube. Corolla usually purple, or other colors, 20–30 mm. Ovary linear; style twisted. Legume brown-yellow, linear, 5–7 cm, pubescent. Seeds smooth. Fl. and fr. Jun–Sep.

Widely cultivated in China and worldwide as an ornamental and cut flower [native to Italy (Sicily)].

17. *Lathyrus latifolius* Linnaeus, Sp. Pl. 2: 733. 1753.

宽叶山黧豆 kuan ye shan li dou

Herbs perennial, to 3 m tall. Stem erect, quadrangular, pubescent or glabrous, winged. Leaves with branched tendril at apex; stipules semisagittate, lanceolate to ovate; leaflets 1-paired, elliptic to elliptic-orbicular, or ovate to linear, (30–)40–150 × 3–50 mm, with parallel veins. Raceme 5–15-flowered. Calyx campanulate, ca. 6 mm, equally 5-toothed. Corolla purple to pink, (15–)20–30 mm. Style twisted. Legume brown, 5–11 cm, glabrous. Seeds 10–15.

Cultivated in Shaanxi [native to C and S Europe; cultivated worldwide in temperate areas as an ornamental and fodder crop].

18. *Lathyrus pratensis* Linnaeus, Sp. Pl. 2: 733. 1753.

牧地山黧豆 mu di shan li dou

Herbs perennial, 30–120 cm tall. Stem decumbent or climbing, wingless. Leaves with simple or branched tendril at apex; stipules sagittate, (5–)10–45 × 3–10(–15) mm; leaflets 1-paired, elliptic, lanceolate, or linear-lanceolate, 10–30(–50) × 2–9(–13) mm, puberulent, with parallel veins. Raceme 3–6 × as long as leaf, 5–12-flowered. Calyx campanulate, pubescent; longest tooth longer than tube. Corolla yellow, 12–18 mm; standard orbicular, ca. 14 mm, with claw; wings slightly shorter than standard. Legume black, linear, 2.5–4.5 cm. Seeds yellow or brown, orbicular, smooth. Fl. Jun–Aug, fr. Aug–Oct.

Forests, hill slopes, roadsides. Gansu, Heilongjiang, Hubei, Qinghai, Shaanxi, Sichuan, Xinjiang, Yunnan [Asia, Europe].

