

## 12. Tribe GENISTEAE

染料木族 ran liao mu zu

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This tribe comprises 25 genera and 550–570 species, mainly distributed in Africa and Europe, but with most species of *Lupinus* in North and South America. The 13 Chinese species (in seven genera) are all introduced and cultivated, and the present authors are not aware of any among them having become naturalized. Therefore, full treatments are not provided here; instead there follow a synopsis and key to the genera and species.

*Cytisus* Desfontaines (金雀儿属 jin que er shu). One species is widely cultivated: *C. scoparius* (Linnaeus) Link (Enum. Hort. Berol. Alt. 2: 241. 1822; *Spartium scoparium* Linnaeus, Sp. Pl. 2: 709. 1753), native to the N Atlantic islands and Europe.

*Genista* Linnaeus (染料木属 ran liao mu shu). One species is widely cultivated: *G. tinctoria* Linnaeus (Sp. Pl. 2: 710. 1753; *G. sibirica* Linnaeus), native from W Europe to Kazakhstan and W Siberia, approaching the N borders of China. It might be expected to occur as a native species in N parts of Xinjiang, Nei Mongol, or Heilongjiang.

*Laburnum* Fabricius (毒豆属 du dou shu). One species is cultivated in NE and NW China: *L. anagyroides* Medikus (Vorles. Churpfälz. Phys.-Öcon. Ges. 2: 363. 1787; *Cytisus laburnum* Linnaeus, Sp. Pl. 2: 739. 1753), native to SC Europe.

*Lembotropis* Grisebach (变黑金雀儿属 bian hei jin que er shu). One species is widely cultivated: *L. nigricans* (Linnaeus) Grisebach (Spic. Fl. Rumel. 1: 10. 1843; *Cytisus nigricans* Linnaeus, Sp. Pl. 2: 739. 1753), native to C and SE Europe.

*Lupinus* Linnaeus (羽扇豆属 yu shan dou shu). At least seven species are widely cultivated: *L. albus* Linnaeus (Sp. Pl. 2: 721. 1753), *L. angustifolius* Linnaeus (loc. cit.: 721, 1200), *L. luteus* Linnaeus (loc. cit.: 722), and *L. micranthus* Gussone (Fl. Sicul. Prodr. 2: 400. 1828–1832), all native to the Mediterranean region; *L. perennis* Linnaeus (loc. cit.: 721) and *L. polyphyllus* Lindley (Bot. Reg. 13: t. 1096. 1827), both native to North America; and *L. pubescens* Bentham (Pl. Hartw. 169. 1845), native to South America.

*Spartium* Linnaeus (鹰爪豆属 ying zhua dou shu). One species is widely cultivated: *S. junceum* Linnaeus (Sp. Pl. 2: 708. 1753), native from the N Atlantic islands (Azores), through the Mediterranean region, to the Caucasus region.

*Ulex* Linnaeus (荆豆属 jing dou shu). One species is widely cultivated: *U. europaeus* Linnaeus (Sp. Pl. 2: 741. 1753), native to W Europe.

- 1a. Shrubs or small trees; leaves 3-foliolate, simple, or reduced to scales.
  - 2a. Small trees; leaves 3-foliolate; flowers in pendulous racemes 10–30 cm ..... *Laburnum anagyroides*
  - 2b. Shrubs; leaves 3-foliolate, simple, or reduced to scales; flowers not in pendulous racemes.
    - 3a. Branchlets sharply spiny; leaves reduced to scales ..... *Ulex europaeus*
    - 3b. Branchlets not spiny; leaves 3-foliolate or simple, not reduced to scales.
      - 4a. Calyx subspathaceous; corolla 20–25 mm; legume 6–9 cm ..... *Spartium junceum*
      - 4b. Calyx not spathaceous; corolla 7–18(–20) mm; legume 1.5–4(–7) cm.
        - 5a. Leaves simple; legume linear, 1.5–2.5 cm × 3–4 mm ..... *Genista tinctoria*
        - 5b. Leaves 3-foliolate, or simple on upper part of plant; legume broadly linear or linear-lanceolate, 2–4(–7) cm × 5–10(–13) mm.
          - 6a. Corolla 7–10 mm; legume 5–6(–7) mm wide ..... *Lembotropis nigricans*
          - 6b. Corolla 16–18(–20) mm; legume 8–10(–13) mm wide ..... *Cytisus scoparius*
  - 1b. Herbs; leaves digitately 5- or more foliolate (*Lupinus*).
    - 7a. Corolla yellow, somewhat purple at tip of keel ..... *Lupinus luteus*
    - 7b. Corolla white to blue, pale red, lilac, or violet.
      - 8a. Proximal calyx lip divided to near base; plants annual.
        - 9a. Leaflets oblanceolate to obovate, 5–15 mm wide, both surfaces hirsute; racemes shorter than leaves; plants brownish hirsute ..... *Lupinus micranthus*
        - 9b. Leaflets linear, 2–4 mm wide, adaxially glabrous; racemes longer than leaves; plants white appressed villous ..... *Lupinus angustifolius*
      - 8b. Proximal calyx lip bifid but not divided to near base; plants annual or perennial (sometimes short lived).
        - 10a. Plants perennial; stems subglabrous; flowers alternate, pedicel 4–10 mm.
          - 11a. Leaflets usually 8, 2–5 × 0.7–1.4 cm; racemes lax ..... *Lupinus perennis*
          - 11b. Leaflets 9–15, 4–10 × 1–2.5 cm; racemes dense ..... *Lupinus polyphyllus*
        - 10b. Plants annual or short-lived perennial; stems hairy; flowers alternate or verticillate, pedicel 2–5 mm.
          - 12a. Racemes 10–35 cm, flowers usually verticillate; leaflets both surfaces densely villous; seeds less than 6 mm ..... *Lupinus pubescens*
          - 12b. Racemes 5–10 cm, flowers usually alternate; leaflets abaxially and at margin appressed sericeous, adaxially glabrous; seeds more than 8 mm ..... *Lupinus albus*