

### 3. VISCUM Linnaeus, Sp. Pl. 2: 1023. 1753.

槲寄生属 hu ji sheng shu

Shrubs parasitic, monoecious or dioecious. Branches opposite, dichotomous, or verticillate; internodes terete or flattened with successive internodes at right angles to each other. Leaves well developed or reduced to scales. Inflorescences axillary or terminal, 1–7-flowered cymes; peduncle short to nearly absent; bracts in pairs, connate, boatlike, forming a navicular involucre, or 1 or 2 beneath each flower. Pedicel absent. Male flower ovoid or ellipsoid in mature bud; perianth lobes usually 4. Anthers sessile, adnate to perianth lobes, rarely connate into synandrium, rotund or elliptic, multiloculed, dehiscence by numerous pores. Pollen grains subspheric to prolate, trilobate-circular in cross section. Female flower ovoid to ellipsoid in mature bud; perianth lobes (3 or)4, usually deciduous. Placentation basal. Style short or absent; stigma nipple-shaped or cushion-shaped. Berry globose, ovoid, or ellipsoid, exocarp smooth or verrucose, indehiscent, usually dispersed by birds.

About 70 species: temperate and tropical regions of the Old World; 12 species (four endemic) in China.

- 1a. Plants dioecious; inflorescences terminal, with stems usually branching immediately below.
  - 2a. Leaves reduced, scale-like, 0.5–1 mm; male cymes 3–5-flowered ..... 4. *V. nudum*
  - 2b. Leaves well developed, 2–7 cm; male cymes 3-flowered.
    - 3a. Leaf blade linear, 0.1–0.4 cm wide, veins indistinct; fruit ovoid, greenish, ca. 4 mm in diam. .... 3. *V. fargesii*
    - 3b. Leaf blade not linear, over 0.7 cm wide, 3–5-veined; fruit globose or ellipsoid, yellowish, orange, reddish, or red, 6–8 mm in diam.
      - 4a. Leaf blade elliptic or oblong-lanceolate, 0.7–1.5(–2) cm wide; fruit globose, yellowish, orange, reddish, or red, 6–8 mm in diam. .... 1. *V. coloratum*
      - 4b. Leaf blade usually obovate, 1.5–2.5 cm wide; fruit ellipsoid, yellow, ca. 6 mm in diam. .... 2. *V. album*
- 1b. Plants monoecious; inflorescences axillary, rarely also terminal at the tips of branchlets.
  - 5a. Leaves well developed; base of fruit rounded or contracted into stipe.
    - 6a. Cymes 3-flowered, central flower female and lateral flowers male, adventitious flowers absent; fruit subglobose, base contracted into a ca. 1 mm stalk, tuberculate ..... 9. *V. ovalifolium*
    - 6b. Cymes (3–)5–7-flowered, outermost flowers adventitious; fruit ellipsoid, subglobose, or obovoid, base rounded, smooth.
      - 7a. Cymes 5–7-flowered, central flower male, lateral 4–6 flowers female; fruit ellipsoid, base rounded, apex obtuse ..... 5. *V. yunnanense*
      - 7b. Cymes 3–7-flowered, central 1–3 flowers female, lateral 2–4 flowers male; fruit ellipsoid, subglobose, or obovoid; base rounded or contracted.
        - 8a. Fruit ellipsoid, base slightly rounded; leaf blade elliptic to lanceolate, sometimes falcate ..... 6. *V. monoicum*
        - 8b. Fruit subglobose or obovoid, base contracted into a slender, 2–4 mm stalk; leaf blade lanceolate or falcate, rarely oblong-ovate ..... 7. *V. multinerve*
  - 5b. Leaves reduced, scale-like; base of fruit rounded.
    - 9a. Stem internodes flattened, longitudinally 3–7-ridged, usually over 2.5 mm wide.
      - 10a. Fruit globose, 3–4 mm in diam., whitish or greenish white; often epiparasitic on species of Loranthaceae ..... 10. *V. articulatum*
      - 10b. Fruit ellipsoid, sometimes ovoid, 4–5 mm in diam., reddish or yellow; never epiparasitic ..... 12. *V. liquidambaricola*
    - 9b. Stem internodes subterete or terete, to 2.5 mm wide.
      - 11a. Seedling with 2–3 pairs of leaves; branchlets flattened; fruit ellipsoid or ovoid, 4–5 mm, smooth ..... 11. *V. diospyrosicola*
      - 11b. Seedling leafless; branchlets and branchlets rounded; fruit subglobose 3–4 mm, slightly verruculose ..... 8. *V. loranthi*

**1. *Viscum coloratum*** (Komarov) Nakai, Rep. Veg. Ooryongto, 17. 1919.

槲寄生 hu ji sheng

*Viscum album* subsp. *coloratum* Komarov, Trudy Imp. S.-Peterburgsk. Bot. Sada 22: 107. 1903; *V. alni-formosanae* Hayata; *V. coloratum* var. *alni-formosanae* (Hayata) Iwata.

Shrubs dioecious, green or yellowish green, 30–80 cm tall. Branching apical, di-, tri-, or polychotomous, terete; internodes 5–10 cm, nodes slightly swollen. Leaves opposite or ternate;

petiole short; leaf blade elliptic or oblong-lanceolate, 3–7 × 0.7–1.5(–2) cm, leathery, 3–5-veined, base attenuate, apex obtuse or rounded. Inflorescences terminal. Male inflorescences cymes; peduncle to 5 mm, sometimes almost absent; involucre navicular, 5–7 mm, usually 3-flowered, central flower with 2 bracts or not. Female inflorescences cymose spikes, subsessile or with peduncle 2–3 mm, 3–5-flowered; terminal flower with 2 bracts or not, lateral flowers each with 1 bract; bracts broadly triangular, ca. 1.5 mm. Male flowers ellipsoid-ovoid in bud, ca. 2 mm; perianth lobes 4, triangular, ca. 1 mm. Stigma nipple-

shaped. Berry yellowish, reddish, orange, or red, globose, 6–8 mm in diam. Fl. Apr–May, fr. Sep–Nov.

Forests; 500–2200 m. Anhui, Fujian, Gansu, Guangxi, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Zhejiang [Japan, Korea, E Russia].

The plants have medicinal uses and are parasitic on *Alnus formosana*, *Malus baccata*, *Prunus armeniaca*, *Pterocarya stenoptera*, *Pyrus ussuriensis*, *Quercus mongolica*, *Ulmus pumila*, and species of *Populus*, *Salix*, and *Tilia*.

**2. *Viscum album* Linnaeus subsp. *meridianum* (Danser) D. G. Long, Notes Roy. Bot. Gard. Edinburgh 40: 129. 1982.**

卵叶槲寄生 luan ye hu ji sheng

*Viscum album* var. *meridianum* Danser, Blumea 4: 274. 1941; *V. costatum* Gamble.

Shrubs dioecious, 30–50 cm tall. Branching apical, dichotomous or polychotomous, terete; internodes 3–7 cm, nodes swollen. Leaves sessile or subsessile; leaf blade usually obovate, sometimes elliptic to lanceolate, 3–5 × 1.5–2.5 cm, leathery, 3–5(–7)-veined, base cuneate, apex rounded. Inflorescences terminal. Male inflorescences cymes; peduncle ± absent; 3-flowered, central flower with 2 bracts, lateral flowers each with 1 bract; bracts triangular, 2–3 mm. Pedicel ca. 5 mm. Female inflorescences 3–5-flowered cymose spikes; peduncle 1–2 mm; lateral flowers each with 1 bract, terminal flower with 2 bracts or not; bracts triangular, 2–2.5 mm. Male flowers subglobose in bud, ca. 2 mm; perianth lobes 4, triangular. Anthers elliptic. Female flowers ovoid in bud, 2.5–3 mm; perianth lobes triangular, 1.5–2 mm. Stigma nipple-shaped. Berry yellow, ellipsoid, 8 × 6 mm, smooth. Fl. Nov–Mar, fr. Jul–Dec.

Forests; 1300–2700 m. S Xizang (Gyirong, Zayü), Yunnan [Bhutan, NE India, N Myanmar, Sikkim, N Vietnam].

The plants have medicinal uses and are parasitic on *Carpinus monbeigiana*, *Juglans regia*, *Prunus pseudocerasus*, *Sorbus megalocarpa*, and species of *Acer*.

*Viscum album* var. *album* differs primarily by a globose, greenish white berry. It occurs from Europe through to the Himalayas (Nepal) and could occur in S Xizang; records from the north of the Flora area are mostly misidentifications of *V. coloratum*.

**3. *Viscum fargesii* Lecomte, Notul. Syst. (Paris) 3: 173. 1915.**

线叶槲寄生 xian ye hu ji sheng

Subshrubs dioecious, 15–50 cm tall. Branching apical, beneath inflorescence, usually dichotomous, terete; internodes (3–)6–11 cm, branchlets slender. Leaves opposite, subsessile, scale-like; leaf blade linear, 2–5 × 0.1–0.4 cm, leathery, veins indistinct, base attenuate, apex obtuse. Inflorescences terminal. Male inflorescences cymes, usually 3-flowered; peduncle ± absent. Female inflorescences cymose spikes; peduncle 2–4 mm; 3–5-flowered, terminal flower with 2 bracts or not, lateral flowers each with 1 bract; bracts triangular, ca. 2 mm. Male flowers subglobose in bud, ca. 3 mm; perianth lobes 4. Female flowers ellipsoid in bud, ca. 1.5 mm; perianth lobes 4, ca. 1 mm. Berry greenish, ovoid, 4.5–5 × ca. 4 mm, smooth. Fl. Jun–Sep, fr. Jul–Oct.

• Forests, mountain slopes, valleys; 1300–2800 m. S Gansu, E Qinghai, S Shaanxi, S Shanxi, Sichuan.

The plants are parasitic on *Crataegus wilsonii*, *Populus davidiana*, *Ulmus pumila*, and species of *Salix*.

**4. *Viscum nudum* Danser, Blumea 4: 275. 1941.**

绿茎槲寄生 lü jing hu ji sheng

Shrubs dioecious, green or yellowish green, 30–50 cm tall. Branching apical, beneath inflorescence, dichotomous or trichotomous, terete; internodes 4–8 cm. Leaves reduced to pairs of ± scarious scales, 0.5–1 mm. Inflorescences terminal, cymose spikes; peduncle 2–5 mm; 3–5-flowered, central flower with 2 bracts, lateral flowers each with 1 bract; bracts triangular, ca. 1 mm. Male flowers yellow, ovoid in bud, ca. 3 mm; perianth lobes 4, ovate, apex acute. Anthers elliptic, ca. 1.5 mm. Female flowers ellipsoid-ovoid in bud, 2–2.5 mm; perianth lobes 4, triangular, ca. 0.5 mm. Stigma nipple-shaped. Berry greenish yellow, ovoid, 5–6 × 4 mm, smooth. Fl. and fr. Mar–Dec.

• Forests, mountain slopes; 2000–3800 m. W Guizhou, Sichuan, Yunnan.

The plants have medicinal uses and are parasitic on *Corylus ferox*, *Platycarya strobilacea*, *Prunus persica*, *Pyrus pashia*, *Quercus schottkyana* and species of *Betula*, *Populus*, and *Salix*.

**5. *Viscum yunnanense* H. S. Kiu, Acta Phytotax. Sin. 22: 206. 1984.**

云南槲寄生 yun nan hu ji sheng

Subshrubs monoecious, ca. 50 cm tall. Branching axillary, opposite, decussate, terete; internodes 2–4.5 cm, longitudinally striate. Leaves opposite; petiole short; leaf blade elliptic or lanceolate, 6–8 × 2–3.5 cm, subleathery, 5-veined, base attenuate, apex obtuse or acuminate. Inflorescences axillary, cymes 2–3 together; peduncle 2–3 mm; 5–7-flowered, central flower male, lateral 4–6 flowers female; involucre navicular, ca. 3 mm, seriate. Pedicel absent. Male flower ovoid in bud, ca. 2 mm; perianth lobes 4, triangular, ca. 1 mm. Female flowers ellipsoid in bud, 2–2.5 mm; perianth lobes 4, triangular, ca. 0.5 mm. Stigma nipple-shaped. Berry yellow, ellipsoid, ca. 5 × 2.5 mm, smooth, base rounded, apex obtuse. Fl. and fr. Apr–Jun.

• Forests, mountain slopes; 900–1000 m. Yunnan (Mengla).

The plants are parasitic on *Macaranga denticulata*.

**6. *Viscum monoicum* Roxburgh ex Candolle, Prodr. 4: 278. 1830.**

五脉槲寄生 wu mai hu ji sheng

Shrubs monoecious, ca. 40 cm tall. Branches opposite, decussate, or dichotomous, terete; internodes 3.5–6 cm. Leaves opposite; petiole short; leaf blade elliptic to lanceolate, sometimes falcate, usually oblique, 6–8 × 1.5–3.5 cm, subleathery, (3–)5(–7)-veined, base cuneate or attenuate, apex acute or acuminate. Inflorescences axillary, cymes 1–3 together; peduncle 1–2 mm, base with 1–3 pairs of scales; (3–)5(–7)-flowered; central 1–3 flower(s) female, lateral flowers male; involucre navicular, 3–4 mm, seriate. Pedicel absent. Male flowers ellip-

soid in bud, ca. 1 mm; perianth lobes 4. Female flowers clavate or obovoid in bud, ca. 2.5 mm; perianth lobes 4, triangular, 0.7–1 mm. Stigma nipple-shaped. Berry yellowish green, ellipsoid, 5–8 × 2–4 mm, smooth, base slightly rounded, apex truncate. Fl. and fr. Mar–Dec.

Forests, mountain slopes; 700–1400 m. W Guangxi, S Yunnan [Bangladesh, Bhutan, India, Myanmar, Sikkim, Sri Lanka, Thailand, Vietnam].

The plants are parasitic on *Ficus benjamina*, *Osmanthus fragrans*, *Punica granatum*, and species of *Evodia*.

**7. *Viscum multinerve*** (Hayata) Hayata, Icon. Pl. Formosan. 5: 196. 1915.

柄果槲寄生 bing guo hu ji sheng

*Viscum orientale* var. *multinerve* Hayata, Bot. Mag. (Tokyo) 20: 72. 1906; *V. stipitatum* Lecomte.

Shrubs monoecious, becoming pendulous, green, 50–70 cm tall. Branches opposite and decussate or dichotomous, terete; internodes 4–6 cm. Leaves opposite; petiole short; leaf blade lanceolate, rarely oblong-ovate, subleathery, 5–7-veined, base attenuate, apex acuminate or acute. Inflorescences axillary, sometimes terminal, cymes 1–3 together; peduncle 2–5 mm; 3–5-flowered, central 1–3 flower(s) female, lateral flowers male; involucre navicular, ca. 2 mm, seriate. Pedicel absent. Male flowers ovoid in bud, ca. 1.5 mm; perianth lobes 4. Female flowers ellipsoid or clavate, 2.5–3 mm; perianth lobes 4, triangular, ca. 1 mm. Stigma nipple-shaped. Berry base narrowed into a slender, 2–4 mm stalk, body greenish yellow, subglobose or obovoid, ca. 4 mm in diam., smooth. Fl. and fr. Apr–Dec.

Forests, mountain slopes; 200–1600 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, S Jiangxi, Taiwan, Yunnan [Nepal, Thailand, Vietnam].

The plants are parasitic on *Castanopsis fabri*, *C. fissa*, *Cinnamomum camphora*, and *Lithocarpus calophyllus*.

**8. *Viscum loranthei*** Elmer, Leaf. Philipp. Bot. 8: 3089. 1919.

聚花槲寄生 ju hua hu ji sheng

Subshrubs epiparasitic, monoecious, yellowish green, 15–20 cm tall. Branches usually opposite, decussate, rounded; internodes 1.2–2.5 cm, shorter toward apex (0.4–0.6 cm), slightly longitudinally grooved. Leaves reduced to pairs of ± scarios scales, absent in seedlings. Inflorescences axillary or some cymes fascicled around nodes, 3-flowered, central flower female, lateral flowers male; navicular involucre ca. 1 mm. Male flowers ovoid in bud, ca. 0.7 mm. Female flower ovoid in bud, ca. 1 mm; perianth lobes 4, triangular, 0.3 mm. Stigma nipple-shaped. Berry subglobose, 3–4 mm, slightly verruculose, base rounded. Fl. and fr. Mar–May.

Forests, mountain slopes; 1200–2600 m. Yunnan (Jianchuan, Menghai, Zhongdian) [India, Indonesia, Philippines].

**9. *Viscum ovalifolium*** Wallich ex Candolle, Prodr. 4: 278. 1830.

瘤果槲寄生 liu guo hu ji sheng

Shrubs monoecious, green, 30–50 cm tall. Branches op-

posite and decussate or dichotomous, terete; internodes 1.5–3 cm, nodes ± swollen. Leaves opposite; petiole 2–4 mm; leaf blade ovate, obovate to elliptic, sometimes asymmetric, 3–8.5 × 1.5–3.5 cm, leathery, 3–5-veined, base attenuate or narrowly cuneate, apex obtuse. Inflorescences axillary, cymes solitary or some fascicled; peduncle 1–1.5 mm; 3-flowered, central flower female, lateral flowers male and usually absent; involucre navicular, ca. 2 mm. Pedicel absent. Male flowers ovoid in bud, ca. 1.5 mm; perianth lobes 4. Female flower ellipsoid in bud, 2.5–3 mm; perianth lobes 4, triangular, ca. 1 mm. Stigma nipple-shaped. Berry with base narrowed into a ca. 1 mm stalk, body yellowish, subglobose, 4–6 mm in diam., tuberculate, becoming smooth. Fl. and fr. Jan–Dec.

Forests, orchards, mangrove swamps; near sea level–1100 m. Guangdong, Guangxi, Hainan, Yunnan [Bhutan, Cambodia, NE India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand, Vietnam].

The plants have medicinal uses and are parasitic on *Bruguiera sexangula*, *Castanea mollissima*, *Citrus grandis*, *Clausena lansium*, *Diospyros kaki*, *Sapindus mukorossi*, *Sonneratia caseolaris*, and *Xylosma congestum*.

**10. *Viscum articulatum*** N. L. Burman, Fl. Indica, 311. 1768.

扁枝槲寄生 bian zhi hu ji sheng

*Aspidixia articulata* (N. L. Burmann) Tieghem; *Viscum articulatum* var. *dichotomum* (D. Don) Kurz; *V. dichotomum* D. Don (1825), not Bertero ex Sprengel (1824); *V. nepalense* Sprengel.

Subshrubs often epiparasitic, monoecious, usually becoming pendulous, green, 20–50 cm tall. Branches opposite and decussate or dichotomous, flattened; internodes 1.5–2.5(–4) cm × 2–3(–3.5) mm, longitudinally 3-ridged. Leaves reduced to pairs of ± scarios scales. Inflorescences axillary, cymes 1–3 together; peduncle ± absent; 3-flowered, central flower female, lateral flowers male and often lacking; bracts 2, coalescent, forming a navicular involucre, ca. 1.5 mm. Male flowers globose in bud, 0.5–1 mm; perianth lobes 4. Female flower ellipsoid in bud, 1–1.5 mm; bract annular; perianth lobes 4, triangular, ca. 0.5 mm. Stigma cushion-shaped. Berry whitish or greenish white, globose, 3–4 mm in diam., smooth, base rounded. Fl. and fr. Jan–Dec.

Forests, plains, mountain slopes; 100–1200(–1700) m. Guangdong, Guangxi, Hainan, Yunnan [S and SE Asia, Australia].

The plants are epiparasitic on *Dendrophthoe pentandra*, *Macrosolen cochinchinensis*, *Scurrula parasitica*, and *Taxillus chinensis*; rarely, they are parasitic on *Bischofia javanica* and species of *Castanopsis*, *Dendrotrophe*, and Lauraceae.

This species is recognized here in a rather wide sense for all plants without normal leaves and with distinctly flattened internodes, and globose, greenish white berries, including plants differing widely in stem width, from forms matching the type of *Viscum nepalense* with internodes to 12 mm wide, to more typical forms with internodes less than 3.5 mm wide. More detailed study of populations in the field could identify more taxa than are currently recognized.

**11. *Viscum diospyrosicola*** Hayata, Icon. Pl. Formosan. 5: 192. 1915.

柿寄生 shi ji sheng

*Viscum filipendulum* Hayata.

Subshrubs monoecious, usually becoming pendulous, yellowish green, 20–50 cm tall. Branches opposite and decussate or dichotomous, subterete, branchlets flattened; internodes 1.5–2.5(–3.5) cm × 2–2.5 mm, longitudinally 2–3-ridged. Leaves scale-like or 2–3 pairs in seedling, elliptic or oblong-ovate, 1–2 × 0.3–0.6 cm, 3-veined, base cuneate, apex obtuse. Inflorescences axillary, cymes solitary or to 3 together; peduncle ± absent; 3-flowered, central flower female; lateral 2 flowers male, usually only 1 female or male flower; involucre navicular, 1–1.5 mm. Male flowers ovoid in bud, 1–1.5 mm. Anthers circular. Female flower ellipsoid in bud, 1.5–2 mm; bract annular or absent; perianth lobes 4, triangular, ca. 0.5 mm. Stigma nipple-shaped. Berry yellow or orange, ellipsoid or ovoid, 4–5 × 3–4 mm, smooth, base rounded. Fl. and fr. Apr–Dec.

• Forests, plains, mountain slopes, valleys; 100–2100 m. Fujian, S Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Shaanxi, Sichuan, Taiwan, Xizang (Zayü), Yunnan, Zhejiang.

The plants have medicinal uses and are parasitic on *Cinnamomum camphora*, *Diospyros kaki*, *Pyrus pyrifolia*, *Vernicia fordii*, *V. montana*, and species of Fagaceae.

*Viscum angulatum* Heyne ex Candolle does not occur within the Flora area, and the records from Taiwan are based on misidentifications of *V. diospyrosicola*.

**12. *Viscum liquidambaricola*** Hayata, Icon. Pl. Formosan. 5: 194. 1915.

枫寄生 feng ji sheng

*Viscum articulatum* var. *liquidambaricola* (Hayata) S. Rao; *V. bongariense* Hayata; *V. querci-morii* Hayata.

Shrubs monoecious, often ± erect, green or yellowish green, 30–70 cm tall. Branches opposite and decussate or dichotomous; internodes flattened, lowermost becoming terete, 2–4 cm × 4–6(–8) mm, longitudinally 5–7-ridged. Leaves reduced to pairs of ± scarious scales. Inflorescences axillary, cymes 1–3 together; peduncle ± absent; 3-flowered, central flower female, lateral flowers male; bracts 2, coalescent, forming a navicular involucre, 1.5–2 mm. Male flowers globose in bud, ca. 1 mm; anthers circular. Female flower ellipsoid in bud, 2–2.5 mm; bract cupular or absent; calyx ovoid, 1.5–2 mm; perianth lobes 4, triangular ca. 0.5 mm. Stigma nipple-shaped. Berry reddish and ellipsoid, sometimes yellow and ovoid, 5–7 × 4–5 mm, smooth, base rounded. Fl. and fr. Apr–Dec.

Forests, mountain slopes; 200–2500 m. Fujian, S Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangxi, S Shaanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, India, Indonesia, Malaysia, Nepal, Sikkim, Thailand, Vietnam].

The plants have medicinal uses and are parasitic on *Diospyros kaki*, *Liquidambar formosana*, *Vernicia fordii*, *V. montana*, and species of Fagaceae; rarely, they are epiparasitic on species of *Viscum*.

