

#### 4. HELIXANTHERA Loureiro, Fl. Cochinch. 1: 142. 1790.

离瓣寄生属 li ban ji sheng shu

Shrubs parasitic, glabrous or with stellate hairs and glabrescent. Leaves opposite or alternate, rarely subwhorled, pinnately veined. Inflorescences axillary, rarely terminal, racemes or spikes; 1 bract subtending each flower. Flowers bisexual, 4-6-merous, actinomorphic, sessile or pedicellate. Calyx limb 4-6-denticulate, persistent. Mature flower bud straight, basal 1/2 usually slightly inflated and angled, distal portion usually subclavate. Corolla red, pink, orange, or yellowish, petals free, straight, spreading. Stamens usually inserted at middle of the petals. Filaments short; anthers 2-4-loculed, sometimes multilocellate, ellipsoid. Pollen grain semi-angular or semilobate in polar view. Ovary 1-loculed; placentation basal. Style subcylindric, 4-6-angled; stigma capitate or truncate. Berry ovoid or ellipsoid, exocarp leathery, smooth or pubescent.

Up to 50 species: tropical and subtropical Africa and Asia; seven species (two endemic) in China.

Barlow (Fl. Malesiana, Ser. 1, Spermatoph. 13: 328. 1997) estimated the global number of species to be 35.

- 1a. Flowers 5-merous; young branchlets and leaves glabrous; inflorescences more than 40-flowered.
  - 2a. Leaves opposite; inflorescence a raceme, pedicels 1-2 mm ..... 1. *H. parasitica*
  - 2b. Leaves subwhorled or alternate; inflorescence a spike, pedicels absent ..... 2. *H. pulchra*
- 1b. Flowers 4-merous; young branchlets and leaves pubescent or scaly, sometimes sparsely so; inflorescences 2-30-flowered.
  - 3a. Inflorescences 10-30-flowered.
    - 4a. Inflorescences 20-30-flowered; pedicel 1-1.5 mm; petals 5-6 mm ..... 3. *H. coccinea*
    - 4b. Inflorescences 10-16-flowered; pedicel absent; petals 9-12 mm ..... 7. *H. scoriarum*
  - 3b. Inflorescences 2-5-flowered.
    - 5a. Young leaves and flowers with yellow stellate hairs; peduncle ca. 1 mm; petals 3-3.5 mm ..... 6. *H. guangxiensis*
    - 5b. Young leaves and flowers with reddish brown scales; peduncle 6-15 mm; petals 7-9 mm.
      - 6a. Leaf blade less than 5 cm; racemes usually 2-flowered ..... 4. *H. sampsonii*
      - 6b. Leaf blade 5-8 cm; racemes 2-4-flowered ..... 5. *H. terrestris*

1. *Helixanthera parasitica* Loureiro, Fl. Cochinch. 1: 142. 1790.

离瓣寄生 li ban ji sheng

*Helicia parasitica* (Loureiro) Persoon; *Leucobotrys adpressa* Tieghem; *Loranthus adpressus* (Tieghem) Lecomte; *L. pentapetalus* Roxburgh.

Shrubs 1-1.5 m tall, all parts apparently glabrous (inflorescences very minutely papillate). Branches elongated. Leaves opposite (or subopposite); petiole 5-15(-20) mm; leaf blade ovate to ovate-lanceolate, 5-12(-18) × (1.5-)3-4.5(-6) cm, papery to thinly leathery, lateral veins conspicuous, base broadly cuneate to rounded, apex acute to acuminate. Racemes solitary or paired, axillary, sometimes at leafless node, 40-60-flowered, 5-10(-30) cm, dull brown or gray papillose; bracts subovate or ovate-triangular (0.7-)1-1.5 mm. Flowers 5-merous; sometimes verticillate. Pedicel 1-2 mm. Calyx ellipsoid, 1.5-2 mm, limb annular, ca. 0.5 mm, entire or 5-denticulate. Mature bud with basal 1/3-1/2 abruptly expanded into 5 prominent semicircular keels, distal portion clavate. Corolla red, pink, or yellowish, petals (4-)6-8 mm, reflexed from above basal keels. Filaments 1-2.5 mm; anthers 4-loculed, 1-1.5(-2.5) mm. Style cylindrical, 5-angled, constricted in middle, 3-6 mm; stigma capitate. Berry red, ellipsoid, ca. 6 × 4 mm, papillose. Fl. Jan-Jul, fr. May-Aug.

Forests in plains or mountain slopes; 100-1500(-1800) m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Xizang (Mêdog), Yunan [Cambodia, NE India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines, Thailand, Vietnam].

Recorded hosts include *Clausena lansium*, *Melia azedarach*, *Prunus salicina*, *Schima superba*, *Vernicia montana*, and species of *Castanopsis*, *Cinnamomum*, *Ficus*, *Lithocarpus*, and *Litsea*.

2. *Helixanthera pulchra* (Candolle) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 318. 1929.

密花离瓣寄生 mi hua li ban ji sheng

*Loranthus pulcher* Candolle, Prodr. 4: 295. 1830; *Helixanthera pierrei* Danser; *Loranthus longispicatus* var. *grandifolius* Lecomte.

Shrubs ca. 1 m tall, all parts glabrous. Branches stout, terete or terminally slightly angled, subsmooth, scattered lenticellate. Leaves mostly ± whorled in groups of 3 or alternate; petiole 10-20(-25) mm; leaf blade lanceolate or oblong-lanceolate, 8-15(-23) × 2.5-5(-11) cm, thickly leathery, lateral veins inconspicuous, base obtuse or cuneate and slightly decurrent, margin narrowly revolute, apex subacuminate. Spikes usually in groups of 3, terminal or subterminal, more than 40-flowered; peduncle 10-30 mm; rachis stout, pink, with flowers inserted in slight hollows, (10-)15-20(-25) cm, glabrous; bracts boat-shaped, with a dorsal spurlike sac, 1.2-2 mm, ciliate. Flowers 5-merous. Pedicel absent. Calyx ovoid, 1-2 mm, limb annular, ca. 1 mm, subentire. Mature bud clavate, slightly constricted beyond base. Corolla reddish yellow to bright red, somewhat constricted in middle, grayish scurfy, petals lanceolate, (3.5-)5-6(-8.5) mm, reflexed from middle. Filaments 1-1.5 mm; anthers 2-loculed, 1-1.5 mm, connective broad. Style cylindrical, 5-angled, not articulated, (2-)3-4(-5.5) mm; stigma obtuse. Immature berry pink, ovoid, ca. 4.5 × 3.5 mm, scurfy.

Fl. Apr–May.

Forests on mountain slopes; 800–1500 m. Yunnan (Jinghong, Mengla) [Cambodia, Indonesia, Malaysia, Thailand].

The plants are parasitic on species of *Rhododendron* in the Flora area; they are recorded from a wider range of hosts outside the Flora area.

**3. *Helixanthera coccinea*** (Jack) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 317. 1929.

景洪离瓣寄生 jing hong li ban ji sheng

*Loranthus coccineus* Jack, Malayan Misc. 1: 8. 1820.

Shrubs ca. 1 m tall, branchlets and leaves ferruginous stellate pubescent when young, becoming glabrous. Branches grayish, lenticellate. Leaves alternate; petiole 8–12(–22) mm; leaf blade ovate or oblong-ovate, (4–)5–8(–12) × 2.5–4.5(–7) cm, subleathery, lateral veins 5–7 pairs, base rounded (to slightly cordate), apex obtuse. Racemes solitary or 2- or 3-fascicled, axillary, rarely subterminal, 20–30-flowered, 5–7 cm, stellate pubescent; bracts ovate-triangular, ca. 1.5 mm. Flowers 4-merous. Pedicel 1–1.5 mm. Calyx urceolate ca. 2 mm, limb annular, 4-denticulate. Corolla red, base rather swollen and 5-keeled, apical portion clavate, petals lanceolate, 5–6 mm, spreading, margin membranous in middle. Filaments ca. 2 mm; anthers 4-loculed, ca. 1.5 mm. Style cylindrical, 4-angled, 5–6 mm; stigma subcapitate. Berry red, vase-shaped, 7–8, 3.5–4 mm in diam. at base. Fl. and fr. Jul–Sep.

Evergreen forests, valleys; ca. 500 m. Yunnan (Jinghong) [NE India, Indonesia, Malaysia, Myanmar, SE Asia].

The plants are parasitic on species of *Castanopsis*.

**4. *Helixanthera sampsonii*** (Hance) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 318. 1929.

油茶离瓣寄生 you cha li ban ji sheng

*Loranthus sampsonii* Hance, J. Bot. 9: 133. 1871.

Shrubs ca. 0.7 m tall, branchlets and leaves densely reddish brown scurfy when young, becoming glabrous. Branches grayish, densely lenticellate. Leaves usually opposite, yellowish green, drying blackish; petioles 2–5 mm; leaf blade ovate or elliptic to oblong-lanceolate, 2–5 × 1–2.4 cm, papery to thinly leathery, lateral veins 3 or 4 pairs, abaxially obscure, base cuneate and slightly decurrent, apex obtusely acute or subacuminate. Racemes solitary or paired, mostly axillary, sometimes 3 terminal on short shoots, 2(–5)-flowered; peduncle 8–15 mm, scurfy; bracts ovate, ca. 1 mm, minutely pilose. Flowers 4-merous. Calyx urceolate, 1.5–2 mm, limb minute, subentire or repand. Mature bud subcylindric. Corolla reddish, base slightly inflated, 4-angled, stellate pubescent, petals lanceolate, 7–9 mm, apical portion reflexed, margin membranous in middle. Filaments ca. 2.5 mm; anthers 2-loculed, ca. 2 mm. Style 4-angled, 6–7 mm; stigma capitate. Berry orange or reddish, ovoid, ca. 6 × 4 mm, smooth. Fl. Apr–Jun, fr. Aug–Oct.

Forests, forest margins on mountain slopes; 100–500(–1100) m. Fujian, Guangdong, Guangxi, Hainan, S Yunnan [N Vietnam].

Recorded hosts include *Camellia oleifera*, *Casearia membranacea*, *Diospyros morrisiana*, *Litsea elongata*, and species of *Euphorbia*-

ceae, Lauraceae, and Theaceae.

Danser has indicated by herbarium determinations that this species should be included with the Indian species *Helixanthera ligustrina* (Wallich) Danser. The type collection and other material from Hong Kong and Guangdong has a scurfy indumentum and 2-flowered inflorescences, rather similar to the next species, but material from elsewhere in the Flora area has been described as having a stellate indumentum and up to 5-flowered inflorescences. The status of this material needs further investigation.

**5. *Helixanthera terrestris*** (J. D. Hooker) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 319. 1929.

林地离瓣寄生 lin di li ban ji sheng

*Loranthus terrestris* J. D. Hooker, Fl. Brit. India 5: 207. 1886.

Shrubs 0.5–2 m tall, branchlets and leaves densely reddish brown scurfy when young, becoming glabrous. Branches grayish, lenticellate. Leaves opposite or alternate; petiole 3–6 mm; leaf blade oblong-ovate or elliptic, 5–8 × 2–3.5 cm, papery, lateral veins 3 or 4 pairs, base cuneate and slightly decurrent, apex acuminate or obtusely subacuminate. Racemes solitary or paired, mostly axillary, sometimes terminal on short shoots, 2–4-flowered; peduncle 6–10 mm, scurfy; bracts suborbicular, 1–1.5 mm. Flowers 4-merous. Pedicel 0.5–1 mm. Calyx urceolate, 1.5–2 mm, gray scurfy, limb annular, ca. 0.5 mm, entire. Mature bud subcylindric. Corolla pink, base slightly inflated, 4-angled, petals lanceolate, 7–8 mm, apical portion reflexed, margin membranous in the middle, ca. 1 mm. Filaments ca. 2 mm; anthers 2-loculed, ca. 2 mm. Style 4-angled, ca. 7 mm; stigma capitate. Berry orange, ovoid, 7–8 × ca. 4 mm, smooth. Fl. May–Nov, fr. Jun–Aug.

Forests or thickets on mountain slopes; 900–1800 m. Xizang (Médog) [NE India].

This species is a root parasite, growing from the ground, and is sometimes parasitic on species of *Ficus*.

**6. *Helixanthera guangxiensis*** H. S. Kiu, Acta Phytotax. Sin. 21: 174. 1983.

广西离瓣寄生 guang xi li ban ji sheng

Shrubs ca. 0.7 m tall, branchlets and leaves densely yellow, stellate pubescent when young, becoming glabrous. Branches grayish, lenticellate. Leaves alternate or subopposite; petiole 2–4 mm; leaf blade ovate or obovate, 2–3 × 1–2 cm, thinly leathery, lateral veins 2 pairs, abaxially obscure, base broadly cuneate, apex obtuse. Racemes solitary or 2- or 3-fascicled, axillary, densely 2–4-flowered; peduncle ca. 1 mm, stellate pubescent; bracts ovate-triangular ca. 1 mm. Flowers 4-merous. Pedicel ca. 3 mm. Calyx ellipsoid, ca. 1.5 mm, limb annular, entire or 4-denticulate. Mature bud subclavate. Corolla yellowish, pubescent, petals linear-spatulate, 3–3.5 mm, reflexed from middle. Filaments ca. 1.5 mm; anthers 2-loculed, ca. 0.5 mm, connective broad. Style slightly 4-angled, ca. 3 mm; stigma subcapitate. Berry yellowish or orange ellipsoid, ca. 7 × 3–4 mm, smooth. Fl. Aug–Nov, fr. Nov–Dec.

• Forests on mountain slopes; 300–1000 m. SE Guangxi, SW Hainan.

The plants are parasitic on *Camellia oleifera*.

**7. *Helixanthera scoriarum*** (W. W. Smith) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 318. 1929.

滇西离瓣寄生 dian xi li ban ji sheng

*Loranthus scoriarum* W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 10: 184. 1918.

Shrubs 1–2 m tall, branchlets and leaves brown scurfy when young, becoming glabrous. Branches dark brown, scattered lenticellate. Leaves opposite or subopposite; petiole 7–15 mm; leaf blade lanceolate to oblong-ovate, 5–12 × 1.5–6 cm, papery, lateral veins 4 or 5 pairs, slender, base cuneate and slightly decurrent, apex acuminate. Racemes solitary or paired, axillary, 10–16-flowered, 3–4 cm, brown scurfy; bracts ovate concave, ca. 2 mm. Flowers opposite, 4-merous. Pedicel absent. Calyx ovoid, ca. 1.5 mm, limb annular, 4-denticulate. Mature bud cylindrical. Corolla orange, base slightly inflated, 4-angled, scurfy, petals lanceolate, 9–12 mm, reflexed from middle. Filaments ca. 3.5 mm; anthers 4-loculed, ca. 2.5 mm. Style 4-angled, 10–12 mm; stigma capitate. Berry yellowish green, ellipsoid, 7–8 × ca. 5 mm, smooth. Fl. and fr. May–Dec.

• Forests or thickets on mountain slopes; 1600–2100 m. Yunnan (Lincang, Tengchong, Yingjiang).

The plants are parasitic on species of *Lithocarpus*, sometimes growing on moist ground in forests, where it is apparently a root parasite.

