

6. DENDROTROPHE Miquel, Fl. Ned. Ind. 1(1): 776, 779. 1856.

寄生藤属 *ji sheng teng shu*

Henslowia Blume (1850), not Wallich (1832), nor Lowe ex Candolle (1844); *Dufrenoya* Chatin.

Woody vines, hemiparasitic, often on branches of other trees, evergreen. Stems terete, ridged when young. Leaves alternate, petiolate or sessile, leathery, palmately 3–9(–11)-veined, lateral veins arched above base, margin entire. Inflorescences axillary, 1-flowered, fasciculate, cymose, or umbellate; bracteoles 3–8 subtending each flower. Perianth lobes 5 or 6, distinct from disk, interior with a tuft of hair or tongue-shaped appendage behind each stamen. Flowers bisexual or unisexual (plants monoecious or dioecious). Male flowers: stamens as many as perianth lobes, nearly on the base of lobes; filaments short; anthers small, introrse, cells divaricate, dehiscence oblique. Disk superior. Female flowers: slightly larger than male, solitary or in fascicles, usually sessile, perianth tube adnate to ovary, lobes similar to those of males, staminodes usually present, discs covering ovary. Ovary inferior; ovules 3, pendulous from apex of placenta. Style almost absent; stigmas lobed or capitate. Fruit a drupe, with ± persistent perianth lobes at apex, lost only in fully mature fruits, endocarp rigid, rugose or tuberculate abaxially, larger tubercles usually forming 8–10 longitudinal lines, adaxially embedded in seed. Seeds longitudinally furrowed, 8–10 aristate rays on transverse section; embryo straight, short; cotyledons minute.

About ten species: from Himalayas and SE Asia to S Australia; six species in China.

- 1a. Stems tuberculate; leaves with 5–9 basal veins.
 - 2a. Branches without lenticels 3. *D. polyneura*
 - 2b. Branches lenticellate.
 - 3a. Leaves elliptic-ovate or obovate-elliptic, tuberculate on both surfaces; female flowers solitary or in clusters of 3 or 4 1. *D. platyphylla*
 - 3b. Leaves broadly ovate, not tuberculate; female flowers solitary or paired 2. *D. granulata*
- 1b. Stems not tuberculate; leaves with 3(or 5) basal veins.
 - 4a. Bracteoles connate, forming an involucre; flowers unisexual, solitary, male flower with each stamen with a tongue-like appendage behind it 4. *D. umbellata*
 - 4b. Bracteoles semidistinct, rarely forming an involucre; flowers unisexual or bisexual, solitary or clustered, each stamen with a small cluster of hairs behind it.
 - 5a. Stigma 3–5-lobed; male inflorescence fasciculate, 1–8-flowered 5. *D. buxifolia*
 - 5b. Stigma entire; male inflorescence fasciculate umbellate or cymose, 5- or 6-flowered 6. *D. varians*

1. *Dendrotrophe platyphylla* (Sprengel) N. H. Xia & M. G. Gilbert, **comb. nov.**

异花寄生藤 *yi hua ji sheng teng*

Basionym: *Viscum platyphyllum* Sprengel, Syst. Veg. 4(2): 47. 1827, based on *V. latifolium* Buchanan-Hamilton ex D. Don, Prodr. Fl. Nepal. 142. 1825, not Lamarck (1789), nor Swartz (1797); *Dendrotrophe heterantha* (Wallich ex Candolle) A. N. Henry & B. Roy; *Dufrenoya heterantha* (Wallich ex Candolle) Chatin; *D. platyphylla* (Sprengel) Stauffer; *Henslowia heterantha* (Wallich ex Candolle) J. D. Hooker & Thomson ex A. Candolle; *Viscum heteranthum* Wallich ex Candolle.

Woody vines, to 2 m tall. Stems erect or twining, 4-ribbed at first, later terete, usually tuberculate and with longitudinally lengthened lenticels. Petiole flat, narrowly winged, short to almost absent; leaf blade varied in shape, usually elliptic-ovate or obovate-elliptic, 2–2.7 × 1.3–1.7(–2) cm, glossy adaxially, tuberculate on both surfaces, basal veins 7–9, usually inconspicuous abaxially, basal 1/2 abruptly narrowed and decurrent into petiole, apex obtuse. Male inflorescences fasciculate, 5- or 6-flowered. Female inflorescences of flowers solitary or 3 or 4 in fascicle; peduncle 3–6 mm; bracts broadly ovate. Flowers ovoid, ca. 1.8 mm, sessile; bracteoles usually several in involucre, elliptic. Male flowers not seen. Female flowers: staminodes sometimes present. Style very short; stigma shallowly 5-

lobed. Drupe red or orange, ellipsoid to subglobose, ca. 4 mm in diam.; persistent perianth lobes triangular, apex incurved. Fr. Aug–Oct.

Broad-leaved forests; 2000–3700 m. NW Yunnan [Bhutan, Malaysia, Myanmar, Nepal, Sikkim].

This species is hemiparasitic on the branches of *Quercus*.

2. *Dendrotrophe granulata* (J. D. Hooker & Thomson ex A. Candolle) A. N. Henry & B. Roy, Bull. Bot. Surv. India 10: 276. 1969.

疣枝寄生藤 *liu zhi ji sheng teng*

Henslowia granulata J. D. Hooker & Thomson ex A. Candolle in Candolle, Prodr. 14(2): 632. 1857; *Dufrenoya granulata* (J. D. Hooker & Thomson ex A. Candolle) Stauffer; *H. granulata* var. *sikkimensis* A. Candolle.

Woody vines. Stems erect, usually grayish brown, rugose-ly lenticellate; branchlets terete, densely covered with prominent, granulate, bulliform tubercles. Petiole flat, narrowly winged; leaf blade broadly ovate, 3–4.5 × 1.6–4 cm, abaxially pale green, adaxially glossy, both surfaces brown when dry, densely bullate, basal veins 5–7, reticulate veins inconspicuous, base broadly cuneate or subrotund, usually oblique, abruptly contracted into petiole, margin revolute, apex obtuse or subrotund.

Male inflorescences fasciculate or umbellate. Female inflorescences of solitary or paired flowers; peduncle ca. 4 mm, ridged; bracts ovate or broadly ovate, ca. 1 mm. Flowers unisexual, ovoid, ± ciliate, sessile; bracteoles 4 or 5, forming involucre, ovate, smaller than bracts; perianth apex incurved. Styles short or absent; stigma inconspicuously lobed. Drupe reddish brown when mature, ovoid, 4–6 mm; persistent perianth very small. Fl. and fr. May–Aug.

Forested slopes; ca. 1800 m. SE Xizang (Médog) [Bhutan, NE India, Myanmar, Nepal, Sikkim].

3. *Dendrotrophe polyneura* (Hu) D. D. Tao ex P. C. Tam in H. S. Kiu & Y. R. Ling, Fl. Reipubl. Popularis Sin. 24: 52. 1988.

多脉寄生藤 duo mai ji sheng teng

Henslowia polyneura Hu, Bull. Fan Mem. Inst. Biol., Bot. 10: 157. 1940.

Woody vines 30–40 cm tall. Stems terete, striate, with small bullate tubercles, more dense when mature. Petiole flat, 5–7 mm; leaf blade variable in shape, usually obovate to suborbicular, 2–4.5 × 2–3.5 cm, papery, basal veins 7–9, prominent on both surfaces, base cuneate, margin cartilaginous, minutely crisped, apex obtuse. Male inflorescences fasciculate, 6-flowered; peduncle 0.5–1 mm. Female inflorescences 1–5-flowered; peduncle 1–1.5 mm. Flowers unisexual (plants dioecious). Male flowers: perianth lobes triangular, ca. 0.8 mm; stamen filaments short. Female flowers: bracteoles several, ovate, ca. 2 × 1 mm, apex acute; perianth yellow, conic, ca. 1.8 mm, lobes 5, similar to male. Disk 5-angled. Style absent; stigma capitate. Drupe yellow, ovoid, ca. 4 mm, inconspicuously ridged. Fl. Dec–Mar, fr. May–Jul.

Mixed montane forests; 1400–2000 m. Yunnan [Vietnam].

Although the combination is usually attributed to D. D. Tao (Index Fl. Yunnan. 1: 774. 1984), that work gives only authorities and dates, not places of publication of basionyms, and thus proposed new combinations are invalid. The combination was effectively validated in FRPS, where the full basionym citation is given.

4. *Dendrotrophe umbellata* (Blume) Miquel, Fl. Ned. Ind. 1(1): 779. 1856.

伞花寄生藤 san hua ji sheng teng

Woody vines. Stems pale brown, 4-ribbed at first, becoming terete, smooth. Petiole 4–6 mm; leaf blade obovate to subspatulate, 4–7(–8) × 2–4 cm, thinly leathery, adaxially glossy, basal veins 3, inconspicuous on both surfaces, base broadly cuneate, decurrent to form petiole, apex rotund or obtuse. Male inflorescences umbellate, 3–5-flowered; peduncle 5–7 mm. Female inflorescences 1–3-flowered. Flowers unisexual (plants dioecious). Male flowers ca. 1 mm in diam.; pedicel 2.5–3 mm; bracteoles connate, forming involucre; perianth tube terete, lobes triangular, ca. 0.65 mm, apex incurved; stamen filaments ca. 0.3 mm with 1 tongue-like appendage behind each, cells rounded. Female flowers: pedicel 1.5–2 mm; perianth tube ovoid, lobes 5, triangular. Discs fleshy. Style ca. 0.75 mm; stigma scutiform, suborbicular, inconspicuously 5-lobed. Drupe

deep red to black when mature, obovoid, ca. 10 mm, stipitate. Fl. Feb–Apr, fr. May–Jun.

Forests; ca. 1100 m. Hainan, S Yunnan [Cambodia, Indonesia, Laos, Malaysia, Vietnam].

1a. Petiole 4–6 mm; leaf blade obovate to subspatulate, 4–7(–8) cm 4a. var. *umbellata*

1b. Petiole 6–10 mm; leaf blade lanceolate-oblong, 8–11 cm 4b. var. *longifolia*

4a. *Dendrotrophe umbellata* var. *umbellata*

伞花寄生藤(原变种) san hua ji sheng teng (yuan bian zhong)

Viscum umbellatum Blume, Bijdr. Fl. Ned. Ind. 666. 1826; *Henslowia umbellata* (Blume) Blume; *Thesium spathulatum* Blume.

Petiole 4–6 mm; leaf blade obovate to subspatulate, 4–7(–8) × 2–4 cm.

Forests. Hainan [Cambodia, Indonesia, Laos, Malaysia, Vietnam].

4b. *Dendrotrophe umbellata* var. *longifolia* (Lecomte) P. C. Tam in H. S. Kiu & Y. R. Ling, Fl. Reipubl. Popularis Sin. 24: 72. 1988.

长叶伞花寄生藤 chang ye san hua ji sheng teng

Henslowia umbellata var. *longifolia* Lecomte, Fl. Indo-Chine 5: 219. 1915.

Petiole 6–10 mm; leaf blade lanceolate-oblong, 8–11 × 3–4 cm.

Forests; ca. 1100 m. S Yunnan [Cambodia].

5. *Dendrotrophe buxifolia* (Blume) Miquel, Fl. Ned. Ind. 1(1): 781. 1856.

黄杨叶寄生藤 huang yang ye ji sheng teng

Henslowia buxifolia Blume, Mus. Bot. 1: 244. 1851; *Osyris rotundata* Griffith.

Semierect shrubs or woody vines, to 3 m tall. Stems yellowish green, becoming brown when old, terete, twisted, ± smooth. Petiole 3–7 mm; leaf blade elliptic, obovate, or spatulate, (2.2–)2.5–4.5 × 1.5–2.5 cm, basal veins 3, base narrowly cuneate, decurrent to form petiole, apex obtuse or slightly acute. Male inflorescences fasciculate, 1–8-flowered; peduncle 2–4 mm; bracts orbicular. Female inflorescences usually 1-flowered. Flowers unisexual (plants dioecious). Male flowers yellowish green, bracteoles 4 or 5, elliptic, tiny; perianth lobes triangular, incurved; stamen filaments short, with a tuft of hair behind each stamen, cells rounded. Female flowers: style very short, stigma 3–5-lobed. Drupe deep red to glossy black when mature, globose, ca. 3 mm in diam., contracted near apex, slightly umbonulate. Fl. Dec–Feb, fr. Mar–May.

Valleys, ravines; ca. 400 m. SW Yunnan [Cambodia, Indonesia, Malaysia, Thailand, Vietnam].

6. *Dendrotrophe varians* (Blume) Miquel, Fl. Ned. Ind. 1(1): 780. 1856.

寄生藤 ji sheng teng

Henslowia varians Blume, Mus. Bot. 1: 244. 1851; *Dendrotrophe frutescens* (Champion ex Benth) Danser; *D. frutescens* var. *subquinenervia* P. C. Tam; *D. punctata* C. Y. Wu & D. D. Tao; *Henslowia frutescens* Champion ex Benth; *H. frutescens* var. *subquinenervia* P. C. Tam; *H. sessiliflora* Hemsley.

Woody vines, usually shrubby, 1–8 m tall. Stems darkish black, yellowish green when young, 3-ribbed, twisted, ± smooth, sometimes reddish brown punctate. Petiole flat, 5–10 mm; leaf blade obovate to broadly elliptic, 3–7 × (1.4–)2–4.5 cm, thick, ± leathery, basal veins 3–5, prominent when dry, base narrowed and decurrent to form petiole, less often rounded, apex obtuse. Male inflorescences umbellate or cymose, 5- or 6-flowered; peduncle to 20 mm; bracteoles 7 or 8, ovate-triangular. Female inflorescences usually of solitary flowers; peduncle 3–4 mm. Flowers usually unisexual (plants usually dioecious). Male flowers globose, ca. 2 mm; pedicel ca. 1.5 mm; bracteoles triangular-ovate, ca. 1 mm; perianth lobes triangular, ca. 1.5 mm; stamen filaments ca. 0.5 mm, with a tuft of hair behind each, cells rounded. Disk 5-lobed to annular. Female flowers: bracteoles 3–5; perianth short terete, 2–3 mm, lobes 5, ovate-triangular, ca. 1 × 1 mm; staminodes present. Style short, stigma not lobed, needle-like. Bisexual flowers ovoid. Drupe reddish, brownish yellow to reddish brown when mature, ovoid, 10–13 mm, inconspicuously 5-ribbed; persistent perianth lobes incurved. Fl. Jan–Mar, fr. Jun–Aug.

Thickets, usually climbing on trees; 100–300 m. Fujian, Guangdong, Guangxi, Hainan [Indonesia, Malaysia, Myanmar, Philippines, Thailand, Vietnam].

Dendrotrophe punctata was described from material with densely punctate stems and leaves, but such gland dots occur sporadically in collections from at least both China and Thailand, and there is no clear division between *D. punctata* and the very widespread and variable *D.*

variens. There are additional probable synonyms based on collections from Indonesia and the Philippines.

The plants are used medicinally.

