

21. MEMECYLON Linnaeus, Sp. Pl. 1: 349. 1753.

谷木属 *gu mu shu*

Shrubs or small trees, often glabrous; branches terete or 4-sided, many-branched. Leaves petiolate or sessile; leaf blade usually leathery, pinnately veined, margin entire. Inflorescences axillary or inserted on leafless stems, cymose or umbellate. Flowers 4-merous. Hypanthium cup-shaped, campanulate, subfunnel-shaped, or semiorbicular, apex repand or shallowly 4-lobed. Petals orbicular, oblong, or ovate, often oblique. Stamens 8, equal, isomorphic; filaments as long as anthers; anthers elliptic, small, longitudinally dehiscent; connective conic, inflated, lengthened, 2–3 × as large as anthers, sometimes abaxially with a circular concave gland. Ovary inferior, subglobose, 1-celled, apex truncate, 8-sulcate, radiated; ovule 6–12, with free central placentation. Fruit a baccate drupe, often globular, apex with hypanthium forming a ring; exocarp usually succulent, 1-seeded. Seed globular, glabrous; seed coat bony; cotyledon crumpled; embryo curved.

About 300 species: tropical Africa, Asia, Australia, Madagascar, and Pacific islands; 11 species (six endemic) in China.

Material usually cannot be reliably identified unless flowers and fruits are both available.

- 1a. Trees to 25 m tall, d.b.h. to 60 cm 11. *M. celastrinum*
 1b. Shrubs or small trees.
 2a. Leaf blade 6–11(–15) × 2–3.8(–7.5) cm.
 3a. Leaves sessile or with petiole 2–3 mm; peduncle 2–3 mm 1. *M. lanceolatum*
 3b. Leaves with petiole 5–7(–10) mm; peduncle 5–20 mm.
 4a. Fruit yellowish green, less than 1 cm in diam. 2. *M. hainanense*
 4b. Fruit pink to dark red and maturing purple to black, to 1.5 cm in diam. 3. *M. caeruleum*
 2b. Leaf blade 3.5–8 × 0.6–3.5 cm.
 5a. Leaf blade 4.2–5 × as long as broad, base decurrent on petiole 6. *M. luchuenense*
 5b. Leaf blade 1.4–3.2 × as long as broad, base not decurrent on petiole.
 6a. Anther connective abaxially without a circular concave gland.
 7a. Leaf blade scabrous on both surfaces 4. *M. ligustrifolium*
 7b. Leaf blade glabrous and glossy on both surfaces 10. *M. nigrescens*
 6b. Anther connective abaxially with a circular concave gland.
 8a. Fruit with 8 raised ribs 7. *M. octocostatum*
 8b. Fruit not ribbed.
 9a. Inflorescences umbellate, forming a very dense spheroid clump of flowers 5. *M. polyanthum*
 9b. Inflorescences cymose.
 10a. Leaf blade on both surfaces glabrous and glossy 8. *M. pauciflorum*
 10b. Leaf blade on both surfaces densely covered with small tubercles and scabrous 9. *M. scutellatum*

1. *Memecylon lanceolatum* Blanco, Fl. Filip. 301. 1837.

狭叶谷木 *xia ye gu mu*

Shrubs or small trees. Branches terete, glabrous. Leaves sessile or with a petiole to 3 mm; leaf blade elliptic, elliptic-ovate, or ovate-oblong, 6–8(–12) × 2–3.5(–5) cm, leathery, both surfaces glabrous, secondary veins ca. 6 on each side of midvein and inconspicuous, base obtuse to cuneate, margin entire, apex acuminate with an obtuse tip. Inflorescences axillary, densely cymose. Flowers 1–2 mm in diam. Fruit globular, 7–8 × ca. 8 mm.

Dense forest margins by streamsides; 300–500 m. Taiwan (Lan Yu) [Indonesia, Philippines].

2. *Memecylon hainanense* Merrill & Chun, Sunyatsenia 2: 44. 1934.

海南谷木 *hai nan gu mu*

Shrubs or trees, 3–15 m tall, many-branched. Branches terete, glabrous. Petiole ca. 5 mm; leaf blade elliptic to oblong-elliptic, 6–8(–15) × 3–3.8(–6.5) cm, leathery to subleathery, both

surfaces glabrous, secondary veins 9 on each side of midvein, base cuneate, margin entire, apex shortly acuminate. Inflorescences in axils of leaves or at leaf scars on older branches, cymose, 2–3 cm, glabrous; peduncle 1–2 cm; bracts lanceolate, ca. 1.5 mm, caducous. Pedicel to 2 mm. Hypanthium broadly cup-shaped, 2–3.5 mm, glabrous, 4-lobed, apex repand. Petals white, ovate, ca. 3.5 mm, oblique, base unguiculate, apex acute. Stamens blue, ca. 3.5 mm; anthers ovate; connective conic, ca. 1.5 mm, inflated, with a small concave abaxial gland. Ovary cup-shaped. Fruit a baccate drupe, globular, 7–9 mm in diam., minutely tuberculate, apex ringed. Fl. May, fr. Feb.

• Thickets, hillsides; ca. 1000 m. Hainan, Yunnan.

3. *Memecylon caeruleum* Jack, Malayan Misc. 1(5): 26. 1820.

天蓝谷木 *tian lan gu mu*

Memecylon cyanocarpum C. Y. Wu (1979), not Gilg (1901); *M. floribundum* Blume.

Shrubs or trees, 3–6(–12) m tall, few- to many-branched. Stems terete, glabrous. Petiole 5–10 mm; leaf blade oblong to elliptic, 8–11(–16) × 3.8–6(–7.5) cm, leathery, both surfaces

glabrous, base cuneate, obtuse, or subround, margin entire, apex acute, obtuse, or retuse. Inflorescences axillary, clustered or shortly cymose, 1.5–3 cm; peduncle 5–12 mm; bracts ca. 0.5 mm, caducous. Pedicel 2–5 mm, glabrous. Hypanthium shallowly cup-shaped, 1.5–3 mm, glabrous. Calyx lobes 4, repand. Petals white or yellowish green but base pale blue, broadly ovate, ca. 2 mm, apex acute. Stamens blue, ca. 2.5 mm; anthers and conic connective 1–1.5 mm, with a small concave abaxial gland. Ovary cup-shaped to ovoid. Fruit pink to dark red and maturing purple to black, obovoid, 1–1.5 cm in diam., smooth and glabrous; exocarp succulent, juicy. Fl. Apr–Aug, fr. Dec–Jan.

Sparse to dense forests; 900–1200 m. Hainan, SE Xizang, Yunnan [Cambodia, Indonesia, Vietnam].

4. Memecylon ligustrifolium Champion ex Benth, Hooker's J. Bot. Kew Gard. Misc. 4: 117. 1852.

谷木 gu mu

Shrubs or trees, 1.5–5(–7) m tall, many-branched. Branches terete or sometimes 4-sided. Petiole 3–5 mm; leaf blade elliptic, ovate, or ovate-lanceolate, 5.5–8 × 2.5–3.5 cm, leathery, both surfaces scabrous, base cuneate, margin entire, apex acuminate with an obtuse tip. Inflorescences in axils of leaves or at leaf scars on older branches, cymose, ca. 1 cm; peduncle 1–3 mm; bracts ovate, ca. 1 mm. Pedicel 1–4 mm, both sides pubescent. Hypanthium semiglobose, 1.5–3 mm. Calyx lobes 4, repand. Petals white or tinged yellowish green or purple, semi-orbicular, ca. 3 × 4 mm, apex rounded. Stamens blue, ca. 4.5 mm; anthers and conic connective 1–2 mm, lacking an abaxial gland. Ovary ovoid, apex truncate. Fruit a baccate drupe, globular, ca. 1 cm in diam., minutely tuberculate, apex with a ring. Fl. May–Aug, fr. Dec–Feb.

• Dense forests, mountain slopes, valleys, damp places; 100–1600 m. Fujian, Guangdong, Guangxi, Hainan, Yunnan.

- 1a. Leaf axil 1- or 2-fruited; fruiting peduncle ca. 3 mm; pedicel 1–2 mm 5a. var. *ligustrifolium*
- 1b. Leaf axil only 1-fruited; fruiting peduncle 1–2 mm; pedicel ca. 4 mm 5b. var. *monocarpum*

4a. Memecylon ligustrifolium var. *ligustrifolium*

谷木(原变种) gu mu (yuan bian zhong)

Leaf axil 1- or 2-fruited. Pedicel 1–2 mm. Fruiting peduncle ca. 3 mm.

• Dense forests; 100–1600 m. Fujian, Guangdong, Guangxi, Hainan, Yunnan.

4b. Memecylon ligustrifolium var. *monocarpum* C. Chen, Bull. Bot. Res., Harbin 4(3): 67. 1984.

单果谷木 dan guo gu mu

Leaf axil only 1-fruited. Pedicel ca. 4 mm. Fruiting peduncle 1–2 mm.

• Dense forests, mountain slopes, valleys, damp places; 800–900

m. Yunnan (Pingbian).

5. Memecylon polyanthum H. L. Li, J. Arnold Arbor. 25: 42. 1944.

滇谷木 dian gu mu

Shrubs or trees, 1–8 m tall, many-branched. Branches terete or sometimes 4-sided, glabrous. Petiole 3–5 mm, glabrous; leaf blade ovate, ovate-lanceolate, or elliptic, 5.5–8 × 2–2.5 cm, leathery, both surfaces scabrous, base cuneate, margin entire, apex acuminate to caudate-acuminate. Inflorescences axillary or inserted on leaf axil of leafless branches, umbellate, forming a very dense spheroid clump of flowers, ca. 1 cm; peduncle very short; bracts lanceolate, ca. 0.5 mm. Pedicel ca. 1.5 mm, glabrous. Hypanthium subfunnel-shaped, ca. 2 mm, glabrous. Calyx lobes 4, repand. Petals purplish red or white, tinged yellowish green, broadly ovate, ca. 2 × 2 mm, apex acute. Stamens ca. 3 mm; filaments ca. 2.5 mm; anthers and conic connectives ca. 1 mm, with a small concave abaxial gland. Ovary cup-shaped, glabrous. Fruit a baccate drupe, globular, ca. 6 × 5–6 mm, glabrous, apex with a ring. Fl. Aug–Oct, fr. Mar–May.

• Dense forests, mountain slopes, valleys, trailsides, streamsides, shaded damp places; 600–1000 m. Yunnan (Jinghong).

6. Memecylon luchuenense C. Chen, Bull. Bot. Res., Harbin 4(3): 67. 1984.

禄春谷木 lu chun gu mu

Shrubs, to 30 cm tall, many-branched. Branches brown, 4-sided, winged, later terete and glabrescent. Petiole 1–3 mm, slightly winged; leaf blade narrowly elliptic to linear-elliptic, 3.5–5.5 × 0.6–1.3 cm, leathery, both surfaces glabrous, base cuneate and decurrent, margin entire, apex obtuse to acuminate. Flowers unknown. Infructescences axillary, 1 or 2 per leaf axil, cymose, ca. 1 cm, 2- or 3-fruited; peduncle 2–4 mm, 4-sided, glabrous. Fruit globular, ca. 7 mm in diam., glabrous, apex 4-dentate with broadly triangular ca. 0.5 mm teeth; fruiting pedicel ca. 2 mm, terete. Fr. Oct.

• Thickets, among stones, river banks; 400–500 m. Yunnan.

7. Memecylon octocostatum Merrill & Chun, Sunyatsenia 2: 294. 1935.

棱果谷木 leng guo gu mu

Shrubs 1–3 m tall, many-branched. Branches 4-sided, narrowly winged, later almost unwinged; bark canescent brown. Petiole 1–2 mm; leaf blade elliptic to broadly elliptic, 1.5–3.5 × 0.7–1.8 cm, stiffly papery to subleathery, both surfaces glabrous, abaxially pale brown, adaxially dark brownish green and glossy when dry, base broadly cuneate, margin entire, apex obtuse to acute. Inflorescences axillary, cymose, 6–8 mm, few-flowered, glabrous; peduncle 2–4 mm; bracts subulate, ca. 1 mm. Pedicel 1–2 mm, glabrous. Hypanthium cup-shaped, 2–2.8 mm, 4-sided, glabrous. Calyx lobes triangular to ovate-triangular, ca. 0.8 mm. Petals lavender, ovate, ca. 3 × 1.5 mm, margin basally irregularly denticulate, apex acuminate. Stamens 2.5–3 mm; filament ca. 2.5 mm; anthers ovate, small; connective conic, ca. 1.2 mm, inflated, with a small concave abaxial gland. Fruit a baccate drupe, subglobose, ca. 7 mm in diam., with 8 conspicu-

ously raised ribs, apex with a ring. Fl. May–Jun or Nov, fr. Nov–Jan.

• Sparse to dense forests, hillsides, valleys, damp places. Guangdong, Hainan.

8. *Memecylon pauciflorum* Blume, Mus. Bot. 1: 356. 1851.

少花谷木 shao hua gu mu

Shrubs or trees, 1–6 m tall, many-branched. Branches 4-sided, glabrous. Petiole 1–2(–3) mm; leaf blade brownish yellow-green when dry, elliptic, broadly elliptic, or rhomboid-oblong, 2.5–3(–5) × 1–1.5(–3) cm, stiffly papery to subleathery, both surfaces glabrous and glossy, base cuneate, margin entire, apex obtuse to acute and with an apiculate or retuse tip. Inflorescences axillary, cymose, to 1 cm; peduncle very short, glabrous; bracts lanceolate, 2–2.5 mm. Pedicel 1–2 mm, glabrous. Hypanthium lobes lanceolate to triangular-lanceolate, ca. 1.5 mm, apex acuminate. Petals triangular-ovate, 2.5–3 × ca. 2 mm, apex acuminate. Stamens ca. 3 mm; filaments ca. 2 mm; anthers and conic connective ca. 1 mm, with a small concave abaxial gland. Fruit a baccate drupe, globular, 5–6 mm in diam., minutely angular when young but later inconspicuously angular, apex with persistent calyx lobes. Fl. Apr–May, fr. Nov.

Forests, mountain slopes. Guangdong, Hainan [India, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam; N Australia].

9. *Memecylon scutellatum* (Loureiro) Hooker & Arnott, Bot. Beechey Voy. 186. 1833.

细叶谷木 xi ye gu mu

Scutula scutellata Loureiro, Fl. Cochinch. 1: 235. 1790; *Memecylon edule* Roxburgh var. *scutellatum* (Loureiro) Triana.

Shrubs or rarely trees, 1.5–4 m tall, many-branched. Branches 4-sided, later terete; bark glaucous. Petiole 3–5 mm; leaf blade elliptic to ovate-lanceolate, 2–5 × 1–3 cm, leathery, both surfaces densely small tuberculate and scabrous, base broadly cuneate, margin entire, apex obtuse, rounded, or retuse. Inflorescences axillary, cymose, up to 8 mm; peduncle base often setose. Pedicel 1–2 mm, glabrous. Hypanthium shallowly cup-shaped, ca. 2 × 3 mm, glabrous, apically truncate, repand, and 4-apiculate. Petals purple to blue, broadly ovate, ca. 2.5 mm. Stamens ca. 3 mm; filaments ca. 2 mm; anthers and conic connective ca. 1 mm, with a small concave abaxial gland. Fruit a baccate drupe, globular, 6–7 mm in diam., densely tuberculate. Fl. (Mar–)Jun–Aug, fr. (Nov–)Jan–Mar.

Sparse to dense forests, thickets, grassy areas, open slopes, stream-sides; ca. 300 m. Guangdong, Guangxi, Hainan [Cambodia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

10. *Memecylon nigrescens* Hooker & Arnott, Bot. Beechey Voy. 186. 1833.

黑叶谷木 hei ye gu mu

Shrubs or trees, 2–8 m tall, many-branched. Branches terete, glabrous; bark canescent brown. Petiole 2–3 mm; leaf blade brownish yellow-green when dry, elliptic, rarely ovate-oblong, 3–6.5 × 1.5–3 cm, stiffly papery, both surfaces glabrous and

glossy, base cuneate, margin entire, apex obtuse to acute and sometimes with a retuse tip. Inflorescences axillary, cymose, nearly capitate, less than 1 cm, 2- or 3-branched, many-flowered; peduncle very short; bracts very small, caducous. Pedicel ca. 0.5 mm. Hypanthium shallowly cup-shaped, ca. 1.5 × 2 mm, glabrous, apex truncate and shallowly 4-lobed. Petals blue or white, broadly lanceolate, ca. 2 × 1 mm, base unguiculate, margin irregularly 1- or 2-dentate, apex acuminate. Stamens ca. 2 mm; filaments 1.2–1.5 mm; anthers and conic connective ca. 0.8 mm, lacking abaxial gland. Fruit black when dry, a baccate drupe, globular, 6–7 mm in diam. Fl. May–Jun, fr. Dec–Feb.

• Sparse to dense forests, thickets, hillsides; 400–1700 m. Guangdong, Hainan.

11. *Memecylon celastrinum* Kurz, Prelim. Rep. Forest Veg. Pegu, App. A, lxxvii, App. B, 53 [in key]. 1875.

蛇藤谷木 she teng gu mu

Trees to 25 m tall, d.b.h. to 60 cm, bole straight but buttressed in larger individuals. Bark finely fissured and flaking, thin, reddish brown to tan or blackish, inner bark pink to red, cambium whitish purple, wood orange-yellow or cream. Branchlets somewhat flattened or quadrangular, becoming cylindrical with age. Petiole 3–6 mm; leaf blade lanceolate to broadly ovate, 5–10 × 2–5.5 cm, leathery, abaxially usually drying green

to straw-colored, adaxially brown to black, veins invisible, base cuneate, apex acuminate. Inflorescences in leaf axils, cymes, 0.7–1.7 cm, many-flowered. Hypanthium funnel-shaped to urceolate, 1–2 mm, papillose. Calyx lobes minute. Petals pink, broadly ovate to suborbiculate, 2–2.5 mm, apically rounded or acute. Anthers crescent-shaped; connective with a small concave abaxial gland. Fruit green when immature, drying yellowish, globose, 7–10 mm in diam., surface pustulate, basally and apically flattened, apex with a ring 1–2 mm in diam.

Primary forests; 2500–1800 m. SE Xizang (Médog) [Myanmar, Singapore, Thailand].

This is perhaps a synonym of *Memecylon minutiflorum* Miquel (Fl. Ned. Ind., Eerste Bijv. 323. 1861).

Flora of China 13: 396–399. 2007.