

11. VENTILAGO Gaertner, Fruct. Sem. Pl. 1: 223. 1788.

翼核果属 yi he guo shu

Climbing shrubs or lianas, rarely small trees. Leaves alternate, leathery or nearly so, rarely papery, conspicuously reticulate, base asymmetric, margin entire or toothed. Flowers small, bisexual, 5-merous, few in fascicles or in shortly pedunculate cymes, or in terminal or axillary, cymose panicles. Sepals 5, triangular, adaxially medially keeled. Petals obovate-orbicular, apex emarginate, rarely absent. Disk thick, fleshy, pentagonous. Ovary globose, immersed in disk, 2-loculed, with 1 ovule per locule; styles 2-fid. Fruit a 1-seeded, indehiscent samara, 1/3–1/2 of base surrounded by persistent calyx tube, apex with longitudinally elongating oblong wing, with relict styles; endocarp globose, thin, woody, 1-loculed, 1-seeded. Seeds without endosperm; cotyledon thick.

About 40 species: Old World tropics; six species (two endemic) in China.

*Ventilago zhengdeii* G. S. Fan (J. Nanjing Forest. Univ. 28(1): 107. 2004), described from Yunnan, could not be treated here because no material was seen by the authors.

- 1a. Ovary and fruit densely pilose.
  - 2a. Leaf blade leathery, both surfaces glabrous or abaxially pubescent on major veins, apex acute, shortly acuminate, or acuminate ..... 5. *V. calyculata*
  - 2b. Leaf blade papery, adaxially glabrous, abaxially with barbate axils on major veins, apex long acuminate or caudate-acuminate ..... 6. *V. oblongifolia*
- 1b. Ovary glabrous or sparsely pubescent; fruit glabrous.
  - 3a. Flowers few fascicled in leaf axils or in axillary shortly pedunculate cymes; lateral veins 4–6(or 7) pairs.
    - 4a. Leaf blade ovate-oblong or ovate-elliptic, 4–8 × 1.5–3.2 cm, apex acuminate or caudate-acuminate, petiole 3–5 mm; winged fruit 3–6 cm ..... 1. *V. leiocarpa*
    - 4b. Leaf blade oblong, 1.2–3 × 1–1.5 cm, apex acute, petiole 1–2 mm; winged fruit 1.5–2 cm ..... 2. *V. elegans*
  - 3b. Flowers in terminal cymose panicles or axillary cymose racemes; lateral veins 8–16 pairs.
    - 5a. Leaf blade leathery, oblong or elliptic, apex obtuse or rounded, margin entire or upper margin inconspicuously remotely dentate, lateral veins 8–16 pairs ..... 3. *V. inaequilateralis*
    - 5b. Leaf blade papery, ovate-oblong or ovate-elliptic, apex long acuminate, margin obtusely dentate, lateral veins 4–8(–10) pairs ..... 4. *V. maderaspatana*

1. *Ventilago leiocarpa* Bentham, J. Proc. Linn. Soc., Bot. 5: 77. 1861.

翼核果 yi he guo

Shrubs scandent. Young branches pilose; branchlets brown, striate, glabrous or pubescent. Petiole 3–5 mm, adaxially sparsely pilose; leaf blade ovate-oblong or ovate-elliptic, 4–8 × 1.5–3.2 cm, thinly leathery, abaxially ± densely pubescent or pilose on major veins, adaxially glabrous except for midvein, lateral veins 4–6(or 7) pairs, prominent abaxially, impressed adaxially, base rounded or subrounded, margin subentire, only inconspicuously serrulate, apex acuminate, or shortly acuminate, rarely acute. Flowers small, bisexual, 5-merous, solitary or 2- to few fascicled in axils of leaves, rarely in terminal cymose racemes or cymose panicles, glabrous or sparsely pilose. Pedicel 1–2 mm. Sepals triangular. Petals obovate, apex emarginate. Stamens slightly shorter than petals. Disk pentagonous. Ovary immersed in disk; styles 2-fid or cleft to half. Drupe depressed-globose, 3–5(–6) cm; stone 4–5 mm in diam., glabrous, wing 7–9 mm wide, apex obtuse-rounded, mucronulate, surrounded by persistent calyx tube at base for 1/4–1/3, 1- or 2-loculed, 1-seeded. Fl. Mar–May, fr. Apr–Jul.

Sparse forests, thickets; below 1500 m. Fujian, Guangdong, Guangxi, S Guizhou, Hunan, Taiwan, Yunnan [India, Myanmar, Thailand, Vietnam].

The roots are used medicinally for improving the circulatory system and tendons and for treating numbness in limbs, injuries, and

trauma.

- 1a. Branchlets, fruiting pedicel, and persistent calyx tube glabrous; leaf blade abaxially glabrous or sparsely hairy on veins or vein axils ..... 1a. var. *leiocarpa*
- 1b. Branchlets, fruiting pedicel, and persistent calyx tube pubescent; leaf blade abaxially densely pubescent at least on veins ..... 1b. var. *pubescens*

1a. *Ventilago leiocarpa* var. *leiocarpa*

翼核果(原变种) yi he guo (yuan bian zhong)

*Smythea nitida* Merrill.

Branchlets, fruiting pedicel, and persistent calyx tube glabrous. Leaf blade abaxially glabrous or veins or vein axils sparsely hairy.

Sparse forests, thickets; below 1500 m. Fujian, Guangdong, Guangxi, Hunan, Taiwan, Yunnan [India, Myanmar, Thailand, Vietnam].

1b. *Ventilago leiocarpa* var. *pubescens* Y. L. Chen & P. K. Chou, Bull. Bot. Lab. N. E. Forest. Inst., Harbin 5: 89. 1979.

毛叶翼核果 mao ye yi he guo

Branchlets, fruiting pedicel, and persistent calyx tube pubescent. Leaf blade abaxially densely pubescent at least on veins.

• Sparse forests in valleys; 600–1000 m. W Guangxi, S Guizhou, SE Yunnan.

**2. *Ventilago elegans*** Hemsley, Ann. Bot. (Oxford) 9: 151. 1895.

台湾翼核果 tai wan yi he guo

Shrubs scandent, many branched. Annual branches often curved, pilose, glabrescent. Stipules minute, caducous; petiole 1–2 mm, pilose; leaf blade abaxially pale green, adaxially dark green, shiny, elliptic or obovate-elliptic, 1.2–3 × 1–1.5 cm, subleathery, abaxially glabrous, lateral veins 4 or 5 pairs, prominent on both surfaces, conspicuously reticulate, base cuneate, margin inconspicuously serrulate, apex acute or slightly obtuse, mucronulate. Flowers small, 2.5–3 mm in diam., bisexual, glabrous, solitary or few fascicled in axils of leaves. Pedicels 1–1.5 mm. Sepals triangular, adaxially medially keeled. Petals obovate, shorter than stamens, apex emarginate. Disk thick, pentagonous. Ovary immersed in disk; styles stout, 2-fid or cleft to half. Drupe winged, 1.5–2 cm, glabrous; stone 1-loculed, 1-seeded.

• Forests. Taiwan.

**3. *Ventilago inaequilateralis*** Merrill & Chun, Sunyatsenia 2: 38. 1934.

海南翼核果 hai nan yi he guo

Shrubs scandent. Young branches glabrous or pilose; branchlets gray-brown. Stipules lanceolate, caducous; petiole short, 1–5 mm, glabrous or subglabrous; leaf blade oblong or elliptic, 6–17 × 2–5 cm, leathery, both surfaces glabrous or abaxially sparsely pubescent on veins when young, lateral veins 8–14(–16) pairs, slightly prominent on both surfaces, conspicuously reticulate, base cuneate or subrounded, asymmetric or slightly so, margin entire or inconspicuously serrulate, apex obtuse or rounded, rarely acute. Inflorescences 3–7 cm, slender, pilose. Flowers yellow, 5-merous, solitary or few fascicled, and in pedunculate cymes, terminal or axillary, cymose panicles, or cymose racemes. Pedicel 1–2 mm, pilose. Calyx sparsely pilose; sepals adaxially medially keeled. Petals obovate, slightly longer than stamens, clawed at base, apex emarginate. Disk thick, fleshy, subpentagonous. Ovary globose, ± completely immersed in disk, glabrous or sparsely pilose; styles cleft to half. Drupe 3.5–4.5 cm, 4–5 mm in diam., wings 7–9 mm wide, apex obtuse or subrounded, surrounded by calyx tube at base for 1/3–1/2; stone 1-loculed, 1-seeded; fruiting pedicel 2–3 mm, sparsely pilose or subglabrous. Seeds without endosperm; cotyledons thick. Fl. Feb–May, fr. Mar–Jun.

• Forests in valleys; low elevations. W Guangxi, SW Guizhou, Hainan, S Yunnan.

**4. *Ventilago maderaspatana*** Gaertner, Fruct. Sem. Pl. 1: 223. 1788.

印度翼核果 yin du yi he guo

Shrubs scandent. Branchlets brownish, pubescent. Stipules caducous; petiole 4–7 mm; leaf blade abaxially pale green, adaxially dark green, shiny, ovate-oblong to ovate-elliptic, 7–15 × 2.5–5 cm, papery or subleathery, abaxially puberulent to gla-

brous, adaxially glabrous, lateral veins 4–8(–10) pairs, base subrounded, symmetric or ± asymmetric, margin obtusely dentate, rarely entire, apex long acuminate. Flowers in terminal or axillary, cymose racemes or cymose panicles, 5–15 cm. Calyx tube pubescent; sepals spreading, triangular, adaxially medially keeled. Petals obovate, equaling stamens, clawed at base, apex emarginate and minutely mucronulate. Disk fleshy, densely hairy. Ovary globose, ± completely immersed in disk, ± densely tomentose; styles cleft to half. Drupe 5–6 cm, densely pubescent; stone 6–8 mm in diam., wing oblong, 0.9–1.1 cm wide, surrounded by calyx tube at base for 2/5–1/2, apex rounded, 1-loculed, 1-seeded; fruiting pedicel ca. 3 mm. Fl. unknown, fr. Dec–Apr of following year.

Forests; low elevations. S Yunnan [India, Indonesia (Java), Myanmar, Sri Lanka].

The bark of *Ventilago maderaspatana* is used medicinally in India.

**5. *Ventilago calyculata*** Tulasne, Ann. Sci. Nat., Bot., sér. 4, 8: 124. 1857.

毛果翼核果 mao guo yi he guo

Shrubs scandent. Young branches glabrous or sparsely pilose, glabrescent, or yellow-brown pubescent; old branches brown, angular. Petiole 5–8 mm, glabrous, sparsely pilose adaxially, or yellow-brown pubescent; leaf blade ovate to elliptic, 5–13 × 3–6 cm, abaxially ± densely pilose when young, glabrescent and finally only pubescent on major veins, adaxially nearly glabrous, lateral veins 5 or 6(–8) pairs, prominent abaxially, rather inconspicuous adaxially, base broadly cuneate or subrounded, lower margin entire, upper margin conspicuously remotely serrate, apex shortly acuminate or acuminate. Flowers numerous, in cymes, terminal or axillary, together in cymose panicles, 10–30 cm; rachis, calyx, and pedicels yellow-brown pilose. Pedicel very short, ca. 1 mm. Sepals ovate-triangular, adaxially medially keeled. Petals spatulate, ca. as long as stamens, apically minutely mucronate. Disk thick, fleshy, 5-lobed, densely ferruginous. Ovary globose, densely pilose, nearly completely immersed in disk; styles deeply 2-cleft. Drupe yellow-green, 4.5–6 cm, 5–6 mm in diam., puberulent, surrounded by persistent calyx tube at base for 1/3–2/5, wing oblong, 1–1.4 cm wide, both surfaces striate, ± puberulent, apex obtuse-rounded; stone 1-loculed, 1-seeded. Fl. Oct–Dec, fr. Dec–Apr of following year.

Forests; middle elevations. W Guangxi, SW Guizhou, S Yunnan [Bhutan, India, Nepal, Thailand, Vietnam].

- 1a. Leaf blade oblong or ovate, upper margin irregularly remotely dentate, middle and lower margins entire; young branches, petioles, and abaxial leaf surface glabrous or sparsely pubescent ..... 5a. var. *calyculata*
- 1b. Leaf blade ovate-elliptic, margin sparsely serrulate; young branches, petioles, and veins on abaxial leaf surface densely yellow-brown pubescent ..... 5b. var. *trichoclada*

**5a. *Ventilago calyculata* var. *calyculata***

毛果翼核果(原变种) mao guo yi he guo (yuan bian zhong)

Young branches, petioles, and abaxial leaf surface gla-

brous or sparsely pubescent. Leaf blade oblong or ovate, lower and middle margins entire, upper margin irregularly remotely dentate.

Forests; middle elevations. W Guangxi, SW Guizhou, S Yunnan [Bhutan, India, Nepal, Thailand, Vietnam].

**5b. *Ventilago calyculata* var. *trichoclada*** Y. L. Chen & P. K. Chou, Bull. Bot. Lab. N. E. Forest. Inst., Harbin 5: 90. 1979.

毛枝翼核果 mao zhi yi he guo

Young branches, petioles, and veins on abaxial leaf surface densely yellow-brown pubescent. Leaf blade ovate-elliptic, margin sparsely serrulate.

• Forests; ca. 600 m. NW Guangxi (Tianlin).

**6. *Ventilago oblongifolia*** Blume, Bijdr. 1144. 1826–1827.

矩叶翼核果 ju ye yi he guo

Shrubs scandent. Annual branches pilose, glabrescent. Petiole 2–3 mm, glabrous or sparsely pilose adaxially; leaf blade narrowly elliptic to oblong, 6–12 × 2–4 cm, papery, both surfaces glabrous except for clustered hairy vein axils abaxially, lateral veins 4–6 pairs, prominent abaxially, slightly impressed adaxially, base rounded to broadly cuneate, often slightly asymmetric, margin crenulate, apex long acuminate or caudate-acuminate. Flowers very small, 1–1.5 mm in diam., numerous in terminal cymose racemes or cymose panicles, ca. 20 cm; peduncles, pedicels, and flowers densely pilose. Calyx tube shallowly cup-shaped; sepals triangular, ca. 1 mm, adaxially distinctly keeled. Petals obovate, ca. 1 mm. Ovary hairy; styles 2-cleft to half. Drupe 5.5–7 cm, wings 1–1.2 cm wide, densely puberulent, surrounded by persistent calyx tube at base; fruiting pedicel 2–3 mm, puberulent; stone 1-loculed, 1-seeded. Fl. Jun, fr. Dec.

Forests, often climbing on trees. Guangxi, Yunnan [Indonesia, Malaysia, Philippines, Thailand].

