

# 1. ASPIDOPTERYS A. Jussieu ex Endlicher, Gen. Pl. 1060. 1840.

盾翅藤属 *dun chi teng shu*

Woody lianas or lianoid shrubs. Leaves opposite, entire, eglandular; stipule absent or small and deciduous. Inflorescences paniculate, rarely a raceme or cyme, axillary or terminal; peduncles articulated distally; pedicels usually bracteolate. Flowers 5-merous, bisexual, actinomorphic. Sepals 5, sometimes connate at base, eglandular. Petals 5, yellow or white, not clawed, entire, explanate or recurved. Stamens 10; filaments filiform, free or sometimes connate at base; anthers basifixed. Ovary 3-lobed, lobes abaxially flattened, margins ± winged; styles 3, free; stigma capitate. Samaras 3, often attached by a carpophore, each 3-winged; lateral wings connate forming 1 large wing, orbicular to oblong, membranous or leathery, palmately veined, sometimes shortly crested at middle; abaxial wing well developed or absent. Seeds cylindrical, located at center of samara.

About 20 species: tropical Asia; nine species (five endemic) in China.

- 1a. Samara oblong, oblong-lanceolate, or ovate-elliptic, length conspicuously longer than width.
  - 2a. Lianoid shrubs, not ferruginous pubescent; pedicels ca. 8 mm ..... 2. *A. floribunda*
  - 2b. Lianas, ferruginous pubescent; pedicels 2–6 mm.
    - 3a. Pedicels 4–6 mm; ovary sparsely hirsute; samara oblong ..... 1. *A. henryi*
    - 3b. Pedicels 2–2.5 mm; ovary glabrous; samara ovate-elliptic ..... 3. *A. glabriuscula*
- 1b. Samara orbicular to suborbicular, length slightly longer than or equaling width.
  - 4a. Plant glabrescent; leaf blade abaxially glabrous, base of midrib sometimes puberulent.
    - 5a. Leaf blade ovate-elliptic to oblong, midrib base abaxially puberulent ..... 5. *A. concava*
    - 5b. Leaf blade variously subcordate to ovate, midrib base abaxially glabrous.
      - 6a. Leaf blade 7–12 × 4.5–6 cm; cymose panicles terminal ..... 9. *A. microcarpa*
      - 6b. Leaf blade 11–25 × 8–15 cm; racemose panicles axillary ..... 6. *A. cavaleriei*
  - 4b. Plant with a persistent pubescence; leaf blade abaxially tomentose or sericeous pubescent.
    - 7a. Leaf blade abaxially sericeous pubescent ..... 8. *A. nutans*
    - 7b. Leaf blade abaxially tomentose.
      - 8a. Leaf blade ovate to ovate-lanceolate, apex caudate-acuminate ..... 4. *A. esquirolii*
      - 8b. Leaf blade suborbicular to orbiculate, apex retuse-acuminate ..... 7. *A. obcordata*

1. *Aspidopterys henryi* Hutchinson, Bull. Misc. Inform. Kew 1917(3): 94. 1917.

蒙自盾翅藤 *meng zi dun chi teng*

*Aspidopterys glabriuscula* A. Jussieu var. *subrotunda* Niedenzu.

Woody lianas; branchlets spreading, subterete, densely ferruginous tomentose. Petiole 7–10 mm, ferruginous hirsute; leaf blade broadly ovate or ovate-orbicular, 8–10 × 5–7 cm, thinly papery, abaxially densely ferruginous tomentose, adaxially glabrous, small concave punctate, base rounded or slightly cordate, apex shortly acuminate; lateral veins 6 pairs, arcuate, hirsute. Racemose panicles terminal or axillary, up to 25 cm, ferruginous pubescent; peduncles ca. 6 cm, up to 15 cm in fruit; bracts hirsute; pedicels fasciculate, slender, articulate, 4–6 mm. Sepals elliptic or elliptic-obovate, ca. 1.5 × 1 mm. Petals obovate, 4–5 × ca. 2 mm. Stamen filaments connate at base, glabrous; anthers broadly elliptic, ca. 1 mm. Ovary sparsely hirsute; style ca. 2.5 mm, glabrous; stigma capitate, subglobose. Samara narrowly oblong, 3.5–4 × 1.5–1.8 cm, sparsely reticulate veined, glabrous; fruit stalk 1.5–2 cm. Fl. Aug–Oct, fr. Oct–Dec.

• Mountain forests; 1100–1700 m. SE and SW Yunnan.

2. *Aspidopterys floribunda* Hutchinson, Bull. Misc. Inform. Kew 1917(3): 95. 1917.

多花盾翅藤 *duo hua dun chi teng*

*Aspidopterys glabriuscula* A. Jussieu var. *brevicuspis* Niedenzu.

Lianoid shrubs; branchlets brown, sparsely pubescent. Petiole 7–10 mm, pubescent; leaf blade elliptic or ovate-elliptic, 7–11 × 4–6.5 cm, thinly papery, both surfaces glabrous, slightly shiny, midrib abaxially and lateral veins adnate pubescent, base rounded or slightly cordate, apex shortly acute-acuminate; lateral veins 4 or 5 pairs, arcuate. Panicles terminal or axillary, typically up to 30 × 15 cm, ferruginous pubescent; bracteoles linear-

lanceolate, ca. 1.5 mm, densely ferruginous pubescent; pedicels fasciculate, slender, ca. 8 mm, articulate proximally, ferruginous pubescent under articulation, glabrous above articulation. Sepals elliptic-ovate, ca. 1 mm, apex rounded, glabrous. Petals elliptic-obovate, 3.5–4 mm, glabrous. Stamen filaments glabrous; anthers ca. 0.5 mm. Ovary glabrous; stigma capitate. Samara yellow-brown, oblong or oblong-lanceolate, 3.5–5 × ca. 1.5 × 1.5–2.3 cm, membranous, with distinct reticulate veins, base truncate-rounded, apex gradually attenuate; fruit stalk 1.5–2 cm. Fl. Jul–Aug, fr. Sep–Oct.

• Sparse hill forests, shrub forests; 1400–1700 m. SE Yunnan.

3. *Aspidopterys glabriuscula* A. Jussieu, Ann. Sci. Nat., Bot., sér. 2, 13: 267. 1840.

盾翅藤 *dun chi teng*

*Aspidopterys heterocarpa* J. Arènes.

Lianas, new growth densely ferruginous sericeous. Petioles 6–10 mm, canaliculate, ferruginous pubescent; leaf blade ovate, obovate, or broadly elliptic, 6–11 × 4–6.5 cm, thinly papery, ferruginous pubescent abaxially along midrib, base rounded or subcordate, apex shortly acuminate; lateral veins ca. 4 pairs, arcuate, veinlets reticulate. Panicles terminal or axillary, ca. 15 cm; pedicels 2–2.5 mm, ca. 15 mm in fruit, proximally articulate, above articulation pubescent; basal bracteoles 2, lanceolate. Sepals elliptic, ca. 1 mm, pubescent. Petals elliptic, ca. 3 × 1.5 mm, apex rounded. Stamen filaments ca. 2 mm. Ovary glabrous; stigma capitate. Samara ovate-elliptic, 4.5–5 × 1.5–2.2 cm. Seed linear, ca. 1 cm. Fl. Aug–Sep, fr. Oct–Nov.

Valley forests; 1500–2000 m. Guangdong, Guangxi, Hainan, Yunnan [Bhutan, India, Philippines, Vietnam].

4. *Aspidopterys esquirolii* H. Léveillé, Repert. Spec. Nov. Regni Veg. 11: 65. 1912.

花江盾翅藤 *hua jiang dun chi teng*

Woody lianas; annual growth felty tomentose with gray-yellow hairs. Petioles 1–1.5 cm, tomentose; leaf blade ovate to ovate-lanceolate, 7–13 × 3.5–6 cm, subleathery, abaxially densely felty tomentose, adaxially deep green, sparsely pubescent, base rounded or subcordate, apex caudate-acuminate; lateral veins 4 or 5 pairs, reticulate veins obscure. Cymose panicles axillary, ca. (5–)11 cm; bracts linear, 6–8 mm, densely tomentose; pedicels ca. 10 mm; bracteoles linear. Flowers crowded atop branchlets. Sepals ovate, ca. 1.5 mm, densely gray-yellow tomentose. Petals oblong-obovate, 5–6 × ca. 3 mm, glabrous. Stamen filaments ca. 1.5 mm; anthers oblong. Ovary pubescent; styles 3, 3–3.5 mm, free. Samara suborbicular, 2.5–4 × 2–3.5 cm, subleathery, apex of lateral wings retuse, abaxial wing ca. 12 × 5 mm. Seed lanceolate, villous. Persistent disk yellow-brown, shallowly 3-lobed, lobes deltoid, ca. 1 mm; carpel stalk conic, ca. 1.5 mm. Fl. Jul–Aug, fr. Oct–Dec.

• Mountain forests; 400–800 m. NW Guangxi, SE Guizhou, W Sichuan.

5. *Aspidopterys concava* (Wallich) A. Jussieu, Ann. Sci. Nat., Bot., sér. 2, 13: 266. 1840.

广西盾翅藤 *guang xi dun chi teng*

*Hiraea concava* Wallich, Pl. Asiat. Rar. 1: 13. 1830.

Woody lianas, up to 20 m; young branchlets red-brown tomentose, glabrate, striate, lenticellate, leaf-scars slightly thickened. Petiole 1–2 cm, glabrous or puberulent; leaf blade ovate-elliptic to oblong, (5–)7–10(–12) × 3–5(–8) cm, subleathery, both surfaces glabrous, abaxial midrib puberulent, base rounded or obtuse, rarely subcordate, apex acuminate; lateral veins 4–7 pairs, anastomosing near margin. Panicles axillary, 5–10 cm, slender, red-brown pubescent, glabrate; pedicels 1–1.5 cm, glabrous, articulate proximally. Sepals ca. 2 × 1 mm, glabrous, apex rounded. Petals white, oblong, 3.5–

5 × 1.5–3 mm, glabrous, apex rounded. Ovary glabrous; style 3–4.5 mm. Samara red-brown, suborbicular to orbicular, 2.5–4.5 × 2–2.7 cm, subleathery or dry membranous, apex retuse, abaxial wing ca. 1 cm × 6 mm. Seed linear, villous. Persistent disk dark red-brown, shallowly 3-lobed; carpel stalk trigonous-conic, as long as lobes of disk. Fl. Jul–Aug, fr. Oct–Dec.

Dense forests of limestone mountains, shrub forests of hills; 300–600 m. Guangxi [Cambodia, Indonesia, Laos, Malaysia, Philippines, Thailand, Vietnam].

6. *Aspidopterys cavaleriei* H. Léveillé, Repert. Spec. Nov. Regni Veg. 9: 458. 1911.

贵州盾翅藤 *gui zhou dun chi teng*

*Aspidopterys dunniana* H. Léveillé.

Scandent lianas; branchlets terete, striate, yellow-brown pubescent, glabrate. Petiole 2.5–7 cm, glabrous; leaf blade ovate or elliptic-ovate to subcordate, 11–25 × 8–15 cm, thinly leathery, abaxially green or ferruginous-red, adaxially olivaceous-green, surfaces glabrous, base rounded or subcordate, apex acute-acuminate; lateral veins 4 or 5 pairs, anastomosing near margin. Racemose panicles axillary, usually 2 inflorescences per axil, 15–25 cm, ferruginous pubescent; pedicels ca. 7 mm, articulate proximally, glabrous; bracteoles 2. Sepals oblong, ca. 1.5 mm, pubescent. Petals yellow-white, oblong, 4–6 mm, glabrous or very sparsely puberulent. Stamens ca. 1/2 as long as petal length; anthers oblong. Ovary glabrous, ca. 1 mm; style ca. 2.5 mm. Samara suborbicular, 3.5–4.5 × 3–3.8 cm, membranous, apex 2-lobed, abaxial wing 15–18 × ca. 3 mm; fruit stalk ca. 1.5 cm. Seed cylindrical. Persistent disk 3-lobed, ca. 1 mm; carpel stalk triangular, ca. 4 mm. Fl. Feb–Apr, fr. Apr–May.

• Valley forests; 200–800 m. Guangdong, Guangxi, Guizhou, Yunnan.

7. *Aspidopterys obcordata* Hemsley, Hooker's Icon. Pl. 27: t. 2673. 1901.

倒心盾翅藤 *dao xin dun chi teng*

Woody lianas; branchlets yellow-brown tomentose. Petiole 2–3 cm, densely yellow tomentose; leaf blade orbicular-obcordate or obovate-obcordate, 6–11 × 7–12 cm, thickly papery to papery or thinly leathery, abaxially yellow tomentose, adaxially glabrous, base rounded or shallowly cordate, apex cuspidate or retuse-acuminate. Panicles axillary, shorter than or equaling leaves, densely yellow-brown pubescent; pedicels slender, 5–10 mm, articulate proximally. Sepals oblong, ca. 1.5 mm, apex obtuse, ciliate. Petals white or yellowish, obovate-oblong, to 5 mm, glabrous. Ovary 3-lobed, glabrous. Samara oblong or suborbicular, 2–2.5 cm, apex retuse, abaxial wing ca. 3 mm wide. Fl. Feb–Mar, fr. Apr–May.

• Forests of higher-elevation hills, sparse forests or shrub forests of valleys or mountains; 600–1600 m. Hainan, S Yunnan.

1a. Leaf blade thickly papery or thinly leathery, obcordate to suborbicular ..... 7a. var. *obcordata*

1b. Leaf blade thinly papery or papery,  
ovate to suborbicular ..... 7b. var. *hainanensis*

**7a. *Aspidopterys obcordata* var. *obcordata***

倒心盾翅藤(原变种) dao xin dun chi teng (yuan bian zhong)

*Aspidopterys tomentosa* Blume var. *obcordata* (Hemsley)  
Niedenzu.

Leaf blade obcordate to suborbicular, thickly papery or  
thinly leathery, apex retuse-acuminate, acumen triangular.  
Petals ca. 5 mm. Fl. Feb–Mar, fr. Apr–May.

• Sparse forests or shrub forests of valleys or mountains; 600–  
1600 m. S Yunnan.

**7b. *Aspidopterys obcordata* var. *hainanensis*** Arènes, Notul.  
Syst. (Paris) 11: 74. 1943.

海南盾翅藤 hai nan dun chi teng

Leaf blade ovate to suborbicular, thinly papery or papery,  
apex cuspidate. Petals ca. 3.5 mm.

• Forests of higher-elevation hills. Hainan.

**8. *Aspidopterys nutans*** (Roxburgh ex Candolle) A. Jussieu,  
Ann. Sci. Nat., Bot., sér. 2, 13: 267. 1840.

毛叶盾翅藤 mao ye dun chi teng

*Hiraea nutans* Roxburgh ex Candolle, Prodr. 1: 585. 1824;  
*Aspidopterys lanuginosa* (Wallich) A. Jussieu; *Hiraea lanu-*  
*ginosa* Wallich.

Scandent lianas, new growth densely gray-white sericeous-lanate; branchlets dark purple-brown, terete, striate. Petioles 1.5–3 cm, densely gray-white pubescent; leaf blade papery to thinly coriaceous, ovate, broadly ovate, or subrotund, 9–12 × 5.5–8 cm, abaxially greenish, densely gray-white sericeous, adaxially deep green, slightly shiny, glabrate, base rounded or sometimes subcordate, apex acuminate; lateral veins (4 or)5 or 6 pairs, parallel, anastomosing near margin, more distinct adaxially. Panicles terminal or axillary, 11–15 cm, densely gray-white sericeous; pedicels 0.8–2 cm, articulate at middle, glabrate; bracteoles 2, subulate. Sepals ovate or broadly elliptic, ca. 1.5 mm, apex rounded, pubescent. Petals oblong-obovate, 4–5 × 2–3 mm. Stamens ca. 1/2 petal in length; anthers oblong. Ovary densely gray-white pubescent; styles 3, free. Samara broadly ovate, 3–3.5 × 2.5–3 cm, apex retuse, abaxial wing absent or narrowly winged. Seed white sericeous. Persistent disk shallowly 3-lobed; stalk longer than lobes of disk. Fl. Aug–Nov, fr. Nov–Dec.

Shrub forests of lower-elevation mountains. S and SW Yunnan [Cambodia, India, Laos, Myanmar, Nepal, Thailand, Vietnam].

The name *Aspidopterys concava* var. *dasyphylla* Arènes has been misapplied to this species.

**9. *Aspidopterys microcarpa*** H. W. Li ex S. K. Chen, Acta Bot. Yunnan. 18: 405. 1996.

小果盾翅藤 xiao guo dun chi teng

Woody lianas, usually scandent; branchlets terete, gla-

brous. Petioles 2–3 cm, glabrous; leaf blade ovate, 7–12 × 4.5–6 cm, thinly leathery, abaxially glabrous, adaxially deep green, both surfaces glaucous, base rounded, apex caudate-acuminate; lateral veins 9 or 10 pairs, parallel, anastomosing near margin, veinlets reticulate, indistinct. Cymose panicles terminal, ca. 25

cm in fruit, glabrous. Flower not seen. Samara milky white, suborbicular, 1–1.2 cm in diam., membranous. Fr. Dec.

Shrub forests of lower-elevation mountains. W Guangxi [Vietnam].

