

## 16. CORYLOPSIS Siebold & Zuccarini, Fl. Jap. 1: 45. 1835.

蜡瓣花属 la ban hua shu

Shrubs or small trees, deciduous or semievergreen, branches with 3 prophylls, usually stellately pubescent; buds perulate. Leaves petiolate; stipules large, membranous, usually rapidly caducous, leaving small scars; leaf blade membranous or leathery, margin serrate, venation pinnate, the 2 basal lateral veins usually with tertiary veins. Inflorescence a raceme or compact thyrse, pendent, usually open before leaves appear; peduncle with 2 or 3 basal leaves; each flower usually with 1 bract and 2 bracteoles. Flowers bisexual. Sepals 5, persistent or deciduous. Petals yellow, rounded or ovate. Stamens 5; filaments linear; anther thecae 2-sporangiate, each dehiscent by 2 valves; 5–10 nectar producing disk scales present, alternating with stamens, apex truncate or 2-lobed. Sometimes 1–5 staminodes present. Ovary from almost superior to almost inferior; ovules 3 per locule, 2 of them sterile; styles short or long, stigmas capitate, persistent in fruit. Capsules ovoid-globose, woody, dehiscent loculicidally by 4 valves, with persistent styles. Seeds ellipsoid; endosperm fleshy; embryo straight.  $2n = 24, 48, 72$ .

About 29 species: China, India, Japan, Korea; 20 species (19 endemic) in China.

*Corylopsis calcicola* C. Y. Wu (Fl. Yunnan. 1: 126. 1977) was described from NE Yunnan (Zhenxiong Xian), but the present authors have seen no specimens.

- 1a. Ovary superior, free from floral cup, capsule separated from persistent floral cups.
  - 2a. Floral cup, ovary and leaves abaxially stellately pubescent ..... 3. *C. stelligera*
  - 2b. Floral cup and ovary glabrous, leaves glabrous or abaxially pubescent along veins.
    - 3a. Petals narrowly spatulate, 6–7 mm; styles as long as petals ..... 1. *C. henryi*
    - 3b. Petals broadly spatulate, 3–4 mm; styles less than 1/2 as long as petals ..... 2. *C. brevistyla*
- 1b. Ovary semi-inferior, connate with floral cup.
  - 4a. Flowers shortly pedicellate, petals narrowly oblanceolate to spatulate, 1.5–2 mm wide; capsule 12–20 mm, with conspicuously thick pedicel; buds gray-white tomentose ..... 4. *C. multiflora*
  - 4b. Flowers sessile, petals obovate or axelike, 3–4 mm wide; capsules 6–9 mm; buds mostly glabrous, occasionally pubescent (tomentose in *C. rotundifolia*).
    - 5a. Disk scales undivided.
      - 6a. Inflorescences 2–5-flowered ..... 5. *C. pauciflora*
      - 6b. Inflorescences 10 or more-flowered.
        - 7a. Leaf blade obovate, 3.5–5.5 cm, apex rounded; stipules 0.5–0.7 cm ..... 6. *C. ahnifolia*
        - 7b. Leaf blade ovate or broadly ovate, 6–10 cm, apex shortly acute; stipules 2–3 cm ..... 7. *C. platypetala*
    - 5b. Disk scales 2-lobed.
      - 8a. Floral cup and ovary stellately pubescent.
        - 9a. Infructescences 8–9 cm, usually with 25–40 capsules, leaf blade with 10–12 lateral veins on each side ..... 12. *C. trabeculosa*
        - 9b. Infructescences 3–6 cm, usually with less than 25 capsules; leaf blade with 6–9 lateral veins on each side.
          - 10a. Styles 5–7 mm, as long as or longer than petals.
            - 11a. Stamens shorter than petals; basal bracts of inflorescences 0.8–1 cm, abaxially pubescent ..... 8. *C. sinensis*
            - 11b. Stamens longer than petals; basal bracts of inflorescences 1–1.3 cm, abaxially glabrous ..... 9. *C. veitchiana*
          - 10b. Styles 1–2.5 mm, shorter than petals.
            - 12a. Leaf blade abaxially pubescent only along nerves; petiole ca. 1 cm; petals 6–7 × 4–5 mm; stamens 4–5 mm; styles 2–2.5 mm ..... 10. *C. yunnanensis*
            - 12b. Leaf blade abaxially densely tomentose; petiole 1.5–2 cm; petals 3–4 × 3–4 mm; stamens ca. 3 mm; styles 1–1.5 mm ..... 11. *C. velutina*
        - 8b. Floral cup and ovary glabrous.
          - 13a. Leaf blade abaxially pubescent, at least along nerves.
            - 14a. Styles 4–5 mm; petals 5–6 mm; peduncle almost glabrous ..... 16. *C. glandulifera*
            - 14b. Styles 1–3 mm; petals 2–3 mm; peduncle pubescent.
              - 15a. Young branches and buds glabrous; capsule globose ..... 15. *C. microcarpa*
              - 15b. Young branches and buds pubescent or tomentose; capsule ovoid.
                - 16a. Leaves circular or oblate; styles 1.2–1.5 mm ..... 13. *C. rotundifolia*
                - 16b. Leaves obovate; persistent styles 2–3 mm ..... 14. *C. obovata*
          - 13b. Leaf blade abaxially glabrous or pubescent only along nerves when young.
            - 17a. Peduncle 5–7 cm, flowers and capsules pedicellate, laxly arranged ..... 20. *C. yui*

- 17b. Peduncle 2–4 cm, flowers and capsules sessile, densely arranged.  
 18a. Petals oblanceolate, 1.5–1.7 mm wide; leaf blade abaxially pale gray ..... 17. *C. glaucescens*  
 18b. Petals obovate, 2–3 mm wide; leaf blade abaxially green.  
 19a. Petals, stamens and styles 3 mm or more; leaf blade abaxially pubescent  
 along nerves, apex acute ..... 18. *C. willmottiae*  
 19b. Petals, stamens and styles 1.5–2 mm; leaf blade abaxially glabrous, apex  
 emarginate or truncate, ..... 19. *C. omeiensis*

**1. *Corylopsis henryi*** Hemsley, Hooker's Icon. 29: Pl. t. 2819. 1906.

鄂西蜡瓣花 e xi la ban hua

Shrubs; branchlets gray-brown, glabrous, minutely lenticellate; terminal buds ellipsoid, 0.8–1 cm, glabrous. Stipules oblong, 18–20 mm, glabrous; petiole 8–10 mm, puberulent; leaf blade obovate-rounded, 6–8 × 4–6 cm, abaxially pale gray-brown, sparsely pubescent or glabrescent along veins, adaxially drying green, glabrous, base cordate, asymmetrical, margin sinuate-serrate, teeth mucronate, apex acute, lateral veins 8–10 on each side, the 2 lowermost with obscure tertiary veins at 90° to lateral veins. Inflorescence 3–4.5 cm, 5–6 cm in fruit; peduncle ca. 1.5 cm, pubescent, with 1 or 2 basal leaves; floral bract ovate, ca. 7 mm, abaxially glabrous; bracteoles oblong, 4–5 mm, abaxially glabrous. Floral cup glabrous. Sepals ovate, apex rounded. Petals narrowly spatulate, 6–7 × 3–3.5 mm. Stamens 5–7 mm; disk scales 2-lobed, apex acute, shorter than sepals. Ovary superior, glabrous; styles 5–6 mm, somewhat longer than stamens. Capsules 6–7 mm. Seeds 4–5 mm. Fl. Apr–Jun, fr. Jul–Sep.

- Forests; ca. 1000 m. W Hubei, E Sichuan.

**2. *Corylopsis brevistyla*** H. T. Chang, Sunyatsenia 7: 71. 1948.

短柱蜡瓣花 duan zhu la ban hua

Shrubs; young branches glabrous, with minute, white lenticels; buds narrowly ovoid, 8–10 mm, glabrous, scales ovate. Stipules narrowly oblong, 13–15 × 3–4 mm, abaxially villous, adaxially glabrous; petiole 5–10 mm, glabrous; leaf blade obovate or obovate-rounded, 3–7 × 2.5–5 cm, abaxially drying grayish, initially villous along veins, glabrescent, adaxially drying dark green, base almost symmetrical, cordate, margin serrate above middle of leaf, teeth mucronate, apex obtuse and mucronate or acute; lateral veins 6–8 on each side. Inflorescence 1.5–2 cm, 14–18-flowered, peduncle ca. 1 cm, tomentose, with 1 or 2 basal leaves; involucral bracts 4–5, scalelike, ovate-rounded, 1–1.2 cm, abaxially pubescent with yellow-brown hairs, adaxially villous; floral bract ovate, 3–4 mm, pubescent; bracteoles oblong, 1.2–1.5 mm. Floral cup glabrous. Sepals nearly rounded, equal to floral cup. Petals broadly spatulate, 3–4 × 2–3 mm, base clawed. Stamens 2.5–3 mm; disk scales 2-parted, apex obtuse, somewhat shorter than sepals. Ovary superior, glabrous; styles 1–1.5 mm. Capsules 5–6 mm, glabrous; persistent styles ca. 1 mm. Seeds 3–4 mm. Fl. Apr–Jun, fr. Jul–Aug.

- Forests; ca. 1200 m. NW and NE Yunnan.

**3. *Corylopsis stelligera*** Guillaumin, Notul. Syst. (Paris) 3: 25. 1914.

星毛蜡瓣花 xing mao la ban hua

Shrubs or small trees; young branches gray-brown, pubescent, lenticellate; terminal buds ellipsoid, 1.5–2 cm, glabrous. Petiole ca. 10 mm, stellately pubescent; leaf blade obovate or obovate-elliptic, 5–12 × 3–7 cm, abaxially stellately pubescent at least along veins, adaxially puberulent along veins, base cordate, asymmetrical, margin serrate above middle of leaf, teeth mucronate, apex acute; lateral veins 7 or 8 on each side, the 2 lowermost with tertiary veins. Inflorescence 3–4 cm, 5–6 cm in fruit; peduncle ca. 1 cm, with 2 or 3 basal leaves; basal bracts of inflorescences (stipules of reduced leaves) 5 or 6, scalelike, ovate, 1–1.3 cm, abaxially glabrous, adaxially villous; floral bracts ovate, 3–4 mm, tomentose on both surfaces; bracteoles oblong-lanceolate, 1.5–2 mm, pubescent. Floral cup stellately pubescent. Sepals ovate, glabrous, apex rounded. Petals spatulate, ca. 5 mm. Stamens ca. 6 mm, exerted from corolla; disk scales acute, 2-lobed, subequal to sepals. Ovary superior, stellately pubescent; styles as long as stamens. Capsules 6–7 mm, stellately pubescent, with persistent styles. Seeds ovoid-ellipsoid, 3–4 mm. Fl. Apr–Jun, fr. Jun–Aug.

- Forests; ca. 1300 m. SW China.

**4. *Corylopsis multiflora*** Hance, Ann. Sci. Nat. Bot., sér. 4, 15: 224. 1861.

瑞木 rui mu

Shrubs or small trees, sometimes semievergreen; young branches tomentose or glabrous; older growth gray-brown, glabrescent, minutely lenticellate; buds gray-white tomentose. Stipules oblong, 18–20 mm, petiole 10–15 mm; leaf blade ovate, obovate, obovate-elliptic, or almost circular, 5–15 × 4–8 cm, abaxially glabrous or stellately pubescent at least along veins, base almost symmetrical, cordate, margin serrate, teeth mucronate, apex acute or acuminate; lateral veins 7–9 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence 2–4 cm, 5–6 cm in fruit; peduncle and general bracts glabrous or pubescent, with 1–5 basal leaves. Pedicel 1–2 mm. Floral cup glabrous. Sepals ovate, 1–1.5 mm. Petals oblanceolate or narrowly so, 3–5 × 1–2 mm. Stamens 4–7 mm; disk scales not lobed, apex truncate, subequal to sepals. Ovary semi-inferior, glabrous; styles slightly shorter than stamens.

- Forests, slopes, roadsides; 1000–1500 m. Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Taiwan, Yunnan.
- 1a. Young branches tomentose; leaves abaxially stellately pubescent; peduncles pubescent; stamens 6–7 mm ..... 4a. var. *multiflora*
- 1b. Young branches, leaves and peduncles glabrous; stamens 4 mm ..... 4b. var. *nivea*

**4a. *Corylopsis multiflora* var. *multiflora***

瑞木(原变种) rui mu (yuan bian zhong)

*Corylopsis cavaleriei* H. Léveillé; *C. cordata* Merrill ex H. L. Li; *C. multiflora* var. *cordata* (Merrill ex H. L. Li) H. T. Chang; *C. multiflora* var. *parvifolia* H. T. Chang; *C. stenopetala* Hayata; *C. wilsonii* Hemsley.

Young branches tomentose. Leaf blade obovate, obovate-elliptic, or almost circular, 7–15 × 4–8 cm, abaxially drying gray-white, stellately pubescent at least along veins, adaxially pubescent along veins. Peduncle pubescent; general bracts 1.5–2 cm, abaxially pubescent with gray-white hairs; bracts ovate, 6–7 mm, pubescent; bracteole 1, oblong, ca. 5 mm, pubescent. Petals oblanceolate, 4–5 × 1.5–2 mm. Stamens 6–7 mm, exerted from corolla. Capsules sessile, hard woody, 12–20 × 8–14 mm; pericarp thick, glabrous. Seeds 8–10 mm. Fl. Apr–Jun, fr. Jun–Sep.

• Forests; ca. 1500 m. Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Taiwan, Yunnan.

**4b. *Corylopsis multiflora* var. *nivea*** H. T. Chang, Acta Sci. Nat. Univ. Sunyatsen. 1960(1): 36. 1960.

白背瑞木 bai bei rui mu

Young branches glabrous. Leaf blade ovate, 5–11 × 4–6.5 cm, abaxially glaucous, glabrous. Peduncle and basal bracts of inflorescences abaxially glabrous; floral bract and bracteoles sparsely pubescent. Petals narrowly oblanceolate, ca. 3 × 1–1.5 mm. Stamens 3–4 mm. Capsules not seen. Fl. May.

• Slopes, roadsides; ca. 1000 m. N Fujian (Chong'an Xian).

**5. *Corylopsis pauciflora*** Siebold & Zuccarini, Fl. Jap. 1: 48. 1835.

少花瑞木 shao hua la ban hua

*Corylopsis matsudae* Kanehira & Sasaki.

Shrubs; young branches and terminal buds glabrous. Petiole 5–10 mm, slender, pubescent; leaf blade ovate-elliptic or broadly ovate, 3–6.5 × 2–3.5 cm, abaxially villous along lateral veins, adaxially glabrous, base somewhat asymmetrical, rounded or subcordate, margin serrate above middle of leaf, teeth mucronate, apex acute; lateral veins 6–8 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence 1–2 cm, 2–5-flowered; peduncle short, glabrous; general bracts ovate-rounded, 0.8–1 cm, abaxially glabrous; floral bract broadly ovate, 7–8 mm, glabrous; bracteoles somewhat shorter than bract. Floral cup glabrous. Sepals triangular, glabrous, apex obtuse. Petals broadly obovate, 6–7 mm. Stamens 5–6 mm; disk scales not lobed, apex truncate. Ovary glabrous; styles 5–6 mm. Capsule 6–8 mm, glabrous. Fl. May–Jul, fr. Jul–Sep.

Slopes and forests; 200–300 m. Taiwan [Japan].

**6. *Corylopsis alnifolia*** (H. Léveillé) C. K. Schneider, Repert. Spec. Nov. Regni Veg. 12: 379. 1913.

桤叶蜡瓣花 qi ye la ban hua

*Berchemia alnifolia* H. Léveillé, Repert. Spec. Nov. Regni Veg. 10: 433. 1912.

Shrubs, to 2 m tall; young branches dark gray, glabrous, older growth lenticellate; buds narrowly ovoid-globose, gla-

brous. Stipules oblong-ovate, 5–7 mm, glabrous; petiole 10–15 mm, glabrous; leaf blade obovate-rounded or almost circular, 3.5–5.5 × 3–5 cm, thinly leathery, abaxially pubescent along veins, adaxially glabrous, base asymmetrical, cordate, margin serrate above middle of leaf, teeth mucronate, apex rounded and mucronate; lateral veins 7 or 8 on each side, the 2 lowermost with faint tertiary veins. Inflorescence 3–4 cm, 10–12-flowered; peduncle 1.2–1.5 cm, glabrous; basal bracts of inflorescences and floral bracts caducous. Floral cup 1 mm, glabrous. Sepals broadly ovate, as long as floral cup, glabrous. Petals and stamens not seen. Disk scales shorter than sepals, not lobed, apex obtuse or submarginate. Ovary adnate to floral cup, glabrous; styles 2–3 mm. Capsules 6–7 mm, glabrous. Fl. May–Jul, fr. Jul–Sep.

• Forests and roadsides; 1000–1200 m. Guizhou.

**7. *Corylopsis platypetala*** Rehder & E. H. Wilson in Sargent, Pl. Wilson. 1: 426. 1913.

阔蜡瓣花 kuo la ban hua

*Corylopsis platypetala* var. *levis* Rehder & E. H. Wilson.

Shrubs, to 2.5 m tall; young branches sometimes glandular pubescent, older growth gray-brown, glabrescent, lenticellate; buds glabrous. Stipules oblong or oblong-lanceolate, 20–30 mm, apex acute, abaxially glabrous, adaxially villous; petiole 12–15 mm, sometimes glandular pubescent; leaf blade ovate or broadly ovate, 7–10 × 4–7 cm, villous on both surfaces, glabrescent, base symmetrical or asymmetrical, cordate, margin serrate, teeth mucronate, apex short acute; lateral veins 6–10 on each side, the 2 lowermost with tertiary veins. Inflorescence 2–2.5 cm, 8–20-flowered; peduncle 1.5–2 cm, subglabrous; basal bracts of inflorescences caducous; floral bracts oblong, 4–5 mm, sparsely pubescent; bracteoles caducous. Floral cup glabrous. Sepals ovate, glabrous, apex obtuse. Petals axelike, 3–4 × ca. 4 mm, base shortly clawed. Stamens somewhat shorter than petals; disk scales not lobed, shorter than sepals. Ovary semi-inferior, glabrous; styles shorter than stamens. Capsules 7–9 mm, glabrous. Seeds 4–5 mm. Fl. Apr–Jul, fr. Jul–Sep.

• Montane forests; 1300–2600 m. Anhui, Hubei, Sichuan.

**8. *Corylopsis sinensis*** Hemsley, Gard. Chron., ser. 3, 39: 18. 1906.

蜡瓣花 la ban hua

*Corylopsis sinensis* var. *parvifolia* H. T. Chang; *C. spicata* Hemsley.

Shrubs; young branches and buds pubescent or glabrous. Stipules narrowly oblong, ca. 20 mm, sparsely pubescent; petiole 5–10 mm, stellately tomentose; leaf blade obovate, obovate-rounded, broadly ovate or oblong-obovate, 3–9 × 2–6 cm, abaxially gray-brown stellately pubescent to glabrous, adaxially glabrous or pubescent along veins, base asymmetrical, cordate or subtruncate, margin serrate, teeth mucronate, apex obtuse, acute, or acuminate; lateral veins 7–9 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence 3–4 cm, 3–6 cm in fruit; peduncle 1.2–1.5 cm, pubescent; basal bracts of inflorescences ovate-rounded, 0.8–1 cm, abaxially pubescent, adaxi-

ally villous; floral bracts ovate, 4–5 mm, pubescent; bracteoles oblong, 2–3 mm. Floral cup stellately pubescent. Sepals ovate, glabrous, apex subobtusate. Petals spatulate, 5–6 × 3–4 mm. Stamens 4–5 mm; disk scales 2-lobed, apex acute, nearly equal to sepals. Ovary stellately pubescent; styles 6–7 mm, base pubescent. Capsules 10–14 × 7–9 mm, stellately pubescent. Seeds 4–5 mm.

• Forests, mountains; 1000–1500 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Zhejiang.

- 1a. Young branches and buds pubescent; leaf blade obovate or obovate-rounded, abaxially gray-brown stellately pubescent ..... 8a. var. *sinensis*  
1b. Young branches and buds glabrous; leaf blade broadly ovate or oblong-obovate, abaxially glabrous or pubescent only along veins ..... 8b. var. *calvescens*

### 8a. *Corylopsis sinensis* var. *sinensis*

蜡瓣花(原变种) la ban hua (yuan bian zhong)

Young branches and buds pubescent. Leaf blade obovate or obovate-rounded, abaxially gray-brown stellately pubescent, adaxially glabrous or pubescent only along veins, base asymmetrical, cordate, apex subacute or obtuse. Fl. May–Jul, fr. Jul–Sep.

• Forests, mountains; 1000–1500 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Zhejiang.

8b. *Corylopsis sinensis* var. *calvescens* Rehder & E. H. Wilson in Sargent, Pl. Wilson. 1: 424. 1913.

秃蜡瓣花 tu la ban hua

Young branches and buds glabrous. Leaf blade broadly ovate or oblong-obovate, abaxially glabrous or pubescent only along veins, adaxially glabrous, base asymmetrical, cordate or subtruncate, apex acute or acuminate. Fl. Apr–Jul, fr. Jul–Sep.

• Mountains; 1000–1500 m. Guangdong, Guangxi, NE Guizhou, Hunan, Jiangxi, Sichuan.

9. *Corylopsis veitchiana* Bean, Bot. Mag. 136: t. 8349. 1910.

红药蜡瓣花 hong yao la ban hua

*Corylopsis sinensis* Hemsley f. *veitchiana* (Bean) B. D. Morley & J. M. Chao.

Shrubs; young branches glabrous, older growth dark brown, lenticellate; buds ellipsoid, pubescent. Stipules oblong-lanceolate, 22–25 mm; petiole 5–8 mm, glabrous; leaf blade obovate or elliptic, 5–10 × 3–6 cm, abaxially grayish, glabrous or pubescent along veins, adaxially glabrous, base asymmetrical, cordate, margin serrate, teeth mucronate, apex acute; lateral veins 6–8 on each side, the 2 lowermost with tertiary veins. Inflorescence 3–4 cm, 5–6 cm in fruit; peduncle 1–1.2 cm, pubescent, with 1 or 2 basal leaves; basal bracts of inflorescences 2–4, ovate-rounded, 1–1.3 cm, abaxially pubescent; floral bracts ovate, 5–6 mm, tomentose; bracteoles oblong, pubescent. Floral cup stellately pubescent. Sepals ovate, pubescent, ciliate, apex rounded. Petals spatulate, 5–6 × 3–4 mm. Sta-

mens slightly exerted from corolla; anthers red-brown; disk scales 2-lobed, apex acute, slightly longer than floral cup. Ovary adnate to floral cup, stellately tomentose; styles 5–6 mm. Capsules 7–8 mm, stellately pubescent. Seeds 4–5 mm. Fl. Apr–Jun, fr. Jun–Aug.

• Forests; ca. 1200 m. Anhui, Hubei, E Sichuan.

10. *Corylopsis yunnanensis* Diels, Notes Roy. Bot. Gard. Edinburgh 5: 226. 1912.

滇蜡瓣花 dian la ban hua

Shrubs, to 3 m tall; young branches drying grayish, tomentose, older growth dark brown, glabrescent, lenticellate; buds oblong, glabrous. Stipules oblong, glabrous; petiole 10–12 mm, pubescent; leaf blade obovate-rounded, 5–8 × 3–6 cm, abaxially gray, stellately pubescent at least along veins, adaxially drying dark green, glabrescent, base asymmetrical, cordate, margin serrate, teeth short mucronate, apex rounded with a deltoid mucro; lateral veins 8 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence 1.5–2.5 cm, 3.5–4.5 cm in fruit; peduncle 1–1.2 cm, brown tomentose, with 2 basal leaves; basal bracts of inflorescences ovate-rounded, 1–1.8 cm, abaxially glabrous; floral bracts ovate-rounded, ca. 6 mm, pubescent; bracteoles lanceolate, 3–4 mm, pubescent. Floral cup stellately pubescent. Sepals triangular-ovate, tomentose, apex subacute. Petals spatulate, 6–7 × ca. 5 mm. Stamens 4–5 mm; disk scales 2-lobed, apex truncate or obtuse, shorter than floral cup. Ovary stellately pubescent; styles 2–2.5 mm, base pubescent. Capsules 6–7 mm, stellately pubescent; persistent styles 1.8–2 mm, apex somewhat curved. Seeds 4–5 mm. Fl. Apr–Jun, fr. Jun–Aug.

• Forests; ca. 1500 m. NW Yunnan (Dali Xian).

11. *Corylopsis velutina* Handel-Mazzetti, Anz. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 62: 130. 1925.

绒毛蜡瓣花 rong mao la ban hua

Shrubs, to 3 m tall; young branches tomentose, glabrescent, older growth gray-brown, white lenticellate; buds elliptic, glabrous. Stipules oblong, 15–20 mm, apex rounded, abaxially pubescent, adaxially villous; petiole 15–20 mm, pubescent; leaf blade ovate-rounded or elliptic, 5–9 × 3–5.5 cm, abaxially stellately pubescent with brown hairs, villous along veins, adaxially drying pale green, base asymmetrical, cordate, margin serrate, teeth short mucronate, apex subacute; lateral veins 8 or 9 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence 3–4 cm, 4–6 cm in fruit; peduncle 0.8–1 cm, densely tomentose, with 2 or 3 basal leaves; basal bracts of inflorescences rounded, 1–1.2 cm, pubescent; floral bracts tomentose; bracteoles lanceolate, tomentose. Floral cup pubescent. Sepals ovate, 0.8–1 mm, glabrous or ciliate. Petals spatulate, 3–4 × 3–4 mm. Stamens 2–3 mm; disk scales linear, 2-lobed. Ovary tomentose; styles 1.2–1.5 mm. Capsules 6–8 mm, tomentose; persistent styles very short. Seeds 4–5 mm. Fl. Apr–Jun, fr. Jun–Aug.

• Montane forests; 1000–1200 m. SW Sichuan.

12. *Corylopsis trabeculosa* He & Cheng, Bull. Fan Mem. Inst. Biol., n.s., 1: 192. 1948.

球江蜡瓣花 *qiu jiang la ban hua*

Shrubs or small trees, 2.5–5 m high. Young branches and petioles densely villous and glandular pubescent; buds ovoid-conical, pale green, borne at apex of short shoots. Leaf blade with 10–12 lateral veins on each side. Inflorescence 3–8 cm long, densely 20–40-flowered; rachis with dense yellow silky hairs; basal bracts of inflorescences involucrelike at anthesis, usually 4, bright yellow, slightly patent, broadly elliptic or oblong, 2–2.8 × 1.2–1.5 cm, base attenuate, margin entire, apex slightly obtuse or acute, membranous, both surfaces and margin yellow sericeous, glabrescent; floral bracts yellow, oblong or ovate, obtuse or acute at apex, sometimes 3-lobed, the lower lobe 14–16 × 8–10 mm, sericeous on both sides, the upper lobes shorter and smaller; bracteoles lanceolate or linear, 4–6 × 1–1.5 mm, sericeous, apex acuminate. Floral cup densely sericeous. Sepals unequal in size, triangular or lanceolate, 0.5–1.5 mm; petals oblong-spatulate or ovate-spatulate, obviously unequal in size, 4–8 × 2.5–4.5 mm, margin entire or irregularly undulate, apex obtuse. Stamens 5, anthers yellow, ovoid, 0.5–0.8 mm long, filaments yellow-green, filiform, 1.8–2.2 mm long, inflated at base; disk scales 5, red, nearly 2-parted to base, lobes 10, 0.5–0.6 mm long, club-shaped, apex obtuse. Ovary ovoid, densely sericeous; style 1.5–2 mm long, stigmas green, 2-parted to near base, upper part divergent, slightly curved. Inflorescences 8–9 cm, usually with 25–40 capsules. Fl. Jan–Mar, fr. May–Sep.

• Valleys, slopes, thickets, evergreen broad-leaved forests; 1300–2000 m. NW Yunnan (Gongshan Xian).

The leaves and fruits of this species are imperfectly known.

**13. *Corylopsis rotundifolia*** H. T. Chang, Acta Sci. Nat. Univ. Sunyatsen. 1960(1): 37. 1960.

圆叶蜡瓣花 *yuan ye la ban hua*

Shrubs, 2–3 m tall; young branches tomentose with yellow-brown hairs, older growth drying brown, glabrescent, minutely lenticellate; buds narrowly ovoid, tomentose. Stipules oblong, 8–13 × 4–5 mm, pubescent with yellow-brown hairs on both surfaces; petiole 7–12 mm, tomentose; leaf blades rounded or subrounded, 4–8 cm in diam., membranous, abaxially sparsely pubescent, villous along veins, adaxially drying green, pubescent along veins, base subsymmetrical, cordate, margin serrate, teeth mucronate, ca. 1 mm, apex rounded and mucronate; lateral veins 6–9 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence terminal on shoots, to 4.5 cm in fruit; peduncle ca. 1.5 cm, tomentose, with 2 or 3 basal leaves; basal bracts of inflorescences 4–6, ovate-rounded, 1.2–1.5 × 1–1.2 cm, brown tomentose on both surfaces; floral bracts ovate, 3–4 mm, pubescent; bracteoles oblong, 2–3 mm, pubescent. Floral cup 1.2–1.5 mm, glabrous. Sepals ovate-rounded, 0.8–1 mm, apex rounded. Petals broadly obovate, 2–3 × 2–2.5 mm, base shortly clawed. Stamens 1.5–2 mm; disk scales 2-lobed, shorter than sepals, apex obtuse. Ovary glabrous; styles 1.2–1.5 mm; stigmas slightly expanded. Capsules 10–17, 5–6 mm in diam. Seeds 3–3.5 mm. Fl. Mar–May, fr. Jun–Aug.

• Montane forests; ca. 1200 m. Chongqing (Nanchuan Xian), N Guizhou (Yinjiang Xian).

**14. *Corylopsis obovata*** H. T. Chang, Sunyatsenia 7: 72. 1948.

黔蜡瓣花 *qian la ban hua*

Shrubs; young branches stellately pubescent with brown hairs, older growth glabrescent; buds narrowly ovoid, gray pubescent. Stipules oblong-lanceolate, 10–12 mm, abaxially gray pubescent, adaxially villous; petiole 10–15 mm, pubescent; leaf blades obovate or obovate-rounded, 4–6 × 3.5–4 cm, membranous, abaxially stellately pubescent with brown hairs, villous along veins, adaxially drying dark green, glabrous, base obtuse or subrounded, margin serrulate above middle of leaf, apex rounded or truncate and mucronate; lateral veins 7 or 8 on each side, the 2 lowermost with obscure tertiary veins. Flowers not seen. Inflorescence terminal on shoots, 4–5 cm; fruiting peduncle 1.8–2 cm, villous, with 1–3 basal leaves. Capsules 15–20, densely arranged, 6–7 mm, glabrous; persistent styles 2–3 mm. Fr. Aug.

• Forests; 1000–1200 m. Chongqing (Youyang Xian), E Guizhou.

**15. *Corylopsis microcarpa*** H. T. Chang, Acta Sci. Nat. Univ. Sunyatsen. 1960(1): 38. 1960.

小果蜡瓣花 *xiao guo la ban hua*

Shrubs, to 4 m tall; young branches slender, glabrous, older growth drying dark brown, minutely lenticellate; buds ovoid-globose, glabrous. Stipules narrowly rounded, 15–17 mm, adaxially densely pubescent, base abaxially villous; petiole 5–8 mm, slender, glabrescent; leaf blade obovate or obovate-rounded, 3–7 × 2–4 cm, membranous, abaxially stellately pubescent, villous along veins, adaxially drying dark green, glabrescent, base slightly asymmetrical, subcordate or rounded, margin serrate above middle of leaf, teeth minutely mucronate, apex acute; lateral veins 8–10 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence 4–4.5 cm; peduncle pubescent, with 1 or 2 basal leaves; floral bracts ovate, 1.8–2 mm, adaxially tomentose. Flowers subsessile. Floral cup 1.8–2 mm, glabrous. Sepals 0.8–1 mm. Petals obovate, 2–3 mm. Stamens 1.5–2 mm; staminodes 2-lobed. Ovary glabrous; styles less than 1 mm. Capsules minute, 4–5 mm, glabrous. Seeds 2–3 mm. Fl. Mar–May, fr. Jun–Aug.

• Mountains; 800–1400 m. S Gansu (Wen Xian), N Sichuan (Songpan Xian).

**16. *Corylopsis glandulifera*** Hemsley, Hooker's Icon. Pl. 29: t. 2818. 1906.

腺蜡瓣花 *xian la ban hua*

*Corylopsis glandulifera* var. *hypoglauca* (Cheng) H. T. Chang; *C. hypoglauca* Cheng; *C. hypoglauca* var. *glaucescens* Cheng; *C. sinensis* Hemsley var. *glandulifera* (Hemsley) Reher & E. H. Wilson; *C. willmottiae* Rehder & E. H. Wilson var. *chekiangensis* Cheng.

Shrubs, to 3 m tall; young branches glabrous, older growth drying gray-brown, lenticellate; buds narrowly ovoid, glabrous. Stipules narrowly oblong, 12–15 mm, glabrous; petiole 6–10 mm, pubescent; leaf blade obovate or obovate-rounded, 5–8 × 3.5–5.5 cm, abaxially sometimes gray-white, stellately pubescent, adaxially glabrous, base asymmetrical, subcordate or subrounded, margin serrate above middle of leaf, apex subacute;

lateral veins 6–8 on each side, the 2 lowermost with tertiary veins. Inflorescence terminal on shoots, 4–6 cm in fruit; peduncle 0.8–1.3 cm, glabrous or pubescent at flower bases, with 1 or 2 basal leaves; basal bracts of inflorescences subrounded, 0.8–1 cm, abaxially glabrous, adaxially villous; floral bracts ovate-rounded, 3–4 mm, sparsely pubescent; bracteoles oblong, 3–4 mm, sparsely pubescent. Floral cup glabrous. Sepals ovate, glabrous, apex subobtusate. Petals spatulate, 5–6 × 3–4 mm. Stamens 4–5 mm; disk scales 2-parted, equal to floral cup, apex acute. Ovary glabrous; styles as long as petals. Capsules 6–8 mm, glabrous. Seeds 3–4 mm. Fl. Mar–May, fr. Jun–Aug.

- Slopes, roadsides; ca. 1300 m. Anhui, Jiangxi, Zhejiang.

**17. *Corylopsis glaucescens*** Handel-Mazzetti, Anz. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 62: 130. 1925.

怒江蜡瓣花 nu jiang la ban hua

*Corylopsis polyneura* H. L. Li.

Shrubs or small trees; young branches glabrous, older growth drying gray-brown, minutely lenticellate; buds narrowly ovoid, 1–1.5 cm, glabrous. Petiole 10–20 mm, glabrous; leaf blade ovate-rounded or obovate-rounded, 5–12 × 4–8 cm, abaxially drying gray-white, glabrescent, adaxially drying green, sparsely villous along veins, base asymmetrical, cordate, margin serrate, teeth mucronate, apex acute; lateral veins 8 or 9 on each side, the 2 lowermost with tertiary veins. Inflorescence terminal on shoots, 4–5 cm, 5–7 cm in fruit; peduncle 1–2 cm, with 1 or 2 basal leaves. Floral cup glabrous. Sepals shorter than floral cup, apex rounded. Petals oblanceolate, 3–4 × 1.5–1.7 mm. Disk scales 2-lobed, apex obtuse. Ovary glabrous; styles 2–3 mm. Capsules 6–7 mm, glabrous. Seeds narrowly ovoid, 4–5 mm. Fl. Apr–Jun, fr. Jun–Aug.

- Forests; 1700–3000 m. NW Yunnan.

**18. *Corylopsis willmottiae*** Rehder & E. H. Wilson in Sargent, Pl. Wilson. 1: 425. 1913.

四川蜡瓣花 si chuan la ban hua

Shrubs or small trees, to 5 m tall; young branches slender, glabrous, older growth drying gray-brown, minutely white lenticellate; buds narrowly ovoid, glabrous. Stipules purple, narrowly oblong, 12–20 mm; petiole 10–15 mm; glabrous; leaf blade obovate or broadly so, 4–9 × 2–6 cm, abaxially glabrescent, adaxially glabrous, base asymmetrical, subcordate or rounded, margin serrate, teeth obscurely mucronate, apex short acute; lateral veins 7–9 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence terminal on shoots, 4–5 cm in fruit, 12–20-flowered; peduncle 1–2 cm, tomentose, with 1–3 basal leaves, basal bracts of inflorescences ovate-rounded, 1–1.5 cm, abaxially glabrous; floral bracts 6–8 × 3–4 mm; bracteoles ovate, 2–3 × 1.5–2 mm, pubescent on both surfaces. Floral cup glabrous. Sepals ovate, 1.2–1.5 mm, glabrous, apex rounded. Petals broadly obovate, 3–4 × 2.5–3 mm, base shortly clawed. Stamens 2.5–3 mm; disk scales 2-lobed, apex acute. Ovary glabrous; styles 3–4 mm. Capsules 7–8 mm, more than 1/2 enclosed in persistent floral cup, persistent styles obliquely patent or slightly curved downward. Seeds ca. 4 mm. Fl. Mar–Jun, fr. Jun–Aug.

- Forests; ca. 1200 m. W Sichuan.

**19. *Corylopsis omeiensis*** X. J. Yang, Contr. Biol. Lab. Sci. Soc. China, Bot. Ser., 12: 133. 1947.

峨眉蜡瓣花 e mei la ban hua

Shrubs, to 3 m tall; young branches slender, glabrous, older growth drying dark brown, sparsely minutely lenticellate; buds narrowly ovoid, ca. 1 cm, glabrous. Leaves glabrous; stipules oblong-lanceolate, 12–17 mm, membranous; petiole 10–18 mm, glabrous; leaf blade obovate-rounded or obovate-elliptic, 4–8 × 2.5–5.5 cm, membranous, abaxially gray-white, glabrous, adaxially drying green, base asymmetrical, cordate, margin entire or serrate above middle of leaf, teeth obscurely mucronate, apex obcordate or truncate; lateral veins 6 or 7 on each side, the 2 lowermost with obscure tertiary veins. Inflorescence terminal on shoots, 12–16-flowered; peduncle 1–1.5 cm, glabrous, with 2 basal leaves, basal bracts of inflorescences elliptic, 1–1.2 × 0.6–0.7 cm, abaxially glabrous, adaxially villous; floral bracts ovate-rounded, 2–3 mm, glabrous; bracteoles 1.2–1.5 mm, glabrous. Floral cup less than 1 mm, glabrous. Sepals shorter than floral cup, apex rounded. Petals spatulate, ca. 2 × 1.5 mm, base very shortly clawed. Stamens 1.5–2 mm; disk scales 2-lobed, apex obtuse or truncate. Ovary glabrous; styles 1.2–1.5 mm. Capsules 5–6 mm. Seeds 2.5–3 mm. Fl. Mar–Jun, fr. Jun–Aug.

- Montane forests; ca. 1500 m. SW Guizhou (Pan Xian), C Sichuan (Emei Shan).

**20. *Corylopsis yui*** Hu & W. C. Cheng, Bull. Fan Mem. Inst. Biol., n.s., 1: 193. 1948.

长穗蜡瓣花 chang sui la ban hua

Shrubs, 3–5 m tall; young branches pubescent with gray-brown hairs, older growth drying dark brown, lenticellate; buds narrowly ovoid, 1–1.2 cm, gray pubescent. Stipules narrowly oblong, 16–18 × 3–4 mm, abaxially gray pubescent, adaxially villous; petiole 8–17 mm, pubescent; leaf blade obovate or obovate-rounded, 7–13 × 4–10 cm, membranous, abaxially pubescent, adaxially drying green, glabrous, base asymmetrical, subcordate or rounded, margin serrate, teeth distinctly mucronate, apex acute; lateral veins 8–11 on each side, the 2 lowermost with tertiary veins. Inflorescence terminal on shoots, 9–12 cm in fruit, 11–17-flowered; peduncle 1–1.5 cm, villous, with 1 or 2 basal leaves, basal bracts of inflorescences 4 or 5, ovate, ca. 1.2 cm, abaxially pubescent, adaxially villous; floral bracts ovate, 4–5 mm, tomentose; bracteoles lanceolate, tomentose. Flowers pedicellate. Floral cup 1.2–1.5 mm, glabrous. Sepals ovate-rounded, 1.5–2 mm, glabrous. Petals and stamens not seen. Disk scales 2-lobed, 0.8–1 mm, apex acute. Ovary glabrous; styles 1–1.5 mm. Capsules 9–16, shortly pedicellate, 7–8 mm, glabrous; persistent styles 1.2–1.5 mm. Seeds 3–4 mm. Fl. Mar–Jun, fr. Jun–Aug.

- Forests; 2700–3000 m. NW Yunnan.

