

14. STRANVAESIA Lindley, Edwards's Bot. Reg. 23: t. 1956. 1837.¹

红果树属 hong guo shu shu

Lu Lingdi (陆玲娣 Lu Ling-ti); Stephen A. Spongberg

Trees or shrubs, evergreen. Winter buds ovoid, small; scales few, exposed. Leaves petiolate, stipulate, simple, leathery, venation camptodromous, margin entire, undulate, or serrate. Corymbs or subumbels, terminal or axillary, few to numerous flowered; bracts early caducous. Hypanthium campanulate, 1/2 adnate to base of ovary. Sepals 5, erect, short. Petals 5, spreading, white, base shortly clawed. Stamens 20; filaments filiform. Ovary semi-inferior, pubescent, 4- or 5-loculed, free to middle from hypanthium in fruit; styles 4 or 5, connate high above middle; stigmas capitate; ovules 2 per locule, basal, collateral, ascending. Fruit a pome, ovoid to subglobose, fleshy, with persistent sepals; carpel crustaceous; locules abaxially loculicidally dehiscent; seeds oblong, compressed, testa leathery; cotyledons nearly flat.

About six species: China, NE India, N Laos, Malaysia, N Myanmar, Nepal, Philippines, Thailand, N Vietnam; five species (two endemic) in China.

This treatment follows that of the FRPS. Alternatively, there is considerable evidence that *Stranvaesia* should be included within *Photinia* (Kalkman, *Blumea* 21: 413–442. 1973; Iketani & Ohashi, *J. Jap. Bot.* 66: 319–351. 1991; Ohashi & Iketani, *J. Jap. Bot.* 69: 22–23. 1994; Phipps et al., *Syst. Bot.* 16: 303–332. 1991; Robertson et al., *Syst. Bot.* 16: 376–394. 1991; Rohrer et al., *Amer. J. Bot.* 78: 1617–1635. 1991; Rohrer et al., *Amer. J. Bot.* 81: 574–581. 1994; Wu Zhengyi, pers. comm.). Basically, all of these point out that the primary character often used to differentiate the two genera, i.e., whether the carpels dehisce or not, is “artificial.” Kalkman (loc. cit.) was the first recent author to note that the supposedly dehiscent carpels of *Stranvaesia* are an artifact of pressing herbarium specimens. Also, Rohrer et al. (loc. cit.) found that *Photinia* and *Stranvaesia* do not differ in connation of the carpels or in the adnation of the carpels to the hypanthium.

- 1a. Bracts ovate-lanceolate; lenticels on branchlets inconspicuous; with large warts above each leaf scar and above some bract scars of inflorescence; fruit subglobose 1. *S. davidiana*
- 1b. Bracts subulate or linear to lanceolate; lenticels on branchlets conspicuous; fruit globose or ovoid-globose.
 - 2a. Petiole more than 1 cm, slender; leaf blade oblanceolate to obovate-oblong; fruit globose.
 - 3a. Rachis, pedicels, and hypanthium pilose; petiole ca. 1 cm, pilose 2. *S. nussia*
 - 3b. Rachis, pedicels, and hypanthium glabrous; petiole 1.5–4 cm, glabrous 3. *S. oblanceolata*
 - 2b. Petiole shorter, not over 1 cm, broader; leaf blade elliptic or oblong to oblong-obovate; fruit ovoid or ovoid-globose.
 - 4a. Petiole, abaxial surface of leaf blade, and inflorescence brownish yellow tomentose-villous; fruit ovoid, reddish yellow, 10–14 mm in diam., slightly tomentose-villous 4. *S. amphidoxa*
 - 4b. Petiole, abaxial surface of leaf blade, and inflorescence densely yellow tomentose; fruit ovoid-globose, 8–10 mm in diam., densely tomentose 5. *S. tomentosa*

1. *Stranvaesia davidiana* Decaisne, *Nouv. Arch. Mus. Hist. Nat.* 10: 179. 1874.

红果树 hong guo shu

Shrubs or small trees, 1–10 m tall, densely branched. Branchlets grayish brown when old, terete, initially densely villous, gradually glabrescent, with sparse, inconspicuous lenticels; buds reddish brown, narrowly ovoid, apex shortly acuminate; scales subglabrous or pubescent at margin. Petiole 1.2–2 cm, pilose, gradually glabrescent; stipules caducous, subulate, 5–6 mm, membranous, slightly pilose; leaf blade oblong, oblong-lanceolate, or oblanceolate, (3–)5–12 × 2–4.5 cm, midvein raised abaxially and impressed adaxially, lateral veins 8–16 pairs and inconspicuous, both surfaces grayish brown villous along midvein, base cuneate to broadly cuneate, margin entire or undulate, apex acute or abruptly pointed. Compound corymbs terminal, 5–8 × (1.5–)5–10 cm, few or numerous flowered; rachis and pedicels villous; bracts caducous, ovate-lanceolate, membranous. Pedicel 2–4 mm. Flowers 5–10 mm in diam. Hypanthium cupular, 5–7 mm, abaxially sparsely villous.

Sepals triangular-ovate, 2–3 mm, margin entire, apex acute. Petals suborbicular, 4–5 mm in diam., base shortly clawed. Stamens 20; anthers purplish red. Styles 5, mostly connate, not exceeding stamens; stigma capitate; ovary tomentose apically. Fruit orangish red, subglobose, 7–8 mm in diam.; sepals erect; seeds narrowly ellipsoid. Fl. May–Jun, fr. Sep–Oct.

Slopes, mountain summits, roadsides, thickets, river valleys, damp gullies; 900–3000 m. Fujian, Gansu, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Shaanxi, Sichuan, Taiwan, Yunnan, Zhejiang [Malaysia, N Vietnam].

One of us (Spongberg) notes that, because of variability, further study is necessary to determine whether these taxa are really distinct.

- 1a. Leaf margin entire; inflorescence 5–10 cm in diam., densely flowered; rachis and pedicels densely villous 1a. var. *davidiana*
- 1b. Leaf margin undulate; inflorescence 1.5–5 cm in diam., few flowered; rachis and pedicels ± villous 1b. var. *undulata*

1a. *Stranvaesia davidiana* var. *davidiana*

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红果树(原变种) hong guo shu (yuan bian zhong)

Photinia davidiana (Decaisne) Cardot; *P. nitakayamensis* Hayata; *P. undulata* (Decaisne) Cardot var. *formosana* Cardot; *Pyrus cavaleriei* H. Léveillé; *P. davidiana* var. *formosana* (Cardot) H. Ohashi & Iketani; *Stranvaesia davidiana* var. *salicifolia* (Hutchinson) Rehder; *S. henryi* Diels; *S. nitakayamensis* (Hayata) Hayata; *S. salicifolia* Hutchinson.

Leaf blade 5–12 cm. Inflorescences 5–10 cm in diam., densely flowered; rachis and pedicels densely villous.

Slopes, mountain summits, roadsides, thickets; 1000–3000 m. Gansu, Guangxi, Guizhou, Hubei, Jiangxi, Shaanxi, Sichuan, Taiwan, Yunnan [Malaysia, N Vietnam].

1b. *Stranvaesia davidiana* var. *undulata* (Decaisne) Rehder & E. H. Wilson in Sargent, Pl. Wilson. 1:192. 1912.

波叶红果树 bo ye hong guo shu

Stranvaesia undulata Decaisne, Nouv. Arch. Mus. Hist. Nat. 10: 179. 1874; *Eriobotrya undulata* (Decaisne) Franchet; *Photinia undulata* (Decaisne) Cardot; *S. davidiana* Decaisne var. *suoxiyuensis* C. J. Qi & C. L. Peng.

Leaf blade 3–8(–10) cm, margin undulate. Inflorescences 1.5–5 cm in diam., few flowered; rachis and pedicels ± villous.

• Slopes, river valleys, damp gullies, thickets; 900–3000 m. Fujian, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Shaanxi, Sichuan, Yunnan, Zhejiang.

2. *Stranvaesia nussia* (Buchanan-Hamilton ex D. Don) Decaisne, Nouv. Arch. Mus. Hist. Nat. 10: 178. 1874.

印緬紅果樹 yin mian hong guo shu

Pyrus nussia Buchanan-Hamilton ex D. Don, Prodr. Fl. Nepal. 237. 1825; *Crataegus glauca* Wallich ex G. Don; *Eriobotrya ambigua* Merrill; *Stranvaesia glaucescens* Lindley.

Trees to 5–9 m tall. Branchlets purplish brown when old, terete, densely pilose when young, gradually glabrescent, subglabrous when old. Petiole ca. 1 cm, pilose; stipules caducous, lanceolate, membranous; leaf blade oblanceolate or obovate-lanceolate, 6–8 × 2–3.5 cm, veins 10–12 pairs, abaxially pilose along veins, adaxially initially pilose, glabrescent, base cuneate, margin irregularly obtusely dentate, apex acute. Compound corymbs terminal, 6–9 × 8–12 cm, many flowered; rachis and pedicels densely pilose; bracts 4–6 mm, pubescent. Pedicel 5–10 mm. Flowers ca. 1 cm in diam. Hypanthium campanulate, abaxially pilose. Sepals triangular-lanceolate, 2.5–4 × 2.5–3 mm, margin entire, apex acute. Petals oblong or elliptic, 4–6 × 3–5 mm, base shortly clawed and barbate, apex emarginate. 8 pairs of lateral veins distinctly raised abaxially and impressed adaxially, abaxially brownish yellow, tomentose-villous along midvein, adaxially glabrous or subglabrous, base cuneate or broadly cuneate, rarely subrounded, margin minutely sharply aristate-serrate, apex acuminate or caudate. Inflorescences terminal, corymbose or subumbellate, 3–4 × 2.5–5 cm, several to more than 10-flowered; rachis and pedicels densely brownish yellow tomentose-villous or glabrous; bracts caducous, brown, subulate, 4–6 mm, membranous. Pedicel 4–10 mm. Flowers 8–9 mm in diam. Hypanthium campanulate, abaxially densely

Stamens 20; filaments unequal in length, slightly shorter than sepals. Ovary semi-inferior, (4- or)5-loculed; styles (4 or)5, connate for ca. 1/2 length, base densely pubescent. Fruit orangish red, compressed-globose, ca. 8 mm in diam., pubescent when young, glabrate; sepals incurved; seeds 1 or 2 per locule.

Mixed forests; 500–2800 m. SE Xizang, Yunnan [NE India, N Laos, N Myanmar, Nepal, Philippines, N Thailand].

3. *Stranvaesia oblanceolata* (Rehder & E. H. Wilson) Stapf, Bot. Mag. 149: t. 9008. 1924.

滇南紅果樹 dian nan hong guo shu

Stranvaesia nussia Buchanan-Hamilton ex D. Don var. *oblanceolata* Rehder & E. H. Wilson in Sargent, Pl. Wilson. 1: 193. 1912.

Shrubs 5–9 m tall. Branchlets purplish red when young, dark purplish brown when old, terete, glabrous, with scattered orbicular lenticels; buds purplish brown, narrowly ovoid, glabrous. Petiole 1.5–4 cm, glabrous; leaf blade oblanceolate or obovate-oblong, 8–13 × 3.5–5 cm, lucid, midvein prominently raised abaxially and slightly impressed adaxially, both surfaces glabrous, base cuneate, rarely subrounded, margin obscurely obtusely dentate, apex acute. Compound corymbs terminal, 7–9(–11) × 5–10(–14) cm, compact, many flowered; rachis and pedicels glabrous; bracts linear, 2–3 mm. Pedicel 3–5 mm. Flowers ca. 1 cm in diam. Hypanthium campanulate, abaxially glabrous. Sepals triangular-ovate, 2–3 mm, much shorter than hypanthium, margin entire, apex acute. Petals suborbicular or broadly ovate, 5–6 × 3–5 mm. Stamens 20, shorter than petals. Ovary pubescent; styles 5, not exceeding stamens, connate for more than 1/2 length; stigma capitate. Fruit ovoid, 6–8 mm in diam.; sepals erect. Fl. Apr–May, fr. Jun–Jul.

Mixed evergreen forests of mountain valleys, slopes; 1400–2000 m. S Yunnan [N Laos, N Myanmar, Thailand].

4. *Stranvaesia amphidoxa* C. K. Schneider, Bull. Herb. Boissier, sér. 2, 6: 319. 1906.

毛萼紅果樹 mao e hong guo shu

Shrubs or small trees, 2–4 m tall. Branchlets purplish brown when young, blackish brown when old, angulate, yellowish brown tomentose-villous when young, glabrous when old, with sparse, brownish lenticels; buds reddish brown, ovoid, apex acute, scale villous at margin. Petiole 2–4 mm, villous; stipules caducous, small; leaf blade dark green adaxially, elliptic, oblong, or oblong-obovate, 4–10 × 2–4 cm, midvein and 6–

yellow tomentose-villous. Sepals triangular-ovate, 2–3 × 2–2.5 mm, nearly 1/2 as long as hypanthium, margin entire, apex acute. Petals suborbicular, 5–7 mm in diam., glabrous, base shortly clawed, apex obtuse or somewhat emarginate. Stamens 20, shorter than petals; anthers yellowish brown. Styles 5, mostly united, not exceeding stamens, yellowish white tomentose-villous; stigma capitate. Fruit reddish yellow, ovoid, 1–1.4 cm in diam., initially slightly tomentose-villous, glabrate, with small pale lenticels; sepals erect or incurved, abaxially tomentose-villous. Fl. May–Jun, fr. Sep–Oct.

• Slopes, roadsides, stream sides, dense forests, thickets, mountain valleys; 500–1500 m. Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang.

- 1a. Inflorescence corymbose; pedicel, hypanthium, and fruit tomentose-villous 4a. var. *amphidoxa*
 1b. Inflorescence subumbellate; pedicel, hypanthium, and fruit glabrous 4b. var. *amphileia*

4a. *Stranvaesia amphidoxa* var. *amphidoxa*

毛萼红果树(原变种) mao e hong guo shu (yuan bian zhong)

Photinia amphidoxa (C. K. Schneider) Rehder & E. H. Wilson; *P. amphidoxa* var. *kwangsiensis* F. P. Metcalf; *P. amphidoxa* var. *stylosa* Cardot; *Pourthiaea amphidoxa* (C. K. Schneider) Stapf; *Pyrus feddei* H. Léveillé.

Inflorescences corymbose. Pedicels, hypanthium abaxially, and fruit tomentose-villous.

- Slopes, roadsides, stream sides, thickets, mountain valleys; 500–

1500 m. Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang.

4b. *Stranvaesia amphidoxa* var. *amphileia* (Handel-Mazzetti) T. T. Yu, Fl. Reipubl. Popularis Sin. 36: 214. 1974.

湖南红果树 hu nan hong guo shu

Photinia amphidoxa (C. K. Schneider) Rehder & E. H. Wilson var. *amphileia* Handel-Mazzetti, Symb. Sin. 7: 481. 1933.

Inflorescences subumbellate. Pedicels, hypanthium abaxially, and fruit glabrous.

- Dense forests in mountain valleys; 1000–1500 m. Guangxi, Guizhou, Hunan.

5. *Stranvaesia tomentosa* T. T. Yu & T. C. Ku, Acta Phytotax. Sin. 13(1): 102. 1975.

绒毛红果树 rong mao hong guo shu

Shrubs or small trees, ca. 2 m tall. Branchlets blackish brown when old, terete, densely yellow tomentose when young, with scattered gray lenticels; buds ovoid, densely tomentose. Petiole short, less than 4 mm, broad, densely yellow tomentose; stipules early caducous, smaller; leaf blade dark green adaxially, oblong or oblong-obovate, 3–6.5 × 1–3 cm, veins 6 or 7 pairs, raised abaxially and impressed adaxially, abaxially densely yellow tomentose, adaxially glabrous or subglabrous, base cuneate or broadly cuneate, rarely subrounded, margin sharply shortly aristate-serrate, apex caudate-acuminate or acuminate. Corymbs crowded, 2–4 cm in diam., 3–7-flowered, rarely to 12-flowered; rachis and pedicels densely yellow tomentose; bracts caducous, lanceolate, membranous. Pedicel 5–12 mm. Flowers 8–10 mm in diam. Hypanthium campanulate, abaxially densely yellow tomentose. Sepals triangular-ovate, nearly 1/3 length of hypanthium, apex acute. Stamens 20. Styles 5, mostly connate, not exceeding stamens. Fruit dark red, ovoid-globose, 8–10 mm in diam., densely tomentose; sepals erect. Fl. May–Jun, fr. Jul–Sep.

- Slope forests, roadsides, water courses; 600–1400 m. Chongqing (Beipei, Nanchuan Xian).

ROSACEAE