

17. RHAPHIOLEPIS Lindley, Bot. Reg. 6: t. 468. 1820, nom. et orth. cons.

石斑木属 shi ban mu shu

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Shrubs or small trees, evergreen. Leaves simple, shortly petiolate, leathery, venation camptodromous, margin serrate or entire; stipules caducous, subulate. Inflorescences in terminal racemes or panicles. Hypanthium campanulate to tubular. Sepals 5, erect or reflexed. Petals 5, white or pink, base shortly clawed. Stamens 15–20. Ovary inferior, 2-loculed, with 2 erect ovules per locule; styles 2 or 3, connate at base. Pome drupe-like, purplish black or bluish, subglobose, succulent, with early caducous sepals leaving an annular ring; seeds 1 or 2, subglobose, large, seed coat thin, cotyledons thickened, plano-convex or semiglobose.

About 15 species: E Asia; seven species (three endemic) in China.

Rhaphiolepis jiulongjiangensis P. C. Huang & K. M. Li (J. Nanjing Inst. Forest. 13(4): 85. 1989), described from Fujian (Hua'an Xian), requires further study. We are unable to treat it in this account because we have seen no specimens.

- 1a. Leaves abaxially, petiole, and pedicel densely rusty tomentose ..... 7. *R. ferruginea*
- 1b. Leaves glabrous or only abaxially slightly tomentose or pubescent; inflorescence glabrous or pubescent.
  - 2a. Leaf blade narrowly lanceolate, lanceolate, or oblong-lanceolate, rarely obovate-oblong.
    - 3a. Leaf blade lanceolate or oblong-lanceolate, rarely obovate-oblong, apex acuminate or acute ..... 5. *R. salicifolia*
    - 3b. Leaf blade narrowly lanceolate, apex obtuse or shortly acuminate ..... 6. *R. lanceolata*
  - 2b. Leaf blade ovate, obovate, elliptic, oblong, or oblong-lanceolate.
    - 4a. Leaf margin remotely serrate.
      - 5a. Leaf blade ovate or oblong, rarely obovate or oblong-lanceolate, 2–8 cm; inflorescence tomentose or glabrous; fruit 5–8 mm in diam. .... 1. *R. indica*
      - 5b. Leaf blade narrowly elliptic to obovate-oblong, 7–15 cm; inflorescence tomentose; fruit 7–10 mm in diam. .... 2. *R. major*
    - 4b. Leaf margin entire or remotely crenate.
      - 6a. Branches spreading; leaf blade narrowly elliptic, ovate, or obovate; petiole 5–10 mm ..... 3. *R. umbellata*
      - 6b. Branches erect or ascending; leaf blade oblong or oblong-obovate; petiole very short or nearly absent ..... 4. *R. integerrima*

1. *Rhaphiolepis indica* (Linnaeus) Lindley, Bot. Reg. 6: t. 468. 1820.

石斑木 shi ban mu

Shrubs, rarely small trees, to 4 m tall. Branchlets purplish brown when young, grayish brown when old, terete, initially brown tomentose, glabrous when old. Petiole 0.5–1.8 cm or nearly absent, slightly brown tomentose or subglabrous; stipules caducous, lanceolate, sparsely brown tomentose, apex acuminate; leaf blade ovate, oblong, rarely obovate, oblong-lanceolate, narrowly elliptic or lanceolate-elliptic, (2–)4–8 × 1.5–4 cm, leathery, veins prominent abaxially, reticulate veins conspicuous abaxially and conspicuous or not adaxially, abaxially pale, glabrous or sparsely tomentose, adaxially lustrous, glabrous, base attenuate, margin crenulate, serrate, or obtusely serrate, apex obtuse, acute, acuminate, or long caudate. Panicle or racemes terminal, many or few flowered; peduncle and pedicels rusty tomentose; bracts and bractlets caducous, lanceolate or narrowly lanceolate, 2–7 mm, both surfaces initially brown tomentose, densely so at margin, soon glabrescent, apex acuminate. Pedicel 0.5–1.5 cm, initially brown tomentose, soon glabrescent. Flowers 1–1.3(–1.5) cm in diam. Hypanthium tubular, brown tomentose at margin and on both surfaces or glabrous. Sepals triangular-lanceolate or linear, 4.5–6 mm, both surfaces slightly brown tomentose or glabrous, apex acute. Petals white or pinkish, obovate or lanceolate, 5–7 × 4–5 mm, pubescent basally, apex obtuse. Stamens 15, ca. as long as or shorter than petals. Ovary glabrous, 2- or 3-loculed, with 2

ovules per locule; styles 2 or 3, connate at base, subglabrous. Pome purplish black, globose, 5–8 mm in diam., glabrous; fruiting pedicel 5–10 mm, glabrous; sepals caducous, leaving an annular ring. Fl. Apr, fr. Jul–Aug.

Slopes, roadsides, thickets at stream sides; 700–1600 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Taiwan, Yunnan, Zhejiang [Cambodia, Japan, Laos, Thailand, Vietnam].

- 1a. Inflorescence sparsely pubescent, few flowered; leaf margin serrate apically ..... 1b. var. *shilanensis*
- 1b. Inflorescence densely rusty tomentose, usually numerous flowered; leaf margin crenulate or obtusely serrate.
  - 2a. Leaf blade ovate, oblong, rarely obovate, or oblong-lanceolate, crenulate; bracts narrowly lanceolate, 2–7 mm ..... 1a. var. *indica*
  - 2b. Leaf blade narrowly elliptic or lanceolate-elliptic, obtusely serrate; bracts lanceolate, ca. 7 mm ..... 1c. var. *tashiroi*

1a. *Rhaphiolepis indica* var. *indica*

石斑木(原变种) shi ban mu (yuan bian zhong)

*Crataegus indica* Linnaeus, Sp. Pl. 1: 477. 1753; *C. rubra* Loureiro; *Mespilus sinensis* Poirlet; *Rhaphiolepis gracilis* Nakai; *R. parvibracteolata* Merrill; *R. rubra* (Loureiro) Lindley; *R. rugosa* Nakai; *R. sinensis* M. Roemer.

Leaf blade ovate or oblong, rarely obovate or oblong-lanceolate, (2–)4–8 × 1.5–4 cm, margin crenulate. Inflorescences rusty tomentose, numerous flowered; bracts narrowly lanceolate, 2–7 mm. Pedicel 0.5–1.5 cm.

Slopes, roadsides, thickets at stream sides; 1500–1600 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Taiwan, Yunnan, Zhejiang [Cambodia, Japan, Laos, Thailand, Vietnam].

*Rhaphiolepis impressivena* Masamune (*R. indica* f. *impressivena* (Masamune) S. S. Ying) might be an allied species or ecotype of *R. indica*.

**1b. *Rhaphiolepis indica* var. *shilanensis*** Y. P. Yang & H. Y. Liu, *Taiwania* 47: 176. 2002.

恒春石斑木 *heng chun shi ban mu*

Leaf blade oblong to oblanceolate, 4–5 × 1.5–2 cm, margin serrate apically. Inflorescences sparsely pubescent, few flowered; bracts lanceolate, ca. 4 mm. Pedicel 0.7–1.5 cm.

• S Taiwan (Pingdong Xian).

The names *Rhaphiolepis hiiranensis* (Kanehira, *Formos. Trees*, rev. ed., 276. 1936) and *R. indica* var. *hiiranensis* (Li, *Lloydia* 4: 235. 1951), synonymous with this taxon, are invalid under Art. 36.1 of the St. Louis Code because Kanehira did not provide a Latin description.

**1c. *Rhaphiolepis indica* var. *tashiroyi*** Hayata, *J. Coll. Sci. Imp. Univ. Tokyo* 22: 129. 1906.

毛序石斑木 *mao xu shi ban mu*

Leaf blade narrowly elliptic or lanceolate-elliptic, 5–7 × 1.5–2 cm, obtusely serrate. Inflorescences densely rusty tomentose, numerous flowered; bracts lanceolate, ca. 7 mm. Pedicel 3–10 mm.

• 700–1000 m. C and N Taiwan.

**2. *Rhaphiolepis major*** Cardot, *Notul. Syst. (Paris)* 3: 380. 1918.

大叶石斑木 *da ye shi ban mu*

*Rhaphiolepis indica* (Linnaeus) Lindley var. *grandifolia* Franchet.

Shrubs to 4 m tall. Branchlets initially green, grayish brown when old, terete, initially glabrous, rarely pubescent, glabrous or subglabrous when old. Stipules caducous, lanceolate, 1.5–2 cm, membranous, initially sparsely pubescent, soon glabrescent; petiole 1.5–2.5 cm, subglabrous or glabrous; leaf blade narrowly elliptic or obovate-oblong, 7–15 × 4–6 cm, leathery, midvein prominent on both surfaces, lateral veins 8–14 pairs, abaxially glabrescent, adaxially glabrous or with sparse hairs in vein axils when young, base cuneate-attenuate, margin shallowly crenulate, entire near base, apex acute or shortly acuminate. Panicle terminal, many flowered; peduncle glabrescent; bracts not seen; bractlets lanceolate, 5–7 mm, membranous, initially sparsely brown pubescent, soon glabrescent, apex acuminate. Pedicel 0.7–1.5 cm, initially sparsely brown pubescent, soon glabrescent. Flowers 1.3–1.5 cm in diam. Hypanthium campanulate, abaxially rusty tomentose, adaxially glabrous. Sepals triangular-lanceolate, rarely ovate-lanceolate, slightly longer than hypanthium, 5–6 mm, abaxially slightly pubescent, adaxially densely so, apex acuminate. Petals white,

ovate, 5–7 × 4.5–5.5 cm, pubescent basally, apex acute or obtuse. Stamens 15, ca. as long as or shorter than petals. Ovary 2-loculed, with 2 ovules per locule; styles 2, connate at base, subglabrous. Pome black, globose, 7–10 mm in diam., pubescent or subglabrous; fruiting pedicel 8–10 mm, brown tomentose; sepals caducous, leaving an annular ring. Fl. Apr, fr. Aug.

• Dense shady forests, among shrubs by streams; 200–300 m. Fujian, S Jiangsu, Jiangxi, Zhejiang.

**3. *Rhaphiolepis umbellata*** (Thunberg) Makino, *Bot. Mag. (Tokyo)* 16: 13. 1902.

厚叶石斑木 *hou ye shi ban mu*

*Laurus umbellata* Thunberg in Murray, *Syst. Veg.*, ed. 14, 384. 1784; *Mespilus sieboldii* Blume; *Opa japonica* Seemann; *Rhaphiolepis indica* (Linnaeus) Lindley f. *umbellata* (Thunberg) S. Hatusima; *R. indica* var. *umbellata* (Thunberg) H. Ohashi; *Rhaphiolepis japonica* Siebold & Zuccarini var. *integerrima* J. D. Hooker; *R. ovata* Briot; *R. umbellata* f. *integerrima* (J. D. Hooker) Rehder; *R. umbellata* f. *ovata* (Briot) C. K. Schneider.

Shrubs or small trees, 2–4 m tall. Branchlets blackish brown, terete, initially brown pubescent, glabrescent. Stipules not seen; petiole 5–10 mm, subglabrous; leaf blade greenish abaxially, dark green adaxially, narrowly elliptic, ovate, or obovate (2–)4–10 × (1.2–)2–4 cm, thickly leathery, reticulate veins conspicuous abaxially, adaxially slightly lustrous, base cuneate, margin entire or remotely crenate, slightly revolute, apex obtuse to slightly acute. Panicle terminal, many flowered; peduncle densely brown pubescent; bracts not seen. Pedicel absent or 1–2 mm, densely brown pubescent. Hypanthium obconical, densely brown pubescent. Sepals lanceolate or triangular-lanceolate, longer than hypanthium, 3–4.5 mm, abaxially sparsely brown pubescent, adaxially densely so, margin entire, apex acuminate. Petals white, obovate, 1–1.2 cm, glabrous, apex obtuse. Stamens 20, shorter than petals. Ovary 2-loculed, with 2 ovules per locule; styles 2, connate at base. Pome blackish purple, globose, 7–10 mm in diam., glaucescent; fruiting pedicel 2–5 mm, glabrous; sepals caducous, leaving an annular ring. Fl. Apr–Jun, fr. Sep–Nov.

Taiwan, E Zhejiang (Putuo Xian, Tiantai Xian) [Japan].

**4. *Rhaphiolepis integerrima*** Hooker & Arnott, *Bot. Beechey Voy.* 263. 1838.

全缘石斑木 *quan yuan shi ban mu*

*Rhaphiolepis integerrima* var. *mertensii* (Siebold & Zuccarini) Makino ex Koidzumi; *R. mertensii* Siebold & Zuccarini; *R. umbellata* (Thunberg) Makino var. *mertensii* (Siebold & Zuccarini) Makino; *R. umbellata* var. *integerrima* (Hooker & Arnott) Masamune.

Shrubs or small trees. Branches erect or ascending. Leaves clustered at apices of branches; stipules not seen; petiole short or nearly absent; leaf blade oblong or oblong-obovate, 4–7 × 2–3.5 cm, leathery, base cuneate, margin entire, revolute, apex obtuse. Panicle terminal; peduncle and pedicels brown tomentose, bracts caducous. Hypanthium campanulate, abaxially tomen-

tose. Sepals narrowly elliptic, 2.5–3 mm, abaxially pubescent. Petals obovate, ca. 1 cm × 5 mm. Stamens 20; filaments irregular. Ovary 2-loculed, with 2 ovules per locule; styles 2, slender, connate at base, glabrous, not exceeding stamens. Fruit globose, ca. 8 mm, fruiting pedicel thick. Fl. Apr–May, fr. Nov.

Taiwan (Hong Yu, Huoshao Dao, Jilong Shi) [Japan (Ryukyu Islands)].

**5. *Rhaphiolepis salicifolia*** Lindley, Coll. Bot. 1: t. 3. 1821.

柳叶石斑木 liu ye shi ban mu

*Rhaphiolepis cheniana* F. P. Metcalf; *R. kwangsiensis* H. H. Hu.

Shrubs or small trees, 2.5–6 m tall. Branchlets red when young, grayish brown or brownish black when old, terete, slender, pubescent. Stipules not seen; petiole 5–10 mm, glabrous; leaf blade deep green adaxially, pale green abaxially, lanceolate or oblong-lanceolate, rarely obovate-oblong, 6–9 × 1.5–2.5 cm, midvein prominent on both surfaces, adaxially lustrous, base attenuate, margin remotely irregularly crenulate, sometimes entire basally, apex acuminate or acute. Panicle terminal, few to several flowered; peduncle and pedicels pubescent; bracts not seen. Pedicel 2–5 mm. Flowers ca. 1 cm in diam. Hypanthium tubular, abaxially pubescent, adaxially subglabrous. Sepals triangular-lanceolate or elliptic-lanceolate, 2–2.5 mm, abaxially nearly glabrous, adaxially pubescent, apex emarginate. Petals white, elliptic or obovate-elliptic, ca. 6 × 2 mm, glabrous, apex obtuse. Stamens 20, shorter than petals. Ovary 2-loculed, with 2 ovules per locule; styles 2, pubescent. Pome blackish brown, globose, 6–9 mm, subglabrous, apex with a pale scar; fruiting pedicel 6–10 mm, subglabrous. Fl. Apr, fr. Oct.

Slopes, forest margins, open forests at mountain summits. Fujian, Guangdong, Guangxi [Vietnam].

**6. *Rhaphiolepis lanceolata*** H. H. Hu, J. Arnold Arbor. 13: 335. 1932.

细叶石斑木 xi ye shi ban mu

*Rhaphiolepis hainanensis* F. P. Metcalf; *R. indica* (Linnaeus) Lindley var. *angustifolia* Cardot.

Shrubs, rarely trees, to 1–1.5 m tall. Branchlets blackish purple, terete, stout, brown pubescent when young, soon glabrescent. Stipules not seen; petiole 2–4 mm, glabrous; leaf blade narrowly lanceolate, 3–7.5 cm × 5–14 mm, leathery, midvein and lateral veins prominent abaxially, midvein impressed adaxially, abaxially glabrous or nearly so, adaxially lustrous, glabrous, base narrowly cuneate, margin sparsely crenate, apex obtuse or shortly acuminate. Panicle terminal, many flowered; peduncle and pedicels brown pubescent; bracts lanceolate or subulate, 2–4 mm, both surfaces pubescent, apex acute. Pedicel ca. 2 mm. Hypanthium tubular, abaxially brown pubescent. Sepals lanceolate, longer than hypanthium, 4.5–6 mm, both surfaces pubescent, apex acute or acuminate. Petals white or pinkish, elliptic-lanceolate, 6–7 × 1.5–4 mm, glabrous, apex obtuse. Stamens 15, longer than or ca. as long as petals. Ovary 3-loculed, with 2 ovules per locule; styles 3, connate at base, glabrous. Pome black, globose, 4–7 mm in diam., pubescent; fruiting pedicel 4–5 mm, pubescent; sepals deciduous,

leaving an annular ring. Fl. Jun, fr. Oct–Nov.

• Open forests on slopes, open thickets in valleys; 400–1500 m. ?Guangdong, Guangxi, Hainan.

**7. *Rhaphiolepis ferruginea*** F. P. Metcalf, Lingnan Sci. J. 18: 509. 1939.

绣毛石斑木 *xiu mao shi ban mu*

Trees or shrubs, more than 10 m tall. Branchlets blackish brown when young, grayish black when old, terete, densely rusty tomentose. Stipules caducous, lanceolate, ca. 5 mm, both surfaces tomentose, apex acuminate; petiole 1–2.5 cm, densely rusty tomentose; leaf blade elliptic or broadly lanceolate, 6–15 × 2.5–5.5 cm, leathery, midvein impressed adaxially, veins slightly prominent abaxially, abaxially densely rusty tomentose or pubescent, adaxially tomentose when young, glabrescent, base cuneate, margin entire or serrate, revolute or not, apex acute or shortly acuminate. Panicles terminal, many flowered; peduncle and pedicels densely rusty pubescent; bracts lanceolate, ca. 6 mm, rusty tomentose, margin entire, apex acuminate. Pedicel 2–4 mm. Flowers 8–10 mm. Hypanthium campanulate, abaxially densely rusty tomentose. Sepals ovate, slightly longer than hypanthium, ca. 3 mm, abaxially densely rusty pubescent, margin entire, apex acute. Petals white, ovate-oblong, ca. 4 mm, glabrous, apex obtuse. Stamens unequal, ca. as long as or shorter than petals. Ovary 2-loculed, with 2 ovules per locule; styles 2, connate at base, glabrous. Pome black, globose, 5–8 mm in diam., yellow tomentose when young, later subglabrous or sparsely rusty tomentose apically; fruiting pedicel short, 4–7 mm, densely rusty tomentose; sepals deciduous, leaving an annular ring. Fl. Apr–Jun, fr. Oct.

• Slopes, valleys, open forests at roadsides and on slopes, stream sides; 300–600 m. Fujian, Guangdong, Guangxi, Hainan.

- 1a. Leaf margin entire and revolute, blade abaxially densely rusty pubescent ..... 7a. var. *ferruginea*  
1b. Leaf margin conspicuously serrate apically, blade abaxially sparsely rusty pubescent .... 7b. var. *serrata*

**7a. *Rhaphiolepis ferruginea* var. *ferruginea***

绣毛石斑木(原变种) *xiu mao shi ban mu* (yuan bian zhong)

Leaf blade entire and revolute at margin, abaxially densely rusty pubescent.

• Slopes, valleys, open forests at roadsides; 300–600 m. Fujian, Guangdong, Guangxi, Hainan.

**7b. *Rhaphiolepis ferruginea* var. *serrata*** F. P. Metcalf, *Lingnan Sci. J.* 18: 511. 1939.

齿叶绣毛石斑木 *chi ye xiu mao shi ban mu*

Leaf blade conspicuously serrate apically, not revolute, abaxially sparsely rusty pubescent.

• Stream sides, open forests on slopes. Fujian, Guangdong, Guangxi.

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