

50. PRUNUS Linnaeus, Sp. Pl. 1: 473. 1753.

李属 li shu

Gu Cuizhi (谷粹芝 Ku Tsue-chih); Bruce Bartholomew

Trees or shrubs, deciduous. Branchlets sometimes spine-tipped. Axillary winter bud solitary, ovoid; terminal winter bud absent. Stipules membranous, soon caducous. Leaves simple, alternate, convolute [or conduplicate] when young; petiolate or sessile; petiole apex or base of leaf blade margin with or without nectaries; leaf blade margin variously crenate or coarsely serrate. Inflorescences apparently axillary, solitary or to 3-flowered in a fascicle; bracts small, soon caducous. Flowers opening before or at same time as leaves. Hypanthium campanulate. Sepals 5, imbricate. Petals 5, white, sometimes purple-veined, rarely greenish, inserted on rim of hypanthium, imbricate. Stamens 20–30, in 2 whorls; filaments unequal. Carpel 1; ovary superior, 1-loculed, glabrous or sometimes villous; ovules 2, collateral, pendulous. Style terminal, elongated. Fruit a drupe, glabrous, often glaucous, usually with a longitudinal groove; mesocarp fleshy, not splitting when ripe; endocarp laterally compressed, smooth, rarely grooved or rugose.

About 30 species: Asia, Europe, North America; seven species (two endemic, three introduced) in China.

Prunus mairei H. Léveillé, described from Yunnan, is *Symplocos paniculata* (Thunberg) Miquel in the Symplocaceae (see Fl. China 15: 252. 1996).

Many plum species are cultivated for their edible fruit and some for their flowers.

- 1a. Secondary veins and midvein at a less than 45° angle 1. *P. simonii*
 1b. Secondary veins and midvein at a 45° angle.
 2a. Young branchlets and bracts tomentose or pubescent; pedicel usually pubescent.
 3a. Flowers solitary; fruiting pedicel erect; endocarp rugose 2. *P. spinosa*
 3b. Flowers usually 2 in a fascicle (but usually solitary in *P. cerasifera*); fruiting pedicel pendulous; endocarp nearly smooth 3. *P. insititia*
 2b. Young branchlets and bracts glabrous or sparsely pubescent (densely pubescent in *P. salicina* var. *pubipes*); pedicel glabrous or rarely pubescent.
 4a. Leaf blade abaxially pubescent; drupe often glaucous 4. *P. domestica*
 4b. Leaf blade abaxially glabrous or sparsely pubescent or pubescent on midvein; drupe not glaucous (slightly glaucous in *P. cerasifera*).
 5a. Leaf blade abaxially pubescent only on midvein; flowers usually solitary, very rarely 2 in a fascicle; endocarp smooth or scabrous 5. *P. cerasifera*
 5b. Leaf blade abaxially glabrous or sparsely pubescent; flowers (2 or)3 in a fascicle; endocarp rugose or grooved.
 6a. Leaf blade glabrous; drupe 3.5–7 cm in diam.; endocarp rugose 6. *P. salicina*
 6b. Leaf blade sparsely pubescent; drupe 1.5–2.5 cm in diam.; endocarp conspicuously grooved 7. *P. ussuriensis*

1. Prunus simonii Carrière, Rev. Hort. 1872: 111. 1872.

Jun–Jul.

杏李 xing li

- Native in Hebei; widely cultivated in N China.

Persica simonii Decaisne; *Prunus persica* (Linnaeus) Batsch var. *nectarina* Maximowicz.

This species is cultivated for its edible fruit and has many cultivars.

Trees 5–8 m tall. Branches purple, glabrous; branchlets pale red, robust, glabrous. Winter buds purplish red, usually glabrous. Stipules linear, margin glandular, apex long acuminate. Petiole 1–1.3 cm, glabrous, apex often with 1 or 2 large nectaries on either side; leaf blade oblong-obovate, oblong-lanceolate, or rarely elliptic, 7–10 × 3–5 cm, glabrous, abaxially pale green, adaxially dark green, base cuneate to broadly cuneate, margin conspicuously crenate or sometimes inconspicuously biserrate, apex acuminate to acute; midvein and secondary veins abaxially conspicuous, adaxially conspicuously impressed, at a less than 45° angle with each other. Flowers 2 or 3 in a fascicle, rarely solitary, 1.5–2 cm in diam. Pedicel 2–5 mm, glabrous. Hypanthium outside glabrous. Sepals oblong, glabrous, margin glandular, apex obtuse. Petals white, oblong, base cuneate and shortly clawed, apex obtuse. Ovary glabrous. Stigma disk-shaped. Drupe red, appressed globose, 3–5(–6) cm in diam., glabrous; mesocarp pale yellow, fragrant; endocarp small, depressed globose, longitudinally grooved. Fl. May, fr.

2. Prunus spinosa Linnaeus, Sp. Pl. 1: 475. 1753.

黑刺李 hei ci li

Prunus domestica Linnaeus var. *spinosa* (Linnaeus) Kuntze.

Shrubs, rarely trees, 4–8 m tall. Branches reddish brown, robust, glabrous, spiny; branchlets reddish brown, densely pubescent. Winter buds purplish red, pubescent. Stipules lanceolate, margin glandular, apex acuminate. Petiole 5–7 mm, pubescent, without nectaries; leaf blade oblong-obovate, elliptic-ovate, or rarely oblong, 2–4 × 0.8–1.8 cm, abaxially yellowish green and pubescent, adaxially dark green and sparsely appressed pubescent, glabrescent, base subrounded to broadly cuneate, margin crenate or sometimes doubly crenate, apex acute to obtuse; secondary veins 4 or 5(–8) on either side of midvein. Flowers solitary, opening before leaves, 1–1.5 cm in diam. Pedicel 6–8(–15) mm, glabrous or sparsely pubescent.

Hypanthium outside glabrous. Sepals triangular-ovate, outside glabrous, margin serrulate, apex acute. Petals white with pale purple veins, oblong, base cuneate, apex obtuse. Stamens 20–25. Ovary glabrous. Stigma capitate. Drupe black, globose, broadly ellipsoid, or conical, 1–1.5 cm in diam., glabrous, glaucous; mesocarp green; endocarp brown, ovoid to ellipsoid, ± flattened, rugose. Fl. Apr, fr. Aug.

Cultivated throughout China [native to N Africa, SW Asia, and Europe].

This species is cultivated for its edible fruit and as grafting stock for other species of Prunoideae.

3. *Prunus insititia* Linnaeus, Amoen. Acad. 4: 273. 1759.

乌荆子李 wu jing zi li

Prunus domestica Linnaeus subsp. *insititia* (Linnaeus) C. K. Schneider; *P. domestica* var. *insititia* (Linnaeus) Fiori & Paoletti.

Shrubs or trees, to 6 m tall. Branches grayish black, glabrous, sometimes spiny; branchlets purplish brown, tomentose. Winter buds solitary or 2 parallel, purplish red, sometimes subglabrous or ciliate at scale margins. Stipules lorate, margin glandular ciliate, apex acuminate. Petiole 1–2(–2.5) cm, pubescent; leaf blade obovate, elliptic, or rarely oblong, 3.5–6(–8) × 2–4 cm, pubescent, soon glabrescent, abaxially pale green, adaxially dark green, base cuneate to broadly cuneate and with a pair of nectaries, margin coarsely serrate with teeth apex obtuse and gland-tipped, apex acute to obtuse; midvein and secondary veins prominent. Flowers 2(or 3) in a fascicle, rarely solitary, 2–2.5 cm in diam. Pedicel 1–1.5 cm, pubescent. Hypanthium outside subglabrous. Sepals narrowly ovate to oblong, outside subglabrous, margin entire or repand, apex obtuse to shortly acute. Petals white and inconspicuously purplish veined, broadly obovate, base broadly cuneate and with a short claw, apex obtuse. Stamens 20–25. Ovary glabrous. Stigma disk-shaped. Drupe bluish black, subglobose to ovoid, 1–2.5 cm in diam., glabrous; endocarp small, ± flattened, nearly smooth. Fl. Apr–May, fr. Jun–Sep.

Cultivated in China [native to SW Asia and Europe].

This species is cultivated for its edible fruit and as grafting stock for other species of Prunoideae.

4. *Prunus domestica* Linnaeus, Sp. Pl. 1: 475. 1753.

欧洲李 ou zhou li

Prunus communis Hudson; *P. domestica* var. *damascena* Linnaeus; *P. domestica* subsp. *oconomica* (Borkhausen) C. K. Schneider; *P. sativa* Rouy & Camus subsp. *domestica* (Linnaeus) Rouy & E. G. Camus.

Trees 6–15 m tall. Branches reddish brown, unarmed or with a few spines, glabrous; branchlets pale red to grayish green, sparsely pubescent. Winter buds reddish brown, usually glabrous. Stipules linear, margin glandular, apex acuminate. Petiole 1–2 cm, densely pubescent; leaf blade dark green, elliptic to obovate, 4–10 × 2.5–5 cm, abaxially pubescent, adaxially glabrous or sparsely pubescent on veins, base cuneate to occasionally broadly cuneate and with a pair of nectaries, margin

remote crenate, apex acute to obtuse; secondary veins 5–7 on either side of midvein. Flowers solitary or to 3 in a fascicle, on apex of short branchlets, 1–1.5 cm in diam. Pedicel 1–1.2 cm, glabrous or pubescent. Hypanthium outside pubescent. Sepals ovate, outside pubescent, margin entire, apex acute. Petals white or occasionally greenish, obovate, base cuneate, apex rounded to obtuse. Drupe red, purple, green, or yellow, usually globose to oblong, rarely subglobose, 1–2.5 cm in diam., often glaucous; endocarp broadly ellipsoid, pitted. Fl. Mar, fr. Sep.

Widely cultivated in China [native to SW Asia and Europe].

This species has a long history of cultivation, with many horticultural varieties. It is grown for its fruit, which are eaten fresh or made into juice or preserves.

5. *Prunus cerasifera* Ehrhart, Beitr. Naturk. 4: 17. 1789.

櫻桃李 ying tao li

Prunus cerasifera subsp. *myrobalana* (Linnaeus) C. K. Schneider; *P. domestica* Linnaeus var. *myrobalana* Linnaeus; *P. sogdiana* Vassilczenko.

Shrubs or trees, to 8 m tall. Branches dark gray, sometimes spiny; branchlets dark red, glabrous. Winter buds purple; scale margins sometimes sparsely ciliate. Stipules lanceolate, margin glandular serrulate, apex acuminate. Petiole 6–12 mm, usually glabrous or sometimes sparsely pubescent when young, without nectaries; leaf blade elliptic, ovate, obovate, or rarely elliptic-lanceolate, (2–)2–6 × 2–6(–6) cm, abaxially pale green and pubescent on midvein, adaxially dark green and glabrous, base cuneate to subrounded, margin crenate or sometimes doubly crenate, apex acute. Flowers solitary, rarely 2 in a fascicle, 2–2.5 cm in diam. Pedicel 1–2.2 cm, glabrous or sparsely pubescent. Hypanthium outside glabrous. Sepals narrowly ovate, outside glabrous, margin shallowly serrate, apex obtuse. Petals white, oblong to spatulate, base cuneate, margin undulate, apex obtuse. Stamens 25–30. Ovary villous. Stigma disk-shaped. Drupe yellow, red, or black, subglobose to ellipsoid, 2–3 cm in diam., slightly glaucous; endocarp ellipsoid to ovoid, smooth or scabrous, sometimes pitted. Fl. Apr, fr. Aug.

Forests, stream sides in valleys, gravelly slopes, also cultivated; 800–2000 m. Xinjiang [Kazakhstan, Turkmenistan, Uzbekistan; SW Asia, S Europe].

This species is widely cultivated throughout much of China for its fruit and flowers, with many horticultural varieties and forms. The purplish-leaved form, *Prunus cerasifera* f. *atropurpurea* (Jacquin) Rehder, is often planted as a garden ornamental in N China.

6. *Prunus salicina* Lindley, Trans. Hort. Soc. London 7: 239. 1830.

李 li

Trees 9–12 m tall; branchlets, petioles, pedicels, outside base of hypanthium glabrous or densely pubescent. Branches purplish brown to reddish brown; branchlets yellowish red. Winter buds purplish red, usually glabrous or rarely hairy at scale margins. Stipules linear, margin glandular, apex acuminate. Petiole 1–2 cm, apex with 2 nectaries; leaf blade oblong-obovate, narrowly elliptic, or rarely oblong-ovate, 6–8(–12) × 3–5 cm, adaxially dark green and lustrous, base cuneate, margin

doubly crenate and often mixed with simple gland-tipped teeth when young, apex acute to shortly caudate; secondary veins 6 or 7 on either side of midvein, not extending to leaf margin. Flowers usually 3 in a fascicle, 1.5–2.2 cm in diam. Pedicel 1–1.5 cm. Sepals oblong-ovate, ca. 5 mm, outside glabrous, margin loosely serrate, apex acute to obtuse. Petals white, oblong-obovate, base cuneate, margin erose near apex. Ovary glabrous. Stigma disk-shaped. Drupe yellow or red, sometimes green or purple, globose, ovoid, or conical, 3.5–5 cm in diam., to 7 cm in diam. in horticultural forms, glaucous; endocarp ovoid to oblong, rugose. Fl. Apr, fr. Jul–Aug.

- Sparse forests, forest margins, thickets, scrub, along trails in mountains, stream sides in valleys, also cultivated; 200–2600 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang.

- 1a. Branchlets, petioles, pedicels, and outside surface of hypanthia glabrous; leaf blade abaxially sparsely pubescent on veins or barbate in vein axils 6a. var. *salicina*
- 1b. Branchlets, petioles, pedicels, and outside base of hypanthia densely pubescent; leaf blade abaxially densely pubescent 6b. var. *pubipes*

6a. *Prunus salicina* var. *salicina*

李(原变种) li (yuan bian zhong)

Prunus botan André; *P. gymmodonta* Koehne; *P. ichangana* C. K. Schneider; *P. staminata* Handel-Mazzetti; *P. thibetica* Franchet; *P. triflora* Roxburgh; *P. triflora* var. *spinifera* Koehne.

Branchlets, petioles, pedicels, and outside surface of hypanthia glabrous. Leaf blade abaxially sparsely pubescent on veins or barbate in vein axils.

- Sparse forests, thickets, scrub, along trails in mountains, stream sides in valleys, also cultivated; 200–2600 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang.

This variety is an important, temperate fruit tree widely cultivated in China and other regions of Asia, Europe, and North America.

The following taxa have been described from China, but we have seen no specimens and are therefore unable to assign them to genus or treat them in this account. Further revision is necessary.

Prunus consociiflora C. K. Schneider (Repert. Spec. Nov. Regni Veg. 1: 54. 1905), described from Hubei: A. Henry 1309.

Prunus japonica Thunberg var. *fukienensis* Rehder (J. Arnold Arbor. 3: 29. 1922), described from Fujian: P. T. Dunn s.n.

Prunus kawakamii Hayata (J. Coll. Agric. Imp. Univ. Tokyo 25: 77. 1908), described from Taiwan: T. Kawakami & U. Mori s.n.

6b. *Prunus salicina* var. *pubipes* (Koehne) L. H. Bailey, Rhodora 18: 155. 1916.

毛梗李 mao geng li

Prunus triflora Roxburgh var. *pubipes* Koehne in Sargent, Pl. Wilson. 1: 280. 1912.

Branchlets, petioles, abaxial surface of leaf blades, pedicels, and outside base of hypanthia densely pubescent.

- Forest margins, thickets; 1600–2000 m. Gansu, Sichuan, Yunnan.

7. *Prunus ussuriensis* Kovalev & Kostina, Trudy Prikl. Bot., Ser. 8, Plodovolye Yagodnye Kul't 4: 75. 1935.

东北李 dong bei li

Prunus salicina Lindley var. *mandshurica* (Skvortzov) Skvortzov & Baranov; *P. triflora* Roxburgh var. *mandshurica* Skvortzov.

Trees 2.5–3 m tall. Branches grayish black, robust, glabrous; branchlets reddish brown, glabrous. Winter buds reddish brown, usually glabrous. Stipules lanceolate, margin glandular serrate, apex acuminate. Petiole glabrous, without nectaries; leaf blade obovate-oblong, rarely elliptic, 4–7(–9) × 2–4 cm, abaxially pale green and basally sparsely pubescent, adaxially dark green and basally sparsely pubescent, base cuneate to rarely broadly cuneate, margin serrate or biserrate with teeth often gland-tipped, apex caudate, acuminate, or acute; midvein and secondary veins abaxially conspicuous and raised, adaxially impressed. Flowers 2 or 3 in a fascicle, rarely solitary, 1–1.2 cm in diam. Pedicel 0.7–1.3 cm, glabrous. Hypanthium outside glabrous. Sepals oblong, glabrous, margin gland-tipped serrulate, apex acute. Petals white, oblong, base cuneate and shortly clawed, margin undulate near apex. Ovary glabrous. Stigma disk-shaped. Drupe purplish red, ovoid, subglobose, or oblong, 1.5–2.5 cm in diam., glabrous; endocarp oblong, conspicuously grooved, inconspicuously pitted. Fl. Apr–May fr. Jun–Sep.

Forest margins, stream sides; 400–800 m. Heilongjiang, Jilin, Liaoning [Russia (Far East, E Siberia)].

This species is resistant to extreme cold and is cultivated in N China as a frost-hardy fruit tree.

Prunus nubium Handel-Mazzetti (Symb. Sin. 7: 530. 1933), described from Hunan: T. H. Wang 1.

Prunus platysepala Koehne (in Sargent, Pl. Wilson. 1: 277. 1912), described from Hubei: E. H. Wilson 2813.

Prunus salicina Lindley var. *cordata* Y. He & J. Y. Zhang (Bull. Bot. Res., Harbin 9(3): 71. 1989), described from Fujian: J. Y. Zhang et al. A10803.

ROSACEAE