

49. ARMENIACA Scopoli, Meth. Pl. 15. 1754.

杏属 xing shu

Lu Lingdi (陆玲娣 Lu Ling-ti); Bruce Bartholomew

Trees, rarely shrubs, deciduous. Branches unarmed, rarely spiny. Axillary winter bud solitary; terminal winter bud absent. Stipules present. Leaves simple, alternate, convolute when young; petioles usually with 2 nectaries; leaf blade margin singly or doubly serrate. Inflorescences apparently axillary, 1–3-flowered. Flowers bisexual, regular, solitary or to 3 in a fascicle, opening before leaves or rarely with leaves. Pedicel nearly absent to very short, rarely longer. Hypanthium caducous in fruit. Sepals 5, imbricate. Petals 5, inserted on mouth of hypanthium, imbricate. Stamens 15–45, perigynous; filaments free, filiform. Carpel 1(or 2); ovary superior, hairy, 1-loculed; ovules 2, collateral, pendulous. Style terminal, elongated. Fruit a drupe, ± laterally compressed, hairy, rarely glabrous, with a conspicuous longitudinal groove; mesocarp succulent or fleshy, not splitting when ripe, rarely dry and splitting when ripe; endocarp hard, 2-valved, compressed on both sides, surface smooth, scabrous, or reticulate, rarely pitted, separating from or adnate to mesocarp. Seeds bitter or sweet.

About 11 species: E to SW Asia; ten species (five endemic) in China.

Armeniaca is widespread in China and is especially common in N China, but its distribution center is the middle and lower reaches of the Huang He. Many species and varieties are cultivated for their edible fruit and a few for their edible seeds. Many species are also grown as ornamentals. The seeds are sweet or bitter and are rich in oil and protein. Seeds are used as food or medicine and the oil is used in light industry. The high quality wood is also used commercially.

- 1a. First year's branchlets green 10. *A. mume*
- 1b. First year's branchlets grayish brown to reddish brown.
 - 2a. Leaf blade margin biserrate 9. *A. mandshurica*
 - 2b. Leaf blade margin not biserrate.
 - 3a. Drupe dark purplish red 8. *A. dasycarpa*
 - 3b. Drupe yellow to yellowish red, rarely white, with or without a red tinge.
 - 4a. Leaf blade usually glabrous on both surfaces, rarely abaxially pubescent in vein axils (sometimes adaxially white pubescent in *A. vulgaris*).
 - 5a. Petiole 1.8–2.1 cm; leaf blade elliptic to obovate-elliptic; sepals not reflexed 2. *A. limeixing*
 - 5b. Petiole 2–3.5 cm; leaf blade ovate, suborbicular, or suborbicular-ovate; sepals apically recurved or reflexed.
 - 6a. Trees 5–8(–12) m tall; mesocarp succulent, not splitting when ripe 1. *A. vulgaris*
 - 6b. Shrubs or trees 2–5 m tall; mesocarp dry, splitting when ripe 3. *A. sibirica*
 - 4b. Leaf blade pubescent on both surfaces, somewhat glabrescent (often adaxially glabrous in *A. hypotrichodes*).
 - 7a. Leaf blade ovate to elliptic-ovate, pubescent abaxially; fruiting pedicel 4–7 mm 4. *A. holosericea*
 - 7b. Leaf blade elliptic, oblong, or lanceolate (sometimes elliptic-ovate in *A. hongpingensis*), densely villous abaxially; fruiting pedicel more than 7 mm.
 - 8a. Leaf blade lanceolate, adaxially usually glabrous, apex acute; sepal margin ciliate-glandular 7. *A. hypotrichodes*
 - 8b. Leaf blade elliptic to oblong, adaxially sparsely pubescent to pilose, apex acuminate to caudate; sepal margin not ciliate-glandular.
 - 9a. Petioles densely pubescent; leaf blade elliptic to elliptic-ovate, densely yellowish brown villous abaxially, base rounded; endocarp ellipsoid, pitted 5. *A. hongpingensis*
 - 9b. Petioles glabrous; leaf blade elliptic to oblong, densely grayish villous abaxially, base truncate, rarely rounded; endocarp narrowly ellipsoid, scabrous, shallowly reticulate, not pitted 6. *A. zhengheensis*

1. *Armeniaca vulgaris* Lamarck, Encycl. 1: 2. 1783.

杏 xing

Trees 5–8(–12) m tall, crown spherical, spherical-flattened, or elongated oblong. Bark grayish brown, longitudinally splitting. Older branchlets brownish, glabrous, transversely lenticellate; young branchlets reddish brown, with many pale lenticels. Winter buds purplish red, ovoid, 2–4 mm, glabrous or puberulous at scale margins, apex obtuse. Petiole 2–3.5 cm, glabrous or white pubescent, basally usually with 1–6 nectaries; leaf blade broadly ovate to orbicular-ovate, 5–9 × 4–8 cm, both

surfaces glabrous, abaxially pubescent in vein axils, or adaxially white pubescent, base cuneate, broadly cuneate, rounded, or subcordate and with several nectaries, margin crenate, apex acute to shortly acuminate. Flowers solitary or occasionally paired, opening before leaves, 2–4.5 cm in diam. Pedicel 1–3 mm, pubescent. Hypanthium purplish green, shortly cylindrical, 5–7 × 3–4 mm, outside pubescent near base. Sepals purplish green, ovate to ovate-oblong, 3–5 mm, reflexed after anthesis, apex acute to rarely obtuse. Petals white, pink, or tinged with red, orbicular to obovate, 0.8–1.2 cm and ± as broad, margin shortly unguiculate, apex rounded. Stamens 20–100, slightly

shorter than petals; filaments white; anthers yellow. Ovary pubescent. Style slightly longer than or nearly as long as stamens, basally pubescent. Drupe white, yellow, orange, often tinged red, globose, ovoid, or rarely obovoid, 1.5 to more than 2.5 cm in diam., usually pubescent, glaucous or not; mesocarp succulent, not splitting when ripe; endocarp globose, ovoid, or ellipsoid, compressed laterally, often obtuse at ventral suture and more straight at dorsal suture, with keel-like ribs on ventral side, surface scabrous or smooth, base symmetric or rarely asymmetric, apex obtuse to ± rounded. Seed bitter or sweet. Fl. Mar–Apr, fr. Jun–Jul.

Sparse forests on mountain slopes, slopes, gullies, also cultivated; sea level to 3000 m. Gansu, Hebei, Henan, Jiangsu, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Xinjiang [Japan, Korea; C Asia].

Apricots are cultivated for their edible fruit throughout China and in most temperate parts of the world. The seeds are also edible and used medicinally. Because of its long history of cultivation in China, it is difficult to know for certain whether specific collections are really wild or escaped from cultivation, but probably the species originated in C Asia.

- 1a. Petiole and leaf blade yellowish brown pubescent 1e. var. *xiongyueensis*
- 1b. Petiole and leaf blade glabrous or sparsely white pubescent.
- 2a. Flowers double, ca. 4–4.5 cm in diam.; stamens ca. 100 1d. var. *meixianensis*
- 2b. Flowers single, 2–3 cm in diam.; stamens 20–50.
- 3a. Leaf base cuneate to broadly cuneate; flowers usually 2; petals pink; endocarp surface reticulate 1c. var. *ansu*
- 3b. Leaf base rounded to subcordate; flowers usually solitary; petals white or tinged with red; endocarp surface not reticulate.
- 4a. Petioles and adaxial surface of leaf blades glabrous; drupe more than 2.5 cm in diam.; endocarp surface scabrous or smooth, base symmetric or rarely asymmetric 1a. var. *vulgaris*
- 4b. Petioles and adaxial surfaces of leaf blades white pubescent; drupe 1.5–2 cm in diam.; endocarp surface smooth, base asymmetric 1b. var. *zhidanensis*

1a. *Armeniaca vulgaris* var. *vulgaris*

杏(原变种) xing (yuan bian zhong)

Prunus armeniaca Linnaeus; *P. tiliifolia* Salisbury.

Petiole glabrous; leaf base rounded to subcordate, both surfaces sparsely pubescent or adaxially glabrous. Flowers solitary. Drupe more than 2.5 cm in diam.; endocarp surface scabrous or smooth, base usually symmetric or rarely asymmetric.

Sparse forests on mountain slopes, also cultivated; 700–3000 m. Gansu, Hebei, Shaanxi, Shandong, Shanxi, Sichuan, Xinjiang [C Asia].

Pure stands of *Armeniaca vulgaris* var. *vulgaris* occur in the Ili prefecture of Xinjiang.

1b. *Armeniaca vulgaris* var. *zhidanensis* (C. Z. Qiao & Y. P. Zhu) L. T. Lu, Acta Phytotax. Sin. 38: 281. 2000.

志丹杏 zhi dan xing

Armeniaca zhidanensis C. Z. Qiao & Y. P. Zhu, Acta Phytotax. Sin. 31: 188. 1993.

Petiole white pubescent; leaf base rounded to subcordate, adaxially white pubescent. Flowers solitary. Drupe 1.5–2 cm in diam.; endocarp surface smooth, base asymmetric.

- Cultivated or wild. Ningxia, Qinghai, Shaanxi, Shanxi.

1c. *Armeniaca vulgaris* var. *ansu* (Maximowicz) T. T. Yu & L. T. Lu, Fl. Reipubl. Popularis Sin. 38: 26. 1986.

野杏 ye xing

Prunus armeniaca Linnaeus var. *ansu* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg 29: 87. 1884; *Armeniaca ansu* (Maximowicz) Kostina; *P. ansu* (Maximowicz) Komarov.

Leaf base cuneate to broadly cuneate. Flowers usually 2. Petals pink. Endocarp surface scabrous and reticulate.

Slopes, gullies, also cultivated; 1000–1500 m. Gansu, Hebei, Henan, Jiangsu, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan [Japan, Korea].

1d. *Armeniaca vulgaris* var. *meixianensis* J. Y. Zhang et al., Bull. Bot. Res., Harbin 9(3): 66. 1989.

陕梅杏 shan mei xing

Flowers double, 4–4.5 cm in diam. Petals to 70. Stamens ca. 100.

- About 700 m. WC Shaanxi (Mei Xian).

1e. *Armeniaca vulgaris* var. *xiongyueensis* T. Z. Li et al., Bull. Bot. Res., Harbin 9(3): 65. 1989.

熊岳杏 xiong yue xing

Petiole and leaf blade yellowish brown pubescent.

- Cultivated or wild; near sea level. S Liaoning (Xiongyue).

2. *Armeniaca limeixing* J. Y. Zhang & Z. M. Wang, Acta Phytotax. Sin. 37: 3. 1999.

李梅杏 li mei xing

Trees 3–4 m tall, spreading. Trunk scabrous, bark grayish brown. Perennial branches grayish brown; previous year's branches yellowish brown on exposed side, green to reddish brown on adaxial side, glabrous, with sparse flattened orbicular lenticels. Petiole 1.8–2.1 cm, glabrous, with 2–4 nectaries; leaf blade elliptic to obovate-elliptic, 6–7 × 3–4 cm, both surfaces glabrous or abaxially pubescent in vein axils, base cuneate, margin shallowly obtusely dentate, apex acuminate to caudate; midvein yellowish white. Flowers solitary to 3 in clusters, opening before or at same time as leaves, 1.5–2.5 cm in diam., slightly fragrant. Pedicel 3–8 mm, 4–12 mm in fruit, glabrous or rarely pubescent. Hypanthium yellowish green to reddish brown, campanulate, outside glabrous. Sepals green, rarely

brown, ligulate to broadly ligulate, not reflexed after anthesis, outside glabrous, margin serrate. Petals 5(–8), white, suborbicular to elliptic, 8–10 × 7–8 mm, base shortly clawed, margin undulate, apex emarginate. Stamens 24–30, shorter than pistil; anthers yellowish. Carpel 1(or 2); ovary and base of style pubescent. Drupe yellowish white, orangish yellow, or yellowish red, subglobose to ovoid-globose, pubescent, not glaucous, with a deep suture; mesocarp yellow to orangish yellow, succulent, sweet-sour, fragrant, adnate to endocarp; endocarp compressed globose, ventral ribs obtuse, dorsal ribs acute, lateral ribs nearly absent, surface shallowly reticulate, base longitudinally shallowly furrowed, apex obtuse to acute. Seed bitter. Fl. Apr–May, fr. Jun–Jul.

• Cultivated. Hebei, Heilongjiang, Henan, N Jiangsu, Jilin, Liaoning, Shaanxi, Shandong.

This species is cultivated for its fruit and is unknown in the wild.

3. *Armeniaca sibirica* (Linnaeus) Lamarck, Encycl. 1: 3. 1783.

山杏 shan xing

Shrubs or trees, 2–5 m tall. Bark dark gray. Branches spreading; branchlets grayish brown to reddish brown, sparsely pubescent when young, glabrescent. Winter buds reddish brown, ovoid to conical, 2–4 mm; scale margins pubescent. Petiole 2–3.5 cm, glabrous or pubescent when young, with or without small nectaries; leaf blade ovate to suborbicular, (3–)5–10 × (2.5–)4–7 cm, both surfaces glabrous, pubescent, or abaxially pubescent in vein axils, base rounded to subcordate, margin obtusely minutely serrate, apex long acuminate to caudate. Flowers solitary, opening before leaves, 1.5–3.5 cm in diam. Pedicel 1–2 mm. Hypanthium purplish red outside, campanulate, outside basally glabrous or slightly pubescent. Sepals oblong-elliptic, recurved at anthesis, apex acute to shortly acuminate. Petals white with pink veins or pinkish, suborbicular to obovate. Stamens nearly as long as petals. Ovary pubescent. Drupe yellow to orangish red, sometimes tinged red, compressed globose, 1.5–2.5 cm and as broad, pubescent, glaucous or not; mesocarp 2.5–3 mm thick, dry and compact, bitter, inedible, readily separating from endocarp and splitting along ventral suture at maturity; endocarp laterally compressed globose, 1.2–2.2 cm and nearly as broad, central rib of ventral suture acute and winged, dorsal rib more obtuse, surface more smooth, base asymmetric, apex obtuse. Seed ± bitter. Fl. Mar–Apr, fr. Jun–Jul.

Forests, thickets, mountainous areas, hill grasslands, slopes, river valleys, dry sunny slopes; 400–2500 m. Gansu, Hebei, Heilongjiang, Henan, Jilin, Liaoning, Nei Mongol, Ningxia, Shaanxi, Shanxi [Korea, Mongolia, Russia].

- 1a. Flowers single, 1.5–2 cm in diam.
 - 2a. Petioles, leaf blades, and pedicels usually glabrous 3a. var. *sibirica*
 - 2b. Petioles, leaf blades, and pedicels pubescent but with age leaf blade only abaxially sparsely pubescent along veins 3b. var. *pubescens*
- 1b. Flowers double, 3–3.5 cm in diam.
 - 3a. Petioles and leaf blades glabrous 3c. var. *multipetala*

- 3b. Petioles and leaf blades pubescent 3d. var. *pleniflora*

3a. *Armeniaca sibirica* var. *sibirica*

山杏(原变种) shan xing (yuan bian zhong)

Prunus sibirica Linnaeus, Sp. Pl. 1: 474. 1753; *Prunus armeniaca* Linnaeus var. *sibirica* (Linnaeus) K. Koch.

Flowers single. Petioles, leaf blades, and pedicels often glabrous.

Forests, thickets, hill grasslands, dry sunny slopes; 700–2000 m. Gansu, Hebei, Heilongjiang, Henan, Jilin, Liaoning, Nei Mongol, Ningxia, Shanxi [Mongolia, Russia].

3b. *Armeniaca sibirica* var. *pubescens* Kostina, Trudy Prikl. Bot., Ser. 8, Plodovolye Yagodnye Kul't 4: 28. 1935.

毛杏 mao xing

Prunus sibirica Linnaeus var. *pubescens* (Kostina) Nakai.

Flowers single. Petioles, leaf blades, and pedicels pubescent but with age leaf blade only abaxially sparsely pubescent along veins.

Sunny slopes in mixed forests, thickets, river valleys, grasslands; 1200–2500 m. Gansu, Hebei, Nei Mongol, Shaanxi, Shanxi [Korea].

3c. *Armeniaca sibirica* var. *multipetala* G. S. Liu & L. B. Zhang, Acta Phytotax. Sin. 27: 394. 1989.

重瓣山杏 chong ban shan xing

Flowers double. Petioles and leaf blades glabrous.

• Slopes; ca. 400 m. E Hebei (Qinglong Xian).

3d. *Armeniaca sibirica* var. *pleniflora* J. Y. Zhang et al., Bull. Bot. Res., Harbin 9(3): 65. 1989.

辽梅杏 liao mei xing

Flowers double. Petioles and leaf blades pubescent.

• Mountainous areas; ca. 800 m. W Liaoning (Beipiao Xian).

4. *Armeniaca holosericea* (Batalin) Kostina, Trudy Prikl. Bot., Ser. 8, Plodovolye Yagodnye Kul't 4: 28. 1935.

藏杏 zang xing

Prunus armeniaca Linnaeus var. *holosericea* Batalin, Trudy Imp. S.-Peterburgsk Bot. Sada 14: 167. 1895.

Trees 4–5 m tall. Branchlets reddish brown to grayish brown, pubescent when young, gradually glabrescent. Winter buds brown, ovoid. Petiole 1.5–2 cm, pubescent, usually with nectaries; leaf blade ovate to elliptic-ovate, 4–6 × 3–5 cm, both surfaces pubescent when young but glabrescent, base rounded to subcordate, margin minutely serrate, apex acuminate. Flowers unknown. Fruiting pedicel 4–7 mm. Drupe ovoid-globose to ovoid-ellipsoid, 2–3 cm in diam., densely pubescent; mesocarp slightly fleshy, not splitting when ripe; endocarp ovoid-ellipsoid to ellipsoid, compressed laterally, ventral rib somewhat obtuse, surface rugose, base subsymmetric to slightly asymmetric, apex acute. Fr. Jun–Jul.

• Thickets, sunny slopes, dry river valleys; 700–3300 m. Qinghai, Shaanxi, Sichuan, SE Xizang.

5. *Armeniaca hongpingensis* C. L. Li, Acta Phytotax. Sin. 23: 209. 1985.

洪平杏 hong ping xing

Armeniaca holosericea (Batalin) Kostina var. *xupuensis* T. Z. Li.

Trees to 10 m tall. Bark grayish brown, irregularly shallowly splitting. Branchlets pale brown to reddish brown, glabrescent. Winter buds small, ovoid. Petiole 1.5–2 cm, densely pubescent; leaf blade elliptic to elliptic-ovate, 6–10 × 2.5–5 cm, abaxially densely yellowish brown villous, adaxially sparsely pubescent, base rounded, margin densely acutely serrulate, apex narrowly acuminate to caudate. Flowers unknown. Fruiting pedicel 7–10 mm. Drupe subglobose, 3.5–4 × 3–3.5 cm, densely yellowish brown pubescent; mesocarp edible; endocarp ellipsoid, compressed on both sides, ventral rib obtuse, longitudinally furrowed on ventral side, surface pitted, base subsymmetric, apex acute. Fr. Jun–Jul.

• Along trails, sometimes cultivated in villages; 200–1800 m. W Hubei, W Hunan (Xupu Xian).

This species is cultivated for its edible fruit.

6. *Armeniaca zhengheensis* J. Y. Zhang & M. N. Lu, Acta Phytotax. Sin. 37: 105. 1999.

政和杏 zheng he xing

Trees 35–40 m tall, erect. Bark dark brown, somewhat smooth, flaking into pieces. Older branchlets grayish brown; younger branchlets reddish brown, smooth, pubescent, with dense and transverse lenticels; new shoots reddish brown on exposed side, green on opposite side. Petiole red, 1.3–1.5 cm, usually glabrous, with 2–4(–6) nectaries apically from middle; leaf blade elliptic to oblong, 7.5–15 × 3.5–4.5 cm, abaxially densely grayish villous, adaxially green and pilose on veins, base mostly truncate to rarely rounded, margin irregularly minutely gland-tipped serrate, apex acuminate to long caudate; midvein adaxially red or sometimes white. Flowers usually solitary, opening before leaves, ca. 3 cm in diam. Pedicel yellowish green, 3–4 mm, glabrous. Hypanthium basally green, apically reddish, campanulate, outside glabrous. Sepals purplish red, ligulate, reflexed after anthesis, outside glabrous. Petals white, elliptic, 1.3–1.5 × 0.8–0.9 cm, base shortly unguiculate, apex obtuse. Stamens 25–30, longer than petals. Drupe yellow, tinged red on exposed side, ovoid-globose, slightly pubescent; mesocarp succulent, sweet, adnate to endocarp and not splitting along suture when ripe; endocarp yellowish brown, narrowly ellipsoid, compressed laterally, 2–2.5 cm, ventral and dorsal ribs obtuse, rarely without lateral ribs, with a deep furrow running from apex to base, surface scabrous and shallowly reticulate but not pitted, base symmetric, apex obtuse. Seed compressed ellipsoid, bitter. Fl. Mar–Apr, fr. Jun–Jul.

• Mountain regions; 700–1000 m. N Fujian (Zhenghe Xian).

7. *Armeniaca hypotrichodes* (Cardot) L. C. Li & S. Y. Jiang, Acta Phytotax. Sin. 36: 367. 1998.

背毛杏 bei mao xing

Prunus hypotrichodes Cardot, Notul. Syst. (Paris) 4(1): 27. 1920.

Shrubs to 3 m tall. Branchlets glabrous, dark brown initially, later brownish gray. Winter buds ovoid, brown; scales orbicular, imbricate, margin pilose. Stipules small, lanceolate, caducous, margin glandular denticulate. Petiole 1–1.5 cm, usually glabrous, with 1–3 nectaries; leaf blade lanceolate, 5–12 × 1.5–4 cm, broadest near middle, abaxially brownish villous, adaxially glabrous or rarely pilose on veins, base narrowly subrounded, margin irregularly minutely gland-tipped serrate, apex acute. Flowers solitary, opening slightly before or with leaves, ca. 3 cm in diam. Pedicel 7–10 mm, glabrous. Hypanthium subcampanulate to obconic, outside glabrous. Sepals ligulate, shorter than hypanthium, reflexed, outside glabrous, margin ciliate glandular. Petals white, long obovate, 1.2–1.5 × 0.8–0.9 cm, base shortly and broadly unguiculate, margin entire, apex obtuse. Stamens ca. 30, arranged in several whorls, outer ones nearly as long as petals, inner ones shorter than petals; filaments slender, glabrous; anthers small, orbicular. Ovary densely villous. Style slender, slightly longer than or nearly as long as stamens, basally hirsute; stigma dilated. Drupe unknown. Fl. Mar–Apr.

• Calcareous mountain areas; ca. 1400 m. Chongqing (Chengkou Xian).

8. *Armeniaca dasycarpa* (Ehrhart) Borkhausen, Arch. Bot. (Leipzig) 1(2): 37. 1797.

紫杏 zi xing

Prunus dasycarpa Ehrhart, Beitr. Naturk. 6: 90. 1791; *Armeniaca atropurpurea* Loiseleur-Deslongchamps; *A. dasycarpa* (Ehrhart) Persoon; *A. fusca* Turpin & Poiteau; *Prunus armeniaca* Linnaeus var. *dasycarpa* (Ehrhart) K. Koch.

Trees 4–7 m tall. Branchlets many, purplish red, somewhat thin, smooth and glabrous when young. Petiole thin, short, with or without small nectaries; leaf blade ovate to elliptic-ovate, 4–7 × 2.5–5 cm, abaxially pubescent along veins or in vein axils, adaxially dark green and glabrous, base cuneate to subrounded, margin irregularly densely minutely crenate, apex shortly acuminate. Flowers usually solitary (or 2), opening before leaves, ca. 2 cm in diam. Pedicel 4–7 mm, 7–12 mm in fruit, thinly pubescent. Hypanthium reddish brown, campanulate, outside subglabrous. Sepals reddish brown, suborbicular to broadly oblong, subglabrous, apex obtuse. Petals white or with pink spots, broadly obovate to spatulate, to 1 cm. Stamens many, nearly as long as petals. Ovary thinly pubescent. Drupe dark purplish red, subglobose, ca. 3 cm in diam., thinly pubescent, glaucous; mesocarp succulent, sour, adnate to endocarp; endocarp ovoid to ellipsoid-ovoid, compressed laterally, ventral and dorsal ribs slightly obtuse, surface longitudinally furrowed and coarsely scabrous or slightly pitted, base subsymmetric, apex acute. Seed bitter, rarely sweet. Fl. Apr–May, fr. Jun–Jul.

Cultivated. Xinjiang [Kashmir, Russia; SW Asia].

This species is cultivated for its edible fruit and seeds and is unknown in the wild.

9. *Armeniaca mandshurica* (Maximowicz) Skvortzov, Trudy Prikl. Bot. 22: 223. 1929.

东北杏 dong bei xing

Trees 5–15 m tall. Bark dark gray, deeply splitting. Branchlets reddish brown to greenish, glabrous. Winter buds purplish brown, ovoid, 2–4 mm, apex obtuse; scale margins glabrous or puberulous. Petiole 1.5–3 cm, puberulous, often with 2 nectaries; leaf blade broadly ovate to broadly elliptic, 5–12(–15) × 3–6(–8) cm, both surfaces glabrous or pubescent but gradually glabrescent and only abaxially pubescent in vein axils with age, base broadly cuneate, rounded, or sometimes cordate, margin irregularly acutely elongately biserrate, apex acuminate to caudate. Flowers solitary, opening before leaves, 2–3 cm in diam. Pedicel 7–10 mm, glabrous or sparsely pubescent when young. Hypanthium reddish brown, campanulate, outside usually glabrous. Sepals reddish brown, oblong to elliptic-oblong, outside usually glabrous, margin inconspicuously minutely serrate, apex obtuse to acute. Petals pink or white, broadly obovate to suborbicular. Stamens many, slightly longer than or nearly as long as petals. Ovary densely pubescent. Drupe yellow, sometimes white tinged red or with reddish spots on exposed side, subglobose, 1.5–2.6 cm in diam., pubescent; mesocarp slightly fleshy to dry, sour or somewhat bitter, edible in large-fruited forms, fragrant; endocarp subglobose to broadly ellipsoid, compressed laterally, 1.3–1.8 × 1.1–1.8 cm, ventral suture smooth, with obtuse median rib, lateral ribs not developed, dorsal rib suborbicular, surface slightly rugose, base subsymmetric, apex obtuse to mucronate. Seed bitter, rarely sweet. Fl. Apr–May, fr. May–Jul.

Mixed forests, thickets, mountain regions, open sunny slopes; 200–1000 m. Heilongjiang, Jilin, Liaoning [Korea, E Russia].

The wood is very hard.

- 1a. Leaf blade pubescent on both surfaces when young, gradually glabrescent and only abaxially pubescent in vein axils with age 9a. var. *mandshurica*
 1b. Leaf blade glabrous on both surfaces 9b. var. *glabra*

9a. *Armeniaca mandshurica* var. *mandshurica*

东北杏(原变种) dong bei xing (yuan bian zhong)

Prunus armeniaca Linnaeus var. *mandshurica* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg 29: 87. 1884; *P. mandshurica* (Maximowicz) Koehne.

Leaf blade pubescent on both surfaces when young, gradually glabrescent and only abaxially pubescent in vein axils with age.

Mixed forests, thickets, open sunny slopes; 400–1000 m. Jilin, Liaoning [N Korea, E Russia].

9b. *Armeniaca mandshurica* var. *glabra* (Nakai) T. T. Yu & L. T. Lu, Fl. Reipubl. Popularis Sin. 38: 31. 1986.

光叶东北杏 guang ye dong bei xing

Prunus mandshurica (Maximowicz) Koehne var. *glabra* Nakai, J. Jap. Bot. 15: 679. 1939.

Leaf blade glabrous on both surfaces.

Mountain regions; 200–400 m. Heilongjiang, Jilin, Liaoning [Korea].

10. *Armeniaca mume* Siebold, Verh. Batav. Genootsch. Kunsten 12(1): 69. 1830.

梅 mei

Trees, rarely shrubs, 4–10 m tall. Bark grayish to tinged with green, smooth. First year's branchlets green, smooth, glabrous or densely incanous. Winter buds purplish brown, ovoid, 3–6 mm, glabrous, apex acute. Petiole 1–2 cm, densely incanous or pubescent when young, often with nectaries; leaf blade ovate, ovate-elliptic, elliptic, obovate, or obovate-oblancoelate, 4–8 × 2.5–5 cm, grayish green, both surfaces pubescent when young, gradually glabrescent or only abaxially pubescent in vein axils with age, base broadly cuneate to rounded, margin usually acutely serrulate, apex caudate. Flowers solitary or 2 in a fascicle, opening before leaves, 2–2.5 cm in diam., strongly fragrant. Pedicel 1–10 mm, glabrous. Hypanthium usually reddish brown but green to greenish purple for some cultivated varieties, broadly campanulate, 2.5–4 mm, outside glabrous or sometimes pubescent. Sepals ovate to suborbicular, 3–5 mm, apex obtuse. Petals white or pink, obovate, 0.9–1.4 × 0.8–1.2 cm. Stamens shorter to slightly longer than petals. Ovary densely pubescent. Style shorter to slightly longer than stamens. Drupe yellow to greenish white, subglobose, 2–3 cm in diam., pubescent; mesocarp sour, adnate to endocarp; endocarp ellipsoid to subglobose, slightly compressed on both sides, ventral suture somewhat obtuse, distinctly longitudinally furrowed on ventral and dorsal sides, surface pitted, base cuneate, obtuse, or rounded, apex obtuse and abruptly mucronulate. Fl. winter–spring, fr. May–Jun (or Jul–Aug in N China).

Forested slopes, sparse forests, stream sides, slopes along trails, mountains, also commonly cultivated; below 3100 m. Native in W Sichuan and W Yunnan, perhaps also in N Taiwan; cultivated throughout most of China particularly in areas S of the Chang Jiang [Japan, Korea, N Laos, N Vietnam].

In addition to the varieties listed below, there are many cultivated varieties selected for their flowers or fruit.

- 1a. Branchlets and petioles densely incanous 10d. var. *pubicaulina*
 1b. Branchlets glabrous, petioles pubescent when young but glabrescent.
 2a. Leaf blade obovate to obovate-oblancoelate; pedicel to 1 cm 10c. var. *cernua*
 2b. Leaf blade ovate, ovate-elliptic, or elliptic; pedicel usually not over 0.5 cm.
 3a. Leaf blade thin; endocarp ellipsoid, base cuneate 10a. var. *mume*
 3b. Leaf blade thick; endocarp subglobose, base obtuse to rounded 10b. var. *palescens*

10a. *Armeniaca mume* var. *mume*

梅(原变种) mei (yuan bian zhong)

Prunus anomala Koehne; *P. mume* (Siebold) Siebold & Zuccarini; *P. mume* var. *formosana* Masamune; *P. mume* var. *tonsa* Rehder.

Leaf blade ovate to elliptic, thin. Pedicel short, 1–3 mm. Endocarp ellipsoid, base cuneate.

ROSACEAE

Commonly cultivated throughout most of China particularly in areas S of the Chang Jiang; perhaps native in N Taiwan [native to Japan and Korea].

This variety is cultivated for both its edible fruit and as an ornamental, but is unknown in the wild in China except perhaps for plants in N Taiwan that have been called *Prunus mume* var. *formosana* (Masamune, Annual Rep. Taihoku Bot. Gard. 2: 137. 1932).

10b. *Armeniaca mume* var. *pallescens* (Franchet) T. T. Yu & L. T. Lu, Fl. Reipubl. Popularis Sin. 38: 32. 1986.

厚叶梅 *hou ye mei*

Prunus mume (Siebold) Siebold & Zuccarini var. *pallescens* Franchet, Pl. Delavay. 197. 1890.

Leaf blade ovate to ovate-elliptic, thick, subleathery. Pedicel not over 5 mm. Endocarp subglobose, base obtuse to rounded.

• Forested slopes, stream sides; 1700–3100 m. W Sichuan, W Yunnan.

10c. *Armeniaca mume* var. *cernua* (Franchet) T. T. Yu & L. T. Lu, Fl. Reipubl. Popularis Sin. 38: 32. 1986.

长梗梅 *chang geng mei*

Prunus mume (Siebold) Siebold & Zuccarini var. *cernua* Franchet, Pl. Delavay. 198. 1890.

Leaf blade obovate to obovate-oblongate. Pedicel to 1 cm.

Sparse forests, slopes along trails, stream sides; 1900–2600 m. W Yunnan [N Laos, N Vietnam].

10d. *Armeniaca mume* var. *pubicaulina* C. Z. Qiao & H. M. Shen, Bull. Bot. Res., Harbin 14: 150. 1994.

毛茎梅 *mao jing mei*

Branchlets and petioles densely incanous.

• Mountains; ca. 2500 m. W Yunnan (Yunlong Xian).

ROSACEAE