

52. PADUS Miller, Gard. Dict. Abr, ed. 4, [999]. 1754.

稠李属 chou li shu

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

Trees or shrubs, deciduous, many branched. Branches unarmed. Axillary winter buds ovoid; terminal bud present. Stipules membranous, soon caducous. Leaves simple, alternate, conduplicate when young; petiole usually with 2 nectaries at apex or at base of leaf blade margin; leaf blade margin serrate, rarely entire. Inflorescences terminal on current year's branchlets, racemose, many flowered, base with a soon caducous involucre formed by floral bud scales; peduncle usually with leaves. Hypanthium campanulate to cup-shaped. Sepals 5. Petals 5, white. Stamens 10 or more, inserted on rim of hypanthium. Ovary superior, 1-loculed; ovules 2, collateral, pendulous. Style terminal, elongated; stigma flat. Fruit a drupe, glabrous, not glaucous, without a longitudinal groove; mesocarp succulent, not splitting when ripe; endocarp bony.

About 20 species: mostly in N temperate regions; 16 species (nine endemic) in China.

- 1a. Racemes basally leafless; sepals persistent in fruit.
 - 2a. Branchlets and abaxial surface of leaf blades glabrous; peduncle subglabrous to sparsely pubescent 1. *P. buergeriana*
 - 2b. Branchlets pubescent and leaf blades pubescent at least on veins; peduncle densely pubescent.
 - 3a. Leaf blade margin acutely serrate; inflorescence base without squamose involucre bracts 2. *P. stellipila*
 - 3b. Leaf blade margin serrulate; inflorescence base with persistent squamose involucre bracts 3. *P. perulata*
- 1b. Racemes basally leafy (usually leafless in *P. maackii* and *P. laxiflora*); sepals soon caducous in fruit.
 - 4a. Inflorescence base leafless or sometimes with 1 or 2 small bracts near base; leaves abaxially glandular or eglandular.
 - 5a. Leaf blade abaxially glandular, midvein pubescent 4. *P. maackii*
 - 5b. Leaf blade not glandular, midvein sericeous-villous 5. *P. laxiflora*
 - 4b. Inflorescence base leafy; leaf blade abaxially non-glandular.
 - 6a. Peduncles and pedicels thickened, conspicuously pale lenticellate in fruit.
 - 7a. Branchlets and abaxial surface of leaf blades glabrous or very rarely sparsely pubescent when young 15. *P. napaulensis*
 - 7b. Branchlets and abaxial surface of leaf blades pubescent 16. *P. wilsonii*
 - 6b. Peduncles and pedicels not thickened and not lenticellate in fruit.
 - 8a. Style exerted 6. *P. grayana*
 - 8b. Style not exerted (not seen in *P. brunescens* or *P. integrifolia*).
 - 9a. Style 1/2 as long as stamens; pedicel 1–1.5(–2.4) cm 7. *P. avium*
 - 9b. Style nearly as long as stamens (not seen in *P. brunescens* or *P. integrifolia*); pedicel shorter than 1 cm.
 - 10a. Leaf blade margin serrulate 14. *P. cornuta*
 - 10b. Leaf blade margin entire, crenulate, or serrate.
 - 11a. Leaf blade margin aristate serrate; inflorescences 16–30 cm.
 - 12a. Leaf blade elliptic to ovate-oblong, abaxially brown pubescent; peduncles and pedicels brown pubescent 8. *P. brunescens*
 - 12b. Leaf blade oblong to rarely elliptic or lanceolate, glabrous; peduncles and pedicels not brown pubescent.
 - 13a. Petiole 1.5–4.2 cm; peduncle with very small leaves at base; pedicels glabrous 10. *P. ssiori*
 - 13b. Petiole 1.5–2.3 cm; peduncle with larger leaves at base; pedicels pubescent 9. *P. brachypoda*
 - 11b. Leaf blade margin not aristate serrate; inflorescences 8–15 cm.
 - 14a. Leaf blade margin entire or very rarely apically sparsely serrate 13. *P. integrifolia*
 - 14b. Leaf blade margin crenulate or appressed serrate.
 - 15a. Leaf blade abaxially glabrous; branchlets glabrous or pubescent; peduncles and pedicels pubescent 11. *P. obtusata*
 - 15b. Leaf blade abaxially velutinous; branchlets velutinous; peduncles and pedicels velutinous 12. *P. velutina*

1. *Padus buergeriana* (Miquel) T. T. Yu & T. C. Ku, Fl. Reipubl. Popularis Sin. 38: 91. 1986.

稠李 lin mu

Prunus buergeriana Miquel, Ann. Mus. Bot. Lugduno-Batavi 2: 92. 1865–1866; *Laurocerasus buergeriana* (Miquel) C. K. Schneider; *P. adenodonta* Merrill; *P. buergeriana* var. *nudiuscula* Koehne; *P. venosa* Koehne.

Trees 6–12(–25) m tall. Branches brown; branchlets purplish brown, usually glabrous, with pale lenticels. Winter buds ovoid to conical, usually glabrous; scale margins rarely ciliate. Stipules linear, margin glandular serrate, apex acuminate. Petiole 1–1.5 cm, usually glabrous; leaf blade elliptic, oblong-elliptic, or rarely obovate-elliptic, 4–10 × 2.5–5 cm, both surfaces glabrous, abaxially pale green, adaxially dark green, base rounded, broadly cuneate, or occasionally cuneate, margin acutely appressed serrate, apex caudate-acuminate to shortly acuminate. Racemes 6–9 cm, usually 20–30-flowered, base leafless; peduncle subglabrous to sparsely pubescent. Flowers 5–7 mm in diam. Pedicel ca. 2 mm, to 3 mm in fruit, subglabrous to sparsely pubescent, glabrescent. Hypanthium campanulate, outside glabrous. Sepals triangular-ovate, persistent in fruit, outside glabrous or sparsely pubescent, margin irregularly serrulate, apex acute. Petals white, broadly ovate, base cuneate to shortly clawed, margin apically erose. Stamens 10. Ovary glabrous. Style ca. 1/2 as long as stamens; stigma discoid to semi-rounded. Drupe blackish brown, subglobose to ovoid, ca. 5 mm in diam., glabrous. Fl. Apr–May, fr. May–Oct.

Dense forests on slopes, along trails, sunny places on slopes; 1000–3400 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, Japan, Korea, Sikkim].

2. *Padus stellipila* (Koehne) T. T. Yu & T. C. Ku, Fl. Reipubl. Popularis Sin. 38: 92. 1986.

星毛稠李 xing mao chou li

Prunus stellipila Koehne in Sargent, Pl. Wilson. 1: 61. 1911.

Trees 6–9 m tall. Branches blackish brown, glabrous, with pale lenticels; branchlets grayish brown, densely velutinous. Winter buds conical; scale margin glabrous or pubescent. Stipules linear-lanceolate, margin glandular serrate, apex acuminate. Petiole 5–8 mm, pubescent, without nectaries; leaf blade elliptic, narrowly oblong, or rarely obovate-oblong, 1–10(–13) × 2.5–4 cm, abaxially brown stellate hairy on veins or in vein axils, adaxially glabrous or pubescent only on midvein and secondary veins, base rounded to broadly cuneate, margin irregularly spreading and acutely serrate, apex caudate, long acuminate, or rarely acute. Racemes 5–8 cm, many flowered, base leafless; peduncle velutinous. Flowers 3–7 mm in diam. Pedicel 2–4 cm, velutinous, glabrescent. Hypanthium campanulate. Sepals triangular, persistent in fruit, outside glabrous, margin glandular serrulate, apex obtuse. Petals white, broadly obovate, base cuneate and shortly clawed, margin apically erose. Stamens 10. Ovary glabrous. Style slightly shorter than stamens. Drupe black, subglobose, 5–6 mm in diam., glabrous. Fl. Apr–May, fr. May–Oct.

• Slopes, along trails, scrub; 1000–1800 m. Gansu, Guizhou, Hubei, Jiangxi, Shaanxi, Sichuan, Zhejiang.

3. *Padus perulata* (Koehne) T. T. Yu & T. C. Ku, Fl. Reipubl. Popularis Sin. 38: 92. 1986.

宿鳞稠李 su lin chou li

Prunus perulata Koehne in Sargent, Pl. Wilson. 1: 61. 1911.

Trees 6–12 m tall. Branches blackish brown to reddish brown, glabrous, with pale lenticels; branchlets reddish brown to purplish brown, velutinous when young. Winter buds ovoid, glabrous or sometimes pubescent at scale margins. Stipules linear-lanceolate, margin glandular serrate, apex acuminate. Petiole 1.2–2.5 cm, velutinous when young, non-glandular; leaf blade oblong-obovate, to obovate-oblong, rarely elliptic, 5–11 × 3–5.5 cm, abaxially pale green, hairy on midvein, and barbate in vein axils, adaxially dark green and glabrous, base rounded to broadly cuneate, margin appressed serrulate, apex acute to shortly acuminate. Racemes 5–10 cm, many flowered, base leafless; involucral bracts persistent; peduncle velutinous, glabrescent. Flowers 5–7 mm in diam. Pedicel ca. 2 mm, to 8 mm in fruit, velutinous, glabrescent. Hypanthium campanulate, outside glabrous. Sepals triangular-ovate, persistent in fruit, outside glabrous, margin glandular, apex acute. Petals white, nearly suborbicular to ovate, apically undulate. Stamens 10. Ovary glabrous. Style slightly shorter than stamens; stigma disk-shaped. Drupe black, subglobose, 7–8 mm in diam., glabrous. Fl. Apr–May, fr. May–Oct.

• Mixed forests, sparse forests beside streams, river sides, valleys; 1800–3200 m. W Sichuan, NW Yunnan.

4. *Padus maackii* (Ruprecht) Komarov in Komarov & Alisova, Key Pl. Far. East URSS 2: 657. 1932.

斑叶稠李 ban ye chou li

Prunus maackii Ruprecht, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 15: 361. 1857; *Cerasus maackii* (Ruprecht) G. V. Eremin & V. S. Simagin; *Laurocerasus maackii* (Ruprecht) C. K. Schneider; *Padus maackii* f. *lanceolata* T. T. Yu & T. C. Ku.

Trees 4–10 m tall. Branches blackish to yellowish brown, glabrous, with pale lenticels; branchlets reddish, pubescent when young. Winter buds ovoid, glabrous or with scale margins ciliate. Stipules linear, margin glandular, apex acuminate. Petiole 1–1.5 cm, pubescent, rarely subglabrous, apically or sometimes at leaf blade base with 2 nectaries; leaf blade elliptic, rhombic-ovate, or rarely oblong-obovate, 4–8 × 2.8–5 cm, abaxially pale green, purplish brown glandular, and pubescent on midvein, adaxially dark green and pubescent to subglabrous on veins, base rounded to broadly cuneate, margin irregularly and acutely glandular serrate, apex caudate-acuminate to shortly acuminate. Racemes 5–7 cm, many flowered, base leafless; peduncle sparsely pubescent. Flowers 8–10 mm in diam. Pedicel 4–6 mm, to 7 mm in fruit, sparsely pubescent, glabrescent. Hypanthium campanulate, outside pubescent. Sepals triangular to ovate-lanceolate, soon caducous, outside pubescent, margin irregularly glandular serrate, apex long acuminate. Petals white, oblong-obovate, base cuneate and shortly clawed, margin apically erose. Stamens 25–30. Ovary glabrous. Style slightly shorter than stamens; stigma disk-shaped. Drupe purple, subglobose, 5–7 mm in diam., glabrous. Fl. Apr–May, fr. Jun–Oct.

Sparse forests on sunny slopes, forest margins, under pine woods,

stream sides; 800–2000 m. Heilongjiang, Jilin, Liaoning [Korea, Russia (Far East)].

5. *Padus laxiflora* (Koehne) T. C. Ku, *comb. nov.*

疏花稠李 *shu hua chou li*

Basionym: *Prunus laxiflora* Koehne in Sargent, Pl. Wilson. 1: 70. 1911; *Cerasus laxiflora* (Koehne) C. L. Li & S. Y. Jiang.

Trees to 10 m tall. Trunk to 40 cm d.b.h. Branches dark brown or tinged black, glabrescent, lenticels few and small; young branchlets puberulent. Stipules narrowly linear, 5–10 mm, pubescent. Petiole 7–12 mm, densely pubescent; leaf blade obovate-oblong to broadly so, 3.5–6 × 1.6–2.7 cm, abaxially glabrous except sericeous-villous along veins, more densely so along midvein, and not papillose, adaxially light green and glabrous except pubescent-villous along midvein, base broadly cuneate and with 2 flattened nectaries, margin incised subduplicate-serrulate, apex acuminate. Inflorescences laxly racemose, 4.5–7 cm, 6–12-flowered, rachis appressed pubescent; peduncle 0.7–1.7 cm, sometimes with 1 or 2 brown sterile bracts, appressed pubescent; bracts basally on rachis 4–10 mm, gradually shortened to 1 mm apically, persistent. Pedicel ca. 1.8 cm for basalmost flowers, ca. 2 mm for apical flowers, laxly villous. Hypanthium semiglobose-campanulate, ca. 3 × 3 mm, outside basally pilose. Sepals triangular, as long as hypanthium, margin with horizontally spreading somewhat long glandular fimbriations, apex acute. Petals white or pink, apex rounded, emarginate, or parted. Stamens 15–50. Ovary and style hairy or glabrous. Endocarp globose to ovoid, smooth or ± rugose. Fl. May.

- Woods; ca. 1700 m. W Hubei.

6. *Padus grayana* (Maximowicz) C. K. Schneider, Ill. Handb. Laubholz. 1: 640. 1906.

灰叶稠李 *hui ye chou li*

Prunus grayana Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg 29: 107. 1884; *Padus acrophylla* C. K. Schneider; *Prunus padus* Linnaeus var. *japonica* Miquel.

Trees 8–10(–16) m tall. Branches blackish brown, glabrous, with pale lenticels; branchlets reddish brown to grayish green, velutinous when young. Winter buds ovoid, glabrous or sometimes sparsely pubescent at scale margins. Stipules linear, margin glandular, apex acuminate. Petiole 5–10 mm, usually glabrous; leaf blade grayish green, ovate-oblong to oblong, 4–10 × 1.8–4 cm, glabrous or abaxially pubescent on midvein, base rounded to subcordate, margin acutely serrate or incised, apex long acuminate to long caudate. Racemes 5–8 cm, dense, many flowered, basally with 2–4(or 5) leaves; peduncle glabrous. Flowers 7–8 mm in diam. Pedicel 2–4 mm, 6–9 mm in fruit, glabrous. Hypanthium campanulate, outside glabrous. Sepals triangular-ovate, soon caducous, outside glabrous, margin serrulate, apex acute. Petals white, oblong-obovate, base cuneate and shortly clawed, margin apically erose; stamens 20–30. Ovary glabrous. Style long and exerted; stigma discoid. Drupe blackish brown, ovoid-globose, 5–6 mm in diam., glabrous. Fl. Apr–May, fr. Jun–Sep.

Mixed forests in valleys, shady places on slopes, along trails; 1000–3800 m. Anhui, Fujian, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang [Japan].

7. *Padus avium* Miller, Gard. Dict ed. 8. *Padus* no. 1, 1778.

稠李 *chou li*

Trees to 15 m tall. Branches purple to brownish gray, with pale lenticels; branchlets reddish brown, glabrous, pubescent, or densely brown villous. Winter buds ovoid, glabrous or with ciliate scale margins. Stipules linear, margin glandular serrate, apex acuminate. Petiole 1–1.5 cm, glabrous, pubescent, or densely brown villous, apically with 2 nectaries; leaf blade abaxially pale green, adaxially dark green, elliptic, oblong, or oblong-obovate, 4–10 × 2–4.5 cm, glabrous, pubescent, or densely brown villous, base rounded to broadly cuneate, margin irregularly and acutely serrate or sometimes biserrate, apex caudate. Racemes 7–10 cm, 7- or 8-flowered, glabrous, pubescent, or densely brown villous, basally with 1 or 2 leaves. Flowers 1–1.6 cm in diam. Pedicel 1–1.5(–2.4) cm. Hypanthium campanulate, outside glabrous. Sepals triangular-ovate, soon caducous, outside glabrous, margin glandular, apex acute to obtuse. Petals white, oblong, base shortly clawed. Stamens many. Ovary glabrous. Style 1/2 as long as stamens; stigma disk-shaped. Drupe reddish brown to black, ovoid-globose, 8–10 cm in diam., smooth. Fl. Apr–Jun, fr. May–Oct.

Forests, forest margins, thickets, slopes, valleys, stream sides; 800–2700 m. Gansu, Hebei, Heilongjiang, Henan, Jilin, Liaoning, Nei Mongol, Qinghai, Shaanxi, Shandong, Shanxi, Xinjiang [Japan, Korea, Mongolia, Russia].

- 1a. Branchlets, petioles, abaxial surface of leaf blades, and inflorescences glabrous 7a. var. *avium*
- 1b. Branchlets, petioles, abaxial surface of leaf blades, and inflorescences densely villous or pubescent.
 - 2a. Branchlets, petioles, abaxial surface of leaf blades, and inflorescences densely brown villous 7b. var. *pubescens*
 - 2b. Branchlets, petioles, abaxial surface of leaf blades, and inflorescences pubescent 7c. var. *asiatica*

7a. *Padus avium* var. *avium*

稠李(原变种) *chou li* (yuan bian zhong)

Cerasus padus (Linnaeus) Delarbre; *Padus germanica* Borkhausen; *P. vulgaris* Borkhausen; *P. racemosa* (Lamarck) Gilibert; *Prunus padus* Linnaeus; *P. racemosa* Lamarck.

Branchlets, abaxial surface of leaf blades, petioles, and inflorescences glabrous. Fl. Apr–Jun, fr. May–Oct.

Slopes, valleys, thickets; 800–2600 m. Hebei, Heilongjiang, Henan, Jilin, Liaoning, Qinghai, Shandong, Shanxi [Japan, Korea, Russia].

7b. *Padus avium* var. *pubescens* (Regel & Tiling) T. C. Ku & B. Bartholomew, *comb. nov.*

毛叶稠李 *mao ye chou li*

Basionym: *Prunus padus* Linnaeus var. *pubescens* Regel & Tiling, Nouv. Mém. Soc. Imp. Naturalistes Moscou 11: 79.

1858; *Padus racemosa* var. *pubescens* (Regel & Tiling) C. K. Schneider; *P. beijingensis* Y. L. Han & C. Y. Yang.

Branchlets, abaxial surface of leaf blades, petioles, and inflorescences densely brown villous. Fl. Apr–Jun, fr. Jun–Oct.

• Forest on slopes, thickets in valleys, moist slopes; 1200–2000 m. Hebei, Henan, Liaoning, Nei Mongol, Shanxi.

7c. *Padus avium* var. *asiatica* (Komarov) T. C. Ku & B. Bartholomew, **comb. nov.**

北亚稠李 *bei ya chou li*

Basionym: *Padus asiatica* Komarov, Fl. URSS 10: 578. 1941; *P. racemosa* var. *asiatica* (Komarov) T. T. Yu & T. C. Ku.

Branchlets, petioles, abaxial surface of leaf blades, and inflorescences pubescent. Fl. Apr–Jun, fr. Jun–Oct.

Broad-leaved evergreen forests, forest margins, slopes, stream sides; 800–2700 m. Gansu, Hebei, Heilongjiang, Jilin, Liaoning, Nei Mongol, Shaanxi, Shandong, Shanxi, Xinjiang [Mongolia, Russia (Siberia)].

8. *Padus brunnescens* T. T. Yu & T. C. Ku, Acta Phytotax. Sin. 23: 211. 1985.

褐毛稠李 *he mao chou li*

Trees 7–12 m tall. Branches blackish brown, glabrous, with pale lenticels; branchlets reddish brown to purplish brown, brown velutinous, glabrescent. Winter buds ovoid, usually glabrous. Stipules linear, margin entire, apex obtuse. Petiole 1.5–2.3 cm, glabrous or brown pubescent; leaf blade elliptic to ovate-oblong, 8–14 × 4–8 cm, abaxially brownish and densely brown pubescent at least on veins or tufted in vein axils, adaxially dark green and glabrous, base cordate to rarely rounded, margin acutely appressed serrate with teeth apically aristate, apex acute to caudate. Racemes 17–22 cm, many flowered, basally with 1–3 leaves; peduncle brown pubescent. Flowers not seen. Fruiting pedicel ca. 4 mm, brown pubescent. Drupe reddish brown to purplish brown, globose to ovoid, ca. 5 mm in diam., glabrous; sepals soon caducous. Fl. May, fr. Jun–Jul.

• Margins of dense forests, slopes, stream sides; 2000–3000 m. SW Sichuan, Yunnan.

9. *Padus brachypoda* (Batalin) C. K. Schneider, Repert. Spec. Nov. Regni Veg. 1: 69. 1905.

短梗稠李 *duan geng chou li*

Trees 8–10 m tall. Branches blackish, glabrous; branchlets blackish brown, glabrous, with sparse lenticels; young branchlets reddish brown, velutinous to subglabrous. Winter buds ovoid, usually glabrous. Stipules linear, margin glandular serrate, apex acuminate. Petiole 1.5–2.3 cm, glabrous, apically with 2 nectaries; leaf blade oblong to rarely elliptic or lanceolate, 6–16 × 3–7 cm, abaxially pale green and glabrous or with tufted hairs in vein axils, adaxially dark green and glabrous, base rounded, subcordate, or rarely truncate, margin appressed to spreading serrate or curved serrate with teeth apically shortly aristate, apex acute, acuminate, or shortly caudate. Racemes 16–30 cm, many flowered, basally with 1–3 leaves; peduncle pubescent. Flowers 5–7 mm in diam. Pedicel 5–7 mm, pubes-

cent. Hypanthium campanulate, base persistent in fruit, outside sparsely pubescent. Sepals triangular-ovate, caducous in fruit, outside sparsely pubescent, margin glandular serrate, apex acute. Petals white, obovate, base cuneate and shortly clawed, margin apically erose or undulate. Stamens 25–27. Ovary glabrous. Style slightly shorter than stamens; stigma disk-shaped. Drupe purplish red but blackish brown with age, globose, 5–7 mm in diam. Fl. Apr–May, fr. May–Oct.

• Mixed forests, thickets on slopes, valleys; 1000–2500 m. Anhui, Gansu, Guizhou, Hebei, Henan, W Hubei, Hunan, Ningxia, Shaanxi, Sichuan, Yunnan, Zhejiang.

- 1a. Leaf blade margin appressed to spreading serrate, apex acute, acuminate, or rarely shortly caudate 9a. var. *brachypoda*
 1b. Leaf blade margin curved serrate, apex shortly caudate 9b. var. *microdonta*

9a. *Padus brachypoda* var. *brachypoda*

短梗稠李(原变种) *duan geng chou li* (*yuan bian zhong*)

Prunus brachypoda Batalin, Trudy Imp. S.-Peterburgsk. Bot. Sada 12: 166. 1892; *Padus brachypoda* var. *eglandulosa* (Cheng) H. J. Wang; *Prunus brachypoda* var. *eglandulosa* Cheng; *P. brachypoda* var. *pseudossiori* Koehne.

Leaf blade oblong to rarely elliptic, margin appressed to spreading serrate, apex acute, acuminate, or rarely shortly caudate.

• Thickets on slopes, valleys; 1000–2500 m. Anhui, Gansu, Guizhou, Hebei, Henan, Hunan, Ningxia, Shaanxi, Sichuan, Yunnan, Zhejiang.

9b. *Padus brachypoda* var. *microdonta* (Koehne) T. T. Yu & T. C. Ku, Fl. Reipubl. Popularis Sin. 38: 99. 1986.

细齿短梗稠李 *xi chi duan geng chou li*

Prunus brachypoda Batalin var. *microdonta* Koehne in Sargent, Pl. Wilson. 1: 66. 1911.

Leaf blade oblong to lanceolate, margin curved serrate, apex shortly caudate.

• Mixed forests. W Hubei (Zigui Xian).

10. *Padus ssiori* (F. Schmidt) C. K. Schneider, Ill. Handb. Laubholz. 1: 641. 1906.

库页稠李 *ku ye chou li*

Prunus ssiori F. Schmidt, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 12(2): 124. 1868.

Trees to 7 m tall. Branchlets glabrous. Petiole 1.5–4.2 cm, glabrous, with nectaries near apex; leaf blade oblong to ovate, 7–15 × 3–7 cm, abaxially glabrous or hairy in vein axils, adaxially glabrous, base usually cordate or deeply so, margin simply or doubly sharply serrate, apex acuminate. Racemes 15–20 cm, densely many flowered, glabrous, base with very small leaves. Flowers ca. 10 mm in diam. Pedicel 7–8 mm, glabrous. Hypanthium cup-shaped. Sepals semiorbicular, short, margin glandular dentate. Petals spreading, white, oblong, 4–5 mm, nearly as long as stamens, margin sparsely serrate. Drupe black, glo-

bose. Fl. May–Jun, fr. Aug–Sep.

Probably cultivated. NE China [native to N Japan and Russia (S Sakhalin)].

The present authors have seen no specimens of this species; the above description is based mainly on the protologue.

11. *Padus obtusata* (Koehne) T. T. Yu & T. C. Ku, Fl. Reipubl. Popularis Sin. 38: 101. 1986.

细齿稠李 xi chi chou li

Prunus obtusata Koehne in Sargent, Pl. Wilson. 1: 66. 1911; *Padus brachypoda* (Batalin) C. K. Schneider var. *pubigera* C. K. Schneider; *Prunus bicolor* Koehne; *P. ohwii* Kanehira & Hatusima; *P. pubigera* (C. K. Schneider) Koehne; *P. pubigera* var. *longifolia* Cardot; *P. pubigera* var. *obovata* Koehne; *P. pubigera* var. *ohwii* (Kanehira & Hatusima ex Kanehira) S. S. Ying; *P. pubigera* var. *potaninii* Koehne; *P. pubigera* var. *prattii* Koehne; *P. vaniotii* H. Lévillé; *P. vaniotii* var. *obovata* (Koehne) Rehder; *P. vaniotii* var. *potaninii* (Koehne) Rehder.

Trees 6–20 m tall. Branches purplish brown to dark brown, glabrous, with sparse lenticels; branchlets reddish brown when young, pubescent or glabrous. Winter buds ovoid, glabrous. Stipules linear, margin glandular serrate, apex acuminate. Petiole 1–2.2 cm, pubescent or glabrous, apex usually with a nectary on either side; leaf blade narrowly oblong, elliptic, or obovate, 4.5–11 × 2–4.5 cm, both surfaces glabrous, abaxially pale green, adaxially dark green, base subrounded, broadly cuneate, or rarely subcordate, margin crenulate, apex acute, acuminate, or rarely obtuse; midvein and secondary veins abaxially prominent. Racemes 10–15 cm, many flowered, basally with 2 leaves; peduncle pubescent. Flowers 8–10 mm in diam. Pedicel 3–7 mm, pubescent. Hypanthium campanulate, outside pubescent. Sepals triangular-ovate, soon caducous, outside subglabrous, margin crenulate, apex acute. Petals white, suborbicular to oblong, base cuneate and shortly clawed, margin apically erose or undulate. Stamens many. Ovary glabrous. Style slightly shorter than stamens; stigma discoid. Drupe black, ovoid-globose, 6–8 mm in diam., glabrous. Fl. May–Jun, fr. Jul–Sep.

• Mixed forests on slopes, valleys, stream sides; 800–3600 m. Anhui, S Gansu, Guizhou, Henan, Hubei, Hunan, Jiangxi, Shaanxi, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang.

12. *Padus velutina* (Batalin) C. K. Schneider, Repert. Spec. Nov. Regni Veg. 1: 69. 1905.

毡毛稠李 zhan mao chou li

Prunus velutina Batalin, Trudy Imp. S.-Peterburgsk. Bot. Sada 14: 168. 1895.

Trees 7–20 m tall. Branches blackish brown, glabrous, sparsely lenticellate; branchlets reddish brown, velutinous to subglabrous. Winter buds ovoid; scale margins velutinous when young. Stipules linear, margin glandular serrate, apex acuminate. Petiole 1.5–2.5 cm, densely brown velutinous, apex with a nectary on either side; leaf blade ovate, elliptic, or occasionally obovate, 6–10 × 3–5.5 cm, abaxially pale green to brownish

green, velutinous, and densely velutinous along midvein and veins, adaxially dark green and glabrous, base rounded, margin appressed serrate, apex acute to shortly acuminate. Racemes 10–15 cm, many flowered, basally with 2–4 leaves; peduncle densely velutinous. Flowers 8–10 mm in diam. Pedicel ca. 5 mm, to 6 mm in fruit, densely velutinous, nearly glabrescent in fruit. Hypanthium cup-shaped, outside glabrous. Sepals triangular to semiorbicular, soon caducous, outside glabrous, margin glandular serrate, apex obtuse to acute. Petals white, oblong, base cuneate and shortly clawed, apex obtuse. Stamens 22–28. Ovary glabrous. Style slightly shorter than stamens; stigma oblique. Drupe reddish brown, globose, 5–7 mm in diam., glabrous. Fl. Apr–May, fr. Jun–Oct.

• Scrub in valleys, stream sides; 1000–1600 m. Hebei, Henan, Hubei, Shaanxi, Sichuan.

13. *Padus integrifolia* T. T. Yu & T. C. Ku, Acta Phytotax. Sin. 23: 212. 1985.

全缘叶稠李 quan yuan ye chou li

Trees 2–7 m tall. Branches purplish brown to blackish brown, glabrous, with sparse pale lenticels; branchlets reddish brown, velutinous, glabrescent. Winter buds ovoid; scale margins velutinous when young. Stipules not seen. Petiole 1.5–2.2 cm, densely velutinous, apex with 1 nectary; leaf blade elliptic, ovate-elliptic, or rarely oblong, 7–10(–12) × 3–4.5 cm, abaxially pale green and glabrous, adaxially dark green and velutinous on midvein or basally on secondary veins, base subrounded, subcordate, or broadly cuneate, margin entire or very rarely apically sparsely serrate, apex shortly acuminate. Racemes 8–13 cm, many flowered, basally with 1–3 leaves; peduncle densely velutinous. Flowers not seen. Fruiting pedicel 4–6 mm, densely velutinous. Drupe black, ovoid, flat on both sides, 6–7 mm in diam., glabrous; sepals soon caducous. Fr. Jun–Oct.

• Forests, stream sides, valleys, along trails; 2900–3200 m. S Xizang.

14. *Padus cornuta* (Wallich ex Royle) Carrière, Rev. Hort. 1869: 275. 1869.

光萼稠李 guang e chou li

Cerasus cornuta Wallich ex Royle, Ill. Bot. Himal. Mts. 207. 1835; *Padus cornuta* var. *glabra* Fritsch ex C. K. Schneider; *Prunus cornuta* (Wallich ex Royle) Steudel.

Trees 3–15 m tall. Branches blackish brown, glabrous, with sparse oblong lenticels; branchlets purplish brown, glabrous or sometimes velutinous. Winter buds ovoid, usually glabrous. Stipules linear, margin glandular serrate, apex acuminate. Petiole 1–2.3 cm, glabrous or subglabrous, apex with 2 nectaries; leaf blade narrowly elliptic to oblong, rarely oblong-lanceolate or obovate, 6–11 × 3–5 cm, abaxially pale green and glabrous or with tufts of hair at veins axils, adaxially dark green and glabrous, base subcordate to broadly cuneate, margin sparsely serrulate, apex shortly acuminate to shortly caudate. Racemes 8–16 cm, many flowered, basally with 1–3 leaves; peduncle velutinous. Flowers 6–8 mm in diam. Pedicel 5–7

mm, velutinous. Hypanthium campanulate, outside basally velutinous, inside glabrous. Sepals triangular-ovate, soon caducous, outside glabrous, margin glandular serrulate, apex obtuse. Petals white, obovate, base cuneate and shortly clawed, margin apically erose. Stamens 20–25. Ovary glabrous. Style slightly shorter than stamens; stigma disk-shaped. Drupe black-brown, ovoid-globose, ca. 8 mm in diam., glabrous. Fl. Apr–May, fr. May–Oct.

Secondary forests, slopes, along trails; 2700–3300 m. S Xizang (Cona Xian, Yadong Xian) [Afghanistan, Bhutan, N India, Nepal, Sikkim].

15. *Padus napaulensis* (Seringe) C. K. Schneider, Repert. Spec. Nov. Regni Veg. 1: 68. 1905.

粗梗稠李 *cu geng chou li*

Cerasus napaulensis Seringe in Candolle, Prodr. 2: 540. 1825; *Prunus napaulensis* (Seringe) Steudel.

Trees to 27 m tall. Branches blackish brown, glabrous, with conspicuous pale lenticels; branchlets reddish brown, glabrous. Winter buds ovoid, glabrous. Stipules linear, margin glandular serrate, apex acuminate. Petiole 0.8–1.5 cm, glabrous, without nectaries; leaf blade narrowly elliptic, ovate-elliptic, or elliptic-lanceolate, 6–14 × 2–6 cm, abaxially pale green and glabrous or very rarely sparsely pubescent when young, adaxially dark green and glabrous, base cuneate, margin coarsely serrate or sometimes undulate, apex acute to shortly acuminate. Racemes 7–14 cm, many flowered, basally with 2 or 3 leaves; peduncle glabrous or subglabrous, later thickened and with pale lenticels. Flowers ca. 1 cm in diam. Pedicel 4–6 mm, conspicuously thickened in fruit, velutinous, glabrescent or nearly so, with conspicuous pale lenticels in fruit. Hypanthium cup-shaped, outside pubescent to subglabrous. Sepals triangular-ovate, soon caducous, outside pubescent, margin serrulate, apex acuminate. Petals white, obovate-oblong, base cuneate and shortly clawed, margin apically erose. Stamens 22–27. Ovary glabrous. Style longer than stamens; stigma disk-shaped. Drupe dark purple to black, ovoid, 1–3 cm in diam., glabrous. Fl. Apr, fr. Jul.

Broad-leaved evergreen or deciduous mixed forests, open places beside streams; 1200–2500 m. Anhui, Guizhou, Hunan, Jiangxi, Shaanxi, Sichuan, Xizang, Yunnan [Bhutan, N India, N Myanmar, Nepal, Sikkim].

16. *Padus wilsonii* C. K. Schneider, Repert. Spec. Nov. Regni Veg. 1: 69. 1905.

绢毛稠李 *juan mao chou li*

Padus napaulensis (Seringe) C. K. Schneider var. *sericea* (Batalin) C. K. Schneider; *Prunus dunniana* H. Léveillé; *P. napaulensis* (Seringe) Steudel var. *sericea* Batalin; *P. rufomicans* Koehne; *P. sericea* (Batalin) Koehne; *P. sericea* var. *batalinii* Koehne; *P. sericea* var. *brevifolia* Koehne; *P. sericea* var. *septentrionalis* Koehne; *P. wilsonii* (C. K. Schneider) Koehne; *P. wilsonii* var. *leibotrys* Koehne.

Trees 10–30 m tall. Branches purplish brown to blackish brown, robust, pubescent to subglabrous, with conspicuous pale lenticels; branchlets reddish brown, pubescent. Winter buds

ovoid, glabrous or pubescent at scale margins. Stipules linear, margin hairy when young, apex long acuminate. Petiole 7–8 mm, glabrous or pubescent, apex with 2 nectaries; leaf blade elliptic, oblong, or oblong-obovate, 6–14(–17) × 3–6 cm, abaxially pale green, densely white silky pubescent when young,

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and later brownish silky pubescent but conspicuously more so on midvein and veins, adaxially dark green to purplish green, base rounded, cuneate, or broadly cuneate, margin rounded to sometimes acutely serrate, apex shortly acuminate to shortly caudate. Racemes 7–14 cm, many flowered, basally with 3–5 leaves; peduncle thickened in age, brown silky pubescent. Flowers 6–8 mm in diam. Pedicel 5–8 mm, to 1 cm in fruit, thickened and densely covered with pale lenticels with age, brown silky pubescent. Hypanthium campanulate to cup-shaped, outside silky pubescent. Sepals triangular-ovate, soon caducous, outside silky pubescent, inside sparsely pubescent but margin densely so, margin serrulate, apex acute. Petals white, obovate-oblong, base cuneate and shortly clawed, margin apically erose. Stamens ca. 20. Ovary glabrous. Style slightly longer than stamens; stigma disk-shaped. Drupe reddish brown at first, becoming blackish purple, globose to ovoid, 8–10 mm in diam., glabrous. Fl. Apr–May, fr. Jun–Oct.

• Slopes, valleys; 900–2500 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Shaanxi, Sichuan, Xizang, Yunnan, Zhejiang.

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