

8. VITIS Linnaeus, Sp. Pl. 1: 202. 1753.

葡萄属 pu tao shu

Ren Hui (任辉); Jun Wen (文军)

Ampelovitis Carrière; *Spinovitis* Romanet du Caillaud.

Lianas, woody, usually polygamo-dioecious, rarely hermaphroditic. Bark usually shedding; tendrils leaf-opposed, usually bifurcate. Leaves simple, often lobed, sometimes palmately compound; stipules usually caducous. Inflorescence a thyrses. Flowers 5-merous. Calyx saucer-shaped; sepals minute. Petals united at apex and shed as a cap (calyptra) at anthesis. Stamens opposite to petals, undeveloped and abortive in female flowers. Disk conspicuous, 5-lobed or ring-shaped. Pistil 1; style slender; stigma slightly expanded. Berry globose, 2–4-seeded. Seeds obovoid or obovoid-elliptic, base rostrate, abaxially 1-furrowed with a rounded or suborbicular or elliptic chalazal knot, adaxially 2-furrowed; endosperm M-shaped in cross-section.

About 60 species: mostly in temperate regions, extending to the subtropics with the species diversity primarily in China and E North America; 37 species (30 endemic, one introduced) in China.

Vitis vinifera Linnaeus, the well-known source plant for grapes and wine, has a long history of cultivation all over the world. The wild grape species are primarily distributed in three centers of diversity: East Asia, North to Central America, and Europe to Central Asia. In China, *Vitis* occurs naturally in all provinces except Xinjiang, Qinghai, Nei Mongol, and Ningxia. The roots, stems, and leaves of several wild species are used as medicine; the berries are edible or used to make wine; and the seeds are sometimes used for oil.

Vitis chrysobotrys H. Léveillé & Vaniot (Repert. Spec. Nov. Regni Veg. 3: 350. 1907) is a synonym of *Iodes vitiginea* (Hance) Hemsley, and *V. seguinii* H. Léveillé (Repert. Spec. Nov. Regni Veg. 4: 331. 1907, “*seguini*”) is the basionym of *I. seguinii* (H. Léveillé) Rehder, both in the Icacinaceae (see Fl. China 11).

Vitis mairei H. Léveillé (Repert. Spec. Nov. Regni Veg. 11: 299. 1912, not 7: 338. 1909) and *V. martini* H. Léveillé & Vaniot (Bull. Soc. Agric. Sarthe 40: 41. 1905) are synonyms of *Gynostemma pentaphyllum* (Thunberg) Makino in the Cucurbitaceae (see Fl. China 19).

The following species were described from China but could not be treated here because no material was seen by the authors:

Vitis adenoclada Handel-Mazzetti (Anz. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 62: 145. 1925), described from Hunan.

Vitis jinzhainensis X. S. Shen (Acta Phytotax. Sin. 27: 304. 1989), described from Anhui.

Vitis shifunensis Hayata (Icon. Pl. Formosan. 5: 31. 1915; *V. triphylla* Hayata, J. Coll. Sci. Imp. Univ. Tokyo 30(1): 63. 1911, not Noronha, 1790), described from Taiwan.

Vitis yuenlingensis W. T. Wang (Bull. Bot. Res., Harbin 9(1): 75. 1989), described from Hunan.

- 1a. Leaves palmately compound with 3–5 leaflets.
 - 2a. Branchlets and inflorescence axes pilose; leaflets abaxially sparsely pubescent, or with woolly hairs when young, becoming sparsely so when mature 10. *V. piasezkii*
 - 2b. Branchlets and inflorescence axes with arachnoid tomentum; leaflets abaxially with persistent rubiginous arachnoid tomentum 37. *V. lanceolatifoliola*
- 1b. Leaves simple.
 - 3a. Branchlets with prickles, becoming tuberculate on old branches 1. *V. davidii*
 - 3b. Branchlets and old branches without prickles or tubercles.
 - 4a. Branchlets and petioles with setose and glandular hairs, glands with or without a stalk.
 - 5a. Branchlets and petioles with dense glandular as well as simple hairs; leaves inconspicuously 3–5-lobed or unlobed, margin with sharp teeth 2. *V. romanetii*
 - 5b. Branchlets and petioles with sparse glandular hairs; leaves conspicuously 3–5-lobed, margin with obtuse teeth 3. *V. shenxiensis*
 - 4b. Branchlets and petioles pilose or with arachnoid tomentum.
 - 6a. Leaves abaxially with dense white or rubiginous arachnoid or woolly tomentum.
 - 7a. Leaves 3–5-lobed or heterophyllous and mixed with undivided ones.
 - 8a. Leaves 3–5-lobed, lobes broad.
 - 9a. Branches with white woolly tomentum, erect hairs absent; tendrils bifurcate 28. *V. heyneana*
 - 9b. Branches pilose; tendrils unbranched or mixed with bifurcate ones 35. *V. sinocinerea*
 - 8b. Leaves 3–5-cleft or deeply parted, mixed with undivided ones.
 - 10a. Leaves of two types, 3–5-cleft and undivided 31. *V. longquanensis*
 - 10b. Leaves all divided deeply or at least to middle, sometimes deep lobes pinnatifid, some lobes broad and undivided 36. *V. bryoniifolia*
 - 7b. Leaves undivided or inconspicuously 3–5-lobed.
 - 11a. Leaves basally deeply cordate, notch rounded or acutely angular, sinuses close together or overlapping.

- 12a. Leaves oval or ovate-elliptic, abaxial veins with woolly tomentum 29. *V. retordii*
- 12b. Leaves suborbicular or quinquangularly rounded, abaxial veins densely pubescent with appressed soft hairs 30. *V. menghaiensis*
- 11b. Leaves basally slightly cordate or subtruncate, sometimes mixed with conspicuously cordate ones.
 - 13a. Branchlets and inflorescence axis ± with arachnoid tomentum 28. *V. heyneana*
 - 13b. Branchlets and inflorescence axis with variable hairiness (including arachnoid tomentum).
 - 14a. Leaves adaxially with sparse arachnoid tomentum when young, then glabrescent; branchlets and inflorescence axis with sparse arachnoid tomentum 32. *V. bellula*
 - 14b. Leaves adaxially or only veins with dense, short, appressed hairs; inflorescence axis densely pubescent.
 - 15a. Branchlets sparsely pilose; leaves slightly lobed, base truncate, only adaxial veins sparsely pubescent 33. *V. bashanica*
 - 15b. Branchlets densely pubescent; leaves undivided, base subcordate, adaxially densely pubescent 34. *V. hui*
- 6b. Leaves abaxially glabrous, or pilose, or with sparse arachnoid tomentum.
 - 16a. Leaves abaxially glabrous or only axils of veins with hairs, or young leaves with tomentum then falling off.
 - 17a. Leaves sagittate or deltoid-sagittate, 3–5-lobed or cleft, or mixed with undivided ones; inflorescence narrow, small, cylindrical, with basal branches poorly developed.
 - 18a. Leaf margin 12–16-toothed on each side, conspicuously ciliate, abaxial veinlets raised 17. *V. wenchowensis*
 - 18b. Leaf margin 7–10-toothed on each side, only upper part of margin with very short and sparse hairs, not ciliate, abaxial veinlets conspicuous, but not raised ... 20. *V. ruyuanensis*
 - 17b. Leaves variously shaped but neither sagittate nor deltoid-sagittate, undivided.
 - 19a. Leaves ovate, oval, elliptic, or ovate-lanceolate, base slightly subcordate or subtruncate.
 - 20a. Leaves ovate or oval, not glaucous, veinlets inconspicuous 25. *V. flexuosa*
 - 20b. Leaves elliptic or ovate-lanceolate, usually glaucous, veinlets conspicuous and raised 8. *V. chungii*
 - 19b. Leaves oval, broadly ovate, or triangular-ovate, base cordate or deeply so.
 - 21a. Basal sinuses close together or partly overlaid.
 - 22a. Leaves subleathery, margin serrate, apex sharply acute, abaxially usually glaucous, rarely glaucescent 6. *V. chunganensis*
 - 22b. Leaves papery, margin coarsely dentate, apex cuspidate, abaxially not glaucous 21. *V. mengziensis*
 - 21b. Basal sinuses forming an obtuse angle without any overlapping.
 - 23a. Peduncles with sparse arachnoid tomentum when young, then gradually falling off 4. *V. balansana*
 - 23b. Peduncles pilose.
 - 24a. Leaves oval, apex acute or acuminate, veinlets slightly raised ... 5. *V. yunnanensis*
 - 24b. Leaves ovate-oblong or triangular-ovate, apex acuminate, veinlets conspicuously raised 7. *V. luochengensis*
- 16b. Leaves abaxially pilose or at least abaxial veins pilose or with arachnoid tomentum.
 - 25a. Leaves conspicuously 3–5-divided or mixed with undivided leaves.
 - 26a. Leaves basally deeply cordate, basal sinuses attaching or partly overlapping, margin coarsely toothed (cultivated) 27. *V. vinifera*
 - 26b. Leaves basally cordate, basal notch obtuse or rounded, margin shallowly toothed.
 - 27a. Tendrils unbranched, rarely bifurcate.
 - 28a. Branchlets and petioles sparsely brown villous; leaves undivided or mixed with 2- or 3-cleft leaves, margin with long ciliate hairs 23. *V. hancockii*
 - 28b. Branchlets, petioles, and peduncles sparsely pilose; leaves usually 3–5-lobed or cleft, margin not ciliate or only slightly so with short ciliate hairs.
 - 29a. Leaves abaxially greenish or lavender, veinlets slightly raised 18. *V. jinggangensis*
 - 29b. Leaves abaxially reddish purple, veinlets conspicuously raised on both sides 19. *V. erythrophylla*
 - 27b. Tendrils 2(or 3)-branched.

- 30a. Leaves unlobed or 3–5-lobed, lobes broad.
 - 31a. Leaves oval or obelliptic, basal sinuses forming an obtuse angle 9. *V. betulifolia*
 - 31b. Leaves broadly oval, basal sinuses rounded, rarely forming an obtuse angle 26. *V. amurensis*
- 30b. Leaves 3–5-cleft to middle or deeply parted, lobes narrow, rarely lobes pinnatifid, or sometimes mixed with shallowly lobed leaves.
 - 32a. Plants small, stems slender; leaf margin 5–9-toothed on each side 15. *V. silvestrii*
 - 32b. Plants strong, stems robust; leaf margin 16–25-toothed on each side 14. *V. zhejiang-adstricta*
- 25b. Leaves undivided, rarely inconspicuously 3–5-lobed.
 - 33a. Leaves abaxially with at least veins with arachnoid tomentum, rarely glabrous, never with erect hairs.
 - 34a. Inflorescence axis pilose and with arachnoid tomentum 22. *V. fengqinensis*
 - 34b. Inflorescence axis with arachnoid tomentum, but not erect hairs.
 - 35a. Leaves 7–16 × 5–12 cm, margin 16–20-toothed on each side 12. *V. wilsoniae*
 - 35b. Leaves 3–7 × 2.5–6 cm, margin 5–13-toothed on each side 16. *V. wuhanensis*
 - 33b. Leaves abaxially with at least veins with erect hairs, or sometimes mixed with arachnoid tomentum.
 - 36a. Leaves rhombic-ovate or rhombic-elliptic, base broadly cuneate or suborbicular 23. *V. hancockii*
 - 36b. Leaves ovate or oval, base cordate, subcordate, or subtruncate, rarely rounded.
 - 37a. Leaves basally conspicuously cordate.
 - 38a. Branchlets glabrous; abaxial veins of leaves pilose with spreading brown hairs 11. *V. pilosonerva*
 - 38b. Branchlets with sparse woolly tomentum; abaxial veins of leaves with white hairs and with sparse arachnoid tomentum 13. *V. pseudoreticulata*
 - 37b. Leaves basally subcordate or subtruncate, rarely rounded.
 - 39a. Tendrils bifurcate; leaves oval or ovate-elliptic 9. *V. betulifolia*
 - 39b. Tendrils unbranched; leaves ovate or oval-lanceolate 24. *V. tsoi*

1. *Vitis davidii* (Romanet du Caillaud) Föex, Cours Compl. Vitic. 44. 1886.

刺葡萄 ci pu tao

Plants polygamo-dioecious. Branchlets prickly or tuberculately so, terete, with longitudinal ridges when young, glabrescent; tendrils bifurcate. Stipules greenish brown, ovate-lanceolate, 2–3 × 1–2 mm, nearly herbaceous, glabrous, caducous; leaf blade oval or oval-elliptic, undivided or shallowly 3-lobed, 5–12 × 4–16 cm, basal veins 5, lateral veins 4 or 5 pairs, veinlets conspicuous and raised, base deeply cordate, margin with 12–33 teeth on each side, teeth sharp, apex acute or mucronate. Panicle leaf-opposed, 7–24 cm, with well-developed basal branches; peduncle 1–2.5 cm, glabrous. Pedicel 1–2 mm, glabrous. Buds obovoid, 1.2–1.5 mm, apex rounded. Sepals minute. Filaments filiform; anthers yellow, elliptic, 0.6–0.7 mm. Ovary conical; style short; stigma expanded. Berry globose, 1.2–2.5 cm in diam. Seeds obovoid-elliptic, apex rounded and obtuse, ventral holes furrowed upward 3/4 from base. Fl. Apr–Jun, fr. Jul–Oct.

• Forests, shrublands, hillsides, valleys; 500–2300 m. Anhui, Chongqing, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Sichuan, Yunnan, Zhejiang.

Vitis davidii var. *hispidula* X. D. Wang & S. C. Chen (Acta Phytotax. Sin. 37: 603. 1999), described from Fujian, could not be treated

here because no material was seen by the authors.

- 1a. Leaves abaxially ferruginous pubescent 1c. var. *ferruginea*
- 1b. Leaves abaxially glabrous.
 - 2a. Berry purple at maturity 1a. var. *davidii*
 - 2b. Berry blue-black at maturity 1b. var. *cyanocarpa*

1a. *Vitis davidii* var. *davidii*

刺葡萄(原变种) ci pu tao (yuan bian zhong)

Spinovitis davidii Romanet du Caillaud, Rev. Hort. (Paris) 55: 53. 1883 [“*davidii*”]; *Ampelovitis davidii* (Romanet du Caillaud) Carrière; *Vitis armata* Diels & Gilg; *V. prunisapida* H. Léveillé & Vaniot.

Branchlets with prickles. Leaves abaxially glabrous. Berry purple at maturity. Fl. Apr–Jun, fr. Jul–Oct.

• Shrublands, hillsides, valleys; 600–1800 m. Anhui, Chongqing, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Sichuan, Yunnan, Zhejiang.

1b. *Vitis davidii* var. *cyanocarpa* (Gagnepain) Sargent, Pl. Wilson. 1: 104. 1911.

蓝果刺葡萄 lan guo ci pu tao

Vitis armata var. *cyanocarpa* Gagnepain in Sargent, Pl.

Wilson. 1: 104. 1911.

Old branches tuberculate; young branchlets without prickles or only sparsely prickly. Leaves abaxially glabrous. Berry blue-black at maturity. Fl. Apr–May, fr. Aug–Sep.

- Forests, shrublands; 600–2300 m. Anhui, Hubei, Yunnan.

1c. *Vitis davidii* var. *ferruginea* Merrill & Chun, Sunyatsenia 1: 69. 1930.

锈毛刺葡萄 xiu mao ci pu tao

Leaves abaxially ferruginous pubescent on veins. Fl. Apr–Jul.

- Shrublands, hillsides; 500–1200 m. Fujian, Guangdong, Hubei, Jiangxi.

2. *Vitis romanetii* Romanet du Caillaud, Rev. Hort. (Paris) 55: 53. 1883 [“*romaneti*”].

秋葡萄 qiu pu tao

Ampelovitis romanetii (Romanet du Caillaud) Carrière; *Vitis pentagona* Diels & Gilg var. *laotica* Gagnepain; *V. romanetii* var. *arachnoidea* Y. L. Cao & Y. H. He; *V. rutilans* Carrière.

Plants polygamo-dioecious. Branchlets terete, with conspicuous longitudinal ridges, pubescent with simple and glandular hairs; tendrils usually bifurcate or trifurcate. Leaves simple; stipules brown, ovate-lanceolate, 7–12(–14) × 3–5 mm, membranous, glabrous, entire, apex acuminate; petiole 2–6.5 cm, with glandular and simple hairs; leaf blade oval or broadly so, 5.5–16 × 5–13.5 cm, slightly 5-lobed or undivided, abaxially tomentose with long and short hairs, adaxially pubescent, basal veins 5, lateral veins 4 or 5 pairs, veinlets conspicuously raised abaxially, slightly raised adaxially, base deeply cordate, notch acute, rarely obtuse, sometimes two sides overlapping, margin with obtuse teeth, teeth sharp. Panicle loose, leaf-opposed, 5–13 cm, basal branches well developed, sometimes with a tendril below basal branch; peduncle 1.5–3.5 cm, densely pubescent with simple and glandular hairs. Pedicel 1.6–2 mm, glabrous. Buds obovoid, 1.5–2 mm, apex rounded. Calyx cupular, ca. 2 mm, glabrous, subtire. Petals galeate. Filaments filiform, 1.4–1.8 mm; anthers yellow, elliptic, ca. 0.5 mm. Ovary conical; style short; stigma expanded. Berry globose, 7–8 mm in diam. Seeds obovoid, apex rounded and retuse, chalazal knot ovate-elliptic, ventral holes obelliptic. Fl. Apr–Jun, fr. Jul–Sep. *2n* = 38.

- Forests, shrublands, hillsides; 100–1500 m. Anhui, Gansu, Henan, Hubei, Hunan, Jiangsu, Shaanxi, Sichuan [Laos].

The berries are edible and used for making wine.

3. *Vitis shenxiensis* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 239. 1996.

陕西葡萄 shan xi pu tao

Plants polygamo-dioecious. Branchlets terete, with longitudinal ridges, sparsely pubescent with simple and stalked glandular hairs, glands 0.8–1 mm; tendrils usually bifurcate.

Leaves simple; petiole 4–5.5 cm, sparsely pubescent with simple and glandular hairs; leaf blade oval, conspicuously 3–5-lobed, rarely tripartite or 3-divided, notch obtuse, rarely acute, 11–16 × 9–14 cm, abaxially sparsely pilose, then glabrescent, adaxially nearly glabrous, basal veins 5, lateral veins 5 or 6 pairs, pilose with spreading hairs, rarely glabrous, base cordate, margin irregularly 25–32-toothed, teeth large and obtuse, apex acuminate or mucronulate, rarely acute. Panicle leaf-opposed, loose, 8–9 cm, with well-developed basal branches; peduncle 1.5–2 cm, nearly glabrous. Pedicel 3–4 mm, glabrous. Buds obovoid, 2–2.5 mm, apex rounded. Calyx cupular, glabrous, entire. Filaments filiform, 1.7–2 mm; anthers yellow, elliptic, ca. 0.5 mm. Pistil abortive in male flowers. Berry purple-black at maturity, globose, ca. 1.2 cm in diam. Seeds obovoid, apex retuse, surface smooth. Fl. Jun, fr. Oct.

- Shrublands, hillsides, valleys; 1100–1400 m. Shaanxi.

4. *Vitis balansana* Planchon in A. Candolle & C. Candolle, Monogr. Phan. 5: 612. 1887 [“*balansaeana*”].

小果葡萄 xiao guo pu tao

Branchlets terete, with longitudinal ridges; tendrils bifurcate, leaf-opposed. Stipules brown, oval to oblong, 2–4 × 1.5–3 mm; petiole 2–5 cm; leaf blade adaxially green, cordate-oval or broadly ovate, 4–14 × 3.5–9.5 cm, basal veins 5, lateral veins 4–6 pairs, veinlets conspicuous and raised, base cordate, notch obtuse, margin with 16–22 fine teeth on each side, slightly undulate, apex acute or mucronulate. Panicle leaf-opposed, 4–13 cm. Pedicel 1–1.5 mm. Buds obovoid, 1–1.4 mm, apex rounded. Calyx cupular, entire. Petals galeate. Filaments filiform in male flowers, 0.6–1 mm; anthers yellow, elliptic, ca. 0.4 mm; stamens shorter than pistils in female flowers, abortive. Disk 0.3–0.4 mm. Ovary conical; style short; stigma slightly expanded. Berry purple-black at maturity, globose, 5–8 mm in diam. Seeds obovoid, apex rounded, chalazal knot elliptic. Fl. Feb–Aug, fr. Jun–Nov.

- Forests, shrublands, valleys; 200–800 m. Guangdong, Guangxi, Hainan [Vietnam].

- 1a. Leaves 3-cleft 4c. var. *ficifolioides*
- 1b. Leaves undivided.
 - 2a. Branchlets, leaves, and petioles with sparse arachnoid tomentum when young, becoming glabrescent 4a. var. *balansana*
 - 2b. Branchlets, leaves, and petioles with dense, persistent, white arachnoid tomentum 4b. var. *tomentosa*

4a. *Vitis balansana* var. *balansana*

小果葡萄(原变种) xiao guo pu tao (yuan bian zhong)

Vitis flexuosa Thunberg var. *gaudichaudii* Planchon.

Branchlets, petioles, adaxial leaf surface, inflorescence axes, and peduncles with sparse arachnoid tomentum when young, becoming glabrescent. Stipules glabrous or with arachnoid tomentum. Pedicel and calyx glabrous.

- Forests, shrublands in valleys, sunny valleys; 200–800 m. Guangdong, Guangxi, Hainan [Vietnam].

4b. *Vitis balansana* var. *tomentosa* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 240. 1996.

绒毛小果葡萄 rong mao xiao guo pu tao

Branchlets, petioles, abaxial leaf surface, and inflorescences with dense, persistent, white arachnoid tomentum.

- Guangxi.

4c. *Vitis balansana* var. *ficifolioides* (W. T. Wang) C. L. Li, Chin. J. Appl. Environ. Biol. 2: 240. 1996.

龙州葡萄 long zhou pu tao

Vitis ficifolioides W. T. Wang, Acta Phytotax. Sin. 17(3): 75. 1979.

Leaves 3-cleft, notch rounded.

- Guangxi (Longzhou).

5. *Vitis yunnanensis* C. L. Li, Acta Bot. Yunnan. 19: 217. 1997.

云南葡萄 yun nan pu tao

Branchlets terete, with longitudinal ridges, glabrous; tendrils bifurcate. Leaves with caducous stipules; petiole 1.5–4 cm, glabrous; leaf blade oval, 5–10 × 4–7.5 cm, abaxially nearly glabrous, basal veins 5, lateral veins 4 pairs, veinlets slightly raised, base cordate, margin 15–17-toothed on each side, teeth acute, apex acute or mucronulate. Panicle leaf-opposed, loose, base with well-developed branches, rachis densely pubescent. Pedicel glabrous. Berry globose, ca. 1 cm in diam. Seeds obovoid, apex rounded, surface smooth, chalazal knot elliptic, ventral holes furrowed from base to apex. Fr. Aug.

- Forests; 500–1800 m. Yunnan (Jingdong, Jinghong).

6. *Vitis chunganensis* Hu, J. Arnold Arbor. 6: 143. 1925.

东南葡萄 dong nan pu tao

Plants polygamo-dioecious. Branchlets terete; old branches with conspicuous longitudinal ridges, glabrous; tendrils bifurcate. Stipules ovate-elliptic or lanceolate, 1.5–3 × 1–1.5 cm, glabrous, apex obtuse, caducous; petiole 2–6.5 cm, glabrous; leaf blade ovate or ovate-elliptic, 6.5–22.5 × 4.5–13.5 cm, abaxially glaucous, rarely glaucescent, basal veins 5–7, lateral veins 5–7 pairs, veinlets inconspicuous, base cordate, margin 12–22-toothed on each side, teeth small, apex acute, acuminate, or caudate. Panicle leaf-opposed, loose, 5–9 cm, base with well-developed branches, occasionally basal branches reduced to tendrils; peduncle 1–2 cm, pubescent or nearly glabrous. Pedicel 1.2–2 mm, glabrous. Buds globose or elliptic, 1–1.5 mm, glabrous. Calyx ca. 2 mm, glabrous. Filaments filiform, 0.5–0.7 mm; anthers yellow, elliptic, ca. 0.4 mm. Ovary oval; style short, slender; stigma expanded. Berry purple-black at maturity, globose, 0.8–1.2 cm in diam. Seeds obovoid, apex retuse, chalazal knot elliptic. Fl. Apr–Jun, fr. Jun–Aug.

- Forests, shrublands, hillsides, streams in valleys; 500–1400 m. Anhui, Fujian, Guangdong, Guangxi, Hunan, Jiangxi, Zhejiang.

7. *Vitis luochengensis* W. T. Wang, Guihaia 8: 110. 1988.

罗城葡萄 luo cheng pu tao

Branchlets usually purple, terete, with longitudinal ridges, glabrous; tendrils bifurcate. Leaves simple; stipules caducous; petiole 2.5–5 cm, glabrous; leaf blade ovate-oblong or ovate, 12–18 × 4–12 cm, basal veins 5, lateral veins 5 or 6 pairs, veinlets conspicuously raised, base cordate, notch obtuse, margin with 15–21 fine teeth on each side, apex acuminate. Panicle leaf-opposed, ca. 17 cm at fruiting stage, with well-developed branches; peduncle ca. 2.5 cm. Pedicel 4–7 mm, nearly glabrous. Berry globose, ca. 0.5 mm in diam. Fr. May–Jul.

- Forests, shrublands on rocky hills, valleys; 400–700 m. Guangdong, Guangxi.

1a. Leaves glabrous 7a. var. *luochengensis*

1b. Abaxial veins of leaves with dense white tomentum 7b. var. *tomentosonerva*

7a. *Vitis luochengensis* var. *luochengensis*

罗城葡萄(原变种) luo cheng pu tao (yuan bian zhong)

Leaves glabrous. Fr. Jul.

- Shrublands on rocky hills. Guangxi.

7b. *Vitis luochengensis* var. *tomentosonerva* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 241. 1996 [*“tomentoso-nerva”*].

连山葡萄 lian shan pu tao

Branchlets, petioles, and abaxial veins of leaves with dense white tomentum. Fr. May.

- Forests, valleys; 400–700 m. Guangdong.

8. *Vitis chungii* F. P. Metcalf, Lingnan Sci. J. 11: 102. 1932.

闽赣葡萄 min gan pu tao

Plants polygamo-dioecious. Branchlets terete, with longitudinal ridges, glabrous; tendrils bifurcate. Leaves simple; stipules brownish, lanceolate, 2.5–3 × 1–1.2 mm, membranous, glabrous, caducous; petiole 1–3.5 cm, glabrous; leaf blade ovate-elliptic or ovate-lanceolate, 4–15 × 2–8 cm, abaxially glabrous, glaucous, basal veins 3, lateral veins 4 or 5 pairs, veinlets raised, glabrous, base truncate, rounded, or subrounded, rarely subcordate, margin sparsely 7–9-toothed on each side, teeth sharp, apex acuminate or caudate, rarely acute. Panicles leaf-opposed, terete, 3.5–10 cm, basal branches poorly developed; peduncle 1.5–2.5 cm, pubescent when young, then glabrescent. Pedicel 1–2.5 mm, glabrous. Buds obovoid, 1–1.4 mm, apex rounded. Calyx entire. Filaments filiform, 0.8–1.2 mm; anthers yellow, elliptic, 0.4–0.5 mm. Ovary oval; style short; stigma expanded. Berry purple-red at maturity, globose, 8–10 mm in diam. Seeds obelliptic, apex rounded, chalazal knot elliptic, ventral holes obelliptic, furrowed upward 3/4 from base.

- Forests in valleys, shrublands, hillsides; 200–1000 m. Fujian, Guangdong, Guangxi, Jiangxi.

9. *Vitis betulifolia* Diels & Gilg, Bot. Jahrb. Syst. 29: 461. 1900.

桦叶葡萄 hua ye pu tao

Vitis hexamera Gagnepain; *V. shimenensis* W. T. Wang;

V. trichoclada Diels & Gilg.

Branchlets terete, with conspicuous longitudinal ridges and sparse lanate tomentum when young, then becoming glabrescent; tendrils bifurcate, leaf-opposed. Leaves simple; stipules brownish, lanceolate, 2.5–6 × 1.5–3 mm, membranous, glabrous, margin entire, apex acute or obtuse; petiole 2–6.5 cm, with arachnoid tomentum when young, then glabrescent; leaf blade oval or ovate-elliptic, undivided or 3-lobed, 4–12 × 3.5–9 cm, abaxially densely tomentose when young, then hairs falling off and only veins pubescent or nearly glabrous, adaxially pubescent and with sparse arachnoid tomentum when young, then glabrescent, basal veins 5, lateral veins 4–6 pairs, veinlets slightly raised abaxially, base cordate or subtruncate, rarely subrounded on upper leaves, margin 15–25-toothed on each side, teeth sharp, apex acute or acuminate. Panicle leaf-opposed, with well-developed basal branches, loose, 4–15 cm, with arachnoid tomentum when young, then nearly glabrescent. Pedicel 1.5–3 mm, glabrous. Buds obovoid, 1.5–2 mm, apex rounded. Calyx ca. 0.2 mm, margin membranous, entire. Filaments filiform, 1–1.5 mm; anthers yellow, elliptic, ca. 0.4 mm. Ovary oval; style short. Berry purple-black at maturity, globose, 8–10 mm in diam. Seeds obovoid, apex rounded, chalazal knot rounded or elliptic, ventral holes furrowed upward 2/3–3/4 from base. Fl. Mar–Jun, fr. Jun–Nov.

• Forests in valleys, shrublands, hillsides; 600–3600 m. SE Gansu, Henan, Hubei, Hunan, Shaanxi, Sichuan, Yunnan.

10. *Vitis piasezkii* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg 27: 461. 1881.

变叶葡萄 bian ye pu tao

Parthenocissus sinensis Diels & Gilg; *Vitis baihensis* P. C. He; *V. pagnuccii* Romanet du Caillaud; *V. piasezkii* var. *baroniana* Diels & Gilg; *V. piasezkii* var. *pagnuccii* (Romanet du Caillaud) Rehder; *V. tiubaensis* X. L. Niu.

Branchlets terete, with longitudinal ridges; tendrils bifurcate, leaf-opposed. Leaves highly variable in shape, 3–5-foliate, or mixed with simple and unlobed, or simple and variously lobed leaves; stipules caducous; petiole 2.5–6 cm; leaf and leaflet blades adaxially nearly glabrous, or pilose and lanate, basal veins 5, lateral veins 4–6 pairs, pubescent to sometimes slightly so or nearly glabrescent, veinlets slightly raised abaxially, inconspicuous adaxially; central leaflet rhombic-elliptic or lanceolate, 5–12 × 2.5–5 cm, base cuneate, apex acute or mucronulate; lateral leaflets ovate-elliptic or ovate-lanceolate, 3.5–9 × 3–5 cm, base asymmetric, subrounded or broadly truncate, margin with 5–20 sharp teeth on each side, apex acute or acuminate; simple leaves oval or ovate-elliptic, 5–12 × 4–8 cm, base cordate, notch obtuse, margin serrate with 21–31 teeth, apex acute. Panicle leaf-opposed, loose, 5–12 cm, basal branches well developed; peduncle 1–2.5 cm. Pedicel 1.5–2.5 mm, glabrous. Buds obovoid, 1–2.5 mm, apex rounded. Calyx glabrous, margin undulate. Filaments filiform, 0.7–1 mm. Ovary oval; style short; stigma expanded. Berry black-purple, globose, 0.8–1.3 in diam., glaucous. Seeds obovoid, apex retuse, chalazal knot oval, ventral holes furrowed upward 1/4 from base. Fl. Jun, fr. Jul–Sep.

• Forests, forest margins, shrublands, hillsides, riversides, usually in sunny and disturbed areas; 900–2100 m. Chongqing, Gansu, Hebei, Henan, Shaanxi, Shanxi, Sichuan, Zhejiang.

11. *Vitis pilosonerva* F. P. Metcalf, Lingnan Sci. J. 11: 14. 1932 [*“pilosonerva”*].

毛脉葡萄 mao mai pu tao

Vitis davidii (Romanet du Caillaud) Föex var. *brachytricha* Merrill.

Plants polygamo-dioecious. Branchlets terete, with conspicuous longitudinal ridges, glabrous; tendrils bifurcate, leaf-opposed. Leaves simple; stipules caducous; petiole 3.5–11 cm, sparsely pilose; leaf blade broadly oval, inconspicuously 3-lobed, 10–16 × 9–14 cm, abaxially glaucous, densely pubescent on veins, basal veins 5, lateral veins 5–8 pairs, veinlets raised, base cordate, apex of notch acute, margin 28–36-toothed on each side, teeth large and sharp, apex acute or mucronulate. Panicle leaf-opposed, loose, 15–34 cm, with well-developed branches; peduncle 5–9 cm, subglabrate. Pedicel 1.5–2 mm, nearly glabrous. Buds obovoid, ca. 1.5 mm, apex rounded. Calyx glabrous, subentire, teeth 0.1–0.2 mm. Filaments filiform, ca. 1 mm; anthers yellow, elliptic, ca. 0.4 mm. Ovary abortive in male flowers. Fl. Jun.

• Forests, hillsides, valleys; 700–800 m. Fujian, Guangdong, Jiangxi.

12. *Vitis wilsoniae* H. J. Veitch, Gard. Chron. 46: 236. 1909 [*“wilsonae”*].

网脉葡萄 wang mai pu tao

Vitis marchandii H. Léveillé; *V. reticulata* Pampanini (1910) and Gagnepain (1911), not M. A. Lawson (1875).

Branchlets terete, with longitudinal ridges, with sparse, brownish arachnoid tomentum; tendrils bifurcate, leaf-opposed. Leaves simple; stipules caducous; petiole 4–8 cm, nearly glabrous; leaf blade cordate to ovate-elliptic, 7–16 × 5–12 cm, abaxially with brownish arachnoid tomentum on veins, adaxially glabrous or nearly so, basal veins 5, lateral veins 4 or 5 pairs, veinlets raised, base cordate, notch obtuse, margin 16–20-toothed on each side, apex acute or acuminate. Panicle leaf-opposed, loose, 4–16 cm, with well-developed basal branches; peduncle 1.5–3.5 cm, with sparse arachnoid tomentum. Pedicel 2–3 mm, glabrous. Buds obelliptic, 1.5–3 mm, apex subtruncate. Calyx undulately lobed. Filaments filiform, 1.2–1.6 mm; anthers yellow, ovoid-elliptic, 0.8–1.2 mm. Ovary oval; style short; stigma expanded. Berry globose, 0.7–1.5 cm in diam. Seeds obovoid, apex globose, chalazal knot oblong, raphe slightly raised, surface smooth, ventral holes furrowed from base to nearly 1/4 near apex. Fl. May–Jul, fr. Jun–next Jan.

• Forests, shrublands, valleys, streamsides; 400–2000 m. Anhui, Chongqing, Fujian, Gansu, Guizhou, Henan, Hubei, Hunan, Shaanxi, Sichuan, Yunnan, Zhejiang.

13. *Vitis pseudoreticulata* W. T. Wang, Acta Phytotax. Sin. 17(3): 73. 1979.

华东葡萄 hua dong pu tao

Plants polygamo-dioecious. Branchlets terete, with conspicuous longitudinal ridges, sparsely lanate when young, becoming glabrescent; tendrils bifurcate, leaf-opposed. Leaves simple; stipules caducous; petiole 3–6 cm, with long villous arachnoid tomentum when young, then falling off and pubescent; leaf blade oval or oblong, 6–13 × 5–11 cm, both surfaces with villous tomentum when young, then becoming sparsely so, abaxially whitish pubescent on lateral veins, basal veins 5, lateral veins 3–5 pairs, veinlets conspicuous abaxially, base deeply cordate to cordate, notch rounded or obtuse, margin 16–25-toothed on each side, teeth sharp and slightly irregular, apex acute or acuminate, rarely rounded. Panicle leaf-opposed, loose, 5–11 cm, basal branches well developed, sometimes with a tendril below basal branch, with sparse arachnoid tomentum when young, then falling off. Pedicel 1–1.5 mm, glabrous. Buds obovoid, 2–2.5 mm, apex rounded. Calyx glabrous, teeth inconspicuous. Filaments filiform, ca. 1 mm; anthers yellow, elliptic, ca. 0.2 × 0.1 mm. Ovary conical; style short. Berry purple-black at maturity, globose, 8–10 mm in diam. Seeds obovoid, apex retuse, chalazal knot elliptic, ventral mid-raphe slightly raised. Fl. Apr–Jun, fr. Jun–Oct.

Forests, shrublands, hillsides, grasslands, riversides; 100–300 m. Anhui, Fujian, Guangdong, Guangxi, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Zhejiang [Korea].

14. *Vitis zhejiang-adstricta* P. L. Chiu, Bull. Bot. Res., Harbin 10(3): 39. 1990.

浙江嬰菓 zhe jiang ying yu

Branchlets terete, slender, with thin longitudinal ridges, with sparse arachnoid tomentum when young, eventually subglabrate; tendrils bifurcate, leaf-opposed. Leaves simple, 3–5-lobed to parted, usually mixed with undivided leaves; petiole 2–4 cm, sparsely pubescent; leaf blade ovate or ovate-pentagonal, 3–6 × 3–5 cm, both surfaces with sparse very short fine hairs and midvein with fine stiff hairs, basal veins 5, lateral veins 3–5 pairs, veinlets slightly raised abaxially, base cordate, notch rounded to acute, teeth obtuse, apex acute or acuminate; midlobes rhombic-ovate, base constricted, notch rounded. Panicle 3.5–8 cm, glabrous or subglabrate; peduncle 1–3 cm; bract narrowly triangular, margin ciliate, then cilia falling off. Pedicel 2–3 mm, glabrous. Berry globose, 6–8 mm in diam.

• By streams in valleys; 600–700 m. Zhejiang.

15. *Vitis silvestrii* Pampanini, Nuovo Giorn. Bot. Ital., n.s., 17: 430. 1910.

湖北葡萄 hu bei pu tao

Plants polygamo-dioecious. Branchlets terete, slender, with longitudinal ridges, densely pubescent, eventually glabrescent; tendrils bifurcate, leaf-opposed. Leaves simple; stipules brownish, lanceolate, 1.5–2 × 0.5–1 mm, membranous, sparsely pilose or glabrate; petiole 1–3 cm, pubescent; leaf blade oval, 3–5 × 2–3 cm, 3–5-lobed or parted, abaxially pubescent, adaxially sparsely pubescent when young, then glabrescent, basal veins 5, lateral veins 3 or 4 pairs, base subcordate or subtruncate, notch retuse to obtuse, rarely acute or rounded, margin 5–9-toothed on each side, teeth obtuse, apex acute or acu-

minate. Panicle leaf-opposed, 2–4.5 cm, narrow, basal branches well developed; peduncle 1–1.5 cm, pubescent or subglabrate. Pedicel 2–3 mm, glabrous. Buds ovoid-elliptic, 1.5–2 mm, apex rounded. Calyx subtire. Filaments filiform, 1.3–1.5 mm; anthers yellow, elliptic, ca. 0.4 mm. Pistil abortive in male flowers. Fl. May.

• Forests, forest margins, hillsides; 300–1200 m. W Hubei, S Shaanxi.

16. *Vitis wuhanensis* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 243. 1996.

武汉葡萄 wu han pu tao

Vitis wuhanensis var. *arachnoidea* X. D. Wang & C. L. Li.

Plants polygamo-dioecious. Branchlets terete, slender, with longitudinal ridges, with sparse arachnoid tomentum; tendrils bifurcate, leaf-opposed. Leaves simple; stipules brownish, elliptic-lanceolate, 2.5–3.5 × 1–1.5 mm, membranous, glabrous, entire, apex obtuse or acute; petiole 1.5–4 cm, with arachnoid tomentum when young, then glabrate; leaf blade ovate or oval, 3-lobed or inconspicuously 3–5-divided, 3–7 × 2.5–6 cm, abaxially white with sparse arachnoid tomentum when young, then glabrate, adaxially glabrous, basal veins 5, lateral veins 4 or 5 pairs, veinlets conspicuous at fruiting stage, base cordate, margin 5–13-toothed on each side, teeth obtuse, apex acute or acuminate. Panicle leaf-opposed, 2.5–4 cm, narrow, basal branches undeveloped; peduncle 1.5–2.5 cm, with sparse arachnoid tomentum. Pedicel 2–3 mm, glabrous. Buds obovoid-elliptic, 1.5–2.5 mm, apex rounded. Calyx ca. 2 mm, subtire. Filaments filiform, 1.2–1.8 mm; anthers yellow, elliptic, ca. 0.5 mm. Pistil abortive in male flowers. Berry globose, 6–7 mm in diam. Seeds obovoid, apex retuse, chalazal knot elliptic, ventral holes furrowed from base upward nearly to apex. Fl. Apr–May, fr. May–Jul.

• Forests, shrublands in valleys, hillsides; 300–700 m. Henan (Xinyang), Hubei, Jiangxi.

17. *Vitis wenchowensis* C. Ling ex W. T. Wang, Acta Phytotax. Sin. 17(3): 74. 1979.

温州葡萄 wen zhou pu tao

Branchlets slender, with longitudinal ridges, glabrous; tendrils unbranched. Leaves simple; stipules caducous; petiole 1.8–3.2 cm, glabrous; leaf blade halberd-shaped or triangular-ovate, undivided or 3–5-lobed, divided leaves with obtuse or acute notch, 4–9.3 × 2.8–4.5 cm, abaxially glabrous, adaxially very shortly strigose on veins, basal veins 5, lateral veins 4 or 5 pairs, veinlets conspicuously raised, base cordate, margin irregularly 7–9-toothed on each side and shortly ciliate, apex long acuminate. Panicles leaf-opposed, 3.8–6 cm; peduncle and pedicels glabrous. Berry globose, 5–8 mm in diam. Seeds obelliptic, chalazal knot elliptic. Fr. Jun–Jul.

• Broad-leaved evergreen forests by streams in valleys. Zhejiang.

18. *Vitis jinggangensis* W. T. Wang, Bull. Bot. Res., Harbin 1(1–2): 167. 1981.

井冈葡萄 jing gang pu tao

Branchlets terete, with longitudinal ridges, densely pubescent; tendrils unbranched, leaf-opposed. Leaves simple; stipules caducous; petiole 3–4 cm, sparsely pubescent; leaf blade oval or ovate-elliptic, usually 3-lobed, rarely 3–5-cleft, 7–9 × 6–7 cm, adaxially pubescent on veins at lower part, basal veins 5, lateral veins 3 or 4 pairs, veinlets conspicuously raised abaxially, inconspicuous adaxially, base slightly cordate or subtruncate, lobes with base cordate, notch obtuse or acute, rarely rounded, margin undulately 8–12-toothed on each side, apex acuminate or mucronulate. Panicle leaf-opposed, subcylindric, 4–4.5 cm, narrow, basal branches well developed; peduncle 2–2.7 cm, pubescent. Pedicel 2–2.5 mm, glabrous. Buds obovoid, 1.8–2 mm, apex rounded. Calyx ca. 1.5 mm, subtire. Filaments filiform. Disk well developed, slightly 5-lobed. Pistil abortive in male flowers. Fl. Apr.

• Shrublands on hillsides; ca. 1000 m. Hunan (Yongshun), Jiangxi.

19. *Vitis erythrophylla* W. T. Wang, Bull. Bot. Res., Harbin 1(1–2): 168. 1981.

红叶葡萄 hong ye pu tao

Plants polygamo-dioecious. Branchlets terete, slender, with longitudinal ridges, sparsely pubescent when young, then subglabrate; tendrils unbranched, leaf-opposed. Leaves simple, 3–5-lobed to -cleft; stipules brownish, lanceolate, 2–3 × 1–1.5 mm, pubescent, entire, apex obtuse; petiole 4–6 cm, pubescent; leaf blade abaxially purplish, adaxially purplish when young, becoming purplish green when old, ovate or ovate-lanceolate, 7–12 × 5–7 cm, abaxially pubescent on veins, adaxially pubescent on veins, basal veins 5, lateral veins 5 or 6 pairs, veinlets usually raised, base cordate, notch obtuse, rarely acute, base of midlobes broad, rarely constricted, margin irregularly 12–16-toothed on each side, teeth sharp, apex acute or acuminate. Panicle leaf-opposed, 6–8 cm, basal branches poorly developed; peduncle 1–2 cm, pubescent. Pedicel 2–3 mm, subglabrate. Buds obovoid, 1.5–2 cm, apex rounded. Calyx ca. 2 mm, entire. Filaments filiform, ca. 0.8 mm; anthers yellow, elliptic, ca. 0.4 mm. Fl. Apr–May.

• Forests, shrublands, hillsides, grasslands, field margins; ca. 1000 m. Jiangxi, Zhejiang.

20. *Vitis ruyuanensis* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 244. 1996.

乳源葡萄 ru yuan pu tao

Plants polygamo-dioecious. Branchlets terete, slender, with inconspicuous longitudinal ridges, glabrous; tendrils unbranched. Leaves simple, undivided or 3–5-lobed; stipules caducous; petiole 1.5–2 cm, glabrous; leaf blade abaxially purplish, sagittate or ovate-hastate, 5–8 × 3–4 cm, abaxially pubescent on veins, adaxially glabrous or with sparse very short hairs, basal veins 5, lateral veins 5 or 6 pairs, veinlets conspicuous but not raised, base cordate, notch acute or obtuse, margin irregularly finely 7–10-toothed on each side, apex acuminate. Panicle leaf-opposed, 7–9 cm, basal branches undeveloped; peduncle 1.5–2 cm, subglabrate. Pedicel 2–3 mm, subglabrate. Buds obovoid, 1.5–2 mm, apex rounded. Calyx ca. 2 mm, entire. Filaments filiform, ca. 1 mm; anthers yellow, elliptic, ca. 0.5 mm.

Ovary conical; style slender. Berry globose, 6–8 mm in diam. Seeds obovoid, base rostrate, apex retuse, chalazal knot rounded, ventral holes furrowed from base nearly to apex. Fl. Apr–May, fr. Jun–Jul.

• Shrublands on hillsides; ca. 200 m. Guangdong.

21. *Vitis mengziensis* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 245. 1996.

蒙自葡萄 meng zi pu tao

Branchlets terete, glabrous, glaucous; tendrils unbranched. Leaves simple; stipules caducous; petiole 4.5–10 cm, glabrous; leaf blade oval, 11–13 × 7–11 cm, glabrous, basal veins 6 or 7, lateral veins 5 or 6 pairs, veinlets slightly raised abaxially, base deeply cordate, notch narrow to acute, two sides close together, margin irregularly 31–39-toothed on each side, apex mucronulate. Panicle leaf-opposed, ca. 12 cm; peduncle subglabrate. Pedicel 2–2.5 mm, glabrous. Buds obovoid, 2–2.5 mm. Calyx glabrous, margin undulate. Petals oblong, 1.5–2 mm. Filaments filiform, slightly flat, 1–1.5 mm; anthers yellow, oblong, ca. 0.8 mm. Ovary conical; style short.

• Forests; ca. 1600 m. Yunnan.

22. *Vitis fengqinensis* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 245. 1996.

凤庆葡萄 feng qing pu tao

Branchlets terete, with sparse, white arachnoid tomentum. Leaves simple; stipules brownish, oblong, 2–2.5 × 1.8–2 mm, membranous, with sparse white tomentum, apex acuminate; petiole 2–6 cm, with sparse, white arachnoid tomentum; leaf blade oval or ovate-elliptic, 4–9.5 × 3.5–7 cm, with sparse, white arachnoid tomentum on veins, basal veins 5, lateral veins 4 or 5 pairs, veinlets raised, base cordate or subcordate, notch obtuse, margin irregularly 17–29(–32)-toothed on each side, apex acuminate or mucronulate. Panicle sparse, basal branches well developed, axis sparsely lanate and pubescent; peduncle 2–6 cm, with sparse, white arachnoid tomentum. Pedicel 2–3 mm, glabrous. Buds obovoid, 1.8–2 mm, apex rounded. Calyx shallow and saucer-shaped, margin undulate. Filaments filiform, 1.3–1.5 mm; anthers yellow, oblong. Pistil entirely abortive in male flowers. Fr. Jun.

• Shrublands on hillsides; ca. 2000 m. Yunnan.

23. *Vitis hancockii* Hance, J. Bot. 20: 4. 1882.

菱叶葡萄 ling ye pu tao

Vitis fagifolia Hu; *V. wentsaiana* P. L. Chiu.

Plants polygamo-dioecious. Branchlets terete, with longitudinal ridges, densely brown villous; tendrils bifurcate or unbranched, sparsely brown pilose. Leaves simple, undivided, rarely 3-lobed; stipules brown, triangular-lanceolate, 2–4 × 1–1.5 mm, membranous, glabrous or base sparsely ciliate, margin entire, apex acuminate; petiole 0.2–3 cm, brown villous; leaf blade rhombic-ovate or elliptic, 3.5–13 × 2–7 cm, abaxially sparsely brownish pilose, adaxially sparsely pubescent only on midvein, basal veins 3, lateral veins 3–5 pairs, veinlets slightly raised abaxially, inconspicuous adaxially, base usually asym-

metric, truncate or broadly so, base of lower leaves rarely subrounded, margin 6–12-toothed on each side, teeth large and sharp, rarely obtuse, apex acute. Panicle leaf-opposed, loose, 2.5–5.5 cm, basal branches undeveloped; peduncle 1–2 cm, densely brownish villous. Pedicel 1.5–2 mm, glabrous. Buds oval, 1.2–1.5 mm, apex rounded. Calyx 0.1–0.2 mm, glabrous, entire. Filaments filiform, 0.5–1 mm; anthers yellow, oval or ovate-elliptic, 0.5–0.6 mm. Ovary rounded; style short; stigma expanded. Berry globose, 6–8 mm in diam. Seeds obovoid, apex retuse, chalazal knot elliptic, ventral holes elliptic and broad, furrowed upward 1/4 from base. Fl. Apr–May, fr. May–Jun.

• Forests, shrublands, hillsides; 100–600 m. Anhui, Fujian, Jiangxi, Zhejiang.

24. *Vitis tsoi* Merrill, Lingnan Sci. J. 11: 101. 1932 [“*tsoii*”].

狭叶葡萄 xia ye pu tao

Vitis embergeri Galet.

Branchlets terete, with longitudinal ridges, densely pubescent; tendrils unbranched. Leaves simple; stipules brown, lanceolate, 1–2 × 0.3–0.5 mm, membranous, glabrous; petiole 1–2 cm, densely pubescent; leaf blade ovate-lanceolate or triangular-ovate, 3.5–9 × 1.5–4 cm, abaxially pubescent on veins, adaxially sparsely pubescent on veins, basal veins 5, outermost pair of veins usually on a line, lateral veins 5 or 6 pairs, base subtruncate or rounded, margin 10–15-toothed on each side, teeth sharp and fine, apex acute. Panicle leaf-opposed, 2–6 cm, narrow, basal branches undeveloped. Pedicel 1.5–2.5 mm, subglabrate. Buds obelliptic, ca. 1.5 mm, apex rounded. Calyx subtire. Filaments filiform, ca. 0.8 mm; anthers yellow, elliptic, ca. 0.5 mm. Ovary conical; style short. Berry purple-black at maturity, globose, 5–8 mm in diam. Seeds obelliptic, apex rounded, chalazal knot elliptic, ventral holes obelliptic and broad, furrowed upward from base to apex. Fl. Apr–May, fr. Jun–Sep.

• Forests, shrublands, hillsides; 300–700 m. Fujian, Guangdong, Guangxi.

25. *Vitis flexuosa* Thunberg, Trans. Linn. Soc. London 2: 332. 1794.

葛藟葡萄 ge lei pu tao

Vitis cavalieriei H. Léveillé & Vaniot; *V. flexuosa* var. *chinensis* Veitch; *V. flexuosa* f. *parvifolia* (Roxburgh) Planchon; *V. flexuosa* var. *parvifolia* (Roxburgh) Gagnepain; *V. flexuosa* var. *wallichii* (Candolle) F. S. Wang; *V. parvifolia* Roxburgh; *V. purani* Buchanan-Hamilton ex D. Don; *V. vulpina* Linnaeus var. *parvifolia* (Roxburgh) Regel; *V. wallichii* Candolle.

Branchlets terete, with longitudinal ridges, with sparse arachnoid tomentum when young, becoming glabrescent; tendrils bifurcate. Leaves simple; stipules caducous; petiole 1.5–7 cm, with sparse arachnoid tomentum or subglabrate; leaf blade ovate, triangular-ovate, oval, or ovate-elliptic, 2.5–12 × 2.3–10 cm, abaxially with sparse arachnoid tomentum when young, eventually glabrescent, basal veins 5, lateral veins 4 or 5 pairs, veinlets inconspicuous, base slightly subcordate or subtruncate,

rarely cordate, often asymmetrical, leaves with cordate bases with obtusely angled notch, margin with 5–12 slightly irregular teeth on each side, apex acute or acuminate. Panicle leaf-opposed, loose, 4–12 cm, basal branches well developed, or short and slender; peduncle 2–5 cm, with sparse arachnoid tomentum or nearly glabrescent. Pedicel 1.1–2.5 mm, glabrous. Buds obovoid, 2–3 mm, apex rounded and subtruncate. Calyx glabrous, undulately lobed. Filaments filiform, 0.7–1.3 mm; anthers yellow, oval, 0.4–0.6 mm. Pistil abortive in male flowers; ovary oval; style short. Berry globose, 8–10 mm in diam. Seeds obovoid, apex subrounded, chalazal knot elliptic, raphe slightly raised and surface smooth, ventral holes furrowed upward 1/4 from base. Fl. Mar–May, fr. Jul–Nov. $2n = 38$.

Forests, shrublands, hillsides, valleys, meadows, fields; 100–2300. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Henan, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Sichuan, Taiwan, Yunnan, Zhejiang [India, Japan, Laos, Nepal, Philippines, Thailand, Vietnam].

26. *Vitis amurensis* Ruprecht, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 15: 266. 1857.

山葡萄 shan pu tao

Branchlets terete, glabrous, with sparse arachnoid tomentum when young; tendrils 2- or 3-branched. Leaves simple; stipules brown, 4–8 × 3–5 mm, membranous, entire, apex obtuse; petiole 4–14 cm, with sparse arachnoid tomentum when young, eventually glabrate; leaf blade broadly oval, 6–24 × 5–21 cm, adaxially with sparse arachnoid tomentum when young, then glabrescent, basal veins 5, lateral veins 5 or 6 pairs, veins raised abaxially, conspicuous or slightly impressed adaxially, abaxial veinlets conspicuous, ± raised, usually pubescent or glabrescent, base cordate, notch rounded to obtuse, base of lobes usually constricted or mixed with broad ones, notch rounded, rarely acute or obtuse, margin 28–36-toothed on each side, teeth sharp, slightly irregular, apex acute or acuminate. Panicle leaf-opposed, loose, 5–13 cm, basal branches well developed, with sparse arachnoid tomentum when young, eventually glabrescent. Pedicel 2–6 mm, glabrous. Buds obovoid, 1.5–3 mm, apex rounded. Calyx 0.2–0.3 mm, glabrous, subtire. Petals calyptrate. Filaments filiform, 0.9–2 mm; anthers yellow, ovoid-elliptic, 0.4–0.6 mm, conspicuously short and abortive in female flowers. Disk 0.3–0.5 mm. Ovary conical; style obvious, slightly thick at base. Seeds obovoid, apex retuse, chalazal knot elliptic, ventral holes furrowed upward to middle or near apex from base. Fl. May–Jun, fr. Jul–Sep.

• Forests, shrublands, hillsides, valleys; 100–2100 m. Anhui, Hebei, Heilongjiang, Jilin, Liaoning, Shandong, Shanxi, Zhejiang.

Vitis amurensis var. *funiushanensis* F. S. Wang (J. Trop. Subtrop. Bot. 8: 5. 2000), described from Henan, could not be treated here because no material was seen by the authors.

- 1a. Berry 1–1.5 cm in diam. 26a. var. *amurensis*
 1b. Berry 0.8–1 cm in diam. 26b. var. *dissecta*

26a. *Vitis amurensis* var. *amurensis*

山葡萄(原变种) shan pu tao (yuan bian zhong)

Vitis vinifera Linnaeus var. *amurensis* (Ruprecht) Regel.

Leaves 3(or 5)-lobed or cleft, or undivided. Berry 1–1.5 cm in diam. Fl. May–Jun, fr. Jul–Sep. $2n = 38^*$.

• Forests or shrublands in valleys, hillsides; 200–2100 m. Anhui (Jinzhai), Hebei, Heilongjiang, Jilin, Liaoning, Shandong, Shanxi, Zhejiang.

26b. *Vitis amurensis* var. *dissecta* Skvortsov, Chin. J. Sci. Arts. 15: 200. 1931.

深裂山葡萄 shen lie shan pu tao

Vitis amurensis var. *yanshanensis* D. Z. Lu & H. P. Liang; *V. baihuashanensis* M. S. Kang & D. Z. Lu.

Leaves 3–5-parted. Berry 0.8–1 cm in diam. Fl. May–Jun, fr. Jul–Sep.

• 100–200 m. Hebei, Heilongjiang, Jilin, Liaoning.

27. *Vitis vinifera* Linnaeus, Sp. Pl. 1: 202. 1753.

葡萄 pu tao

Branchlets terete, with longitudinal ridges, glabrous or sparsely pilose; tendrils bifurcate. Leaves simple, conspicuously 3–5-lobed or cleft; stipules caducous; petiole 4–9 cm, nearly glabrous; leaf blade oval, 7–18 × 6–16 cm, basal veins 5, lateral veins 4 or 5 pairs, veinlets inconspicuously raised, base deeply cordate, notch rounded, 2 sides usually overlapping to nearly so, margin 22–27-toothed on each side, teeth large, irregular, and sharp, glabrous or sparsely pilose, apex of midlobes acute. Panicle sparse or dense, opposite to leaves, basal branches well developed, 10–20 cm; peduncle 2–4 cm, glabrous or with sparse arachnoid tomentum. Pedicel 1.5–2.5 mm, glabrous. Buds obovoid, 2–3 mm, apex rounded. Calyx glabrous, undulate. Filaments filiform, 0.6–1 mm; anthers yellow, oval, 0.4–0.8 mm. Pistil entirely abortive in male flowers; ovary oval; style short; stigma expanded. Berry globose or elliptic, 1.5–2 cm in diam. Seeds obovoid to obelliptic, apex subrounded, chalazal knot elliptic, raphe slightly raised, ventral holes broadly furrowed upward ca. 1/4 from base. Fl. Apr–May, fr. Aug–Sep. $2n = 38^*$.

Cultivated throughout China for grapes and wine-making [native to SW Asia and SE Europe].

28. *Vitis heyneana* Roemer & Schultes, Syst. Veg. 5: 318. 1819.

毛葡萄 mao pu tao

Plants polygamo-dioecious. Branchlets terete, with longitudinal ridges, gray or brown lanate; tendrils bifurcate. Leaves simple; stipules brown, ovate-lanceolate, 3–5 × 2–3 mm, membranous, entire, apex acuminate, rarely obtuse; petiole 2.5–6 cm, with dense arachnoid tomentum; leaf blade sometimes 3-lobed to -cleft, 4–12 × 3–8 cm, abaxially densely grayish or brown tomentose, gradually becoming less so, abaxial veins tomentose, sometimes pilose or lanate, adaxially with sparse arachnoid tomentum when young, then glabrate, adaxial veins glabrous or sometimes sparsely pubescent, basal veins 3–5, lateral veins 4–6 pairs, base cordate to subcordate, notch obtuse,

rarely acute, margin 9–19-toothed on each side, teeth sharp, apex acute or acuminate. Panicle leaf-opposed, 4–14 cm, basal branches developed; peduncle 1–2 cm, with gray or brown arachnoid tomentum. Pedicel 1–3 mm, glabrous. Buds obovoid or elliptic, 1.5–2 mm, apex rounded. Calyx ca. 0.1 mm, subentire. Filaments filiform, 1–1.2 mm; anthers yellow, elliptic or broadly so, ca. 0.5 mm. Ovary oval; style short. Berry purple-black at maturity, globose, 1–1.3 cm in diam. Seeds obovoid, apex rounded, chalazal knot rounded, ventral holes furrowed upward ca. 1/4 from base. Fl. Apr–Jul, fr. Jun–Oct.

Forests, shrublands, hillsides, valleys; 100–3200 m. Anhui, Chongqing, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Xizang, Yunnan, Zhejiang [Bhutan, India, Nepal].

- 1a. Leaves oval, ovate-oblong, or ovate-quinquangular 28a. subsp. *heyneana*
- 1b. Leaves usually 3-lobed to cleft 28b. subsp. *ficifolia*

28a. *Vitis heyneana* subsp. *heyneana*

毛葡萄(原亚种) mao pu tao (yuan ya zhong)

Vitis ficifolia Bunge var. *pentagona* Pampanini; *V. kelungensis* Momiyama; *V. lanata* Roxburgh; *V. pentagona* Diels & Gilg; *V. pentagona* var. *honanensis* Rehder; *V. quinquangularis* Rehder; *V. thunbergii* Siebold & Zuccarini var. *yunnanensis* Planchon.

Leaves oval, ovate-oblong, or ovate-quinquangular. Fl. Apr–Jun, fr. Jun–Oct.

Forests, shrublands, hillsides, valleys; 100–3200 m. Anhui, Chongqing, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Xizang, Yunnan, Zhejiang [Bhutan, India, Nepal].

28b. *Vitis heyneana* subsp. *ficifolia* (Bunge) C. L. Li, Chin. J. Appl. Environ. Biol. 2: 250. 1996.

桑叶葡萄 sang ye pu tao

Vitis ficifolia Bunge, Enum. Pl. China Bor. 12. 1833; *V. labrusca* Linnaeus var. *ficifolia* (Bunge) Regel.

Leaves usually 3-lobed to cleft, and mixed with undivided ones. Fl. May–Jul, fr. Jul–Sep. $2n = 38^*$.

• Forests, shrublands, hillsides; 100–1300 m. Hebei, Henan, Jiangsu, Shaanxi, Shandong, Shanxi.

29. *Vitis rotundifolia* Romanet du Caillaud ex Planchon in A. Candolle & C. Candolle, Monogr. Phan. 5: 613. 1887.

绵毛葡萄 mian mao pu tao

Vitis hekouensis C. L. Li.

Plants polygamo-dioecious. Branchlets terete, with longitudinal ridges, densely brownish villous when young, eventually glabrescent; tendrils bifurcate. Leaves simple; stipules brown, ovate-lanceolate, 3–5 × 2–3 mm, membranous, subglabrate, apex acuminate, caducous; petiole 1.5–9 cm, densely pubescent with brown and arachnoid hairs; leaf blade oval or ovate-elliptic, 6–15 × 4–11 cm, abaxially tomentose with brown and villous hairs, adaxially densely pubescent, basal veins 5,

lateral veins 4 or 5 pairs, veinlets tomentose and raised abaxially, raised and pubescent adaxially, base deeply cordate, notch with an acute angle, rarely overlapping, margin 19–43-toothed on each side, teeth sharp. Panicle leaf-opposed, loose, 6–10 cm, basal branches well developed; peduncle 1.2–2.5 cm, usually brown tomentose. Pedicel 1–1.5 mm, glabrous. Buds obelliptic, 1.2–1.5 mm, apex rounded. Calyx cupular, ca. 1.5 mm, glabrous, subentire. Filaments filiform, 1–1.2 mm; anthers yellow, oblong, ca. 0.5 mm. Ovary oval; style short. Berry globose, ca. 8 mm in diam. Seeds obelliptic, apex rounded, chalazal knot ovate-elliptic, ventral holes furrowed upward ca. 1/3 from base. Fl. May, fr. Jun–Jul.

Forests in valleys, shrublands, hillsides; 200–1000. Guangdong, Guangxi, Guizhou, Hainan [Laos, Vietnam].

30. *Vitis menghaiensis* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 250. 1996.

勐海葡萄 meng hai pu tao

Branchlets terete, densely ferruginous pilose. Leaves simple; stipules brown, ovate-elliptic, 4–6 × 2–3 mm, membranous, apex obtuse; petiole 3–5.5 cm, densely ferruginous pilose; leaf blade suborbicular or quinquangularly orbicular, 9–11 × 8–10 cm, abaxially with dense rubiginous arachnoid tomentum, adaxially densely pubescent, basal veins 5–7, lateral veins 5 or 6 pairs, veins densely pubescent with spreading hairs, base deeply cordate, notch narrow, 2 sides close together or overlapping, margin 28–47-toothed on each side, teeth fine and sharp, apex acute or rounded, rarely retuse. Panicle loose, ca. 12 cm, basal branches undeveloped; peduncle ca. 2.5 cm, densely ferruginous pilose. Pedicel 1–2 mm, subglabrate. Buds obovoid, 1.5–2 mm, apex rounded. Calyx ca. 0.2 mm, undulate. Filaments filiform, slightly flat, 1–1.2 mm; anthers yellow, ovoid-oblong. Ovary abortive in male flowers. Fl. May.

• Mixed forests; 1500–1600 m. Yunnan.

31. *Vitis longquanensis* P. L. Chiu, Bull. Bot. Res., Harbin 10(3): 41. 1990.

龙泉葡萄 long quan pu tao

Branchlets terete, with longitudinal ridges, white lanate when young, then glabrescent. Leaves of two types, those of upper branches sometimes 3–5-divided, notch rounded, most leaves of lower branches undivided, simple; stipules caducous; petiole 2–5.5 cm, densely light brown lanate; leaf blade adaxially greenish, oval, triangular-ovate, or triangular-lanceolate, 4–12 × 4–10 cm, abaxially densely light brown lanate, rarely hairs falling off and only veins tomentose, adaxially with sparse arachnoid tomentum when young, then glabrate, basal veins 5, outermost pair of veins on a line and bifurcate at 5–9 mm from base, lateral veins 3 or 4 pairs, veinlets tomentose and raised abaxially, conspicuously raised adaxially, base subcordate or subtruncate, notch very short, two sides nearly overlapping, margin with fine teeth, apex acute or acuminate. Panicle leaf-opposed, loose, basal branches well developed; peduncle 3–9 cm, with sparse arachnoid tomentum. Pedicel 1–4 mm, glabrous. Berry purple-black and glaucous at maturity, globose, 5–6 mm in diam. Seeds obovoid, apex retuse, chalazal knot rounded, ventral holes narrow and oblong. Fr. Jul–Sep.

• Forests and shrublands in valleys, roadsides; 700–1300 m. Fujian, Jiangxi, Zhejiang.

32. *Vitis bellula* (Rehder) W. T. Wang, Acta Phytotax. Sin. 17(3): 74. 1979.

美丽葡萄 mei li pu tao

Branchlets terete, slender, with longitudinal ridges, sparsely white lanate; tendrils unbranched or mixed with bifurcate ones. Leaves simple; stipules green-brown, ca. 0.8 × 0.7 mm, submembranous, glabrous, apex obtuse; petiole 1–3 cm, with sparse arachnoid tomentum; leaf blade 3–7 × 2–4 cm, abaxially with dense gray-white or gray-brown arachnoid tomentum, adaxially subglabrate, basal veins 3, lateral veins 4 or 5 pairs, veinlets tomentose and raised abaxially, not raised adaxially, base subcordate, subtruncate, or subrounded, notch very short, margin 7–10-toothed on each side, teeth fine and sharp, apex acute or acuminate. Panicle leaf-opposed, terete, basal branches undeveloped; peduncle 0.5–1.2 cm. Pedicels 2–3 mm, slender, glabrous. Buds elliptic or obelliptic, 1.5–1.8 mm, apex rounded. Calyx glabrous, teeth inconspicuous. Petals ovate-elliptic, 1.2–1.6 mm. Filaments filiform, ca. 1.2 mm; anthers yellow, oblong, ca. 0.5 mm. Disk well developed and pistil entirely abortive in male flowers. Berry purple-black and glaucous at maturity, globose, 6–10 mm in diam. Seeds obovoid, apex rounded and retuse, chalazal knot rounded, ventral holes furrowed from base upward nearly to tip. Fl. May–Jun, fr. Jun–Aug.

• Forests, shrublands, hillsides, cliffs; 400–1600 m. Guangdong, Guangxi, Hubei, Hunan, Sichuan.

1a. Leaves oval or ovate-elliptic 32a. var. *bellula*
1b. Leaves mostly ovate-triangular 32b. var. *pubigera*

32a. *Vitis bellula* var. *bellula*

美丽葡萄(原变种) mei li pu tao (yuan bian zhong)

Vitis pentagona Diels & Gilg var. *bellula* Rehder in Sargent, Pl. Wilson. 3: 428. 1917; *V. quinquangularis* Rehder var. *bellula* (Rehder) Rehder.

Leaves oval or ovate-elliptic. Peduncle with sparse arachnoid tomentum. Fl. May–Jun, fr. Jul–Aug.

• Forests, shrublands, hillsides; 1300–1600 m. Hubei, Sichuan.

32b. *Vitis bellula* var. *pubigera* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 251. 1996.

华南美丽葡萄 hua nan mei li pu tao

Leaves mostly ovate-triangular. Inflorescence axis pilose. Fl. May, fr. Jun–Aug.

• Forests, shrublands, cliffs; 400–1500 m. Guangdong, Guangxi, Hunan.

33. *Vitis bashanica* P. C. He, Acta Univ. Agric. Bor.-Occid. 23(5): 121. 1995.

麦黄葡萄 mai huang pu tao

Branchlets terete, slender, with longitudinal ridges, pilose and lanate with white hairs; tendrils unbranched or bifurcate. Leaves simple; stipules caducous; petiole 1.6–3 cm, pilose and

lanate; leaf blade oval or ovate-elliptic, 5.5–6.9 × 3.6–4.8 cm, abaxially densely gray-white tomentose, adaxially sparsely pubescent on veins, basal veins 5, lateral veins 3 or 4 pairs, veinlets inconspicuously raised, base truncate, margin 7–12-toothed on each side, teeth fine and sharp, apex acuminate. Panicle ca. 3.6 cm; peduncle ca. 1.2 cm. Berry purple-black and glaucous at maturity, globose, ca. 7 mm in diam. Fr. Aug.

- About 300 m. Shaanxi (Baiheyinfang).

34. *Vitis hui* W. C. Cheng, Contr. Biol. Lab. Sci. Soc. China, Bot. Ser. 10: 77. 1935.

庐山葡萄 lu shan pu tao

Plants polygamo-dioecious. Branchlets terete, with longitudinal ridges, densely pubescent and sparsely lanate; tendrils unbranched or mixed with bifurcate ones. Leaves simple; stipules ovate-elliptic, 2–3 × 1.5–2 mm, subglabrate, subentire, apex obtuse; petiole 5–10 mm, densely pubescent and lanate; leaf blade oval or ovate-elliptic, 3–5.5 × 2–4 cm, abaxially densely lanate with gray hairs and pubescent with short hairs, adaxially densely pubescent and sparsely lanate, basal veins 5, lateral veins 4 or 5 pairs, veins densely pubescent and with sparse arachnoid tomentum, veinlets densely tomentose and pubescent abaxially, inconspicuous adaxially, base cordate, notch acute, margin with sharp teeth, apex acute or acuminate. Panicle leaf-opposed, 2–8.5 cm, basal branches short; peduncle 0.5–1.5 cm, densely pubescent. Pedicels 1–1.5 mm, densely pubescent. Buds obovoid, 1.5–2 mm, apex rounded. Calyx ca. 0.2 mm, glabrous, 5-lobed. Filaments filiform, 1–1.2 mm; anthers yellow, oblong, ca. 0.5 mm. Ovary abortive in male flowers. Fl. May, fr. Jul.

- Shrublands, fields; 100–200 m. Jiangxi, Zhejiang.

35. *Vitis sinocinerea* W. T. Wang, Acta Phytotax. Sin. 17(3): 75. 1979.

小叶葡萄 xiao ye pu tao

Vitis thunbergii Siebold & Zuccarini var. *cinerea* Gagnepain; *V. thunbergii* var. *taiwaniana* F. Y. Lu.

Branchlets terete, with longitudinal ridges, sparsely pubescent with arachnoid tomentum; tendrils unbranched or bifurcate. Leaves simple, 3-lobed or inconspicuously divided; stipules brownish, ovate-lanceolate, ca. 2 × 1 mm, membranous, subglabrate, apex obtuse or acuminate; petiole 1–3 cm, densely pubescent; leaf blade oval, 3–8 × 3–6 cm, abaxially with dense brown and arachnoid tomentum, adaxially densely pubescent or glabrescent, basal veins 5, lateral veins 3 or 4 pairs, veins densely pubescent and sparsely lanate, base subcordate or subtruncate, margin 5–9-toothed on each side, apex acute. Panicle leaf-opposed, small, 3–6 cm, slender, basal branches undeveloped; peduncle 1.5–2 cm, densely pubescent. Pedicels 1.5–2 mm, subglabrate. Buds obovoid-elliptic, 1.5–2 mm, apex rounded. Calyx cupular, glabrous, subentire. Petals calyptrate. Filaments filiform, ca. 1 mm; anthers yellow, oblong, ca. 0.5 mm. Pistil abortive in male flowers. Berry purple-black at maturity, 6–10 mm in diam. Seeds obovoid, apex retuse, chalazal knot elliptic, ventral holes furrowed upward 1/4–1/3 from base. Fl. May–Jun, fr. Jul–Oct.

- Forests, shrublands, hillsides; 200–2800 m. Fujian, Hubei, Hunan, Jiangsu, Jiangxi, Taiwan, Yunnan, Zhejiang.

36. *Vitis bryoniifolia* Bunge, Enum. Pl. China Bor. 11. 1833 [*“bryoniaefolia”*].

嬰菓 ying yu

Plants polygamo-dioecious. Branchlets terete, with longitudinal ridges, densely lanate when young, becoming sparsely so; tendrils bifurcate. Leaves simple; stipules brownish, oval or ovate-lanceolate, 3.5–8 × 2.5–4 mm, membranous, glabrous or subglabrate, entire, apex obtuse; petiole 0.5–4.5 cm, densely lanate, pubescent, or tomentose, becoming sparsely so; leaf blade ovate, 2.5–8 × 2–5 cm, basal veins 5, lateral veins 4–6 pairs, veinlets inconspicuous or slightly raised adaxially, base cordate or deeply so, notch rounded, margin with 9–16 obtuse teeth on each side or pinnatifidly divided. Panicle leaf-opposed, basal branches well developed or sometimes reduced to tendrils, rarely narrow and branches undeveloped; peduncle 0.5–2.5 cm, with arachnoid tomentum when young, becoming sparsely so. Pedicels 1.5–3 mm, glabrous. Buds obelliptic or globose, 1.5–2.2 mm, apex rounded. Calyx ca. 0.2 mm, glabrous, subentire. Filaments filiform, 1.5–1.8 mm; anthers yellow, oblong, 0.4–0.5 mm. Ovary elliptic-ovoid; style short, slender; stigma expanded. Berry purple-red at maturity, 5–8 mm in diam. Seeds obovoid, apex retuse, chalazal knot rounded or elliptic, ventral holes narrow, furrowed upward ca. 3/4 from base. Fl. Apr–Aug, fr. Jun–Oct.

- Forests in valleys, shrublands, streamsides, fields; 100–2500 m. Anhui, Fujian, Guangdong, Guangxi, Hebei, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Yunnan, Zhejiang.

- 1a. Leaves simple, 3–5(–7)-parted or lobed, rarely mixed with undivided ones 36a. var. *bryoniifolia*
- 1b. Leaves 3-foliolate or 3–5-parted 36b. var. *ternata*

36a. *Vitis bryoniifolia* var. *bryoniifolia*

嬰菓(原变种) ying yu (yuan bian zhong)

Vitis adstricta Hance; *V. bryoniifolia* var. *mairei* (H. Lévêillé) W. T. Wang; *V. bryoniifolia* var. *multilobata* S. Y. Wang & Y. H. Hu; *V. flexuosa* Thunberg var. *mairei* H. Lévêillé; *V. novisinesis* Vassilczenko; *V. thunbergii* Siebold & Zuccarini var. *adstricta* (Hance) Gagnepain; *V. thunbergii* var. *mairei* (H. Lévêillé) Lauener.

Leaves simple, 3–5(–7)-parted or lobed, rarely mixed with undivided ones; leaf blade abaxially with dense arachnoid tomentum and short hairs, then becoming sparsely so, rarely mostly pubescent with short hairs and only sparsely lanate, base constricted to rounded, apex of midlobes acute or acuminate.

- Forests in valleys, shrublands, streamsides, fields; 100–2500 m. Anhui, Fujian, Guangdong, Guangxi, Hebei, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Yunnan.

36b. *Vitis bryoniifolia* var. *ternata* (W. T. Wang) C. L. Li, Chin. J. Appl. Environ. Biol. 2: 253. 1996.

三出嬰菓 san chu ying yu

Vitis adstricta var. *ternata* W. T. Wang, Acta Phytotax. Sin. 17(3): 76. 1979.

Leaves 3-foliolate or 3–5-parted; leaf blade abaxially sparsely lanate.

• Zhejiang.

37. *Vitis lanceolatifolia* C. L. Li, Chin. J. Appl. Environ. Biol. 2: 253. 1996 [*“laceolatifolia”* & *“lanceolatifolia”*].

鸡足葡萄 ji zu pu tao

Vitis piasezkii Maximowicz var. *angusta* W. T. Wang.

Branchlets terete, with longitudinal ridges, densely rubiginous lanate; tendrils bifurcate. Leaves palmate, 3–5-foliolate; stipules brownish, elliptic, 1.8–2.5 × 1–1.3 mm, membranous, glabrous or subglabrate, entire, apex acute; petiole 3–5 cm, with dense brown and arachnoid tomentum; leaflets abaxially with

dense brown arachnoid tomentum, adaxially with sparse arachnoid tomentum when young, then glabrate, only midvein pilose with very short hairs, lateral veins 3–5 pairs, veinlets inconspicuous; central leaflet lanceolate, rarely oblong or obovate-lanceolate, 3.5–9 × 1.5–2.5 cm, base truncate, margin with 5 or 6 sharp teeth on each side, apex acuminate; lateral leaflets ovate-lanceolate, 3–8 × 1.2–3 cm, base asymmetric, obliquely cuneate or rounded, margin finely 6–11-toothed, apex acuminate. Panicle leaf-opposed, loose, basal branches well developed; peduncle 4–8 cm, with dense rubiginous arachnoid tomentum. Pedicel 1–1.3 mm, subglabrate. Buds obovoid, 1.7–2.8 mm, apex rounded. Calyx teeth inconspicuous. Ovary oval; style short. Berry globose, 8–10 mm in diam. Seeds obovoid, apex subrounded, chalazal knot elliptic, raphe raised. Fl. May, fr. Aug–Sep.

• Forests or shrublands by streams, hillsides; 600–800 m. Guangdong, Hunan, Jiangxi.

