

7. BUDDLEJA Linnaeus, Sp. Pl. 1: 112. 1753.

醉鱼草属 zui yu cao shu

Shrubs, less often trees, lianas, or suffrutescent herbs. Branches terete, 4-angled, or 4-winged. Leaves opposite, rarely alternate; stipules usually leafy, suborbicular and auriculate or reduced to a transverse line; petiole often short; leaf blade margin entire, crenate, or dentate. Inflorescences terminal and/or axillary, usually many flowered; bracts mostly leafy; bracteoles resembling sepals. Flowers 4-merous, bisexual or unisexual. Calyx campanulate or subcampanulate, less often cupular or obconical, tube usually longer than lobes. Corolla campanulate, cupular, salverform, or funnellform; tube cylindrical, straight to curved, usually longer than lobes; lobes imbricate, rarely valvate. Stamens inserted on corolla tube, usually included, alternate with corolla lobes; filaments shorter to longer than anthers; anthers introrse, 2-locular, base usually deeply cordate. Ovary 2(–4)-locular; ovules several to many per locule. Style short to long; stigma often large, clavate, capitate, or less often 2-lobed. Fruit a septicial 2-valved capsule or (in *Buddleja madagascariensis*) many-seeded berry. Seeds small, often winged; endosperm fleshy; embryo straight.

About 100 species: tropics and subtropics of America, Africa, and Asia; 20 species and five hybrids in China.

Within China at least five recognizable hybrids are occasionally found of which three have been given hybrid epithets. These hybrids are intermediate between parental species and are essentially impossible to key out.

- 1a. Leaves alternate (see also *B. ×wardii*) 1. *B. alternifolia*
- 1b. Leaves opposite (sometimes apical leaves alternate in *B. asiatica*).
 - 2a. Corolla 2.3–3 cm, throat to 9 mm in diam., tube (1.2–)1.7–2.1 cm; fruit a capsule 1–1.6 cm 2. *B. colvilei*
 - 2b. Corolla to 2 cm, throat to 3.5 mm in diam., tube to 1.3 cm (to 1.7 cm in *B. lindleyana*); fruit a capsule (3–)4–8(–1.2) cm or a globose berry 2–2.5 mm (*B. madagascariensis*).
 - 3a. Inflorescences dense spikes with many bracts of which some are longer than flowers 3. *B. yunnanensis*
 - 3b. Inflorescences not dense spikes or if so then only some pairs of bracts exceeding flowers (see *B. asiatica* and *B. crispa*).
 - 4a. Corolla mostly curved, outside covered with a short indumentum; anthers mostly inserted at or below middle of corolla tube (above middle in *B. brachystachia*); inflorescences usually spicate (thyrsoid in *B. brachystachia*).
 - 5a. Leaf blade 1–3.5 × 0.5–1.7 cm, apex acute to slightly obtuse; inflorescences 1.5–3 × 1.5–2.5 cm; ovary stellate tomentose except glabrous at base 4. *B. brachystachya*
 - 5b. Leaf blade 3–16 × 1.5–7 cm (occasionally smaller), apex acuminate to less often acute (sometimes obtuse in *B. curviflora*); inflorescences 4–20 × 2–4 cm; ovary glabrous.
 - 6a. Branchlets terete or occasionally obscurely angular, (1–)2–3 mm in diam. when dry; leaf margin entire to subentire; calyx and corolla outside short stellate tomentose to stellate pubescent and with some glandular hairs 5. *B. curviflora*
 - 6b. Branchlets quadrangular to subquadrangular, 1(–2) mm in diam. when dry; leaf margin coarsely sinuate-dentate or entire; calyx and corolla outside pubescent with glandular hairs which may be accompanied by some stellate hairs 6. *B. lindleyana*
 - 4b. Corolla straight, outside glabrous, partly hairy, or entirely stellate tomentose; anthers inserted at or above middle of corolla tube or if inserted lower to middle of corolla tube then outside glabrous or only partly hairy (*B. forestii* and *B. davidii*); inflorescences not spicate or if spicate then corolla tube less than 5 mm (*B. asiatica* and *B. myriantha*), or broadly cylindrical and 8–11 × 2–3.2 mm (*B. macrostachya*), or leaves ± lobed (*B. crispa*) (see also *B. brachystachya*).
 - 7a. Leaf blade ovate to triangular or narrowly so, base mostly rounded to cordate and abruptly narrowed into petiole; seeds not winged 7. *B. crispa*
 - 7b. Leaf blade narrowly elliptic to ovate, base mostly cuneate or decurrent but never abruptly narrowed or cordate; seeds winged (not winged in *B. madagascariensis*).
 - 8a. Corolla tube outside glabrous or partly hairy (portion included in the calyx tube always glabrous).
 - 9a. Inflorescences paniculate, rather lax 8. *B. delavayi*
 - 9b. Inflorescences thyrsoid or spiciform, occasionally paniculate in *B. forestii*, mostly rather dense.
 - 10a. Corolla tube broadly cylindrical, 7–11 × (1.2–)2–3.5 mm 9. *B. forestii*
 - 10b. Corolla tube obconic and to 6.5 mm or narrowly cylindrical and 6–11.5 × ca. 1 mm.
 - 11a. Corolla tube obconic, 4–6.5 mm; stamens inserted just inside corolla mouth; corolla lilac 10. *B. albiflora*

- 11b. Corolla tube narrowly cylindric or nearly so, 6–11.5 mm; stamens inserted at ± middle or near base of corolla tube; corolla white to dark purple (see also *B. davidii* × *B. fallowiana*) 11. *B. davidii*
- 8b. Corolla tube outside entirely stellate tomentose.
- 12a. Corolla tube 2.5–6 mm, if more than 5 mm then mostly over 2 mm wide; inflorescences thyrsoïd or spicate (paniculate sometimes in *B. nivea*).
- 13a. Ovary glabrous or scaly.
- 14a. Inflorescences spiciform; lower branches not longer than others; corolla mostly white; leaf blade mostly remotely serrate-dentate 12. *B. asiatica*
- 14b. Inflorescences almost cylindric; lower branches exceeding others; corolla mostly purple; leaf blade mostly serrate 13. *B. myriantha*
- 13b. Ovary stellate tomentose.
- 15a. Calyx and corolla outside short stellate tomentose; calyx lobes not obscured by indumentum; corolla tube 1–1.3 wide 13. *B. myriantha*
- 15b. Calyx and corolla outside densely stellate tomentose; calyx lobes often obscured by indumentum; corolla tube mostly 1.8 mm wide or wider.
- 16a. Leaf blade adaxially bullate to rugose; stamens often inserted at middle of corolla tube 14. *B. candida*
- 16b. Leaf blade adaxially not bullate or rugose; stamens inserted just 1–1.5 mm inside corolla mouth 15. *B. nivea*
- 12b. Corolla tube (6–)7–13.5 mm, if less than 8 mm then mostly less than 2 mm wide; inflorescences paniculate, thyrsoïd, or spicate (see also *B. davidii*).
- 17a. Inflorescences racemose, spiciform, or thyrsoïd and calyx lobes acuminate.
- 18a. Inflorescences racemose or spiciform, continuous and dense or less often interrupted and rather lax; corolla tube mostly broadly cylindric and at least 2 mm wide; branchlets quadrangular and often 4-winged 16. *B. macrostachya*
- 18b. Inflorescences thyrsoïd, sometimes interrupted; corolla tube cylindric, 1–1.5 mm wide; branchlets terete 17. *B. fallowiana*
- 17b. Inflorescences paniculate or thyrsoïd, if thyrsoïd then calyx lobes acute or obtuse.
- 19a. Inflorescences lax paniculate; corolla tube 10–13.5 mm, often glabrous just above calyx; calyx lobes acuminate 8. *B. delavayi*
- 19b. Inflorescences paniculate or thyrsoïd, lax or congested; corolla tube 6–10 mm, outside entirely stellate tomentose; calyx lobes acute or obtuse.
- 20a. Corolla dark yellow, orange, or salmon; anthers barely included; fruit baccate 19. *B. madagascariensis*
- 20b. Corolla white to pale purple; anthers with apex at least 1 mm below corolla mouth; fruit capsular.
- 21a. Corolla tube 1.2–1.6(–2) mm in diam., inside pilose up to insertion of stamens or up to just inside mouth; leaf blade margin entire or less often serrate, apex acuminate to rarely acute 18. *B. paniculata*
- 21b. Corolla tube (1.6–)2–2.2 mm in diam., inside densely pilose up to mouth or less often just inside mouth; leaf blade margin entire or sinuate to repand dentate, apex mostly acute to obtuse 20. *B. officinalis*

1. *Buddleja alternifolia* Maximowicz, Bull. Acad. Imp. Sci. Saint-Pétersbourg 26: 494. 1880.

互叶醉鱼草 hu ye zui yu cao

Buddleja legendrei Gagnepain; *B. minima* S. Y. Pao.

Shrubs 1–4(–9) m tall. Branchlets 4-angled to subterete, stellate tomentose, glabrescent; long branchlets delicate, declinate on apical parts. Leaves alternate; leaf blade short stellate

tomentose on both surfaces or adaxially glabrescent, margin entire or undulate-dentate. Leaves on long vegetative branchlets with petiole 1–2 mm; leaf blade very narrowly elliptic to almost linear, 3–10 cm × 2–13 mm, base cuneate, apex acuminate to obtuse. Leaves on floriferous branchlets short petiole to sessile; leaf blade 5–15 × 2–10 mm, base cuneate to decurrent, apex rounded to obtuse. Inflorescences only on short lateral branchlets, paniculate cymes or glomerules, 1–4.5 × 1–3

cm; peduncle very short, usually with 2 leaflets at base. Flowers fragrant. Calyx campanulate, 2.5–4 mm, outside stellate tomentose and with some glandular hairs, inside with a few minute glandular hairs on apical half; lobes triangular, 0.5–1.7 mm. Corolla lilac, violet, or purple, with an orange throat, tube 6–10 × 1.2–1.8 mm; lobes suborbicular to broadly ovate, 1.2–3 × 1.2–3 mm, both surfaces stellate tomentose but glabrescent. Stamens inserted at middle of corolla tube; anthers oblong, 1–1.8 mm. Ovary ovoid to subovoid, 1–2 mm, glabrous. Style ca. 1 mm; stigma large, clavate. Capsule ellipsoid, ca. 5 × 2 mm, glabrous. Seeds narrowly oblong, 1.5–2 mm, winged all around. Fl. Mar–Jul.

* Thickets on river banks, along dry river beds; 1500–4000 m. Gansu, Hebei, Henan, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Xizang.

Ornamental.

Buddleja ×wardii C. Marquand has been named for what is probably a hybrid between *B. alternifolia* and *B. crispa* (Marquand, J. Linn. Soc., Bot. 48: 203. 1929). This hybrid species has been collected in SE Xizang and has the following characteristics: Shrubs 1–5 m tall. Branchlets stellate tomentose, glabrescent. Leaves opposite or alternate; leaf blade elliptic to subelliptic, 0.5–5 × 0.3–2 cm, short stellate tomentose, margin repand-crenate, apex acuminate to acute. Inflorescences cymose, 1.5–2 cm in diam. Calyx campanulate, tube ca. 2 mm; lobes triangular, 0.5–0.7 mm, outside densely stellate tomentose. Corolla lilac, with an orange throat, tube 6–7 × 1–1.5 mm. Stamens inserted at middle of corolla tube, included. Ovary subglobose, ca. 1 mm in diam., stellate tomentose. Style longer than ovary. Capsule subellipsoid, ca. 5 mm in diam., stellate tomentose.

2. *Buddleja colvilei* J. D. Hooker & Thomson in J. D. Hooker, Ill. Himal. Pl. t. 18. 1855.

大花醉鱼草 da hua zui yu cao

Buddleja sessilifolia B. S. Sun ex S. Y. Pao.

Shrubs or small trees 2–6 m tall. Branchlets subquadrangular to subterete, with scattered stellate and glandular hairs, glabrescent. Leaves sessile or with petiole to 1 cm and with same indument as branchlets; leaf blade narrowly elliptic to subelliptic, 7–16 × 2–6 cm, with stellate and scattered glandular hairs when young, glabrescent, base cuneate to rounded or decurrent, margin serrate, apex acuminate. Inflorescences terminal and in axils of upper leaves, paniculate or thyrsoid cymes, 7–23 × 4–6 cm. Calyx campanulate, 6–8 × 4–8 mm, tube 4–5 mm; lobes ovate to triangular, 1.5–3 × 1.5–3 mm, outside densely stellate tomentose with glandular hairs or with glandular and ± scattered stellate hairs, inside with glandular hairs. Corolla purple to wine red, 2.3–3 cm; tube broadly cylindrical, (1.2–) 1.7–2.1 cm, base 5–8 mm in diam., throat to 9 mm in diam.; lobes suborbicular, 5–10 × 5–10 mm, outside with some stellate and glandular hairs but soon glabrescent, inside pilose at throat, margin crenate. Stamens inserted 2–6 mm below mouth; anthers oblong, 2.5–5 mm, apex obtuse to apiculate. Ovary ovoid, 5–8 mm, stellate tomentose. Style long, thick, glabrous or basally stellate tomentose; stigma capitate. Capsule ellipsoid, 1–1.6 cm × 6–8 mm, glabrous or stellate tomentose. Seeds oblong, 1–1.5 mm, not winged. Fl. Jun–Sep.

Open forests, thickets, open places; 1600–4200 m. S Xizang, Yunnan (Mojiang Hanizu Zizhi Xian, Luxi Xian) [Bhutan, India, Nepal, Sikkim].

3. *Buddleja yunnanensis* Gagnepain, Notul. Syst. (Paris) 2: 187. 1912.

云南醉鱼草 yun nan zui yu cao

Shrubs 0.5–4 m tall. Branchlets nearly 4-angled, stellate pubescent, glabrescent. Leaves subsessile to petiole 5 mm; leaf blade elliptic, ovate, or narrowly ovate, 2–12 × 1–4.5 cm, abaxially densely stellate tomentose, adaxially glabrous or with scattered stellate hairs, base cuneate to decurrent, margin subentire to coarsely dentate-serrate, apex acuminate; lateral veins 4–6 per side. Inflorescences terminal, densely spicate, 2–6 × 1.5–2 cm. Flowers sessile. Calyx campanulate, 4–6 mm, outside densely stellate and glandular hairy, inside often glabrous; lobes triangular, 1–2 mm. Corolla lilac, 1–1.2 cm; tube 8–9.5 mm, outside densely stellate and glandular hairy, inside stellate pilose and with some glandular hairs except for base; lobes oblong, 2–2.5 × ca. 1.5 mm. Stamens inserted near base of corolla tube; anthers ovate. Ovary ovoid, 2–3 × ca. 2 mm, stellate tomentose except for lower third; stigma subcapitate. Capsule ellipsoid, 4–5 × 2.3–3 mm, stellate pubescent. Seeds obliquely ovoid to ellipsoid, not winged. Fl. Jun–Oct.

* Forest edges, thickets in mountains; 1000–2500 m. Yunnan.

4. *Buddleja brachystachya* Diels, Notes Roy. Bot. Gard. Edinburgh 5: 249. 1912.

短序醉鱼草 duan xu zui yu cao

Buddleja nana W. W. Smith; *B. purdomii* W. W. Smith; *B. purdomii* var. *fulvotomentosa* Z. Y. Zhang.

Shrubs to 1 m tall. Branchlets subquadrangular to subterete, stellate tomentose, glabrescent. Leaves sessile or petiolate; petiole to 7 mm, stellate tomentose; leaf blade elliptic to ovate or very narrowly so, 1–3.5 × 0.5–1.7 cm, abaxially sparsely to densely stellate tomentose and with some glandular hairs, adaxially sparsely so subglabrous, base rounded, cuneate, or decurrent, margin entire or obscurely sinuate, apex acute to slightly obtuse; lateral veins 4 or 5 per side. Inflorescences terminal thyrsoid cymes, 6–12-flowered, 1.5–3 × 1.5–2.5 cm. Calyx outside short stellate tomentose; lobes triangular to narrowly so, 1–4 mm. Corolla lavender; tube often curved, 0.8–1.3 cm × 1.5–2 mm, outside short stellate tomentose, inside pilose or sometimes glabrous at base; lobes suborbicular, 3–5 × 3–5 mm, inside glabrous, margin entire or subcrenate. Stamens inserted slightly above middle of corolla tube, included; anthers oblong to suboblong. Ovary ellipsoid, 1.5–2 mm, stellate tomentose except for glabrous base. Stigma clavate. Capsule ovoid to ellipsoid, 5–6 × ca. 2 mm, glabrous or stellate tomentose. Seeds ovate, ca. 1 mm, not winged. Fl. Mar–Jun.

* Scrub in mountains, along dry river banks; 1000–2700 m. Gansu, Sichuan, Yunnan.

5. *Buddleja curviflora* Hooker & Arnott, Bot. Beechey Voy. 267. 1838.

台湾醉鱼草 tai wan zui yu cao

Buddleja formosana Hatusima; *B. venenifera* Makino.

Shrubs 1–1.5 m tall; leaves, petioles, and inflorescences tawny tomentose or pubescent with stellate hairs, glabrescent. Stems brown; branchlets terete or occasionally obscurely angular. Petiole 0.5–2 cm; leaf blade ovate, less often narrowly ovate to elliptic, 5–16 × 2–7 cm, base cuneate, rounded, or subtruncate, margin entire, subentire, or with some obscure teeth, apex acuminate, acute, or sometimes obtuse; lateral veins 5–7 per side. Inflorescences terminal, spicate or thyrsoid cymes, 5–20 × 2–4 cm. Calyx campanulate, 2–3.5 mm, outside stellate tomentose and with minute glandular hairs; lobes ovate to triangular, 0.5–1 mm, inside glabrous. Corolla purple, 1.1–2 cm; tube dilated and curved, apically 1.4–2.5 mm in diam., basally 1.2–1.5 mm in diam.; lobes suborbicular, 1.5–2.5 × 1.5–2.5 mm, outside stellate tomentose or pubescent and with minute glandular hairs. Stamens inserted near or at middle of corolla tube; anthers oblong, 1.4–2 mm. Pistil glabrous. Ovary ovoid to subovoid, 1.8–2.5 × 1.2–1.5 mm. Capsule ellipsoid, 5–7 × 2–3 mm, glabrous. Seeds obliquely ellipsoid, 1.2–1.5 mm, winged at both ends. Fl. Apr–Sep, fr. Aug–Dec.

Thickets; 100–300 m. S Taiwan [Japan].

6. *Buddleja lindleyana* Fortune in Lindley, Bot. Reg. 30 (Misc.): 25. 1844.

醉鱼草 zui yu cao

Adenoplea lindleyana (Fortune) Small; *Buddleja lindleyana* var. *sinuatodentata* Hemsley.

Shrubs 1–3 m tall; young branchlets, leaves abaxially, petioles, and inflorescences densely rusty pubescent with stellate and/or glandular hairs. Stems brown, branchlets quadrangular to subquadrangular. Stipules absent. Petiole 1–7 mm; leaf blade ovate to elliptic or narrowly so, 3–11 × 1–5 cm, membranous when dry, adaxially glabrous or sparsely pubescent, base cuneate, margin entire to coarsely sinuate-dentate, apex acuminate; lateral veins 6–8 per side, conspicuous. Inflorescences terminal, spicate cymes, 4–20 × 2–4 cm; lower bracts leafy, often linear, 1–10 mm. Calyx campanulate to urceolate, 2–4 mm; lobes broadly triangular, 0.2–1 × 0.5–1 mm, outside densely pubescent with glandular and often also with some stellate hairs. Corolla purple, 1.3–2 cm; tube 1.1–1.7 cm, curved below middle, apically 2.5–4 mm in diam., basally 1–1.5 mm wide, outside pubescent with glandular and often also with some stellate hairs; lobes suborbicular, 2–3.5 × 2–3 mm. Stamens inserted at or near base of corolla tube; anthers oblong to ovate. Pistil glabrous. Ovary ovoid, 1.5–2.2 mm. Stigma clavate. Capsule ellipsoid, 4–6 × 1.5–2 mm, glandular-pubescent or less often glabrous. Seeds pale brown, obliquely tetrahedral, narrowly winged at edges. Fl. Apr–Oct, fr. Apr of following year.

* Mountains beside trails, scrub by streams, forest edges; 200–2700 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Yunnan, Zhejiang.

Cultivated, medicinal, poisonous.

7. *Buddleja crispa* Benthham, Scroph. Ind. 43. 1835.

皱叶醉鱼草 zhou ye zui yu cao

Buddleja acosma C. Marquand; *B. agathosma* Diels; *B. agathosma* var. *glandulifera* C. Marquand; *B. caryopteridifolia* W.W. Smith; *B. caryopteridifolia* var. *eremophila* (W.W. Smith) C. Marquand; *B. caryopteridifolia* var. *fasciculiflora* Z. Y. Zhang; *B. caryopteridifolia* var. *lanuginosa* C. Marquand; *B. crispa* var. *amplexicaulis* Z. Y. Zhang; *B. crispa* var. *dicipiens* Schmidt; *B. crispa* var. *farreri* (I. B. Balfour & W. W. Smith) Handel-Mazzetti; *B. crispa* var. *glandulifera* (C. Marquand) S. Y. Pao; *B. crispa* var. *grandiflora* (C. Marquand) S. Y. Pao; *B. eremophila* W.W. Smith; *B. farreri* I. B. Balfour & W.W. Smith; *B. hastata* Prain ex C. Marquand; *B. incompta* W.W. Smith; *B. praecox* Lingelsheim; *B. sterniana* A. Cotton; *B. tibetica* W. W. Smith; *B. tibetica* var. *farreri* (I. B. Balfour & W.W. Smith) C. Marquand; *B. tibetica* var. *glandulifera* C. Marquand; *B. tibetica* var. *grandiflora* C. Marquand; *B. tibetica* var. *truncatifolia* (H. Léveillé) C. Marquand; *B. truncata* Gagnepain; *B. truncatifolia* H. Léveillé; *B. whitei* Kraenzlin.

Shrubs 0.2–5 m tall. Branchlets subterete to 4-angled, densely stellate tomentose. Stipules suborbicular to cordate, 0.3–3 cm. Leaves petiolate, sessile, or connate-perfoliate, usually amplexicaul on vigorous shoots; petiole often winged, to 4 cm; leaf blade ovate to triangular or narrowly so, 1–20 × 0.5–8 cm, densely tomentose, often glabrescent especially adaxially, base mostly rounded to cordate, margin crenate, serrate, dentate, or shallowly lobed and then lower lobes often large, apex acuminate, acute, or obtuse; lateral veins 3–11 per side. Inflorescences terminal, paniculate or spicate cymes, 1–20 × 1–15 cm; bracteoles several to many, almost linear, 0.4–2.5 cm. Calyx campanulate, 3–9 mm, outside densely stellate tomentose and with some glandular hairs, inside often glabrous; lobes ovate to triangular, 0.8–1.7 mm. Corolla lilac, violet, or purple, with an orange throat, 0.7–1.6 cm, outside densely to sparsely stellate tomentose and with glandular hairs or glabrous, inside with a pilose belt; tube 6–12 × 1–2 mm; lobes suborbicular, 1.2–4 × 1.2–4 mm. Stamens inserted slightly above or at middle of corolla tube; anthers sessile. Pistil 3–5 mm. Ovary ovoid, 1.2–2 mm, stellate tomentose. Style 1.5–2.5 mm, base stellate tomentose; stigma clavate. Capsule ellipsoid, 5–6 × 2–3 mm, stellate tomentose. Seeds ovate-oblong, ca. 1 mm, not winged. Fl. Feb–Aug.

Dry river bottoms, slopes with boulders, exposed cliffs, thickets; 1400–4300 m. Gansu, Sichuan, Xizang, Yunnan [Afghanistan, Bhutan, N India, Nepal, Pakistan].

Medicinal.

8. *Buddleja delavayi* Gagnepain, Notul. Syst. (Paris) 2: 190. 1912.

腺叶醉鱼草 xian ye zui yu cao

Buddleja delavayi var. *tomentosa* H. F. Comber; *B. glabrescens* W. W. Smith; *B. heliophila* W. W. Smith; *B. heliophila* var. *adenophora* Handel-Mazzetti; *B. heliophila* var. *angustifolia* C. Marquand; *B. heliophila* var. *pubescens* C. Marquand.

Shrubs or small trees 1–6 m tall. Branches subterete, glabrous or stellate tomentose, soon glabrescent; nodes slightly inflated. Petiole to 5 mm; leaf blade ovate to very narrowly elliptic, 4–16 × 1.5–6.5 cm, stellate tomentose to almost glabrous, abaxially often with some glandular hairs, base cuneate to decurrent, margin usually entire or repandentate, apex acuminate; lateral veins 4–7 per side, abaxially conspicuous. Inflorescences terminal and axillary, panicle cymes, 4–12 × 3–7 cm; peduncle stellate tomentose. Calyx campanulate, 2.5–5 mm; lobes triangular, 0.5–1.5 mm, outside stellate tomentose or glabrous, apex acuminate. Corolla rose pink to lavender, 1.1–1.6 cm, outside sparsely to densely stellate tomentose and often with some glandular hairs; tube 1–1.4 cm × 1.5–2 mm, inside with a few scattered glandular hairs; lobes suborbicular, 2–4.5 mm, inside glabrous. Stamens inserted slightly above middle of corolla tube, included; anther sessile or subsessile, ovate to triangular, 1.5–2 mm. Ovary ovoid, 1.5–2 mm, glabrous or stellate tomentose. Style short; stigma clavate. Capsule ellipsoid, 4–10 × 2–4 mm, glabrous or partially stellate tomentose. Seeds narrowly elliptic, ca. 2 mm, winged all around. Fl. Jan–Apr.

* Forests edges, thickets in valleys, along trails in mountains; 2000–3000 m. Xizang, Yunnan.

9. *Buddleja forrestii* Diels, Notes Roy. Bot. Gard. Edinburgh 5: 249. 1912.

滇川醉鱼草 dian chuan zui yu cao

Buddleja cooperi W. W. Smith; *B. forrestii* var. *gracilis* Lingelsheim; *B. henryi* Rehder & E. H. Wilson; *B. henryi* var. *glabrescens* C. Marquand; *B. latiflora* S. Y. Pao; *B. limitanea* W. W. Smith; *B. longifolia* Gagnepain; *B. pterocaulis* A. B. Jackson; *B. subherbacea* Keenan; *B. taliensis* W. W. Smith.

Shrubs 1–6 m tall; young branchlets, leaves, petioles, and inflorescences glabrous or stellate pubescent or tomentose and with glandular hairs but soon glabrescent. Branchlets nearly 4-angled, often narrowly winged. Petiole 2–15 mm; leaf blade ± narrowly elliptic, 5–35 × 1–8 cm, base cuneate to decurrent, margin crenate-serrate, serrate, less often dentate, or subentire, apex acuminate; lateral veins 8–18 per side. Inflorescences terminal and often also in or above axils of upper leaves, thyrsoid or less often paniculate, lax to almost spikelike and then interrupted or not, 6–25 × 2–8 cm. Calyx campanulate, 3.5–7 mm, outside glabrous or stellate tomentose and with some minute glandular hairs; lobes triangular, 1–2 mm. Corolla orange, pinkish, purple, or mauve, 0.9–1.6 cm; tube 7–11 × (1.2–)2–3.5 mm, inside pilose above middle; lobes suborbicular, 2–6 × 2–5.5 mm, inside glabrous or with some glandular hairs, outside glabrous or stellate tomentose and with some minute glandular hairs. Stamens inserted above or below middle of corolla tube; anthers ovate. Ovary ovoid to subovoid, 2–6 × 1–3 mm, stellate tomentose or glabrous. Capsule ellipsoid to narrowly ovoid, 6–12 × 2–4 mm, with some glandular hairs. Seeds narrowly elliptic, 2–4 mm, winged all around. Fl. Jun–Oct.

Open woodlands, forest edges, scrub, mostly near riverbanks in mountains; 1800–4000 m. Sichuan, SE Xizang, Yunnan [Bhutan, India, N Myanmar].

Buddleja forrestii × *B. macrostachya* has been reported from Mengzi Xian in Yunnan (Leeuwenberg, Meded. Landbouwhogeschool 79(6): 149. 1979). This hybrid has the following characteristics: Shrubs. Branchlets 4-angled or nearly so and often narrowly winged, stellate tomentose or pubescent and/or with glandular hairs, glabrescent. Petiole to 1.5 cm; leaf blade elliptic to narrowly elliptic, 10–20 × 3–7 cm, stellate tomentose, margin crenate-serrate to serrate. Inflorescences thyrsoid or paniculate cymes. Calyx campanulate, outside glabrous or stellate tomentose and with some minute glandular hairs. Corolla purple to pinkish; tube ca. 9 mm, outside glabrous or loosely stellate tomentose only on apical half; lobes suborbicular, 2–6 × 2–6 mm. Stamens inserted below corolla mouth. Ovary ovoid, 2–4 × 1.2–1.4 mm, stellate tomentose but basally glabrous. Capsule ellipsoid, 7–10 mm, stellate tomentose.

10. *Buddleja albiflora* Hemsley in F. B. Forbes & Hemsley, J. Linn. Soc., Bot. 26: 118. 1889.

巴东醉鱼草 ba dong zui yu cao

Buddleja albiflora var. *giraldii* (Diels) Rehder & E. H. Wilson; *B. albiflora* var. *hemsleyana* (Koehne) C. K. Schneider; *B. giraldii* Diels; *B. hemsleyana* Koehne.

Shrubs 1–3 m tall; branchlets, petioles, inflorescences, calyces, and outside of corollas glabrous or less often minutely stellate tomentose and with glandular hairs when young but glabrescent. Branchlets terete or nearly 4-angled. Petiole 2–15 mm; leaf blade ovate to narrowly elliptic, 7–30 × 1.5–10 cm, abaxially minutely stellate tomentose and with some glandular hairs, adaxially glabrous or with scattered stellate and/or glandular hairs, base cuneate to rounded, margin crenate-serrate to sometime subentire, apex acuminate; lateral veins 10–17 per side. Inflorescences terminal, thyrsoid cymes, mostly narrow and almost cylindrical, 7–25 × 2–5 cm. Calyx campanulate, 2–3.5 mm; lobes triangular, 0.5–1.7 mm. Corolla lilac, 5–8 mm; tube 4–6.5 × 1.5–3 mm, outside glabrous or pilose above middle; lobes suborbicular, 1.2–1.5 × 1.2–1.5 mm. Stamens inserted just inside corolla mouth; anther sessile. Pistil glabrous. Ovary ovoid, 1.5–1.7 mm. Style 1–1.5 mm; stigma clavate. Capsule ellipsoid, 5–8 × 2–3 mm, glabrous. Seeds brown, fusiform, narrowly winged at ends. Fl. Feb–Sep.

* Open woodlands, forest edges, stream banks; 500–3000 m. Gansu, Guizhou, Henan, Hubei, Hunan, Shaanxi, Sichuan, Yunnan.

Buddleja ×alata Rehder & E. H. Wilson has been named for what is probably a hybrid between *B. albiflora* and *B. nivea* (Rehder & E. H. Wilson in Sargent, Pl. Wilson. 1: 570. 1913). This hybrid species has been collected in W Sichuan at 1300–3000 m and has the following characteristics: Shrubs 1–3 m tall; young branchlets, petioles, leaves abaxially, calyces, and corollas with scattered stellate and glandular hairs to subglabrous. Branchlets 4-angled and with 4 elevated wings. Petiole 1–1.5 cm; leaf blade narrowly ovate, 15–25 × 4–8 cm, base cuneate, margin serrate, apex acuminate; veins reticulate. Inflorescences terminal and in axils of apical leaves, seemingly racemose or thyrsoid cymes, 10–20 × 1.5–2.5 cm; bracts and bracteoles subulate, ca. 2.5 mm. Calyx campanulate, ca. 3 mm; lobes triangular, ca. 1 mm. Corolla lilac, outside stellate tomentose; tube ca. 5 mm, inside pilose but glabrous at base; lobes suborbicular,

1–1.5 × 1–1.5 mm, inside pilose only at base. Stamens inserted just below corolla mouth. Ovary ca. 1 mm, stellate tomentose. Style ca. 1 mm; stigma clavate, ca. 0.5 mm. Capsule oblong, ca. 5 mm, sparsely stellate tomentose. Seeds winged at both ends. Fl. Apr–Oct.

11. *Buddleja davidii* Franchet, *Nouv. Arch. Mus. Hist. Nat.*, sér. 2, 10: 65. 1887.

大叶醉鱼草 da ye zui yu cao

Buddleja davidii var. *alba* Rehder & E. H. Wilson; *B. davidii* var. *glabrescens* Gagnepain; *B. davidii* var. *magnifica* (E. H. Wilson) Rehder & E. H. Wilson; *B. davidii* var. *nanhoensis* (Chittenden) Rehder; *B. davidii* var. *superba* (Veitch) Rehder & E. H. Wilson; *B. davidii* var. *veitchiana* (Veitch) Rehder & Bailey; *B. davidii* var. *wilsonii* (E. H. Wilson) Rehder & E. H. Wilson; *B. shaanxiensis* Z. Y. Zhang; *B. shimidzuana* Nakai; *B. striata* Z. Y. Zhang; *B. striata* var. *zhouquensis* Z. Y. Zhang; *B. variabilis* Hemsley; *B. variabilis* var. *magnifica* E. H. Wilson; *B. variabilis* var. *nanhoensis* Chittenden; *B. variabilis* var. *prostrata* C. K. Schneider; *B. variabilis* var. *superba* Veitch; *B. variabilis* var. *veitchiana* Veitch; *B. variabilis* var. *wilsonii* E. H. Wilson.

Shrubs 0.5–5 m tall; young branchlets, leaves abaxially, petioles, and inflorescences white tomentose or pubescent with stellate hairs. Branchlets nearly 4-angled. Stipules often present, suborbicular to ovate, 1–6 mm. Petiole 1–5 mm; leaf blade narrowly ovate, narrowly elliptic, or very narrowly ovate, 4–20 × 0.3–7.5 cm, adaxially dark green and glabrous or subglabrous, base cuneate, margin serrate, apex acuminate; lateral veins 9–14 per side. Inflorescences terminal, seemingly racemose or thyrsoid cymes, 4–30 × 2–5 cm; lower bracts leafy, others small and linear. Calyx campanulate, 2–3.5 mm, outside stellate pubescent to glabrous; lobes narrowly triangular, 0.5–2 mm. Corolla violet to dark purple, sometimes white, with an orange-yellow throat, 0.8–1.4 cm, outside glabrous or stellate pubescent and/or with glandular hairs; tube narrowly cylindrical or subcylindrical, 6–11.5 × 1–1.5 mm, inside pilose except at base; lobes suborbicular, 1.5–3 × 1.5–3 mm, outside glabrous. Stamens inserted at middle to near base of corolla tube; anthers oblong, 0.8–1.2 mm. Ovary ovoid, 1.2–2 × 0.8–1.1 mm, glabrous to minutely pubescent, sometimes with glandular hairs. Style 0.5–1.5 mm; stigma clavate. Capsule brown, narrowly ellipsoid to narrowly ovoid, 5–9 × 1.5–2 mm, glabrous or sparsely stellate pubescent. Seeds ellipsoid, 2–4 × ca. 0.5 mm, long winged at both ends. Fl. May–Oct.

Thickets on mountain slopes, side of draws in mountains; 800–3000 m. Gansu, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Sichuan, Xizang, Yunnan, Zhejiang [Japan (most probably introduced)].

Medicinal; ornamental.

Buddleja davidii × *B. fallowiana* has been reported from Yunnan (Leeuwenberg, *Meded. Landbouwhogeschool* 79(6): 149. 1979). This hybrid has the following characteristics: Shrubs. Branchlets terete, densely stellate tomentose. Leaves subsessile to petiole 6 mm; leaf blade ovate to narrowly elliptic, 4–13 × 1–6.5 cm, both surfaces densely stellate tomentose to adaxially glabrescent, base cuneate to decurrent, margin crenate-serrate, apex acuminate, acute, or obtuse, venation inconspicuous. Inflorescences terminal, thyrsoid,

5–15 × 2–3 cm. Calyx campanulate, 3.5–5 mm, inside densely stellate tomentose. Corolla violet to lilac, with an orange-yellow throat, outside densely stellate tomentose and with glandular hairs, tube ca. 9 mm; lobes orbicular, 1–3 × 1–3 mm. Stamens inserted above middle of corolla tube; anthers oblong. Ovary oblong, stellate tomentose. Fl. May–Oct.

12. *Buddleja asiatica* Loureiro, *Fl. Cochinch.* 1: 72. 1790.

白背枫 bai bei feng

Buddleja acuminatissima Blume; *B. amentacea* Kraenzlin; *B. arfakensis* Kanehira & Hatusima; *B. asiatica* var. *brevicuspe* Koorders; *B. asiatica* var. *densiflora* (Blume) Koorders & Valetton; *B. asiatica* var. *salicina* (Lamarck) Koorders & Valetton; *B. asiatica* var. *sundaica* (Blume) Koorders & Valetton; *B. densiflora* Blume; *B. neemda* Buchanan-Hamilton ex Roxburgh; *B. neemda* var. *philippensis* Chamisso & Schlechtendal; *B. salicina* Lamarck; *B. serrulata* Roth; *B. subserrata* Buchanan-Hamilton ex D. Don; *B. sundaica* Blume; *B. virgata* Blanco; *Vitex esquirolii* H. Léveillé.

Shrubs or small trees 1–8 m tall; young branchlets, leaves abaxially, petioles, and inflorescences densely stellate pubescent or woolly with white, gray, or tawny hairs. Branchlets terete or subterete. Leaves opposite, sometimes alternate toward branchlet apex. Petiole 2–15 mm; leaf blade narrowly to very narrowly elliptic, 6–30 × 1–7 cm, adaxially stellate pubescent or glabrous, base cuneate to decurrent, margin subentire or remotely serrate-dentate, apex acuminate; lateral veins 10–14 per side. Inflorescences terminal and/or axillary, 1–3 or more seemingly racemose cymes together, 5–25 × 0.7–2 cm; bracteoles linear. Pedicel to 2 mm. Calyx campanulate, 1.5–4.5 mm; lobes triangular, outside stellate pubescent or tomentose, inside glabrous. Corolla white, rarely pale violet or greenish; tube 2.5–4.8 mm, outside densely to sparsely stellate pubescent; lobes suborbicular, 1–1.7 × 1–1.5 mm, spreading. Stamens inserted above middle of corolla tube to nearly at mouth, included; anthers oblong. Ovary ovoid to narrowly ovoid, 1–1.5 × 0.8–1 mm, glabrous or scaly. Style short; stigma capitate. Capsule ellipsoid, 3–5 × 1.5–3 mm, glabrous or sparsely and minutely scaly. Seeds pale brown, elliptic, 0.8–1 × 0.3–0.4 mm, short winged at both ends. Fl. Jan–Oct; fr. Mar–Dec.

Open places, at edge of open forests, open woodlands; near sea level to 2800 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangxi, Shanxi, Sichuan, Taiwan, Xizang, Yunnan [Bangladesh, Bhutan, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, New Guinea, Pakistan, Philippines, Thailand, Vietnam].

Medicinal and source of perfume.

13. *Buddleja myriantha* Diels, *Notes Roy. Bot. Gard. Edinburgh* 5: 250. 1912.

酒药花醉鱼草 jiu yao hua zui yu cao

Buddleja adenantha Diels; *B. duclouxii* C. Marquand.

Shrubs 1–3 m tall. Branchlets nearly 4-angled, stellate tomentose, glabrescent. Petiole to 6 mm; leaf blade narrowly to very narrowly elliptic, 5–20 × 1–6 cm, abaxially stellate

tomentose, adaxially with stellate hairs and some spreading glandular hairs, base cuneate to decurrent, margin serrate, crenate-serrate, or subentire, apex acuminate; lateral veins 7–12 per side. Inflorescences terminal, almost cylindric, sometimes formed by three slender spicate or thyrsoid cymes, 6–22 × 1–3 cm. Calyx campanulate, 2–4 mm, outside stellate tomentose, inside with minute glandular hairs or glabrous. Corolla purple to violet or white, outside stellate tomentose and often also with glandular hairs, inside pilose but glabrous at base, tube 4–5.8 × 1–1.3 mm; lobes suborbicular, ca. 1–1.2 × 1–1.2 mm, inside glabrous. Stamens inserted just below corolla mouth; anthers sessile, oblong, 0.8–1.2 mm. Ovary ovoid, 1.5–2 mm, glabrous or short stellate tomentose on apical half. Style 1–1.5 mm; stigma clavate. Capsule ellipsoid, 4–6 × 1.5–2 mm, usually glabrous. Seeds fusiform, 2–2.5 mm, narrowly winged at both ends. Fl. Apr–Oct.

Open woodlands, forest edges, thickets, stream banks; 400–3400 m. Fujian, Gansu, Guangdong, Guizhou, Hunan, Sichuan, Xizang, Yunnan [Myanmar].

14. *Buddleja candida* Dunn, Bull. Misc. Inform. Kew 1920: 134. 1920.

密香醉鱼草 mi xiang zui yu cao

Shrubs 1–2 m tall; young branchlets, leaves abaxially, petioles, and inflorescences densely stellate tomentose. Branchlets terete or subterete. Petiole 0.5–1.5 cm; leaf blade oblong or narrowly so, 12–24 × 3–6 cm, adaxially stellate tomentose but glabrescent and bullate to rugose with age, base cuneate to decurrent, margin serrate to crenate, apex acuminate; lateral veins 10–12 per side. Inflorescences terminal panicles composed of several interrupted spikelike thyrsi, 8–20 × 3–11 cm. Calyx campanulate, ca. 3 mm, outside densely stellate tomentose and with some glandular hairs, inside glabrous; lobes triangular, ca. 1.7 mm. Corolla violet, ca. 6 mm; tube ca. 4.8 mm, outside stellate tomentose, inside pilose above middle; lobes suborbicular, ca. 1.2 × 1.2 mm, inside glabrous. Stamens inserted at middle of corolla tube; anthers sessile, oblong, ca. 1.2 mm. Ovary ovoid to conical, ca. 2.2 × 1.5 mm, stellate tomentose except for glabrous base; stigma clavate. Capsule ellipsoid, ca. 6 × 2 mm, stellate tomentose and with glandular hairs. Seeds fusiform, winged at both ends. Fl. Apr–Oct.

Forest edges, thickets on mountains, riverbanks; 1000–2500 m. S Sichuan, SE Xizang, Yunnan [NE India].

Buddleja × *griffithii* (C. B. Clarke) C. Marquand has been named for what is probably a hybrid between *B. candida* and *B. macrostachya* (Marquand, Bull. Misc. Inform. Kew 1930: 194. 1930). This hybrid species has been collected in Qinghai, Xizang, E Bangladesh, and Bhutan at altitudes of 700–800 m and has the following characteristics: Shrubs or small trees, to 6 m tall. Branchlets terete, stellate tomentose. Leaves sessile; leaf blade narrowly to very narrowly elliptic, 4–27 × 1–12 cm wide, both surfaces stellate tomentose or adaxially sometime glabrescent, margin serrate. Inflorescences terminal and axillary, spicate cymes, to 20 × 1–1.5 cm, densely stellate tomentose. Corolla lead blue, with an orange throat; tube 4–5 × ca. 1 mm, rarely smaller; lobes suborbicular, 1–2 mm. Stamens inserted below corolla mouth. Ovary ovoid, stellate tomen-

tose and with glandular hairs. Capsule ellipsoid, 4–5 mm, stellate tomentose. Seeds winged at both ends.

15. *Buddleja nivea* Duthie, Gard. Chron., ser. 3, 38: 275. 1905.

金沙江醉鱼草 jin sha jiang zui yu cao

Buddleja macrostachya Wallich ex Benth var. *yunnanensis* Dop; *B. nivea* var. *yunnanensis* (Dop) Rehder & E. H. Wilson; *B. stenostachya* Rehder & E. H. Wilson.

Shrubs 1–3 m tall; branchlets, leaves abaxially, petioles, and inflorescences densely stellate tomentose. Branchlets terete or 4-angled. Petiole 0.5–1.5 cm; leaf blade narrowly ovate to elliptic, 5–26 × 1.5–11 cm, adaxially glabrous or with spreading hairs and/or stellate tomentose on midrib, base cuneate, rounded, or subcordate, margin serrate to crenate, apex acuminate; lateral veins 12–16 per side. Inflorescences terminal and often also in axils of upper leaves, spicate or thyrsoid cymes, mostly narrow and almost cylindric, 10–30 × 2–5 cm. Calyx campanulate, 3–4 mm, outside densely stellate tomentose, inside glabrous. Corolla purple, 6–8 mm, outside densely stellate tomentose; tube 5–6 × 1.8–3 mm, inside pilose on apical half; lobes suborbicular, 1.2–2 × 1.2–2 mm, inside pilose. Stamens inserted near corolla mouth; anthers narrowly ovate, 1.3–1.5 mm, apex reaching corolla mouth. Ovary ovoid, ca. 2 × 1–1.5 mm, stellate tomentose. Style 1–1.5 mm, glabrous or basally stellate tomentose; stigma capitate. Capsule ellipsoid, 5–8 × 2–3 mm, stellate tomentose. Seeds fusiform to oblong-ellipsoid, 2–3.5 mm, winged at both ends. Fl. Jun–Sep.

* Open woodlands and border of forests, thickets on mountains; 700–3600 m. Sichuan, Xizang, Yunnan.

16. *Buddleja macrostachya* Wallich ex Benth, Scroph. Ind. 42. 1835.

大序醉鱼草 da xu zui yu cao

Buddleja cylindrostachya Kraenzlin; *B. hancockii* Kraenzlin; *B. henryi* Rehder & E. H. Wilson var. *hancockii* (Kraenzlin) C. Marquand; *B. hookeri* C. Marquand, *B. hosseusiana* Kraenzlin; *B. martii* Schmidt.

Shrubs or small trees 1–6 m tall. Branchlets 4-angled to 4-winged, stellate tomentose when young, glabrescent. Leaves sessile or subsessile; interpetiolar stipules leaflike, sometimes deciduous; leaf blade narrowly to very narrowly elliptic, 4–45 × 1–15 cm, abaxially densely stellate tomentose, adaxially stellate tomentose but glabrescent, base cuneate to decurrent into very short petiole or into leaf base, margin crenate-serrate, apex acuminate; lateral veins 16–26 per side. Inflorescences terminal, spicate, dense or less often interrupted, 5–20 × 2.5–4 cm. Calyx campanulate, 3–6 mm, outside stellate tomentose and often with a few glandular hairs, inside glabrous; lobes triangular, 1.2–2.5 × 1–1.8 mm. Corolla mauve, purple, pinkish, or lilac, with an orange to red throat, 0.9–1.5 cm; tube cylindric, 8–11 × 2–3.2 mm, outside stellate tomentose and often with a few glandular hairs, inside villous but basally glabrous; lobes suborbicular, 2–4 × 2–4 mm, inside glabrous. Stamens inserted slightly below corolla

mouth; anthers oblong to narrowly triangular, 2–2.5 mm. Ovary ovoid, 2–4 × 1.5–2.5 mm, stellate tomentose and often with glandular hairs. Style 0.5–3 mm, basally stellate tomentose and with glandular hairs like ovary; stigma clavate. Capsule ellipsoid to narrowly ovoid, 7–10 × 3–4 mm, stellate tomentose, glabrescent. Seeds pale brown, 3–3.5 mm, long winged at both ends. Fl. Mar–Sep.

Scrub on mountain slopes, river banks in forests; 900–3200 m. Guizhou, Sichuan, Xizang, Yunnan [Bangladesh, Bhutan, India, Myanmar, Sikkim, Thailand, Vietnam].

17. *Buddleja fallowiana* I. B. Balfour & W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 10: 15. 1917.

紫花醉鱼草 *zi hua zui yu cao*

Buddleja fallowiana var. *alba* Sabourin.

Shrubs 1–5 m tall; branchlets, leaves abaxially, petioles, inflorescences, bracts, and calyces and corollas outside densely stellate tomentose and with glandular hairs. Branchlets terete. Petiole 5–10 mm; leaf blade ovate to narrowly elliptic, 5–14 × 2–6.5 cm, adaxially densely stellate tomentose when young, glabrescent, base cuneate to decurrent, margin serrate, apex usually acuminate to acute; lateral veins 8–10 per side, inconspicuous. Inflorescences terminal, thyrsoïd, 5–15 × 2–3 cm. Calyx campanulate, 3.5–5 mm; lobes triangular, 1.5–2.5 mm, apex acuminate. Corolla white or lavender, with an orange throat, 9–14 mm; tube cylindric, 7–10 × 1–1.5 mm, outside stellate tomentose, inside pilose but basally glabrous; lobes elliptic to subelliptic, 2–4 × 1.5–3 mm, margin crenate-serrate. Stamens inserted near corolla mouth; anthers oblong, 1–1.5 mm. Pistil stellate tomentose except for glabrous apex of style. Ovary ovoid, 1.2–2 × 1–1.4 mm; stigma large, clavate. Capsule ellipsoid, 4–7 × 2–4 mm, stellate tomentose. Seeds oblong, winged all around. Fl. May–Oct.

* Open woodlands and thickets in mountains; 1200–3800 m. Sichuan, Xizang, Yunnan.

Medicinal.

18. *Buddleja paniculata* Wallich in Roxburgh, Fl. Ind. 1: 412. 1820.

喉药醉鱼草 *hou yao zui yu cao*

Buddleja acutifolia C. H. Wright; *B. gynandra* C. Marquand; *B. lavandulacea* Kraenzlin; *B. mairei* H. Léveillé.

Shrubs or small trees 1–6 m tall. Branchlets terete or nearly 4-angled, stellate tomentose. Stipules present, sometimes leafy. Petiole 0.2–2 cm; leaf blade narrowly elliptic, narrowly ovate, or less often ovate or elliptic, 2–25 × 0.7–9 cm, abaxially stellate tomentose, adaxially slightly bullate, stellate tomentose, and often with glandular hairs but glabrescent, base decurrent, margin entire or less often serrate, apex acuminate to rarely acute or obtuse; lateral veins 8–13 per side. Inflorescences terminal and in axils of apical leaves, paniculate or thyrsoïd cymes, 3–25 × 2–12 cm. Calyx campanulate, 2.5–4 mm, outside stellate tomentose and mostly with glandular hairs, inside usually glabrous; lobes triangular to broadly triangular, 0.3–1.2 mm. Corolla white, pink, or lavender, with an orange throat, 7–12 mm, outside stellate tomentose and with some

glandular hairs; tube 6–10 × 1.2–1.6(–2) mm, inside pilose above base; lobes suborbicular, 2–2.5 × 1.8–2.2 mm. Stamens inserted just below corolla mouth, included; anthers oblong, 1–1.2 mm. Ovary ovoid, 1.2–2 × 0.8–1.2 mm, stellate pubescent and with glandular hairs except for glabrous base. Stigma clavate, 1–1.5 mm. Capsule ellipsoid, 4–7 × 2–3 mm, stellate pubescent, glabrescent. Seeds oblong, 1–1.2 mm, winged at both ends. Fl. Mar–Jun. $2n = 38$.

Forest edges in mountains, open woodlands, thickets; 500–3000 m. Guangxi, Guizhou, Hunan, Jiangxi, Sichuan, Yunnan [Bhutan, N India, Myanmar, Nepal, Vietnam].

19. *Buddleja madagascariensis* Lamarck, Tabl. Encycl. 1: 291. 1792.

浆果醉鱼草 *jiang guo zui yu cao*

Adenoplea madagascariensis (Lamarck) Eastwood; *Nicodemia madagascariensis* (Lamarck) R. Parker.

Shrubs or climbers 2–10 m; branchlets, leaf blades abaxially, petioles, and inflorescences densely grayish white stellate tomentose, drying rusty. Branchlets terete. Petiole 0.5–2 cm; leaf blade narrowly ovate to elliptic, 2–14 × 1.5–7 cm, adaxially glabrous or subglabrous, base rounded, acute, cuneate, or rarely subcordate, margin entire, apex acuminate; lateral veins 6–12 per side. Inflorescences terminal, paniculate or thyrsoïd, 5–25 × 2–15 cm. Calyx campanulate to urceolate, 2–3.5 cm; lobes broadly triangular, 0.4–1 × 0.5–1 mm. Corolla dark yellow, orange, or salmon; tube 7–10 mm, outside stellate tomentose, inside with a pilose belt; lobes ovate to suborbicular, 2–4 × 2–3 mm. Stamens inserted just below corolla mouth; anthers oblong, 1–1.4 mm. Ovary subglobose, 1–1.5 mm, apex stellate tomentose, 4-locular. Style base stellate tomentose; stigma clavate, 1.2–1.7 mm. Berry white at first, purple-blue when ripe, globose, 2.5–5 mm in diam., glandular pubescent or glabrous, often stellate tomentose at apex. Seeds ellipsoid to obliquely ovoid, ca. 1 × 0.5 mm, not winged. Fl. Apr–Jun, fr. Aug–Nov. $2n = 38$.

100–300 m. Cultivated in Fujian, Guangdong, and Guangxi [introduced from Madagascar, cultivated throughout tropical and subtropical Asia].

Medicinal.

20. *Buddleja officinalis* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg 26: 496. 1880.

密蒙花 *mi meng hua*

Buddleja officinalis var. *macrantha* Lingelsheim.

Shrubs 1–4 m tall; branchlets, leaves abaxially, petioles, and inflorescences densely stellate tomentose. Branchlets terete or slightly 4-angled. Petiole 0.2–3 cm; leaf blade ovate to elliptic or narrowly so, 4–19 × 2–8 cm, adaxially glabrescent, base cuneate to decurrent, margin entire, sinuate, or repand-dentate, apex acuminate, acute, or obtuse; lateral veins 8–14 per side. Inflorescences terminal, paniculate or thyrsoïd, 5–15(–30) × 2–10 cm. Calyx campanulate, 2.5–4.5 mm, outside densely stellate tomentose and with some glandular hairs; lobes triangular to broadly triangular, 0.6–1.2 × 1–1.2 mm. Corolla pinkish, lilac, or pale purple, with an

orange throat, 1–1.3 cm, outside densely stellate tomentose and with some glandular hairs; tube 8–10 × (1.6–)2–2.2 mm, inside densely pilose; lobes suborbicular, 2–3 × 1.8–2.8 mm, inside glabrous. Stamens included, inserted just above middle of corolla tube; anthers oblong, 0.8–1.3 mm. Ovary ovoid, 1.5–2.2 × 1.2–1.8 mm, stellate tomentose and with some glandular hairs but glabrous below middle. Style 1–1.5 mm, basal hairs like those of ovary; stigma clavate. Capsule ellipsoid, 4–8 × 2–3 mm, stellate tomentose, glabrescent. Seeds narrowly elliptic, 1–1.2 × 0.3–0.5 mm, winged all around. Fl. Mar–Apr.

Forest edges in mountains, thickets on riverbanks; 200–2800 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Shaanxi, Shanxi, Sichuan, Xizang, Yunnan [Myanmar, Vietnam].

Source of dye, food, medicine, and perfume.

