

94. OCIMUM Linnaeus, Sp. Pl. 2: 597. 1753.

罗勒属 *luo le shu*

Herbs, subshrubs, or shrubs, aromatic. Leaves petiolate, dentate. Verticillasters 6(–10)-flowered, in terminal, pedunculate thyrses or panicles; bracts early deciduous, petiolate, margin entire, rarely longer than flowers. Flowers white; pedicel straight, apex recurved. Calyx ovoid to campanulate, declined in fruit, glandular outside, glabrous or occasionally villous at throat inside, limb 2-lipped; upper lip 3-toothed, middle tooth circular to obovate, margin winged, decurrent, lateral teeth shorter; lower lip 2-toothed, teeth narrower, apex acuminate to spinescent, sometimes approximate. Corolla tube slightly shorter than calyx or rarely exserted, not hairy annulate inside, dilated, obliquely campanulate at throat; limb 2-lipped, upper lip subequally (3- or) 4-lobed; lower lip somewhat elongated or not, declined, margin entire, flat or slightly concave. Stamens 4, exserted, declined on lower corolla lip, anterior 2 longer; filaments free or anterior 2 connate at base; anthers ovoid-reniform, 1-locellate. Style longer than stamens, 2-cleft at apex; lobes subequal, subulate or flat. Nutlets ovoid or subglobose, smooth or glandular foveolate, viscid when moist, with a white basal areola.

About 100–150 species: temperate regions worldwide, especially in Africa and South America; five species in China.

- 1a. Posterior filaments edentate at base.
 - 2a. Posterior filaments villous tufted, pilose tufted, or subglabrous at base; stem spreading pilose; leaves oblong, 2.5–5.5 × 1–3 cm, apex obtuse, base cuneate to rounded, puberulent, glandular; bracts cordate 4. *O. sanctum*
 - 2b. Filaments glabrous; stems pubescent; upper leaves ovate, ca. 3 × 2 cm, apex acute, base strongly attenuate, subglabrous; bracts ovate 5. *O. tashiroi*
- 1b. Posterior filaments dentate at base.
 - 3a. Shrubs; fruiting calyx pendulous; posterior tooth broadly obovate, with narrow, slightly decurrent marginal wings; lateral teeth narrow, slightly wider than anterior teeth, approximate, forming a 2-spinescent lower lip 3. *O. gratissimum*
 - 3b. Herbs; fruiting calyx appressed reflexed; posterior tooth circular, with marginal broad wings decurrent to middle of calyx; lateral teeth triangular to broadly obovate, apex acute; anterior teeth 2, narrow, nearly not approximate.
 - 4a. Leaves narrowly ovate, 1–1.7 cm × 5–10 mm, adaxially green, abaxially gray-green; corolla 3–4 mm 1. *O. americanum*
 - 4b. Leaves ovate to ovate-oblong, 2.5–5 × 1–2.5 cm, green; corolla ca. 6 mm 2. *O. basilicum*

1. *Ocimum americanum* Linnaeus, Cent. Pl. I, 15. 1755.

灰罗勒 *hui luo le*

Ocimum africanum Loureiro; *O. canum* Sims.

Herbs annual, 20–30(–60) cm tall. Stems erect, retrorse puberulent, nodes bristly, much branched from stem base. Petiole 5–12 mm, puberulent and pilose; leaf blade ovate, 1–1.7 cm × 5–10 mm, puberulent, glandular, base cuneate, margin serrulate to subentire, ciliate, apex acute, lateral veins 4- or 5-paired. Racemes numerous, crowded, erect, 10–14 cm, pedunculate, retrorse puberulent; verticillasters separate, 6-flowered; bracts oblong, ca. 4 mm, base attenuate, margin bristly, apex attenuate. Pedicel ca. 1.5 mm, conspicuously recurved in fruit. Calyx campanulate, ca. 2 × 1 mm, puberulent near base, throat densely puberulent, tube ca. 1.5 mm; middle tooth of upper lip circular, lateral teeth shorter, triangular; lower lip teeth ovate-lanceolate, apex awned, longer than upper lip, ciliate; fruiting calyx ca. 4 mm, conspicuously 10-veined. Corolla straight, 1.5–2 × as long as calyx, limb sparsely puberulent, glabrous inside; tube conspicuously exserted, obconical; lower lip oblong, concave, margin entire. Stamens free, ca. 2 × as long as corolla. Nutlets black, ovoid, ca. 1.5 × 0.6 mm, finely dotted.

Yunnan [India, Indonesia, Malaysia, Myanmar, Philippines, Sri Lanka; Africa, SW Asia].

Leaves are made into a paste which is used for skin diseases.

2. *Ocimum basilicum* Linnaeus, Sp. Pl. 2: 597. 1753.

罗勒 *luo le*

Herbs annual. Stems erect, 20–80 cm tall, apex retrorse puberulent, base glabrous, tinged red, much branched. Petiole ca. 1.5 cm, ± narrowly winged apically; leaf blade ovate to

oblong, 2.5–5 × 1–2.5 cm, subglabrous, abaxially glandular, base attenuate, margin irregularly dentate or subentire, apex subobtusate to acute; lateral veins 3- or 4-paired. Thyrses 10–20 cm, puberulent; verticillasters puberulent or densely pilose, approximate apically; bracts sessile, oblanceolate, 5–8 mm, base attenuate, margin ciliate, apex acute, colored. Pedicel ca. 3 mm in flower, to 5 mm in fruit. Calyx campanulate, ca. 4 × 3.5 mm, pubescent outside, pilose at throat inside, tube ca. 2 mm; middle tooth of upper lip widest, ca. 2 × 1 mm, subcircular, concave, apex mucronate; lateral teeth broadly ovate, ca. 1.5 mm, apex acute; lower lip teeth lanceolate, ca. 2 mm, apex spinescent, ciliate; fruiting calyx persistent, conspicuously veined. Corolla purplish or with upper lip white, limb puberulent outside; tube ca. 3 mm, throat ± dilated; upper lip wide, ca. 3 × 4.5 mm, 4-lobed, ± flat; lower lip purple, ca. 6 mm. Stamens free, slightly exserted, posterior 2 dentate, base puberulent. Nutlets dark brown, ovoid, ca. 2.5 × 1 mm, glandular foveolate. Fl. Jul-Sep, fr. Sep-Dec.

Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Sichuan, Taiwan, Xinjiang, Yunnan, Zhejiang [Africa, Asia].

- 1a. Leaves ovate to ovate-oblong; petioles and verticillasters puberulent 2a. var. *basilicum*
- 1b. Leaves oblong; petioles and verticillasters densely pilose 2b. var. *pilosum*

2a. *Ocimum basilicum* var. *basilicum*

罗勒 *luo le*

Ocimum basilicum Linnaeus var. *majus* Benth.

Petiole puberulent; leaf blade ovate to ovate-oblong. Verticillasters puberulent.

Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hebei, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Sichuan, Taiwan, Xinjiang, Yunnan, Zhejiang [Africa, Asia].

Mostly cultivated as aromatic herbs, sometimes wild. Source of an essential oil. Herb used as a condiment, also used in cosmetics and perfumes.

2b. *Ocimum basilicum* var. *pilosum* (Willdenow) Bentham, Prodr. 12: 33. 1848.

疏柔毛变种 shu rou mao bian zhong

Ocimum pilosum Willdenow, Enum. Pl. 629. 1809.

Petiole densely pilose; leaf blade oblong. Verticillasters densely pilose.

Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hebei, Henan, Jiangsu, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [Africa, Asia].

Mostly cultivated as an aromatic herb, sometimes wild.

3. *Ocimum gratissimum* Linnaeus var. ***suave*** (Willdenow) J. D. Hooker, Fl. Brit. India 4: 609. 1885.

无毛丁香罗勒 wu mao ding xiang luo le

Ocimum suave Willdenow, Enum. Pl. 629. 1809.

Shrubs erect, 50–100 cm, much branched; branches and stems villous or subglabrous, red-brown when dry. Petiole 1–3.5 cm; leaf blade ovate-oblong to oblong, 5–12 × 1.5–6 cm, gradually reduced toward apex, slightly scabrid, densely villous-tomentose, golden glandular, base cuneate to long attenuate, margin remotely crenate, apex long acuminate. Verticillasters 6-flowered, in erect, pedunculate, terminal and axillary thyrses or panicles 10–15 cm; lower floral leaves subsessile, oblong, 2–2.5 cm; peduncle 1.5–2.5 cm; bracts sessile, ovate-rhombic to lanceolate, 3–4 mm, long acuminate. Pedicel ca. 1.5 cm. Calyx campanulate, to 4 mm, throat villous, tube ca. 2 mm; middle tooth of upper lip ovate, ca. 2 × 1.5 mm, margin ± reflexed, apex acute; lateral teeth spinescent, slightly wider than connate lower lip teeth; fruiting calyx enlarged, to 5 mm, conspicuously 10-veined, posterior tooth reflexed. Corolla yellowish to white, ca. 4.5 mm, slightly exserted, puberulent, limb glandular, tube obconical, upper lip 4-lobed; lower lip slightly longer, oblong, ca. 1.5 mm. Stamens free, subequal; posterior 2 dentate at base, glabrous. Nutlets brown, subglobose, ca. 1 mm in diam., corrugate, glandular foveolate. Fl. Oct, fr. Nov.

Cultivated in Fujian, Guangdong, Guangxi, Jiangsu, Taiwan, Yunnan, Zhejiang [Sri Lanka; Africa].

Ocimum gratissimum var. *gratissimum* is subglabrous; not currently cultivated in China.

4. *Ocimum sanctum* Linnaeus, Mant. I, 85. 1767.

圣罗勒 sheng luo le

Subshrubs to 1 m tall, much branched. Stems erect, base woody, spreading pilose. Petiole 1–2.5 cm; leaf blade oblong, 2.5–5.5 × 1–3 cm, puberulent, glandular, pilose on veins, base cuneate to rounded, margin shallowly undulate-serrate, apex obtuse. Verticillasters 6-flowered, in pedunculate, terminal thyrses or panicles 6–8 cm; bracts sessile, cordate, ca. 1.5 × 1.5 mm, apex acute; peduncle 1–1.5 cm. Pedicel ca. 2.5 mm. Calyx campanulate, ca. 2.5 mm, villous, tube ca. 1.5 mm; middle tooth of upper lip broadly oblate, abruptly acute; lateral teeth broadly triangular, shorter than lower lip teeth, spinescent; lower lip teeth lanceolate, apex spinescent; fruiting calyx to 6 × 4 mm, conspicuously veined. Corolla

white to reddish, ca. 3 mm, slightly exserted, sparsely puberulent; tube ca. 2 mm, dilated at throat; upper lip less than 1 × 2.5 mm, lobes ovate; lower lip oblong, ca. 1 × 0.6 mm, flat. Stamens slightly exserted, free; posterior filaments puberulent at base. Nutlets brown, ovoid, ca. 1 × 0.7 mm, glandular-foveolate. Fl. Feb-Jun, fr. Mar-Aug.

Dry sandy areas. Hainan, Sichuan, Taiwan [Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand, Vietnam; Africa, SW Asia, Australia].

Leaves used as a condiment in salads and other foods, and as substitute for tea.

5. *Ocimum tashiroi* Hayata, Icon. Pl. Formos. 9: 86. 1920.

台湾罗勒 tai wan luo le

Stems erect; branches slender, pubescent. Lower stem leaves not seen. Petiole of upper stem leaves ca. 2 cm; leaf blade ovate, ca. 3 × 2 cm, membranous, subglabrous, base strongly attenuate, margin serrate except for apex, apex triangular-acuminate, acute. Verticillasters 6–8-flowered, in decussate terminal thyrses or panicles 5–6 cm; bracts ovate, ca. 1 × 1 mm, apex palmately serrate, hirsute. Pedicel ca. 1 mm, hirsute. Calyx tubular-campanulate, ca. 1.5 × 1 mm, spreading hirsute outside, densely glandular; middle tooth of upper lip subcircular, apex acute, ca. 0.6 mm; lateral teeth linear, ca. 1 mm, ciliate; anterior teeth 2, linear, ca. 1 mm, ciliolate. Corolla tube ca. 2 mm, glabrous, ca. 0.6 mm wide; middle lobe of upper lip hirsute abaxially, circular, lateral lobes circular; lower lip oblong, ca. 1 mm, obtuse, glabrous. Filaments to 0.6 mm. Nutlets ovoid, glabrous.

- Taiwan.

