

63. MICROMERIA Bentham, Edward's Bot. Reg. 15: t. 1282. 1829, nom. cons.

姜味草属 jiang wei cao shu

Subshrubs or herbs. Leaves subsessile to short petiolate, ± hairy, conspicuously impressed glandular, upper leaves bractlike. Verticillasters axillary, 1- to many flowered, in terminal spikes or panicles. Calyx tubular, 13(–15)-veined, straight or slightly curved, ± hairy, glandular, throat pilose, limb with 5 subequal straight teeth or somewhat 2-lipped. Corolla white, reddish, to purple, 2-lipped, hairy; tube straight, gradually dilated at throat; upper lip straight, margin entire, apex emarginate or 2-lobed; lower lip spreading, 3-lobed; lobes subequal or middle lobe larger, margin entire, undulate, or emarginate. Stamens 4, anterior 2 longer, ascending, free, apex arcuate, approximate, included or occasionally exerted; anther cells 2, parallel, divergent or divaricate, connectives transversely thicker. Style apex 2-cleft; lobes subulate, equal or anterior lobe elongated, involute, flat, posterior lobe short. Nutlets ovoid or triquetrous oblong, dry, smooth.

About 100 species: Africa, Asia, Europe; five species in China.

The generic limits between *Micromeria*, *Clinopodium*, *Calamintha*, and several related genera not found in China are controversial.

- 1a. Leaves more than 1 cm.
 - 2a. Stems white floccose-puberulent; leaves entire, involute; verticillasters widely spaced; calyx conspicuously 15-veined; corolla purplish, ca. 1.4 cm, glabrous inside 4. *M. wardii*
 - 2b. Stems densely glandular puberulent; leaves widely spaced, conspicuously crenulate; verticillasters pedunculate, 3–7 in narrow panicles; calyx 13-veined; corolla dark red, ca. 1 cm, pilose on middle of lower lip and apical part of tube inside 5. *M. euosma*
- 1b. Leaves less than 1 cm.
 - 3a. Stems sparsely floccose-puberulent; calyx tubular-funnelform, 2.5–3 mm; bracteoles absent 2. *M. formosana*
 - 3b. Stems densely puberulent or pubescent, white pilose; calyx tubular, more than 4 mm; bracteoles linear to linear-subulate, 1.5–2 mm.
 - 4a. Stems densely pilose, pubescent; calyx to 4 mm, 2-lipped; posterior teeth 3, narrowly triangular, ca. 1.5 mm, long acuminate; anterior teeth 2, subulate, ca. 2 mm, spinescent; corolla ca. 6 mm 1. *M. biflora*
 - 4b. Stems densely puberulent, white spreading pilose; calyx to 9 mm; teeth subequal, subulate, apiculate, ca. 2.5 mm; corolla ca. 1.8 cm 3. *M. barosma*

1. *Micromeria biflora* (Buchanan-Hamilton ex D. Don) Bentham, Labiat. Gen. Spec. 378. 1834.

姜味草 jiang wei cao

Thymus biflorus Buchanan-Hamilton ex D. Don, Prodr. Fl. Nepal. 112. 1825; *Satureia biflora* Briquet; *T. cavaleriei* H. Léveillé.

Subshrubs tufted, aromatic. Stems numerous, ascending, to 30 cm, subterete, slender, densely ± patent white pilose and pubescent, red-purple. Petiole 0.1–0.5 mm; leaf blade ovate, 4–5×2.5–3 mm, conspicuously golden yellow glandular, sparsely puberulent on midrib, base rounded to shallowly cordate, margin flat or recurved, entire, apex acute. Verticillasters 1- or 2(–5)-flowered, pedunculate; peduncle 1–2 mm; bracts and bracteoles subequal, linear-subulate, ca. 1.5 mm, ciliate. Pedicel 2–3 mm, secund, red. Calyx short tubular, 2-lipped, to 4 mm, veins puberulent, throat pilose, 13-veined, ciliate; posterior teeth narrowly triangular, ca. 1.5 mm, apex long acuminate; anterior teeth subulate, ca. 2 mm, apex spinescent. Corolla rose, ca. 6 mm, sparsely puberulent, tube ca. 4 mm; upper lip elliptic, ca. 2 mm; lower lip ca. 2.5 mm, lobes subequal or middle larger. Anterior stamens nearly included. Ovary yellow-brown, glabrous. Nutlets brown, oblong, ca. 1 mm, glabrous. Fl. Jun-Jul, fr. Jul-Aug.

Hilly grasslands over limestone; 2000–2500 m. Guizhou, Yunnan [Afghanistan, Bhutan, India, Nepal].

Extremely variable and at the center of a species complex distributed in Africa and SW Asia.

Essential oil used for flavoring liqueurs. Decoction used for abdominal distension, dysentery, colds, and coughs.

2. *Micromeria formosana* Marquand, Hooker's Icon. Pl. 33: t. 2330. 1934.

台湾姜味草 tai wan jiang wei cao

Herbs perennial, mostly shiny golden glandular. Stems erect or ascending, ca. 12 cm, much branched, terete, red and purplish, sparsely floccose-puberulent. Petiole 2–3 mm; leaf blade ovate, ca. 7×5 mm, adaxially slightly scabrid, base subcuneate, apex slightly obtuse. Verticillasters few flowered, in upper axils; bracts leaflike; bracteoles absent. Pedicel less than 1 mm. Calyx tubular-funnelform, 2.5–3×1 mm, purplish, puberulent, throat white villous; teeth ovate-triangular, ca. 1 mm, apex subacute. Corolla gray-violet, 5–7 mm, pubescent; upper lip ovate, ca. 2.5 mm in diam.; lower lip lobes subcircular, ca. 1.5 mm in diam. Nutlets ellipsoid-oblong, less than 0.5 mm, smooth (specimens not seen).

• Taiwan.

A little known species described from a cultivated plant.

3. *Micromeria barosma* (W. Smith) Handel-Mazzetti, Symb. Sin. 7: 932. 1936.

小香薷 xiao xiang ru

Calamintha barosma W. Smith, Notes Roy. Bot. Gard. Edinburgh 9: 88. 1916; *Satureia barosma* (W. Smith) Kudô.

Subshrubs diffuse, tufted, aromatic. Stems numerous, radiately prostrate, slender, 20–40 cm, terete, base woody, persistent, purple-red, densely puberulent, white pilose, much-branched, upper branches longer. Petiole ca. 0.5 mm; leaf blade lanceolate to oblanceolate, 4–6×2–3 mm, subpapery, glabrous or finely pilose, conspicuously impressed glandular, base cuneate, decurrent, margin entire, involute, apex slightly obtuse. Verticillasters 1- or 2-flowered, 3–7 close together in terminal spikes; bracts similar to leaves, smaller, narrower; bracteoles linear, ca. 2 mm. Pedicel ca. 2 mm. Calyx ca. 9 mm, ± purplish, conspicuously 13-veined, veins and teeth

puberulent, golden glandular between veins, throat pilose annulate; teeth subulate, apiculate, subequal, ca. 2.5 mm. Corolla rose to red-purple, ca. 1.8 cm, densely puberulent; tube slender, ca. 1.2 cm; upper lip oblong, ca. 6×3 mm; lower lip spreading, ca. 7 mm; middle lobe elongated, oblong; lateral lobes ovate. Ovary glabrous. Nutlets triquetrous, oblong, ca. 1.3 mm, black-brown with 2 white scars at base, glabrous. Fl. Jul-Aug, fr. Sep-Oct.

- Dry gravelly grasslands, rocky crevices of limestone mountains; 2300–3800 m. Yunnan.

Species 3–5 are closely related.

4. *Micromeria wardii* Marquand & Airy Shaw, J. Linn. Soc., Bot. 48: 216. 1929.

西藏姜味草 xi zang jiang wei cao

Subshrubs aromatic. Rhizomes transverse. Stems erect, to 50 cm, few branched, terete, purplish, finely striate, sparsely white floccose-puberulent, branches erect. Petiole ca. 1 mm; leaf blade ovate, 1–1.5 cm×4–7 mm, densely impressed glandular, adaxially sparsely strigose, scabrid, base cuneate, margin entire, involute, apex obtuse. Verticillasters 2–6-flowered, widely spaced, in upper axils; bracteoles subulate. Pedicel subulate, 1–3 mm. Calyx 4–5×1–1.5 mm, purplish, veins puberulent, white pilose at throat, conspicuously 15-veined; teeth subequal, triangular, ca. 1 mm, apex subulate, spreading. Corolla purplish, ca. 1.4 cm, pubescent; tube slender, to 2 mm wide at throat; upper lip ovate, 2-lobed; lower lip slightly longer. Ovary glabrous. Nutlets subtriquetrous, ovoid-oblong, ca. 1.3 mm, glabrous.

- Grassy hillsides, thickets, pine forests; 2100–3700 m. Xizang.

5. *Micromeria euosma* (W. Smith) C. Y. Wu, Acta Phytotax. Sin. 10: 229. 1965.

清香姜味草 qing xiang jiang wei cao

Calamintha euosma W. Smith, Notes Roy. Bot. Gard. Edinburgh 9: 89. 1916; *Satureia euosma* (W. Smith) Kudô.

Subshrubs aromatic, diffuse, tufted. Stems numerous, prostrate-ascending, unbranched, slender, 15–30 cm, basally woody, terete, densely glandular puberulent, purple-red. Petiole 2–4 mm, narrowly winged at apex; leaf blade ovate to subcircular, bractlike toward stem apex, 1–2 ×0.5–1.3 cm, glabrous or midrib puberulent, impressed glandular, base cuneate to rounded, ± decurrent, margin remotely crenulate, apex rounded. Verticillasters (2–)6–10-flowered, 3–7 in narrow terminal panicles; peduncle 5–10 mm; bracts oblong, ca. 5×1.5 mm; bracteoles minute, linear. Pedicel 2.5–4 mm. Calyx ca. 5 mm, glandular puberulent, sparsely golden yellow glandular, veins and teeth pilose, throat white pilose, conspicuously 13-veined; teeth narrowly triangular, apex spinescent, subequal, ca. 1.5 mm. Corolla dark red, ca. 1 cm, sparsely puberulent, conspicuously pilose inside; tube ca. 6 mm, slightly exerted; upper lip slightly spreading, suboblong, ca. 1.5 mm, 2-lobed to ca. 1/2 its length; lower lip ca. 5 mm, margin undulate, middle lobe subobcordate, lateral lobes broadly ovate. Ovary glabrous. Nutlets brown, ca. 1 mm, glabrous. Fl. Jun-Aug, fr. Sep-Nov.

- Grassy hillsides, dry valleys in limestone mountains; 3300 m. Yunnan.

