

15. CARYOPTERIS Bunge, Pl. Mongholic-Chin. 27. 1835.

莜属 you shu

Cardioteucris C. Y. Wu.

Herbs, subshrubs, or shrubs, erect or climbing. Leaves opposite, simple, entire or dentate, usually with glistening glands. Flowers in lax or dense cymes often aggregate into thyrses, rarely solitary. Calyx (4- or 5- (or 6)-dentate or -lobed. Corolla short tubed, slightly 2-lipped, margin entire or dentate; lobes 5, spreading; lower lobe larger, concave, fringed. Stamens 4, often strongly exerted, inserted on apical part of corolla tube. Ovary 4-locular; ovules pendulous or laterally attached. Stigma 2-cleft. Fruit dry, usually dividing into four nutlets.

Sixteen species: C and E Asia, 14 species in China.

- 1a. Inflorescences terminal, narrowly cylindrical thyrses, sharply differentiated from vegetative shoots, cymes subtended by very reduced bracts.
 - 2a. Thyrses lax; lateral cymes to 5-flowered; calyx clearly 2-lipped; corolla white 12. *C. siccanea*
 - 2b. Thyrses very dense; lateral cymes more than 5-flowered; calyx deeply 6-lobed; corolla bluish purple 13. *C. bicolor*
- 1b. Inflorescences axillary or subterminal, mostly cymes, sometimes compact thyrses or reduced to a solitary flower, all except sometimes the uppermost subtended by normal leaves.
 - 3a. Inflorescences dense axillary thyrses; fruit globose, ca. 4 × as long as calyx 14. *C. paniculata*
 - 3b. Inflorescences axillary or subterminal cymes, often corymbose, sometimes reduced to 1 flower; fruit usually winged or lobed, to 2 × as long as calyx.
 - 4a. Leaf blade entire or with occasional teeth.
 - 5a. Leaf blade linear-lanceolate or linear-oblong to narrowly oblanceolate, abaxial veins often darker than rest of leaf surface.
 - 6a. Leaf blade adaxially puberulent; corolla 10–15 mm; ovary glabrous 1. *C. mongholica*
 - 6b. Leaf blade adaxially glutinous and shiny; corolla 6–8 mm; ovary hairy 2. *C. glutinosa*
 - 5b. Leaf blade elliptic to subrounded, abaxial veins same color or paler than rest of leaf surface.
 - 7a. Leaf blade elliptic to narrowly ovate; corolla whitish to yellow, rarely pale blue 3. *C. forrestii*
 - 7b. Leaf blade ovate to subrounded; corolla purplish 4. *C. jinshajiangensis*
 - 4b. Leaf blade regularly crenate or serrate.
 - 8a. Cymes dense, corymbose, without bracts and bractlets; abaxial corolla lobe fringed to dentate; nutlets winged, glabrous or with subapical tuft of stiff coarse hairs.
 - 9a. Corolla glabrous except for a patch of long lanate hairs on each lobe 7. *C. trichosphaera*
 - 9b. Corolla uniformly appressed puberulent.
 - 10a. Leaf blade same color on both surfaces; nutlets with subapical patch of stiff coarse hairs 5. *C. incana*
 - 10b. Leaf blade distinctly white abaxially; nutlets glabrous 6. *C. tangutica*
 - 8b. Cymes lax, rarely clearly corymbose, with bracts and bractlets; abaxial corolla lobe entire; nutlets not winged, uniformly puberulent.
 - 11a. Cymes more than 5-flowered, branches divaricate; calyx shallowly bowl-shaped, exposing nutlets 11. *C. divaricata*
 - 11b. Cymes 1–5-flowered, branches not divaricate; calyx campanulate, enclosing nutlets.
 - 12a. Leaf blade irregularly sharply serrate with 1–3 teeth per side, those subtending cymes subtentire; ovary and nutlets with yellow hairs 10. *C. aureoglandulosa*
 - 12b. Leaf blade, including those subtending cymes, regularly serrate to crenate with 4–10 teeth or lobes per side; ovary and nutlets with white hairs.
 - 13a. Leaf blade crenate with 4–6 rounded lobes per side; flowers always solitary 8. *C. nepitifolia*
 - 13b. Leaf blade serrate with 6–10 sharp teeth per side; flowers mostly in (2- or 3-) 5-flowered cymes, rarely solitary 9. *C. terniflora*

1. *Caryopteris mongholica* Bunge, Pl. Mongholic-Chin. 28. 1835.

蒙古莜 meng gu you

Caryopteris mongholica var. *serrata* Maximowicz.

Subshrubs 30–150 cm tall, aromatic, usually branched from base. Branchlets purple-brown, pubescent when young, glabrescent. Petiole ca. 3 mm; leaf blade linear-lanceolate to linear-oblong, 0.8–4 × 0.2–0.7 cm, papery, abaxially densely gray tomentose, adaxially dark green and puberulent, margin entire or subtentire. Cymes axillary. Calyx campanulate, ca. 3 mm, deeply 5-lobed, outside densely gray tomentose; lobes linear to linear-lanceolate, ca. 1.5 mm. Corolla blue-purple, 1–1.5 cm, tube ca. 5 mm, pilose in throat, lower lobe strongly fringed. Stamens and style exerted. Ovary glabrous. Fruit

subglobose, glabrous. Nutlets with winged edges. Fl. and fr. Aug-Oct.

Dry open slopes, boulder strewn washes, open canyons; 1100–1300 m. Gansu, Hebei, Nei Mongol, Shaanxi, Shanxi [Mongolia].

2. *Caryopteris glutinosa* Rehder in Sargent, Pl. Wilson. 3: 378. 1916.

粘叶莜 nian ye you

Shrubs 0.5–1.5 cm tall. Branchlets terete, pubescent. Petiole ca. 2 mm; leaf blade narrowly oblanceolate to narrowly oblong, 1–3 × 0.3–0.8 cm, abaxially white scaly and with black veins, adaxially glutinous and shiny, base cuneate, margin entire, apex obtuse. Cymes axillary or terminal, pubescent. Calyx cup-shaped, ca. 3 mm, outside silvery

tomentose; lobes 5, lanceolate. Corolla blue-purple, 6–8 mm; tube ca. 3 mm, outside silvery tomentose, villous in throat. Ovary pubescent. Fruiting calyx ca. 5 mm. Fruit ovoid, ca. 3 mm in diam., pilose above middle. Fl. and fr. Sep–Oct.

- Valleys; 1600–1800 m. Sichuan (Min Jiang valley).

Related to *Caryopteris mongholica* but differs in shorter corolla tubes and fringed abaxial corolla lobes.

3. *Caryopteris forrestii* Diels, Notes Bot. Gard. Edinburgh 5: 296. 1912.

灰毛蕨 hui mao you

Subshrubs, aromatic. Branchlets terete, grayish brown tomentose when young, glabrescent. Petiole 2–10 mm; leaf blade narrowly elliptic to ovate-lanceolate, 0.5–6 × 0.2–2.5 cm, thickly papery, abaxially densely gray tomentose, adaxially green and pubescent, base cuneate, apex obtuse. Inflorescences axillary or terminal, dense corymbose cymes; peduncle densely gray tomentose. Calyx campanulate, 2–4 mm, outside gray tomentose; lobes 5, lanceolate. Corolla greenish white to greenish yellow, ca. 5 mm, tube ca. 2 mm, lower lobe dentate to nearly fringed, both surfaces puberulent especially outside, villous at insertion of filaments. Stamens and style exerted. Ovary pubescent, apically glandular. Fruiting calyx 5–7 mm. Fruit ca. 2 mm in diam., hirsute, apical part glandular, nutlets winged, oblong-oblancoate, ca. 3 mm, glabrous or with short spreading hairs near tip.

- 1700–4000 m. Guizhou, Sichuan, Xizang, Yunnan.

- 1a. Lower corolla lobe dentate; leaf blade 2–6 × 0.5–2.5 cm 3a. var. *forrestii*
1b. Lower corolla lobe nearly fringed; leaf blade 0.5–2 × 0.2–0.5 cm 3b. var. *minor*

3a. *Caryopteris forrestii* var. *forrestii*

灰毛蕨 hui mao you

Plants 30–120 cm tall. Leaf blade 2–6 × 0.5–2.5 cm. Lower corolla lobe dentate.

- Thickets on mountain slopes, in valleys, or along roadsides; 1700–3000 m. Guizhou, Sichuan, Xizang, Yunnan.

3b. *Caryopteris forrestii* var. *minor* P'ei & S. L. Chen ex C. Y. Wu, Fl. Yunnan. 1: 481. 1977.

小叶灰毛蕨 xiao ye hui mao you

Plants very short, much branched from base. Leaf blade 5–20 × 2–5 mm. Lower corolla lobe larger, nearly fringed.

- Dry mountain slopes; 2000–4000 m. SW Sichuan, SE Xizang, NW Yunnan.

4. *Caryopteris jinshajiangensis* Y. K. Yang & X. D. Cong, Bull. Bot. Res., Harbin 10(1): 45. 1990.

金沙江蕨 jin sha jiang you

Subshrubs 30–70 cm tall, usually branched from base. Branchlets densely brown tomentose when young, glabrescent. Petiole (0.2–)1–2 cm, densely puberulent; leaf blade broadly ovate to subrounded, (0.3–)1–3.2 × (0.4–)1–3 cm, papery, densely glandular, abaxially glaucous, margin entire or subentire, veins 3 or 4 pairs. Inflorescences axillary or terminal, corymbose cymes; peduncle slender, 0.5–2.2 cm, brown pilose. Calyx campanulate, 1.7–2.2 mm, lobes oblong-lanceolate, outside brown puberulent and glandular. Corolla

tube 6–8 mm, puberulent at insertion of stamens, lower lobe slightly dentate. Stamens and style exerted. Ovary subglabrous. Fruit ovate-elliptic, 2.7–3.2 × 2–2.4 mm.

- Valleys; 1400 m. SW Yunnan (Jinsha Jiang valley).

Related to *Caryopteris forrestii* but differs in its broadly ovate to subrounded leaf blades and purplish corollas.

5. *Caryopteris incana* (Thunberg ex Houttuyn) Miquel, Ann. Mus. Bot. Lugduno-Batavum 2: 97. 1865.

兰香草 lan xiang cao

Herbs, perennial, 25–50 cm tall, aromatic, with woody base, pubescent. Petiole 0.3–1.7 mm; leaf blade narrowly lanceolate, lanceolate, oblong, or ovate, 1.5–9 × 0.4–4 cm, thickly papery, pubescent, yellow glandular, base cuneate, subrounded, or truncate, margin coarsely serrate to rarely subentire, apex obtuse to acute. Inflorescences axillary or terminal, dense corymbose cymes. Calyx cup-shaped, ca. 2 mm, outside pubescent. Corolla purplish to bluish, tube ca. 3.5 mm, lower lobe fringed, both surfaces pubescent. Stamens and style exerted. Ovary pubescent. Fruiting calyx 4–5 mm. Fruit ca. 2.5 mm in diam., hirsute, nutlets with winged edges. Fl. and fr. Jun–Oct.

100–800 m. Anhui, Fujian, Guangdong, Guangxi, Hubei, Hunan, Jiangsu, Jiangxi, Taiwan, Zhejiang [Japan, Korea].

Medicinal.

- 1a. Leaf blade lanceolate, ovate, or oblong, 0.8–4 cm wide 5a. var. *incana*
1b. Leaf blade narrowly lanceolate, 0.4–0.8 cm wide 5b. var. *angustifolia*

5a. *Caryopteris incana* var. *incana*

兰香草 lan xiang cao

Nepeta incana Thunberg ex Houttuyn, Nat. Hist. 2(9): 307. 1778; *Barbula sinensis* Loureiro; *Caryopteris ovata* Miquel; *C. sinensis* (Loureiro) Dippel; *Mastacanthus sinensis* (Loureiro) Endlicher ex Walpers.

Leaf blade lanceolate, oblong, or ovate, 1.5–9 × 0.8–4 cm, apex obtuse to acute. Fl. and fr. Jun–Oct.

Slopes along roadsides; 100–800 m. Anhui, Fujian, Guangdong, Guangxi, Hubei, Hunan, Jiangsu, Jiangxi, Zhejiang [Japan, Korea].

5b. *Caryopteris incana* var. *angustifolia* S. L. Chen & R. L. Guo, Fl. Reipubl. Popularis Sin. 65(1): 213. 1982.

狭叶兰香草 xia ye lan xiang cao

Leaf blade narrowly lanceolate, 3–4.5 × 0.4–0.8 cm, apex acuminate. Fl. and fr. Sep–Oct.

- Thickets in stony places; 300 m. Jiangxi.

6. *Caryopteris tangutica* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg, sér. 3, 27: 525. 1881.

光果蕨 guang guo you

Shrubs 0.5–2 m tall, erect. Branchlets gray tomentose. Petiole 0.4–1 cm; leaf blade lanceolate to ovate-lanceolate, 2–5.5 × 0.5–2 cm, abaxially densely gray tomentose, adaxially green pilose, base cuneate to rounded, margin deeply serrate, apex acuminate to obtuse, veins 5–8 pairs. Inflorescences axillary or subterminal, very dense corymbose cymes. Calyx ca. 2.5–4 mm, deeply 5-lobed, outside densely villous; lobes lanceolate, usually longer than tube. Corolla blue-purple, tube

5–7 mm, lower lobe fringed. Stamens and style exerted. Ovary glabrous. Fruiting calyx ca. 6 mm. Fruits obovate-globose, ca. 5 × 4 mm, glabrous, nutlets with broadly winged edges.

• Dry slopes; 2500 m. Gansu, Hebei, Henan, Hubei, Shaanxi, Sichuan.

7. *Caryopteris trichosphaera* W. Smith, Notes Roy. Bot. Gard. Edinburgh 10: 18. 1917.

毛球蕨 mao qiu you

Caryopteris incana (Thunberg ex Houttuyn) Miquel var. *brachyodonta* (Handel-Mazzetti) Moldenke; *C. tangutica* Maximowicz var. *brachyodonta* Handel-Mazzetti.

Shrubs 50–100 cm tall, aromatic. Branchlets pubescent and glandular when young. Petiole 3–9 mm or apical leaves subsessile; leaf blade ovate-oblong to broadly ovate, 1–3 × 1.5–3 cm, papery, pubescent, glandular especially abaxially, base rounded to truncate, margin coarsely serrate, apex obtuse; veins 6–8 pairs, abaxially prominent. Inflorescences axillary or terminal, dense cymes, densely villous; peduncle ca. 1 cm. Calyx campanulate, ca. 3 mm, lobes oblong-lanceolate, outside densely villous and glandular. Corolla bluish to purplish, ca. 6 mm, outside glabrous or nearly so except for lobes each with a distinct patch of villous to lanate hairs, pubescent at insertion of stamens, tube ca. 5 mm, lower lobe fringed. Stamens ca. 2 × as long as corolla tube. Ovary and style glabrous. Fruiting calyx ca. 6 mm. Fruit oblong to ovoid, 2–3 × 2 mm, nutlets with winged edges. Fl. and fr. Aug-Sep.

• Thickets on mountain slopes, dry grassy places in valleys; 2700–3300 m. W Sichuan, E Xizang, NW Yunnan.

Related to *Caryopteris tangutica* but differs in having leaf blades ovate-oblong to broadly ovate, both surfaces glandular, and calyces and corollas glandular outside.

8. *Caryopteris nepetifolia* (Benth) Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg, sér. 3, 23: 390. 1877.

单花蕨 dan hua you

Teucrium nepetifolium Benth in A. de Candolle, Prodr. 12: 580. 1848.

Herbs, perennial, 30–60 cm tall, prostrate. Branches pubescent, 4-angled. Petiole ca. 3–10 mm, pubescent; leaf blade broadly ovate to subrounded, 1.5–5 × 1.5–4 cm, papery, pubescent, glandular, base broadly cuneate to rounded, margin coarsely serrate, apex obtuse, veins 3–5 pairs. Flowers axillary, solitary; bractlets short, linear. Pedicel slender. Calyx cup-shaped, ca. 6 mm, pubescent, glandular; lobes 5, ovate-lanceolate to ovate. Corolla bluish, tube 6–9 mm, lobes entire, lower lobe largest, outside sparsely puberulent and glandular. Stamens inserted near corolla throat; filaments basally hairy. Ovary densely pubescent. Nutlets ovoid, hirsute, without winged edges. Fl. and fr. May-Sep.

• Forest edges along streams and roadsides; 100–700 m. Anhui, Fujian, Jiangsu, Zhejiang.

Medicinal.

9. *Caryopteris terniflora* Maximowicz, Bull. Soc. Imp. Naturalistes Moscou 54(1): 40. 1879.

三花蕨 san hua you

Caryopteris terniflora f. *brevipedunculata* P'ei & S. L. Chen.

Shrubs 15–60 cm tall, erect, usually branched from base. Petiole 2–15 cm, pubescent; leaf blade lanceolate-oblong to ovate, 1.5–4 × 1–3 cm, papery, pubescent and glandular especially abaxially, base broadly cuneate to rounded, margin serrate, apex acute. Inflorescences axillary cymes, (1–)3(–5)-flowered; peduncle (0.1–)1–3 cm; bracts awl-shaped. Pedicel (0.5–)3–6 mm. Calyx campanulate, (4–)8–9 mm, 5-lobed, lobes lanceolate, both surfaces pubescent and glandular. Corolla pinkish to purple, 1.1–1.8(–2) cm, 5-lobed, lower lobe broadly ovate to subrounded, outside sparsely puberulent and glandular. Stamens and style exerted. Ovary pubescent. Nutlets ovoid, densely hirsute, with distinctly reticulate veins. Fl. and fr. Jun-Sep.

• Mountain slopes in open places along streams; 600–2600 m. Gansu, Guizhou, Hebei, Henan, Hubei, Jiangxi, Shaanxi, Shanxi, Sichuan, Yunnan.

Medicinal.

10. *Caryopteris aureoglandulosa* (Vaniot) C. Y. Wu, Fl. Yunnan. 1: 484. 1977.

金腺蕨 jin xian you

Ocimum aureoglandulosum Vaniot, Bull. Acad. Int. Géogr. Bot. 14: 171. 1904.

Subshrubs 30–100 cm tall, erect to ascending. Branches 4-angled, densely puberulent. Petiole 1–5 mm; leaf blade ovate-lanceolate to ovate, 2–14 × 1.2–5 cm, membranous, densely puberulent when young, glabrescent, abaxially sparsely yellow glandular, base cuneate to subrounded, margin with 1–3 irregular serrations per side above middle, rarely subentire, apex acute. Inflorescences axillary, 1–3-flowered, densely puberulent, cymes aggregated into poorly defined thyrses; peduncle 1–3(–10) mm; bracts and bractlets linear. Pedicel ± as long as peduncle. Calyx campanulate, ca. 5 mm, sparsely puberulent; teeth 4 or 5, lanceolate to ovate-triangular, acuminate. Corolla white or pinkish, ca. 1.2 cm; tube ca. 8 mm, outside puberulent, inside glabrous. Stamens exerted. Ovary apically densely white puberulent. Style as long as stamens. Nutlets ovoid, puberulent, slightly reticulate. Fl. Apr.

• Grasslands; 600–800 m. S to W Guizhou, Hubei, SW Sichuan, SW Yunnan.

11. *Caryopteris divaricata* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg, sér. 3, 23: 390. 1877.

蕨 you

Clerodendrum divaricatum Siebold & Zuccarini (1846), not Jack (1820).

Herbs, perennial, ca. 80 cm tall. Branches 4-angled, subglabrous to pubescent. Petiole 0.5–2 cm; leaf blade ovate-oblong to ovate, 12–14 × 1.2–5 cm, membranous, sparsely pubescent, base cuneate to subrounded, margin coarsely serrate, apex acuminate to caudate, veins 3–5 pairs. Inflorescences axillary, cymes, dichotomous, sparsely pubescent; peduncle 2–3(–11) cm; bracts linear to lanceolate. Calyx cup-shaped, broader than long, 2–4 mm, inside pubescent; teeth 5, triangular, 0.6–1 mm. Corolla pinkish to purple to pinkish, 1–2 cm, outside pubescent, villous in throat, tube 0.8–1.6 cm, lobes entire, lower lobe broadly obovate. Stamens and style exerted. Ovary pubescent, ± glandular, apex rudimentarily 4-lobed. Fruiting calyx twice as long as flowering calyx, broader than long. Nutlets pale brown ovoid,

shorter than calyx tube, reticulate, glabrescent. Fl. and fr. Jul-Sep.

Mixed forests on mountain slopes and along roadsides; 700–2900 m. Gansu, Henan, Hubei, Jiangxi, Shaanxi, Shanxi, Sichuan [Japan, Korea].

12. *Caryopteris siccanea* W. Smith, Notes Roy. Bot. Gard. Edinburgh 10: 18. 1917.

腺毛蕨 xian mao you

Cardioteucris cordifolia C. Y. Wu.

Herbs, perennial, rhizomatous, 50–90 cm tall, usually unbranched, minutely hirsute, glandular. Petiole 3–8(–10) cm, much shorter on apical leaves, minutely hirsute and sparsely glandular; leaf blade broadly ovate, 6–12 × 5–10 cm, membranous, strigose, base cordate, margin with 8–15 serrations per side, apex acute. Inflorescences slender, lax terminal thyrses, sometimes also in most apical leaf axils, densely minutely hirsute, glandular; bracts linear-lanceolate to lanceolate, 1–6(–10) mm, shorter than pedicel. Calyx 5–7 mm, outside minutely hirsute and glandular, 2 lipped, lower lip 2-dentate, upper lip 3-dentate or rarely subentire in fruit. Corolla white, ca. 1.2 cm, outside puberulent. Stamens and style exserted. Fruit shallowly lobed; nutlets ca. 3 mm, glabrous, faintly ridged. Fl. Jun-Aug.

Open or forested slopes; 2000–3000 m. Sichuan, Yunnan [Myanmar].

13. *Caryopteris bicolor* (Roxburgh ex Hardwicke) Mabblerley in Manilal, Bot. Hist. Hort. Malab. 83. 1980.

香蕨 xiang you

Volkameria bicolor Roxburgh ex Hardwicke, Asiat. Res. 6: 366. 1799; *Caryopteris odorata* (D. Don) Robinson; *C. wallichiana* Schauer.

Shrubs 1–3 m tall, spreading. Branchlets 4-angled, gray minutely tomentose. Petiole 5–10 mm; leaf blade lanceolate-elliptic, 5.5–13 × 2–4 cm, papery, abaxially pubescent and glandular, adaxially subglabrous, base cuneate, margin subentire to serrate, apex acuminate. Inflorescences tight terminal thyrses, densely pubescent; bracts and bractlets lanceolate, to 1.5 cm, margins entire. Calyx 3–4.5 mm, usually 6-lobed, pubescent, densely glandular. Corolla bluish purple, tube ca. 5 mm, lobes ca. 8 mm, pubescent, glandular. Stamens exserted. Ovary pubescent, glandular. Style longer than stamens. Fruiting calyx ca. 6 mm. Fruit subglobose, ca. 4 mm in diam. Fl. Mar.

Dry mountain slopes; 900–2000 m. Yunnan [Bhutan, India, Nepal, Thailand].

14. *Caryopteris paniculata* C. B. Clarke in J. D. Hooker, Fl. Brit. Ind. 4: 597. 1885.

锥花蕨 zhui hua you

Callicarpa esquirolii H. Léveillé; *C. martinii* H. Léveillé.

Shrubs 1–3 m tall, spreading, climbing, much branched, pubescent. Petiole 5–10 mm; leaf blade broadly lanceolate to ovate-lanceolate, 9–14 × 3–6.5 cm, thickly membranous, sparsely pubescent, densely yellow glandular, base broadly cuneate to rounded, margin sparsely serrate, apex caudate-acuminate; veins 5 pairs, abaxially prominent. Inflorescences axillary, paniculate, densely pubescent; bracts and bractlets

minute. Calyx ca. 3 mm, 5- or 6-lobed, pubescent, densely glandular. Corolla pinkish, deep red, or purple, ca. 4 mm, tube ca. 2 mm, 5-lobed, outside pubescent and glandular. Stamens exserted. Style slightly longer than stamens. Fruiting calyx ca. 4 mm. Fruit usually orange at maturity, globose, ca. 2 mm in diam., pubescent, glandular, tardily breaking up. Fl. and fr. Mar-Sep.

Mixed forests on mountain slopes, along roadsides; 700–2300 m. Guangxi, W Guizhou, Sichuan, Yunnan [Bhutan, India, Myanmar, Nepal, Thailand].

