

3. TEUCRIUM Linnaeus, Sp. Pl. 2: 562. 1753.

香科科属 xiang ke ke shu

Herbs or subshrubs, with rhizomes or stolons. Stems erect or ascending, simple or branched from base. Leaves simple, petiolate or sessile, cordate to lanceolate, pinnate. Verticillasters 2–6-flowered, in false spikes, terminal racemes, or panicles of racemes; bracts rhombic-ovate to linear-lanceolate, margin entire or dentate. Calyx 10-veined, throat glabrous to pilose annulate; tube tubular to campanulate, swollen in front at base; limb equally 5-toothed to 2-lipped, upper lip 3-toothed, lower lip 2-toothed. Corolla 1-lipped; tube included or exserted, not hairy annulate inside; limb 5-lobed, with middle lobe circular or spatulate, occasionally 2-lobulate; lateral lobes 4, small. Stamens 4, anterior 2 slightly longer, all exserted from posterior sinus of corolla; anther cells divaricate. Ovary globose. Style equal to or slightly longer than stamens, equally or subequally 2-cleft at apex. Nutlets obovoid, glabrous, smooth to netted, areole ca. 1/2 as long as nutlet.

Approximately 260 species: worldwide, but abundant in the Mediterranean region; 18 species in China.

- 1a. Verticillasters 2–6-flowered, without bracts, inserted on all parts of stem and branches; calyx with 5 subequal teeth, not 2-lipped; posterior sinus of corolla narrow so that the corolla appears inconspicuously 1-lipped.
 - 2a. Plants lanate-villous, hairs 1–1.5 mm; basal leaves sessile, rounded to broadly cuneate at base, 3–6-crenate to coarsely 3–6-serrate on each margin 1. *T. scordium*
 - 2b. Plants densely lanate-villous, hairs to 2 mm; basal leaves sessile, auriculate-amplexicaul to rounded at base, 5–12-crenate on each margin 2. *T. scordioides*
- 1b. Verticillasters 2-flowered, bracteate, in terminal false spikes; calyx \pm 2-lipped; posterior sinus of corolla broad so that the corolla appears conspicuously 1-lipped.
 - 3a. Calyx 2-lipped; stamens much exserted, ca. $2\times$ as long as corolla tube.
 - 4a. Leaves ovate-lanceolate, caudate-acuminate at apex, entire 18. *T. integrifolium*
 - 4b. Leaves ovate, ovate-lanceolate, to lanceolate, coarsely serrate.
 - 5a. Lower lip of calyx 2-toothed to base; posterior-lateral lobes of corolla limb obliquely triangular-ovate; plants densely, retrorsely white puberulent 16. *T. pernyi*
 - 5b. Lower lip of calyx 2-toothed less than 1/3 its length; posterior-lateral lobes of corolla limb subcircular; plants subglabrous 17. *T. bidentatum*
 - 3b. Calyx inconspicuously to conspicuously 2-lipped; stamens slightly exserted to much exserted, ca. $2\times$ as long as corolla tube.
 - 6a. Verticillasters in cylindrical false spikes; calyx inconspicuously 2-lipped, throat glabrous inside; corolla tube slightly exserted; nutlets not netted.
 - 7a. Corolla 1 cm or less when open, tube ca. 1/2 as long to as long as limb, middle lobe of limb small, subcircular or circular; petiole ca. 1/4 as long as blade.
 - 8a. Leaves circular to ovate-triangular; bracts 3-lobed; false spikes composed of widely spaced verticillasters 3. *T. veronicoides*
 - 8b. Leaves ovate to ovate-oblong; bracts entire; false spikes composed of closely spaced verticillasters 4. *T. viscidum*
 - 7b. Corolla 1.1–1.5 cm when open, tube 1/3 to 1/2 as long as limb, middle lobe of limb largest, rhombic-obovate, subcircular, or obovate-orbicular; petiole ca. 1/5 as long as blade.
 - 9a. Calyx nearly 2-lipped, teeth with conspicuously netted veins; false spikes composed of 2–4-flowered verticillasters; leaves thick, adaxially \pm corrugate; petiole and stems densely white lanate 8. *T. ussuriense*
 - 9b. Calyx with 5 equal or subequal teeth, when subequal the lower 2 teeth as long as but narrower than upper 3, all inconspicuously veined; false spikes composed of 2-flowered verticillasters; leaves papery; petiole and stems variously hairy (white lanate only in *T. japonicum* var. *tsungmingense*).
 - 10a. Stems spreading white or yellowish villous, hairs 1.5–3 mm.
 - 11a. Calyx densely villous outside 7. *T. pilosum*
 - 11b. Calyx glabrous or pilose only on veins, when pilose calyx purplish 6. *T. tsinlingense*
 - 10b. Stems subglabrous or covered with small hooked hairs or white lanate but without spreading villous hairs 5. *T. japonicum*
 - 6b. Verticillasters in dorsiventrally flattened false spikes; calyx conspicuously 2-lipped, throat pilose annulate inside; corolla tube exserted more than $2\times$ longer than calyx tube; nutlets netted.
 - 12a. False spikes terminal on apical 2/3 of stems and branches, in panicles; corolla limb projected at an obtuse angle to tube; stems covered with golden yellow, rusty brown, or purple villous or strigose hairs, hairs to 2.5 mm 9. *T. quadrifarium*
 - 12b. False spikes terminal on stems and branches, composed of widely spaced verticillasters, not in panicles; corolla limb projected at a right angle to tube; stems covered with hairs not as above.
 - 13a. Corolla 1.8–1.9 cm, limb as long as tube, tube ca. $2\times$ as long as calyx tube; leaves ovate-lanceolate, oblong-lanceolate, to ovate-oblong.
 - 14a. Bracts ovate; stems covered with small, purple, hooked hairs; corolla tube ca. 8×1.2 mm, limb to 1.2 cm 15. *T. labiosum*
 - 14b. Bracts ovate-lanceolate, lanceolate, to linear-lanceolate.
 - 15a. Stems spreading villous; corolla tube ca. 9 mm, ca. 1.5 mm wide at middle; teeth of lower calyx lip subulate to caudate-acuminate at apex 14. *T. simplex*

- 15b. Stems subglabrous; corolla tube ca. 7×2 mm; teeth of lower calyx lip lanceolate, short acuminate at apex 13. *T. omeiense*
- 13b. Corolla 1.2–1.6 cm, limb 1.5–2×as long as tube, tube less than 2×as long as calyx tube; leaves ovate to obovate, sometimes oblong or elliptic.
- 16a. Bracts oblong-lanceolate to obovate-lanceolate; stems scabrid-villous; plants less than 25 cm 10. *T. nanum*
- 16b. Bracts oblong to subcircular; stems subglabrous or with small hooked hairs or villous; plants more than 35 cm.
- 17a. Stems slender and twisted; bracts oblong to subcircular; corolla limb nearly 2×as long as tube; leaves ovate to obovate, 1.2–3.8×0.8–2.2 cm, apex rounded to obtuse; petiole 3–9 cm 11. *T. anlungense*
- 17b. Stems erect; bracts ovate; corolla limb slightly longer than tube; leaves ovate to oblong, 3–6(–11)×1.5–4.5 cm, apex acute; petiole 1–2.5 cm 12. *T. manghuaense*

1. *Teucrium scordium* Linnaeus, Sp. Pl. 2: 565. 1753.

蒜味香科科 suan wei xiang ke ke

Herbs perennial. Stems ascending, 25–35 cm tall, lanate-villous, with hairs 1–1.5 mm, branched from base. Leaves subsessile basally, sessile apically; leaf blade obovate to oblong, 1.2–3×0.4–1.2 cm, adaxially appressed villous, abaxially spreading villous mainly along veins and glandular, base rounded to broadly cuneate, margin remotely 3–6-crenate to coarsely 3–6-serrate, apex obtuse. Verticillasters 2–6-flowered, inserted on all but basal nodes. Pedicel 4–5 mm. Calyx tubular-campanulate, ca. 2.8 mm, very swollen in front at base, villous and glandular villous outside; teeth triangular, ca. 1/2 as long as calyx, with anterior 2 slightly narrower. Corolla purple, ca. 6 mm, pubescent outside; limb with a tuft of hairs inside, middle lobe oblong, undulate, lateral lobes obliquely ovate-triangular. Ovary white barbate. Nutlets ovoid, ca. 1 mm, slightly netted. Fl. Jul–Aug, fr. Sep.

Moist areas; 1000 m. Gansu, Xinjiang [Russia; Europe].

Used to treat wounds and as an antihydroptic.

2. *Teucrium scordioides* Schreber, Pl. Verticill. Unilaa. Gen. Sp. 37. 1774.

沼泽香科科 zhao ze xiang ke ke

Herbs perennial, rhizomatous, stoloniferous. Stems erect, to 60 cm tall, densely lanate-villous, with hairs to 2 mm, striate, much branched apically. Leaves sessile; leaf blade obovate to oblong, 1–3.2×0.4–1.2 cm, unevenly villous except adaxially densely lanate-villous on midrib, margin 5–12-crenate. Verticillasters 2–6-flowered, inserted on all but basal nodes. Pedicel 4–5 mm. Calyx tubular-campanulate, less than 3 mm, very swollen in front at base, villous and glandular villous outside; teeth triangular, subequal, ca. 1/2 as long as tube. Corolla purple, ca. 2×as long as calyx, pubescent outside; limb with a tuft of hairs inside, middle lobe circular, lateral lobes narrowly, obliquely ovate-triangular. Ovary white, bullate, hairy. Nutlets unknown. Fl. Jul.

Marsh margins, moist grasslands. Xinjiang [Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan; SW Asia, Europe].

Used medicinally and as a spice.

3. *Teucrium veronicoides* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg, sér. 3, 23: 388. 1877.

裂苞香科科 lie bao xiang ke ke

Herbs perennial, stoloniferous. Stems erect, 20–40 cm tall, spreading villous, much branched. Petiole 1–2 cm, spreading villous; leaf blade of mid stem leaves circular to ovate-triangular, 2–4×1.8–3 cm, basal leaf blade sometimes subreniform, 0.7–1.3×0.5–1.5 cm, adaxially appressed

villous, abaxially puberulent except for villous veins, base truncate to subcordate, margin double crenate, apex obtuse to acute. Verticillasters 2-flowered, in spikes 5–10 cm; rachis villous; bracts ovate, 3-lobed. Pedicel 2.5–3.5 mm, villous. Calyx campanulate, 3–4×2–2.5 mm; teeth triangular, subequal, obtuse, subglabrous except for ciliate margin. Corolla purplish red, 7–8 mm, subglabrous outside; limb obliquely spreading, middle lobe subcircular, lateral lobes obliquely ovate-triangular and subequal. Nutlets chestnut brown, oblong-obovoid, ca. 1.2 mm, smooth. Fl. Jul.

Forests; 1800–2500 m. Hunan, Liaoning, Sichuan, Yunnan [Japan, Korea].

4. *Teucrium viscidum* Blume, Bijdr. 827. 1826.

血见愁 xue jian chou

Herbs perennial, stoloniferous. Stems erect, 30–70 cm tall, basally glabrous or subglabrous, apically glandular pubescent or glabrous. Petiole 1–3 cm, subglabrous; blade ovate to ovate-oblong, 3–10 cm, subglabrous or very sparsely puberulent, base rounded, broadly cuneate to cuneate, margin double crenate-serrate, apex acute to short acuminate. Spikes on apical parts of stem and branches, 3–7 cm, densely glandular pubescent; verticillasters close together, 2-flowered; bracts lanceolate. Pedicel 1–2 mm, densely glandular villous. Calyx campanulate, 2.8–4×2.2 mm; teeth straight, subequal, less than 1/2 as long as calyx tube, upper 3 ovate-triangular, lower 2 triangular. Corolla white, reddish, or purplish, 6.5–7.5 mm, tube ca. 3 mm; middle lobe circular, lateral lobes ovate-triangular, obtuse. Ovary apically bullate, hairy. Style as long as stamens. Nutlets yellow-brown, oblate, ca. 1.3 mm. Fl. Jun–Nov (Jun–Sep in the Chang Jiang basin; Jun–Nov in Guangdong and S Yunnan).

Moist forests, ravines, thickets on slopes; 100–2500 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [India, Indonesia, Japan, Korea, Myanmar, Philippines].

- 1a. Calyx glabrous 4c. var. *leiocalyx*
- 1b. Calyx densely glandular villous, gray puberulent, or gray pubescent.
- 2a. Calyx densely glandular villous 4a. var. *viscidum*
- 2b. Calyx densely gray puberulent or gray pubescent.
- 3a. Calyx densely gray puberulent 4b. var. *nepetoides*
- 3b. Calyx densely gray pubescent.
- 4a. Bracts to 10 mm; plants glabrous 4d. var. *longibracteatum*
- 4b. Bracts less than 8 mm; plants sparsely pubescent 4e. var. *macrostephanum*

4a. *Teucrium viscidum* var. *viscidum*

血见愁 xue jian chou

Teucrium philippinense Merrill; *T. stoloniferum* Roxburgh.

Calyx densely glandular villous outside.

Moist forests; 100–1500 m. Fujian, Guangdong, Guangxi, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [India, Indonesia, Japan, Korea, Myanmar, Philippines].

Used medicinally.

4b. *Teucrium viscidum* var. *nepetoides* (H. Léveillé) C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 331. 1965.

微毛变种 wei mao bian zhong

Teucrium nepetoides H. Léveillé, Repert. Spec. Nov. Regni Veg. 8: 450. 1910.

Calyx densely gray puberulent, ca. 4×2.5 mm. Corolla 8–10 mm, tube 4–5 mm.

• Moist forests; 700–2000 m. Anhui, Guizhou, Hubei, Jiangxi, Shaanxi, Sichuan, Zhejiang.

4c. *Teucrium viscidum* var. *leiocalyx* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 332. 1965.

光萼变种 guang e bian zhong

Stems pilose or subglabrous. Calyx glabrous, shiny in fruit. Corolla white.

• Forests, ravines; 1700 m. Gansu, Hubei, Shaanxi, Sichuan.

4d. *Teucrium viscidum* var. *longibracteatum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 332. 1965.

长苞变种 chang bao bian zhong

Leaf base rounded to truncate. Spikes gray pubescent; bracts to 10 mm.

• Forests. Hunan.

4e. *Teucrium viscidum* var. *macrostephanum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 333. 1965.

大唇变种 da chun bian zhong

Stems sparsely pubescent. Petiole and abaxial surface of leaves pubescent, leaf base truncate. Bracts less than 8 mm. Calyx gray pubescent. Corolla ca. 1 cm.

• Thickets on slopes. Guangxi, Guizhou, Yunnan.

5. *Teucrium japonicum* Willdenow, Sp. Pl. 3: 23. 1800.

穗花香科科 sui hua xiang ke ke

Herbs perennial, stoloniferous. Stems 50–80 cm tall, glabrous or occasionally sparsely villous near nodes. Petiole 0.8–1.5 cm; leaf blade ovate-oblong to ovate-lanceolate, 5–10×1.5–4.5 cm, base cordate to truncate, margin double serrate/crenate, apex acute to short acuminate. Spikes 3–4.5 cm, glabrous; verticillasters close together and 2-flowered; bracts linear-lanceolate. Pedicel ca. 1.5 mm. Calyx campanulate, 4–4.5×3–3.5 mm, slightly swollen in front near base, 10-veined; teeth triangular, lower 2 narrower. Corolla white or reddish, 1.2–1.4 cm, tube 1/4 as long as corolla; middle lobe rhombic-obovate, nearly 1/2 as long as limb; lateral lobes ovate-oblong, acute. Style as long as stamens.

Nutlets chestnut brown, obovoid, ca. 1.2 mm, smooth, sparsely white bullate, hairy. Fl. Jul-Sep.

Hilly fields, waste areas, grasslands near roads; 500–1200 m. Gansu, Guangdong, Guizhou, Hebei, Henan, Hunan, Jiangsu, Jiangxi, Sichuan, Zhejiang [Japan, Korea].

- 1a. Calyx glabrous except for ciliate margin.
- 2a. Inflorescences glabrous; petiole and abaxial leaf surface sparsely pubescent; plants sparsely pilose or pubescent to subglabrous 5a. var. *japonicum*
- 2b. Inflorescences pubescent; petiole and abaxial leaf surface lanate; plants white lanate through-out 5b. var. *tsungmingense*
- 1b. Calyx sparsely pubescent 5c. var. *microphyllum*

5a. *Teucrium japonicum* var. *japonicum*

穗花香科科 sui hua xiang ke ke

Calyx glabrous, ciliate on margin.

Hilly fields; 500–1100 m. Guangdong, Guizhou, Hunan, Jiangsu, Jiangxi, Sichuan, Zhejiang [Japan, Korea].

Used medicinally.

5b. *Teucrium japonicum* var. *tsungmingense* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 334. 1965.

崇明变种 chong ming bian zhong

Plants white lanate.

• Grasslands near roads. Jiangsu, Zhejiang.

5c. *Teucrium japonicum* var. *microphyllum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 334. 1965.

小叶变种 xiao ye bian zhong

Calyx sparsely pubescent.

• Waste areas; 500–1200 m. Gansu, Hebei, Henan.

6. *Teucrium tsinlingense* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 334. 1965.

秦岭香科科 qin ling xiang ke ke

Herbs stoloniferous. Stems erect, simple or branched, 40–80 cm tall, basally glabrous, with spreading villous hairs above middle, hairs to 2.5 mm. Petiole 0.6–1.5 cm, villous; leaf blade ovate-lanceolate, 3.5–7×1–2.5 cm, adaxially sparsely puberulent, abaxially subglabrous, pubescent on veins, glandular, base truncate to subcordate, margin serrate, apex acute to acuminate. Spikes 1.5–4.5 cm, verticillasters close together and 2-flowered; bracts linear-lanceolate, pilose. Pedicel ca. 2 mm, glabrous. Calyx campanulate, glabrous, shiny glandular; teeth ciliate, 3.5–4 mm, triangular, subequal. Corolla reddish, ca. 1.1 cm, tube as long as calyx; limb well developed, middle lobe subcircular, anterior lateral lobes ovate, posterior lateral lobes acute. Ovary bullate, hairy. Nutlets unknown.

• Wet field margins, plateaus; 1200–1800 m. Gansu, Shaanxi.

- 1a. Calyx glabrous, green 6a. var. *tsinlingense*
- 1b. Calyx pilose along veins, purplish 6b. var. *porphyreum*

6a. *Teucrium tsinlingense* var. *tsinlingense*

秦岭香科科 qin ling xiang ke ke

Calyx green, glabrous.

- Wet field margins; 1200 m. Shaanxi.

6b. *Teucrium tsinlingense* var. *porphyreum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 335. 1965.

紫萼变种 *zi e bian zhong*

Calyx purplish, pilose along veins.

- Plateaus; 1800 m. Gansu.

7. *Teucrium pilosum* (Pampanini) C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 335. 1965.

长毛香科科 *chang mao xiang ke ke*

Teucrium japonicum Willdenow var. *pilosum* Pampanini, Nuovo Giorn. Bot. Ital., n.s. 17: 711. 1910.

Herbs perennial, stoloniferous. Stems erect, simple or occasionally branched apically, 50–100 cm tall, densely spreading white villous or yellow villous, hairs to 3 mm. Petiole 0.4–1 cm, spreading villous; leaf blade ovate-lanceolate to oblong-lanceolate, 5–8(–12)×1.5–2.5(–5) cm, adaxially with villous midrib otherwise appressed pubescent and unevenly pubescent, abaxially with villous veins, base truncate to subcordate, margin irregularly double serrulate, apex short acuminate to acuminate. Spikes terminal, 3.5–7(–15) mm, villous, verticillasters 2–4-flowered; bracts linear-lanceolate, villous. Pedicel ca. 1.5 mm, villous. Calyx campanulate, ca. 4×3 mm, villous, yellow glandular outside; upper 3 teeth triangular, lower 2 triangular-subulate. Corolla reddish, 1.2–1.5 cm; tube less than 1/3 as long as corolla; limb straight, middle lobe obovate-orbicular, to 5.5 mm in diam., apex apiculate; lateral lobes ovate-oblong, apically acute. Nutlets unknown. Fl. Jul-Aug.

- Forest margins, slopes, river banks; 300–2500 m. Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Zhejiang.

Used medicinally.

8. *Teucrium ussuriense* V. Komarov, Izv. Bot. Sada Akad. Nauk. SSSR 30: 208. 1932.

黑龙江香科科 *hei long jiang xiang ke ke*

Teucrium japonicum Willdenow var. *continentale* Kitagawa.

Herbs perennial, stoloniferous. Stems erect, 25–45 cm tall, simple or very short branched, white lanate. Petiole 4–7 mm, white lanate; leaf blade ovate-oblong, 2.5–4×1–1.6 cm, papery, adaxially appressed pubescent and ± rugulose, abaxially densely white lanate, base truncate or broadly cuneate, margin irregularly serrulate, apex obtuse or acute. Spikes 2–4.5 cm, verticillasters 2–4-flowered; bracts linear-lanceolate, 3–4 mm, pilose. Pedicel ca. 2 mm, pilose. Calyx campanulate, ca. 5×2.5 mm, pilose outside, 2-lipped; teeth ca. 1/4 as long as calyx and ciliate, upper 3 ovate-triangular and lower 2 triangular-lanceolate, apically acute. Corolla purple, ca. 1.2 cm, sparsely white puberulent outside, throat white puberulent, tube ca. 1/3 or more as long as corolla; middle lobe rhombic-obovate, ca. 2/5 as long as limb, lateral lobes ovate-oblong. Anterior stamens as long as corolla limb. Style slightly exerted. Nutlets brownish, 2 or 3, well developed, unequal, subglobose, ca. 1 mm in diam., smooth. Fl. Aug, fr. Sep.

Open, stony slopes, riverbanks. Hebei, Liaoning, Shanxi [Russia].

9. *Teucrium quadrifarium* Buchanan-Hamilton ex D. Don, Prodr. Fl. Nepal. 108. 1825.

铁轴草 *tie zhou cao*

Teucrium fortunei Benth; *T. fulvoaureum* H. Léveillé; *T. fulvum* Hance; *T. kouytchouense* H. Léveillé.

Subshrubs. Stems erect, 30–110 cm tall, subterete, densely golden yellow, rusty villous, purple villous, or upwardly strigose. Petiole absent or to 1 cm; leaf blade ovate to oblong-ovate, 3–7.5×1.5–4 cm, adaxially appressed pubescent, abaxially gray tomentose to densely pubescent except villous or strigose on veins, base subcordate to truncate, margin double serrate to double crenate, apex obtuse to acute. Spikes on main stems and branches of apical 1/3 of plant, in panicles; verticillasters, usually close together; bracts 4–8×2–4 mm, sparsely villous, apically acuminate to caudate-acuminate. Calyx campanulate, 4–5×2 mm, villous or pubescent outside, pilose annulate at throat; middle tooth of upper lip obovate-oblate, lateral teeth triangular, teeth of lower lip lanceolate. Corolla reddish, 1.2–1.3 cm, sparsely pubescent and yellowish glandular outside, white puberulent on lower part of limb inside, tube ca. 1/3 as long as corolla; middle lobe of limb obovate-subcircular, less than 1/2 as long as limb, lateral lobes ovate-oblong, posterior lobes reflexed. Nutlets dark brown, obovate-subglobose, ca. 1 mm, netted on back. Fl. Jul-Sep.

Open slopes, forests, thickets; 400–2400 m. Fujian, Guangdong, Guizhou, Hunan, Jiangxi, Yunnan [India (Sikkim), Indonesia (Sumatra), N Myanmar, Nepal].

Used medicinally.

10. *Teucrium nanum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 337. 1965.

矮生香科科 *ai sheng xiang ke ke*

Herbs perennial. Stems erect or ascending, 20–25 cm tall, terete, simple, scabrid villous. Leaves opposite or in whorls of 3; petiole 3–5 mm, villous; leaf blade oblong to obovate, 2–4×1.2–2 cm, adaxially villous, abaxially tomentose, base cuneate-decurrent, margin of apical half crenate, apex rounded to obtuse. Spikes 6–8 cm, villous; bracts oblong-lanceolate to obovate-lanceolate, shorter than calyx. Pedicel ca. 1.5 mm, densely yellow villous. Calyx campanulate, ca. 5×3.3 mm, densely yellow villous outside, throat pilose annulate; middle tooth of upper lip oblate, apex acute, lateral teeth obliquely ovate-triangular, lower lip teeth subulate. Corolla 1.1–1.2 cm, pilose outside, white puberulent inside, tube ca. 1/2 as long as corolla; middle lobe subcircular, clawed, lateral lobes ovate-lanceolate. Nutlets brown, oblong, ca. 1 mm, slightly netted. Fl. Aug-Sep.

- Grassy slopes. Sichuan, Yunnan.

11. *Teucrium anlungense* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 338. 1965.

安龙香科科 *an long xiang ke ke*

Herbs perennial. Stems erect or ascending, much branched, 60–70 cm tall, covered with small hooked hairs. Petiole 3–9 mm, strigose; leaf blade ovate to obovate, 1.2–3.8×0.8–2.2 cm, adaxially strigose, abaxially hispid, base cuneate-decurrent, margin undulate-crenate to crenate, apex rounded to obtuse. Spikes of second, widely spaced, 2-flowered verticillasters; bracts oblong to subcircular, 1.5–5×1.2–3.8 mm, ciliate. Pedicel ca. 2 mm. Calyx campanulate,

ca. 5×3.5 mm, yellowish glandular, pilose at base of veins outside, throat pilose annulate; middle tooth of upper lip very large, circular, acute at apex, lateral teeth obliquely ovate-triangular, lower lip teeth lanceolate. Corolla white or purplish, ca. 1.6 cm; throat bullate outside and inside, tube ca. 6 mm; middle lobe obovate-orbicular, ca. 3.8 mm, anterior lateral lobes ca. 0.7 mm, posterior lateral lobes ca. 1 mm. Ovary bullate, hairy. Nutlets yellow-brown, obovoid, ca. 1 mm, netted. Fl. Oct.

- Open hillsides; 600–1500 m. Guizhou, Yunnan.

Used medicinally for indigestion.

12. *Teucrium manghuaense* Sun ex S. Chow, Acta Phytotax. Sin. 10: 339. 1965.

巍山香科科 wei shan xiang ke ke

Stems erect, ca. 40 cm tall, densely strigose, unbranched or sometimes with clusters of leaves in leaf axils. Petiole 1–2.5 cm, densely villous; leaf blade ovate to oblong, adaxially strigose, abaxially sparsely pubescent, base cuneate, apex acute. Spikes sometimes axillary, 3–7 cm; verticillasters 2-flowered, secund; bracts ovate, 4–8×1.7–3 mm, ciliate. Pedicel ca. 1.5 mm strigose. Calyx campanulate, ca. 6 mm, glabrous or slightly puberulent outside, throat pilose annulate, tube ca. 4 mm; upper lip triangular, ca. 2.3×4 mm; middle tooth ovate, ca. 2×3 mm; lateral teeth triangular; lower lip teeth narrowly triangular, ca. 1.8×1 mm. Corolla greenish white, ca. 1.2 cm, pubescent outside, throat puberulent, tube ca. 5.5 mm; limb reflexed, ca. 6.5 mm; middle lobe ovate, ca. 2.5×1.8 mm; lateral lobes elliptic, ca. 1 mm. Nutlets unknown. Fl. Aug-Sep.

- Broad-leaved forests. Yunnan.

- 1a. Plants densely strigose; leaves 3–6×1.5–3.3 cm; bracts ovate 12a. var. *manghuaense*
- 1b. Plants subglabrous; leaves to 11×4.5 cm; bracts lanceolate 12b. var. *angustum*

12a. *Teucrium manghuaense* var. *manghuaense*

巍山香科科 wei shan xiang ke ke

Plants densely strigose. Leaf blade 3–6×1.5–3.3 cm. Bracts ovate.

- Broad-leaved forests; 2800 m. Yunnan.

12b. *Teucrium manghuaense* var. *angustum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 340. 1965.

狭苞变种 xia bao bian zhong

Plants subglabrous. Leaf blade to 12×4.5 cm. Bracts lanceolate.

- Broad-leaved hillside forests; below 2000 m. Yunnan.

13. *Teucrium omeiense* Sun ex S. Chow, Acta Phytotax. Sin. 10: 340. 1965.

峨嵋香科科 e mei xiang ke ke

Herbs erect, perennial. Stems ca. 50 cm tall, subglabrous, few branched. Petiole (0.5–)1–1.5 cm, glabrous; leaf blade ovate-lanceolate, 3.5–12×1.5–3.5 cm, base rounded to cuneate, margin irregularly serrate, apex acute to acuminate. Spikes 4–10 cm; verticillasters close together, secund, 2-flowered; bracts lanceolate to linear-lanceolate, 2.5–5×0.8–1.5 mm, margin entire or 1- or 2-serrate, ciliolate. Pedicel ca.

2 mm, pubescent or puberulent. Calyx campanulate, ca. 6 mm, sparsely pubescent or subglabrous except at base, pilose annulate at throat, tube ca. 4 mm; middle tooth of upper lip subcircular, ca. 3 mm wide, acute at apex; lateral teeth triangular, ca. 1.5×1.5 mm; lower lip teeth lanceolate, ca. 2×1.2 mm, and apically short acuminate. Corolla white, ca. 1.8 cm, pubescent outside, tube ca. 7×2 mm, limb ca. 1.1 cm; middle lobe ovate, ca. 4.5×3 mm; lateral lobes lanceolate, 1.6–2 mm. Style ca. 1.2 cm, sparsely puberulent. Nutlets ovoid, ca. 1.3 mm, netted. Fl. Jul-Sep.

- Moist forests; 1200–2600 m. Sichuan, Yunnan.

- 1a. Leaf blade adaxially pubescent, green, abaxially subglabrous except on veins, greenish; petiole 0.5–1.5 cm 13a. var. *omeiense*
- 1b. Leaves glabrous, adaxially bluish green, abaxially purplish; petiole to 2.5 cm 13b. var. *cyanophyllum*

13a. *Teucrium omeiense* var. *omeiense*

峨嵋香科科 e mei xiang ke ke

Petiole 0.5–1.5 cm; leaf blade adaxially pubescent, abaxially green and subglabrous except on veins.

- Moist forests; 1200–2000 m. Sichuan.

13b. *Teucrium omeiense* var. *cyanophyllum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 341. 1965.

蓝叶变种 lan ye bian zhong

Petiole to 2.5 cm; leaf blade glabrous, adaxially bluish green, abaxially purplish.

- Moist hillside forests; 2300–2600 m. Yunnan.

14. *Teucrium simplex* Vaniot, Bull. Acad. Int. Géogr. Bot. 14: 186. 1904.

香科科 xiang ke ke

Herbs erect, ca. 50 cm tall, spreading villous, unbranched or short branched. Petiole 1.5–2.5 cm, strigose-villous; leaf blade ovate-lanceolate to oblong-lanceolate, 5–9×1.5–2.4 cm, sparsely villous, base cuneate-decurrent, margin coarsely serrate, apex acuminate. Spikes terminal, 4–7 cm, verticillasters 2- or 3-flowered; rachis densely strigose-villous; bracts reduced apically, pilose. Pedicel 1.5–2 mm, densely villous. Calyx campanulate, 6–6.5 mm, pilose outside, pilose annulate at throat; middle tooth of upper lip circular, ca. 2 mm wide, apex apiculate, lateral teeth obliquely triangular; lower lip teeth subulate, apically caudate-acuminate, ca. 2.5 mm. Corolla white, to 1.9 cm, pilose outside, tube ca. 9×1.5 mm; middle lobe ovate, ca. 4×2.8 mm, apex rounded; lateral lobes subulate-lanceolate, ca. 2.2 mm. Stamens 6–7 mm. Style ca. 1 cm. Nutlets ocher colored, obovoid, netted. Fl. Jul-Aug.

- Moist areas in broad-leaved forests; 2000 m. Guizhou, Yunnan.

15. *Teucrium labiosum* C. Y. Wu & S. Chow, Acta Phytotax. Sin. 10: 342. 1965.

大唇香科科 da chun xiang ke ke

Herbs perennial, stoloniferous, ascending. Stems ca. 60 cm tall, unbranched or short branched, with dense, purple, hooked hairs. Petiole 0.5–2 cm; leaf blade ovate-oblong, 3–

6×1.5–2.6 cm, adaxially puberulent or subglabrous, abaxially subglabrous except for pubescent veins, base cuneate to broadly cuneate-decurrent, margin double crenate, apex obtuse to acute. Spikes on short branches, 3–15 cm; verticillasters secund, 2-flowered; bracts subsessile, ovate, margin entire. Pedicel 2–2.5 mm, to 4 mm in fruit, densely pubescent. Calyx campanulate, ca. 5 mm, pubescent outside, pilose annulate at throat; middle tooth of upper lip subcircular, apex acute, ca. 2 mm wide, lateral teeth triangular; lower lip teeth subulate, ca. 2.5 mm. Corolla white, to 2 cm, tube ca. 8×1.2 mm, pilose outside; middle lobe rhombic-oblate, ca. 4.5×5 mm, apex acute, constricted into claw at base; posterior lateral lobes linear-lanceolate, apically ciliate. Ovary bullate, hairy. Nutlets yellow-brown, obovoid, ca. 1.1 mm, slightly netted. Fl. Jul-Aug.

- Hilly forests; 1200 m. Guizhou, Sichuan, Yunnan.

16. *Teucrium pernyi* Franchet, *Nouv. Arch. Mus. Hist. Nat.*, sér. 2, 6: 125. 1883.

庐山香科科 lu shan xiang ke ke

Kinostemon ningpoense (Hemsley) Kudô; *K. pernyi* (Franchet) Kudô var. *ningpoense* (Hemsley) Kudô; *Teucrium huoshanense* S. W. Su & J. Q. He; *T. ningpoense* Hemsley.

Herbs perennial, erect, stoloniferous. Stems 60(–100) cm tall, with dense, retrorse white pubescence, with hairs ca. 0.5 mm. Petiole 3–7 mm; leaf blade ovate-lanceolate, 3.5–5.3(–8.5)×1.5–2(–3.5) cm, puberulent except white pubescent on abaxial veins, base broadly cuneate-decurrent, apex short acuminate to acuminate. Spikes terminal, on short axillary branches, verticillasters 2(–6)-flowered; bracts ovate, pubescent, as long as pedicel. Pedicel 3–4 mm, pubescent. Calyx campanulate, swollen in front at base, ca. 5×3.5 mm, sparsely puberulent outside, pilose annulate at throat; middle tooth of upper lip subcircular, apex mucronate; lateral teeth triangular-ovate, less than 1/2 as long as middle tooth; lower lip teeth triangular-subulate, apically acuminate. Corolla white, sometimes tinged red, ca. 1 cm; tube slightly exserted, ca. 4.5 mm, sparsely puberulent outside; middle lobe of limb well developed, elliptic-subulate, ca. 4×2.6 mm, apex acute; posterior lobes obliquely triangular-ovate. Stamens more than 2×as long as corolla tube. Style unequally 2-cleft at apex. Ovary bullate, hairy. Nutlets brownish black, obovoid, ca. 1.2 mm, conspicuously netted.

- Hilly areas, fields; 200–1100 m. Anhui, Fujian, Guangdong, Guangxi, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Zhejiang.

17. *Teucrium bidentatum* Hemsley, *J. Linn. Soc., Bot.* 26: 312. 1890.

二齿香科科 er chi xiang ke ke

Kinostemon bidentatum (Hemsley) Kudô; *Plectranthus hanceiformis* H. Léveillé; *Teucrium bidentatum* Hemsley var. *purpureum* Diels.

Herbs erect, perennial. Stems 60–90 cm tall, sparsely retrorse puberulent; branches subhorizontal. Petiole 5–9 mm, puberulent; leaf blade ovate to lanceolate, 4–11×1.5–4 cm, glabrous except sparsely puberulent on midrib and veins, abaxially minutely papillate, base cuneate to broadly cuneate-decurrent, margin of apical half 3- or 4-serrate, apex acuminate to caudate-acuminate. Spikes 1.5–4.5 cm, puberulent; verticillasters 2-flowered; bracts ovate-lanceolate, glabrous except ciliate on margin, as long as or longer than

pedicel. Pedicel ca. 3 mm, puberulent or subglabrous. Calyx campanulate, swollen in front at base, ca. 4.6×4 mm, glabrous except for puberulent base outside, pilose annulate at throat; middle tooth of upper lip oblate, to 3.5 mm wide, lateral teeth subcircular. Corolla white, ca. 1 cm, glabrous; tube slightly exserted, ca. 5×1.8 mm; middle lobe of limb subcircular, ca. 3 mm wide, basally constricted; anterior lateral lobes oblong, ca. 1.2×0.8 mm; posterior lateral lobes subcircular, ca. 1.2×1.5 mm. Stamens ca. 3×as long as corolla tube. Nutlets yellow-brown, ovoid, ca. 1.2×1 mm, netted.

- Hilly forests; 1000–1300 m. Guangxi, Guizhou, Hubei, Sichuan, Taiwan, Yunnan.

Used medicinally.

18. *Teucrium integrifolium* C. Y. Wu & S. Chow, *Acta Phytotax. Sin.* 10: 345. 1965.

全叶香科科 quan ye xiang ke ke

Herbs erect, perennial. Stems ca. 90 cm tall, basally terete and woody, apically subglabrous or sparsely puberulent. Leaves subsessile; leaf blade ovate-lanceolate, 3.5–11×0.8–2.8 cm, glabrous, abaxially with small yellowish glands, base rounded, slightly decurrent, margin entire, apex caudate-acuminate. Spikes 3.5–4.5(–6) cm, verticillasters 2-flowered; bracts linear, as long as pedicel, subglabrous. Pedicel ca. 2.5 mm, puberulent. Calyx swollen in front at base, ca. 5×4.5 mm, base puberulent outside, throat pilose annulate, tube ca. 2.6 mm; middle tooth of upper lip oblate, ca. 2.4×3 mm, lateral teeth subcircular; lower lip teeth subulate. Corolla white, to 1.2 cm, glabrous, yellowish glandular outside, center of lip white bullate, hairy, tube ca. 5×1.8 mm; middle lobe spatulate, ca. 4×3.5 mm, apex apiculate; anterior lateral lobes oblong, ca. 1.8×1 mm; posterior lateral lobes obliquely triangular, ca. 1.2×2 mm. Stamens more than 2×as long as corolla tube; filaments basally pubescent. Nutlets unknown. Fl. Jul.

- Thickets; 1000 m. Guizhou.

