

2. STAUROGYNE Wallich, Pl. Asiat. Rar. 2: 80. 1831.

叉柱花属 cha zhu hua shu

Hu Jiaqi (胡嘉琪 Hu Chia-chi), Deng Yunfei (邓云飞); Thomas F. Daniel

Ebermaiera Nees.

Annual or perennial herbs or small shrubs, without cystoliths. Stems very short or elongate. Leaves in a basal rosette or cauline, opposite (or alternate, especially apically), petiolate or sessile; leaf blade margin entire or nearly so. Inflorescences terminal or axillary, racemes or spikes; bracts opposite or alternate, leaflike or usually well differentiated from leaves; bracteoles present. Calyx 5-lobed almost to base; lobes equal or unequal. Corolla tube cylindric or basally cylindric and apically expanding into a campanulate throat; limb subactinomorphic to 2-lipped, 5-lobed; lobes subequal, patent, descending cochlear in bud. Stamens 4, didynamous, included or anterior pair slightly exerted; filaments usually hairy; anthers 2-theous; thecae parallel, usually equal; staminode 1 or more, sometimes absent. Ovary with usually 12–60 ovules arranged in 2 or 4 rows per locule; style glabrous; stigmas 2-lobed, sometimes repeatedly 2-lobed. Capsule oblong, many seeded; retinacula absent. Seeds minute, subspherical or cuboid.

About 140 species: tropical regions worldwide; 17 species (eight endemic) in China.

- 1a. Bracts pinnately veined.
2a. Plants to 20 cm tall; leaf blade $2.5\text{--}6 \times 1\text{--}2$ cm; spikes ca. 1 cm 7. *S. paotingensis*
2b. Plants to 1 m tall; leaf blade $13\text{--}17 \times 4.5\text{--}7$ cm; racemes to 15 cm 8. *S. rivularis*
- 1b. Bracts not pinnately veined.
3a. Leaf blade base cordate 5. *S. chapaensis*
3b. Leaf blade base cuneate, rounded, or attenuate.
4a. Stems very short; leaves forming a basal rosette.
5a. Leaf blade oblanceolate, widest above middle 10. *S. concinnula*
5b. Leaf blade ovate-oblong, elliptic, oblong, ovate, or oblong-obovate, widest below middle.
6a. Leaf blade adaxially villous; corolla ca. 2 cm 6. *S. sinica*
6b. Leaf blade adaxially strigose; corolla ca. 5.5 mm 12. *S. strigosa*
- 4b. Stems elongate; leaves cauline.
7a. Calyx 1.8–2.4 cm; corolla 3–4 cm 4. *S. sesamoides*
7b. Calyx less than 1.5 cm; corolla less than 2.5 cm (corollas unknown in *S. sichuanica* and *S. yunnanensis*).
8a. Leaf blade linear, 5–9 mm wide, length/width greater than 5 13. *S. stenophylla*
8b. Leaf blade lanceolate, ovate-lanceolate, oblong, or elliptic, usually broader than 1 cm, length/width less than 3.
9a. Calyx lobes spatulate 15. *S. petelotii*
9b. Calyx lobes linear, lanceolate, or triangular.
10a. Longer pair of stamens slightly exerted 1. *S. hypoleuca*
10b. Stamens all included.
11a. Inflorescences all borne on axillary brachyblasts 2. *S. longicuneata*
11b. Inflorescences not all borne on axillary brachyblasts.
12a. Inflorescences terminal only; calyx lobes unequal.
13a. Bracts adaxially densely pubescent 14. *S. yunnanensis*
13b. Bracts glabrous or subglabrous 16. *S. vicina*
12b. Inflorescences terminal and axillary; calyx lobes subequal or equal.
14a. Stems suberect or ascending from a decumbent base 17. *S. debilis*
14b. Stems erect.
15a. Filaments glabrous 11. *S. hainanensis*
15b. Filaments pubescent.
16a. Peduncles, rachises, and pedicels puberulent 3. *S. sichuanica*
16b. Peduncles, rachises, and pedicels glabrous 9. *S. brachystachya*

1. *Staurogyne hypoleuca* Benoist, Notul. Syst. (Paris) 2: 338. 1911.

灰背叉柱花 hui bei cha zhu hua

Ophiorrhizophyllon hypoleucum (Benoist) Benoist.

Herbs to 1 m tall. Stems glabrous, lenticellate. Petiole 3–6

cm; leaf blade oblong, elliptic, or lanceolate, $13\text{--}17 \times 4.5\text{--}7$ cm, both surfaces glabrous, abaxially glaucous, adaxially green, secondary veins 8–11 on each side of midvein, base cuneate and slightly decurrent onto petiole, margin entire or undulate, apex acuminate to sometimes acute. Racemes terminal or in axils of apical leaves, to 15 cm, unbranched or branched at base; rachis

gland-tipped pilose; bracts linear, 4–4.5 × ca. 0.8 mm, apex acuminate; bracteoles linear, ca. 2 mm. Flowers alternate. Pedicel 2–3.5 mm. Calyx ca. 5 mm, outside pubescent with gland-tipped trichomes; lobes triangular-ovate, ca. 4 × 1 mm, unequal with lateral 2 lobes smaller, margin ciliate with gland-tipped trichomes. Corolla white, funnel-shaped, ca. 7 mm; lobes suborbicular, ca. 1.5 × 1.3 mm, subequal. Stamens with longer pair ca. 3 mm and shorter pair ca. 2 mm; filaments glabrous; anther thecae ca. 1 mm, those of longer pair of stamens slightly exerted. Ovary ellipsoid, ca. 2 mm; ovules in 2 rows per locule, 12 in each row; style ca. 3 mm, glabrous; stigma 2-cleft. Capsule cylindric, 5–7 mm. Fl. Dec–Apr.

Forests; 300–1800 m. Yunnan [Vietnam].

2. *Staurogyne longicuneata* H. S. Lo, Bull. Bot. Res., Harbin 8(1): 2. 1988.

楔叶叉柱花 xie ye cha zhu hua

Herbs to 30 cm tall. Stems stout, 4-angled, pubescent. Petiole 2–5 cm, brown pubescent, soon glabrescent; leaf blade elliptic to elliptic-lanceolate, 10–20 × 5–7 cm, both surfaces brown or white pubescent, abaxially pale green, adaxially green, secondary veins 11–17 on each side of midvein, base cuneate and usually decurrent onto petiole, margin entire, apex acute to obtuse. Racemes borne on axillary brachyblasts, to 16 cm; rachis brownish pubescent with gland-tipped trichomes; bracts linear, 3–5 × ca. 1 mm; bracteoles linear, 3–4 × ca. 1 mm. Pedicels 2–5 mm. Calyx ca. 1 cm, outside brown pubescent, inside glabrous; lobes linear, ca. 9 × 1 mm, subequal. Corolla ca. 1.5 cm, outside pubescent; lobes oblong, ca. 2 × 1.5 mm, subequal. Staminal filaments pubescent; anther thecae ca. 1 mm. Style glabrous; stigma 3-lobed. Capsule ellipsoid, 5–6 mm. Seeds black, in 2 rows, pubescent. Fl. Mar–Apr.

• Forests or thickets by streams; 100–400 m. Yunnan.

3. *Staurogyne sichuanica* H. S. Lo, Bull. Bot. Res., Harbin 8(1): 2. 1988.

金长莲 jin chang lian

Herbs 10–30 cm tall. Stems purplish black, terete, sulcate, pubescent. Petiole purple, 1–2 cm, puberulent; leaf blade ovate-lanceolate to elliptic-lanceolate, 4–9 × 1.3–3 mm, both surfaces sparsely strigillose, secondary veins 6–11 on each side of midvein and abaxially inconspicuous, base cuneate to broadly cuneate and sometimes oblique, margin entire, apex acuminate. Racemes terminal or axillary, 3.5–6 cm, 2–5-flowered; peduncle and rachis slightly puberulent; bracts linear, ca. 5.5 × 0.5 mm, subglabrous, 1-veined, margin ciliate; bracteoles similar to bracts. Pedicel 4–7 mm. Calyx ca. 1.1 cm, subglabrous; lobes linear, 9–11 × 0.6–1.2 mm, subequal, 3-veined, margin ciliate. Corolla purplish blue in bud. Staminal filaments glabrous. Ovary glabrous. Capsule ca. 5 mm. Fl. Feb, fr. Jun–Jul.

• Forests; 500–600 m. Sichuan (Changning, Hejiang).

4. *Staurogyne sesamoides* (Handel-Mazzetti) B. L. Burtt, Notes Roy. Bot. Gard. Edinburgh 22: 310. 1958.

大花叉柱花 da hua cha zhu hua

Loxostigma sesamoides Handel-Mazzetti, Oesterr. Bot. Z. 85: 217. 1936; *Staurogyne dolichocalyx* E. Hossain.

Herbs to 40 cm tall, unbranched. Stems striate, tomentose, soon glabrescent. Petiole 1.5–4 cm, tomentose; leaf blade elliptic-lanceolate, 5–13 × 2–5.5 cm, abaxially pubescent along veins, adaxially glabrous, secondary veins 5–11 on each side of midvein, base cuneate, margin entire or sometimes irregularly undulate, apex acuminate to sometimes acute. Racemes terminal or axillary, densely flowered, elongated after flowering; peduncle and rachis pubescent; bracts lanceolate, 6–7 × 2–2.2 mm, pilose, 3-veined; bracteoles lanceolate, 8–8.5 × ca. 2 mm, pilose. Pedicel 0.8–1 mm but elongated to 5 mm in fruit, tomentose. Calyx 1.8–2.4 mm, outside sparsely pilose or glabrous; lobes lanceolate, 1.6–2.2 × 0.1–0.2 cm, subequal. Corolla white or pinkish on lobes, 3–4 cm; lobes suborbicular, ca. 1 cm in diam., subequal, 3-veined. Stamens with longer pair ca. 1.7 cm and shorter pair ca. 1.3 cm; filaments gland-tipped hairy and apically more densely hairy; anther thecae ca. 2.5 × 1.5 mm, with appendage, margin hispid. Ovary glabrous; ovules ca. 60 in 2 rows; style ca. 2 cm, sparsely pubescent; stigma triangular, 2-cleft; stigma lobes fimbriate on margin, posterior one elliptic and ca. 3 × 2 mm, anterior one ca. 4 × 4 mm. Capsule narrowly ellipsoid. Seeds small, alveolate. Fl. Mar–May.

Moist places in forests; below 800 m. Guangdong, Guangxi [Vietnam].

5. *Staurogyne chapaensis* Benoist, Bull. Mus. Natl. Hist. Nat., sér. 2, 5: 172. 1933.

弯花叉柱花 wan hua cha zhu hua

Herbs to 10 cm tall. Stems short. Leaves in a basal rosette; petiole to 11 cm, brownish tomentose; leaf blade ovate to oblong, 2.5–14.5 × 2–6 cm, abaxially glaucous and densely hairy, adaxially green and sparsely hairy, secondary veins 7–9 on each side of midvein, base cordate, margin entire or slightly undulate, apex obtuse. Racemes terminal or axillary; peduncle ca. 4 cm, villous; rachis villous; bracts obovate to linear-spatulate, 2.5–3.5 cm, abaxially villous, adaxially glabrous; bracteoles linear-spatulate, ca. 5 × 1.6 mm, abaxially villous, adaxially glabrous, margin ciliate, apex obtuse. Pedicel 1.5–7 mm, villous. Calyx ca. 1 cm, outside villous, inside glabrous; lobes unequal, margins ciliate, posterior one spatulate and ca. 8 × 2 mm, lateral 2 linear and ca. 5 × 0.5 mm. Corolla light bluish purple, ca. 1.5 cm; lobes orbicular, subequal. Stamens with longer pair ca. 2 mm and shorter pair ca. 1.1 mm; filaments glabrous; anther thecae subequal, base with a rectangular appendage. Ovary ellipsoid, ca. 2 mm, glabrous; style ca. 5.5 mm, glabrous. Capsule obovoid-ellipsoid, ca. 6 mm. Fl. Mar–May, fr. Jul–Aug.

Forests; 1000–2000 m. Guangdong, Guangxi, Hunan, Yunnan [Vietnam].

6. *Staurogyne sinica* C. Y. Wu & H. S. Lo, Fl. Hainan. 3: 590. 1974.

中华叉柱花 zhong hua cha zhu hua

Titanotrichum parviflorum X. B. Ye & W. T. Lin.

Herbs, annual. Stems very short, densely pubescent. Leaves in a basal rosette; petiole 0.5–3 cm; leaf blade ovate-oblong, 4–9 × 1–4.5 cm, papery, abaxially pale green and villous along veins, adaxially green and villous, secondary veins 5–7 on each side of midvein, base rounded to broadly cuneate, margin entire, apex rounded. Racemes terminal or axillary, 3–12 cm; peduncle hispid; bracts linear-spatulate, 3–4 mm, pubescent on both surfaces, 3-veined, apex rounded; bracteoles similar to bracts. Pedicel 4–5 mm, hispid. Calyx 6–9 mm, outside villous; lobes linear-lanceolate, unequal, anterior and posterior ones 6–8 mm and lateral ones 5–7 mm, 3-veined. Corolla whitish purple, tubular-campanulate, ca. 2 cm; tube basally cylindrical for ca. 8 mm; lobes oblong, 1.8–2.5 × 1.5–2 mm, slightly unequal, apex rounded. Stamens with longer pair ca. 7 mm and shorter pair ca. 6 mm; filaments glabrous; anther thecae ca. 1.8 mm; staminode ca. 1 mm. Ovary ellipsoid, ca. 1.8 mm, glabrous; style ca. 8 mm, glabrous. Capsule oblong-ovoid, ca. 6 mm, glabrous. Fl. Mar–May, fr. Aug.

- Dense forests; 500–1200 m. Guangdong, Hainan.

7. *Staurogyne paotingensis* C. Y. Wu & H. S. Lo, Fl. Hainan. 3: 589. 1974.

保亭叉桂花 bao ting cha zhu hua

Herbs 10–20 cm tall, annual. Stems erect, pubescent. Leaves cauline; petiole to 4 cm; leaf blade elliptic, elliptic-lanceolate, or rarely subovate, 2.5–6 × 1–2 cm, papery, abaxially green and glabrous, adaxially pale green and glabrous except slightly pubescent along midvein, secondary veins 6–9 on each side of midvein, base cuneate, margin entire, apex obtuse to rounded. Spikes borne on axillary brachyblasts, ca. 1 cm; peduncle and rachis pubescent; bracts elliptic to spatulate-elliptic, 6–7 × ca. 3.5 mm, abaxially pubescent, pinnately veined, apex obtuse; bracteoles linear-oblong, ca. 6 × 1 mm, abaxially pubescent, 1-veined, apex acute. Pedicel short or absent. Calyx ca. 1 cm, outside pubescent; lobes linear, 8–9 mm, unequal, margin ciliate. Corolla purple, ca. 9 mm, outside pubescent, inside pubescent at base; tube basally cylindrical for ca. 2 mm; lobes suborbicular, 1.7–2 mm in diam., slightly unequal, apex rounded. Stamens with longer pair ca. 5 mm and shorter pair ca. 3 mm; filaments flattened, ciliate; anther thecae ca. 1 mm, base appendaged; staminode ca. 1 mm. Ovary oblong, glabrous; ovules ca. 24 in 2 rows per locule; style ca. 3 mm; stigma 2-lobed, lobes unequal with posterior one 2-dentate. Capsule ovoid-oblong, ca. 6 mm. Seeds orbicular, ca. 0.2 mm in diam. Fl. Dec.

- Wet places, paddy fields. Hainan (Baoting).

8. *Staurogyne rivularis* Merrill, Philipp. J. Sci., C, 7: 248. 1912.

瘦叉桂花 shou cha zhu hua

Herbs to 1 m tall, usually ascending from a decumbent base and rooting at nodes on lower portion. Stems striate and lenticellate, glabrous. Petiole 3–6 cm; leaf blade elliptic, oblong, or lanceolate, 13–17 × 4.5–7 cm, both surfaces glabrous, secondary veins 8–11 on each side of midvein, base cuneate and slightly decurrent onto petiole, margin entire or undulate, apex acuminate to acute. Racemes terminal or axillary from

apical leaves, to 15 cm, unbranched or with 2 branches at base; rachis gland-tipped pubescent; bracts linear, 4–4.5 × ca. 0.8 mm, pinnately veined, apex acuminate; bracteoles linear, ca. 2 × 0.5 mm. Pedicel 2–3.5 mm. Calyx ca. 5 mm, outside pubescent with gland-tipped trichomes. Corolla white, funnel-shaped, ca. 7 mm; lobes suborbicular, ca. 1.5 × 1.3 mm, subequal, apex rounded. Stamens with longer pair ca. 3 mm and shorter pair ca. 2 mm; filaments glabrous; anther thecae ca. 1 mm. Ovary ellipsoid, ca. 2 × 1 mm, glabrous; ovules 12 in 2 rows per locule; style ca. 3 cm, glabrous; stigma 2-lobed. Capsule cylindrical, 5–7 mm. Fl. Dec–May.

Forests along streams. Hainan, Yunnan [Vietnam].

9. *Staurogyne brachystachya* Benoist, Bull. Mus. Natl. Hist. Nat., sér. 2, 5: 174. 1933.

短穗叉桂花 duan sui cha zhu hua

Herbs to 80 cm tall. Stems subterete, sulcate, brown pubescent. Petiole 0.5–2 cm, brown pubescent; leaf blade lanceolate to ovate-lanceolate, 3–8 × 1–1.6 cm, both surfaces glabrous, abaxially pale green but brown when dry, adaxially green, secondary veins 8–10 on each side of midvein, base narrowly cuneate, margin irregularly undulate, apex acute. Racemes axillary or terminal, 2–4 cm, 3–5-flowered; peduncle and rachis glabrous; bracts linear, 2.3–5 mm, thickened, 1-veined, glabrous; bracteoles linear, 2.3–3 mm, glabrous, 1-veined. Pedicel 1.2–1.6 cm, glabrous. Calyx 0.9–1.1 cm, glabrous except margin slightly ciliate with gland-tipped trichomes; lobes linear, 7.5–9 × ca. 1 mm, subequal, apex acuminate. Corolla white, 1–1.4 cm, glabrous; lobes orbicular, ca. 2 mm in diam. Stamens with longer pair 7–9 mm and shorter pair 6–8 mm; filaments pubescent (especially apically); anther thecae with a long tie-shaped appendage, apex hirsute; staminode small. Ovary glabrous; style ca. 1 cm, glabrous; stigma 2-lobed. Capsule not seen. Fl. Mar–Apr.

Forests; 800–1200 m. Guangxi, Yunnan [Vietnam].

10. *Staurogyne concinnula* (Hance) Kuntze, Revis. Gen. Pl. 2: 497. 1891.

叉桂花 cha zhu hua

Ebermaiera concinnula Hance, J. Bot. 6: 300. 1868.

Herbs to 15 cm tall, perennial. Stems generally short, partially subterranean, 0.5–6 cm, usually simple, rarely few branched, terete, densely shortly pubescent. Leaves in a basal rosette; petiole 0.3–3 cm, pubescent; leaf blade oblanceolate, 1.5–7 × 0.5–1.5 cm, scarious, abaxially glaucous and pubescent along veins, adaxially green and sometimes pubescent along veins, secondary veins 5–8 on each side of midvein and abaxially prominent, base gradually attenuate, margin obscurely undulate, apex obtuse to rounded. Racemes 1–4, axillary, sometimes loosely branched and forming a panicle, 5–15 cm; branches slender, with 3–10 interrupted flowers; bracts linear to linear-oblanceolate, 2–4 mm, apex obtuse to subacute; bracteoles borne near middle of pedicel, linear, ca. 2 mm, apex obtuse. Pedicel 1–4 mm, pubescent. Calyx campanulate, 5-lobed almost to base, glabrous except for margin minutely pilose; lobes linear to linear-lanceolate, 5–6 mm but accrescent to 7

mm in fruit, unequal, apex acute. Corolla white, tubular-funnel-form, ca. 1 cm; tube ampliate, ca. 6 mm, ca. 4 mm wide; lobes orbicular, ca. 3 mm, subequal. Stamens with longer pair ca. 5 mm and shorter pair ca. 2.5 mm; filaments glabrous; anther thecae ca. 1.5 mm. Ovary ellipsoid, glabrous; style ca. 5 mm; stigma subulate. Capsule oblong, 4–5 × ca. 1.5 mm, glabrous, shorter than persistent calyx. Seeds suborbicular, ca. 0.2 mm. Fl. Mar–May, fr. Jul–Sep.

Forests along streams. Fujian, Guangdong, Hainan, Taiwan [Japan].

11. *Staurogyne hainanensis* C. Y. Wu & H. S. Lo, Fl. Hainan. 3: 589. 1974.

海南叉柱花 hai nan cha zhu hua

Herbs to 30 cm tall, perennial. Stems terete, villous. Leaves cauline, crowded at apex of branches; petiole 1–3 cm, densely villous; leaf blade oblong to oblong-lanceolate, 3–10 × 1.3–3 cm, subleathery, abaxially adpressed villous, adaxially glabrous except midvein slightly villous, secondary veins 6–10 on each side of midvein, base cuneate to broadly cuneate, margins entire or irregularly undulate, apex rounded. Racemes terminal or axillary, to 16 cm; rachis pubescent; bracts linear-spatulate to linear, ca. 2.5 mm, 1-veined; bracteoles similar to bracts. Pedicel ca. 3 mm. Calyx 6–7 mm, subglabrous; lobes linear, unequal, 3-veined, apex acuminate. Corolla purple, ca. 8 mm; lobes ovate-oblong, 1.2–1.4 × ca. 1 mm, apex rounded. Stamens with longer pair ca. 5 mm and shorter pair ca. 3 mm; filaments glabrous; anther thecae of longer stamens unequal and of shorter stamens equal; staminode ca. 0.7 mm. Ovary ovoid, ca. 1 mm, glabrous; style ca. 6 mm. Capsule ovoid-oblong, ca. 5 mm, glabrous. Fl. Feb–May, fr. Jul–Aug.

• Streamsides; 600–900 m. Hainan.

12. *Staurogyne strigosa* C. Y. Wu & H. S. Lo, Fl. Hainan. 3: 590. 1974.

琼海叉柱花 qiong hai cha zhu hua

Herbs, annual. Stems very short, villous. Leaves in a basal rosette; petiole 0.5–2.2 cm, strigose; leaf blade elliptic, oblong, ovate, or oblong-obovate, 1–1.5 × 0.8–2.5 cm, papery, abaxially villous, adaxially strigose, secondary veins 5–7 on each side of midvein, base cuneate to rounded, margin entire, apex rounded to obtuse. Raceme terminal or axillary, to 6 cm, simple or rarely branched; peduncle villous; bracts spatulate-linear, ca. 6 mm, abaxially villous, apex obtuse, rounded, or acute; bracteoles similar to bracts. Pedicel 1–3 mm, villous. Calyx 6–8 mm, abaxially villous; lobes linear, 3-veined, apex acuminate. Corolla ca. 5.5 mm; lobes orbicular, ca. 1 mm in diam. Staminal filaments glabrous; anther thecae of longer stamens ca. 0.7 mm and of shorter stamens ca. 0.2 mm; staminode ca. 1 mm. Ovary glabrous; stigma 2-lobed. Capsule ovoid-oblong, ca. 6 mm, glabrous. Fl. Feb–Mar, fr. Jul–Aug.

• Forests; below 200 m. Hainan (Qionghai).

13. *Staurogyne stenophylla* Merrill & Chun, Sunyatsenia 2: 322. 1935.

狭叶叉柱花 xia ye cha zhu hua

Herbs, perennial. Stems short, densely villous. Leaves usually crowded at apex of branches (but not forming a basal rosette); petiole ca. 1 cm, pubescent; leaf blade linear to lanceolate-linear, 6–12 × 0.5–0.9 cm, papery, abaxially paler and villous especially along veins, adaxially dark green, densely white papillose, and subglabrous except for margin slightly pubescent, secondary veins 8–13 on each side of midvein, base attenuate, margin entire or undulate, apex obtuse. Racemes axillary, 5–10 cm, unbranched or with 1 or 2 branches at base; peduncle and rachis villous; bracts linear, 3.8–4.5 mm, abaxially pubescent, 1-veined; bracteoles linear, ca. 3.7 mm, abaxially pubescent. Pedicel 2–3.5 mm. Calyx ca. 6 mm, abaxially slightly villous; lobes linear-triangular, 4.5–5.1 × 0.5–0.6 mm, unequal, margin ciliate. Corolla pink, ca. 8 mm; tube basally cylindrical for ca. 1.5 mm then gradually widened, convex at one side; lobes orbicular to suborbicular, 2.2–2.5 × ca. 2 mm, unequal. Stamens 4 with longer pair ca. 4.5 mm and shorter pair ca. 3 mm; filaments glabrous; staminode ca. 0.7 mm. Ovary ellipsoid, ca. 2 × 1 mm, glabrous; style unequally 3-lobed. Capsule ovoid-oblong, ca. 3 mm. Fl. Mar–May, fr. Aug–Sep.

• Dense forests; 1000–2000 m. Hainan.

14. *Staurogyne yunnanensis* H. S. Lo, Bull. Bot. Res., Harbin 8(1): 3. 1988.

云南叉柱花 yun nan cha zhu hua

Herbs to 0.7 m tall. Stems densely pubescent. Leaves cauline; petiole 1.5–2 cm; leaf blade ovate-lanceolate, elliptic-lanceolate, or lanceolate, 4.5–10.5 × 2–3.5 cm, abaxially villous along veins, adaxially glabrous, secondary veins 9–14 on each side of midvein, abaxially conspicuous, and adaxially inconspicuous, base cuneate, margin undulate or inconspicuously dentate, apex obtuse. Racemes terminal only, to 8–15 cm in fruit; peduncle and rachis densely hirsute; bracts linear, 2.5–3 × ca. 0.5 mm, adaxially densely pubescent, 1-veined, apex acuminate to acute; bracteoles linear, ca. 1.2 mm, glabrous, apex acuminate. Pedicel 2–3 mm in fruit. Calyx ca. 4 mm, glabrous; lobes extremely unequal, anterior one triangular, 2.5–3 × ca. 0.5 mm, and apex acuminate, posterior and lateral ones subtriangular and ca. 1 mm. Corolla not seen. Capsule ± oblong, 3.5–4 mm. Seeds light brown. Fr. Jul.

• Forests. Yunnan (Hekou).

15. *Staurogyne petelotii* Benoist, Arch. Bot. Bull. Mens. 4: 75. 1930.

中越叉柱花 zhong yue cha zhu hua

Herbs 10–30 cm tall, ascending from a decumbent base. Stems erect, densely pubescent, unbranched or rarely branched in apical part, base with 1.5–3 cm internodes. Leaves cauline; petiole 2–4 cm, pubescent; leaf blade ovate to oblong, 3–6 × 2–3.5 cm, membranous, abaxially glabrous, adaxially darker and sparsely pubescent, secondary veins 4–6 on each side of midvein, base broadly cuneate to rounded, margin entire, apex obtuse. Raceme terminal, ca. 5 cm; bracts obovate, ca. 8 × 4 mm,

abaxially sparsely pubescent, base attenuate, margin distally ciliate, apex rounded; bracteoles oblong, ca. 6×1 mm, abaxially pubescent especially apically, base gradually attenuate, apex rounded. Calyx ca. 6 mm; lobes spatulate with apex slightly enlarged and rounded, unequal, anterior one ca. 5×0.5 mm and others ca. 3×0.2 mm. Corolla 1.5–1.7 cm, slightly curved; lobes orbicular, ca. 5×5 mm. Staminal filaments glabrous. Ovary glabrous; style 1.8–2 mm, glabrous; stigma 2-cleft. Capsule ellipsoid, ca. 7 mm, glabrous. Fl. Jan–Apr.

Forests along ravines or on slopes; 1400–1700 m. Yunnan [Vietnam].

16. *Staurogyne vicina* Benoist, Bull. Mus. Natl. Hist. Nat., sér. 2, 5: 171. 1933.

密花叉柱花 mi hua cha zhu hua

Herbs to 50 cm tall. Stems erect, 4-angled, sulcate, tuberculate on basal part, pubescent on apical part. Leaves cauline; petiole 2–4 cm, pubescent; leaf blade elliptic, $6\text{--}15 \times 3\text{--}7$ cm, both surfaces glabrous except for pubescence along veins, abaxially glaucous, adaxially green, secondary veins 10–12 on each side of midvein, base acute, margin entire or serrate, apex acute to shortly acuminate. Racemes terminal only, unbranched or sometimes branched, 10–16 cm; peduncle 2–5 cm, glabrous; bracts linear, $4\text{--}7 \times$ ca. 1 mm, glabrous, apex acute; bracteoles lanceolate, $2\text{--}3 \times$ ca. 1 mm, glabrous, apex acute. Pedicel 2–3 mm, glabrous. Calyx 5–7 mm, glabrous; lobes linear, unequal, apex obtuse. Corolla white, 1.8–2.2 cm, outside glabrous; lobes oblong, ca. 4×3 mm, subequal, apex rounded. Staminal filaments glabrous; anther thecae spherical, ca. 1 mm in diam. Ovary glabrous; style glabrous; stigma 2-cleft. Capsule oblong, ca. 8 mm, glabrous. Fl. Apr.

Yunnan [Vietnam].

17. *Staurogyne debilis* (T. Anderson) C. B. Clarke ex Merrill, Philipp. J. Sci., C, 2: 302. 1907.

菲律賓叉柱花 fei lü bin cha zhu hua

Ebermaiera debilis T. Anderson, J. Linn. Soc., Bot. 9: 452. 1866.

Herbs 10–15 cm tall, somewhat succulent. Stems terete, ascending, unbranched or rarely branched, pubescent. Leaves cauline; petiole 5–8 mm, pubescent; leaf blade elliptic, oblong, or oblong-ovate, $2.5\text{--}4 \times 0.8\text{--}1.7$ cm, abaxially pale green and glabrous except pubescent along veins, adaxially green and glabrous, secondary veins 6 or 7 on each side of midvein, base cuneate to rounded, margin undulate, apex obtuse. Racemes terminal or axillary, to 7 cm, 4–7-flowered; rachis sometimes branched at base, slightly pubescent; bracts linear, ca. 2×0.4 mm; bracteoles subulate, ca. 1×0.3 mm. Pedicel ca. 2 mm. Calyx 5–6 mm; lobes linear, subequal, margin sparsely hirsute. Corolla white, ca. 1 cm, glabrous; lobes oblong, ca. 2×2 mm, subequal. Stamens with longer pair ca. 3 mm and shorter pair ca. 2 mm; filaments strigose; anther thecae ellipsoid, ca. 1×0.7 mm. Ovary ca. 1.8 mm, glabrous; style ca. 8 mm, glabrous; stigma 2-cleft. Capsule oblong, ca. 6 mm, compressed, glabrous. Fl. Feb–Mar, fr. Aug.

Evergreen broad-leaved forests; 300–400 m. Taiwan [Philippines].

Fl. China 19: 372–376. 2011.