

**88. COLEUS** Loureiro, Fl. Cochinch. 2: 372. 1790.

鞘蕊花属 qiao rui hua shu

Herbs or shrubs. Leaves petiolate, dentate. Verticillasters 6- to many flowered, in racemes or panicles; bracts early deciduous or absent. Flowers pedicellate. Calyxovoid-campanulate to campanulate, 5-toothed or conspicuously 2-lipped, posterior tooth larger; fruiting calyx dilated, declinate or recurved, throat glabrous or villous. Corolla much exserted, erect or recurved, 2-lipped; upper lip (3- or) 4-lobed, strongly reflexed; lower lip entire, elongated, navicular, narrowed at base. Stamens 4, declinate, included within lower lip; filaments connate or free, rarely adnate to corolla tube; anther cells apex confluent. Style apex equally 2-cleft. Nutlets ovoid to globose, smooth, tuberculate or not.

About 90(–150) species: tropics of E hemisphere, Australia; six species in China.

Many workers believe that the type species of *Coleus* is congeneric with *Plectranthus* s. str., a large predominantly African genus, but some of the Asian species have never been formally transferred to that genus. There is much less agreement on the status of other segregate genera.

- 1a. Fruiting calyx recurved, throat closed by villous hairs; verticillasters 6–10-flowered ..... 1. *C. forskohlii*
- 1b. Fruiting calyx declinate, throat glabrous; verticillasters lax, many flowered.
  - 2a. Calyx conspicuously 2-lipped, teeth unequal.
    - 3a. Lower calyx lip narrow, oblong, lobes highly connate; plants puberulent; leaves mostly with brilliant color; corolla purplish to purple or blue ..... 6. *C. scutellarioides*
    - 3b. Lower lip of calyx not oblong, lobes not highly connate, lanceolate; plants densely tawny tomentose; leaves without brilliant color; corolla yellow ..... 5. *C. xanthanthus*
  - 2b. Calyx not 2-lipped, lateral and anterior teeth equal or subequal, posterior tooth wider.
    - 4a. Calyx densely glandular puberulent outside, red glandular; leaves succulent ..... 4. *C. carnosifolius*
    - 4b. Calyx subglabrous or without glands and puberulent outside; leaves not succulent.
      - 5a. Calyx 3–4 mm in flower, subglabrous or puberulent outside; posterior tooth ovate, acute ..... 3. *C. bracteatus*
      - 5b. Calyx 2.5 mm in flower, densely puberulent outside; posterior tooth only slightly wider, acuminate ..... 2. *C. esquirolii*

**1. *Coleus forskohlii*** (Willdenow) Briquet, Nat. Pflanzenfam., div. 4, 3a: 359. 1897.

毛喉鞘蕊花 mao hou qiao rui hua

*Plectranthus forskohlii* Willdenow, Sp. Pl. 3: 169. 1800; *Coleus barbatus* (Andrews) Bentham; *P. barbatus* Andrews.

Herbs erect or ascending. Stems robust, ca. 40 cm, branched, spreading villous, densely so at apex. Petiole ca. 1.5 cm or less; leaf blade ovate, 7.5–13 × 4.5–7 cm, densely tomentose-villous, base abruptly attenuate, margin crenate, ± succulent, apex obtuse to acute. Racemes to 11 cm, verticillasters 6-flowered; bracts sessile, broadly ovate, membranous, margin ciliate, apex caudate-acute, sparsely glandular and puberulent outside, deciduous in flower. Calyx campanulate, ca. 6 mm, densely villous, throat closed by villous hairs in fruit; teeth subulate-lanceolate, posterior tooth cordate, apex acute, lateral teeth shorter. Corolla purple-blue, 1.2–1.5 cm, sparsely glandular outside, recurved, throat dilated, upper lip unequally 4-lobed; lower lip oblong, concave. Stamens nearly exserted or included; filaments connate forming a sheath for ca. 1/2 its length. Nutlets globose, flattened. Fl. Sep.

Slopes; 2300 m. Yunnan (Dongchuan) [Bhutan, India, Nepal, Sri Lanka; Africa].

**2. *Coleus esquirolii*** (H. Léveillé) Dunn, Notes Roy. Bot. Gard. Edinburgh 8: 158. 1913.

毛萼鞘蕊花 mao e qiao rui hua

*Calamintha esquirolii* H. Léveillé, Repert. Spec. Nov. Regni Veg. 8: 450. 1910; *Coleus mucosus* Hayata.

Herbs erect or ascending, roots tuberlike. Stems 15–45 cm, woody at base, branched. Petiole 1–2.5 cm; leaf blade ovate to subcordate, 2–3.5(–5) × 1–3(–4) cm, ± succulent,

puberulent, base shallowly cordate or rarely rounded, margin coarsely crenate, apex obtuse to sometimes acute. Racemes or panicles terminal, to 15 cm, densely puberulent, verticillasters many flowered; peduncle ca. 2 mm, robust. Pedicel slender, 2–4 mm. Calyx ovoid-campanulate, ca. 2.5 mm, to 5–6 mm in fruit, densely puberulent outside, glabrous inside; teeth subequal, triangular, apex acute, posterior tooth wider than others. Corolla purple to purple-blue, ca. 1.5 cm, recurved, sparsely puberulent, glandular; tube gradually dilated, 2.5–3 mm wide at throat; upper lip 4-lobed, reflexed; lower lip to 6 mm, concave. Stamens included; filaments ± connate at base. Nutlets black, subglobose. Fl. Sep–Nov.

• Rocky areas, grassy hills; 1100–1800 m. Guangxi, Guizhou, Taiwan, Yunnan.

**3. *Coleus bracteatus*** Dunn, Notes Roy. Bot. Gard. Edinburgh 8: 158. 1913.

光萼鞘蕊花 guang e qiao rui hua

Herbs. Stems erect, to 90 cm, ± succulent, puberulent or subglabrous. Petiole slender, 2.5–5 cm; leaf blade ovate, 4.5–14.5 × 3–7 cm, membranous, puberulent or subglabrous, base broadly cuneate to shallowly cordate, margin crenate, apex acuminate. Panicles lax, terminal, to 42 cm, pubescent, verticillasters many flowered; peduncle 1–3 mm; bracts early deciduous. Pedicel 4–6 mm. Calyx campanulate, 3–4 mm in flower, to 8.5 mm in fruit, subglabrous or puberulent, densely rust colored glandular; teeth subequal, posterior 1 ovate, apex acute, reflexed in fruit; lateral and anterior teeth lanceolate, apex acuminate, straight. Corolla purple to reddish, puberulent, rust colored glandular, 1.6–1.8 cm; tube much exserted, abruptly reflexed beyond calyx, throat to 2 mm wide; limb 1/8–1/6 as long as tube, upper lip erect; lower lip slightly elongated, concave. Nutlets ovoid-globose. Fl. Sep.

• Forest margins, open areas, fields, rocky areas, wet forests; 1000–2200 m. Yunnan.

**4. *Coleus carnosifolius*** (Hemsley) Dunn, Notes Roy. Bot. Gard. Edinburgh 8: 158. 1913.

肉叶鞘蕊花 rou ye qiao rui hua

*Plectranthus carnosifolius* Hemsley, J. Linn. Soc., Bot. 26: 270. 1890.

Herbs perennial, succulent. Stems rather robust, erect, ca. 30 cm, much branched, pubescent, subglabrescent, brownish. Petiole shorter than to as long as blade, ± winged; leaf blade succulent, broadly ovate to subcircular, 1.2–3.5 cm wide, sparsely hairy, red brown glandular, base truncate to rounded rarely cuneate, margin remotely crenate to undulate-crenate, apex obtuse to rounded, purplish. Panicles terminal, to 18 cm, densely puberulent; verticillasters many flowered, 3–4 cm in diam. in fruit, short pedunculate; bracts ± deciduous, obovate, ca. 4×3 mm, acute. Pedicel 3–6 mm. Calyx ovoid-campanulate, ca. 2.5 mm, densely glandular puberulent, red-brown glandular, glabrous inside; teeth subequal, oblong-lanceolate, apex acuminate, posterior 1 triangular-ovate reflexed in fruit; fruiting calyx tubular-campanulate, conspicuously declinate, slightly curved. Corolla purplish, puberulent, ca. 1.2 cm; tube abruptly recurved beyond calyx, throat to 2.5 mm wide; filaments ± connate at base. Nutlets dark brown or black, ovoid-globose. Fl. Sep-Oct, fr. Oct-Nov.

• Rocks, forests, mountainous rocky areas. Guangdong, Guangxi, Hunan.

**5. *Coleus xanthanthus*** C. Y. Wu & Y. C. Huang, Acta Phytotax. Sin. 10: 241. 1965.

黄鞘蕊花 huang qiao rui hua

Shrubs ca. 50 cm tall. Stem basally gray, glabrous, tuberculate-lenticellate, apex brown and densely yellow-brown tomentose. Petiole 4–10 mm; leaf blade narrowly ovate, 3–5×1.5–2.4 cm, densely villous, base rounded, margin crenate, apex short acuminate. Panicles terminal and axillary; floral leaves reduced, very short petiolate; bracts ovate, ca. 4×2 mm, short caudate, sparsely pubescent, glandular, ciliate. Pedicel 1–2 mm. Calyx campanulate, ca. 2.5 mm in flower, to 5 mm in fruit, yellow-brown tomentose, puberulent inside upper lip; limb 2-lipped, 3-lobed, middle tooth of upper lip broadly ovate; lateral teeth ovate, ca. 1/2 as long as middle tooth; lower teeth lanceolate, nearly as long as lateral lobes. Corolla yellow, ca. 1 cm, sparsely pubescent; tube abruptly recurved beyond calyx, throat to 2 mm wide; upper lip equally 4-lobed, lower lip elliptic. Nutlets brown, ovoid. Fl. Sep.

• Limestone mountains; 1400 m. Yunnan.

**6. *Coleus scutellarioides*** (Linnaeus) Benth, Edward's Bot. Reg. 15: t. 1300. 1830.

五彩苏 wu cai su

Herbs erect or ascending. Stems usually purple, puberulent, branched. Petiole 1–5 cm; leaf blade ovate, 4–12.5×2.5–9 cm, membranous, yellow, dark red, purple, or green, puberulent, sparsely red-brown glandular abaxially, base broadly cuneate to rounded, margin crenate-serrate or

crenate, apex obtuse to short acuminate. Panicles 5–10(–25)×3–5(–8) cm, puberulent; verticillasters many flowered, ca. 1.5 cm in diam.; bracts deciduous, broadly ovate, 2–3 mm, caudate, glandular. Pedicel ca. 2 mm. Calyx campanulate, 2–3 mm in flower, to 7 mm in fruit, 10-veined, minutely hispid, glandular; middle lobe of upper lip broadly ovate, reflexed in fruit; lateral lobes ovate, ca. 1/2 as long as middle lobe; lower lip rhombic, longer than upper lip, lobes narrowly triangular. Corolla purple to blue, 0.8–1.3 cm, puberulent, tube abruptly recurved, throat to 2.5 mm wide, upper lip erect. Nutlets brown, broadly ovoid or globose, 1–1.2 mm, flattened, shiny. Fl. Jul.

Streamsides, open areas, hills, fields, forests. Fujian, Guangdong, Guangxi, Taiwan, cultivated in all provinces [India, Indonesia, Malaysia, Philippines; Pacific Islands].

1a. Middle lobe of upper calyx lip as long as to longer than lobes of lower lip

..... 6a. var. *scutellarioides*

1b. Middle lobe of upper calyx lip shorter than lobes of lower lip

..... 6b. var. *crispipilus*

**6a. *Coleus scutellarioides* var. *scutellarioides***

五彩苏 wu cai su

*Ocimum scutellarioides* Linnaeus, Sp. Pl., ed. 2, 2: 834. 1763; *Coleus acuminatus* Benth; *C. blumei* Benth; *Plectranthus scutellarioides* (Linnaeus) R. Brown.

Middle lobe of upper calyx lip as long as to longer than lobes of lower lip.

Fujian, Guangdong, Guangxi, Taiwan, cultivated in all provinces [India, Indonesia, Malaysia, Philippines; Pacific Islands].

Widely grown as an ornamental foliage plant.

**6b. *Coleus scutellarioides* var. *crispipilus*** (Merrill) H. Keng, Gard. Bull. Straits. Settle. 24: 56. 1969.

小五彩苏 xiao wu cai su

*Coleus macranthus* Merrill var. *crispipilus* Merrill, Philipp. J. Sci. 1: suppl. 235. 1906; *C. crispipilus* (Merrill) Merrill; *C. formosanus* Hayata; *C. pumilus* Blanco.

Middle lobe of upper calyx lip shorter than lobes of lower lip.

Streamsides, open areas, hills, fields, forests. Fujian, Guangdong, Guangxi, Taiwan [Philippines].

