

## 29. BARLERIA Linnaeus, Sp. Pl. 2: 636. 1753.

假杜鹃属 *jia du juan shu*

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Shrubs, subshrubs, or perennial herbs, with cystoliths, usually spiny. Leaves opposite, petiolate. Inflorescences axillary cymes (sometimes secund or reduced to dense clusters), terminal spikes, or flowers solitary; bracts present or absent; bracteoles 2, sometimes becoming spinose. Calyx deeply 4-lobed; outer 2 lobes larger [anterior lobe sometimes 2-cleft]; inner 2 lobes smaller. Corolla funnel-shaped, usually large; limb 5-lobed (usually with upper lip appearing 4-lobed); lobes subequal, quincuncial in bud. Stamens [2 or]4 and didynamous, one pair usually greatly reduced and/or sterile; anthers 2-theous; thecae  $\pm$  equal in size, equally inserted, lacking basal appendages; staminodes 1 or 3, sometimes bearing very small anthers. Ovary with 2 ovules per locule; stigma 2-cleft or entire. Capsule substipitate or lacking a distinct basal stalk, subellipsoid to ovoid, 2–4-seeded; retinacula present. Seeds discoid, pubescent with appressed hygroscopic trichomes.

About 80–120 species: tropical regions of Africa and Asia, one species in tropical America; four species (one endemic) in China.

*Barleria procumbens* Loureiro (Fl. Cochinch. 2: 377. 1790) is not treated here because no material was available for study. *Barleria lupulina* Lindley is cultivated only in China and not treated here.

1a. Margin of calyx lobes (at least outer lobes) serrate or spiny.

2a. Flowers in dense, shortly pedunculate cymes from leaf axils; bracteoles linear to linear-lanceolate,

2.4–6.5 cm ..... 1. *B. cristata*

2b. Flowers in axillary and terminal dense spikes; bracteoles elliptic, ca. 1.2 cm ..... 3. *B. strigosa*

1b. Margin of calyx lobes entire (apex spine-tipped in *B. prionitis*).

3a. Plants with spines in at least some leaf axils; calyx lobes apically spinose; corolla yellowish to orange ..... 2. *B. prionitis*

3b. Plants without spines; calyx lobes not apically spinose; corolla not yellowish to orange.

4a. Flowers in dense spikes; calyx purple; narrow basal portion of corolla tube ca.  $3 \times$  as long as throat;

bracteoles ca.  $1/2$  as long as calyx; seeds 4 per capsule ..... 3. *B. strigosa*

4b. Flowers solitary in leaf axils; calyx green; narrow basal portion of corolla tube shorter than throat;

bracteoles equaling or longer than calyx; seeds 2 per capsule ..... 4. *B. integrisepala*

### 1. *Barleria cristata* Linnaeus, Sp. Pl. 2: 636. 1753.

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*Barleria cavaleriei* H. Léveillé; *B. ciliata* Roxburgh; *B. cristata* var. *mairi* H. Léveillé; *B. dichotoma* Roxburgh; *B. laciniata* Nees; *B. napalensis* Nees.

Subshrubs to 2 m tall. Stems terete, branched, covered with soft trichomes. Petiole (0–)0.3–1 cm; leaf blade elliptic to oblong to ovate, 2–10  $\times$  1–4 cm, both surfaces villous especially along veins, secondary veins 4–7 on each side of midvein, base cuneate and decurrent onto petiole, apex acute to sometimes acuminate. Inflorescences axillary short and dense cymes, shortly pedunculate; bracts absent; bracteoles variable, linear to linear-lanceolate, 2.4–6.5  $\times$  0.5–1.5 cm, 3–7-veined, base cuneate, margin usually spiny but sometimes bristly pilose and becoming spinescent with age, apex acuminate. Outer calyx lobes ovate to narrowly elliptic to lanceolate, 1.2–2.5  $\times$  0.5–1.3 cm, pilose, reticulately veined, margin spiny, apex mucronate; inner calyx lobes linear to lanceolate, 6–12 mm, 1-veined, margin scarios. Corolla purplish blue, 4.5–6.5 cm, outside pilose; tube basally narrowly cylindrical then gradually widened; lobes oblong-elliptic, ca. 1.5 cm, equal. Stamens 4, didynamous; filaments pilose especially toward base; staminode 1, filament sparsely pilose. Ovary oblong-ellipsoid, glabrous; style linear, ca. 2.5 cm, glabrous; stigma slightly inflated. Capsule 1.2–1.8 cm, glabrous, 4-seeded. Seeds subglobose to ovoid, 4–5  $\times$  ca. 4 mm. Fl. May, Aug–Dec, fr. May, Oct.  $2n = 40$ .

Roadsides, slopes, along streams, in xeric vegetation; below 100–2600 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Sichuan, Taiwan, ?Xizang, Yunnan [Bhutan, Cambodia, India, Indonesia, Laos, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam].

*Barleria cristata* is a medicinal and ornamental plant.

### 2. *Barleria prionitis* Linnaeus, Sp. Pl. 2: 636. 1753.

黄花假杜鹃 *huang hua jia du juan*

Shrubs to 1.8 m tall with spines in lower leaf axils, branched. Stems and branches terete, smooth, lenticellate, glabrous. Petiole 1–2.5 cm; leaf blade elliptic to ovate, 4–10.5  $\times$  1.8–5.5 cm, both surfaces pubescent when young but soon glabrescent, sparsely strigose along midvein, base attenuate and decurrent onto petiole, margin entire, apex acute. Flowers clustered in axils of upper leaves and/or bracts; bracts linear-oblong, 1.2–2.2  $\times$  0.2–0.8 cm, margin ciliate, apex abruptly acuminate; bracteoles linear-lanceolate, to 1.4  $\times$  0.2 cm, spine-tipped. Outer calyx lobes ovate-oblong, ca. 1.5  $\times$  0.4 cm, apex mucronate; inner calyx lobes linear-lanceolate, ca. 1.3  $\times$  0.2 cm, apex mucronate. Corolla yellow to orange, 2.4–4 cm, outside pilose; tube with narrow basal portion slightly shorter than throat; lobes ovate-oblong to orbicular, 8–10  $\times$  6–7 mm, recurved. Stamens 4, longer pair ca. 1.1 cm with anthers ca. 3.2 mm, shorter pair ca. 1.5 mm with anthers ca. 1 mm. Ovary ovoid; stigma slightly enlarged, 2-cleft, exserted. Capsule ovoid, ca. 1.8 cm, contracted gradually at tip forming a beak, 2-seeded. Seeds ovate in outline, ca. 7  $\times$  5 mm. Fl. Oct–Dec, fr. Dec–Feb.

$2n = 40$ .

Roadsides, thickets, dry places in evergreen broad-leaved forests; ca. 600 m. Yunnan [India, Laos, Myanmar, Sri Lanka, Thailand, Vietnam; Africa, Madagascar].

This species is used medicinally.

The distribution of *Barleria prionitis* is commonly given as throughout tropical Africa and Asia, where it is often introduced; its native distribution is not known with certainty.

**3. *Barleria strigosa*** Willdenow, Sp. Pl. 3: 379. 1800.

紫萼假杜鹃 *zi e jia du juan*

*Barleria purpureosepala* H. P. Tsui.

Subshrubs to 80 cm tall, branched. Stems subterete, coarsely fulvous strigose. Petiole 0.7–2.5 cm, brownish yellowish strigose; leaf blade elliptic to ovate, 5.5–15 × 2.2–5.5 cm, both surfaces fulvous strigose especially along veins, secondary veins ca. 7 on each side of midvein, base cuneate and decurrent onto petiole, apex acute. Flowers in axillary and terminal dense spikes to 5 cm; bracts oblong to elliptic-oblong, abaxially shortly strigose along veins, apex sharply acute; bracteoles elliptic, ca. 1.2 cm, 1-veined, margin ciliate, apex acute. Outer calyx lobes purple, ovate, ca. 3.2 × 1.8 cm, base rounded, margin subentire to dentate, apex acute; inner calyx lobes yellowish brown, lanceolate, ca. 1.5 × 0.2 cm, both surfaces strigose, apex acute. Corolla purplish red, 5–6 cm; tube basally cylindrical for ca. 3.7 cm, throat ca. 1.2 cm; lobes obovate-oblong, ca. 2 × 1–1.5 cm, subequal. Stamens 4; filaments basally pilose, longer pair ca. 1.3 cm with anthers ca. 5 mm, shorter pair ca. 3 mm with anthers ca. 1.5 mm; staminode 1. Ovary ovoid, ca. 3 mm; style ca. 2.5 cm. Capsule ellipsoid, 1.4–1.8 × ca. 0.5 cm, glabrous, shining, 4-seeded. Fl. Nov, fr. Feb.  $2n = 40$ .

Dense forests; ca. 900 m. Yunnan [Bhutan, Cambodia, India, Indonesia, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam].

**4. *Barleria integrisepala*** H. P. Tsui, Acta Bot. Yunnan. 12: 269. 1990.

全缘萼假杜鹃 *quan yuan e jia du juan*

Shrubs to 1 m tall, evergreen. Stems sparsely lenticellate, strigose, soon glabrescent. Leaves clustered at shoot apices; petiole 3–5 cm, strigose; leaf blade ovate, narrowly ovate, or lanceolate, 3–4.5 × 0.7–1.8 cm, both surfaces pilose and strigose along veins, secondary veins 4–6 on each side of midvein, base cuneate and decurrent onto petiole, apex acute. Flowers axillary, solitary; bracteoles linear, ca. 14 × 1 mm, sparsely pilose. Pedicel short. Outer calyx lobes elliptic, ca. 1.3 × 0.7 cm, outside sparsely strigose, inside pilose, base cuneate, margin ciliate, apex acute; inner calyx lobes lanceolate, ca. 5 × 1 mm, margin ciliate, apex acuminate. Corolla bluish purple, funnel-shaped, ca. 3.5 cm; tube basally cylindrical for ca. 7 mm, throat ca. 1.5 cm; lobes suborbicular, ca. 1.4 × 1.4 cm, subequal. Stamens 4; filaments basally pilose, longer pair ca. 1.7 cm with anthers ca. 4 mm, shorter pair ca. 4 mm with anthers ca. 1.5 mm; staminode 1, filament ca. 4 mm. Ovary subellipsoid, ca. 4 mm, glabrous; stigma enlarged. Capsule ellipsoid, ca. 1.7 cm,

contracted at tip forming a beak, 4-seeded. Seeds ovate in outline, ca. 5 × 5 mm. Fl. Aug–Sep, fr. Nov–Dec.

- Thickets along streams; 1900–2000 m. Sichuan (Muli).

Fl. China 19: 468–469. 2011.