

## 21. NOMOCHARIS Franchet, J. Bot. (Morot) 3: 113. 1889.

豹子花属 *bao zi hua shu*

Liang Songyun (梁松筠 Liang Song-jun); Minoru N. Tamura

Herbs perennial, bulbiferous. Bulb of many imbricate, fleshy scales, white, without a tunic. Stem erect. Cauline leaves alternate or whorled, sessile, linear-lanceolate to elliptic-lanceolate. Inflorescence a terminal, 1- to several-flowered raceme; bracts 1–3. Tepals 6, free, usually with dark spots or blotches, usually papillose at apex; inner ones with nectary processes on both sides (rarely on 1 or neither side) of a short, median channel at base adaxially. Stamens 6, inserted at base of tepals; filaments often swollen, fleshy and cylindric proximally, sometimes subulate; anthers versatile. Ovary cylindric, 3-loculed; ovules many per locule. Style clavate, widened apically; stigma capitate. Fruit a capsule. Seeds narrowly winged all round.

Seven species: China, India, Myanmar; six species (two endemic) in China.

- 1a. Leaves alternate; filaments nearly subulate, tapering from flat, widened base to filiform apex; inner tepals entire at margin.
  - 2a. Style 6.5–12 mm, longer than ovary ..... 1. *N. aperta*
  - 2b. Style 2.5–4 mm, shorter than ovary ..... 2. *N. saluenensis*
- 1b. Leaves whorled, at least distal ones; filaments swollen, cylindric, and fleshy proximally, abruptly narrowed to a filiform portion distally; inner tepals entire or erose to lacerate at margin.
  - 3a. Inner tepals neither spotted nor blotched with deep color, margin entire ..... 3. *N. basilissa*
  - 3b. Inner tepals spotted or blotched with deep color, margin erose to lacerate.
    - 4a. Inner tepals ovate to elliptic, more than 1.5 × as long as broad; anthers 3–3.5 × ca. 1 mm ..... 6. *N. meleagrina*
    - 4b. Inner tepals ovate to orbicular, scarcely or slightly longer than broad; anthers 4–6 × 1.5–2 mm.
      - 5a. Leaves elliptic to lanceolate-elliptic, 10–30 mm wide ..... 4. *N. pardanthina*
      - 5b. Leaves linear to narrowly lanceolate, 5–8 mm wide ..... 5. *N. farreri*

**1. *Nomocharis aperta*** (Franchet) E. H. Wilson, Lilies East. Asia 13. 1925.

开瓣豹子花 *kai ban bao zi hua*

*Lilium apertum* Franchet, J. Bot. (Morot) 12: 220. 1898; *Fritillaria oxypetala* Royle; *L. oxypetalum* (Royle) Baker; *Nomocharis forrestii* I. B. Balfour.

Bulb ovoid, 1.5–2.5 × 1–2 cm. Stem 25–50 cm. Leaves alternate, broadly lanceolate to linear-lanceolate, 3–5.5 × 0.8–1.2 cm. Flowers usually 1 or 2(–6). Tepals spreading, rose or pink, with a deep maroon or purplish crimson blotch at base, and a few or more crimson spots mostly in proximal part, margin entire; outer tepals elliptic, ovate, or lanceolate, 2.2–4.5 × 1.2–1.5 cm; inner ones broadly elliptic or broadly ovate, 2.2–4.4 × 1.3–2.2 cm; nectary processes 2, of fleshy, cushionlike projections of tissue, rarely 1 or absent. Filaments 5–10 mm, nearly subulate, tapering from flat base to filiform apex, fleshy. Ovary 5–9 mm. Style 6.5–12 mm. Capsule green-brown, oblong-ovoid, 1–2.5 × 1.2–2 cm. Fl. Jun–Jul, fr. Aug–Oct. *2n* = 24\*.

Broad-leaved forests, bamboo scrub, alpine grasslands; 3000–3900 m. SW Sichuan, Xizang, NW Yunnan [N Myanmar].

**2. *Nomocharis saluenensis*** I. B. Balfour, Trans. Bot. Soc. Edinburgh 27: 294. 1919.

云南豹子花 *yun nan bao zi hua*

*Lilium apertum* Franchet var. *thibeticum* Franchet; *L. saluenense* (I. B. Balfour) S. Yun Liang.

Bulb white, ovoid, 2–4 × 2–2.5 cm. Stem 30–90 cm. Leaves alternate, usually lanceolate, 3.5–7 × 1–1.5 cm. Flowers

1–7. Tepals spreading, white to pink, with a dark purple blotch at base and well spotted or blotched crimson proximally, margin entire; outer tepals elliptic to narrowly so, 3.5–5.2 × 1.6–2 cm; inner ones elliptic to broadly ovate, 3–4.5 × 1.7–2.5 cm; nectary processes 2, of fleshy, cushionlike projections of tissue. Filaments nearly subulate, 8–11 mm, tapering from slightly widened base to filiform apex; anthers 7.5–8 mm. Ovary 6–7 × 2.5–3 mm. Style 2.5–4 mm, usually shorter than ovary. Capsule oblong, 1.7–1.8 × ca. 1.8 cm. Fl. Jun–Aug, fr. Aug–Sep. *2n* = 24\*.

Forest margins, shrubby and grassy slopes; 2800–4500 m. Sichuan, Xizang, NW Yunnan [N Myanmar].

**3. *Nomocharis basilissa*** Farrer ex W. E. Evans, Notes Roy. Bot. Gard. Edinburgh 15: 25. 1925.

美丽豹子花 *mei li bao zi hua*

Bulb ovoid, small; scales laxly arranged, lanceolate to ovate-lanceolate. Stem 35–95 cm. Proximal leaves alternate, distal ones whorled, linear to lanceolate, 5.5–9 cm × 5–7 mm. Flowers 1–5, ± nodding. Tepals red, sometimes flushed purple or blackish purple basally, margin entire; outer ones ovate to elliptic, 3.5–4.5 × 1.5–1.8 cm; inner ones broadly elliptic or broadly ovate, 3.5–4.5 × 2–2.5 cm; nectary processes 2, of purplish black, thin flanges of tissue arranged in a fan shape. Filaments 7–8 mm, swollen, cylindric, and fleshy proximally, abruptly narrowed to a filiform portion distally; anthers 6–7 mm. Ovary 6–7 mm. Style 8–10 mm; stigma rather large, 3-lobed. Fl. Jul–Aug. *2n* = 24\*.

Alpine bamboo scrub, alpine grasslands; 3900–4300 m. NW Yunnan [N Myanmar].

**4. *Nomocharis pardanthina*** Franchet, J. Bot. (Morot) 3: 113. 1889.

豹子花 bao zi hua

*Nomocharis leucantha* I. B. Balfour; *N. mairei* H. Léveillé; *N. mairei* f. *candida* W. E. Evans; *N. mairei* f. *leucantha* (I. B. Balfour) W. E. Evans; *N. pardanthina* f. *punctulata* Sealy.

Bulb ovoid-globose, 2.5–3.5 × 2–3.5 cm. Stem 25–90 cm. Proximal leaves alternate, distal ones whorled, elliptic to lanceolate-elliptic, 2.5–7 × 1–3 cm. Flowers 1 to several. Tepals white or pink, usually with a dark purple blotch at base; outer ones laxly spotted purple-red, ovate, 2.5–3.5 × 1.2–2 cm, margin entire; inner ones densely or laxly spotted or blotched purple-red, ovate to orbicular, 2–3 × 1.5–2 cm, margin usually erose or lacerate; nectary processes 2, of purple-red, fleshy ridges of tissue arranged in a fan shape. Filaments swollen, cylindrical, 6.5–7 mm, and fleshy proximally, abruptly narrowed to a filiform, 2–2.5 mm long portion distally. Style 6–8 mm. Fl. May–Jul, fr. Jul–Aug.  $2n = 24^*$ .

• Forest margins, grassy slopes; 2700–4100 m. SW Sichuan, NW Yunnan.

**5. *Nomocharis farreri*** (W. E. Evans) Harrow, New Fl. & Silva 1: 76. 1928.

滇西豹子花 dian xi bao zi hua

*Nomocharis pardanthina* Franchet var. *farreri* W. E. Evans.

Bulb ovoid, 1.8–2 × 1.5–1.8 cm. Stem 25–75 cm. Proximal leaves alternate, distal ones whorled, linear to narrowly lanceolate, 3–9 cm × 5–8 mm. Flowers 1 or 2, horizontal or sub-erect. Tepals white, rose, or pink; outer ones elliptic, 2.5–3.5 × 1.2–1.4 cm, margin entire; inner ones densely spotted purple-red or dark brown-red, ovate to orbicular, 2.5–3.5 × 2.2–3 cm, margin shallowly erose; nectary processes 2, of narrow flanges of tissue arranged in a fan shape. Filaments swollen, cylindrical, 6–7 mm, and fleshy proximally, abruptly narrowed to a filiform, 2.5–3.5 mm long portion distally. Style ca. 1 cm. Capsule oblong, 2–2.5 × ca. 2 cm, 6-angular. Fl. Jun–Jul, fr. Aug–Oct.  $2n = 24^*$ .

Forests, bamboo forest margins, grassy places; 2700–3400 m. W Yunnan [N Myanmar].

**6. *Nomocharis meleagrina*** Franchet, J. Bot. (Morot) 12: 196. 1898.

多斑豹子花 duo ban bao zi hua

*Nomocharis biluoensis* S. Yun Liang.

Bulb white, ovoid, 2.5–3 × 2–2.8 cm. Stem 35–100 cm. Leaves 5–8-whorled, narrowly lanceolate to elliptic, 4.5–11 × 1–3 cm, margin sometimes conspicuously papillose. Flowers 1–4, nodding. Tepals white or tinged pale pink abaxially; outer ones blotched purple-red, elliptic to ovate-elliptic, 4–5 × (1–)2–2.5 cm, margin entire; inner ones spotted or mainly in distal part blotched purple-red, ovate to elliptic, 4–5 × (1–)2.5–3 cm, margin erose-serrate; nectary processes 2, of low ridges of tissue arranged in a fan shape. Filaments swollen, cylindrical, 6–7 mm, and fleshy proximally, abruptly narrowed to a filiform, 2–2.5

mm long portion distally. Style 7–9 mm. Capsule oblong-ovoid. Fl. Jun–Jul, fr. Aug–Sep.  $2n = 24^*$ .

• *Abies* forests, broad-leaved forests, forest margins, grassy slopes; 2800–4000 m. Sichuan, SE Xizang, NW Yunnan.

