

2. PTEROCEPHALUS Vaillant ex Adanson, Fam. Pl. 2: 152, 595. 1763.

翼首花属 yi shou hua shu

Herbs, perennial or annual, or sometimes subshrubs. Leaves basal, rosulate, entire, pinnatifid to pinnatisect. Capitula solitary, terminal; involucre of 2, rarely 3 whorls of 4–6 involucral bracts; receptacles covered with hirsute hairs or bracts; involucre 1, 4–8-ribbed, apex obscurely dentate, or corona-like, or membranous and dentate. Calyx segmented and 8–24-setose or pinnate. Corolla 4- or 5-lobed, that of central flowers nearly actinomorphic, that of marginal flowers nearly 2-lipped; upper lip with 1 lobe, entire or 2-lobed; lower lip usually 3-lobed. Stamens 4, rarely 2 or 3, inserted at upper part of corolla, exserted. Ovary inferior, enveloped by involucre. Achenes smooth or ribbed. Seeds with a large, straight embryo and scanty endosperm.

About 25 species: from the Mediterranean to C Asia and tropical Africa; two species (one endemic) in China.

- 1a. Leaves spatulate or linear-spatulate, entire or narrowly segmented; inflorescences globose in fruit; involucral bracts of outer layer narrowly ovate; persistent calyx segmented into 20 pinnate hairs; corolla 5-lobed, obovoid, 4–5 mm 1. *P. hookeri*
- 1b. Leaves oblong-lanceolate or oblanceolate, pinnatifid to bipinnatisect; inflorescences compressed globose in fruit; involucral bracts of outer layer lanceolate; persistent calyx segmented into 8 brown setae; corolla 4-lobed 2. *P. bretschneideri*

1. *Pterocephalus hookeri* (C. B. Clarke) E. Pritzl, Bot. Jahrb. Syst. 29: 601. 1901.

匙叶翼首花 chi ye yi shou hua

Scabiosa hookeri C. B. Clarke in J. D. Hooker, Fl. Brit. India 3: 218. 1881; *Pterocephalodes hookeri* (C. B. Clarke) V. Mayer & Ehrendorfer; *Pterocephalus batangensis* Pax ex K. Hoffmann.

Herbs, perennial, 10–50 cm tall, white villous throughout. Taproots robust, columnar, 8–15 × 1.5–3.5 cm, lignified. Leaves all basal, rosulate, oblanceolate, 5–18 × 1–2.5 cm, base attenuate into winged petiole, margin entire, remotely and coarsely serrate, or pinnatifid, apex obtuse or acute; segments in 3–5 pairs, obliquely ovate or lanceolate, 1–2 cm; terminal lobe larger, lanceolate, abaxially white, midvein conspicuous, adaxially green, white puberulent. Scapes 10–40 cm, 2–4 mm in diam., white villous, more densely so near inflorescences. Capitula solitary, terminal, erect or slightly pendulous, globose, 3–4 cm in diam.; involucral bracts 2- or 3-layered, narrowly ovate to ovate-lanceolate, 12–18 × 5–7 mm, pilose, margin ciliate, apex acute; bracts linear-oblanceolate, 1–1.2 cm, base clawed, densely white villous, midvein conspicuous; involucre tubular, 4–5 × ca. 1.5 mm, outside white hirsute, attenuate toward base, sinuate-dentate, apex slightly spreading. Calyx segmented to base into 20 soft pinnate hairs. Corolla yellowish white to pale purple, tubular-funnelform, 1–1.2 cm, outside rather densely villous, shallowly 5-lobed; lobes obtuse, ca. 3.5 mm. Stamens 4; anthers dark purple, ca. 3 mm. Ovary enveloped in involucre; style ca. 1.5 cm, strongly exserted; stigma pale brown, compressed globose. Achenes pale brown, obovoid, 3–5 mm, longitudinally 8-ribbed, sparsely adpressed hairy; pinnate hairs of persistent calyx ca. 1 cm, white. Fl. and fr. Jul–Oct.

Grassy slopes, meadows, by fields; 1800–4800 m. S Qinghai, W Sichuan, Xizang, N Yunnan [Bhutan, India, Nepal].

2. *Pterocephalus bretschneideri* (Batalin) Pritzl ex Diels, Bot. Jahrb. Syst. 29: 601. 1901.

裂叶翼首花 lie ye yi shou hua

Scabiosa bretschneideri Batalin, Trudy Imp. S.-Peterburgsk. Bot. Sada 14: 184. 1895; *Pterocephalodes bretschneideri* (Batalin) V. Mayer & Ehrendorfer.

Herbs, perennial, 8–40 cm tall. Taproots columnar, 3–20 mm in diam. Leaves basal, rosulate; petiole 3–10 cm; leaf blade oblong to oblanceolate, 5–20 cm, pinnatifid to bipinnatisect; segments linear, both surfaces glabrous or puberulent. Scapes white puberulent, more densely so near inflorescence. Capitula solitary, terminal, oblate, 2.5–3 cm in diam.; involucral bracts 2-layered, 10–14, broadly linear, outside white puberulent; receptacles disklike, densely white hairy; bracts brown, linear-lanceolate, 4–6 mm, pubescent, apex acuminate; involucre ellipsoid-obovoid, 4–5 mm, 8-ribbed, densely white hirsute, membranous at apex, dentate. Calyx segmented into 8 brown setae, setae 1–1.2 cm, hispidulous above. Corolla pale rose to purple-red, tubular, 12–15 mm; tube 7–10 mm, densely white villous; limb with 4 obtuse lobes, slightly 2-lipped; upper lip slightly larger, ca. 2.5 mm; 3 lobes of lower lip ca. 2 mm, with several brown veins. Stamens 4, inserted at upper part of corolla; filaments ca. 5 mm, obviously exserted. Stigma capitate. Achenes ellipsoid, ca. 4 mm, apex tapering into a rostrum, 8-veined, sparsely villous; persistent calyx 8-setose. Fl. Jul–Aug, fr. Sep–Oct.

• Mountainous rocky crevices, grassy slopes in forests; 1600–3400 m. W Sichuan, SE Xizang (Nangxian), N Yunnan.

Fl. China 19: 655–656. 2011.