

13. LINDENBERGIA Lehmann in Link & Otto, Icon. Pl. Rar. 95. 1828. 钟萼草属 zhong e cao shu

Herbs, annual or perennial, basally woody, erect or decumbent, much branched, hairy, rooting from lower nodes. Leaves opposite or upper alternate. Flowers solitary or in terminal spikes or racemes; bracts foliaceous. Bracteoles absent. Calyx campanulate, 5-lobed, parted to ca. middle, hairy. Corolla 2-lipped; tube tubular, often puberulent; lower lip large, 3-lobed, often plicate; upper lip short, wide, apex truncate, subemarginate, or 2-lobed. Stamens 4, didynamous, included, inserted below middle of corolla tube; filaments usually glabrous; anther locules distinct, connective often forming a stalk. Ovary hairy or glabrous. Stigma not lobed. Capsule generally enclosed by persistent calyx, 2-grooved, loculicidal; valves entire, separating from placental column; style persistent. Seeds numerous, minute.

12 species: tropical and subtropical Africa and Asia; three species in China.

The genus occurs mostly in India with few species in tropical Africa and Malaysia. There are possibly five species in China, but we have been unable to confirm the presence of *Lindenbergia macrostachya* Benth and *L. griffithii* J. D. Hooker.

- 1a. Ovary and capsule glabrous or sparsely pilose; flowers in dense spicate racemes; calyx lobes acute 3. *L. philippensis*
- 1b. Ovary and capsule densely pilose; flowers solitary in leaf axils or in lax spikes; calyx lobes obtuse, sometimes apiculate.
 - 2a. Calyx 4–5 mm; corolla 0.8–0.9 cm; flowers solitary in leaf axils; leaf blade to 6 cm 1. *L. muraria*
 - 2b. Calyx 7–8 mm; corolla to 3 cm; flowers in lax spikes; leaf blade to 20 cm 2. *L. grandiflora*

1. Lindenbergia muraria (Roxburgh ex D. Don) Brühl, J. Dept. Sci. Calcutta Univ. 2: 26. 1920.
野地钟萼草 ye di zhong e cao

Stemodia muraria Roxburgh ex D. Don, Prodr. Fl. Nepal 89. 1825.
Annuals, 10–40 cm tall, pilose to subglabrous. Primary root undeveloped, lateral roots numerous and fibrous. Stems terete, simple or often branched, straight or ascending. Petiole slender, hairy; leaf blade ovate, 2.5–6 cm, thin, submembranous, pilose or eventually glabrescent, base cuneate, middle and distal margin crenulate, apex acute to obtuse. Flowers solitary in leaf axils. Pedicel 1–5 mm, hairy. Calyx 4–5 mm, densely hairy; tube membranous, somewhat white; lobes equal, oblong-ovate, apex obtuse to apiculate. Corolla yellow, 8–9 mm; tube slightly longer than calyx, hairy; limb subglabrous; lower lip conspicuously plicate, lobes oblong-ovate, subequal, and apically obtuse; upper lip truncate, emarginate. Anthers orbicular, stalked. Ovary and style densely long ciliate. Stigma globose, glabrous. Capsule ovoid-globose, ca. 5 mm, densely hairy, apex acuminate. Seeds yellow, 0.5–0.7 mm. Fl. Jul–Sep, fr. Oct.

Trailsides, along rivers, dry mountain slopes; 800–2500 m. Guangdong, Guangxi, Guizhou, Hubei, Sichuan, Xizang, Yunnan [Afghanistan, Kashmir, Myanmar, Pakistan, Thailand, Vietnam].

2. Lindenbergia grandiflora (Buchanan-Hamilton ex D. Don) Benth., Scroph. Ind. 22. 1835.
大花钟萼草 da hua zhong e cao

Stemodia grandiflora Buchanan-Hamilton ex D. Don, Prodr. Fl. Nepal. 89. 1825.
Annuals, ± scendent, much branched, densely pilose. Branches slender, flexuous, 15–80 cm. Leaves opposite; petiole to 7 cm; leaf blade ovate, to 20 cm below,

noticeably decreasing in size upward, margin undulate and serrate; lateral veins 6–10 on each side of midrib. Inflorescences spicate, lax, to 25 cm. Flowers subsessile, solitary from bract axils. Calyx 7–8 mm, glandular hairy; lobes equal, spreading flat, orbicular, apex obtuse. Corolla golden yellow, to 3 cm; tube 2–3 × as long as calyx, sparsely hairy; throat with 2 oblong red-punctate plaits; lower lip broader than wide, to 2.5 cm, lateral lobes oblong, middle lobe smaller than other lobes, orbicular, and emarginate; upper lip short and orbicular, emarginate. Filaments hairy below middle. Ovary sericeous. Capsule ovoid, apex exserted from persistent calyx. Seeds ca. 0.5 mm.

S Xizang [Bhutan, India (Darjeeling), Nepal, Sikkim].
3. Lindenbergia philippensis (Chamisso & Schlechtendal) Benth. in A. de Candolle, Prodr. 10: 377. 1846.

钟萼草 zhong e cao
Stemodia philippensis Chamisso & Schlechtendal, Linnaea 3: 5. 1828; *Lindenbergia melvillei* S. Moore; *L. philippensis* var. *ramosissima* Bonati.
Perennials, to 1 m tall, stout, erect, straight, much branched, glandular hairy. Stems terete. Petiole 6–12 mm; leaf blade ovate to ovate-lanceolate, papery, 2–8 cm, base cuneate, margin serrate, apex acute to acuminate. Inflorescences terminal, spicate-racemose, dense, 6–20 cm; bracts narrowly lanceolate, shorter than calyx. Flowers subsessile. Calyx 5–6 mm, conspicuously 5-veined; lobes subulate-triangular, as long as tube, apex acute. Corolla yellow, outside with purple patches, sparsely hairy; tube ca. 2 × as long as calyx; lower lip long, conspicuously plicate; upper lip apically subtruncate, sometimes emarginate. Anthers long stalked. Style basally and apically hairy. Capsule narrowly ovoid, 5–6 mm, densely brown hirsute

apically. Seeds yellow, ca. 0.5 mm, scabrous. Fl. and fr.
Nov–Mar.

Dry mountain sides, rocky crevices; 1200–2600 m. Guangdong,
Guangxi, Guizhou, Hubei, Hunan, Yunnan [Cambodia, India, Laos,
Myanmar, Philippines, Thailand, Vietnam].

