

29. HEMIPILIA Lindley, Gen. Sp. Orchid. Pl. 296. 1835.

舌喙兰属 she hui lan shu

Chen Xinqi (陈心启 Chen Sing-chi); Stephan W. Gale, Phillip J. Cribb

Herbs, terrestrial, small to medium-sized. Tuber subspherical to ellipsoid, fleshy. Stem erect, abbreviate, with 1 short sheathing cataphyll at base and 1 solitary leaf (rarely 2 leaves). Leaf basal, usually appressed to substrate, green, often with purple markings, cordate to ovate-cordate, directly sheathing stem at base, fleshy, glabrous. Inflorescence elongate, with 2–4 scattered sterile bracts and a few to several flowers in a lax to subdense terminal raceme, glabrous; floral bracts lanceolate, usually shorter than ovary. Flowers resupinate, purple, purplish red, pink, or nearly white, medium-sized; pedicel and ovary often slightly arcuate, narrowly cylindrical-fusiform, glabrous. Sepals free; dorsal sepal often erect; lateral sepals spreading, oblique. Petals usually connivent with dorsal sepal and forming a hood over column, slightly smaller than sepals; lip spreading, spurred at base, 3-lobed or entire, adaxially finely papillate, with 2 prominent ridges below mouth of spur; spur cylindrical to conic, rather long, often papillate inside. Column stout; anther hoodlike, with 2 divergent locules and a broad connective; rostellum conspicuous, to 2 mm, protruding between anther cells, lateral lobes fleshy, apically infolded; pollinia 2, granular-farinaceous, sectile, attached to viscidia via long caudicles; viscidia cymbiform, enclosed by folded apices of rostellum lateral lobes; stigma lobes confluent, slightly concave, posterior to rostellum; auricles 2, one on either side of anther base. Capsule narrowly ellipsoid.

About ten species: from Nepal, through Bhutan and S China, to Myanmar and Thailand; seven species (five endemic) in China; one additional species (endemic) is incompletely known.

- 1a. Lip 3-lobed, though lateral lobes sometimes reduced.
 - 2a. Mid-lobe of lip rectangular to ovate-orbicular, margins usually diverging, apex not divided 1. *H. cordifolia*
 - 2b. Mid-lobe of lip subsquare to rectangular, margins often tapering slightly toward apex, apex divided into 2 rounded lobules 2. *H. henryi*
- 1b. Lip simple.
 - 3a. Spur ca. 10 mm or more.
 - 4a. Lip 8–10 mm, basally contracted into short claw, blade flabellate to orbicular; spur conic-cylindric, attenuate, 13–18 mm 3. *H. flabellata*
 - 4b. Lip ca. 13 mm, not clawed, blade suboblong; spur cylindrical, uniformly thick (not attenuate), 10–12 mm 4. *H. crassicalcarata*
 - 3b. Spur to 8 mm.
 - 5a. Lip ovate to orbicular, broadest below middle 5. *H. limprichtii*
 - 5b. Lip obovate to oblong, broadest above middle.
 - 6a. Lip 12–13 mm wide 6. *H. kwangsiensis*
 - 6b. Lip 6–8 mm wide 7. *H. calophylla*

1. *Hemipilia cordifolia* Lindley, Gen. Sp. Orchid. Pl. 296. 1835.

心叶舌喙兰 xin ye she hui lan

Hemipilia bulleyi Rolfe; *H. cordifolia* var. *yunnanensis* Finet; *H. cruciata* Finet; *H. formosana* Hayata; *H. yunnanensis* (Finet) Schlechter.

Plants 13–27 cm tall. Tubers ovoid to subspherical, 1.5–4.5 cm. Stem with 1 tubular cataphyll at base, 1-leaved. Leaf abaxially purplish, adaxially dark green with purple spots, suborbicular to cordate, 2.5–8 × 2–6.5 cm, fleshy, base cordate, apex acute or obtuse. Inflorescence 11–25 cm, with 2 or 3 lanceolate sterile bracts; rachis 5–10 cm, laxly to subdensely 3- to more than 10-flowered; floral bracts lanceolate, apex acuminate. Flowers purplish red to pink; pedicel and ovary erect, often arcuate toward apex, 7–15 mm. Dorsal sepal oblong to ovate-lanceolate, 4–6 × 2–3.2 mm, 5-veined, apex obtuse; lateral sepals spreading to reflexed, oblong-ovate, falcate, 6–7 × 3.5–4 mm, 5-veined, apex acuminate. Petals connivent with dorsal sepal and forming a hood, ovate, slightly oblique, 3.2–4.5 × 2–3 mm, 3-veined, apex subacute; lip variable in outline, 7–9 × ca. 5 mm, 3-lobed though lateral lobes sometimes reduced, adaxially finely papillate, apical margin usually fimbri-

ate; lateral lobes short, rectangular, triangular, or suborbicular, margin entire to minutely incised; mid-lobe rectangular to ovate-orbicular, margins usually diverging, entire to slightly serrate, apex not divided; spur straight and horizontal or slightly upcurved toward apex, to strongly downcurved, cylindrical to attenuate, 10–15 mm, apex obtuse. Column ca. 2.5 mm; rostellum ca. 1 mm. Capsule ca. 2.5 cm. Fl. Jun–Sep. $2n = 42$.

Forests, rocky slopes; 1500–3500 m. SW Sichuan, Taiwan, S Xizang, NW Yunnan [Bhutan, India, Myanmar, Nepal].

2. *Hemipilia henryi* Rolfe, Bull. Misc. Inform. Kew 1896: 203. 1896.

裂唇舌喙兰 lie chun she hui lan

Hemipilia amesiana Schlechter; *H. cordifolia* Lindley var. *cuneata* Finet; *H. cuneata* (Finet) Schlechter.

Plants 20–32 cm tall. Tubers ellipsoid, ca. 2 cm. Stem with 1 tubular cataphyll at base, 1- or rarely 2-leaved. Leaf abaxially pale green, adaxially green with purple spots, ovate, 4–11 × 3–8 cm, base cordate or rounded, apex acute or cuspidate. Inflorescence 17–30 cm, with 2–4 sterile bracts; rachis 6–11 cm, laxly to subdensely 3–9-flowered; floral bracts lanceolate, to ca. 12 mm, apex acuminate or long acuminate. Flowers purplish

red; pedicel and ovary erect, slightly arcuate, 16–24 mm. Dorsal sepal ovate-elliptic, 6–7 × ca. 3 mm, 3-veined, apex obtuse; lateral sepals broadly ovate, oblique, ca. 8.5 × 5 mm, adaxially finely papillate, 3- or 5-veined, apex obtuse. Petals obliquely rhombic-ovate, ca. 6 × 3.5–4 mm, adaxially inconspicuously papillate, 3-veined, apex obtuse; lip broadly obovate-cuneate, 3-lobed, ca. 12 × 10 mm, adaxially finely papillate; lateral lobes broadly triangular to suboblong, margin sometimes irregularly serrulate, apex obtuse to acute; mid-lobe subsquare to rectangular, margin often tapering slightly toward apex, truncate, apex divided into 2 rounded lobules; spur straight and horizontal or slightly curved downward, narrowly conic, gradually attenuate, 14–18 mm, slightly shorter than ovary, apex sometimes hooked. Column ca. 3 mm; rostellum ovate, ca. 2 mm, apex acute. Fl. Jul–Aug.

• Rocky outcrops; 800–1100 m. W Hubei, NE, SE, and SW Sichuan.

3. *Hemipilia flabellata* Bureau & Franchet, J. Bot. (Morot) 5: 152. 1891.

扇唇舌喙兰 shan chun she hui lan

Hemipilia cordifolia Lindley var. *subflabellata* Finet; *H. flabellata* var. *grandiflora* Finet; *H. flabellata* var. *leptoceras* Soó; *H. quinquangularis* Tang & F. T. Wang; *H. sikangensis* Tang & F. T. Wang.

Plants 15–28 cm tall. Tubers narrowly ellipsoid, 1.5–4.5 cm. Stem with 1 tubular cataphyll at base, 1-leaved. Leaf abaxially purple, adaxially green with purple spots, cordate to broadly ovate, 2–10 × 2–9 cm, base cordate to rounded, apex acute to cuspidate. Inflorescence 12–24 cm, with 3 or 4 lanceolate sterile bracts; rachis 4–8 cm, laxly to subdensely 3–15-flowered; floral bracts lanceolate, largest to 11 mm. Flowers variable in color, from purplish red to nearly pure white; pedicel and ovary erect, sometimes arcuate toward apex, 12–18 mm. Dorsal sepal oblong to narrowly ovate, concave, 6–9 × 2.5–4 mm, 3- or 5-veined, apex obtuse or acute; lateral sepals obliquely ovate to oblong, falcate, 7–10 × 3.5–5 mm, 3-veined, apex obtuse. Petals broadly ovate, slightly oblique, 5–7 × 3–5 mm, 3-veined, apex subacute; lip simple, 8–10 mm, basally contracted into short claw; claw oblong or cuneate, ca. 2 mm; blade widely dilated, flabellate to orbicular, 6–8 × 6.5–8.5 mm, margin irregularly crenulate, apex truncate or obtuse, sometimes emarginate; spur usually straight and horizontal or sometimes slightly curved downward, conic-cylindric, attenuate, 13–18 mm, apex obtuse or shallowly 2-lobed. Column ca. 3 mm; rostellum ligulate, ca. 1 mm, apex rounded. Capsule ca. 3 mm. Fl. Jun–Aug.

• Forests, crevices on limestone cliffs; 1600–3200 m. NW Guizhou, SW Sichuan, C and NW Yunnan.

4. *Hemipilia crassicalcarata* S. S. Chien, Contr. Biol. Lab. Sci. Soc. China, Bot. Ser. 6: 80. 1931.

粗距舌喙兰 cu ju she hui lan

Hemipilia silvestrii Pampanini.

Plants 15–35 cm tall. Tubers ellipsoid, 1–2 cm. Stem with 1 tubular cataphyll at base, 1- or rarely 2-leaved. Leaf ovate to

ovate-cordate, 5–12 × 4–5.8 cm, base cordate or subcuneate, apex acute. Inflorescence 13–30 cm, with 4 ovate to lanceolate sterile bracts to 2.5 cm; rachis ca. 6 cm, subdensely (2–)7–15-flowered; floral bracts lanceolate, to ca. 11 mm. Flowers purplish red; pedicel and ovary 12–18 mm. Dorsal sepal erect, ovate, cymbiform, 6–6.5 × ca. 3 mm, 3-veined, apex obtuse; lateral sepals obliquely ovate, ca. 7 × 4 mm, 3-veined, apex obtuse. Petals similar to lateral sepals but slightly smaller, oblong-ovate, oblique, ca. 7 × 3.5 mm, 3-veined, margin sometimes irregularly denticulate, apex obtuse to subtruncate; lip simple, suboblong, ca. 13 × 9–10 mm, adaxially finely papillate, base broadly cuneate, margin irregularly crenate, apex truncate, often apiculate or occasionally emarginate; spur straight and horizontal or sometimes slightly curved downward, white, cylindric, uniformly thick (not attenuate), 10–12 mm, apex obtuse and slightly dilated. Column to 4 mm; rostellum oblong-elliptic, ca. 1.5 mm, apex rounded. Fl. Jul.

• Cypress forests, grassy slopes; 1000–1200 m. S Shaanxi, SE Shanxi, N and W Sichuan.

5. *Hemipilia limprichtii* Schlechter, Repert. Spec. Nov. Regni Veg. Beih. 12: 331. 1922.

短距舌喙兰 duan ju she hui lan

Hemipilia cordifolia Lindley var. *bifoliata* Finet.

Plants 10–30 cm tall. Tubers narrowly oblong-ellipsoid, 1–1.5 cm. Stem with 1 tubular cataphyll at base, 1- or rarely 2-leaved. Leaf ovate, 3–6 × 2.2–5.5 cm, base cordate, apex subacute. Inflorescence to 28 cm, with 4–9 ovate-lanceolate sterile bracts; rachis to 10 cm, laxly 3- to usually more than 10-flowered; floral bracts ovate-lanceolate, to ca. 9 mm. Flowers purplish red; pedicel and ovary 10–12 mm. Dorsal sepal ovate, cymbiform, 4.5–5.5 × ca. 2.5 mm, apex obtuse; lateral sepals spreading to reflexed, oblong-ovate, oblique, 5–6.5 × ca. 3 mm, apex obtuse or emarginate. Petals erect, triangular-ovate, oblique, subequal in length to lateral sepals, apex subacute; lip ovate to orbicular, 8–10 × 9–11 mm, adaxially papillate-puberulent, basally broadly cuneate, simple, margin irregularly crenulate, apex emarginate; spur often slightly upcurved, conic, 6–7 mm, attenuate toward apex. Column ca. 3 mm; rostellum ovate, ca. 2 mm. Fl. Jul–Aug.

• Limestone meadows, grasslands; 1000–1600 m. C Guizhou, C and NW Yunnan.

6. *Hemipilia kwangsiensis* Tang & F. T. Wang ex K. Y. Lang, Guihaia 18: 7. 1998.

广西舌喙兰 guang xi she hui lan

Plants 13–20 cm tall. Tubers ellipsoid, 1.5–2 cm. Stem 1-leaved. Leaf orbicular to suborbicular, 5.5–6 × 5–6 cm, base cordate, apex acute. Inflorescence 11–18 cm, with 3 lanceolate sterile bracts; rachis 5–7 cm, laxly 5–7-flowered; floral bracts ovate or ovate-lanceolate, 7–14 mm, apex long acuminate. Flowers pale red; pedicel and ovary suberect, 14–18 mm. Dorsal sepal ovate-elliptic, 5–7 × ca. 3 mm, 3-veined, apex subacute; lateral sepals ovate-elliptic, slightly oblique, 6–7 × 3–3.5 mm, 3-veined, apex subacute. Petals ovate-triangular, oblique, 5–6 × 2.5–3 mm, 1-veined, margin minutely ciliate, apex acute;

lip obovate, 11–12 × 12–13 mm, adaxially finely papillate, base slightly contracted, simple, apex emarginate; spur cylindrical-conic, ca. 6 × 3 mm, attenuate, apex subacute, usually downcurved. Column ca. 2 mm; rostellum ligulate, ca. 2 mm. Fl. Aug.

• Forests on limestone substrates; 400–1000 m. S Guangxi, SE Yunnan.

7. *Hemipilia calophylla* E. C. Parish & H. G. Reichenbach, J. Bot. 12: 197. 1874.

美叶舌喙兰 mei ye she hui lan

Galearis subrotunda (King & Pantling) P. F. Hunt; *Hemipilia amethystina* Rolfe ex J. D. Hooker; *Orchis subrotunda* King & Pantling.

Plants 5.5–11 cm tall. Tubers ovoid, ca. 2 cm. Stem with 1 tubular cataphyll at base, 1- or 2-leaved. Leaves abaxially dark greenish purple, adaxially dark green netted with purplish brown, suborbicular to ovate, 1.5–3 × 1–2.5 cm, base cordate to rounded, apex acute. Inflorescence 5–9.5 cm, with 2 or 3 nar-

rowly ovate sterile bracts; rachis 1–3.5 cm, laxly 1–4-flowered; floral bracts ovate, ca. 6 mm, apex acuminate. Flowers white and purple; pedicel and ovary erect, sometimes slightly arcuate, 12–20 mm. Dorsal sepal ovate, 5–6.5 × 2–3 mm, 3-veined, apex acute; lateral sepals ovate-elliptic, oblique, 6–7 × 2.5–3 mm, 1-veined, apex acute. Petals ovate, slightly oblique, 4.5–5 × ca. 2 mm, 1-veined, apex acute; lip oblong to obovate, 9–11 × 6–8 mm, truncate, simple, margin undulate and slightly crenulate toward apex, apex obtuse or occasionally emarginate; spur conic to urceolate, 6–8 mm, slightly downcurved toward apex. Column ca. 2 mm; rostellum ligulate, ca. 1.5 mm. Fl. Oct.

About 1500 m. Yunnan [Myanmar, Thailand, N Vietnam].

A single, somewhat dwarf collection at K (*Henry 13815*) is referable to this taxon, though material from neighboring countries in SE Asia indicates that overall dimensions, as well as those for the leaf and flower parts, can sometimes be greater. When these larger plants are taken into consideration, lip dimensions in *Hemipilia calophylla* become continuous with those of *H. kwangsiensis*, making the distinction given in the key somewhat artificial. More material from China is required to assess the stability of floral characters within either taxon.

Incompletely known species

Hemipilia forrestii Rolfe, Notes Roy. Bot. Gard. Edinburgh 8: 27. 1913.

长距舌喙兰 chang ju she hui lan

Hemipilia forrestii var. *macrantha* Handel-Mazzetti.

Plants ca. 20 cm tall. Tubers ellipsoid, 3–4(–5) cm. Stem 1-leaved. Leaf ovate-oblong, ca. 4.5 × 2.5 cm, base subcordate, apex acute. Inflorescence ca. 17 cm; rachis ca. 6 cm, several flowered; floral bracts lanceolate or ovate-lanceolate, 10–12 mm, apex acuminate. Flowers rose-purple; pedicel and ovary ca. 20 mm. Dorsal sepal erect, cymbiform, ovate-oblong, ca. 6 mm, apex obtuse; lateral sepals ovate, oblique, concave, ca. 12 mm, apex subobtuse, recurved. Petals ovate-oblong, ca. 5 mm, apex obtuse; lip sessile, quadrate-obovate, ca. 13 × 10 mm, margin irregularly crenate, apex truncate; spur attenuate, ca. 30 mm, slightly incurved, apex subacute. Column ca. 5 mm; rostellum ovate-oblong, ca. 3 mm. Fl. Sep.

• Crevices on rocky slopes; 1200–3000 m. SW Sichuan, SE Xizang, NW Yunnan.

This species is clearly a close ally of *Hemipilia flabellata*, though with larger flower parts and a longer spur. No specimens have been seen by us to confirm its identity.

