

185. GASTROCHILUS D. Don, Prodr. Fl. Nepal. 32. 1825.

盆距兰属 *pen ju lan shu*

Chen Xinqi (陈心启 *Chen Sing-chi*), Ji Zhanhe (吉占和 *Tsi Zhan-huo*); Jeffrey J. Wood

Herbs, epiphytic, small to medium-sized, monopodial. Stems rather short or elongate, ascending or pendulous, enclosed in basal sheaths of leaves. Leaves many, usually distichous, narrowly elliptic or strap-shaped, slightly fleshy or leathery, flat, jointed and amplexicaul-sheathing at base, sometimes twisted at base and \pm lying in one plane, apex unequally bilobed, acute or rarely with 3 setae. Inflorescence lateral, rather short, racemose or subumbellate, few to many flowered. Flowers small to medium-sized, \pm fleshy. Sepals and petals free, similar, spreading. Lip firmly attached to base of column, with a subglobose-saccate or conic hypochile with lateral lobes reduced to often fleshy edges of sac; epichile fan-shaped, often broadly triangular, often hairy or papillose, margin entire to fimbriate. Column short and thick, footless; rostellum short, 2-lobed; anther subglobose, apex narrowed; pollinia waxy, 2, subglobose, porate or rarely cleft, attached by a common narrow stipe to a bilobed viscidium.

About 47 species: from India and Sri Lanka to E Asia and south to Indonesia; 29 species (17 endemic) in China.

The following three species were recently described or recorded from China:

Gastrochilus affinis (King & Pantling) Schlechter (Repert. Spec. Nov. Regni Veg. 12: 314. 1913; *Saccolabium affine* King & Pantling, Ann. Roy. Bot. Gard. Calcutta 8: 228. 1898), recorded from NW Yunnan (Fugong: Gaoligong Shan, 2500–2600 m) by X. H. Jin, H. Li, and D. Z. Li (Acta Phytotax. Sin. 45: 804. 2007).

Gastrochilus alatus X. H. Jin & S. C. Chen (Acta Phytotax. Sin. 45: 800. 2007), described from W Yunnan (Fugong, 2700–2800 m).

Gastrochilus malipoensis X. H. Jin & S. C. Chen (Acta Phytotax. Sin. 45: 801. 2007), described from SE Yunnan (Malipo, 1300–1400 m).

In addition, reviewer L. Averyanov notes that *Gastrochilus minutiflorus* Averyanov (Bot. Zhurn. (Moscow & Leningrad) 82(3): 143. 1997), described from N Vietnam, should also occur in S China. However, the present authors could not substantiate this assertion because they found no relevant specimens.

- 1a. Stem either very short with basal leaves or elongate and rather stout (4–7 mm in diam.) with large cauline leaves (4.5–)6–23 cm.
 - 2a. Leaves 2–2.5 cm.
 - 3a. Petals suborbicular, fimbriate at margin; lip epichile white hairy adaxially 13. *G. rantabunensis*
 - 3b. Petals oblong, entire at margin; lip epichile glabrous adaxially 14. *G. xuanenensis*
 - 2b. Leaves more than (3–)5 cm.
 - 4a. Inflorescence racemose; leaves 3–5 cm 1. *G. platycalcaratus*
 - 4b. Inflorescence subumbellate; leaves (5–)6–23 cm.
 - 5a. Central cushion on lip epichile with a groove or cavity at base.
 - 6a. Flowers 2–3 cm in diam.; dorsal sepal 12–17 mm 2. *G. bellinus*
 - 6b. Flowers 1–1.8 cm in diam.; dorsal sepal 5–10 mm.
 - 7a. Stem 1–2 cm; lip epichile glabrous adaxially 3. *G. hainanensis*
 - 7b. Stem 5–30 cm; lip epichile with dense papillate hairs adaxially 4. *G. calceolaris*
 - 5b. Central cushion on lip epichile without a groove or cavity at base.
 - 8a. Epichile \pm papillate-hairy adaxially.
 - 9a. Leaves linear, 5–8 mm wide; margin of lip epichile irregularly fimbriate 10. *G. linearifolius*
 - 9b. Leaves ligulate or oblong, 1–2.5 cm wide; margin of lip epichile lacinate-erose.
 - 10a. Epichile transversely oblong or oblate, margin irregularly denticulate 12. *G. acinacifolius*
 - 10b. Epichile broadly triangular, margin lacerate to erose.
 - 11a. Stem 1–2 cm, with subbasal leaves; petals \pm spatulate, yellow with purple spots 6. *G. subpapillosus*
 - 11b. Stem to 20 cm, with cauline leaves; petals ligulate-oblong, yellowish tinged with brownish at apex 11. *G. yunnanensis*
 - 8b. Epichile glabrous adaxially except for cushion.
 - 12a. Stem 1–1.5 cm, with subbasal leaves 1.7–6 cm wide; sepals 6–12 \times 3.5–6 mm 9. *G. obliquus*
 - 12b. Stem (2–)5–20 cm, with cauline leaves 0.5–1.2(–1.7) cm wide; sepals 5–6 \times 2.2–3 mm.
 - 13a. Epichile 5–8 mm wide, with a papillate cushion adaxially; stem terete 8. *G. japonicus*
 - 13b. Epichile 3–5 mm wide, with a glabrous cushion adaxially; stem slightly compressed terete.
 - 14a. Lip hypochile narrower than epichile; cushion on epichile extending to subglobose hypochile 5. *G. intermedius*
 - 14b. Lip hypochile broader than epichile; cushion on epichile not extending to

- hypochile 7. *G. guangtungensis*
- 1b. Stem elongate and slender (ca. 2 mm in diam.) with small cauline leaves 1–2.5(–4.5) cm.
- 15a. Epichile glabrous adaxially.
- 16a. Hypochile broader than epichile; leaves ± with purple-red spots.
- 17a. Inflorescence 5- or 6-flowered; leaves with 1–3 short awns at apex 15. *G. pseudodistichus*
- 17b. Inflorescence 1- or 2-flowered; leaves without awns at apex 16. *G. fuscopunctatus*
- 16b. Hypochile narrower than epichile; leaves without purple-red spots.
- 18a. Epichile suborbicular, with 2 conic calli at base 17. *G. distichus*
- 18b. Epichile broadly triangular, without calli at base 18. *G. fargesii*
- 15b. Epichile ± hairy adaxially.
- 19a. Dorsal sepal 2.2–3 mm.
- 20a. Hypochile cylindric, 2.8–3 mm tall; epichile reniform 19. *G. nanus*
- 20b. Hypochile subglobose, ca. 2 mm tall; epichile triangular 20. *G. ciliaris*
- 19b. Dorsal sepal 3.5–7 mm.
- 21a. Hypochile subcupular or subglobose.
- 22a. Epichile papillate-hairy only on central cushion, surroundings glabrous 26. *G. formosanus*
- 22b. Epichile densely shortly hairy adaxially.
- 23a. Epichile not 2-lobed nor emarginate at apex 27. *G. saccatus*
- 23b. Epichile 2-lobed or emarginate at apex.
- 24a. Epichile rounded and emarginate at apex 28. *G. gongshanensis*
- 24b. Epichile subtruncate and deeply 2-lobed at apex 29. *G. nanchuanensis*
- 21b. Hypochile conic.
- 25a. Saccate hypochile ca. 2 × as tall as wide 23. *G. raraensis*
- 25b. Saccate hypochile ca. as tall as or slightly taller than wide.
- 26a. Saccate hypochile ca. 2 mm tall; epichile obtuse at apex 21. *G. linii*
- 26b. Saccate hypochile 3–4.5 mm tall; epichile emarginate or retuse at apex.
- 27a. Saccate hypochile distinctly curved forward, parallel to epichile; leaves without colored spots 24. *G. matsudae*
- 27b. Saccate hypochile not or only slightly curved forward, not parallel to epichile; leaves with purple-red or brownish purple spots.
- 28a. Epichile 4–5 mm wide; saccate hypochile slightly curved forward; flowers with purple-red spots 22. *G. sinensis*
- 28b. Epichile ca. 8 mm wide; saccate hypochile straight; flowers with brown spots 25. *G. hoi*

1. *Gastrochilus platycalcaratus* (Rolfe) Schlechter, Orchid-
een, 582. 1914.

滇南盆距兰 dian nan pen ju lan

Saccolabium platycalcaratum Rolfe, Bull. Misc. Inform.
Kew 1909: 368. 1909; *Gastrochilus diannanensis* Z. H. Tsi &
Y. Z. Ma.

Stems ca. 5 cm, ca. 4 mm in diam. Leaves 3–6, nearly
basal; blade green, tinged with purplish red, oblong, 3–5 × 0.7–
1.2 cm, obtuse and unequally bilobed. Inflorescence racemose,
to 9-flowered; peduncle pale yellowish green, usually 1.5–2 cm,
upper part enlarged; rachis ca. 5 mm; floral bracts ovate-trian-
gular, obtuse; pedicel and ovary yellowish green with purple
spots, ca. 8 mm. Flowers widely opening; sepals and petals
yellowish green, sometimes with purplish red spots; lip whitish,
± with purple-blackish spots on hypochile and greenish cushion
on epichile. Dorsal sepal oblong, concave, ca. 3 × 1.5 mm, apex
obtuse; lateral sepals slightly oblique, oblong, ca. 3 × 1 mm,
apex obtuse. Petals ovate-elliptic, ca. 3 × 2 mm, apex obtuse;
lip with an epichile and a hypochile; epichile triangular-ovate,
ca. 3 × 3 mm, adaxially densely hirsute and with a central
cushion, slightly reflexed, rounded at apex; hypochile subconic,
ca. 4 mm tall, ca. 1.8 mm in diam., slightly narrowed at middle,

strongly dorsiventrally compressed from middle to tip, subtrun-
cate and concave at tip. Column pale yellow, tinged with pur-
plish blue, short; anther cap yellow. Fl. Mar.

On tree trunks in dense forests; 700–800 m. S Yunnan [Myanmar,
Thailand].

2. *Gastrochilus bellinus* (H. G. Reichenbach) Kuntze, Revis.
Gen. Pl. 2: 661. 1891.

大花盆距兰 da hua pen ju lan

Saccolabium bellinum H. G. Reichenbach, Gard. Chron.,
n.s., 21: 174. 1884.

Stems 2–5 cm, stout, internodes ca. 1 cm. Leaf blade lorate
or oblong, 11.5–23.5 × 1.5–2.3 cm, apex unequally 2-lobed.
Inflorescences usually 2 or 3, subumbellate, 4–6-flowered; pe-
duncle ca. 2 cm, stout, with 2 short cupular sheaths at base;
pedicel and ovary pale yellow, tinged with purple. Flowers 2–3
cm in diam.; sepals and petals pale yellow with brownish purple
markings; lip white, with few sparse purple markings. Sepals
subsimilar, elliptic, 12–17 × 6–7 mm, apex obtuse-rounded. Pet-
als slightly smaller than sepals; lip with an epichile and a sac-
cate hypochile; epichile usually ± recurved, nearly reniform-tri-
angular, 7–10 × 15–20 mm, adaxially with dense white papil-
late hairs except on central cushion, margin erose or fimbriate;

cushion yellow, with a cavity at base; hypochile subconic or subglobose, ca. 9 mm tall, ca. 9 mm in diam., rounded-tipped. Fl. Apr.

On tree trunks in dense forests; 1600–1900 m. S Yunnan [Myanmar, Thailand, N Vietnam].

3. *Gastrochilus hainanensis* Z. H. Tsi, Bull. Bot. Res., Harbin 9(2): 21. 1989.

海南盆距兰 hai nan pen ju lan

Stems 1–2 cm, ca. 5 mm in diam. Leaves 4 or 5, nearly basal; blade oblong, 14–17 × 2–3 cm, fleshy, apex obtuse and unequally 2-lobed. Inflorescence subumbellate, short, several flowered; peduncle 2–3 cm, ca. 3 mm in diam.; floral bracts ovate-triangular, 3–4 mm. Flowers widely opening, thickly textured; sepals and petals yellow, with purplish red spots; lip white, with purple-red spots. Sepals subsimilar, obovate-elliptic, 7–10 × 3–4 mm, apex obtuse. Petals shorter and narrower than sepals; lip with an epichile and a saccate hypochile; epichile ovate-triangular, ca. 6 × 10 mm, thickly fleshy, glabrous, basal margin membranous and slightly toothed, with a large central cushion, and a reversely T-shaped groove at its base, apex rounded, recurved; hypochile conic, 7–8 mm tall, 5–5.5 mm in diam. Column purple, short, thick; rostellum pale yellow, 2-lobed; anther cap nearly subglobose, apex narrowed into a beak. Fl. Aug.

On tree trunks in forests. C Hainan [Thailand, Vietnam].

The record of *Saccolabium obliquum* in Fl. Hainan. (4: 257. 1977) was based on material of this species.

4. *Gastrochilus calceolaris* (Buchanan-Hamilton ex Smith) D. Don, Prodr. Fl. Nepal. 32. 1825.

盆距兰 pen ju lan

Aerides calceolaris Buchanan-Hamilton ex Smith in Rees, Cycl. 39: Aerides no. 11. 1818; *Saccolabium calceolare* (Buchanan-Hamilton ex Smith) Lindley.

Stems often arching, 5–30 cm, 5–8 mm in diam., with many leaves. Leaves distichous; blade often falcate, narrowly oblong, 20–23 × 1.5–2.5 cm, slightly fleshy, apex obtuse and unequally 2-lobed. Inflorescences several to many, from upper part of stem, opposite to leaves, subumbellate, 2–3 cm, several to many flowered; floral bracts small; pedicel and ovary slightly compressed, 1.3–2 cm. Flowers widely opening; sepals and petals yellow, with purplish brown markings; lip with white epichile and yellow hypochile, both with purple-red marks. Sepals similar, obovate-oblong, 7–8 × ca. 4 mm, base contracted, apex obtuse-rounded. Petals similar to sepals, slightly smaller, apex obtuse-rounded; lip with an epichile and a saccate hypochile; epichile spreading forward, suborbicular-triangular or lunate-triangular, 2–3 × 5–7 mm, adaxially with long white hairs except on yellow and purple-spotted central cushion and with a cavity at base of cushion, margin irregularly fimbriate or erose; hypochile yellowish green with purplish red margin, helmetlike, ca. 5 mm tall, ca. 5 mm in diam. Fl. Mar–Apr. $2n = 38, 40, 76$.

On tree trunks in forests; 1000–2700 m. Hainan, S Xizang, S and W Yunnan [Bhutan, NE India, Malaysia (Peninsular), Myanmar, Nepal,

Thailand, Vietnam].

5. *Gastrochilus intermedius* (Griffith ex Lindley) Kuntze, Revis. Gen. Pl. 2: 661. 1891.

细茎盆距兰 xi jing pen ju lan

Saccolabium intermedium Griffith ex Lindley, J. Proc. Linn. Soc., Bot. 3: 33. 1858.

Stems slightly flattened, ca. 15 cm, 3–4 mm in diam., slender, branched, internodes 5–8 mm. Leaves distichous; blade narrowly lanceolate, 5–6 × 0.7–1 cm, apex acuminate and 2- or 3-lobed, lobes setiform. Inflorescence subumbellate, short, often 2- or 3-flowered; peduncle ca. 1 cm; floral bracts ovate, ca. 1.5 mm, apex acute; pedicel and ovary ca. 1 cm. Flowers pale yellow, small. Sepals similar, elliptic, ca. 5.5 × 2.5 mm, 3-veined, apex obtuse. Petals oblanceolate, ca. 5 × 2 mm, apex rounded; lip with an epichile and a saccate hypochile; epichile suborbicular-triangular, ca. 2 × 5 mm, adaxially glabrous, with a central cushion extending to front wall of hypochile, margin erose or irregularly toothed, apex rounded; hypochile subglobose or helmetlike, ca. 4 mm tall, ca. 4 mm in diam., apex rounded and with 2 or 3 ridges on distal surface outside, with erect lateral margins. Anther cap slightly narrowed toward apex. Fl. Oct.

On tree trunks in forests; ca. 1500 m. SE Sichuan [NE India, Thailand, Vietnam].

6. *Gastrochilus subpapillosus* Z. H. Tsi, Guihaia 16: 142. 1996.

歪头盆距兰 wai tou pen ju lan

Stems ca. 2 cm, stout, with 5 or 6 leaves. Leaf blade spatulate or nearly oblong, 13–18.5 × ca. 2.1 cm, apex unequally 2-lobed. Inflorescence subumbellate, 3–3.5 cm, 5- or 6-flowered; peduncle ca. 3 cm, with 2 or 3 cupular sheaths; floral bracts broadly ovate, ca. 4 mm; pedicel and ovary ca. 1.4 cm. Sepals and petals yellow, with purple spots; lip white with yellow cushion on epichile. Sepals similar, oblong, 6–7 × ca. 3 mm, 3-veined, apex obtuse. Petals subspatulate, ca. 6 × 2.2 mm, 3-veined, apex obtuse; lip with an epichile and a saccate hypochile; epichile broadly triangular, ca. 2 × 6 mm, adaxially sparsely shortly papillate-hairy except on central cushion, margin erose; hypochile cucullate, ± laterally compressed, ca. 4 mm tall, ca. 6 mm in diam. Column ca. 5 mm, stout; rostellum deeply 2-lobed; anther cap narrowed toward apex. Fl. Oct.

• On tree trunks in dense forests; 1100–1400 m. S Yunnan.

7. *Gastrochilus guangtungensis* Z. H. Tsi, Guihaia 16: 139. 1996.

广东盆距兰 guang dong pen ju lan

Stems ± compressed terete, 6–17 cm, ca. 4 mm in diam., slender, internodes ca. 1 cm, sometimes branched. Leaves several, distichous; blade falcate-oblong or oblong, 4.5–9.5 × 0.6–1.1 cm, apex acuminate and 2-aristate. Inflorescence subumbellate, 1–1.5 cm, usually 2- or 3-flowered; peduncle ca. 1 cm, base with 2 cupular sheaths; floral bracts broadly ovate, ca. 2 mm, membranous; pedicel and ovary ca. 8 mm. Flowers yellow. Sepals similar, obovate, 5–6 × 2.2–2.7 mm, apex obtuse. Petals similar to sepals, slightly smaller; lip with an epichile and a

saccate hypochile; epichile subovate-triangular, ca. 2.5×3 mm, adaxially glabrous, with a large central cushion, margin slightly erose, apex acute; hypochile subglobose, ca. 3.5 mm tall, ca. 4.5 mm in diam. Fl. Oct.

● On tree trunks in forests; ca. 1500 m. N Guangdong, SW Yunnan.

8. *Gastrochilus japonicus* (Makino) Schlechter, Repert. Spec. Nov. Regni Veg. 12: 315. 1913.

黄松盆距兰 huang song pen ju lan

Saccolabium japonicum Makino, Ill. Fl. Japan 1(7): 3, t. 13. 1891; *Gastrochilus holttumianus* S. Y. Hu & Barretto; *G. somae* (Hayata) Hayata; *S. somae* Hayata; *S. taiwanianum* S. S. Ying (1977), not (Hayata) Tang & F. T. Wang (1951).

Stems ascending or pendulous, 2–10 cm, 3–5 mm in diam. Leaves distichous, closely spaced; blade \pm falcate, linear-oblong, or linear-lanceolate, $5-14 \times 1-2.5$ cm, fleshy, apex subacute and slightly hooked. Inflorescence subumbellate, 4–7(–10)-flowered; peduncle 1.5–2 cm; floral bracts ovate-triangular, 2–3 mm, apex acute; pedicel and ovary 10–12 mm. Flowers widely opening; sepals and petals yellowish green, with purplish red spots; lip whitish, tinged with yellow at apex of epichile and with yellow and purple-spotted cushion. Sepals similar, obovate-elliptic or subelliptic, $5-9 \times 3-5$ mm, apex obtuse. Petals similar to sepals, slightly narrower, apex obtuse; lip with an epichile and a saccate hypochile; epichile subtriangular, $2-4 \times 5-8$ mm, adaxially glabrous except on finely papillate central cushion, margin erose or nearly entire; hypochile cucullate, laterally compressed, 5–7 mm tall, 4–6 mm in diam. Column pale purple, short. Fl. Jun–Sep. $2n = 30, 38, 40$.

On tree trunks in forests; 200–1500 m. Hong Kong, Taiwan [Japan (Ryukyu Islands)].

9. *Gastrochilus obliquus* (Lindley) Kuntze, Revis. Gen. Pl. 2: 661. 1891.

无茎盆距兰 wu jing pen ju lan

Saccolabium obliquum Lindley, Gen. Sp. Orchid. Pl. 223. 1833.

Stems 1–2 cm, stout, with 3–5 leaves. Leaves nearly basal, distichous; blade oblong to oblong-lanceolate, $8-20 \times 1.7-6$ cm, slightly fleshy or leathery, apex obtuse and unequally 2-lobed. Inflorescences 1–4, from base of stem, subumbellate, often 5–8-flowered; peduncle straight, 1–2 cm, stout, with 2 cupular sheaths; floral bracts broadly ovate, ca. 3 mm; pedicel and ovary 1–1.5 cm. Flowers fragrant, with yellow sepals and petals and white lip, all with brownish purplish spots. Sepals similar, subelliptic, $6-12 \times 3.5-6$ mm, base contracted, apex obtuse. Petals spatulate, smaller than sepals, apex obtuse; lip with an epichile and a saccate hypochile; epichile subtriangular, ca. $5 \times 8-10$ mm, adaxially glabrous, with a central cushion, margin lacerate or erose, apex obtuse and with a small wart abaxially; hypochile with yellow tip, with purplish red spots, nearly subglobose-cucullate, laterally compressed, 5–6 mm tall, 6–7 mm in diam., outside with 3 ridges. Column short. Fl. Oct.

On tree trunks at forest margins; 500–1400 m. SW Sichuan, S Yunnan [Bhutan, India (Andaman Islands, Sikkim), Laos, Myanmar, Nepal, Thailand, Vietnam].

Chinese collections all belong to *Gastrochilus obliquus* var. *obliquus*; *G. obliquus* var. *suavis* (Seidenfaden) Z. H. Tsi, from NE India, differs from var. *obliquus* in having sepals and petals with dense bright red dots.

10. *Gastrochilus linearifolius* Z. H. Tsi & Garay, Guihaia 16: 138. 1996.

狭叶盆距兰 xia ye pen ju lan

Stems pendulous, 15–32 cm, ca. 5 mm in diam., slender, usually branched, internodes 1.5–2 cm. Leaves distichous, well spaced; blade linear, falcate, $8-15 \times 0.5-0.8$ cm, apex long acuminate and with 2 or 3 awns. Inflorescence subumbellate, 3- or 4-flowered; peduncle 1–1.5 cm, slender; floral bracts ovate, ca. 2 mm, apex acute; pedicel and ovary ca. 5 mm. Flowers small, widely opening. Dorsal sepal subovate, ca. 5×2.5 mm, apex obtuse; lateral sepals similar to dorsal sepal, slightly narrower. Petals oblong, smaller than sepals, apex obtuse; lip with an epichile and a saccate hypochile; epichile suborbicular, ca. 2.2×4 mm, adaxially finely papillate on central cushion, margin irregularly fimbriate, inside villous at apex, apex rounded; hypochile subcupular, ca. 3.5 mm tall, ca. 2.5 mm in diam., with a ridge, rounded at apex. Fl. Sep.

On tree trunks in forests; ca. 1600 m. SE Xizang [India (Sikkim)].

The record of *Gastrochilus intermedius* in Fl. Xizang. (5: 783. 1987) was based on material of this species.

11. *Gastrochilus yunnanensis* Schlechter, Repert. Spec. Nov. Regni Veg. Beih. 4: 76. 1919 [*“yunnanense”*].

云南盆距兰 yun nan pen ju lan

Gastrochilus monticola (Rolfe ex Downie) Seidenfaden & Smitinand; *Saccolabium monticola* Rolfe ex Downie; *S. yunnanense* (Schlechter) S. Y. Hu.

Stems elongate, to 20 cm, 4–7 mm in diam., internodes 1.5–2 cm. Leaves distichous, well spaced; blade ligulate or oblong, $6-16.5 \times 1.5-2.5$ cm, apex long acuminate and with 2 or 3 awns. Inflorescence subumbellate, 4–15-flowered; peduncle 1.5–5.5 cm, rigid, base with 1 or 2 sheaths; floral bracts ovate-triangular, 1–2 mm; pedicel and ovary ca. 1 cm. Flowers small; sepals and petals pale yellow, tinged brownish at apex; lip white, with yellowish white and sparsely purple-red spotted cushion on epichile and purple-red spots near entrance of hypochile. Sepals similar, ligulate-oblong, $5-7 \times 2.7-3.5$ mm, apex obtuse. Petals similar to sepals, narrower; lip with an epichile and a saccate hypochile; epichile broadly triangular, ca. 2.5×5 mm, adaxially with papillate yellow and slightly purplish red spotted central cushion, margin lacerate-erose; hypochile nearly subglobose, ca. 5 mm tall, ca. 5 mm in diam. Column short. Fl. Oct.

On tree trunks in dense forests; ca. 1500 m. S Yunnan [Bangladesh, N Thailand, N Vietnam].

12. *Gastrochilus acinacifolius* Z. H. Tsi, Bull. Bot. Res., Harbin 9(2): 25. 1989.

镰叶盆距兰 *lian ye pen ju lan*

Stems ± compressed terete, usually 8–11 cm, 4–5 mm in diam., internodes ca. 1 cm. Leaves distichous; blade usually falcate-oblong, 7–14 × 1–2 cm, apex acute and with 2 short awns. Inflorescences 1 or 2, almost opposite to leaf, subumbellate, several flowered; peduncle 1–1.5 cm, upper part enlarged, with 2 or 3 cupular sheaths at base; floral bracts deltoid, 1–2 mm, subfleshy; pedicel and ovary ca. 1 cm. Flowers widely opening; sepals and petals pale yellow with purplish red spots; lip white, with yellow and purple-red spotted cushion on epichile. Sepals similar, obovate-spatulate, 6–7 × 3–4 mm, apex obtuse. Petals similar to sepals, smaller, apex obtuse; epichile white, transversely oblong or oblate, adaxially sparsely papillate-hairy except on central cushion, margin irregularly denticulate; hypochile nearly subglobose, ca. 5 mm tall, ca. 5 mm in diam., outside with 3 ridges. Column ca. 3 mm; anther cap narrowed toward apex. Fl. Sep–Dec.

- On tree trunks in forests; ca. 1000 m. Hainan.

This species was treated as *Saccolabium intermedium* in Fl. Hainan. (4: 258. 1977).

13. *Gastrochilus rantabunensis* C. Chow ex T. P. Lin, Native Orchids Taiwan 3: 109. 1987.

合欢盆距兰 *he huan pen ju lan*

Stems erect, very short. Leaves nearly tufted, basal; blade obovate-oblong, 2–2.5 × 0.4–0.7 cm, apex acute and unequally 2-lobed. Inflorescence subumbellate, 3- or 4-flowered; peduncle ca. 2 cm, upper part enlarged, base with 1 or 2 sheaths; floral bracts ovate-triangular, 3–4 mm, apex acute; pedicel and ovary green with purplish red spots, ca. 9 mm. Sepals and petals green to yellowish with red spots; lip white with a green cushion on epichile. Dorsal sepal obovate, ca. 3.8 × 3 mm, apex rounded; lateral sepals obliquely ovate-triangular, 3–4 × ca. 2.5 mm, apex obtuse. Petals suborbicular, 3–3.5 × 2.5–3 mm, margin fimbriate, apex rounded; lip with an epichile and a saccate hypochile; epichile subreniform, 2–3 × 5–6.5 mm, adaxially densely white hairy except on central cushion, apex retuse; hypochile subconic, slightly laterally compressed, ca. 3.5 cm tall, ca. 4 mm in diam., apex rounded and slightly concave. Column short. Fl. Jan–Feb or Jul.

- On tree trunks in coniferous forests; ca. 2000 m. S Hunan, C Taiwan.

S. S. Ying (Quart. J. Chin. Forest. 21: 115. 1988) recorded material of this species from Taiwan as *Gastrochilus bellinus*.

14. *Gastrochilus xuanenensis* Z. H. Tsi, Acta Bot. Yunnan. 4: 269. 1982.

宣恩盆距兰 *xuan en pen ju lan*

Stems ca. 5 cm, ca. 2 mm in diam., with 4–6 leaves. Leaves basal, closely spaced, distichous; blade oblong or falcate-oblong, 2–2.5 × 0.5–0.8 cm, apex acute and with 2 or 3 awns. Inflorescence subumbellate, few flowered; peduncle 5–9 mm, base with 1 or 2 cupular sheaths; floral bracts ovate-triangular, 1–2 mm; pedicel and ovary ca. 6 mm. Flowers small, widely opening. Dorsal sepal oblanceolate-elliptic, ca. 4 × 1.5 mm, apex acute; lateral sepals oblong, ± oblique, ca. 3 × 1.5

mm, apex acute. Petals similar to lateral sepals, ca. 3 × 1.5 mm; lip with an epichile and a saccate hypochile; epichile reniform-triangular, ca. 2 × 3.5 mm, adaxially glabrous, with a central cushion extending to front wall of hypochile, entire; hypochile helmetlike, 2.5–3 mm tall, 2–2.5 mm in diam., outside with 3 ridges, apex rounded, ± auriculate on both sides of its entrance. Column short. Fl. May.

- On tree trunks at forest margins; 500–700 m. NE Guizhou, SW Hubei.

15. *Gastrochilus pseudodistichus* (King & Pantling) Schlechter, Repert. Spec. Nov. Regni Veg. 12: 315. 1913.

小唇盆距兰 *xiao chun pen ju lan*

Saccolabium pseudodistichum King & Pantling, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 64: 341. 1895; *Gastrochilus hoyopse* (Rolfe ex Downie) Seidenfaden & Smitinand; *S. hoyopse* Rolfe ex Downie.

Stems pendulous or creeping, to 28 cm, ca. 2 mm in diam., slender, sometimes branched, internodes 6–7 mm. Leaves distichous, green, with purplish red spots; blade ovate-lanceolate or oblong, 1.5–2.7 × 0.5–0.6 cm, apex acute and with 2 or 3 awns. Inflorescence subumbellate, 5- or 6-flowered; peduncle green, with purplish red spots, 1–2 cm, upper part enlarged, often with 2 sheaths at base; floral bracts ovate-lanceolate, 1–2 mm; pedicel and ovary ca. 1 cm. Flowers yellow, with purplish red marks or spots. Sepals similar, oblanceolate-oblong, ca. 3.5 × 1.8 mm, apex obtuse. Petals subobovate, slightly smaller than sepals, apex obtuse; lip with an epichile and a saccate hypochile; epichile nearly suborbicular, concave, narrower than hypochile, ca. 2 mm wide, thickly fleshy, adaxially glabrous, entire, obtuse at apex; hypochile cupular, ca. 3 mm tall, ca. 4 mm in diam. Column ca. 2 mm; anther cap narrowed, beaked at apex. Fl. Jun. *2n* = 38.

On tree trunks in forests, on branches in thickets; 1000–2500 m. SE to W Yunnan [Bhutan, NE India, N Thailand, N Vietnam].

16. *Gastrochilus fuscopunctatus* (Hayata) Hayata, Icon. Pl. Formosan. 6(Suppl.): 78. 1917.

红斑盆距兰 *hong ban pen ju lan*

Saccolabium fuscopunctatum Hayata, Icon. Pl. Formosan. 2: 143. 1912.

Stems often pendulous, 3–7 cm, ca. 2 mm in diam. Leaves distichous, green, with dense purplish red spots; blade oblong or falcate-oblong, 1.5–2.2 × 0.3–0.5 cm, apex acute and slightly 3-lobed. Inflorescence subumbellate, often 1- or 2-flowered; peduncle 8–20 mm, base with 1 or 2 sheaths; floral bracts ovate-triangular, 1–2 mm, apex acute; pedicel and ovary ca. 7 mm. Sepals and petals yellowish green with brown spots; lip whitish, with a yellow and brown-spotted cushion on epichile. Dorsal sepal elliptic, ca. 4 × 2.3 mm, apex obtuse; lateral sepals obliquely ovate-oblong, 3–4 × ca. 2 mm, apex subacute. Petals subelliptic, ca. 3.2 × 2.2 mm, apex rounded; lip with an epichile and a saccate hypochile; epichile elliptic-orbicular, concave, ca. 2.5 × 2 mm, thickly fleshy, abaxially carinate, adaxially glabrous, with a central cushion, entire, obtuse at apex; hypochile cupular, ± laterally compressed, ca. 5 mm tall, ca. 3.2 mm in

diam. Column very short, both sides with purplish red spots; anther cap narrowed into a beak. Fl. Jan–Jul.

- On tree trunks in dense forests; 1000–2500 m. Taiwan.

17. *Gastrochilus distichus* (Lindley) Kuntze, Revis. Gen. Pl. 2: 661. 1891.

列叶盆距兰 lie ye pen ju lan

Saccolabium distichum Lindley, J. Proc. Linn. Soc., Bot. 3: 36. 1858.

Stems pendulous, usually 1.5–20 cm, ca. 2 mm in diam., slender, often branched. Leaves many, distichous; blade lanceolate or falcate-lanceolate, 1.5–3 × 0.4–0.6 cm, apex acute and with 2 or 3 awns. Inflorescences several, opposite to leaves, subumbellate, 2–4-flowered; peduncle 1–3 cm, slender, upper part enlarged, lower part with 2 cupular sheaths; floral bracts ovate-lanceolate, 1–2 mm; pedicel and ovary ca. 8 mm. Flowers pale green, with reddish brown spots. Sepals similar, usually concave, oblong-elliptic, 4.5–5 × 2.5–3 mm, apex obtuse. Petals subobovate, slightly smaller than sepals, apex obtuse; lip with an epichile and a saccate hypochile; epichile nearly suborbicular, ca. 3 × 5 mm, adaxially glabrous, with a central cushion, near base with 2 conic calli, entire, obtuse at apex; hypochile subcupular, ca. 4 mm tall, 2–3 mm in diam., apex rounded. Column ca. 2.5 mm; anther cap narrowed into a beak toward apex. Fl. Jan–May. $2n = 38$.

On tree trunks in forests; 1100–2800 m. SE Xizang, W Yunnan [Bhutan, NE India, Nepal].

18. *Gastrochilus fargesii* (Kraenzlin) Schlechter, Repert. Spec. Nov. Regni Veg. Beih. 4: 288. 1919.

城口盆距兰 cheng kou pen ju lan

Saccolabium fargesii Kraenzlin, J. Bot. (Morot) 17: 423. 1903 [“*fargesii*”].

Stems repent, 3–13 cm, ca. 2 mm in diam., slender, with many leaves. Leaves distichous; blade narrowly oblong or falcate-oblong, 2–4.5 × 0.4–0.6 cm, apex acute and with 2 or 3 short awns. Inflorescences several, subumbellate, 2- or 3-flowered; peduncle 5–10 mm, upper part enlarged, lower part with 2 sheaths; floral bracts ovate-lanceolate, 1–2 mm; pedicel and ovary ca. 2 mm. Flowers small, yellowish green, with purplish red spots. Sepals similar, oblong-elliptic, ca. 4 × 2 mm, apex obtuse. Petals narrowly oblong, ca. 3 × 1.5 mm, base contracted, apex obtuse-rounded; lip with an epichile and a saccate hypochile; epichile broadly triangular, 2–3 × 4–4.5 mm, adaxially glabrous, with a cushion extending to front wall of hypochile, margin ± erose, apex obtuse; hypochile subconic, ca. 2.2 mm tall, ca. 3 mm in diam., apex obtuse. Column ca. 1.5 mm; anther cap narrowed and beaked at apex. Fl. May–Jun.

• On tree trunks in forests; ca. 2300 m. N Chongqing, W Sichuan, SE Yunnan.

19. *Gastrochilus nanus* Z. H. Tsi, J. Arnold Arbor. 71: 121. 1990.

江口盆距兰 jiang kou pen ju lan

Stems creeping, 3–4 cm, ca. 2 mm in diam. Leaves many, closely spaced, distichous; blade deep green, with purplish red spots, elliptic-oblong, 8–10 × 5–6 mm, apex acute. Inflorescence from near apex of stem, subumbellate, 5- or 6-flowered; peduncle suberect, 6–11 mm, upper part enlarged, base with 1 or 2 tubular sheaths; floral bracts green, with purplish red spots, ovate-triangular, 1–1.3 mm; pedicel and ovary ca. 5 mm. Flowers yellowish green. Dorsal sepal elliptic, concave, ca. 2.2 × 1.2 mm, apex obtuse; lateral sepals ± oblique, oblong, ca. as large as dorsal sepal. Petals oblong, smaller than sepals; lip with an epichile and a saccate hypochile; epichile spreading, reniform, ca. 2 × 2.5 mm, margin and adaxial surface densely white hairy, with an olive central cushion, apex subtruncate and emarginate; hypochile straight, nearly parallel to ovary, subcylindric, 2.8–3 mm tall, ca. 1 mm in diam., slightly narrowed at middle, apex rounded. Column ca. 0.5 mm; anther cap narrowed into a beak at apex. Fl. Aug.

- On tree trunks at forest margins; ca. 1000 m. NE Guizhou.

20. *Gastrochilus ciliaris* F. Maekawa, J. Jap. Bot. 12: 92. 1936.

缘毛盆距兰 yuan mao pen ju lan

Stems creeping, to 10 cm, with many leaves. Leaf blade abaxially with brown spots, ovate-elliptic to oblanceolate, 0.8–2.5 × 0.4–0.5 cm, fleshy, leathery, apex acute or apiculate. Inflorescence subumbellate, ca. 1.2 cm, 3- or 4-flowered; floral bracts small, ca. 1 mm; pedicel and ovary 3–4 mm. Flowers yellowish green, with brown spots abaxially. Sepals similar, elliptic, 2.7–3 × 1–1.3 mm, concave, apex obtuse or acute. Petals rhombic-elliptic, 2.4–2.7 × ca. 1.3 mm; lip with an epichile and a saccate hypochile; epichile triangular, ca. 3 mm wide, ciliate, adaxially very sparsely pubescent; hypochile nearly subglobose, ca. 2 mm tall. Column ca. 1 mm, stout. Fl. unknown.

On trees in forests; ca. 1800 m. C Taiwan [Japan].

21. *Gastrochilus linii* Ormerod, Taiwania 47: 242. 2002.

金松盆距兰 jin song pen ju lan

Gastrochilus flavus T. P. Lin, Native Orchids Taiwan 3: 95. 1987, not (J. D. Hooker) Kuntze (1891); *G. raraensis* Fukuyama var. *flavus* S. S. Ying.

Stems often less than 8 cm. Leaves distichous, closely spaced; blade grayish green abaxially, green adaxially, elliptic or oblong, ca. 3 × 0.8 cm, apex acute. Inflorescence subumbellate, 3–7-flowered; peduncle ca. 1 cm; pedicel and ovary ca. 1.2 cm. Flowers yellow, with brown spots. Sepals and petals similar, elliptic or narrowly elliptic, 5–5.5 × 2.5–3 mm, apex rounded; lip with an epichile and a saccate hypochile; epichile reflexed, white, deltoid, ca. 4 × 5.5 mm, margin and adaxial surface with white hairs, with a yellow central cushion, apex obtuse; hypochile conic, slightly laterally compressed, ca. 2 mm tall, laterally shallowly grooved, slightly attenuate and obtuse at tip, ± curved. Column short. Fl. May.

- On trunks of *Pinus* trees; ca. 2000 m. C Taiwan.

22. *Gastrochilus sinensis* Z. H. Tsi, Bull. Bot. Res., Harbin

9(2): 23. 1989.

中华盆距兰 *zhong hua pen ju lan*

Stems repent, 10–20 cm or more, ca. 2 mm in diam., slender. Leaves distichous, well spaced, very shortly petiolate; blade green, with purple-red spots, elliptic or oblong, 1–2 × 0.5–0.7 cm, apex acute and with 3 short awns. Inflorescences 2 or 3, subumbellate, 2- or 3-flowered; peduncle ca. 1 cm, slender, upper part enlarged; floral bracts ovate-triangular, ca. 1 mm; pedicel and ovary yellowish green, with purplish red spots, ca. 7 mm. Flowers small, widely opening, yellowish green, with purplish red spots. Dorsal sepal subelliptic, concave, 4–5 × ca. 2.5 mm, apex obtuse; lateral sepals slightly oblique, oblong, ca. as large as dorsal sepal, abaxially ± carinate. Petals subobovate, slightly smaller than sepals, apex rounded; lip with an epichile and a saccate hypochile; epichile reniform, ca. 2.5 × 4–5 mm, margin and adaxial surface densely shortly hairy, with a central cushion, apex broadly emarginate; hypochile subconic, ± laterally compressed, 3.5–4 mm tall, ca. 3 mm in diam., apex obtuse-rounded and slightly bent forward, densely hairy near entrance. Column ca. 2 mm; anther cap narrowed toward apex. Fl. Oct.

• On tree trunks in forests, on rocks along valleys; 800–3200 m. N Fujian, NE Guizhou, NW Yunnan, NW Zhejiang.

23. *Gastrochilus raraensis* Fukuyama, Bot. Mag. (Tokyo) 48: 441. 1934.

红松盆距兰 *hong song pen ju lan*

Saccolabium raraense (Fukuyama) S. Y. Hu.

Stems creeping, usually 2–15 cm, slender. Leaves many, distichous; blade yellowish green, often with red speckles on both surfaces, oblong to lanceolate, 1.5–2.6 × 0.4–0.7 cm, apex acute and often with 3 short awns. Inflorescence subumbellate, 3–7-flowered; peduncle short, 8–10 mm; floral bracts ca. 1 mm; pedicel and ovary 5–6 mm. Flowers small, not widely opening, yellowish to yellowish green, with purplish blue spots near base of sepals and petals. Sepals similar, subelliptic, 3.5–4.5 × 1.7–2.5 mm, apex obtuse. Petals subobovate, shorter than sepals, apex rounded; lip with an epichile and a saccate hypochile; epichile nearly suborbicular or reniform, 2–3 × 3–4 mm, adaxially densely white barbate, with a yellow glabrous central cushion, apex rounded or slightly emarginate; hypochile subconic, ± laterally compressed, 3.5–4.5 mm tall, ca. 2 mm in diam., with narrowed tip and bent forward. Column very short; anther cap narrowed at apex. Fl. Jan–Feb.

• On tree trunks in coniferous forests; 1500–2200 m. Taiwan.

The record of the Japanese species *Gastrochilus toramanus* (Makino) Schlechter in the first edition of Fl. Taiwan (5: 1001. 1978) was based on the synonymization of *G. raraensis* within that species.

24. *Gastrochilus matsudae* Hayata, Icon. Pl. Formosan. 9: 116. 1920 [*"matsudai"*].

宽唇盆距兰 *kuan chun pen ju lan*

Saccolabium matsudae (Hayata) Makino & Nemoto.

Stems creeping, elongate, slender. Leaves distichous;

blade narrowly lanceolate or linear-lanceolate, ca. 3 × 0.4–0.6 cm, fleshy, base cuneate, apex acute. Inflorescence subumbellate, 3- or 4-flowered; peduncle ca. 2 cm; pedicel and ovary 4–5 mm. Flowers yellowish green, with a few brown spots. Sepals similar, obovate-oblong or subelliptic, concave, 4.5–6 × 3–3.7 mm, base contracted, apex obtuse. Petals similar to sepals, slightly smaller; lip with an epichile and a saccate hypochile; epichile reflexed, suborbicular or flabellate, ca. 5 × 6–7 mm, adaxially densely white pubescent, with a yellow central cushion, apex rounded and retuse; hypochile parallel to epichile, distinctly bent forward, subconic, ± laterally compressed, 3–4.8 mm tall, 2–3.8 mm in diam. Column ca. 1 mm. Fl. Jan–Feb.

• On tree trunks in forests; ca. 1000 m. S Taiwan.

25. *Gastrochilus hoi* T. P. Lin, Native Orchids Taiwan 3: 103. 1987 [*"hoii"*].

何氏盆距兰 *he shi pen ju lan*

Stems prostrate, 4–10 cm, slender. Leaves distichous; blade oblong to lanceolate, 2–2.1 × 0.7–0.9 cm, base narrowed, apex acute. Inflorescence subumbellate, 2–4-flowered; peduncle short; floral bracts ovate, ca. 2 mm; pedicel and ovary ca. 1 cm. Flowers yellowish green, sometimes with brown spots. Dorsal sepal elliptic, 4–5 × ca. 3 mm, apex obtuse; lateral sepals obliquely ovate, 4–5 × 2.5–3 mm, apex acute. Petals elliptic, ca. 4 × 3 mm; lip with an epichile and a saccate hypochile; epichile recurved, reniform, 3–5 × 6–8 mm, adaxially with dense white hairs, with a green central cushion, apex emarginate; hypochile straight, conic, slightly flattened, ca. 4.5 mm tall, ca. 4 mm in diam., obtuse at tip. Column very short. Fl. Jan–Feb.

• On tree trunks in coniferous forests; 2000–2500 m. Taiwan.

26. *Gastrochilus formosanus* (Hayata) Hayata, Icon. Pl. Formosan. 6(Suppl.): 78. 1917.

台湾盆距兰 *tai wan pen ju lan*

Saccolabium formosanum Hayata, J. Coll. Sci. Imp. Univ. Tokyo 30(1): 336. 1911; *Gastrochilus formosanus* var. *shaoyaoi* (S. S. Ying) S. S. Ying; *G. nebulosus* Fukuyama; *G. quercetorum* Fukuyama; *G. rupestris* Fukuyama; *S. nebulosum* (Fukuyama) S. Y. Hu; *S. quercetorum* (Fukuyama) S. Y. Hu; *S. rupestre* (Fukuyama) S. Y. Hu; *S. shaoyaoi* S. S. Ying.

Stems often prostrate, to 37 cm, ca. 2 mm in diam., slender, often branched, internodes ca. 5 mm. Leaves many, distichous; blade green, sometimes with purple-red spots on both surfaces, oblong or elliptic, 1.5–3 × 0.4–0.8 cm, slightly fleshy, apex acute or bifid, with an abaxial awn. Inflorescence subumbellate, 2- or 3-flowered; peduncle often 1–1.5 cm; floral bracts triangular, 1–2 mm, membranous; pedicel and ovary pale yellow, with purplish red spots, 1–1.5 mm. Flowers yellowish, with purplish speckles or irregular blotches. Dorsal sepal concave, elliptic-oblong, 4.8–7 × 2.5–4 mm, apex obtuse; lateral sepals obliquely oblong, similar in size to dorsal sepal, apex obtuse. Petals oblanceolate, 4–5 × 2.8–3 mm, apex rounded; lip with an epichile and a saccate hypochile; epichile white, broadly triangular or nearly suborbicular, 2.2–3.2 × 7–9 mm,

adaxially with a yellow densely papillate-hairy cushion, margin entire or slightly dentate-undulate, apex subtruncate or rounded; hypochile subcupular, ca. 5 mm tall, ca. 4 mm in diam. Column ca. 1.5 mm; anther cap narrowed toward apex. Fl. throughout year.

• On tree trunks in forests; 500–2500 m. N Fujian, W Hubei, S Shaanxi, Taiwan.

Material of this species was treated by T. S. Liu and H. J. Su (Fl. Taiwan 5: 1001. 1978) as *Gastrochilus matsuran* (Makino) Schlechter, a species restricted to Japan and Korea.

27. *Gastrochilus saccatus* Z. H. Tsi, Guihaia 16: 149. 1996.

四肋盆距兰 si lei pen ju lan

Stems creeping, 3–9 cm, ca. 2 mm in diam., sometimes branched, internodes 4–5 mm. Leaves many, distichous; blade elliptic, 1–1.8 × 0.4–0.7 cm, apex acute and slightly 3-lobed. Inflorescence subumbellate, 2- or 3-flowered; peduncle ca. 7 mm, slender, upper part slightly enlarged, with 2 sheaths at base; floral bracts ovate-triangular, small, ca. 1 mm; pedicel and ovary ca. 6 mm. Dorsal sepal elliptic, ca. 4.8 × 2.8 mm, apex obtuse; lateral sepals slightly oblique, oblong, ca. 5 × 2.6 mm, apex obtuse. Petals oblanceolate, ca. 4 × 2.6 mm, apex rounded; lip with an epichile and a saccate hypochile; epichile recurved, reniform or reniform-triangular, ca. 2.7 × 9 mm, margin and adaxial surface densely shortly hairy, with a central cushion extending to hypochile, apex obtuse; hypochile straight, subglobose or cupular, ca. 4 mm tall, ca. 3 mm in diam., outside 4-ridged, apex rounded. Column short; anther cap ca. 2 mm, narrowed toward apex. Fl. unknown.

• Yunnan.

28. *Gastrochilus gongshanensis* Z. H. Tsi, Guihaia 16: 149. 1996.

贡山盆距兰 gong shan pen ju lan

Stems creeping, ca. 14 cm, ca. 2 mm in diam., internodes 4–5 mm. Leaves many, distichous; blade oblong, 1.5–1.6 × ca. 0.6 cm, apex acute and slightly 3-lobed. Inflorescence subumbellate, often 2-flowered; peduncle ca. 1 cm, upper part enlarged, lower part with 2 cupular sheaths; floral bracts ovate-triangular, ca. 1.5 mm. Dorsal sepal subelliptic, concave, ca. 5 × 3 mm, 1-veined, apex obtuse; lateral sepals oblong, ca. 5 × 2.3 mm, 1-veined, apex obtuse. Petals subobovate, ca. 4.5 × 2.5 mm, 1-veined, apex rounded; lip with an epichile and a saccate hypochile; epichile reniform, ca. 2.5 × 4 mm, margin and adaxial surface densely shortly barbate, with a central cushion, apex rounded and broadly emarginate; hypochile nearly subglobose, ca. 3 mm tall, ca. 2.5 mm in diam. Column ca. 1 mm; anther cap narrowed and beaked at apex. Fl. unknown.

• On rocks in forests; ca. 3200 m. NW Yunnan.

29. *Gastrochilus nanchuanensis* Z. H. Tsi, Guihaia 16: 149. 1996.

南川盆距兰 nan chuan pen ju lan

Stems creeping, 4–7 cm, ca. 2 mm in diam., internodes 4–

5 mm. Leaves many, distichous; blade green, with purple-red spots, ovate or elliptic, 1.3–1.6 × 0.6–0.9 cm, apex acute and 3-lobed. Inflorescence subumbellate, 2- or 3-flowered; peduncle 5–7 mm, lower part with 2 cupular sheaths; floral bracts ovate, ca. 1 mm, apex acute; pedicel and ovary ca. 9 mm. Flowers yellow, with purplish red spots, not widely opening. Sepals similar, elliptic, concave, ca. 4.2 × 3.5 mm, apex obtuse. Petals similar to sepals, ca. 4.1 × 2.9 mm, apex obtuse; lip with an epichile and a saccate hypochile; epichile nearly suborbicular or reniform, ca. 3 × 6 mm, adaxially densely shortly hairy, with a central cushion extending to hypochile, apex subtruncate and deeply 2-lobed; hypochile subconic, dorsiventrally compressed, ca. 3.3 mm tall, ca. 4.2 mm in diam., apex rounded. Column very short; anther cap narrowed and beaked at apex. Fl. Dec.

• On tree trunks in dense forests; ca. 1200 m. Chongqing (Nanchuan).

