
山姜属  shan jiang shu

Albina Giseke, nom. rej.; Buekia Giseke, nom. rej.; Zerumbet J. C. Wendland, nom. rej.

Rhizomes creeping, thick. Pseudostems many, well developed, rarely absent. Leaves many, rarely 1–4; leaf blade oblong or lanceolate. Inflorescence a terminal panicle, raceme, or spike, dense or lax, covered by 1–3 spatulate involucral bracts when immature; bracts (when present) open to base, rarely hooded, each subtending 1 flower or a cincinnus of 2 to many flowers; bracteoles open to base or tubular, rarely hooded, sometimes absent. Calyx usually tubular, rarely split on 1 side. Corolla central lobe ± hooded, usually wider than lateral lobes. Lateral staminodes small or absent, subulate or toothlike, adnate to base of labellum. Labellum often showy, usually larger than corolla lobes, sometimes inconspicuous, margin variously lobed or entire. Filament present or absent; connective crested or not. Ovary usually 3-loculed and placentation axile. Stigma usually well expanded, sometimes clavate, rarely geniculate. Styloides often massive. Capsule usually globose, dry or fleshy, indehiscent or irregularly dehiscent. Seeds numerous, often angled, arillate.

About 230 species: tropical and subtropical Asia, Australia, and Pacific Islands; 51 species (35 endemic) in China.

1a. Bracteoles funnelform or deeply concave, enclosing flower buds.
   2a. Bracteoles funnelform, persistent; corolla lobes 0.5–1.2 cm; labellum 0.5–1.5 cm; bracts small.
      3a. Labellum ca. 1.5 cm; capsule black, 1.2–1.5 cm in diam. ................................................................. 1. A. nigra
      3b. Labellum ca. 0.5 cm; capsule not black, 0.8–1 cm in diam. ............................................................. 2. A. conchigera
   2b. Bracteoles shell-shaped, deciduous after anthesis; corolla lobes 1.8–4.5 cm; labellum more than 2 cm, bracts absent.
      4a. Inflorescence a panicle.
        5a. Capsule ribbed.
           6a. Inflorescences erect, rachis subglabrous; labellum ca. 3 cm ....................................................... 3. A. formosana
           6b. Inflorescences drooping, rachis densely tomentose; labellum 4–6 cm ......................................... 4. A. zerumbet
        5b. Capsule not ribbed.
           7a. Petiole absent; leaf blade glabrous, 2–3.5 cm wide; labellum obovate, 2.7–3.5 × 1.5–2 cm .................. 5. A. calcicola
           7b. Petiole 2.5–9 cm; leaf blade pubescent abaxially, 6–20 cm wide; labellum 3.5–4 × 3–3.8 cm.
           8a. Ligule 2-lobed; bracteoles deep red, 2–3.3 cm; corolla lobes white tinged with red, ca. 2.2 cm ........ 6. A. guinanensis
           8b. Ligule entire; bracteoles brown, 3–4 cm; corolla lobes wholly white, 3–3.6 cm .............................. 7. A. menghaiensis
      4b. Inflorescence a raceme or spike.
         9a. Inflorescence a spike.
            10a. Labellum 1.5–2 cm.
                11a. Bracteoles ca. 1.5 cm, early deciduous; corolla lobes ca. 1.5 cm; labellum ovate-rhomboidal, ca. 1.6 × 1.6 cm ................................................................. 8. A. shimadae
                11b. Bracteoles ca. 3.2 cm, persistent; corolla lobes 1.8–2.2 cm; labellum suborbicular, ca. 2 × 2 cm ..... 9. A. sessiliflora
            10b. Labellum 3–4.5 cm.
               12a. Corolla lobes ca. 2 cm; lateral staminodes absent; labellum white, with purple stripes toward center ................................................................................................................................. 10. A. dolichocephala
               12b. Corolla lobes 3–5 cm; lateral staminodes very small or 4–5 mm; labellum yellow at margin, yellow-red toward center.
                  13a. Spikes ca. 15 cm; bracteoles 2- or 3-toothed at apex; labellum ovate-rhomboidal, not 2-lobed at apex ................................................................................................................................................ 11. A. kusshakuensis
                  13b. Spikes 20–25 cm; bracteoles subrounded at apex; labellum broadly ovate-rhomboidal, shortly 2-lobed at apex ................................................................. 12. A. tonrokuensis
            9b. Inflorescence a raceme.
               14a. Pedicels less than 2 mm.
                  15a. Leaf blade abaxially glabrous ........................................................................................................ 13. A. mesanthera
                  15b. Leaf blade abaxially hairy.
                     16a. Bracteoles ca. 1.2 cm; corolla lobes ciliate at margin; labellum ovate, ca. 2.2 cm ....................... 14. A. kawakamii
                     16b. Bracteoles 4–5 cm; corolla lobes glabrous at margin; labellum obovate, 4.5–7 cm ............... 15. A. platychilus
               14b. Pedicels 2–15 mm.
               17a. Leaf blade adaxially glabrous.
                  18a. Labellum 3–3.8 cm.
                     19a. Ligule 2-cleft, ca. 10 mm; leaf blade cordate at base; labellum red, white at margin .......... 16. A. ovoideicarpa
                     19b. Ligule entire, 4–6 mm; leaf blade cuneate at base; labellum red with yellow center, margin not white ........................................................................................................ 17. A. blepharocalyx
                  18b. Labellum (3.5–)3.8–5.5 cm.
20a. Pedicels 4–8 mm; lateral staminodes 4–8 mm ................................................................. 18. A. napoensis
20b. Pedicels 2–4 mm; lateral staminodes 2–3 mm.
21a. Ligule 3–10 mm; bracteoles 2–3.5 cm; labellum 3.5–4.5 cm ............................................. 19. A. hainanensis
21b. Ligule 10–15 mm; bracteoles ca. 5.5 cm; labellum ca. 5 cm .......................................... 20. A. uraiensis

17b. Leaf blade adaxially hairy.
22a. Petiole 2.5–8 cm.
22b. Petiole 2.5–4 cm; ligule 1–2 cm; labellum ca. 4 cm, yellow at center .............................. 21. A. emaculata
22c. Petiole 4–8 cm; ligule ca. 0.8 cm; labellum ca. 2.5 cm, red at center ............................ 22. A. kwangsiensis
22d. Petiole less than 2.5 cm.
23a. Lateral staminodes subulate, 6–8 mm.
23b. Calyx 4–6-toothed at apex; labellum broadly ovate, 3.9–4.5 cm, yellow with red center 23. A. rubromaculata
23c. Calyx 3-toothed at apex; labellum ovate, 3–3.5 cm, red with yellow center .................. 17. A. blepharocalyx
24a. Lateral staminodes absent or 0.3 mm.
24b. Lateral staminodes absent; pedicel 7 mm; corolla lobes densely sericeous ............... 24. A. malaccensis
25a. Ligule 10–15 mm; bracteoles ca. 5.5 cm; labellum ca. 5 cm ........................................ 20. A. uraiensis

1b. Bracteoles flat or slightly concave, sometimes very small (ca. 1 mm) or absent.
27a. Bracteoles absent or very small (ca. 1 mm); bracts absent or minute.
28a. Ligule 1–3 cm or more, membranous.
29a. Leaf blade linear, 1.2–2.5 cm wide ................................................................. 25. A. officinarum
29b. Leaf blade lanceolate, 3–6 cm wide.
30a. Inflorescence a panicle; labellum nearly fan-shaped, ca. 1 cm ............................... 26. A. flabellata
30b. Inflorescence a raceme; labellum obovate, ca. 2 cm ............................................. 27. A. oxyphylla
28b. Ligule less than 0.5 cm, not membranous.
31a. Leaf blade hairy on both surfaces.
32a. Leaf blade 25–40 × 4–7 cm; racemes 15–30 cm; labellum ovate, ca. 6 mm wide ................. 28. A. japonica
32b. Leaf blade 10–18 × 2–3 cm; racemes 4–5 cm; labellum oblong-obovate or oblong, 0.8–1.6 cm ... 29. A. nanchuanensis
31b. Leaf blade glabrous.
33a. Inflorescence a spike.
33b. Inflorescence a raceme.
34a. Leaf sheath pubescent; spikes 1.5–6 cm; flowers usually in pairs proximally on spike rachis, solitary distally; labellum entire at margin ................................................................. 30. A. bambusifolia
34b. Leaf sheath glabrous; spikes 10–20 cm; flowers in clusters of 3 on spike rachis; labellum crisped at margin .................................................................................. 31. A. jiangangfeng
33b. Inflorescence a raceme.
35a. Labellum ca. 2 cm.
35b. Labellum (0.5–)0.7–1.6 cm.
36a. Leaf blade linear-lanceolate, ca. 2.3 cm wide; lateral staminodes absent; labellum obovate ........................ 32. A. pricei
36b. Leaf blade linear, 0.3–1.5 cm wide; lateral staminodes linear, 8–9 mm; labellum ovate ........ 33. A. graminifolia
37a. Ligule cuneate, ca. 4 mm; petiole absent; racemes 4–8(–12) cm; lateral staminodes triangular, ca. 1 mm ................................................................. 34. A. brevis
37b. Ligule 2-lobed, 2–3 mm; petiole 0.5–3 cm; racemes 9–22 cm; lateral staminodes linear, 3–4 mm ................................................................. 35. A. sichuanensis

27b. Bracteoles flat or concave, more than 1 mm; bracts present.
38a. Inflorescence a panicle.
39a. Panicles narrow, branches 3–6 mm; labellum 6–7 mm ............................................. 36. A. oblongigolia
39b. Panicles spreading, branches more than 8 mm; labellum more than 10 mm.
40a. Pedicel and leaf blade pubescent adaxially (sometimes glabrous in A. polyantha).
40b. Bracts and bracteoles persistent in fruit; capsule oblong or ellipsoid; petiole to 0.6 cm .......... 37. A. galanga
41a. Petiole and leaf blade pubescent adaxially (sometimes glabrous in A. polyantha).
41b. Petiole and leaf blade glabrous adaxially.
41a. Petiole and leaf blade pubescent adaxially (sometimes glabrous in A. polyantha).
41b. Petiole and leaf blade glabrous adaxially.
43a. Ligule 5–6 mm, thin; panicles glabrous ................................................................. 40. A. intermedia
43b. Ligule 10–20 mm, thick; panicles hairy.
44a. Panicle branches apically 1–3-flowered; labellum 1.5–2 cm ................................. 41. A. guangdongensis
44b. Panicle branches apically 3–8-flowered; labellum 1.2–1.4 cm.
45a. Leaf blade oblong, 10–14 cm wide; bracteoles oblong ............................................ 42. A. globosa
45b. Leaf blade linear-lanceolate, ca. 7 cm wide; bracteoles ovate ............................................. 43. A. tonkinensis

38b. Inflorescence a raceme or spike.
46a. Inflorescences conelike or cylindrical, densely flowered.
47a. Inflorescences conelike, 4.5–9 × 3–4 cm; bracts 1.7–2.2 cm; petiole absent to 1 cm ..................... 44. A. strobiliformis
47b. Inflorescences cylindrical, 7–9 × 1.5–2.5 cm; bracts less than 0.8 cm; petiole 2.5–4.5 cm .................. 45. A. pinnanensis
46b. Inflorescences neither conelike nor cylindrical, laxly flowered.
48a. Pseudostems not frondlike; leaves 1–4.
49a. Leaf blade adaxially green with deep green stripes along veins, glabrous; labellum white with red stripes, ovate, ca. 1.2 cm ............................................................... 46. A. pumila
49b. Leaf blade adaxially uniformly green, glabrous except pubescent along midvein and at margin; labellum yellow with red stripes, broadly ovate, ca. 0.7 cm .................................................. 47. A. psilogyna
48b. Pseudostems frondlike; leaves many.
50a. Leaf blade elliptic or ovate-elliptic; inflorescences ca. 4 cm; labellum oblong .................................. 48. A. coriacea
50b. Leaf blade elliptic-lanceolate; inflorescences 5–6 cm; labellum ovate or rhomboidal-ovate.  
51a. Plants with odor of coriander (Coriandrum sativum); bracts deciduous ................................. 49. A. coriandriodora
51b. Plants without odor of coriander; bracts persistent.
52a. Leaf blade adaxially glabrous; spikes 10–16 cm; bracts densely tomentose .............................. 50. A. stachyodes
52b. Leaf blade adaxially densely pubescent; spikes 7–9 cm; bracts densely sericeous .................. 51. A. jingxienensis

黑果山姜 hei guo shan jiang

Zingiber nigrum Gaertner, Fruct. Sem. Pl. 1: 35. 1788; 
Alpinia allughas (Retzius) Roscoe; Heritiera allughas Retzius; Languas allughas (Retzius) Burkill.

Pseudostems 1.5–3 m. Leaves sessile or subsessile; ligule orbicular, 4–6 mm, glabrous; leaf blade lanceolate or elliptic-lanceolate, 25–40 × 6–8 cm, glabrous, base and apex acute. Panicles erect to 30 cm; branches expanded, 2–8 cm; rachis and branches tomentose, usuall y lax with remote cincinni; bracts 1–10 cm, glabrous except pubescent along midvein abaxially and at margin, lateral veins very conspicuous and dense when dry, base obtuse, apex acute. Panicles 20–30 cm, usually only 1- or 2-branched; secondary branches many, ca. 1.5 cm; bracts ca. 5 mm; bracteoles funnelform, 3–4 mm, apex obliquely truncate. Pedicel 3–5 mm. Calyx pale green, cupular, 3–4 mm, apex 3-cleft. Corolla white or pale blue-green, abaxially pubescent; tube equaling calyx; lobes 5–7 mm, central one rounded at apex. Lateral staminodes red, quadrate, ca. 1.5 cm. Labellum pale yellow or pinkish with red streaks, ovate, ovate, ca. 5 mm, concave, base bearing a purple callosity covering corolla throat. Filament pale yellowish to pinkish, ca. 5 mm, slender; anther ca. 2 mm. Ovary pyriform, glabrous, Capsule globose when fresh, oblong when dry, 8–10 mm in diam. Seeds 3–5, strongly aromatic. Fl. May–Jul, fr. Sep–Dec.  
Forests; 600–1100 m. Yunnan [Bangladesh, Cambodia, India, Indonesia (Sumatra), Laos, W Malaysia, Myanmar, Thailand, Vietnam].

Medicinal.

美山姜 mei shan jiang

Alpinia koshunensis Hayata; Languas formosana (K. Schumann) Sasaki; L. koshunensis (Hayata) Sasaki.

Pseudostems to 1(–3.5) m. Ligule to 1 cm, abaxially vil-lous, apex obtuse; petiole absent to 1 cm; leaf blade lanceolate or oblong-lanceolate, 50–70 × 8–12 cm, both ends acuminate. Panicles narrow, 15–20 cm; rachis glabrous or sparsely villous; branches 2- or 3-flowered; bracteoles elliptic, ca. 1.5 cm, apex mucronate. Pedicel ca. 3 mm. Calyx 1.3–1.7 cm, split on 1 side, apex 3-toothed, ciliate. Corolla tube ca. 1 cm, glabrous; lobes oblong, ca. 1.5 cm, apex ciliate. Lateral staminodes subulate, less than 2 mm. Labellum white tinged with yellow, marked with red stripes at center, broadly ovate, ca. 3 cm, apex shortly 2-cleft, crisped. Stamen ca. 2 cm, with a kneelike bend. Ovary subglobose, white sericeous. Capsule vermilion, ellipsoid, wrinkled. Fl. Jul–Aug.  
Taiwan [Japan].  
This species was recognized as a natural hybrid between Alpinia intermedia and A. zerumbet by Yang and Wang (in Chiu & Peng, Proc.

**Costus zerumbet** Persoon, Syn. Pl. 1: 3. 1805; *Alpinia fluviatilis* Hayata; *A. schumanniana* Valeton; *A. speciosa* (J. C. Wendland) K. Schumann (1893), not (Blume) D. Dietrich (1839); *Languas schumanniana* (Valeton) Sasaki; *L. speciosa* (J. C. Wendland) Small; *Zerumbet speciosum* J. C. Wendland.

Pseudostems 2–3 m. Ligule 5–10 mm, abaxially hairy; petiole 1–1.5 cm; leaf blade lanceolate, 30–60 × 5–10 cm, glabrous except pubescent at margin, base attenuate, apex acuminate with a spiral mucro. Panicles drooping, to 30 cm, densely pubescent except hirsute at margin. Spikes cylinde, 12–15 cm, densely flowered; rachis suberect, 16–36 cm, densely pubescent; branches 3–14 mm, apically 1–3-flowered; involucral bracts 2, oblong, 15–24 × ca. 2.8 cm, abaxially pubescent, early deciduous; bracts oblong, 2–5 mm, deciduous; bracteoles deep red, shell-shaped, 2–3.3 cm, deciduous, margin ciliate. Pedicel 1–2 mm. Calyx white, ca. 1.5 cm, apex 3-toothed, ciliate. Corolla tube ca. 1 cm, densely pubescent at throat; lobes white tinged with red, oblong, ca. 2.2 cm × 7 mm, apex cucullate, central lobe wider than lateral ones. Lateral staminodes purple, linear, (2–)5–9 mm. Labellum yellow with purple stripes, ovate, ca. 4 × 3 cm, base rounded, margin undulate, apex emarginate. Filament ca. 1.6 cm; anther ca. 1 cm. Ovary densely pubescent. Capsule red, globose, smooth. Fl. Apr. 2n = 48*.

- Scrub. Guangxi.


**Stenostylis pumila** Hayata; *A. macrocalyx* Hayata; *Alpinia speciosa* subsp. *pumila* (Hayata) Sasaki; *Languas pumila* Sasaki; *L. macrocalyx* (Hayata) Sasaki; *L. pseudoepiphylla* (Hayata) Sasaki.

Pseudostems 1.5–3 m. Leaf sheath striate, glabrous; ligule entire, 1.4–1.6 cm, densely brown pubescent; petiole 4–9 cm, thinly pubescent; leaf blade oblong-lanceolate, 10–120 × 16–20 cm, abaxially pubescent, base ciliate, margin densely ciliolate, apex shortly acuminate. Panicles 28–34 cm, densely brown bristly; branches very short, 1- or 2-flowered; bracteoles brown, 3–4 cm, leathery. Calyx light purple-red, tubular, 2–2.3 cm, apex 4-toothed. Corolla tube white, 0.5–1.8 cm, pubescent; lobes white, central one subovate, 3.1–3.6 × 2.1–2.6 cm, lateral ones narrowly elliptic, 1.2–1.5 cm wide. Lateral staminodes red, ca. 1 cm. Labellum orange-yellow, scarlet at center, yellow at margin and at red-striped apex, broadly ovate, 3.5–4 × 3.2–3.8 cm, apex narrowed, 2-lobed. Stamen ca. 3 cm; filament ca. 1.2 cm. Ovary densely yellow-brown pubescent. Style white pubescent. Fl. Apr.

- Low forests; ca. 900 m. SW Yunnan (Menghai Xian).


**Angraecum rotatum** Hayata; *A. braunii* Hayata; *Languas rotondosa* (Hayata) Sasaki; *L. brasii* (Hayata) Sasaki; *L. imbricata* (Hayata) Sasaki.

Pseudostems to 3 m. Leaf sheath striate, pubescent; ligule 2-lobed or -cleft, 1–1.5 cm, abaxially pubescent, margin ciliate; petiole 2.5–6 cm, pubescent; leaf blade oblong, 18–90 × 7.5–18 cm, adaxially glabrous, abaxially sparsely pubescent, base obliquely cuneate, margin ciliate, apex ciliate. Panicles suberect, 16–36 cm, densely pubescent; branches 3–14 mm, apically 1–3-flowered; involucral bracts 2, oblong, 15–24 × ca. 2.8 cm, abaxially pubescent, early deciduous; bracts oblong, 2–5 mm, deciduous; bracteoles deep red, shell-shaped, 2–3.3 cm, deciduous, margin ciliate. Pedicel 1–2 mm. Calyx white, ca. 1.5 cm, apex 3-toothed, ciliate. Corolla tube ca. 1 cm, densely pubescent at throat; lobes white tinged with red, oblong, ca. 2.2 cm × 7 mm, apex cucullate, central lobe wider than lateral ones. Lateral staminodes purple, linear, (2–)5–9 mm. Labellum yellow with purple stripes, ovate, ca. 4 × 3 cm, base rounded, margin undulate, apex emarginate. Filament ca. 1.6 cm; anther ca. 1 cm. Ovary densely pubescent. Capsule red, globose, smooth. Fl. Apr. 2n = 48*.

- Low forests; ca. 900 m. SW Yunnan (Menghai Xian).

- Montane regions; 400–800 m. Taiwan.


大头山姜 da tou shan jiang


Pseudostems 1–2 m. Leaves petiolate; ligule oblong, abaxially hirsute; leaf blade linear-lanceolate, ca. 80 × 11 cm, adaxially glabrous, abaxially glabrous except sparsely villous along veins, base attenuate, margin hirsute, apex acute or acuminate. Spikes erect, dark red or purple-red, ca. 9 × 6 cm, densely flowered; racis densely villous, base with 2 spathe-like bracts subtending inflorescence; bracteoles ca. 3.2 cm, persistent. Pedicel absent. Calyx cylindric, ca. 1.5 cm × 8 mm, base velvety abaxially, Corolla tube ca. 1.4 cm, glabrous; lobes obovate, 1.8–2.2 cm. Lateral staminodes absent. Labellum subglobose, ca. 2 × 2 cm, base constricted, margin crisped. Filament ca. 7 mm; anther ca. 8 mm. Ovary globose, less than 1 cm in diam., densely villous. Style glabrous. Fl. May.

- Montane regions; 1300–2000 m. Taiwan.


紫纹山姜 zi wen shan jiang

*Languas dolicobapha* (Hayata) Sasaki.

Pseudostems to 2 m. Leaves subsessile; ligule yellow, purple striped abaxially, entire or nearly 2-cleft, villous; leaf blade lanceolate, 70–90 × 10–12 cm, glabrous except shortly hirsute at margin, base abruptly attenuate, apex with caudate tip ca. 1 cm. Spikes ca. 15 cm, 20–30 cm in fruit, dark yellow sericeous-villous; bracteoles ca. 3 cm, nearly hard and brittle, base and margin hirsute, apex subrounded with hair-like arista 1–2 mm. Pedicel absent. Calyx subcylindric, ca. 2 cm, split on 1 side, abaxially very shortly hirsute. Corolla tube ca. 1 cm; lobes ca. 2 cm, central one hooklike, distal margin hirsute, apex mucronate. Lateral staminodes absent. Labellum white, purple striped abaxially, Corolla tube ca. 4 cm, margin erose, apex 2-cleft. Filament glabrous; anther ca. 1 cm. Ovary subglobose, ca. 2 mm in diam. Capsule globose, ca. 1.5 cm in diam., shortly hirsute. Fl. Apr.

- Forests; 400–700 m. Taiwan.


菱唇山姜 ling chun shan jiang

*Languas kusshakuensis* (Hayata) Sasaki.

Pseudostems more than 2 m. Leaves sessile or shortly petiolate; ligule 2-lobed, ca. 8 mm, abaxially villous; leaf blade lanceolate, ca. 50 × 10 cm, glabrous except ciliate at margin, base attenuate, apex abruptly acuminate. Spikes ca. 15 cm, densely many flowered, densely villous; bracteoles shell-shaped, 2.5–3 cm, apex 2- or 3-toothed. Pedicel very short or absent. Calyx ca. 2 cm, split to middle on 1 side, abaxially hirsute, margin and apex slightly hairy. Corolla tube ca. 1 cm; lobes 3–5 cm, central one obovate-spatulate, ca. 1.5 cm wide. Lateral staminodes 4–5 mm. Labellum yellow-red toward center, yellow at margin, ovate-oblanceolate, 4–5.5 × ca. 3 cm, throat hirsute, margin erose-denticulate, apex ciliate, not 2-lobed. Stamina ca. 4 cm; anther linear, ca. 1.5 cm. Ovary ca. 1 cm, densely villous. Style glabrous. Fl. May.

- Taiwan (Taipei Shi).

This species was recognized as a natural hybrid between *Alpinia shimadai* and *A. uraiensis* by Yang and Wang (loc. cit.).


台北山姜 tai bei shan jiang

Pseudostems 2–3 m. Leaves subsessile; ligule 2-lobed, ca. 8 mm, abaxially villous; leaf blade lanceolate, ca. 5.5 × 10 cm, glabrous except hirsute at margin, base acute, apex with linear-caudate tip ca. 2 cm. Spikes erect, 20–25 cm, densely flowered, densely yellow villous; bracteoles pink, shell-shaped, ca. 3 × 3 cm, apex subrounded. Calyx pink, obconical-cylindric, ca. 2 cm, split to middle on 1 side. Corolla tube ca. 1 cm; lobes obovate, 4–5 cm, base attenuate. Lateral staminodes very small. Labellum yellow-red toward center, yellow at margin, broadly ovate-rhomboidal, 3–4 × 2.5 cm, base densely hirsute, apex subcuspate, shortly 2-lobed. Stamina erect or recurved; anther linear, ca. 1.5 cm; corona 2-lobed, ca. 6 mm wide, hirsute. Ovary densely tomentose. Stigma funnelform. Fl. May.

- Taiwan (Taipei Shi).

This species was recognized as a natural hybrid between *Alpinia uraiensis* and *A. zerumbet* by Yang and Wang (loc. cit.).


疏花山姜 shu hua shan jiang

*Languas mesanthera* (Hayata) Sasaki.

Pseudostems 1–2 m. Leaves sessile; ligule strigose abaxially and at margin, apex rounded; leaf blade linear-lanceolate, ca. 60 × 10 cm, glabrous except villous at margin, base cuneate, apex acuminate. Racemes erect, ca. 27 cm, lax; peduncle hirsute; bracteoles ca. 2.2 × 1.7 cm, split on 1 side, glabrous, apex 2- or 3-lobed. Pedicel held at right angle to racis. Calyx cylindric, ca. 2 cm, split on 1 side, base shortly hirsute abaxially, apex 3-lobed, ciliate. Corolla tube cylindric, ca. 1.3 cm, abaxially glabrous; central lobe obovate, ca. 3 × 2.5 cm, apex emarginate or 2-cleft, ciliate; lateral lobes oblong-spatulate, narrower than central one. Lateral staminodes warty, hirsute. Labellum orbicular, ca. 3 cm in diam., margin denticulate, apex 2-cleft. Filament ca. 1 cm; anther oblong-spatulate, ca. 1 cm. Ovary oblong, ca. 1.3 cm, densely villous. Fl. Jul.

- Taiwan.


密毛山姜 mi mao shan jiang

Alpinia elwesii Turrill; A. shimadai Hayata var. kawakamii (Hayata) J. Jung Yang & J. C. Wang; Languas kawakamii (Hayata) Sasaki

Pseudostems 1–2 m. Leaves subsessile; leaf sheath pubescent, marked with conspicuous, vertical striations; ligule 2-cleft, ca. 4 mm, abaxially pubescent; leaf blade linear-lanceolate, ca. 45 × 5.5 cm, adaxially glabrous, abaxially densely pubescent, base attenuate, apex ciliate-acuminated. Racemes erect, 12–15 cm, stout, densely flowered; rachis villous; bracteoles obovate, ca. 1.2 cm × 7 mm, abaxially pubescent, margin ciliate. Pedicel ca. 1 mm, villous. Calyx ca. 1 cm, split on 1 side, abaxially densely pubescent, margin ciliate. Corolla white; tube ca. 1 cm, glabrous; lobes ciliate at margin, lateral ones elliptic-lanceolate, ca. 1.8 cm × 7 mm, narrower than central one. Lateral staminodes very short. Labellum ovate, ca. 2.2 × 1.6 cm, apex emarginate, white tinged with red. Stamen ca. 1.7 cm; filament ca. 7 mm; anther ca. 1.7 cm. Ovary ovoid, ca. 2.5 mm in diam. Seeds black; aril membranous.

- Montane regions; 400–900 m. S Taiwan.

This species was united with Alpinia copelandii Ridley, from the Philippines, by Moo (in Li et al., Fl. Taiwan 5: 832–833. 1978) and in FRPS.


宽唇山姜 kuan chun shan jiang

Pseudostems ca. 2 m. Leaves subsessile; ligule ca. 1 cm, yellow villous; leaf blade lanceolate, ca. 60 × 16 cm, abaxially sericeous-velvety, base attenuate, apex acute. Racemes erect, 25 cm or more; rachis very stout, golden yellow, sericeous-velvety; bracteoles reddish, broadly elliptic, 4–5 × ca. 7.5 cm, glabrous, apex obtuse. Pedicel very short. Calyx 3–3.7 cm, split nearly to base on 1 side, apex 3-lobed, lobes subequal. Corolla white; tube short and wide, ca. 5 mm, sericeous-villos; lobes broadly elliptic, 3.5–4 cm. Lateral staminodes hooklike, ca. 7 mm. Labellum yellow tinged with red, obovate, 4.5–7 × 8–9 cm, base with very densely sericeous scar, apex 2-cleft. Filament ca. 1.5 cm, base villous; anther elliptic, ca. 1.7 cm. Ovary broadly ellipsoid, sericeous-villos.

- Weat areas in forests; 800–1600 m. S Yunnan.


卵果山姜 luan guo shan jiang

Pseudostems 2–2.5 m. Ligule 2-lobed, ca. 1 cm, leathery; petiole 3–5 cm; leaf blade oblange-elliptic, 40–60 × 4–12.5 cm, glabrous, base obliquely cordate. Racemes erect, 18–24 cm, densely flowered; rachis densely golden hispid; bracteoles brownish, narrowly elliptic, 2.5–3.8 cm. Pedicel ca. 2.5 cm, densely golden hispid. Calyx pale red, tubular, ca. 1.6 cm, white pubescent, apex 3-toothed. Corolla white; tube ca. 1 cm, white puberulent; lobes white ciliate at margin, central one suborbicular, ca. 2.5 × 2 cm, apex mucronate, lateral ones narrowly elliptic, ca. 2 × 1.5 cm. Lateral staminodes subulate, 4–6 mm. Labellum yellow with red stripes, white at margin, ovate, 3–3.8 × ca. 1.5 cm, apex reflexed. Stamen ca. 2.4 cm; filament red, ca. 1.2 cm. Capsule red, ovoid, ca. 1.5 × 1.2 cm. Fl. Apr, fr. Sep.

- Forests. Guanzxi.


云南草蔻 yun nan cao kou

Pseudostems 1–3 m. Ligule ca. 6 mm, apex villous; petiole to 2 cm; leaf blade adaxially dark green, abaxially pale green, lanceolate or oblanceolate, 45–60 × 4–15 cm, adaxially glabrous, abaxially densely villous or glabrous, base attenuate, apex acuminate, mucronate. Racemes drooping, 20–30 cm; rachis hirsute; bracteoles green, elliptic, 3–4 cm, dry and brittle, sparsely villous or glabrescent, 1-flowered, early deciduous at anthesis. Pedicel 4–8 mm, slightly elongate in fruit. Calyx elliptoid, 2–2.5 cm, split on 1 side, margin ciliate, apex 3-toothed. Corolla flesh-colored; tube ca. 1 cm, pubescent at throat; central lobe suborbicular, ca. 2 cm wide; lateral lobes broadly lanceolate, 2–2.5 cm. Lateral staminodes subulate, 6–7 mm. Labellum red with yellow center, ovate, 3–3.5 × ca. 3 cm, apex acute. Filament ca. 7 mm; anther ca. 1.7 cm. Ovary oblong, tomentose. Capsule ellipsoid, ca. 3 × 2 cm, pubescent. Seeds gray-yellow to dull brown, forming globose clumps 1.2–1.6 cm in diam. Fl. Mar–Jul, fr. Apr–Dec.

Dense or sparse forests; 400–1200 m. Guangdong, Guanzxi, Yunnan [Bangladesh, India, Laos, Myanmar, Thailand, Vietnam].

Medicinal.

1a. Leaf blade abaxially densely villous ........................................ 17a. var. blepharocalyx
1b. Leaf blade abaxially glabrous ....................... 17b. var. glabrior

17a. Alpinia blepharocalyx var. blepharocalyx

云南草蔻 (原变种) yun nan cao kou (yu an bian zhong)

Alpinia bracteata Roxburgh (1820), not Roscoe (1815); Languas blepharocalyx (K. Schumann) Handel-Mazzetti.


Sparse forests; 500–1000 m. Yunnan [Bangladesh, India, Laos, Myanmar, Thailand, Vietnam].


光叶云南草蔻 guang ye yun nan cao kou


Dense forests; 400–1200 m. Guangdong, Guanzxi, Yunnan [Thailand, Vietnam].


那坡山姜 na po shan jiang

Pseudostems purple spotted, 1.5–2 m. Ligule entire or 2-
Labellum marked with radiate, purple stripes from center to margin ciliate. Lateral staminodes subulate, ca. 3 mm to toothed. Corolla tube 8–10 mm; lobes lanceolate, 2.5–3 cm, glabrous toward mucronate apex. Pedicel 2–4 mm. Calyx elliptic, 2–3.5 cm, hirsute at base and gradually becoming bracts 4–4.5 cm, glabrous; bracteoles milky white, broadly caudate mucro. Racemes erect, 10–30 cm, yellow hirsute; daedeae subglabrous; central lobe obovate-oblong, ca. 6-toothed. Corolla tube ca. 1.3 cm, abaxially densely tomentose. Calyx nearly white, campanulate-cylindric, strigose at base abaxially. Pedicel ca. 3 mm, moderately stout, mm, glabrous; bracteoles orbicular, ca. 5.5 cm, glabrous except grooved; bracts reddish purple at apex, linear, ca. 2.5 cm × 4–5 mm, glabrous; bracteoles orbicular, ca. 5.5 cm, glabrous except mucronate. Pedicel ca. 3 mm, moderately stout, densely tomentose. Calyx nearly white, campanulate-cylindric, ca. 3.5 × 2 cm, deeply split on 1 side, abaxially sparsely hirsute, apex finely 6-toothed. Corolla tube ca. 1.3 cm, abaxially sparsely hirsute or subglabrous; central lobe obovate-oblong, ca. 3.5 × 2.8 cm. Lateral staminodes linear, ca. 2 mm. Labellum yellow with reddish center, with radiate stripes on distal middle part disappearing at margin, oblong-triangular, ca. 5 × 4 cm, apex 2-cleft; lobes 6–7 mm, with small warts, base densely villous. Filament ca. 1 cm; anther ca. 1.8 cm. Ovary globose. Style apex cupular. Capsule pale scarlet, globose, ca. 2.5 cm in diam., densely hairy. Fl. Apr.–May.

- Forests. Guangxi.


Pseudostems to 3 m. Ligule (3–)5–10 mm, abaxially hirsute; petiole absent to 2 cm; leaf blade linear-lanceolate, 20–65 × 2–12 cm, glabrous or rarely abaxially sparsely hirsute, base obliquely attenuate, margin hairy, apex acuminate, with spirally ciliate apex. Racemes erect, 10–30 cm, yellow hirsute; bracts 4–4.5 cm, glabrous; bracteoles milky white, broadly elliptic, 2–3.5 cm, hirsute at base and gradually becoming glabrous toward mucronate apex. Pedicel 2–4 mm. Calyx campanulate, 2–3 cm, split on 1 side, abaxially hairy, apex 2-toothed. Corolla tube 8–10 mm; lobes lanceolate, 2.5–3 cm, margin ciliate. Lateral staminodes subulate, ca. 3 mm. Labellum marked with radiate, purple stripes from center to margin, triangular-ovate, 3.5–4.5 cm, apex shallowly 2-cleft. Filament ca. 1.5 cm; anther 1.2–1.5 cm. Ovary hirsute, ca. 5 mm in diam. Capsule globose, 2–3 cm in diam., yellow hirsute. Fl. Apr.–Jun; fr. May–Aug. 2n = 48*. Dense or sparse forests. Guangdong, Guangxi, Hainan [Vietnam].


Languas uraiensis (Hayata) Sasaki.

Pseudostems more than 2 m. Leaves sessile; ligule oblong-triangular, 1–1.5 cm × ca. 6 mm, abaxially hirsute, apex obtuse; leaf blade linear-lanceolate, ca. 1 m × 13 cm, glabrous, base and apex acuminate. Racemes erect, flowering part ca. 25 cm, densely flowered; rachis densely strigose-tomentose, many grooved; bracts reddish purple at apex, linear, ca. 2.5 cm × 4–5 mm, glabrous; bracteoles orbicular, ca. 5.5 cm, glabrous except strigose at base abaxially. Pedicel ca. 3 mm, moderately stout, densely tomentose. Calyx nearly white, campanulate-cylindric, ca. 3.5 × 2 cm, deeply split on 1 side, abaxially sparsely hirsute, apex finely 6-toothed. Corolla tube ca. 1.3 cm, abaxially sparsely hirsute or subglabrous; central lobe obovate-oblong, ca.
petiole 1–2.5 cm; leaf blade elliptic-lanceolate or oblong-lanceolate, 40–80 × 10–14 cm, abaxially densely pubescent, base narrow, obtuse, apex shortly acuminate. Racemes 18–30 cm; rachis brown hispid; bracteoles oblong-triangular, 3.5–4 cm, apex 3-toothed, teeth rounded. Calyx red, tubular, 2.3–2.6 cm, base and apex densely white pubescent, apex 4–6-toothed, ciliate. Corolla tube white, ca. 1 cm, pubescent; lobes white, elliptic, 3.8–4.5 × 1.7–2.1 cm, base with a small appendage, margin ciliate. Lateral staminodes red, ca. 8 mm, pubescent. Labellum yellow with a few stripes, red at center, red spotted at margin, broadly ovate, 3.9–4.5 × 5–5.8 cm, apex 2-lobed. Stamen ca. 3 cm; filament ca. 1.2 cm, base white pubescent. Ovary yellow-brown villous. Fr. Apr.

- Forests; ca. 800 m. S Yunnan.


毛瓣山姜  mao ban shan jiang

Maranta malaccensis N. L. Burman, Fl. Indica, 2. 1768.

Pseudostems ca. 3 m or more. Ligule 2-cleft, to 1 cm, slightly tomentose; petiole ca. 2 cm, grooved; leaf blade oblong-lanceolate or lanceolate, to 90 × 15 cm, abaxially pubescent, base acute, apex acuminate. Racemes erect, to 35 cm; rachis stout, densely yellow pubescent; bracteoles white, broadly elliptic, 3.5–4 cm. Pedicel ca. 7 mm, densely yellow pubescent. Calyx campanulate, ca. 1.5 cm, densely sericeous. Corolla white, sericeous; tube ca. 1 cm; lobes oblong-lanceolate, 2.5–3 cm. Lateral staminodes absent. Labellum yellow with red stripes, ovate, ca. 3.5 cm, apex emarginate. Stamen ca. 2.4 cm. Ovary villous. Capsule yellow, globose, ca. 2 cm in diam., dehiscing irregularly. Fl. Apr. 2n = 48*.

Xizang, Yunnan; cultivated in Guangdong [Bangladesh, Bhutan, India, Indonesia (Java), W Malaysia, Myanmar, Thailand].

Cultivated as an ornamental.


高良姜  gao liang jiang

Languas officinarum (Hance) Farwell.

Rhizomes elongate, terete. Pseudostems 40–110 cm. Leaves sessile; ligule lanceolate, entire, 2–3(–5) cm, membranous; leaf blade linear, 20–30 × 1.2–2.5 cm, glabrous, base attenuate, apex ciliate. Racemes erect, 6–10 cm; rachis tomentose; bracteoles very small, less than 1 cm. Pedicel 1–2 mm. Calyx 8–10 cm, puberulent, apex 3-toothed. Corolla tube slightly shorter than calyx; lobes oblong, ca. 1.5 cm, central one hoodlike. Labellum white with red streaks, ovate, ca. 2 cm. Filament ca. 1 cm; anther ca. 6 mm. Ovary tomentose. Capsule red, globose, ca. 1 cm in diam. Fl. Apr–Sep, fr. May–Nov. 2n = 48*.

- Guangdong, Guangxi, Hainan.

Medicinal.


扇唇山姜 shan chun shan jiang

Languas flabellata (Ridley) Merrill.

Pseudostems to 3 m. Ligule ovate, entire, ca. 1 cm, margin minutely white hairy. Leaf blade narrowly lanceolate, 30–40 × 4–5 cm, glabrous, margin denticulate near acumenate apex. Panicles 10–20 cm, densely flowered; branches 2 or 3, 9–7 cm; bracts minute, ca. 7 mm; bracteoles absent. Pedicel 2–3 mm, pubescent. Calyx tubular, ca. 8 mm, obtusely ribbed, glabrous, apex 3-lobed. Corolla tube ca. 1 cm; central lobe oblong, ca. 7 × 3.5 mm, apex hooked, minutely muricate; lateral lobes obovate-oblong, ca. 5 mm. Lateral staminodes 2, at base of labellum. Labellum nearly fan-shaped, ca. 1 cm; claw short; limb subreniform, 4-lobed. Filament linear, short, glabrous; anther oblong, short; connective crestless. Capsule ca. 6 mm in diam., glabrous.

Taiwan (Huoshao Dao and Lan Yu opposite SE coast) [Japan (Ryukyu Islands), Philippines].


益智  yi zhi

Languas oxyphylla (Miquel) Merrill.

Pseudostems 1–3 m. Ligule brownish, 2-cleft, 1–2 cm, rarely longer, membranous, sparsely puberulent; petiole short; leaf blade lanceolate, 25–35 × 3–6 cm, base subrounded, margin hispid, glabrescent, apex attenuate, ciliate. Racemes enclosed in bud by a hat-shaped involucral bract deciduous at anthesis; rachis very shortly puberulent. Pedicel 1–2 mm. Calyx tubular, ca. 1.2 cm, split to middle on 1 side, abaxially pubescent, apex 3-toothed. Corolla tube 8–10 mm; lobes oblong, ca. 1.8 cm, central one white, wider than lateral ones, abaxially sparsely puberulent. Lateral staminodes subulate, ca. 2 mm. Labellum white with red stripes, ovate, ca. 2 cm, apical margin crisped. Filament ca. 1.2 cm; anther ca. 7 mm. Ovary densely tomentose. Capsule globose when fresh, fusiform when dry, 1.5–2 × ca. 1 cm, with elevated, vascular stripes, pubescent, apex with persistent calyx. Seeds irregularly oblate; aril brownish. Fl. Mar–May, fr. Apr–Sep. 2n = 48*.

- Fujian, Guangdong, Guangxi, Hainan, Yunnan.

Both wild and cultivated plants are used for medicine.


山姜  shan jiang

Globba japonica Thunberg in Murray, Syst. Veg., ed. 14, 73. 1784; Alpinia agiokuenensis Hayata; Languas agiokuenensis (Hayata) Sasaki; L. japonica (Thunberg) Sasaki.

Pseudostems 35–70 cm. Ligule 2-cleft, ca. 2 mm, pubescent; petiole to 2 cm; leaf blade lanceolate, oblanceolate, or narrowly long elliptic, 25–40 × 4–7 cm, pubescent especially abaxially, base attenuate, apex acuminate, murcate. Racemes 15–30 cm; rachis densely tomentose; involucral bracts lanceolate, ca. 9 cm, deciduous at anthesis; bracteoles very small, early deciduous. Flowers usually paired on rachis, often also with degenerate flowers; pedicel ca. 2 mm. Calyx clavate, 1–1.2 cm; filament ca. 1 cm; ovary 2-celled, 3–5 mm, glabrous, white. Fr. Sep–Oct. 2n = 48*.

- Cultivated as an ornamental.

- Cultivated as a medicinal plant.
cm, pubescent, apex 3-toothed. Corolla tube ca. 1 cm, sparsely puberulent; lobes oblong, ca. 1 cm, abaxially tomentose, central one hoodlike. Lateral staminodes linear, ca. 5 mm. Labellum white marked with red stripes, ovate, ca. 6 mm wide, margin irregularly notched, apex 2-cleft. Stamen 1.2–1.4 cm. Ovary densely tomentose. Capsule salmon red, globose or ellipsoid, 1–1.5 cm in diam., pubescent, apex with persistent calyx. Seeds ca. 5 × 3 mm, many angled, with campchorlike odor. Fl. Apr–Aug, fr. Jul–Dec. 2n = 48*.

- Forests. Fujian, Guangdong, Guizhou, Jiangsu, Jiangxi, Sichuan, Taiwan, Zhejiang [Japan].
- Medicinal.


- Medicinal.


- Medicinal.


- Medicinal.

**小花山姜** xiao hua shan jiang

Pseudostems 1–2 m. Leaves sessile; leaf sheath sparingly villous at margin; rachis 2–3 mm, densely villous, apex cuneate; leaf blade linear-lanceolate, 18–25 × 3–5 cm, glabrous or abaxially sparingly villous especially along main veins, base obtuse or attenuate, apex narrowly long caudate. Racemes 4–8(–12); rachis ca. 2 mm thick, slender, glabrous or pubescent; bracteoles absent. Flowers white slightly tinged with pink; pedicel 1–1.5 cm, pubescent. Calyx tubular, 0.8–1.2 cm, glabrous or pubescent. Corolla tube subequaling calyx; lobes oblong, 5–6 × ca. 2 mm. Lateral staminodes triangular, ca. 1 mm. Filament ca. 4 mm; anther ca. 2.5 mm, ovary globose, ca. 1 mm in diam., densely villous. Capsule globose, 6–8 mm in diam. Seeds 4–5 mm in diam., many angled. Fl. May–Aug, fr. Sep–Nov.


**四川山姜** si chuan shan jiang

Pseudostems 70–120 cm. Ligule 4–10 mm, membranous, margin entire or ciliate, apex acuminate or caudate. Racemes 9–22 cm; bracts 2, linear, 6–20 cm; bracteoles semioblong, entire deciduous. Pedicel 1–2 mm, pubescent. Calyx tubular, 1.2–1.5(–1.7) cm, pubescent, apex 3- or 4-lobed or 3- or 4-toothed. Corolla tube subequaling calyx, glabrous; lobes oblong, 6–7 mm, apex densely pubescent. Lateral staminodes purple, linear, 3–4 mm. Labellum yellow-white with purple stripes, ovate-oblanceolate, 5–6 × ca. 6 mm, margin rounded toothed. Filament 4–6 mm; anther 4–6 mm. Capsule red, globose, 8–9 mm in diam., apex with persistent calyx. Seeds 9–12. Fl. May–Jun, fr. Aug–Nov.


**华山姜** hua shan jiang

*Alpinia suishaensis* Hayata; *Languas oblongifolia* (Hayata) Sasaki; *L. suishaensis* (Hayata) Sasaki.

Pseudostems ca. 1 m. Ligule 0.5–3 cm; leaf blade oblong-lanceolate, 15–35 × 3–7 cm, glabrous on both surfaces, base cuneate, margin entire or ciliolate, apex acuminate or caudate. Racemes 9–22 cm; bracts 2, linear, 6–20 cm; bracteoles semioblong, entire deciduous. Pedicel 1–2 mm, pubescent. Calyx tubular, 1.2–1.5(–1.7) cm, pubescent, apex 3- or 3-lobed or 3- or 4-toothed. Corolla tube subequaling calyx, glabrous; lobes oblong, 6–7 mm, apex densely pubescent. Lateral staminodes purple, linear, 3–4 mm. Labellum yellow-white with purple stripes, ovate-oblanceolate, 5–6 × ca. 6 mm, margin rounded toothed. Filament 4–6 mm; anther 4–6 mm. Capsule red, globose, 8–9 mm in diam., apex with persistent calyx. Seeds 9–12. Fl. May–Jun, fr. Aug–Nov.


**红豆蔻** hong dou kou

**原变种** hong dou kou (yuan bian zhong)


Leaf blade and panicle rachis glabrous.

- 1a. Leaf blade and panicle rachis glabrous
  - 37a. var. *galanga*
- 1b. Leaf blade abaxially and panicle rachis pubescent
  - 37b. var. *pyramidata* 37b. var. *pyramidata*

37a. *Alpinia galanga* var. *galanga* 37b. *Alpinia pyramidata* (Blume) K. Schumann

**毛红豆蔻** mao hong dou kou


Leaf blade abaxially and panicle rachis pubescent.

- 37b. var. *pyramidata* 37b. var. *pyramidata*


Leaf blade abaxially and panicle rachis pubescent.


**多花山姜** duo hua shan jiang
Rhizomes creeping, thick. Pseudostems to 6 m. Leaf sheath longitudinally rough lined, densely tomentose; ligule 2-cleft, 1–2 cm, tomentose; petiolo 1–9 cm, tomentose; leaf blade lanceolate or elliptic, to 1 m × 25 cm, glabrous or abaxially tomentose, base cuneate, margin long ciliate, apex acuminate. Panicles erect, 35–60 × 7–9 cm, tomentose; branches 0.5–3 cm, 5–8–flowered; involucral bracts oblong-lanceolate, ca. 27 × 5.5 mm; bracteoles oblong to oblanceolate, ca. 1.2 cm × 3–7 mm, membranous. Pedicel 1–10 mm. Calyx red, 0.9–1.4 cm, split on 1 side, apex 3-toothed. Corolla tube equaling calyx; lobes oblong, 1.3–1.7 cm × ca. 5 mm. Lateral staminodes red, horn-shaped, ca. 6 mm. Labellum suborbicular to oblong, ca. 1 cm, apex cucullate. Filament ca. 1.4 cm; anther 3–4 mm. Ovary ovoid, 1.5–1.8 cm long, ca. 1 cm, apex cucullate. Lateral staminodes ca. 5 mm. Pedicel ca. 1 mm. Calyx tubular, ca. 8 mm, pubescent, apex 3-toothed. Corolla tube ca. 1.4 cm; lobes oblong, 8–10 mm. Lateral staminodes red, ca. 4 mm. Labellum reflexed at anthesis, ovate, 1.5–2 × ca. 1.6 cm. Filament white, ca. 2.5 cm; anther red, ca. 4 mm. Ovary green, globose, glabrescent. Fr. May–Jun, fr. Oct–Nov. 2n = 48*.


光叶假益智 guang ye jia yi zhi

Pseudostems 1.5–2.5 m. Leaf sheath pubescent; ligule 2-lobed, ca. 1 cm, densely hairy; petiolo ca. 4.5 cm; leaf blade lanceolate, 20–50 × 7–12 cm, glabrous except pubescent at margin, base cuneate, apex caudate. Panicles 20–25 cm, winding, pubescent; branches ca. 1.5 cm, apically 1–3–flowered; bracteoles white, boat-shaped, early deciduous, base glabrous, apex pubescent. Pedicel ca. 1 mm. Calyx tubular, ca. 8 mm, pubescent, apex 3-toothed. Corolla tube ca. 1.4 cm; lobes oblong, 8–10 mm. Lateral staminodes red, ca. 4 mm. Labellum reflexed at anthesis, ovate, 1.5–2 × ca. 1.6 cm. Filament white, ca. 2.5 cm; anther red, ca. 4 mm. Ovary green, globose, glabrescent. Fr. Jun.

42. Alpinia globosa (Loureiro) Horaninow, Prodr. Monogr. Scitam. 34. 1862.

推广应用 gai guo shan jiang


Pseudostems ca. 1.5 m. Ligule 2-cleft, 1–2 cm, villous; petiolo 5–6 cm; leaf blade oblong, 45–70 × 10–14 cm, glabrous, base attenuate, margin scabrous, ciliate, apex acuminate. Panicles cylindrical, ca. 30 × 5 cm, pubescent; branches numerous, 1.5–3.5 cm, apically 4–8–flowered; bracts very small or absent; bracteoles oblong, ca. 1 cm × 4 mm, membranous. Pedicel 2–3(–8) mm. Calyx ca. 9 mm, apex 3-toothed. Corolla tube equaling or slightly longer than calyx; lobes linear, ca. 1 cm × 2 mm. Lateral staminodes subulate. Labellum white with purple stripes, oblong or elliptic, ca. 1.2 × 1 cm, base slightly contracted, apex emarginate or entire. Filament 1.2–1.5 cm; anther ca. 6 mm. Ovary globose, pubescent. Capsule red, globose, 7–10 mm in diam.; pericarp thin, fragile. Seeds 5–7. Fl. Apr. fr. Jun.


滑叶山姜 hua ye shan jiang

Pseudostems stout. Leaf sheath longitudinally lined; ligule 1.5–2 cm, leathery, apex obtuse; petiolo 3–6 cm; leaf blade linear-lanceolate, ca. 60 × 7 cm, leathery, glabrous, base attenuate, apex acuminate. Panicles erect, 40–50 × ca. 4 cm, proximally glabrous, distally densely villous; branches apically 3–5–flowered; bracts ovate, ca. 1.5 cm, leathery, deciduous; bracteoles similar to bracts but smaller. Pedicel very short. Calyx subcampanulate, 9–10 mm, split to middle on 1 side, apex irregularly crenate. Corolla tube 7–8 mm; lobes oblong, 1.5–1.8 cm, concave, central one ciliate at proximal margin, apex apiculate. Lateral staminodes linear, very short. Labellum orbicular or ovate, ca. 1.4 × 1–1.2 cm, base slightly contracted, apex slightly hairy. Fl. Jun. 2n = 48*.

Forest floors, scrub; 300–1000 m. Guangdong, Taiwan [Japan, Philippines].

emarginate. Filament 4–5 mm; anther ca. 6 mm. Ovary globose, sericeous. Fl. Feb. 2n = 48*.
Forests. Guangxi, Hainan [Vietnam].
Medicinal and used as a condiment.


球穗山姜 qiú suí shān jiāng

 pseudo-8–1.2 m. Ligule 2-cleft, lobes orbicular, 1–3 mm; petiole absent to 1 cm; leaf blade linear, 25–50 × 2.5–5 cm, abaxially densely velvety or glabrous, midvein pubescent, base attenuate, apex caudate-mucronate. Spikes conelike, 4.5–9 × 3–4 cm, 5.5–6 × ca. 2.5 cm in fruit; bracts densely imbricate, brownish when dry, ovate, 1.7–2.2 × 1–1.5 cm, densely villous on both surfaces; bracteoles ovate, ca. 1.2 cm, golden sericeous abaxially. Flowers white. Calyx tubular, ca. 1 cm, apex 2-toothed, ciliate. Corolla tube ca. 1 cm; lobes ovate, ca. 7 × 3 cm. Lateral staminodes absent. Labellum oblong, ca. 1 cm; connate 1–3 mm; connective emarginate, apex slightly concave, lateral ones narrowly ovate-lanceolate, 3.5–14 cm, pubescent along midvein and at margin, base obliquely cuneate, apex acute. Filament 15–30 mm; stamen ca. 1.5 cm; connective emarginate. Capsule concealed by perianth ca. 1 cm in diam., slightly oblong-lanceolate, 1.3–1.5 cm, pubescent, capsule 3-toothed. Corolla white; tube ca. 1 cm; lobes oblong, slightly longer than tube. Lateral staminodes subulate, 3–4 mm. Labellum white with red stripes, ovate, ca. 1.2 cm, margin crenate, apex reflexed, 2-cleft. Filament 5–10 mm; anther 5–8 mm. Ovary sericeous. Capsule globose, ca. 1 cm in diam., apex with persistent perianth ca. 1 cm. Fl. Apr–Jun, fr. Jun–Nov.

- Forests. Guangxi


矮山姜 ài shān jiāng

 pseudo-stem 13–24 cm. Leaves 1–4, usually 3; ligule 2-cleft, 3–5 mm, margin ciliate; petiole 0.3–4.5 cm, pubescent; leaf blade adaxially uniformly green, long elliptic or oblong-lanceolate, 14–40 × 3–7 cm, leathery, glabrous except pubescent along midvein and at margin, bases obliquely cuneate, apex acute. Spikes erect, 5–9 cm, densely pubescent; peduncle 1–5 cm; involucral bract oblong or linear-lanceolate, 3.5–14 cm, puberulent; bracts pale green, oblong-elliptic, boat-shaped, 1.25 cm, 2–or 3-flowered, persistent. Calyx white, ca. 1.5 cm, slightly split on 1 side, puberulent, apex 2- or 3-toothed. Corolla tube white, equaling calyx; lobes yellowish, oblong, ca. 9 × 5 mm. Lateral staminodes red, linear, ca. 4 mm. Labellum yellowish with red stripes, broadly obovate, ca. 7 mm wide, margin toothed, apex 2-cleft. Stamina ca. 1.5 cm; connective emarginate, rarely with deltoid appendage. Ovary glabrous. Capsule red, ovoid to ellipsoid, ca. 1.5 × 1 cm. Fl. May, fr. Oct–Nov.

- Forests. Guangxi


花叶山姜 huā yè shān jiāng

pseudo-stems ca. 1.5 cm. Ligule 2-cleft, abaxially villous, lobes deltoid, 2–4 mm; petiole 2.5–4.5 cm; leaf blade lanceolate, 30–60 × 5–9 cm, glabrous except velvety golden velvety along midvein abaxially and at margin, base attenuate, apex acuminately dentate, ciliate. Spikes pendulous, cylindrical, 7–9 × 1.5–2.5 cm; bracts ovate, less than 8 mm, densely golden velvety; bracteoles ca. 5 mm, densely golden velvety. Flowers yellow. Calyx ca. 3 mm, split to base on 1 side. Corolla tube ca. 5 mm, pubescent at throat; lobes ovate-oblong, ca. 6 mm, central one larger than lateral ones. Labellum subequaling corolla lobes, narrow, apex 2-cleft. Filament ca. 4 mm; anther ca. 3 mm. Ovary obconical, ca. 1 mm. Capsule red, globose, ca. 1.2 cm in diam., dry and brittle. Fl. Jul, fr. Sep–Nov.

- Medicinal


革叶山姜 gé yè shān jiāng

pseudo-stems 50–60 cm. Ligule orbicular, 2-cleft, ca. 3 mm, margin ciliate; petiole 5–7 mm; leaf blade deep green, elliptic or ovate-elliptic, 10–15 × 5–8 cm, leathery, glabrous, apex acuminate, with caudate tip ca. 1 cm. Spikes ca. 4 cm; bracts densely imbricate, lanceolate, 1–1.5 cm, 2-flowered, persistent; bracteoles pale green, ovate, ca. 1.2 cm, densely pilose. Calyx ca. 1 cm, densely pilose, apex 3-toothed. Corolla tube white, ca. 1.2 cm; lobes oblong, central one ca. 8 × 4 mm, puberulent, margin ciliate, apex slightly concave, lateral ones nar-
rower. Lateral staminodes oblong, ca. 3.5 mm. Labellum pale green with red stripes, oblong, ca. 1 cm × 7 mm, apex emarginate. Filament ca. 5 mm; anther ca. 3 mm; connective appendage absent. Capsule ovoid, ca. 1 cm. Fl. and fr. Jun–Aug. 2n = 48*.

- Forests. E Hainan (Wanning Xian).


香姜 xiang jiang

Plants with odor of coriander (*Coriandrum sativum* Linnaeus). Rhizomes purple-red, short. Pseudostems 0.5–2 m. Leaves 15–25, subsessile; ligule orbicular, 2-cleft, ca. 1 cm, margin often ciliate; leaf blade elliptic-lanceolate, 8–13 × 1.2–5 cm, glabrous, base cuneate, margin shortly hispid, glabrescent, apex long caudate. Spikes 5–10 cm; rachis densely pubescent; involucral bract elliptic-lanceolate, 4.5–12 cm, puberulent, apex caudate; bracts 1.5–5 cm × 4–6 mm, early deciduous; bracteoles elliptic, 5–9 mm, flat, puberulent, deciduous. Proximal flowers in clusters of 3 on rachis, distal ones solitary; pedicel ca. 1 mm, densely pubescent. Calyx 6–9 mm, shallowly split on 1 side, apex 3-toothed. Corolla tube subequaling calyx; lobes oblong, ca. 7 × 4 mm, abaxially densely appressed pubescent. Lateral staminodes linear, ca. 4 mm, minutely glandular hairy. Labellum purple-red striped, subovate, 6–7 mm wide, velvety, apex shallowly 2-cleft. Stamen ca. 1.1 cm; connective appendage triangular or tongue-shaped, ca. 2 mm. Ovary densely pubescent. Capsule red, globose, 0.8–1.4 cm in diam., sparsely velvety, apex with persistent calyx. Fl. Apr–May, fr. Sep–Oct. 2n = 48*.

- Guangxi.

Medicinal and used as a condiment.


密苞山姜 mi bao shan jiang

Pseudostems 1–1.5 m. Leaf sheath tomentose; ligule orbicular, 2-cleft, ca. 1 cm, margin ciliate; petiole 0.3–2 cm; leaf blade elliptic-lanceolate, 28–50 × 5–9 cm, adaxially glabrous, abaxially densely pubescent, base cuneate, apex caudate. Spikes sessile, 7–9 cm; rachis pubescent; involucral bracts 2, ovate-lanceolate, 4.5–13 cm; bracts red, ovate-deltoid, 2.4–3 cm, sericeous, 3-flowered; bracteoles ovate-deltoid, 1.5–1.8 cm, sericeous. Calyx pale red, slightly split on 1 side, sericeous, apex 2-toothed. Corolla tube ca. 2 cm, pubescent; lobes oblong, ca. 1 cm × 4 mm, central one larger than lateral ones, sericeous. Lateral staminodes subulate, ca. 2 mm, densely glandular hairy. Labellum red striped, ovate, ca. 7 mm wide, apex 2-cleft. Filament ca. 5 mm; anther ca. 4 mm, densely and shortly glandular hairy. Ovary glabrous. Capsule subglobose, ca. 8 mm in diam., apex with persistent calyx. Fl. Jun–Jul.

- Forests, roadsides; 600–700 m. Guangdong.


靖西山姜 jing xi shan jiang

Pseudostems 50–60 cm. Ligule 2-cleft, 3–4 mm, thick, densely pubescent; petiole 0.3–2 cm; leaf blade elliptic-lanceolate, 20–40 × 4–7 cm, leathery, glabrous except tomentose at margin and apex, or abaxially tomentose especially on median veins, base attenuate, apex acuminate, with caudate tip ca. 2.5 cm. Spikes erect, subcylindric, 10–16 cm; involucral bract linear, 8–9 cm × 8–10 mm; bracts ovate or lanceolate, 1.5–2.5 cm, densely imbricate, tomentose, 3-flowered, persistent; bracteoles lanceolate, 5–10 mm, tomentose, persistent. Flowers fragrant, tomentose. Calyx tubular, 1–1.5 cm, apex 3-toothed. Corolla tube ca. 1.2 cm; lobes oblong, ca. 6 mm, concave. Lateral staminodes linear, ca. 2 mm. Labellum striated at center, rhomboidal-ovate, obscurely 3-lobed, ca. 7 × 3 mm, margin undulate, apex 2-cleft. Filament ca. 5 mm; anther ca. 4 mm. Ovary densely hirsute. Capsule globose, ca. 1 cm in diam., apex with persistent calyx. Fl. and fr. Jun–Aug. 2n = 48*.

- Forests, roadsides; 600–700 m. Guangdong, Guangxi, Guizhou, Jiangxi, Yunnan.

1a. Leaf blade glabrous except tomentose at margin and apex .................................. 50a. var. *stachyodes*

1b. Leaf blade abaxially tomentose especially on median veins .................................. 50b. var. *yangchunensis*

50a. *Alpinia stachyodes* var. *stachyodes*

密苞山姜(原变种) mi bao shan jiang (yuan bian zhong)

*Alpinia densibracteata* T. L. Wu & S. J. Chen.

Leaf blade glabrous except tomentose at margin and apex.

- Dense forests. Guangdong, Guangxi, Guizhou, Jiangxi, Yunnan.


阳春山姜 yang chun shan jiang

Leaf blade abaxially tomentose especially on median veins.

- Forests, roadsides; 600–700 m. Guangdong.

The spelling of the specific epithet follows the protologue; in FRPS it was given as “*Alpinia chinghsiensis*.”