

30. SINOBAMBUSA Makino ex Nakai, J. Arnold Arbor. 6: 152. 1925.

唐竹属 tang zhu shu

Zhu Zhengde (朱政德 Chu Cheng-de), Yang Guangyao (杨光耀); Chris Stapleton

Arborescent or shrubby bamboos. Rhizomes leptomorph, with running underground stems. Culms diffuse, sometimes also clustering, erect to nodding; internodes substantially grooved above branches, initially usually pubescent; nodes prominent, sheath rings corky. Branches 3, rarely 5–7 at higher nodes, subequal, buds initially closed at front. Culm sheaths deciduous, setose; ligule serrate or entire; blade lanceolate. Leaves 3–9 per ultimate branch; blade lanceolate. Inflorescence fully bracteate, partially iterant, lateral, racemose, prophyllate. Spikelets 1–3, subtended by a prophyll and 2 to more gradually enlarged bracts or glumes, apical 1 or 2 bracts usually with axillary buds, forming secondary pseudospikelets, lateral spikelets sessile, terminal spikelet variably pedicellate. Spikelets with several to many (up to 50) florets. Rachilla disarticulating between florets. Lemma leathery, apex acute; palea about as long as lemma or slightly shorter, 2-keeled, rounded at apex, ciliolate; lodicules 3, membranous, many veined. Stamens 3, sometimes 2 or 4; filaments free. Ovary ellipsoid; style 1, sometimes absent, usually long; stigmas 2 or 3, plumose. Fruit a caryopsis.

About ten species: S and SW China, N Vietnam; introduced to Japan during the Tang Dynasty; ten species (nine endemic) in China.

Sinobambusa is very difficult to distinguish from *Indosasa* without knowledge of stamen number.

In addition to the species treated below, *Sinobambusa glabrata* W. T. Lin & Z. J. Feng (J. S. China Agric. Univ. 14(1): 47. 1993) was described from Guangdong. It is a doubtful species, and the type possibly represents a species of *Bambusa*. *Sinobambusa scabrida* T. H. Wen (J. Bamboo Res. 2(1): 61. 1983) was described from W Guangxi based on a winter-shooting specimen. It would seem that the culm sheaths were taken from newly emerged, abnormal shoots. The flowers are unknown, and the identity of this species is uncertain.

The generic placement of *Sinobambusa dushanensis* (species no. 10) is uncertain. It has not, therefore, been included in the following key.

- 1a. Culm sheath auricles absent, or small and obscure.
 - 2a. Culm sheath auricles present but obscure; culm sheath ligule yellow-green, proximally tomentose; leaf blade abaxially glabrous 9. *S. incana*
 - 2b. Culm sheath auricles absent; leaf blade abaxially pubescent.
 - 3a. Culm sheath ligule convex, purple, proximally densely setose 7. *S. rubroligula*
 - 3b. Culm sheath ligule truncate, proximally tomentose 8. *S. yixingensis*
- 1b. Culm sheath auricles well developed.
 - 4a. Culm internodes glabrous, sometimes papillate below nodes.
 - 5a. Culm internodes and culm sheath densely pruinose initially, gray-green, culm sheath blade rugose 3. *S. farinosa*
 - 5b. Culm internodes green, culm sheath light brown or yellow, light pruinose initially, culm sheath blade not rugose.
 - 6a. Culm internodes dark green; culm sheath blades not purple; culm sheath auricles not developed (except in var. *laeta*) 1. *S. tootsik*
 - 6b. Culm internodes pale green; culm sheath blade purple; culm sheath auricles moderately developed 2. *S. humilis*
 - 4b. Culm internodes pubescent.
 - 7a. Culm sheath initially pruinose, coarsely black glandular hairy 4. *S. henryi*
 - 7b. Culm sheath initially not pruinose, purple-brown to yellow-brown setose.
 - 8a. Culm internodes with fine hairs; culm sheath blade glabrous 5. *S. intermedia*
 - 8b. Culm internodes with coarse hairs; culm sheath blade pubescent 6. *S. nephroaurita*

1. *Sinobambusa tootsik* (Makino) Makino, J. Jap. Bot. 2: 8. 1918.

唐竹 tang zhu

Culms 5–12 m, 2–6 cm in diam.; internodes initially deep green, flattened above branches, 30–40(–80) cm, glaucous, glabrous, apically minutely papillate. Culm sheaths initially red-brown, basally suboblong, leathery, slightly glaucous, setose, densely so at base, margins ciliate, apex broadly rounded; auricles very variable, scabrid, tomentose; oral setae curved, ca. 2 cm; ligule arcuate, ca. 4 mm, uniform; blade reflexed, green, lanceolate. Leaves 3–6(–9) per ultimate branch; sheath glabrous; auricles obscure; oral setae deciduous, radiate, ca. 1.5 cm, undulate; ligule truncate or subrounded; blade 6–22 × 1–3.5

cm, secondary veins 4–8-paired, margins serrulate. Spikelets 1–3(–5), lateral spikelets sessile, terminal spikelet on 2–11 mm pedicel, linear, 8–20 × 0.2–0.3 cm; florets 7–12 mm, glabrous. Lemma ovate, ca. 7 mm wide, margins ciliate, apex acute; palea elliptic; lodicules nearly rhombic, elliptic or ovate, ca. 2.5 mm, ciliolate. Anthers light yellow. Ovary glabrous; style 1, extremely short; stigmas 3, 3–4 mm. New shoots Apr–May.

Fujian, Guangdong, Guangxi [N Vietnam; introduced in Japan].

- 1a. Leaf blade abaxially pubescent.
 - 2a. Culm sheath ligule arcuate, 3–4 mm; blade green; lodicule 7–9-veined 1a. var. *tootsik*
 - 2b. Culm sheath ligule truncate, short; blade purple or purple-green; lodicule few

- veined 1b. var. *laeta*
 1b. Leaf blade abaxially glabrous.
 3a. Apex of culm sheath ligule entire
 1c. var. *maeshimana*
 3b. Apex of culm sheath ligule sharply
 toothed or 2-toothed 1d. var. *dentata*

1a. *Sinobambusa tootsik* var. *tootsik*

唐竹(原变种) tang zhu (yuan bian zhong)

Arundinaria tootsik Makino, Bot. Mag. (Tokyo) 19: 63. 1905; *A. dolichantha* Keng; *Neobambos dolichanthus* (Keng) P. C. Keng; *Pleioblastus dolichanthus* (Keng) P. C. Keng; *Semiarundinaria okuboi* Makino; *S. tootsik* (Makino) Muroi.

Culm sheath ligule arcuate, 3–4 mm; blade green. Leaf sheath auricles obscure; oral setae radiate, ca. 1.5 cm, undulate; blade abaxially pubescent. Lodicules with 7–9 veins.

Fujian, Guangdong, Guangxi [N Vietnam; introduced in Japan].

This variety is usually planted as an ornamental. The culms, although fragile, are used for pipes and poles.

1b. *Sinobambusa tootsik* var. *laeta* (McClure) T. H. Wen, J. Bamboo Res. 1(2): 13. 1982.

满山爆竹 man shan bao zhu

Sinobambusa laeta McClure, Lingnan Univ. Sci. Bull. 9: 63. 1940; *Semiarundinaria tootsik* var. *laeta* (McClure) T. H. Wen.

Culm sheath ligule truncate, short; blade purple or purple-green. Leaf sheath auricles and oral setae developed; blade abaxially pubescent. Lodicules with a few vertical veins.

• Fujian, Guangdong.

1c. *Sinobambusa tootsik* var. *maeshimana* Muroi ex Sugimoto, New Keys Jap. Trees: 475. 1961.

光叶唐竹 guang ye tang zhu

Semiarundinaria tenuifolia Koidzumi, Acta Phytotax. Geobot. 11: 314. 1942; *Sinobambusa tootsik* var. *tenuifolia* (Koidzumi) S. Suzuki.

Culm sheath ligule entire at apex. Leaf blade abaxially glabrous.

• Guangxi [cultivated in Japan].

This variety was described from Japanese cultivated material. Wild plants with the same characteristics are known in Guangxi.

1d. *Sinobambusa tootsik* var. *dentata* T. H. Wen, J. Bamboo Res. 1(2): 13, 1982.

火管竹 huo guan zhu

Apex of culm sheath ligule sharply toothed or double-toothed. Leaf blade abaxially glabrous.

• Fujian.

2. *Sinobambusa humilis* McClure, Lingnan Univ. Sci. Bull. 9:

59. 1940 [*"humila"*].

竹子 zhu zi

Culms to 1 m; internodes pale green, grooved above branches, glaucous, glabrous; nodes prominent, densely retrorsely hairy below sheath ring; mid-culm branches 3 per node, base appressed. Culm sheaths ± persistent, base generally reflexed, pale purple, later green, with pale purple apex, proximally densely hairy, abaxially glabrous; auricles brown, falcate, moderately developed, scabrid; oral setae radiate, slender; ligule very short; blade erect, lanceolate, abaxially glabrous, adaxially hispid. Leaves 3 per ultimate branch; sheath glabrous, margins pale ciliolate; auricles generally scabrid or nearly glabrous; oral setae developed, radiate, pale, rigid, glabrous or basally hispid; ligule very short, adaxially hispid; pseudopetiole hispid; blade oblong-lanceolate, 8.7–16.4 × 1–2.4 cm, glabrous or abaxially slightly hairy, base rounded or cuneate, apex acuminate. Flowering branches lateral. Inflorescence paniculate, simple, erect, 2–3 cm with stalk; basal bract persistent. Spikelets 3–5. Rachilla rigid, glabrous. Glumes 4, apex acute or acuminate, abaxial keel glabrous; lemma ca. 8.5 mm, glabrous, margin ciliate, apex acute; palea shorter than lemma, ciliolate, apex obtuse, internal keel nearly appressed, external keel glabrous or subglabrous; lodicules lanceolate, margins ciliolate. Ovary very slender, glabrous; styles 2. Mature fruit deciduous.

• Guangdong.

3. *Sinobambusa farinosa* (McClure) T. H. Wen, J. Bamboo Res. 1(2): 19. 1982.

白皮唐竹 bai pi tang zhu

Semiarundinaria farinosa McClure, Lingnan Univ. Sci. Bull. 9: 45. 1940.

Culms to 7 m, 2–4 cm in diam.; internodes 40–60 cm, initially densely glaucous, persistent below nodes, glabrous, apically minutely papillate; nodes swollen, sheath ring corky, initially yellow-brown setose. Culm sheaths deciduous, initially gray-green, basally suboblong, leathery, densely glaucous, purple-brown setose, densely so at base, sparsely so near apex, margins dark brown ciliate or glabrous, apex broad; auricles nearly erect, dark brown, elliptic or falcate, moderately sized, coarsely hairy; oral setae yellow-brown, to 1.4 cm, fragile, scabrid; ligule arched, short, coarsely hairy, entire, ciliolate; blade lanceolate, green, papery, slightly rugose, glabrous or nearly so, margins serrulate. Leaves 3–6 per ultimate branch; sheath pubescent, soon glabrous; auricles very small; oral setae erect, light yellow, rigid, scabrid at base; ligule short, coarsely hairy; blade lanceolate or oblong-lanceolate, 13–19 × 1.4–2.2 cm, glabrous or abaxially slightly hairy, secondary veins 4–6-paired, sharply pointed. Inflorescence unknown. New shoots May.

• Fujian, Guangdong, Guangxi, Jiangxi, Zhejiang.

4. *Sinobambusa henryi* (McClure) C. D. Chu & C. S. Chao, Acta Phytotax. Sin. 18: 32. 1980.

扛竹 kang zhu

Semiarundinaria henryi McClure, Lingnan Univ. Sci. Bull. 9: 48. 1940; *Sinobambusa nandanensis* T. H. Wen.

Culms 7–13 m, 3–8 cm in diam.; internodes green, 30–60 cm, glaucous below nodes, initially sparsely hairy, papillate; nodes very prominent; sheath ring corky, initially setose. Culm sheaths basally subtriangular, leathery, initially glaucous, setose, coarsely black glandular hairy, margins dark brown ciliate, apex narrow; auricles variable in size, scabrid; oral setae dark brown to yellow-green, rigid; ligule arched, very short, entire, ciliate; blade erect, lanceolate, ca. 1/2 as wide as sheath apex, both surfaces glabrous or scabrid, margins coarsely hairy. Leaves 3–5 per ultimate branch; sheath glabrous or sparsely setose, margins ciliate; auricles fragile, falcate at branchlet base, weak or absent apex; oral setae erect, light yellow; ligule very short, thin, glabrous, sometimes ciliate; blade lanceolate or oblong-lanceolate, 8–15 × 1.5–2.3 cm, secondary veins 4-paired, margins serrulate, sharply pointed. Inflorescence unknown. New shoots Apr–May.

• Guangdong, Guangxi.

5. *Sinobambusa intermedia* McClure, Lingnan Univ. Sci. Bull. 9: 61. 1940.

晾衫竹 liang shan zhu

Arundinaria longifimbriata (S. Y. Chen) T. H. Wen; *A. nanningensis* Q. H. Dai, J. Bamboo Res. 6(3): 35. 1987; *Pleioblastus longifimbriatus* S. Y. Chen.

Culms ca. 5 m, to 2 cm in diam.; internodes green, striate, 50–60 cm, grooved above branches, glaucous below nodes, initially pubescent, scabrid, apically minutely papillate; cavity with granular pith; nodes prominent; sheath ring corky, densely setose. Culm sheaths green when fresh, purple at apex, basally suboblong, sparsely deciduously yellow-brown setose, more densely so proximally, margins ciliate, apex broad; auricles falcate, fragile, scabrid; oral setae erect or radiate, ca. 2 cm, undulate; ligule arched, short, hirsute, sometimes slightly dentate or ciliate; blade erect or deflexed, green with purple apex, narrowly lanceolate, glabrous, apex acuminate. Leaves 3–5 per ultimate branch; sheath glabrous, margins ciliate; auricles obscure or absent, ciliate; ligule truncate or slightly prominent, coarsely hairy; blade broadly lanceolate, 12–22 × 1.3–2.8 cm, base coarsely hairy, margins serrulate. Pseudospikelets to 13 × 0.3 cm; bracts 2–4, pubescent or sometimes glabrous, apex acute. Rachilla glabrous; lemma mucronate at apex; palea shorter than lemma; lodicules 2 or 3, oblong to rhombic, tomentellate, apex ciliate. Anthers yellow. Ovary ovoid, glabrous; style 1, about as long as ovary; stigmas (2 or)3-cleft, sparsely pubescent. New shoots Apr–May.

• Fujian, Guangdong, Guangxi, Sichuan, Yunnan.

6. *Sinobambusa nephroaurita* C. D. Chu & C. S. Chao, Acta Phytotax. Sin. 18: 32. 1980.

肾耳唐竹 shen er tang zhu

Culms 6–8 m, 2–3 cm in diam.; internodes 30–40 cm, thinly glaucous especially below nodes, initially roughly hairy, distally minutely papillate; cavity with slightly granular pith;

nodes prominent; sheath ring corky, initially setose. Culm sheaths green or yellow-brown, basally suboblong, leathery, sparsely setose, apex broad; auricles kidney-shaped to elliptic, 7–8(–15) × 4–5(–9) mm, scabrid; oral setae radiate, 1–1.5 cm; blade usually reflexed or horizontal, lanceolate at culm apex, triangular at mid-culm, pubescent, margins serrulate. Leaves 4–6 per ultimate branch, sheath glabrous, margins ciliate, auricles weak or absent; oral setae erect, ca. 1 cm; ligule truncate or arcuate; very short, blade lanceolate, 11–18 × 1.1–1.6 cm, thin, glabrous, secondary veins 4–6-paired, margins serrulate. Inflorescence unknown. New shoots Apr–May.

• Guangdong, Guangxi, Sichuan.

7. *Sinobambusa rubroligula* McClure, Lingnan Univ. Sci. Bull. 9: 65. 1940.

红舌唐竹 hong she tang zhu

Culms 2–4 m, ca. 1 cm in diam.; internodes gray-green, to 27 cm, initially sometimes sparsely hairy, glaucous below nodes, nearly solid; nodes swollen; sheath ring corky, setose. Culm sheaths green, basally suboblong, glabrous but densely setose at base, margins ciliate, apex broad; auricles absent; oral setae absent or scarce, erect; ligule purple, arcuate, 1–2 mm, scabrid or roughly hairy, uniform, ciliate; blade deciduous, usually reflexed, green but with purple margins and apex, lanceolate, ca. 1/3 as wide as sheath apex, tomentose. Leaves 5–7 per ultimate branch; sheath smooth, glabrous or hirsute, margins ciliate; auricles initially present, developed or weak; oral setae dull brown, ca. 1 cm, undulate; ligule convex, 1–2 mm, hirsute, uniform; blade lanceolate or elliptic-lanceolate, 10–22 × 0.8–2.6 cm, abaxially pubescent, adaxially smooth and glabrous, secondary veins 5- or 6-paired, margins serrulate. Inflorescence unknown. New shoots Apr–May.

• Guangdong, Guangxi, Hainan.

8. *Sinobambusa yixingensis* C. S. Chao & K. S. Xiao, J. Nanjing Inst. Forest. 1985(4): 20. 1985.

宜兴唐竹 yi xing tang zhu

Culms ca. 3 m, ca. 1.7 cm in diam.; internodes 40–70 cm, conspicuously grooved above branches, initially hairy; nodes very prominent, brown hairy below corky ring. Branches 3 per node. Culm sheaths deciduous, green, conspicuously many purple veined, spots absent, not or only thinly glaucous, abaxially deciduously sparsely hispid, basally brown hairy, hairs ca. 3 mm; auricles and oral setae absent; ligule truncate, shortly ciliate; blade deciduous, lanceolate, ca. 2.5 cm. Leaves 3–5 per ultimate branch; sheath glabrous, auricles and oral setae absent; blade oblong-lanceolate, 7–14 × 1.3–2 cm, abaxially white pubescent. Inflorescence unknown. New shoots middle May.

• Jiangsu.

9. *Sinobambusa incana* T. H. Wen, J. Bamboo Res. 1(2): 13. 1982.

毛环唐竹 mao huan tang zhu

Culms internodes flexuose, yellow-green, grooved above branches, glabrous; nodes very prominent, initially pubescent

beneath corky ring. Culm sheaths leathery, initially coarsely yellow-brown setose, with striae later, margins pubescent near base, glossy; auricles weak, brown, scabrid, tomentose; ligule arched, basally densely pubescent, ciliate; blade erect, triangular, ca. 1/3 as wide as sheath apex, glabrous, many veined. Leaves 2–4 per ultimate branch; sheath glabrous, margins ciliate, apically pubescent; auricles obscure, ovate, or absent; oral setae few, curved, 7–8 mm; ligule arcuate, ca. 1 mm, coarsely yellow-brown hairy; blade lanceolate, 5–8 × 0.7–1 cm, glabrous, margins serrulate. Flowering branches lateral. Pseudospikelets 1–3, ca. 9 × 0.2–0.3 cm, bracts 2, prophyll nearly leathery, glabrous, 2-keeled; florets to 11. Rachilla slightly flexuose, glabrous. Lemma glabrous, acute; palea sparsely ciliate, apex rounded; lodicules 3, posterior shorter and thicker, rhomboid. Stamens (2 or)3. Anthers yellow. Ovary glabrous, base constricted into a stalk, 1.5–2 mm; style very short, ca. 0.3 mm; stigmas 3, ca. 3 mm.

- Guangdong.

10. *Sinobambusa dushanensis* (C. D. Chu & J. Q. Zhang) T. H. Wen, *J. Bamboo Res.* 6(3): 33. 1987.

独山唐竹 du shan tang zhu

Arundinaria dushanensis C. D. Chu & J. Q. Zhang, *Bamboo Res.* 1982(1): 1. 1982.

Culms to 10 m tall, 2–5 cm in diam.; internodes initially green, striate, 25–40 cm, papillate below nodes; wall thick; nodes swollen; sheath ring corky, prominent, initially glabrous or setose. Culm sheath yellow-green or brown-yellow, basally subtriangular, leathery, densely setose and papillose at base, margins shortly setose, purplish, apex narrowly constricted, ca. 2 cm wide; auricles elliptic or falcate, 5–9 mm, both surfaces coarsely brown hairy; oral setae 8–15 mm; ligule purple, arched or nearly truncate, 2–3 mm, nearly entire, ciliate; blade deciduous, erect or reflexed, purple-green, striate, lanceolate, 8–11 × ca. 1 cm, scabrid. Leaves 2 or 3 per ultimate branch; sheath glabrous; auricles usually absent, sometimes falcate; oral setae ca. 7 mm, curved; ligule truncate or slightly prominent, 0.5–1 mm, glabrous; blade with 5 pairs of secondary veins, one margin serrulate, other margin entire. Inflorescence unknown. New shoots Apr–May.

- Guizhou.

Flora of China 22: 147. 2006.