

### 33. SHIBATAEA Makino ex Nakai, J. Jap. Bot. 9(2): 83. 1933.

鹅毛竹属 e mao zhu shu

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Shrubby bamboos. Rhizomes leptomorph, with running underground stems. Culms pluricaespitose, less than 1 m, distally flexuose; internodes flattened on branching sides; nodes 2-ridged. Branches 3–5, slender, often without secondary branchlets, usually with persistent membranous prophylls and branch sheaths. Culm sheaths deciduous, papery, transverse veins distinct; auricles absent; ligule well developed; blade lanceolate to subulate, small. Leaves usually solitary on each branchlet; sheaths contiguous with branchlets, thickened, petiole-like, rarely 2 or more with median sheaths exceeding proximal and distal ones; auricles absent; ligule usually long, conical and highly involute in solitary or upper leaves; blade very broadly lanceolate to narrowly lanceolate, transverse veins distinct. Inflorescence bracteate, partially iterant, composed of 1-spikeleted racemes gathered in fascicles with a spatulate prophyll, 0 or 1 empty bract, and 0–3 gemmiferous bracts. Spikelets 2–7-flowered, lower 1 or 2 fertile, upper ones sterile. Glumes usually absent; lemma membranous, broadly lanceolate, apex acuminate; palea 2-keeled; lodicules 3, narrowly obovate, membranous. Stamens 3. Style 1; stigmas 3, plumose. Fruit a caryopsis.

• Seven species: China.

In addition to the species treated below, *Shibataea pygmaea* F. Maekawa (J. Jap. Bot. 19: 150. 1943) was described from Jiangxi. This species was based on abnormal material, and it is difficult to confirm its identity, since no *Shibataea* has been found at the type locality. *Shibataea tumidinoda* T. H. Wen (J. Bamboo Res. 7(1): 23. 1988) was described from Fujian. This species was based on a poor gathering, and its identity is uncertain.

These bamboos are usually cultivated as ornamentals. One species was introduced to Japan at an early date and has been widely planted there.

- 1a. Leaf blade narrowly lanceolate with a long caudate tip, length 6–10 × width.
  - 2a. Culm sheaths glabrous ..... 5. *S. lancifolia*
  - 2b. Culm sheaths initially white pubescent ..... 6. *S. nampingensis*
- 1b. Leaf blade ovate, ovate-lanceolate, or elliptic, length less than ca. 4 × width.
  - 3a. Culm sheaths glabrous.
    - 4a. Leaf blade abaxially pubescent, margins acutely and rigidly serrulate ..... 4. *S. hispida*
    - 4b. Leaf blade abaxially glabrous, margins minutely serrulate ..... 7. *S. chinensis*
  - 3b. Culm sheaths hairy.
    - 5a. Leaf blade abaxially pubescent ..... 1. *S. kumasaca*
    - 5b. Leaf blade abaxially glabrous.
      - 6a. Culm sheaths sparsely brown strigose ..... 2. *S. strigosa*
      - 6b. Culm sheaths densely white pubescent ..... 3. *S. chiangshanensis*

**1. *Shibataea kumasaca*** (Zollinger ex Steudel) Makino ex Nakai, J. Jap. Bot. 9(2): 78. 1933.

矮竹 wo zhu

*Bambusa kumasaca* Zollinger ex Steudel, Syn. Pl. Glumac. 1: 331. 1854; *B. ruscifolia* Siebold ex Munro; *Phyllostachys kumasaca* (Zollinger ex Steudel) Munro; *Shibataea ruscifolia* (Siebold ex Munro) Makino.

Culms ca. 1 m, 3–4 mm in diam.; internodes glossy, glabrous; wall thick with small lumen; nodes with ridge strongly raised; intranode to 3–5 mm. Culm sheaths papery, appressed pubescent, outer margin ciliate; auricles absent; oral setae few or absent; ligule truncate or arcuate, to 3–4 mm, pubescent, apex ciliate; blade lanceolate, small. Branches 3–5 (or 6) per node, 0.5–1.5 cm, equal in diam., 2–4(–6)-noded, axillary prophyll usually persistent; branch sheaths gradually deciduous or persistent and disintegrating in situ, membranous. Leaves 1 (or 2) per ultimate branch; blade adaxially deep green, ovate or narrowly ovate, 2.5–18 × 0.6–3.5 cm, abaxially glaucous and pubescent, adaxially glabrous, secondary veins 6–9-paired, tessellations rectangular, base broadly cuneate to rounded, apex acuminate. Flowering branches at lower nodes of leafy branches or rarely at nodes of culms, usually rebranched,

secondary branches comprising a prophyll, few bracts, and (1 or) 2–5 pseudospikelets; pseudospikelets consisting of a prophyll, 0 or 1 empty bract, 2 or 3 gemmiferous bracts, and a terminal spikelet. Spikelets with 3–7 florets, lower 1–3 bisexual, others male or sterile. Lemma thin; palea membranous; lodicules thinly membranous, ovate. Anthers yellow. Ovary narrowly ovoid; style 1; stigmas 2 or 3. Caryopsis narrowly ovoid. New shoots May–Jun.  $2n = 48^*$ .

• Mountain slopes. Fujian, Zhejiang; cultivated in Anhui, Guangdong, Jiangsu, and Taiwan [widely cultivated in Japan].

The specific epithet has been erroneously spelled “*kumasa*” by some authors.

A cultivar with yellow-striped leaves, *Shibataea kumasaca* ‘Aureostriata’, is grown. The species is introduced in many countries as an ornamental.

**2. *Shibataea strigosa*** T. H. Wen, Bull. Bot. Res., Harbin 3(1): 96. 1983.

矮雷竹 ai lei zhu

Culms ca. 50 cm, ca. 3 mm in diam.; internodes green, glabrous, flattened throughout on one side; nodal ridge strongly elevated. Culm sheaths pale green, sparsely deciduously brown strigose, base and margins glabrous, apex truncate; ligule weak-

ly arcuate or truncate, margin ciliate; blade erect, subulate, small. Branches 3 per node. Leaves 1 per ultimate branch, petiole 3–4 mm; blade ovate-lanceolate to elliptic, 5–7 × 1.5–2 cm, both surfaces glabrous, base rounded, asymmetric, secondary veins 6- or 7-paired, tessellation distinct, apex abruptly acuminate. Inflorescence unknown.

• Jiangxi, Zhejiang.

**3. *Shibataea chiangshanensis*** T. H. Wen, Bull. Bot. Res., Harbin 3(1): 95. 1983.

江山鹅毛竹 *jiang shan e mao zhu*

Culms ca. 50 cm, ca. 2 mm in diam.; internodes initially green, later red-brown, subterete, 7–12 cm, white powdery below nodes, subterete; nodal ridge elevated. Culm sheaths pale red, densely white pubescent, especially at base, margins ciliate; auricles and oral setae absent; ligule truncate, short; blade erect, purple-red, subulate. Branches 3 per node, central one thicker, 2–2.5 cm, lateral two ca. 1/2 as long as central one. Leaves 1 per ultimate branch; pseudopetiole ca. 8 mm; blade ovate to triangular, 6–8 × 1–2.3 cm, broadest near base, both surfaces glabrous, secondary veins 7- or 8-paired, tessellations square, base rounded or subtruncate, apex abruptly acuminate, shortly caudate.

• Zhejiang.

**4. *Shibataea hispida*** McClure, Lingnan Univ. Sci. Bull. 9: 57. 1940.

芦花竹 *lu hua zhu*

Culms ca. 1 m, 1.5–4 mm in diam.; internodes pale yellow, triangular, glossy, glabrous, grooved above branches; cavity small; nodal ridge rather elevated; intranode 2–4 mm. Culm sheaths brown, apex acuminate; auricles and oral setae absent; blade subulate, small. Branches 3 or 4 per node, 2–4-noded; internodes 0.5–1 cm, sparsely hispid. Leaves 1 per ultimate branch; sheath 1–2 cm; ligule short; pseudopetiole 4–8 mm, glabrous or scarcely pubescent; blade abaxially gray-green, adaxially green, lanceolate, 7–10 × 2–3(–4) cm, broadest near base, abaxially pilulose, adaxially glabrous, secondary veins 6–8-paired, tessellation distinct, base suborbicular, margins minutely serrulate, apex abruptly acuminate. Inflorescence unknown.

• Forest margins, open forests, slopes; below 300 m. Anhui, Zhejiang.

**5. *Shibataea lancifolia*** C. H. Hu, J. Nanjing Univ., Nat. Sci. Ed. 1981(2): 257. 1981.

狭叶鹅毛竹 *xia ye e mao zhu*

Culms 45–100 cm, 2–3 mm in diam.; internodes subterete, 3–4 cm, glabrous, grooved above branches; nodal ridge raised. Culm sheaths deciduous, papery, glabrous; auricles and oral setae absent; blade subulate, 3–6 mm. Branches 3–5 per node, 0.8–1.5 cm, 3–5-noded, with persistent prophyll at base; branch sheaths gradually deciduous, membranous; blade small, mucronate. Leaves 1 or 2 per ultimate branch; sheath ca. 2 cm, lower sheath longer than upper in 2-leaved branches; ligule conical, tightly involute, ca. 5 mm and weakly curved in solitary or upper leaves, shorter in lower ones; blade lanceolate, 8–12 ×

0.8–1.5 cm, abaxially pubescent, adaxially glabrous, base cuneate, margins minutely serrulate, apex acuminate, caudate. Flowering branches at lower nodes of leafy branches, sometimes with 2–5 secondary branches, each branch subtended by a large spathe-like bract and with an axillary prophyll and 1–4 pseudospikelets; pseudospikelets linear, 1.5–2 cm, comprising a prophyll, 1–3 gemmiferous bracts or lowest bract empty, and a terminal spikelet. Spikelets with 3–5 florets, lower 1 or 2 fertile, others male or sterile. Lemma pale green, lanceolate, ca. 1.2 cm, thin, 11-veined; palea thinner, about as long as lemma; lodicules membranous, transparent. Anthers yellow. Ovary narrowly ellipsoid; style 1; stigmas 3. Caryopsis narrowly ovoid. New shoots May–Jun, fl. Mar–Apr.  $2n = 48^*$ .

• Montane forests; ca. 500 m. Fujian, Zhejiang.

**6. *Shibataea nanpingensis*** Q. F. Zheng & K. F. Huang, Wuyi Sci. J. 2: 17. 1982 [“*nanpinensis*”].

南平鹅毛竹 *nan ping e mao zhu*

Culms 1–1.7 m, 4–5 mm in diam.; internodes green, terete, or triangular and grooved above branches, 25–30(–40) cm; nodal ridge conspicuously raised; intranode ca. 5 mm. Culm sheaths pale green, densely deciduously white pubescent especially toward base, scabrous between veins; auricles and oral setae absent; ligule convex, 1.5–4 mm, ciliate; blade linear, 3–6 mm, green. Branches 3 per node, 1.5–1.7 cm, 2- to several-noded. Leaves 1 per ultimate branch; blade elliptic-lanceolate, 17–18 × 2.5–3 cm, both surfaces glabrous or abaxially hairy, secondary veins 7–9-paired, base cuneate, margins minutely serrulate, apex caudate-acuminate. Inflorescence unknown. New shoots Jun–Jul.  $2n = 48^*$ .

• Fujian.

- 1a. Leaf blade abaxially glabrous ..... 6a. var. *nanpingensis*  
1b. Leaf blade abaxially hairy ..... 6b. var. *fujianica*

**6a. *Shibataea nanpingensis* var. *nanpingensis***

南平鹅毛竹(原变种) *nan ping e mao zhu* (yuan bian zhong)

Leaf blade glabrous on both surfaces.

• Fujian.

**6b. *Shibataea nanpingensis* var. *fujianica*** (Z. D. Zhu & H. Y. Zhou) C. H. Hu, Fl. Reipubl. Popularis Sin. 9(1): 321. 1996.

福建鹅毛竹 *fu jian e mao zhu*

*Shibataea fujianica* Z. D. Zhu & H. Y. Zhao, Acta Phytotax. Sin. 26: 134. 1988.

Leaf blade abaxially hairy.

- Fujian.

**7. *Shibataea chinensis*** Nakai, J. Jap. Bot. 9: 81. 1933.

鹅毛竹 e mao zhu

Culms ca. 1 m, 2–3 mm in diam.; internodes pale green or tinged with purple, triangular, 7–15 cm, glabrous, grooved above branches; nodal ridge rather raised. Culm sheaths deciduous, unmarked, papery, glabrous or basally setulose, margins ciliate; auricles and oral setae absent; ligule to 4 mm, blade small, subulate or acicular in lower sheaths. Branches 3–5 per node, 3–5-noded, with a lateral bud, each branch with a gradually deciduous prophyll and some branch sheaths, prophyll 3–5 cm, membranous, margins ciliate. Leaves 1(or 2) per ultimate branch; sheath glabrous; auricles and oral setae absent; ligule lanceolate or triangular, 4–6 mm or more, conically tightly involute, or loose in lower leaf of 2-leaved branch, membranous, puberulent; blade ovate-lanceolate, 6–10 × 1–2.5 cm, both surfaces glabrous, secondary veins 5–8(or 9)-paired, tessellations distinct, base asymmetric, margins minutely serrulate, apex acuminate. New shoots May–Jun.

• Mountain slopes, forests, forest margins, in cultivation; ca. 1100 m. Anhui, Jiangsu, Jiangxi, Zhejiang.

- 1a. Culm sheaths basally glabrous; blade subulate ..... 7a. var. *chinensis*  
1b. Culm sheaths basally setulose; blade minute, awnlike ..... 7b. var. *gracilis*

**7a. *Shibataea chinensis* var. *chinensis***

鹅毛竹(原变种) e mao zhu (yuan bian zhong)

Culms taller. Culm sheaths basally glabrous. Leaf blade completely green.

• Mountain slopes, forest margins, forests, commonly cultivated as an ornamental; ca. 1100 m. Anhui, Jiangsu, Jiangxi.

**7b. *Shibataea chinensis* var. *gracilis*** C. H. Hu, J. Nanjing Univ., Nat. Sci. Ed. 1982(3): 733. 1982.

细鹅毛竹 xi e mao zhu

Culms smaller. Culm sheaths basally setulose; blade slender, awnlike.

- Jiangsu, Zhejiang.

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