

202. **CAPILLIPEDIUM** Stapf in Prain, Fl. Trop. Africa 9: 169. 1917.

细柄草属 xi bing cao shu

Chen Shouliang (陈守良); Sylvia M. Phillips

Perennial or annual. Culms erect, decumbent or rambling. Leaf blades linear, sometimes aromatic; ligule membranous, margin ciliate. Inflorescence a terminal open panicle with elongate central axis; branches capillary, subdivided, each branchlet tipped by a short raceme; racemes with 1–5(–8) spikelet pairs, often reduced to triads of 1 sessile and 2 pedicelled spikelets, basal homogamous spikelet pairs absent; rachis internodes and pedicels slender, with a median translucent stripe between thickened margins. Sessile spikelet dorsally compressed; callus very short, obtuse, shortly bearded; lower glume cartilaginous, broadly convex to slightly concave, flanks rounded, keeled toward apex, apex acute to obtuse; upper glume boat-shaped, dorsally keeled; lower floret reduced to a small empty hyaline lemma; upper lemma stipitiform, entire, awned from apex; awn geniculate, glabrous or puberulous. Pedicelled spikelet male or barren, similar to the sessile or smaller, herbaceous.

About 14 species: E Africa, tropical Asia, Australia; five species (one endemic) in China.

This homogeneous genus is distinguished from *Bothriochloa* by the combination of an elongate inflorescence and few-spiculate racemes.

- 1a. Sessile spikelet 2.6–3 mm.
  - 2a. Culms woody, 1.5–3.5 m tall; pedicelled spikelet 1/2–2 times longer than sessile spikelet ..... 1. *C. assimile*
  - 2b. Culms herbaceous, 0.5–1.1 m tall; pedicelled spikelet equal to sessile spikelet or slightly longer ..... 2. *C. kuoi*
- 1b. Sessile spikelet 3–3.8 mm.
  - 3a. Culms up to 30 cm, much branched; nodes glabrous; leaf blades 6–10 cm; lower glume of sessile spikelet acute or bidentate ..... 3. *C. kwashotense*
  - 3b. Culms up to 120 cm, not or little branched; nodes bearded; leaf blades 15–30 cm; lower glume of sessile spikelet obtuse.
    - 4a. Racemes 1(–3)-noded, with 1(–3) sessile spikelets; lower glume of sessile spikelet 2-veined and channeled on back ..... 4. *C. parviflorum*
    - 4b. Racemes 3–8-noded, with more than 3 sessile spikelets; lower glume of sessile spikelet often 4–5-veined and flat on back ..... 5. *C. spicigerum*

1. **Capillipedium assimile** (Steudel) A. Camus in Lecomte, Fl. Indo-Chine 7: 314. 1922.

硬秆子草 ying gan zi cao

*Andropogon assimilis* Steudel, Syn. Pl. Glumac. 1: 397. 1854; *A. glaucopsis* Steudel; *A. subrepens* Steudel; *Bothriochloa assimilis* (Steudel) Ohwi; *B. picta* Ohwi; *Capillipedium glaucopsis* (Steudel) Stapf; *Dichanthium assimile* (Steudel) Deshpande.

Perennial, often straggling. Culms decumbent and rooting at base, woody, 1.5–3.5 m tall, 1.5–5 mm in diam., fastigiate branched, nodes glabrous or pubescent. Leaf sheaths glabrous, bearded at mouth; leaf blades linear-lanceolate, 6–15 × 0.3–0.6 cm, glabrous or hispidulous, base tapering, apex setaceous acuminate; ligule ca. 0.7 mm. Panicle pyramidal, 5–12 × ca. 4 cm; branches pilose in axils; racemes composed of triads, sometimes with 1 or 2 additional spikelet pairs, greenish or pinkish; rachis internodes and pedicels long ciliate. Sessile spikelet 2.1–2.9 mm; lower glume elliptic-oblong or lanceolate, back 2–5-veined, slightly convex, glossy, glabrous or hispidulous, upper margins keeled, ciliate-hispid; upper glume ciliate along margins; awn of upper lemma 0.6–1.5 cm. Pedicelled spikelet linear-lanceolate, up to twice length of sessile spikelet. Fl. and fr. Aug–Dec. 2n = 40.

Streams, forests, or mountain slopes. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Hubei, Hunan, Jiangxi, Shandong, Si-

chuan, Taiwan, Xizang, Yunnan, Zhejiang [Bangladesh, Bhutan, India, Indonesia, Japan, Malaysia, Myanmar, Nepal, Thailand, Vietnam].

This grass is said to have the appearance of a small bamboo. It differs from the other common species, *Capillipedium parviflorum*, by its taller, woody, fasciculately branching culms, shorter leaf blades with narrowed base, smaller sessile spikelets, and pedicels ciliate along the length of both margins.

2. **Capillipedium kuoi** L. B. Cai, Acta Biol. Plateau Sin. 12: 34. 1994.

郭氏细柄草 guo shi xi bing cao

Perennial, loosely tufted. Culms erect or geniculate at base, herbaceous, 50–110 cm tall, 1.5–2.3 mm in diam., few branched, nodes pubescent. Leaf sheaths glabrous or sparsely tuberculate-hairy; leaf blades linear, 10–20 × 0.5–0.8 cm, adaxial surface scabrid or hispid at base, abaxial surface glabrous or sparsely pubescent; ligule ca. 1.6 mm. Panicle ovate in outline, 10–18 cm; branches pilose in axils; racemes composed of 1–3 spikelet pairs and a terminal triad; rachis internodes and pedicels ciliate. Sessile spikelet ca. 3 mm; lower glume elliptic-lanceolate, back 4–6-veined, slightly sulcate, pilose, margins keeled, thinly ciliate, apex denticulate; upper glume glabrous; awn of upper lemma 0.8–1.2 cm. Pedicelled spikelet equal to or slightly longer than sessile spikelet. Fl. and fr. Jun–Oct.

• Moist roadside thickets, ditch banks; 600–1900 m. SW Sichuan, SE Xizang, NW Yunnan.

**3. *Capillipedium kwashotense*** (Hayata) C. C. Hsu, J. Jap. Bot. 37: 280. 1962.

绿岛细柄草 lü dao xi bing cao

*Andropogon kwashotensis* Hayata, Icon. Pl. Formosan. 7: 80. 1918; *Bothriochloa kwashotensis* (Hayata) Ohwi.

Perennial, rhizomatous. Culms solitary or tufted, hard, 15–30 cm tall, ca. 1 mm in diam., much branched above base, nodes glabrous. Leaf sheaths glabrous; leaf blades linear-lanceolate, 6–11 × 0.3–0.5 cm, glabrous, long tubercle-based bristles above ligule, apex setaceously acuminate; ligule ca. 1 mm. Panicle small, elliptic in outline, 4–8 cm; branches simple or little branched; racemes composed of 3–4 spikelet pairs below the terminal triad, straw-colored; rachis internodes and pedicels long ciliate. Sessile spikelet 3–3.8 mm; lower glume narrowly lanceolate-oblong, back 5–7-veined, flat, not glossy, scaberulous on veins, margins keeled and scabrid above middle, apex acute or bidentate; upper glume scabrid on upper keel; awn of upper lemma 1–1.6 cm. Pedicelled spikelet resembling the sessile, staminate. Fl. and fr. autumn.  $2n = 40^*$ .

Cliffs and slopes near the sea. Taiwan [Japan (Iriomote Island in S Ryukyu Islands)].

This nearly endemic species is apparently confined to the eastern coast of Taiwan and a few offshore islands, where it is locally abundant and used for forage. It can withstand salt water.

**4. *Capillipedium parviflorum*** (R. Brown) Stapf in Prain, Fl. Trop. Africa 9: 169. 1917.

细柄草 xi bing cao

*Holcus parviflorus* R. Brown, Prodr. 199. 1810; *Andropogon cinctus* Steudel; *Bothriochloa parviflora* (R. Brown) Ohwi; *Chrysopogon pictus* Hance.

Perennial. Culms tufted, 50–120 cm tall, 0.5–2 mm in diam., not or little branched, nodes bearded. Leaf sheaths glabrous or pilose, ciliate at mouth; leaf blades 15–30 × 0.3–0.8 cm, scaberulous or pubescent, usually hispid with tubercle-based hairs toward base, base rounded, apex acuminate; ligule 0.5–1 mm. Panicle oblong in outline, 9–20 × 2–5 cm; branches untidily flexuous, pilose in axils; racemes usually composed of triads, occasionally with 1–2 additional spikelet pairs, purple; rachis internodes and pedicels shortly ciliate at base. Sessile spikelet 3–4 mm; lower glume oblong-lanceolate, slightly glossy, back 2-veined, shallowly concave between veins, hispidulous, margins keeled, pectinate-ciliate above middle, apex narrowly obtuse; upper glume ciliate along upper margins; awn of upper lemma 1–1.5 cm. Pedicelled spikelet equaling the sessile and often staminate, or smaller and barren. Fl. and fr. Aug–Dec.  $2n = 20, 40, 60$ .

Mountain slopes, streams. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Shaanxi, Shandong, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, India, Indonesia, Japan, Myanmar, Nepal, New Guinea, Pakistan, Philippines, Thailand; Africa, SW Asia, Australia].

*Capillipedium parviflorum* introgresses with *C. assimile* at the tetraploid level where both species are sympatric, resulting in apomictic hybrids. Tetraploid *C. parviflorum* also introgresses extensively with

tetraploid *Bothriochloa bladhii*, likewise forming apomictic, hybrid races that cause much taxonomic difficulty. The name *B. glabra* has been applied to these hybrids.

**5. *Capillipedium spicigerum*** S. T. Blake, Pap. Dept. Biol. Univ. Queensland 2(3): 43. 1944.

多节细柄草 duo jie xi bing cao

*Andropogon micranthus* Kunth var. *spicigerus* (Bentham) Hackel; *A. parviflorus* Roxburgh var. *spicigerus* (Bentham)

Domin; *A. spicigerus* (S. T. Blake) Reeder; *Bothriochloa spicigera* (Bentham) T. Koyama; *Capillipedium parviflorum* (R. Brown) Stapf var. *spicigerum* (Bentham) C. Hsu; *Chrysopogon parviflorus* (R. Brown) Bentham var. *spicigerus* Bentham.

Perennial. Culms tufted, up to 150 cm tall, unbranched, nodes bearded. Leaf sheaths usually pilose, ciliate at mouth; leaf blades 15–40 × 0.5–0.8 cm, scaberulous or pubescent, usually hispid with tubercle-based hairs toward base, base rounded, apex acuminate; ligule 0.5–1 mm. Panicle oblong-ovate in outline, 10–18 × 5–8 cm; branches untidily flexuous, pilose in axils; racemes composed of 3–7 spikelet pairs below the terminal triad, purple; rachis internodes and pedicels ciliate. Sessile spikelet 3–4 mm; lower glume oblong-lanceolate, slightly glossy, back 4–5-veined, scarcely depressed along midline, sparsely hispidulous, margins keeled, pectinate-ciliate above middle, apex narrowly obtuse; upper glume ciliate along upper margins; awn of upper lemma 1.2–1.8 cm. Pedicelled spikelet equaling the sessile and often staminate, or smaller and barren. Fl. and fr. autumn.  $2n = 40$ .

Mountain slopes. Hong Kong, Taiwan, Zhejiang [Indonesia, Japan (Ryukyu Islands), Philippines; Australia].

This species is thought to have arisen by hybridization between *Capillipedium parviflorum* and *Bothriochloa bladhii*, resulting in intermediates with several spikelet pairs per raceme. It tends to be slightly more robust than *C. parviflorum*.

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