

89. POLYPOGON Desfontaines, Fl. Atlant. 1: 66. 1798.

棒头草属 bang tou cao shu

Lu Shenglian (卢生莲); Sylvia M. Phillips

Annual or perennial. Leaf blades linear, flat; ligule membranous. Panicle contracted to dense and spikelike, often bristly with numerous small deciduous spikelets. Spikelets with 1 floret, laterally compressed, without rachilla extension, falling entire, pedicel or upper part of it articulated and remaining attached to spikelet as a stipe; glumes equal, longer than floret, papery, scabrid, 1-veined, apex entire to 2-lobed, often with slender awn from apex; lemma about 1/2 as long as glumes, rounded, thin, smooth, shiny, obscurely 5-veined, veins usually shortly excurrent from truncate apex, awnless or with fine subapical awnlet or geniculate dorsal awn; palea 1/2 as long to equaling lemma. Stamens 1–3.

Twenty-five species: warm-temperate regions of the world and on tropical mountains, especially in damp places; six species (one endemic) in China.

Polygogon is closely related to *Agrostis*, with which it hybridizes. It is distinguished mainly by its deciduous spikelets falling with a slender, basal stipe attached.

1a. Glumes awnless.

2a. Spikelets 1.5–2.5 mm; palea almost as long as lemma; anthers 0.5–0.7 mm 1. *P. viridis*

2b. Spikelets 3–4 mm; palea 2/3 lemma length; anthers 1–1.5 mm 2. *P. hissaricus*

1b. Glumes awned.

3a. Awn of glumes shorter than or up to 1.5 times as long as glume body.

4a. Panicle very dense; spikelet stalks short, the longest articulated much above their base; palea almost as long as lemma 3. *P. fugax*

4b. Panicle lax; spikelet stalks long, all articulated only at their base; palea 2/3 lemma length 4. *P. ivanovae*

3b. Awn of glumes 2.5–4 times as long as glume body.

5a. Glumes emarginate; lemma with 1.5–2 mm awn 5. *P. monspeliensis*

5b. Glumes deeply 2-lobed; lemma awnless 6. *P. maritimus*

1. *Polygogon viridis* (Gouan) Breistroffer, Bull. Soc. Bot. France 110(89 Sess. Extraord.): 56. 1966.

苔绿棒头草 tai lu bang tou cao

Agrostis viridis Gouan, Hortus Regius Monspeliensis: 546. 1762; *Agrostis semiverticillata* (Forsskål) C. Christensen; *Phalaris verticillata* Forsskål; *Polygogon semiverticillatus* (Forsskål) Hylander.

Perennial, stoloniferous; stolons slender, spreading, rooting at nodes. Culms geniculately ascending, 20–100 cm tall. Leaf blades linear, flat, 3–12 cm, 2–8 mm wide, scaberulous on both surfaces, apex acute; ligule 2–5 mm. Panicle contracted, lanceolate to oblong, lobed and often interrupted, 5–15 cm; branches semiverticillate, ascending, bearing densely clustered spikelets. Spikelets narrowly oblong, 1.5–2.5 mm; glumes narrowly elliptic-oblong, scabrid, lightly keeled upward, apex obtuse, awnless; lemma broadly elliptic, ca. 1 mm, awnless, apex truncate, minutely denticulate; palea almost as long as lemma. Stamens 3, anthers 0.4–0.7 mm. Caryopsis oblong, ca. 1 mm.

Aquatic grass rooting in sand and mud of streams, marshy grasslands; ca. 2600 m. Yunnan [Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, Uzbekistan; N Africa, SW Asia, S Europe, NW India; introduced in S Africa, America, Australia].

2. *Polygogon hissaricus* (Roshevitz) Bor in K. H. Rechinger, Fl. Iran. 70: 307. 1970.

糙毛棒头草 cao mao bang tou cao

Agrostis hissarica Roshevitz, Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR 4: 93. 1923; *A. hissarica* subsp. *pamirica* (Ovczinnikov) Tzvelev; *A. pamirica* Ovczinnikov; *A. stewartii* Bor; *A. tianschanica* Pavlov.

Perennial. Culms erect or procumbent and rooting from lower nodes, 60–110 cm tall. Leaf blades linear, flat, 7–25 cm, 3–7.5 mm wide, scabrid on both surfaces, apex acute; ligule 3–6 mm. Panicle lanceolate to narrowly lanceolate, lobed, rather dense or sometimes loose, 10–20 cm; branches subverticillate, densely spinulose. Spikelets lanceolate, 3–4 mm; glumes oblong, scabrid or shortly bristly, apex acute, awnless; lemma 2–2.5 mm, apex obtuse or with deciduous awnlet up to 1.5 mm; palea 2/3 as long as lemma. Stamens 3, anthers 1–1.5 mm.

Wet meadows in river valleys; 2000–3000 m. Xinjiang [Afghanistan, SE Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Uzbekistan; SW Asia (NE Iran)].

3. *Polygogon fugax* Nees ex Steudel, Syn. Pl. Glumac. 1: 184. 1854.

棒头草 bang tou cao

Nowodworskya fugax (Nees ex Steudel) Nevski; *Polygogon demissus* Steudel; *P. higegaweri* Steudel; *P. littoralis* var. *higegaweri* (Steudel) J. D. Hooker.

Annual, tufted. Culms geniculate, sometimes trailing and rooting at lower nodes, 10–75 cm tall. Leaf blades linear or broadly linear, 2.5–15 cm, 3–10 mm wide, scabrid or adaxial surface smooth, apex acute; ligule 3–8 mm. Panicle densely

cylindrical, slightly lobed, or looser and narrowly ovate, 4–15 cm, pale green or flushed purple; branches narrowly ascending, up to 4 cm, bearing densely clustered spikelets. Spikelets narrowly oblong, 2–2.5 mm; glumes narrowly oblong, puberulous, vein scabrid-aculeate, margins shortly ciliate in lower half, apex emarginate, awned from sinus; awn shorter than or up to 1.5 times as long as glume body; lemma elliptic, 1–1.2 mm, apex slightly 4-toothed, midvein extended into a fine, straight, ca. 2 mm awn; palea as long as lemma. Stamens 3, anthers ca. 0.7 mm. Caryopsis elliptic, ca. 1 mm. Fl. and fr. Apr–Sep.

Moist places, near farmlands; 100–3600 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Henan, Hubei, Jiangsu, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xinjiang, Xizang, Yunnan, Zhejiang [Bhutan, N India, Japan, Kazakhstan, Korea, Kyrgyzstan, Myanmar, Nepal, Pakistan, Russia, Tajikistan, Turkmenistan, Uzbekistan; SW Asia; introduced elsewhere].

The names *Polypogon littoralis* Smith and *P. lutosus* (Poiret) Hitchcock have both been misapplied to this species. They are in fact synonyms of *Agropogon lutosus*.

4. *Polypogon ivanovae* Tzvelev, Rast. Tsentr. Azii 4: 72. 1968.

伊凡棒头草 yi fan bang tou cao

Perennial, forming small loose tufts. Culms geniculate ascending, 8–20 cm, scaberulous below panicle. Leaf blades linear, flat or folded, 3–20 cm × 0.8–2.5 mm wide, scabrid on both surfaces; ligule 2–4.5 mm. Panicle narrow, fairly lax, 2.5–7 cm; tinged pinkish violet; branches short, scabrid. Spikelets 2.2–2.8 mm; glumes oblong, scabrid, apex obtuse, awned, awn straight, 0.5–2 mm; lemma ovate, 1.4–1.8 mm, apex aristulate-denticulate, midvein extended into a straight or curved 2.3–3.5 mm awn; palea 2/3 lemma length. Stamens 3, anthers 0.5–0.8 mm. Fl. Jun.

• Wet valley arable land, flooded meadows; 1300–1700 m. Xinjiang (Kunlun Shan).

5. *Polypogon monspeliensis* (Linnaeus) Desfontaines, Fl. Atlant. 1: 67. 1798.

长芒棒头草 chang mang bang tou cao

Alopecurus monspeliensis Linnaeus, Sp. Pl. 1: 61. 1753.

Annual, tufted. Culms erect or geniculate, up to 60 cm tall. Leaf blades narrowly to broadly linear, 2–13 cm, 2–9 mm wide, adaxial surface and margins scabrid, abaxial surface smooth, apex acute; ligule 2–8 mm. Panicle narrowly oblong in outline, dense, spikelike, sometimes slightly lobed, 1–10 cm, pale green, thickly clothed in yellow bristles. Spikelets narrowly oblong, 1.5–2.5 mm; glumes narrowly obovate-oblong, puberulous, vein scabrid-aculeate, margins ciliate, apex emarginate, apex of lobes slightly acute, awned from sinus; awn 2.5–4 times as long as glume body; lemma obovate, 1–1.2 mm, apex slightly 4-toothed, midvein extended into a fine, straight, readily deciduous, 1.5–2 mm awn; palea as long as lemma. Stamens 3, anthers ca. 0.8 mm. Caryopsis obovate-oblong, ca. 1 mm. Fl. and fr. May–Oct.

Moist places, streamsides; below 3000 m. Anhui, Fujian, Gansu,

Guangdong, Hebei, Henan, Jiangsu, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xinjiang, Xizang, Yunnan, Zhejiang [India, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Russia, Tajikistan, Turkmenistan, Uzbekistan; N and S Africa, SW Asia (Caucasus), Europe].

This is a widely introduced weed naturalized in most warm-temperate regions.

6. *Polypogon maritimus* Willdenow, Ges. Naturf. Freunde Berlin Neue Schriften 3: 442. 1801.

裂颖棒头草 lie ying bang tou cao

Annual, tufted. Culms erect or geniculate, up to 35 cm tall. Leaf sheaths scabrid, uppermost slightly inflated; ligule 1–6 mm, apex irregularly toothed; leaf blades linear, 5–10 cm, 1–5 mm wide, both surfaces scabrid, apex acuminate. Panicle dense, spikelike, sometimes lobed, 5–7 cm, often purple tinged. Spikelets 2–3 mm, yellowish green; glumes obovate-oblong, hispid, margins ciliate, apex deeply 2-lobed, lobes obtuse, awned from sinus; awn 6–7 mm; lemma 1–1.2 mm, awnless; palea as long as lemma. Stamens 3, anthers 0.3–0.4 mm. Caryopsis obovate-oblong, 0.7–0.9 mm. Fl. and fr. Jun–Aug.

Moist grassland on mountain slopes, marshy meadows; 400–3300 m. Xinjiang [Kazakhstan, Kyrgyzstan, Mongolia, Russia, Turkmenistan, Uzbekistan; N Africa, SW Asia, Europe; introduced in North America].

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