

### 123. ENNEAPOGON Desvaux ex P. Beauvois, Ess. Agrostogr. 81. 1812.

九顶草属 *jiu ding cao shu*

Perennial or sometimes annual. Culms tufted. Leaf blades usually narrow, often convolute. Panicle contracted, sometimes spikelike or capitate. Spikelets with 2–3(–6) florets, lowermost floret bisexual, second floret smaller, usually staminate, remaining florets reduced to barren lemmas forming a brushlike apical clump; glumes lanceolate, unequal with the upper longer, 1- to several-veined; lemmas papery to leathery, smooth or ribbed, villous below middle, veins extended into 7–9 awns forming a circlet around top of lemma; awns stout and ciliate for much of their length, slender and scaberulous toward tips.

Twenty-eight species: tropics and subtropics, especially Africa and Australia, extending to temperate E Asia; two species in China.

- 1a. Third lemma vestigial, 0.5–3 mm including awns; basal sheaths enclosing cleistogamous spikelets ..... 1. *E. desvauxii*  
1b. Third lemma sterile but well developed, 4–10 mm including awns; basal sheaths lacking cleistogamous spikelets .. 2. *E. persicus*

**1. *Enneapogon desvauxii*** P. Beauvois, Ess. Agrostogr. 82. 1812.

九顶草 *jiu ding cao*

*Enneapogon borealis* (Grisebach) Honda; *E. brachystachyus* (Jaubert & Spach) Stapf; *E. desvauxii* subsp. *borealis* (Grisebach) Tzvelev; *E. jinjiangensis* B. S. Sun & S. Wang; *Pappophorum boreale* Grisebach; *P. brachystachyum* Jaubert & Spach.

Perennial. Culms densely tufted, wiry, usually geniculate at base, 5–35 cm tall, pubescent. Basal leaf sheaths tough, whitish, enclosing cleistogamous spikelets, finally becoming fibrous; leaf blades usually involute, filiform, 2–12 cm, 1–3 mm wide, densely pubescent or the abaxial surface with longer white soft hairs, finely acuminate. Panicle gray, dense, spike-like, linear to ovate, 1.5–5 × 0.6–1 cm. Spikelets with 3 florets, 5.5–7 mm; glumes pubescent, 3–9-veined, lower glume 3–3.5 mm, upper glume 4–5 mm; lowest lemma 1.5–2 mm, densely villous; awns 2–4 mm, subequal, ciliate in lower 2/3 of their length; third lemma 0.5–3 mm, reduced to a small tuft of awns. Anthers 0.3–0.6 mm. Fl. and fr. Aug–Nov.  $2n = 36$ .

Dry hill slopes; 1000–1900 m. Anhui, Hebei, Liaoning, Nei Mongol, Ningxia, Qinghai, Shanxi, Xinjiang, Yunnan [India, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, E Russia; Africa, America, SW Asia].

This species is one of the most widespread in the genus and is the only one to develop cleistogamous spikelets within the basal leaf sheaths. Mature grains can often be found at the base of the plant.

**2. *Enneapogon persicus*** Boissier, Diagn. Pl. Orient., ser. 1, 5: 71. 1844.

波斯九顶草 *bo si jiu ding cao*

*Enneapogon schimperianus* (A. Richard) Renvoize; *Pappophorum aucheri* Jaubert & Spach; *P. persicum* (Boissier) Steudel; *P. schimperianum* Hochstetter ex A. Richard; *P. turcomanicum* Trautvetter.

Perennial. Culms compactly tufted, wiry, erect or geniculate, 15–45 cm tall, pubescent especially below nodes. Basal leaf sheaths tough, lacking cleistogamous spikelets, not becoming fibrous; leaf blades usually involute, rarely flat, often diverging at a wide angle from the culm, 3–17 cm, 3–4 mm wide, pubescent, acuminate. Panicle olive-gray or tinged purplish, contracted to spikelike, narrowly oblong, 4–18 × 1–2 cm. Spikelets with 3 or 4 florets, 8–14 mm; glumes puberulous, (5–) 7–9-veined, lower glume 5–10 mm, upper glume 7–11 mm; lowest lemma 2–3.2 mm, shortly villous; awns 4.5–7 mm, unequal with 4 shorter, ciliate in lower 2/3–3/4 of their length; third lemma sterile but well developed, 3–5 mm (including awns); fourth lemma vestigial or absent. Anthers 0.5–1.3 mm. Fl. May.  $2n = 20$ .

Dry, stony or sandy soils. Xinjiang [Afghanistan, NW India, Pakistan, Tajikistan, Turkmenistan, Uzbekistan; NE Africa, SW Asia].

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