

**53. ORTHORAPHIUM** Nees, Proc. Linn. Soc. London 1: 94. 1841.

直芒草属 zhi mang cao shu

*Stipa* sect. *Orthoraphium* (Nees) Hackel.

Perennial. Leaf blades narrowly linear. Inflorescence a narrow panicle; branches erect. Spikelets with 1 floret, bisexual, disarticulating above glumes; rachilla extension absent; glumes lanceolate-oblong, unequal with upper longer, thinly papery, 3–5-veined, apex acute or obtuse; callus obtuse, shortly bearded; lemma narrowly lanceolate, slightly dorsally flattened, firmly papery, pilose, margins overlapping only toward apex, apex narrowed to cylindrical beak slightly exceeding upper glume and bearing 2 to several stout retrorse spines; awn persistent, almost straight, hispid at base, otherwise scabrid; palea exposed between lemma margins. Lodicules 3. Stamens 3, anthers glabrous. Stigmas 2.

One species: outer ranges of the Himalayas, including China.

**1. *Orthoraphium roylei*** Nees, Proc. Linn. Soc. London 1: 94. 1841.

Sichuan, Xizang, Yunnan [Bhutan, N India, Kashmir, N Myanmar, Nepal].

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The long, retrorse spines at the lemma apex are an unmistakable distinguishing feature of this species.

*Stipa roylei* (Nees) Duthie.

Loosely tufted, shortly rhizomatous. Culms 40–60 cm tall, 3–5-noded. Leaf sheaths glabrous, mostly longer than internodes; leaf blades flat (inrolled when dry), 15–30 cm, 2–3 mm wide, abaxial surface smooth, scabrid toward apex, adaxial surface pubescent; ligule oblong-lanceolate, up to 5 mm. Panicle linear, 10–20 cm; branches single or lower paired, up to 7 cm, smooth. Spikelets green or tinged purplish; lower glume 5–8 mm, upper glume 7–11 mm, smooth; callus 0.5–0.7 mm; lemma 9–10 mm, loosely pubescent in lower 1/4–1/2; awn 1.3–1.7 cm, stiffly hispid at base, hairs 0.5–0.8 mm, scabrid above. Anthers 2–3 mm. Fl. and fr. Aug–Oct.

Open grassy mountainsides, forest clearings; 2700 m and above.

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