**70. COLPODIUM** Trinius, Fund. Agrost. 119. 1822.

*Colpodium* species usually occur on high mountains. They often resemble *Poa* morphologically, but can be distinguished by the thinner lemmas with veinless tips and smooth palea keels. Species with long glumes, a single floret, and 3-veined lemmas are not easily recognizable as members of tribe *Pooae*.

1a. Spikelet with 2–4 florets; plant densely tufted; culms tuberously thickened at base ....................................................... 1. *C. humile*

1b. Spikelet with 1 floret; plant shortly rhizomatous; culms not tuberously thickened.

2a. Glumes equaling or longer than floret, lanceolate.

3a. Leaf blades 3–4 mm wide; panicle branches bearing 3–4 clustered spikelets; lemma veins densely pilose below middle ........................................................................................................ 2. *C. tibeticum*

3b. Leaf blades 1–2 mm wide; panicle branches capillary, mostly with a single spikelet; lemma veins shortly pubescent below middle ............................................................................... 3. *C. wallichii*

2b. Glumes shorter than floret, at least the lower, oblong-lanceolate or ovate-lanceolate.

4a. Leaf blades green, 2–5 mm wide; panicle contracted, lower branches spreading; spikelets usually purple ................................................................. 4. *C. altaicum*

4b. Leaf blades glaucous, 1–3 mm wide; panicle very narrow, branches suberect to appressed; spikelets usually whitish green ................................................. 5. *C. leucolepis*

---

1. **Colpodium humile** (M. Bieberstein) Grisebach in Ledebour, Fl. Ross. 4. 384. 1852 ["1853"].

Aira humilis M. Bieberstein, Fl. Taur.-Caucas. 1: 57. 1808; *Catabrosa humilis* (M. Bieberstein) Trinius; *Catabrosella humilis* (M. Bieberstein) Tzvelev; *Colpodium humile* subsp. *songorica* Tzvelev; *C. songorica* (Tzvelev) Czerepanov.

Perennial, densely tufted; roots hairy. Culms tuberously thickened at base, clothed in fibrous sheath remnants, erect or geniculate at lowest node, 10–30 cm tall, 2–3-noded. Leaf sheaths closed in lower 1/6; leaf blades usually flat, 1–6 cm × 1–2 mm, glabrous; ligule 1–2 mm. Panicle pyramidal, open, 3.5–7 × 2–5 cm; branches 2–6 per node, ascending or spreading, smooth. Spikelets 3–5 mm, florets 2–3(–4), purplish brown or purplish green; glumes shorter than spikelet, unequal, lower glume ovate, 1.5–2 mm, upper glume broadly ovate, 2–2.3 mm, acute; lemmas ovate-oblong, 2.5–3 mm, keel and marginal veins densely silky villous below middle, intermediate veins inconspicuous or absent, apex truncate-erose; palea keels densely silky villous below middle; rachilla extension 0.3–0.8 mm. Stamens 3; anthers 1.5–1.8 mm. Fl. Apr–Jun. 2n = 10.

---

Sandy steppe, mountain valleys, roadsides; 400–1700 m. Xinjiang [Kazakhstan, Kyrgyzstan, Russia, N Uzbekistan; SW Asia (Caucasus, N Iran)].

This is a rather widespread species showing variation over its range, especially in lemma hairiness and venation, and several subspecies have been described. The Chinese material, with mainly 3-veined lemmas, and any weak intermediate veins glabrous, corresponds to *Catabrosella humilis* subsp. *songorica*. Typical *Colpodium humile* has distinctly 5-veined lemmas densely pilose on the proximal part of all veins.


Paracolpodium tibeticum (Bor) E. B. Alexeev.

Perennial, shortly rhizomatous. Culms erect, 12–21 cm tall, 2–3-noded. Leaf sheaths slightly inflated, longer than internodes, purple at blade junction, old basal sheaths becoming fibrous; leaf blades folded or lower flat, up to 7 cm × 3–4 mm, glabrous or puberulent; ligule 4–6 mm. Panicle oblong or pyramidal in outline, open, 3–7 × 1–3 cm, shortly exserted from uppermost leaf sheath; branches 2 per node, up to 1.5 cm, 3–4 spikelets clustered at tips with lateral pedicels much shorter than spikelet, reflexed at maturity. Spikelets 5–6 mm, floret 1,
purple; glumes lanceolate, equal, equaling or longer than floret, glabrous, apex acuminate, sometimes slightly recurved; lemma ca. 4 mm, 3-veined, densely pilose along veins below middle, apex rounded; palea keels pilose; rachilla extension present, short. Stamens 2; anthers 2.7–3 mm. Fl. and fr. Jun–Aug.

Moist grassy or stony places in high mountains; 4500–5500 m. S Xizang (Cona) [Bhutan, Nepal].

When describing *Colpodium tibeticum*, Bor annotated the herbarium specimen Ludlow, Sherriff & Hicks 20796 (BM) as the holotype, but in the protologue he indicated the specimen Kingdon Ward 11688 (BM) as the holotype. The Kingdon Ward specimen must therefore be taken as the correct holotype of the name.


瓦小沿沟草 wa xiao yan gou cao


Perennial, shortly rhizomatous. Culms erect, 7–25 cm tall, 2–3-noded. Leaf sheaths longer than internodes; leaf blades narrowly linear to filiform, up to 10 cm × 1–2 mm, glabrous; ligule 2–2.5 mm. Inflorescence delicate, open, few-spiculate, almost racemose, 2.5–5.5 cm; branches 1 or 2 per node, up to 1 cm, capillary, flexuous, mostly bearing only 1 spikelet, occasionally 2, equaling or longer than spikelet, gently reflexing at maturity. Spikelets 3.7–5.5 mm, floret 1, purple or less often greenish; glumes slightly shorter to slightly longer than floret, lower glume narrowly lanceolate, 3–5 mm, apex subacute, up- per glume lanceolate-oblong, 3.5–5.5 mm, apex obtuse to truncate-denticulate; lemma narrowly lanceolate-oblong, 3.2–4.3 mm, obscurely 3–5-veined, shortly pubescent along veins below middle, sometimes a few hairs on lower back, apex obtuse to truncate-denticulate; palea keels shortly pubescent; rachilla extension present, short. Stamens 2; anthers 2–2.5 mm.

Stony or sandy places in trickling water from snow melt; above 4000 m. ?Xizang [Bhutan, Nepal].

This species is very likely to occur in the mountains of S Xizang, but the illustration in Fl. Xizang. (5: 141. 1987, as *Catabrosa aquatica*) appears to be a form of *Catabrosa aquatica*.


柔毛小沿沟草 rou mao xiao yan gou cao

*Catabrosa altaica* (Trinius) Boisser; *Paracolpodium altaicum* (Trinius) Tzvelev.

Perennial, shortly rhizomatous, forming loose mats. Culms erect or ascending, 8–28 cm tall, 2-noded. Leaf sheaths closed up to middle, longer than internodes; leaf blades glaucous, folded, 2–12 cm × 1–3 mm, adaxial surface puberulous, abaxial surface usually glabrous, apex acute; ligule 1–3 mm. Panicle very narrow, spike-like, almost racemose, 3–7 cm, branches spaced, erect or almost so. Spikelets 3.4–4.2 mm, floret 1, usually pale green; glumes unequal, slightly shorter than floret, lower glume lanceolate-elliptic, 2.1–3 mm, upper glume oblong-lanceolate-elliptic, 2.6–3.5 mm, apex obtuse; lemma oblong, as long as spikelet, 5-veined, villous on veins or generally in lower half; apex obtuse-denticulate; palea keels villous, rachilla extension absent. Stamens 2; anthers 2–3 mm, dark purple. Fl. and fr. Jun–Aug.

Stony or gravelly mountain slopes; 2500–4800 m. Xinjiang [NE Kazakhstan, Mongolia, Russia (Siberia)].


高山小沿沟草 gao shan xiao yan gou cao

*Colpodium villosum* Bor; *Paracolpodium altaicum* subsp. *leucolepis* (Nevski) Tzvelev; *P. leucolepis* (Nevski) Tzvelev.

Perennial, shortly rhizomatous, forming loose mats. Culms erect or ascending, 8–30 cm tall, 2-noded. Leaf sheaths closed up to middle, longer than internodes; leaf blades glaucous, folded, 8–28 cm × 1–3 mm, adaxial surface puberulous, abaxial surface usually glabrous, apex acute; ligule 1–3 mm. Panicle very narrow, spike-like, almost racemose, 3–7 cm, branches spaced, erect or almost so. Spikelets 3.4–4.2 mm, floret 1, usually pale green; glumes unequal, slightly shorter than floret, lower glume lanceolate-oblong, 3.5–5.5 mm, apex obtuse; lemma oblong, as long as spikelet, 5-veined, villous on veins or generally in lower half; apex obtuse-denticulate; palea keels villous, rachilla extension absent. Stamens 2; anthers 2–3 mm, dark purple. Fl. and fr. Jun–Aug.

Stony or gravelly mountain slopes; 2500–4800 m. Xinjiang [NE Afghanistan, Kashmir, E Kazakhstan, Kyrgyzstan, N Pakistan, Tajikistan (Pamirs)].

This species is confined to the high mountains of the W Himalayas.

*Colpodium himalaicum* (J. D. Hooker) Bor, from Kashmir and the W Himalayas, is similar, but has a more densely tufted habit and much shorter glumes not exceeding 1/2 the length of the floret.