Melica flava Z. L. Wu, Acta Phytotax. Sin. 30: 171. 1992, not Steudel (1855); *M. qinghaiensis* W. Hempel, nom. illeg. superfl.

Perennial, loosely tufted. Culms erect or inclined at base, 50–80 cm tall, 2–4 mm in diam., 3–5-noded, scabrid below panicle. Leaf sheaths keeled, scabrid on veins; leaf blades flat or folded, 10–22 cm × 3–6 mm, both surfaces scaberulous; ligule 2–4 mm, truncate, back pubescent. Panicle broadly linear in outline, 6–12 cm, dense, interrupted below, weakly 1-sided, spikelets many; branches laxly erect. Spikelets broadly ovate, 8–11 mm, yellow, fertile florets 2–4, terminal sterile lemmas gathered into globular cluster; glumes as long as spikelet, papery, slightly unequal, obovate-oblong or oblong-lanceolate, lower glume 6–8 mm, 1–3-veined, upper glume 7–11 mm, 3-veined, both acute; lemmas oblong, lowest 5.5–7 mm, lower part herbaceous, 5–7-veined, upper 1/3 slightly enlarged, membranous, apex 2-lobed, lobes rounded; palea as long as herbaceous part of lemma, keels ciliolate. Anthers ca. 1 mm. Fl. Jul–Aug.

● Grassy mountain slopes; ca. 3600 m. Qinghai.

57. SCHIZACHNE Hackel, Repert. Spec. Nov. Regni Veg. 7: 322. 1909.

裂稃茅属 lie fu mao shu

Perennial. Culms slender, erect. Leaf sheaths with margins fused in lower part; leaf blades linear. Panicle little branched, often racemelike, spikelets few. Spikelets elliptic, florets several, upper 1 or 2 sterile; rachilla scabrid, disarticulating below each floret; glumes broadly lanceolate, shorter than first floret, unequal with lower glume shorter, membranous, lower glume 1–3-veined, upper glume 5-veined, apex subacute; floret callus oblong, bearded, obtuse; lemmas lanceolate, thickly herbaceous, back rounded, 7-veined, apex shallowly 2-toothed, awned from just below teeth; awn straight or slightly recurved, usually longer than lemma body; palea 2/3–3/4 lemma length, keels ciliate above middle. Stamens 3. Caryopsis oblong, free from lemma and palea. Chromosomes small. $x = 10$.

One species: E Europe to E Asia, North America.

1. Schizachne purpurascens (Torrey) Swallen subsp. **callosa** (Turczaninow ex Grisebach) T. Koyama & Kawano, Canad. J. Bot. 42: 862. 1964.

裂稃茅 lie fu mao

Avena callosa Turczaninow ex Grisebach in Ledebour, Fl. Ross. 4: 416. 1852; *Melica callosa* (Turczaninow ex Grisebach) Ohwi; *Schizachne callosa* (Turczaninow ex Grisebach) Ohwi; *S. fauriei* Hackel.

Perennial, shortly rhizomatous. Culms loosely tufted, 20–50 cm tall, 0.7–1.5 mm in diam., scabrid below panicle. Leaf sheaths longer than internodes, lower sheaths scaberulous; leaf blades narrowly linear, flat or margins inrolled, 5–20 cm × 1–1.5 mm, abaxial surface glabrous, adaxial surface scaberulous and sparsely pilose; ligule 1–2 mm. Panicle lanceolate in outline, 6–8 cm, laxly bearing 4–6(–10) spikelets; branches slender, scabrid, up to 1.5 cm, unbranched and tipped by a single spikelet. Spikelets 10–14 mm, florets 3–4(–5), pale green tinged brownish purple; lower glume 4–5 mm, upper glume 5–7 mm; callus hairs 1–1.5 mm; lemmas 7–9 mm, veins scaberulous, margins broad, scarious, apical teeth acute, ca. 1.5 mm; awn 1–1.5 cm, straight or almost so. Anthers 1.5–2 mm. Fl. and fr. Jun–Jul. $2n = 20$.

Forest undergrowth, moist grassy places; 800–2000(–3500) m. Hebei, Heilongjiang, Henan, Jilin, Liaoning, Shanxi, Yunnan (Hengduan Shan) [E Kazakhstan, Korea, Japan, Mongolia, Russia; Europe (Ural Mountains)].

This is a forage grass of forest pastures. It has been reported to occur at 2800–3500 m in Yunnan, based on "*Schizachne hengduanensis* L. Liou," which name was not validly published.

Schizachne purpurascens subsp. *purpurascens* occurs in North America and NE Russia (Kamchatka). It has broader leaf blades 2–5 mm wide, larger panicles with up to 20 spikelets, the lower branches longer and subdivided, and spikelets with more definitely recurved awns.

10. Tribe DIARRHENEAE

龙常草族 long chang cao zu

Liu Liang (刘亮); Sylvia M. Phillips

Perennials with short scaly rhizomes. Culms slender, arching, unbranched. Leaf blades narrowly lanceolate, transverse veinlets present (visible on abaxial surface), narrowed to base; ligule thickly membranous. Inflorescence an open or contracted panicle, sparingly branched. Spikelets all alike, florets 2–5(–7) with uppermost floret reduced, laterally compressed, disarticulating below each floret; glumes lanceolate or ovate, unequal, much shorter than lemmas, membranous, 1–3-veined; lemmas ovate or ovate-elliptic, herbaceous to thinly leathery, rounded on back, 3(–5)-veined, apex obtuse to cuspidate; palea subequal to lemma, keels smooth or ciliate; lodicules 2, large, membranous; stamens 2 or 3. Caryopsis obliquely ellipsoid; pericarp thick, enlarged at apex into a conspicuous pallid knob or beak bearing 2 terminal stigmas, softening and peeling away when wet. Leaf anatomy: non-Kranz; microhairs obscure; fusoid cells absent. $x = 10$.

One genus and four species: three species in E Asia and one in the United States; three species in China.

This is a small tribe found in warm-temperate forests.

58. DIARRHENA P. Beauvois, Ess. Agrostogr. 142. 1812, nom. cons.

龙常草属 long chang cao shu

Neomolinia Honda.

Description and distribution as for tribe.

1a. Keels of palea smooth; anthers 0.7–1.2 mm; panicle open, branches spreading ..... 1. *D. japonica*
1b. Keels of palea ciliate; anthers 1.5–2 mm; panicle ± contracted, branches erect to ascending.
2a. Panicle contracted at first, becoming somewhat lax at maturity, primary branches often further divided; lemmas smooth on veins; lowest lemma 3.5–4 mm ..... 2. *D. fauriei*
2b. Panicle always contracted, primary branches erect, simple; lemmas scabrid on veins near apex; lowest lemma 4.5–5 mm ..... 3. *D. mandshurica*

1. Diarrhena japonica Franchet & Savatier, Enum. Pl. Jap. 2: 603. 1879.

日本龙常草 ri ben long chang cao

Neomolinia japonica (Franchet & Savatier) Probatova.

Culms tufted, erect, 50–80 cm tall, 1–1.5 mm in diam., 4–5-noded, glabrous below nodes. Leaf sheaths mostly shorter than internodes, glabrous; leaf blades flat, 20–30 × 0.8–1.5 cm, glabrous or adaxial surface sparsely pilose, apex gradually acuminate; ligule 0.5–1 mm. Panicle open, ovate in outline, 10–20 × 8–20 cm; primary branches 1 or 2 per node, widely spreading, filiform, scabrid, sparingly branched, bearing up to 6 spikelets. Spikelets obovate at maturity, 3–5 mm, florets 1–3; glumes membranous, 1-veined, lower glume lanceolate, 0.8–1 mm, upper glume broadly lanceolate, ca. 1.5 mm, acute; lemmas lanceolate-ovate, lowest 2.7–3 mm, 3-veined, veins smooth, apex obtuse; palea keels smooth. Anthers 0.7–1.2 mm. Caryopsis 2.5–3 mm. Fl. and fr. Aug–Sep. 2*n* = 38.

Mountain slopes in forests. NE China [Korea (Cheju Island), Japan, Russia (Kunashir Island in S Kuril Islands)].

2. Diarrhena fauriei (Hackel) Ohwi, Acta Phytotax. Geobot. 10: 135. 1941.

法利龙常草 fa li long chang cao

Molinia fauriei Hackel, Bull. Herb. Boissier, ser. 2, 3: 504. 1903; *Diarrhena koryoensis* Honda; *D. nekkamontana* Honda; *D. yabeana* Kitagawa; *Neomolinia fauriei* (Hackel) Honda; *N. koryoensis* (Honda) Nakai.

Culms solitary or in small tufts, erect, 80–100 cm tall, 2–3 mm in diam., 5–7-noded, puberulous below nodes. Leaf sheaths shorter than internodes, glabrous, rarely upper puberulous; leaf blades flat, thin, 20–30 × 1–2 cm, adaxial surface glabrous or puberulous, abaxial surface scabrid or nearly smooth, apex gradually long-acuminate; ligule ca. 0.5 mm. Panicle laxly contracted, narrowly lanceolate at first, later slightly more spreading, 12–15 × 2–3 cm; primary branches in clusters of 2–5, erect to ascending, scabrid, each branch with branchlets, loosely bearing 4–13 spikelets. Spikelets obovate at maturity, 4–7 mm, florets 2; glumes lanceolate, usually 1-veined, acute, lower glume 1–1.5 mm, upper glume ca. 2 mm; lemmas 3.5–4 mm, 3-veined, veins smooth, apex subacute; palea keels ciliolate. Anthers 1.5–2 mm. Caryopsis ca. 2.5 mm. Fl. and fr. Jul–Sep. 2*n* = 38.

Montane forests. Shandong, NE China [Japan, Korea, Russia (Far East)].

3. Diarrhena mandshurica Maximowicz, Bull. Acad. Imp. Sci. Saint-Pétersbourg 32: 628. 1888.

龙常草 long chang cao

Neomolinia mandshurica (Maximowicz) Honda.

Culms solitary or in small tufts, erect, 70–120 cm tall, 2–3 mm in diam., 5–6-noded, scabrid or puberulous below nodes. Leaf sheaths shorter than internodes, pubescent; leaf blades flat, thin, 15–30 × 0.6–2 cm, adaxial surface pubescent, abaxial surface scabrid, apex gradually long-acuminate; ligule ca. 1 mm. Panicle densely contracted, 12–20 × ca. 1 cm; primary branches solitary or paired at base, erect, each branch simple, bearing 2–7 spikelets. Spikelets obovoid at maturity, 4.5–7 mm, florets 2–3; glumes lanceolate, acute, lower glume 1.5–2 mm, 1-veined, upper glume 2–3 mm, 1–3-veined, the lateral veins obscure; lemmas 4.5–5 mm, 3–5-veined, veins scabrid near apex, apex subacute; palea keels ciliate. Caryopsis ca. 4 mm. Fl. and fr. Jun–Sep. 2*n* = 38.

Forests, grassy hillsides. NE China [Korea, Russia (Far East)].

11. Tribe POEAE

早熟禾族 zao shu he zu

Wu Zhenlan (吴珍兰), Lu Shenglian (卢生莲), Liu Liang (刘亮),
Zhu Guanghua (朱光华), Chen Shouliang (陈守良), Chen Xiang (陈翔);
Sylvia M. Phillips, Robert J. Soreng, Susan G. Aiken, Nikolai N. Tzvelev, Marina V. Olonova

Annual or perennial. Leaf blades linear to filiform; ligule membranous. Inflorescence usually an open or contracted panicle, rarely spikelike or a single raceme with tough rachis (fragile in *Parapholis*). Spikelets all alike or rarely dimorphic with mixed fertile and sterile spikelets, florets (1 or)2 to many with uppermost reduced, usually laterally compressed, disarticulating below each floret;