

on both surfaces. **Pan** 8–30 cm, with 3–100 rcm br; **br** 1–19 cm, ascending to reflexed. **Spklt** 2–4 mm, distant to imbricate, green, magenta, or maroon, with 2–5(6) flt. **Glm** smt exceeding the flt, linear to narrowly elliptic, acute, attenuate, or aristate; **lo glm** 1.6–4 mm, linear to lanceolate; **up glm** 1.6–3.6 mm, lanceolate; **lm** 0.9–1.7 mm, glab or somewhat sericeous, acute to obtuse; **pal** glab or sericeous; **anth** 3, 0.2–0.3 mm. **Car** 0.8–1.2 mm long, 0.5–0.6 mm wide, nearly round in cross section, with or without a ventral groove, apc acute to broadly obtuse.

*Leptochloa panicea* is a widely ranging species that somewhat resembles *L. chinensis* (L.) Nees, an aggressive weed that has not yet been found in North America. It differs in its sparsely to densely hairy, rather than glabrous or almost

glabrous, sheaths and blades. One of its three subspecies grows in the Intermountain Region.

**Leptochloa panicea** subsp. **brachiata** (Steud.)

N. SNOW RED SPRANGLETOP [p. 415]

**Clm** to 150 cm. **Lig** 0.9–3.2 mm; **bld** 2–21 mm wide. **Glm** usu not exceeding the flt, lanceolate to narrowly elliptic; **lm** 1.3–1.7 mm, shortly sericeous along the veins. **Car** 0.9–1.2 mm, widely depressed, obovate or obdeltate in cross section, usu with a narrow, shallow ventral groove, apc broadly obtuse to acute.  $2n = 20$ .

*Leptochloa panicea* subsp. *brachiata* extends from the southern half of the United States to Argentina. It is common in disturbed and mesic agricultural sites, and is considered a noxious weed by the U.S. Department of Agriculture.

10.12 ERAGROSTIS Wolf

Paul M. Peterson

**Pl** ann or per; usu synoecious, smt dioecious; ces, stln, or rhz. **Clm** 2–160 cm, not woody, erect, decumbent, or geniculate, smt rooting at the lo nd, simple or brchd; **intnd** solid or hollow. **Lvs** not strongly distichous; **shth** open, often with tufts of hairs at the apc, hairs 0.3–8 mm; **lig** usu memb and ciliolate or ciliate, cilia smt longer than the memb base, occ of hairs or memb and non-ciliate; **bld** flat, folded, or involute. **Infl** tml, smt also axillary, simple pan, open to contracted or spikelike, tml pan usu exceeding the up lvs; **pulvini** in the axils of the pri br glab or not; **br** not spikelike, not **dis**. **Spklt** 1–27 mm long, 0.5–9 mm wide, lat compressed, with (1)2–60 flt; **dis** below the flt flt, smt also below the glm, acropetal with deciduous glm and lm but persistent pal, or basipetal with the glm often persistent and the flt usu falling intact. **Glm** usu shorter than the adjacent lm, 1(3)-veined, not lobed, apc obtuse to acute, unawned; **cal** glab or sparsely pubescent; **lm** usu glab, obtuse to acute, (1)3(5)-veined, usu keeled, unawned or mucronate; **pal** shorter than the lm, longitudinally bowed-out by the car, 2-keeled, keels usu ciliate, intercostal region memb or hyaline; **anth** 2–3; **ov** glab; **sty** free to the bases. **Cleistogamous spklt** occ present, smt on the axillary pan, smt on the tml pan. **Car** variously shaped.  $x = 10$ . The origin of the name is obscure.

*Eragrostis*, a genus of approximately 350 species, grows in tropical and subtropical regions throughout the world. Twelve species grow in the Intermountain Region, seven of which are introduced. In most taxa native to the Western Hemisphere, disarticulation is acropetal and the lemmas fall with the caryopses, leaving the paleas attached to the rachilla.

Van den Borre and Watson (2000) and Hilu and Alice (2001) suggested that *Eragrostis* might not be monophyletic. Ingram and Doyle (2004), based on nuclear and plastid sequence data, concluded that it is, if four segregate genera are included: *Acampocladius*, *Diandrochloa*, *Neeragrostis*, and *Pogonarthria*.

Nathaniel Wolf (1776), the person who first named *Eragrostis*, made no statement concerning the origin of its name. Clifford (1996) provides three possible derivations: from *eros*, 'love', and *Agrostis*, the Greek name for an indeterminate herb; from the Greek *er*, 'early' and *agrostis*, 'wild', referring to the fact that some species of *Eragrostis* are early invaders of arable land; or the Greek *eri-*, a prefix meaning 'very' or 'much', suggesting that the name means many-flowered *Agrostis*. Many authors have stated that the first portion of the name is derived from *eros*, but none has explained the connection between *Eragrostis* and passionate expressions of love, the kind of love to which *eros* applies.

1. Plants perennial, sometimes rhizomatous, forming innovations at the basal nodes.
  2. Caryopses somewhat laterally compressed, opaque, reddish brown . . . . . 12. *E. intermedia*
  2. Caryopses dorsally compressed, translucent, mostly light brown, bases sometimes greenish.
    3. Lemmas 1.8–3 mm long; panicles 16–35(40) cm long, (4)8–24 cm wide; blades 12–50 (65) cm long; caryopses 1–1.7 mm long; ligules 0.6–1.3 mm long . . . . . 2. *E. curvula*
    3. Lemmas 1.5–1.7 long; panicles 7–18 cm long, 2–8 cm wide; blades 2–12 cm long; caryopses 0.6–0.8 mm long; ligules 0.3–0.5 mm long . . . . . 3. *E. lehmanniana*
1. Plants annual, tufted or mat-forming, without innovations.
  4. Plants mat-forming; panicles 1–3.5 cm long; erect portion of culms (2)5–20 cm, the basal portion prostrate and rooting at the nodes. . . . . 1. *E. hypnoides*
  4. Plants usually not forming mats; panicles 4–40 cm long; culms (2)5–130 cm tall, not prostrate or rooting at the lower nodes.

5. Caryopses with a shallow or deep ventral groove, ovoid to rectangular-prismatic, laterally compressed. . . . . 4. *E. mexicana*
5. Caryopses without a ventral groove, usually globose, rarely flattened, pyriform, obovoid, ellipsoid, or rectangular-prismatic, the surface smooth to faintly striate.
6. Plants without glandular pits or bands.
  7. Lemmas 1.6–3 mm long; caryopses 0.7–1.3 mm long, obovoid, smooth, light brown to white; plants cultivated, occasionally escaping . . . . . 11. *E. tef*
  7. Lemmas 1–2.2 mm long; caryopses 0.5–1.1 mm long, pyriform or obovoid to prism-shaped, smooth or faintly striate, brownish; plants native species or established introductions, variously distributed.
  8. Lower glumes 0.5–1.5 mm long, at least ½ as long as the lowest lemmas; spikelets 1.2–2.5 mm wide; panicle branches solitary or paired at the lowest 2 nodes; lemmas with moderately conspicuous lateral veins . . . . . 7. *E. pectinacea*
  8. Lower glumes 0.3–0.6(0.8) mm long, usually less than ½ as long as the lowest lemmas; spikelets 0.6–1.4 mm wide; panicle branches usually whorled at the lowest 2 nodes; lemmas with inconspicuous lateral veins. . . . . 6. *E. pilosa*
6. Plants with glandular pits or bands somewhere, the location(s) various, including any or all of the following: below the cauline nodes, on the sheaths, blades, rachises, panicle branches, or pedicels, or on the keels of the lemmas and paleas.
  9. Panicles 0.5–2 cm wide, contracted; primary panicle branches usually appressed, occasionally diverging up to 30° from the rachises; spikelets light yellowish, occasionally with reddish purple markings . . . . . 5. *E. lutescens*
  9. Panicles 2–18 cm wide, open to somewhat contracted; primary panicle branches diverging 10–110° from the rachises; spikelets plumbeous, yellowish brown, greenish, or reddish purple.
    10. Spikelets 0.6–1.4 mm wide; pedicels 1–10 mm long, lax, appressed or divergent . . . . . 6. *E. pilosa*
    10. Spikelets 1.1–4 mm wide; pedicels 0.2–4 mm long, stiff, straight, usually divergent.
    11. Lemmas 2–2.8 mm long, with 1–3 crateriform glands along the keels; spikelets 6–20 mm long, 2–4 mm wide, with 10–40 florets; disarticulation below the florets, the rachillas persistent; anthers yellow. . . . . 8. *E. cilianensis*
    11. Lemmas 1.4–1.8 mm long, rarely with 1 or 2 crateriform glands along the keels; spikelets 4–7(11) mm long, 1.1–2.2 mm wide, with 7–12(20) florets; disarticulation below the lemmas, both the paleas and rachillas usually persistent; anthers reddish brown.
      12. Panicles with glandular regions below the nodes, the glandular tissue forming a ring or band, often shiny or yellowish; anthers 3; blade margins without crateriform glands; pedicels without glandular bands . . . . . 9. *E. barrelieri*
      12. Panicles sometimes with areas, but rarely rings, of glandular spots or crateriform pits below the nodes, the glands usually dull greenish gray to stramineous; anthers 2; blade margins sometimes with crateriform glands; pedicels usually with glandular bands . . . . . 10. *E. minor*

1. ***Eragrostis hypnoides*** (Lam.) Britton, Sterns & Poggenb. TEEL LOVEGRASS [p. 416, 506]  
**Pl** ann; stln, mat-forming, without innovations, without glands. **Clm** decumbent and rooting at the lo nd, erect portion (2)5–12(20) cm, often brchd, glab or hairy on the lo intnd. **Shth** pilose on the mrg, col, and at the apc, hairs 0.1–0.6 mm; **lig** 0.3–0.6 mm; **bld** 0.5–2.5 cm long, 1–2 mm wide, flat to involute, abx surfaces glab, adx surfaces appressed pubescent, hairs about 0.2 mm. **Pan** tml and axillary, 1–3.5 cm long, 0.7–2.5

cm wide, ovate, open to somewhat congested; **pri br** 0.1–0.5 cm, appressed to strongly divergent, glab; **pulvini** sparsely pilose or glab; **ped** 0.2–1 mm, ciliate. **Spklt** 4–13 mm long, 1–1.5 mm wide, linear-oblong, often arcuate, loosely imbricate, greenish yellow to purplish, with 12–35 flt; **dis** acropetal, pal persistent. **Glm** linear-lanceolate to lanceolate, hyaline; **lo glm** 0.4–0.7 mm; **up glm** 0.8–1.2 mm; **lm** 1.4–2 mm, ovate, strongly 3-veined, veins greenish, apc acuminate; **pal** 0.7–1.2 mm, hyaline, keels scabridulous, apc acute to

obtuse; **anth** 2, 0.2–0.3 mm, brownish. **Car** 0.3–0.5 mm, ellipsoid, somewhat translucent, light brown.  $2n = 20$ .

*Eragrostis hypnoides* grows along muddy or sandy shores of lakes and rivers and in moist, disturbed sites, at 10–1600 m. It is native to the Americas, extending from southern Canada to Argentina.

2. *Eragrostis curvula* (Schrad.) Nees WEEPING LOVEGRASS [p. 416, 506]

**Pl** per; ces, forming innovations at the bas nd, without glands. **Clm** (45)60–150 cm, erect, glab or glandular. **Shth** with scattered hairs, hairs to 9 mm; **lig** 0.6–1.3 mm; **bld** 12–50(65) cm long, 1–3 mm wide, flat to involute, abx surfaces glab, smt scabridulous, adx surfaces with scattered hairs bas, hairs to 7 mm. **Pan** 16–35(40) cm long, (4)8–24 cm wide, ovate to oblong, open; **pri br** 3–14 cm, diverging 10–80° from the rchs; **pulvini** glab or not; **ped** 0.5–5 mm, appressed, flexible. **Spklt** 4–8.2(10) mm long, 1.2–2 mm wide, linear-lanceolate, plumbeous to yellowish, with 3–10 ft; **dis** irregular to acropetal, proximal rchl intnd persistent. **Glm** lanceolate, hyaline; **lo glm** 1.2–2.6 mm; **up glm** 2–3 mm; **lm** 1.8–3 mm, ovate, memb, lat veins conspicuous, apc acute; **pal** 1.8–3 mm, hyaline to memb, apc obtuse; **anth** 3, 0.6–1.2 mm, reddish brown. **Car** 1–1.7 mm, ellipsoid to obovoid, dorsally compressed, adx surfaces with a shallow, broad groove or ungrooved, smooth, mostly translucent, light brown, bases often greenish.  $2n = 40, 50$ .

*Eragrostis curvula* is native to southern Africa. It is often used for reclamation because it provides good ground cover but, once introduced, it easily escapes. In North America, it grows on rocky slopes, at the margins of woods, along roadsides, and in waste ground, at 20–2400 m, usually in pine-oak woodlands, and yellow pine and mixed hardwood forests.

3. *Eragrostis lehmanniana* Nees LEHMANN'S LOVEGRASS [p. 416, 506]

**Pl** per; ces, forming innovations at the bas nd, without glands. **Clm** (20)40–80 cm, erect, commonly geniculate, smt rooting at the lo nd, glab, lo portions smt scabridulous. **Shth** smt shortly silky pilose bas, hairs less than 2 mm, apc sparsely hairy, hairs to 3 mm; **lig** 0.3–0.5 mm, ciliate; **bld** 2–12 cm long, 1–3 mm wide, flat to involute, glab, abx surfaces smt scabridulous, adx surfaces scabridulous. **Pan** 7–18 cm long, 2–8 cm wide, oblong, open; **pri br** 1–8 cm, appressed or diverging to 40° from the rchs; **pulvini** glab; **ped** 0.5–4 mm, diverging or appressed, flexible. **Spklt** 5–12(14) mm long, 0.8–1.2 mm wide, linear-lanceolate, plumbeous to stramineous, with 4–12(14) ft; **dis** irregular to basipetal, pal

usu persistent. **Glm** oblong to lanceolate, memb; **lo glm** 1–1.5 mm; **up glm** 1.3–2 mm; **lm** 1.5–1.7 mm, ovate, memb, lat veins inconspicuous, apc acute to obtuse; **pal** 1.4–1.7 mm, obtuse; **anth** 3, 0.6–0.9 mm, yellowish. **Car** 0.6–0.8 mm, ellipsoid to obovoid, dorsally compressed, smt with a shallow adx groove, smooth, translucent, mostly light brown, embryo region dark brown with a greenish ring.  $2n = 40, 60$ .

*Eragrostis lehmanniana* is native to southern Africa, where it grows in sandy, savannah habitats. It was introduced for erosion control in the southern United States, where it often displaces native species. In North America, it grows in sandy flats, along roadsides, on calcareous slopes, and in disturbed areas, at 200–1830 m. It is commonly found in association with *Larrea tridentata*, *Opuntia*, *Quercus*, *Juniperus*, and *Bouteloua gracilis*.

4. *Eragrostis mexicana* (Hornem.) Link MEXICAN LOVEGRASS [p. 417, 506]

**Pl** ann; ces, without innovations. **Clm** 10–130 cm, erect, smt geniculate, glab, smt with a ring of glandular depressions below the nd. **Shth** smt with glandular pits, pilose near the apc and on the col, hairs to 4 mm, papillose-based; **lig** 0.2–0.5 mm, ciliate; **bld** 5–25 cm long, 2–7(9) mm wide, flat, abx surfaces glab, adx surfaces scabridulous, occ pubescent near the base. **Pan** (5)10–40 cm long, (2)4–18 cm wide, ovate, rchs angled and channeled; **pri br** 3–12(15) cm, solitary to whorled, appressed or diverging to 80° from the rchs; **sec br** somewhat appressed; **pulvini** glab; **ped** 1–6(7) mm, almost appressed to narrowly divergent, stiff. **Spklt** (4)5–10(11) mm long, 0.7–2.4 mm wide, ovate to linear-lanceolate, gray-green to purplish, with 5–11(15) ft; **dis** acropetal. **Glm** subequal, 0.7–2(2.3) mm, ovate to lanceolate, memb; **lm** 1.2–2.4 mm, ovate, memb, glab or with a few hairs, gray-green, lat veins evident, often greenish, apc acute; **pal** 1–2.2 mm, hyaline, keels scabrous, apc obtuse to truncate; **anth** 3, 0.2–0.5 mm, purplish. **Car** 0.5–0.8(1) mm, ovoid to rectangular-prismatic, lat compressed, shallowly to deeply grooved on the adx surface, striate, reddish brown, distal 2/3 opaque.  $2n = 60$ .

*Eragrostis mexicana* grows along roadsides, near cultivated fields, and in disturbed open areas, at 100–3000 m. It is native to the Americas, its native range extending from the southwestern United States through Mexico, Central and northern South America, to Argentina.

1. Spikelets ovate to oblong in outline, 1.5–2.4 mm wide; lower glumes 1.2–2.3 mm long; sum of the spikelet width and lower glume length 2.7–4.7 mm; culms and sheaths sometimes with glandular depressions ..... subsp. *mexicana*

1. Spikelets linear to linear-lanceolate, 0.7–1.4 wide; lower glumes 0.7–1.7 mm long; sum of the spikelet width and lower glume length 1.5–3.1 mm; culms and sheaths without glandular depressions..... subsp. *virescens*

***Eragrostis mexicana*** (Hornem.) Link subsp. *mexicana* [p. 417]

**Cm** and **shth** smt with glandular depressions. **Spklt** 1.5–2.4 mm wide, ovate to oblong in outline. **Lo glm** 1.2–2.3 mm; **sum of spklt width and lo glm length** 2.7–4.7 mm.

*Eragrostis mexicana* subsp. *mexicana* grows from Ontario through the midwestern United States to California, South Carolina, and Texas and southwards to Mexico.

***Eragrostis mexicana*** subsp. *virescens* (J. Presl) S.D. Koch & Sánchez Vega [p. 417]

**Cm** and **shth** without glandular depressions. **Spklt** 0.7–1.4 mm wide, linear to linear-lanceolate. **Lo glm** 0.7–1.7 mm; **sum of spklt width and lo glm length** 1.5–3.1 mm.

*Eragrostis mexicana* subsp. *virescens* has a disjunct distribution, growing in California and western Nevada and, in South America, from Ecuador to Chile, southern Brazil, and northern Argentina. It has also been found, as an introduction, at various other locations in North America.

5. ***Eragrostis lutescens*** Scribn. SIXWEEKS LOVEGRASS [p. 417, 506]

**Pl** ann; tufted, without innovations. **Cm** (2)6–25 cm, usu erect, smt decumbent, glab, with elliptical, yellowish, glandular pits below the nd. **Shth** with elliptical glandular pits, sparsely hairy at the throat, hairs to 2 mm; **lig** 0.2–0.5 mm, ciliate; **bld** 2–12 cm long, 1–3 mm wide, flat to involute, abx surfaces scabridulous, bases with glandular pits. **Pan** tml, 4–10(15) cm long, 0.5–2 cm wide, narrowly elliptic, contracted, dense; **pri br** alternate, usu appressed, occ diverging to 30° from the rchs, rchs and br with glandular pits; **pulvini** glab; **ped** 1.4–10 mm, appressed or divergent. **Spklt** 3.6–7.5 mm long, 1.2–2 mm wide, narrowly ovate, light yellowish, occ mottled with reddish purple, with 6–11(14) flt; **dis** acropetal, pal persistent. **Glm** subequal, ovate to lanceolate, hyaline; **lo glm** (0.7)0.9–1.4 mm; **up glm** 1.2–1.8 mm; **lm** 1.5–2.2 mm, ovate, subhyaline, stramineous, veins greenish and conspicuous, apc acute; **pal** 1.2–2 mm, hyaline, keels scabridulous, apc obtuse; **anth** 3, 0.2–0.3 mm, purplish. **Car** 0.5–0.8 mm, pyriform except slightly flattened adx, smooth, light brown.  $2n =$  unknown.

*Eragrostis lutescens* grows on the sandy banks of streams and lakes and in moist alkaline flats of the western United States at 300–2000 m.

6. ***Eragrostis pilosa*** (L.) P. Beauv. INDIA LOVEGRASS [p. 418, 506]

**Pl** ann; tufted, without innovations. **Cm** 8–45(70) cm, erect or geniculate, glab, occ with a few glandular depressions. **Shth** mostly glab, occ glandular, apc hirsute, hairs to 3 mm; **lig** 0.1–0.3 mm, ciliate; **bld** 2–15(20) cm long, 1–2.5(4) mm wide, flat, abx surfaces glab, occ with glandular pits along the midrib, adx surfaces scabridulous. **Pan** 4–20(28) cm long, 2–15(18) cm wide, ellipsoid to ovoid, diffuse; **pri br** 1–10 cm, diverging 10–80°(110°) from the rchs, capillary, whorled on the lowest 2 nd, rarely glandular; **pulvini** glab or hairy; **ped** 1–10 mm, flexible, appressed or divergent. **Spklt** (2)3.5–6(10) mm long, 0.6–1.4 mm wide, linear-oblong to narrowly ovate, plumbeous, with (3)5–17 flt; **dis** acropetal, pal tardily deciduous, rchl persisting longer than the pal. **Glm** narrowly ovate to lanceolate, hyaline; **lo glm** 0.3–0.6(0.8) mm; **up glm** 0.7–1.2(1.4) mm; **lm** 1.2–1.8(2) mm, ovate-lanceolate, memb to hyaline, grayish green proximally, reddish purple distally, lat veins inconspicuous, apc acute; **pal** 1–1.6 mm, memb to hyaline, keels scabridulous to scabrous, apc obtuse; **anth** 3, 0.2–0.3 mm, purplish. **Car** 0.5–1 mm, obovoid to prism-shaped, adx surfaces flat, smooth to faintly striate, light brown.  $2n = 20, 40$ .

*Eragrostis pilosa* is native to Eurasia but has become naturalized in many parts of the world. In North America, it grows in forest margins and disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields, at 0–2500 m.

***Eragrostis pilosa*** (L.) P. Beauv. var. *pilosa* [p. 418]

**Cm** with few or no glandular pits; **shth** and **bld** without glandular pits. **Spklt** 0.6–1.3 mm wide. **Up glm** 0.7–1.2 mm; **lm** 1.2–1.8 mm; **car** 0.5–0.9 mm.

*Eragrostis pilosa* var. *pilosa* is the only variety that grows in the Intermountain Region.

7. ***Eragrostis pectinacea*** (Michx.) Nees TUFTED LOVEGRASS [p. 418, 506]

**Pl** ann; tufted, without innovations, without glandular pits. **Cm** 10–80 cm, erect to geniculate or decumbent below, glab. **Shth** hirsute at the apc, hairs to 4 mm; **lig** 0.2–0.5 mm; **bld** 2–20 cm long, 1–4.5 mm wide, flat to involute, abx surfaces glab and smooth, adx surfaces scabridulous. **Pan** 5–25 cm long, 3–12(15) cm wide, ovoid to pyramidal, usu open, smt contracted; **pri br** 0.6–8.5 cm, appressed or diverging to 80° from the rchs, solitary or paired at the lowest 2 nd; **pulvini** glab

or sparsely hairy; **ped** 1–7 mm, flexible, appressed to widely divergent, smt capillary. **Spklt** 3.5–11 mm long, 1.2–2.5 mm wide, linear-oblong to narrowly lanceolate, plumbeous, yellowish brown, or dark reddish purple, with 6–22 flt; **dis** acropetal, pal persistent. **Glm** subulate to ovate-lanceolate, hyaline; **lo glm** 0.5–1.5 mm, at least ½ as long as the adjacent **lm**; **up glm** 1–1.7 mm, usu broader than the **lo glm**; **lm** 1–2.2 mm, ovate-lanceolate, hyaline to memb, grayish green proximally, reddish purple distally, lat veins moderately conspicuous, apc acute; **pal** 1–2 mm, hyaline to memb, keels scabridulous, apc obtuse; **anth** 3, 0.2–0.7 mm, purplish. **Car** 0.5–1.1 mm, pyriform, slightly lat compressed, smooth, faintly striate, brownish.  $2n = 60$ .

*Eragrostis pectinacea* is native from southern Canada to Argentina. In North America, it grows in disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields, at 0–1200 m. One variety grows in the Intermountain Region.

**Eragrostis pectinacea** (Michx.) Nees var.  
**pectinacea** [p. 418]

**Ped** appressed or diverging to 20° from the br axes. **Anth** 0.2–0.4 mm.

*Eragrostis pectinacea* var. *pectinacea* grows throughout most of the contiguous United States. It usually flowers from July–November.

8. **Eragrostis cilianensis** (All.) Vignolo ex Janch.  
STINKGRASS [p. 419, 506]

**Plann**; tufted, without innovations. **Clm** 15–45(65) cm, erect or decumbent, smt with crateriform glands below the nd. **Shth** glab, occ glandular, apc hairy, hairs to 5 mm; **lig** 0.4–0.8 mm, ciliate; **bld** (1)5–20 cm long, (1)3–5(10) mm wide, flat to involute, abx surfaces glab, smt glandular, adx surfaces scabridulous, occ also hairy. **Pan** (3)5–16(20) cm long, 2–8.5 cm wide, oblong to ovate, condensed to open; **pri br** 0.4–5 cm, appressed or diverging 20–80° from the rchs; **pulvini** glab or hairy; **ped** 0.2–3 mm, stout, straight, stiff, usu divergent, occ appressed. **Spklt** 6–20 mm long, 2–4 mm wide, ovate-lanceolate, plumbeous, greenish, with 10–40 flt; **dis** below the flt, each flt falling as a unit, rchl persistent. **Glm** broadly ovate to lanceolate, memb, usu glandular; **lo glm** 1.2–2 mm, usu 1-veined; **up glm** 1.2–2.6 mm, often 3-veined; **lm** 2–2.8 mm, broadly ovate, memb, keels with 1–3 crateriform glands, apc obtuse to acute; **pal** 1.2–2.1 mm, hyaline, keels scabrous, smt also ciliate, cilia to 0.3 mm, apc obtuse to acute; **anth** 3, 0.2–0.5 mm, yellow. **Car** 0.5–0.7 mm, globose to broadly ellipsoid, smooth to faintly striate, not grooved, reddish brown or translucent.  $2n = 20$ .

*Eragrostis cilianensis* is an introduced European species that now grows in disturbed sites such as pastures and roadsides, at 0–2300 m, through most of the contiguous United States and southern Canada. The English name refers to the odor of fresh plants.

9. **Eragrostis barrelieri** Daveau

MEDITERRANEAN LOVEGRASS [p. 419, 506]

**Pl** ann; tufted, without innovations. **Clm** (5)10–60 cm, erect or decumbent, much-brchd near the base, with a ring of glandular tissue below the nd, rings often shiny or yellowish. **Shth** hairy at the apc, hairs to 4 mm; **lig** 0.2–0.5 mm, ciliate; **bld** 1.5–10 cm long, 1–3(5) mm wide, flat, abx surfaces glab, adx surfaces glab, smt scabridulous, occ with white hairs to 3 mm, mrg without crateriform glands. **Pan** 4–20 cm long, 2.2–8(10) cm wide, ovate, open to contracted, rchs with shiny or yellowish glandular spots or rings below the nd; **pri br** 0.5–6 cm, diverging 20–100° from the rchs; **pulvini** glab; **ped** 1–4 mm, stout, stiff, divergent, without glandular bands. **Spklt** 4–7(11) mm long, 1.1–2.2 mm wide, narrowly ovate, reddish purple to greenish, occ grayish, with 7–12(20) flt; **dis** acropetal, pal persistent. **Glm** broadly ovate, memb, 1-veined; **lo glm** 0.9–1.4 mm; **up glm** 1.2–1.6 mm; **lm** 1.4–1.8 mm, broadly ovate, memb, apc acute to obtuse; **pal** 1.3–1.7 mm, hyaline, keels scabrous, scabridities to 0.1 mm, apc obtuse to acute; **anth** 3, 0.1–0.2 mm, reddish brown. **Car** 0.4–0.7 mm, ellipsoid, not grooved, smooth to faintly striate, light brown.  $2n = 40$ .

*Eragrostis barrelieri* is a European species that is now naturalized in North America, primarily in the southwestern United States. It grows on gravelly roadsides, in gardens, and other disturbed, sandy sites, especially near railroad yards, at 10–2000 m. The ring of glandular tissue is most conspicuous below the upper cauline nodes.

10. **Eragrostis minor** Host LITTLE LOVEGRASS  
[p. 419, 506]

**Pl** ann; tufted, without innovations. **Clm** 10–45 cm, erect to decumbent, smt with a ring of glandular tissue below the nd. **Shth** smt glandular on the midveins, hairy at the apc, hairs to 4 mm; **lig** 0.2–0.5 mm, ciliate; **bld** 1.5–10 cm long, 1–3(4) mm wide, flat, glab or sparsely white-hairy, mrg smt with crateriform glands. **Pan** 4–20 cm long, 2.2–8(10) cm wide, ovate, open to contracted, rchs smt with glandular spots or pits below the nd, rarely with a glandular ring, glands usu dull, greenish gray to stramineous; **pri br** 0.5–6 cm, diverging 20–100° from the rchs; **pulvini** glab or hairy; **ped** 1–4 mm, stiff, straight, divergent, usu with a distal ring of crateriform glands. **Spklt** 4–7(11) mm long, 1.1–2.2 mm

wide, narrowly ovate, mostly reddish purple to greenish, occ grayish, with 7–12(20) flt; **dis** acropetal, pal persistent. **Glm** broadly ovate, memb; **lo glm** 0.9–1.4 mm; **up glm** 1.2–1.6 mm; **lm** 1.4–1.8 mm, broadly ovate, memb, keels occ with 1–2 crateriform glands, apc acute to obtuse; **pal** 1.3–1.7 mm, hyaline, keels smooth or scabridulous, scabridities to 0.1 mm, apc obtuse to acute; **anth** 2, 0.2–0.3 mm, reddish brown. **Car** 0.4–0.7 mm, ellipsoid, not grooved, striate, light brown.  $2n = 40$ .

*Eragrostis minor* is a European species that now grows in gravelly roadsides and disturbed sites, especially near railroad yards, at 20–1600 m in southern Canada and the contiguous United States.

11. **Eragrostis tef** (Zucc.) Trotter TEFF [p. 420]  
**Pl** ann; loosely tufted, without innovations, without glands. **Clm** 25–60 cm, erect, glab and shiny. **Shth** mostly glab, apc hairy, hairs to 5 mm; **lig** 0.2–0.4 mm, ciliate; **bld** 10–30 cm long, 2–5.5 mm wide, flat to involute, glab abx, scabridulous adx. **Pan** 10–45 cm long, 2.5–22 cm wide, ovate, open to contracted; **pri br** 4–17 cm, appressed or diverging up to 50° from the rchs, flexible, naked below; **pulvini** glab or hairy, hairs to 5 mm; **ped** 2.5–17 mm, appressed or divergent. **Spklt** 4–11 mm long, 1.3–2.5 mm wide, linear-lanceolate to ovate, stramineous, grayish green to purplish, with 4–16 flt; **dis** tardy, acropetal, car falling before the glm and lm, pal persistent. **Glm** lanceolate, memb to hyaline; **lo glm** 1–2 mm; **up glm** 1.5–2.8 mm; **lm** 1.6–3 mm, lanceolate, memb, apc acute; **pal** 1.4–2.2 mm, hyaline, keels scabridulous, apc obtuse; **anth** 3, 0.2–0.5 mm, purplish. **Car** 0.7–1.3 mm, obovoid, not grooved, smooth, light brown to whitish.  $2n = 40$ .

#### 10.13 ELEUSINE Gaertn.

Khidir W. Hilu

**Pl** ann or per; ces. **Clm** 10–150 cm, herbaceous, glab, brchg both at and above the base. **Shth** open; **lig** memb, ciliate. **Infl** tml, pan of (1)2–20 non-dis, spikelike br, exceeding the up lvs; **br** 1–17 cm, all or most in a digitate cluster, smt 1(2) br attached immediately below the tml whorl, axes flattened, terminating in a fnctl spklt. **Spklt** 3.5–11 mm, lat compressed, with 2–15 bisex flt; **dis** above the glm and between the flt (*E. coracana* not dis). **Glm** unequal, shorter than the lo lm; **lo glm** 1–3-veined; **up glm** 3–5(7)-veined; **lm** 3-veined, glab, keeled, apc entire, neither mucronate nor awned; **pal** smt with winged keels; **anth** 3, 0.5–1 mm; **ov** glab. **Fruits** modified car, pericarp thin, separating from the seed at an early stage in its development; **seeds** usu obtusely trigonous, the surfaces ornamented.  $x = 8, 9, 10$ . Name from Eleusis, a Greek town where Demeter, the goddess of harvests, was worshipped.

Eight of the nine species of *Eleusine* are native to Africa, where they grow in mesic to xeric habitats; the exception, *E. tristachya*, is native to South America. Two species have become established in the Intermountain Region. When moistened, the seeds of all species are easily freed from the thin pericarp.

1. Lower glumes 1-veined; panicle branches 3–5.5 mm wide; surface of the seeds striate. . . . . 1. *E. indica*
1. Lower glumes 2- or 3-veined; panicle branches 5–15 mm wide; surface of the seeds granular . . . 2. *E. coracana*

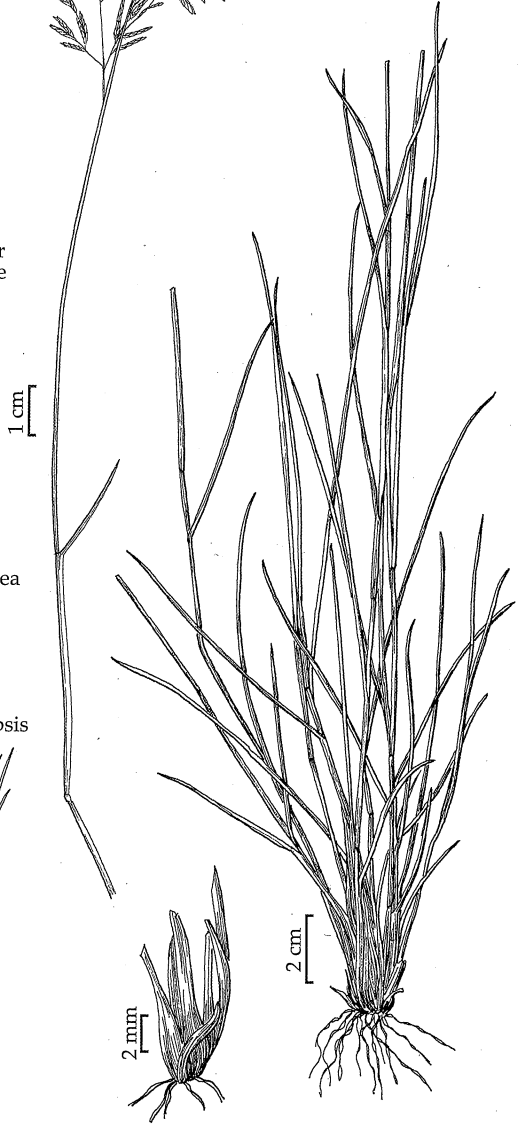
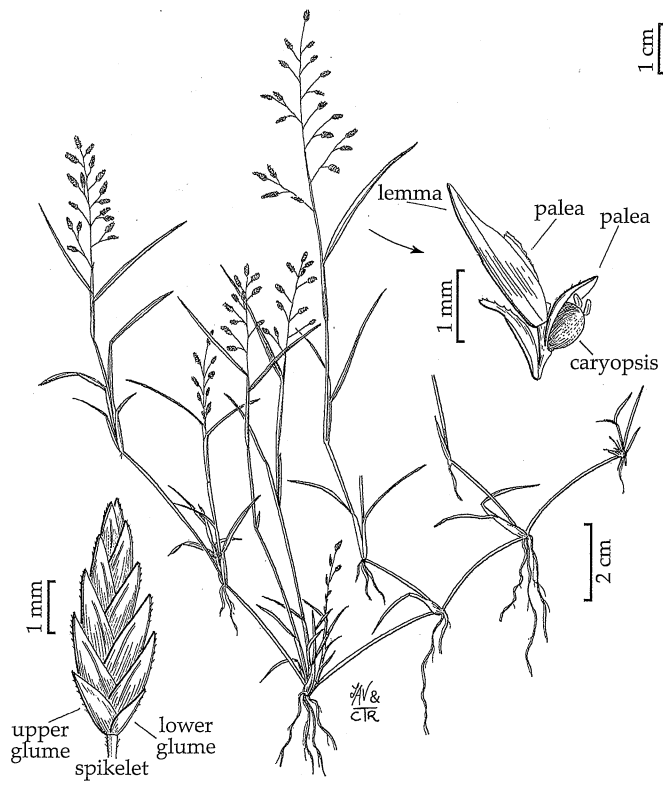
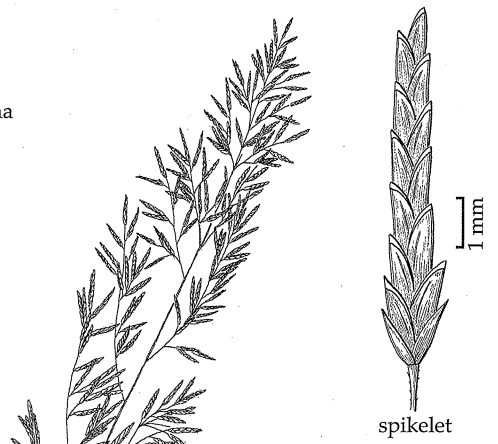
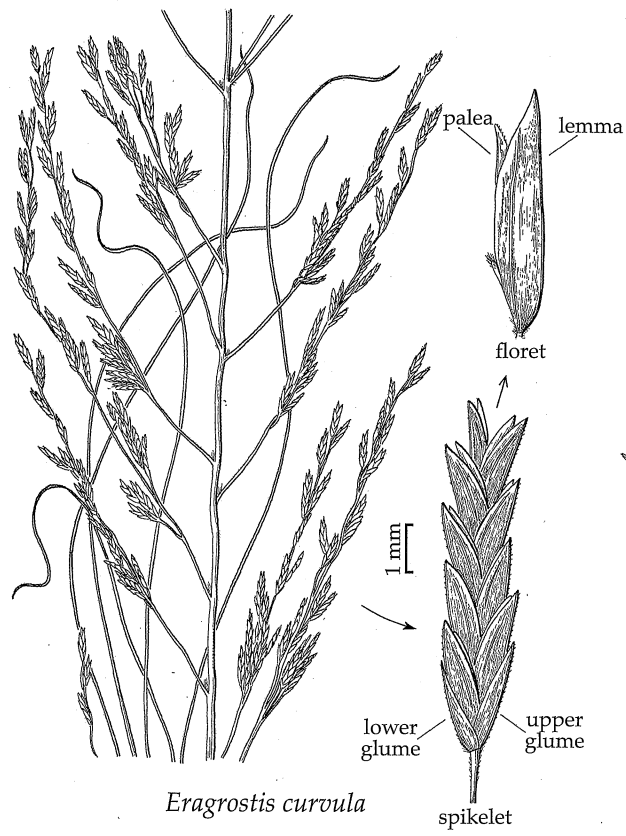
*Eragrostis tef* is native to northern Africa. In Ethiopia, it is used both as a grain and as fodder for cattle. It is also grown, but not commonly, for these purposes in North America and is occasionally found as an escape from cultivation.

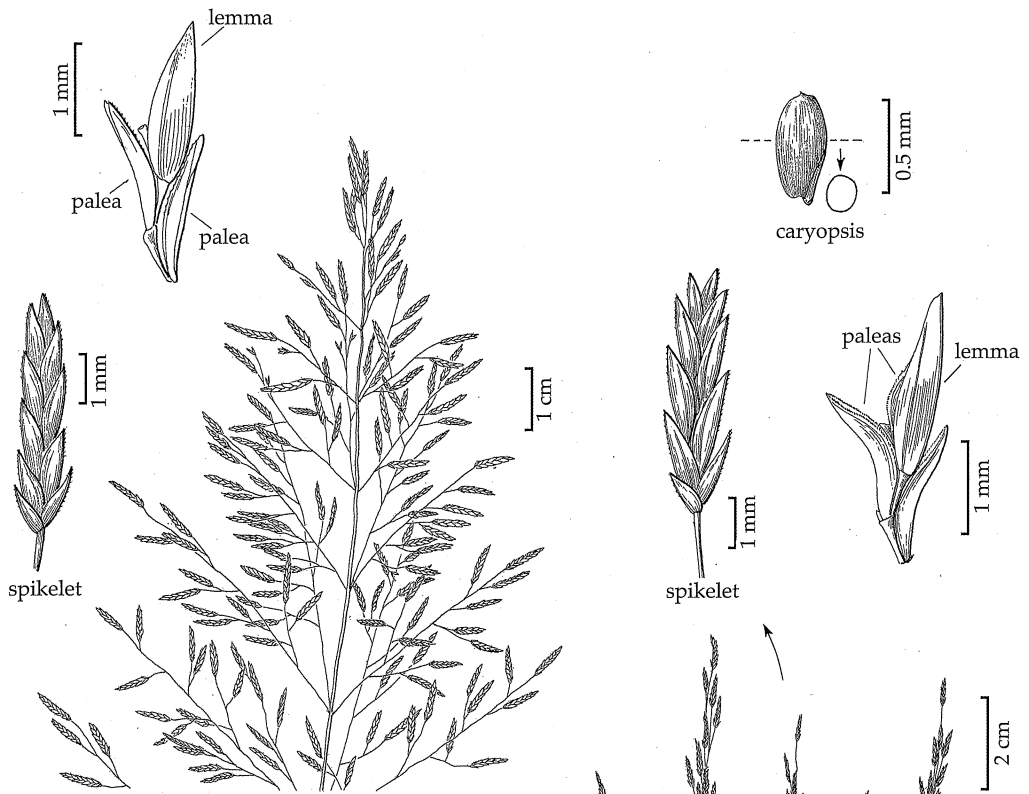
#### 12. **Eragrostis intermedia** Hitchc. PLAINS

LOVEGRASS [p. 420, 506]

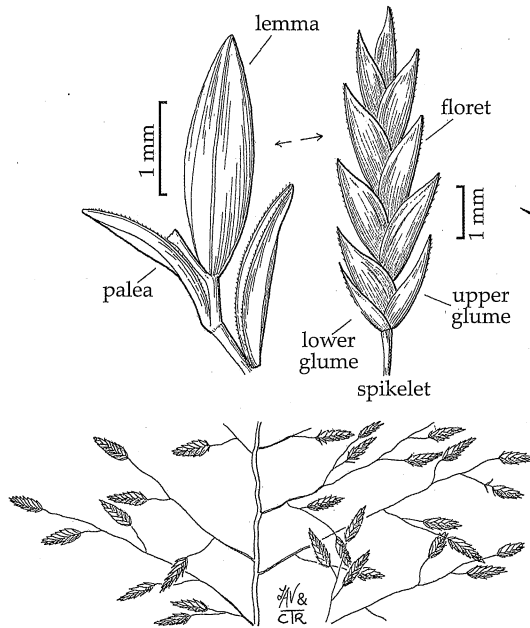
**Pl** per; ces, with innovations, without rhz, not glandular. **Clm** (30)40–90(110) cm, erect, glab below the nd. **Shth** sparsely pilose on the mrg, apc hairy, hairs to 8 mm, not papillose-based; **lig** 0.2–0.4 mm; **bld** (4)10–20(30) cm long, 1–3 mm wide, flat or involute, abx surfaces glab, adx surfaces densely hairy behind the lig, elsewhere usu glab, occ sparsely hairy. **Pan** 15–40 cm long, (8.5)15–30 cm wide, ovate, open; **pri br** 4–25 cm, diverging 20–90° from the rchs, capillary; **pulvini** hairy or glab; **ped** 2–14 mm, divergent. **Spklt** 3–7 mm long, 1–1.8 mm wide, narrowly lanceolate, olivaceous to purplish, with (3)5–11 flt; **dis** acropetal, pal persistent. **Glm** lanceolate to ovate, hyaline to memb; **lo glm** 1.1–1.7 mm, narrower than the up glm; **up glm** 1.3–2 mm, apc acuminate to acute; **lm** 1.6–2.2 mm, ovate, memb, hyaline near the mrg, lat veins inconspicuous, apc acute; **pal** 1.4–2.1 mm, hyaline, narrower than the lm, apc obtuse to acute; **anth** 3, 0.5–0.8 mm, purplish. **Car** 0.5–0.9 mm, rectangular-prismatic, somewhat lat compressed, with a well-developed adx groove, striate, opaque, reddish brown.  $2n =$  ca. 54, 60, 72, ca. 74, 80, 100, 120.

*Eragrostis intermedia* grows in clay, sandy, and rocky soils, often in disturbed sites, at 0–1850 m. Its range extends from the United States through Mexico and Central America to South America.

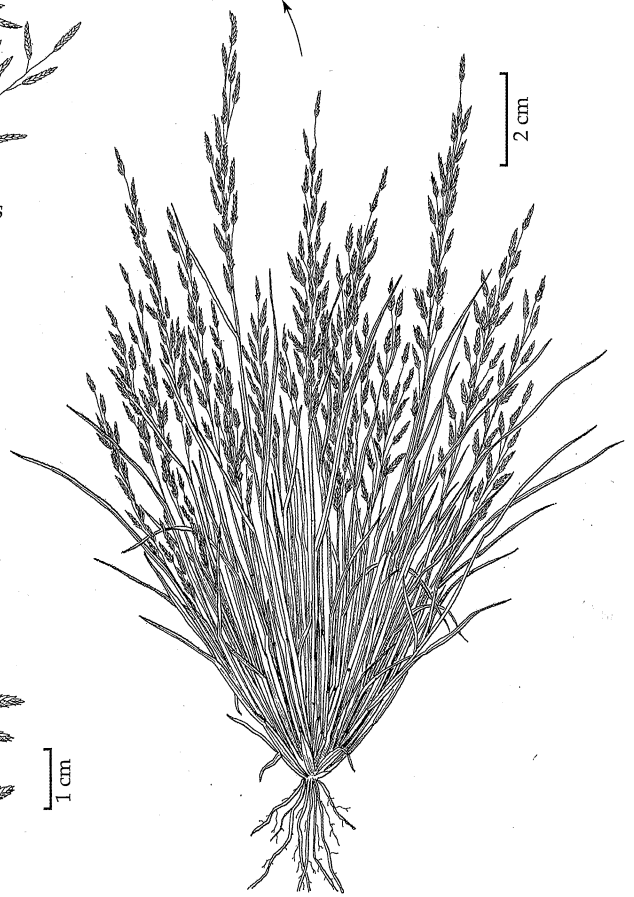




*Eragrostis mexicana* subsp. *virescens*

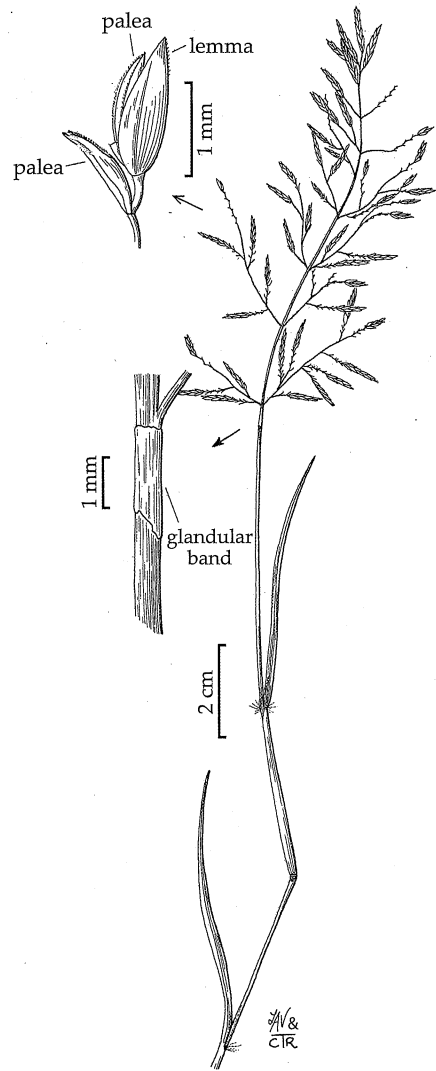
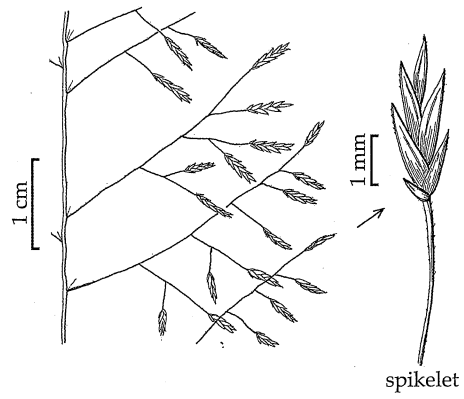


*Eragrostis mexicana* subsp. *mexicana*

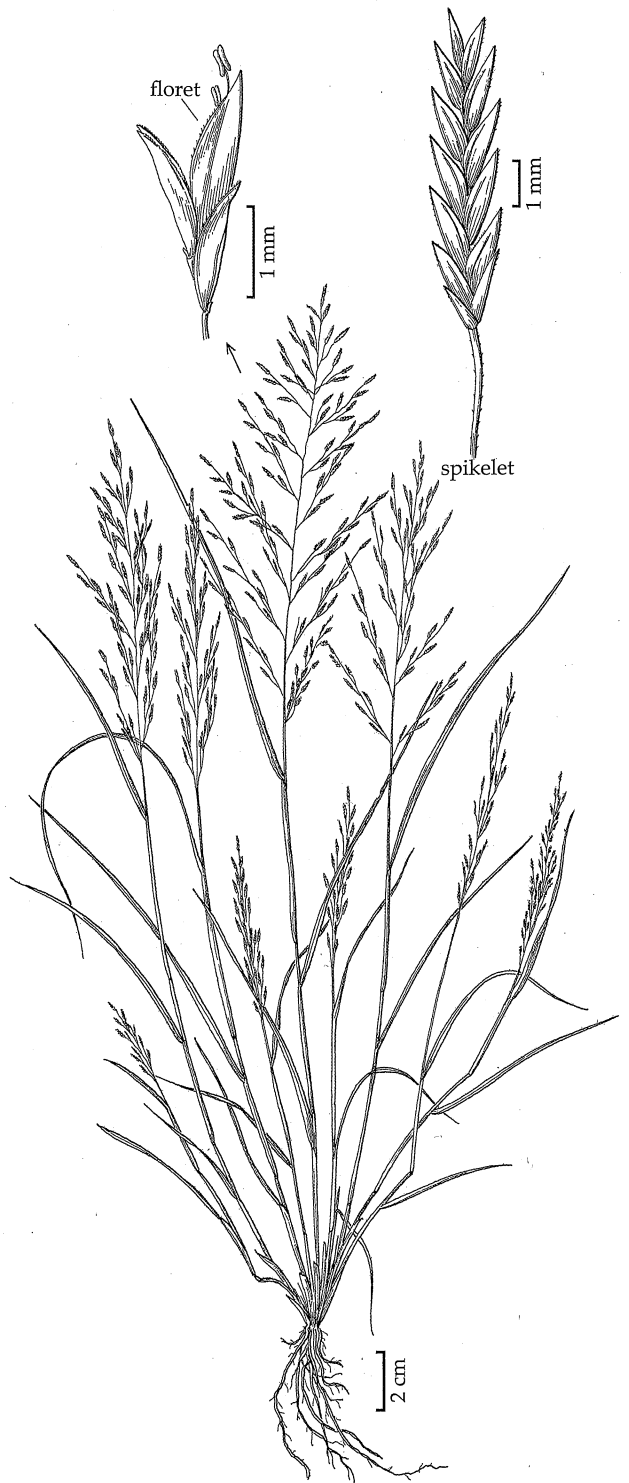


*Eragrostis lutescens*

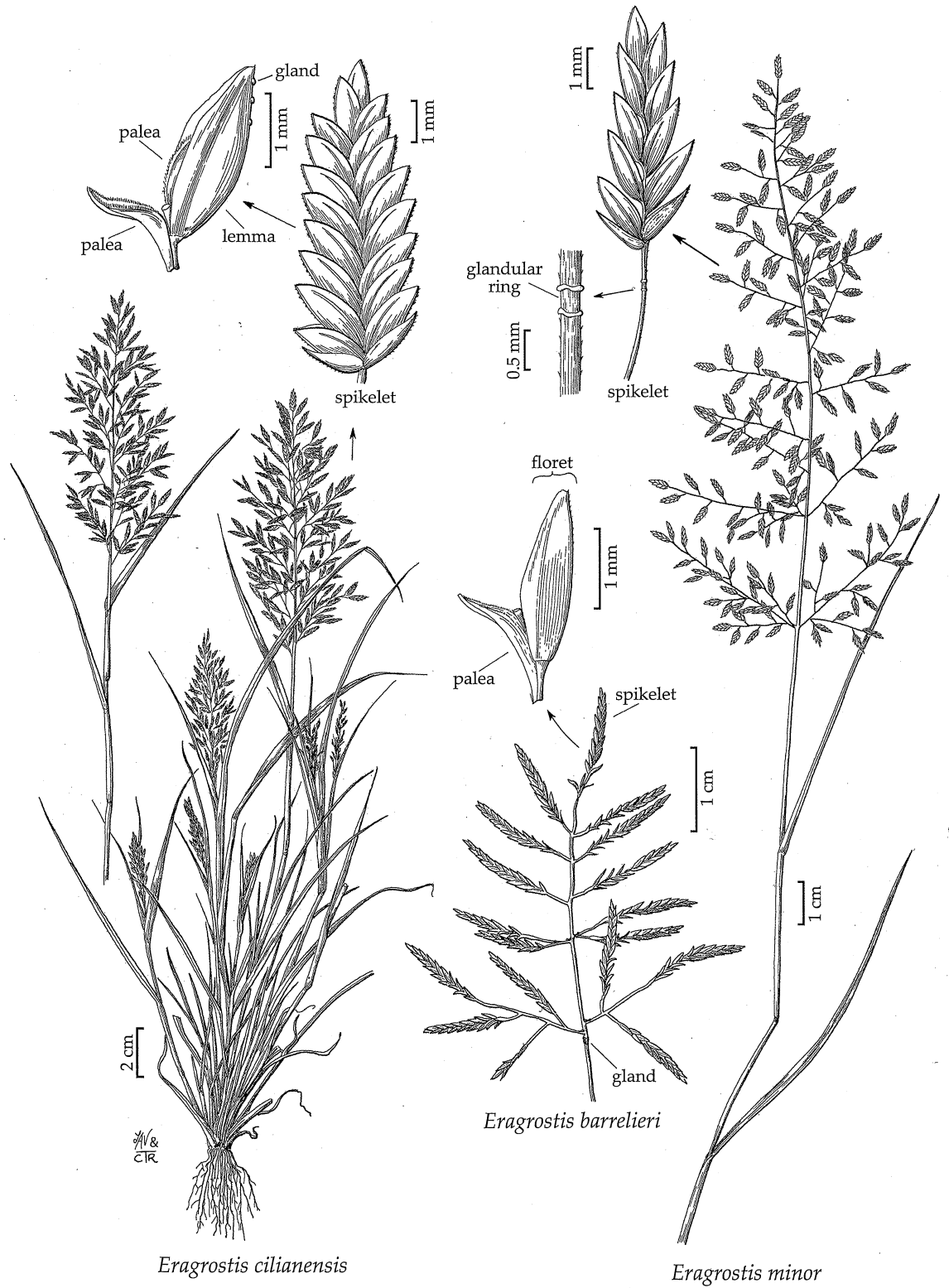




*Eragrostis pilosa* var. *pilosa*



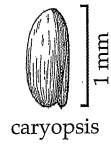
*Eragrostis pectinacea* var. *pectinacea*



*Eragrostis cilianensis*

*Eragrostis barrelieri*

*Eragrostis minor*

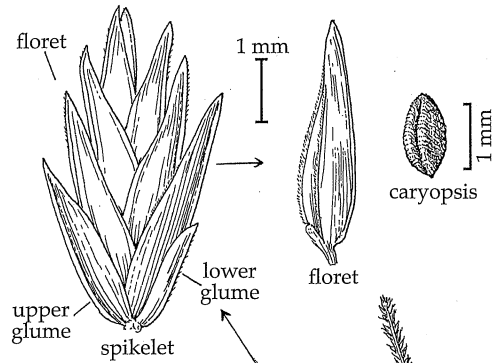


caryopsis



spikelet

*Eragrostis tef*



floret

1 mm

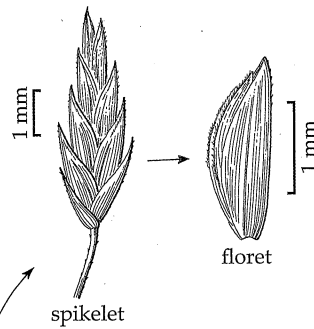
caryopsis

floret

upper glume

spikelet

lower glume



1 mm

floret

1 mm

spikelet



2 cm

A & CTR

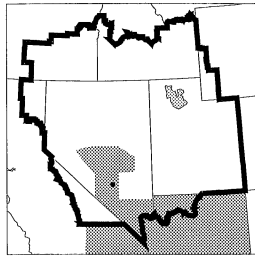
*Eragrostis intermedia*



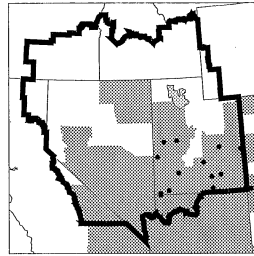
2 cm

A & CTR

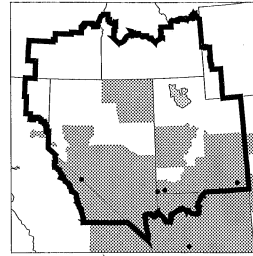
*Eleusine indica*



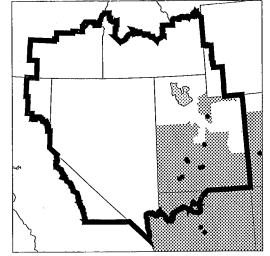
*Scleropogon brevifolius*  
10.05.1



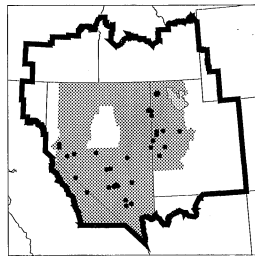
*Erioneuron pilosum*  
10.06.1



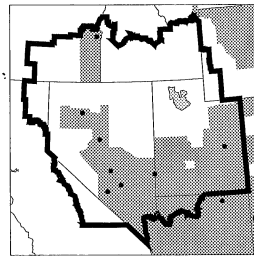
*Dasyochloa pulchella*  
10.07.1



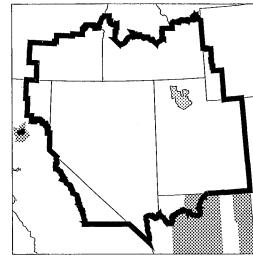
*Blepharoneuron tricholepis*  
10.08.1



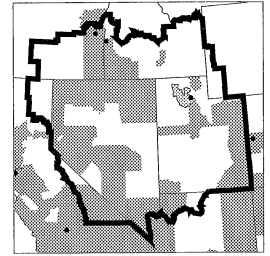
*Blepharidachne kingii*  
10.09.1



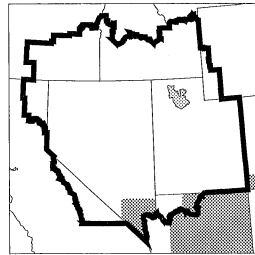
*Munroa squarrosa*  
10.10.1



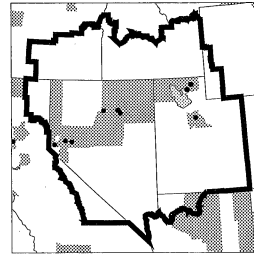
*Leptochloa dubia\**  
10.11.1



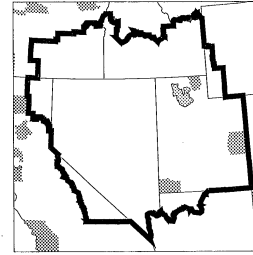
*Leptochloa fusca*  
10.11.2



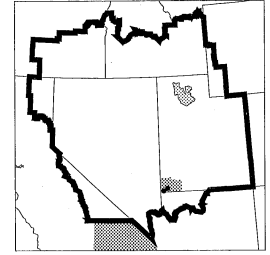
*Leptochloa panicea*  
10.11.3



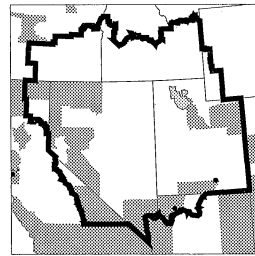
*Eragrostis hypnoides*  
10.12.1



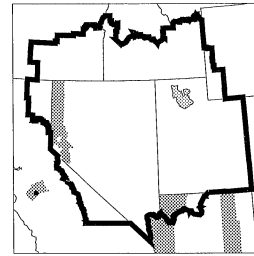
*Eragrostis curvula*  
10.12.2



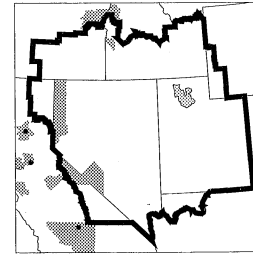
*Eragrostis lehmanniana*  
10.12.3



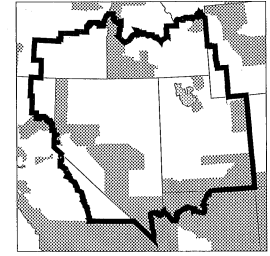
*Eragrostis mexicana*  
10.12.4



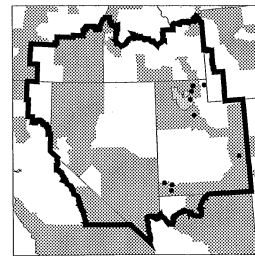
*Eragrostis lutescens*  
10.12.5



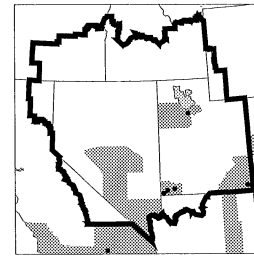
*Eragrostis pilosa*  
10.12.6



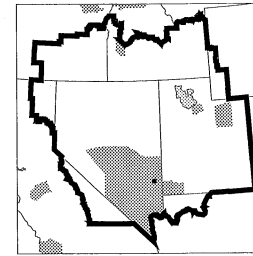
*Eragrostis pectinacea*  
10.12.7



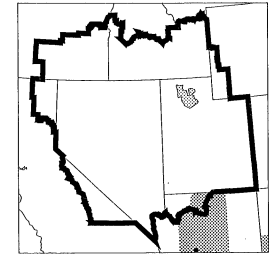
*Eragrostis cilianensis*  
10.12.8



*Eragrostis barrelieri*  
10.12.9



*Eragrostis minor*  
10.12.10



*Eragrostis intermedia\**  
10.12.12

# *Grasses of the Intermountain Region*

*Edited by* Laurel K. Anderton and Mary E. Barkworth

*Illustrated by* Cindy Talbot Roché, Linda Ann Vorobik, Sandy Long,  
Annaliese Miller, Bee F. Gunn, and Christine Roberts

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