

Stipa lepida A. Hitchc., FOOTHILL NEEDLE GRASS. Perennial herb, rhizomatous (highly condensed), fibrous-rooted, many-stemmed at base, densely cespitose with shoots crowded along rhizome, unbranched above, erect to ascending, 35–95 cm tall; shoots with basal leaves and cauline leaves, leaves becoming tightly inrolled concealing upper surface when water-stressed, with the uppermost cauline leaf sheath (flag leaf) concealing peduncle, when water-stressed exposed surfaces glabrous or with minute hairs but upper (hidden) surfaces typically villous or puberulent. **Stems (culms):** many-ridged, < 0.9 mm diameter, stiff-puberulent below each node, the lowermost internodes often villous changing to glabrous approaching peduncle, nodes sometimes villous; internodes hollow. **Leaves:** alternate distichous, simple with sheath; prophyll (first leaf of shoot) and then several leaves only sheath; prophyll 2-keeled, to 15 mm long, short-ciliate along keels; sheath open, often < internode, rounded on back, ridged with midrib of blade descending on sheath above midpoint, scarious on margins, glabrous or with minute hairs between ribs, without lobes (auricles) at top; collar sparsely short-villous to glabrous; ligule membranous, truncate and jagged on margin (rounded), typically 0.3–0.5(–1.6) mm long; blade linear, to 200 × 1–3.2 mm, the widest at base, flat (flowering shoot) but later becoming inrolled concealing upper surface, minutely toothed on margins, ± acute at tip, parallel-veined and strongly ridged on upper surface and with only midrib prominent on lower surface, upper surface dull, villous, lower surface dull to semi-glossy, slightly scabrous-puberulent to nearly glabrous. **Inflorescence:** spikelets, in terminal, open panicles, panicle lax with ascending, flexible branches from widely spaced nodes, lateral branches typically 2 per node and unequal in pair, spikelet with 1 floret, bracteate, awned; peduncle and sometimes the lowermost lateral branches concealed by sheath of flag leaf; bracts subtending lateral branches 1–3, membranous, unequal, 0.5–2.5 mm long, ciliate on margins; lateral branches to 110 mm long (including awns), with mostly overlapping spikelets, axes wiry and fine (0.1 mm diameter), short-hairy; axes with spikelets 1–5 mm long, minutely scabrous. **Spikelet:** narrowly lanceoloid-fusiform, breaking above glumes; **glumes** 2, erect, unequal, lanceolate-linear and long-tapered to tip, lower glume 10–13 × ± 0.7 mm, upper glume 9–10.5 × ± 0.9 mm, lower glume > upper glume, membranous aging scarious and often purplish at base, with 1 vein to tip and 3(5)-veined below midpoint, the veins green aging reddish, glabrous, spreading after fruit abscised; **lemma** long-awned, 5–6 mm long, < glumes, membranous, callused at base, with a crown of erect hairs at necklike tip (crown), typically 5-veined with veins converging at crown, short-strigose to short-villous but minutely papillate-scabrous between veins (20×), with margins strongly overlapping in fruit; awn 20–46(–55) mm long, ± 0.15 mm wide at base, scabrous, green with 2 pale reddish ridges, at anthesis straight and not or barely twisted at base; callus pointed, hairy with straight hairs to 0.7 mm long; **palea** lanceolate to ovate, 1.1–1.5 mm long, << lemma, membranous, not keeled, veins obscure or with 2 short veins at base, acute at tip, glabrous. **Flower:** bisexual; **perianth (lodicules)** 2, erect, oblong-ovoid to oblanceoloid, 1.1–1.3 × 0.3–0.5 mm, > ovary and conspicuous, at anthesis fleshy aging flat, translucent, thin and minutely jagged at tip; **stamens** 3, free, exerted sideways with pendent anthers; filaments threadlike, 2–3 mm long, translucent-white; anthers basifixed, dithecal, subequal, linear, 3–4.2 × 0.5–0.6 mm, red-purple, each sac with conspicuous tuft of short, colorless bristles at tip (pedicellate), longitudinally dehiscent; pollen whitish; **pistil** 1; ovary superior, ellipsoid, ± 0.7 mm long, glossy greenish translucent, glabrous, 1-chambered with 1 ovule; styles 2, spreading, exerted sideways from about midpoint of lemma; stigma several-forked (dendritic), 1.2–1.5 mm long, white-translucent, with branching directed upward. **Fruit:** achene (caryopsis), tightly enclosed by lemma, narrowly ellipsoid, 3–3.5 × 0.5 mm, green when fruit abscised; enveloping lemma 5–6 × 0.6 mm + cylindric crown 0.25–0.3 × ± 0.2 mm + erect bristles on crown rim < 0.5 mm long, green when fruit abscised; awns ± 0.15 mm diameter at base, tawny and red (ridges), strongly bent, lower segment < upper segment, the lower segment strongly twisted, the upper segment wavy. Late March–mid May.

Native. Perennial herb mostly observed in chaparral having chamise (*Adenostoma fasciculatum*), growing around or beneath shrubs but when fully exposed after a burn growing vigorously. In fruit, *Stipa lepida* is easy to distinguish from other local species of needlegrass because the awns are very fine and typically less than forty millimeters long.

B. A. Prigge & A. C. Gibson