

Thalictrum fendleri A. Gray, FENDLER'S MEADOW RUE. Perennial herb, drought-dormant, from an erect caudex, fibrous-rooted, not rosetted, 1-stemmed at base, neither in dense clumps nor appearing clonal, typically unbranched below inflorescence, erect to ascending, 50–235 cm tall; dioecious; shoots with 3-dimensional basal leaves and cauline leaves having slightly elevated lateral leaflets, glandular-puberulent throughout, with strong skunklike odor, somewhat glaucous; caudex retaining fibrous leaf bases, yellowish.

Stems: cylindric, to 10 mm diameter, scarcely ridged but appearing striped, tough, shallowly zigzagged, long internodes midplant to 270 mm long, internodes at base of plant purplish and other internodes often tinged purplish red but with some green, lightly glaucous on lower purple portion, with minute glandular hairs often persistent; internodes hollow. **Leaves:** helically alternate, to 4-compound unequally 3-forked at major junctions (3–4-ternate), to 550 mm long, pinnately arranged with primary, secondary, and tertiary leaflets formed along axis in symmetric pairs, long-petiolate with stipulelike sheathing base; petiole to 290 mm long (basal leaves) and to 160 mm long (cauline leaves) decreasing upward to < 30 mm long approaching inflorescence, basal portion sheathing, sheathing base closed (lower leaves) and open (the uppermost cauline leaves), having a pair of stipulelike wings, the wings 4–35 mm long (decreasing upward), at midstem flaring several mm and pale green to whitish, above wings the axis cylindric, green but often red to purplish red on exposed side, minutely glandular-hairy and somewhat glaucous, hollow; stipel-like appendages 2 at the lowest fork (persistent on lower side) and often at second fork (early-deciduous), cupped, several mm long, fringed, and white, withering from tip; axes cylindric and hollow except at forks, first segment of rachis the longest, gradually decreasing in length and diameter with each order, at each fork axes having similar diameters but central axis always longer and thicker, noticeably knobby at junctions and often finely constricted and appearing jointed, glandular-puberulent, terminal segment cylindric, to 0.5 mm diameter; petiolules of ultimate segments fine, 0.5–10+ mm long (of terminal leaflet the longest); ultimate blade segments roundish or heart-shaped to broadly wedge-shaped, 5–30 × 6–30(–37) mm, thin and easily wilted, cordate to truncate at base and lateral leaflets often oblique, ± 3-lobed or toothed especially above midpoint, crenate to serrate, venation pseudopalmate with principal veins arising near base and most veins slightly raised on lower surface, dull, glaucous but less so on upper surface, upper surface smooth, lacking hairs, lower surface paler, uniformly glandular-puberulent.

Inflorescences: panicle of cymes, unisexual, to 4-compound, at top of canopy, terminal on main axis and sometimes terminal on an ascending branch just beneath terminal inflorescence, cymes axillary to bracts along inflorescence or sometimes upper cymes paired, principal cymes several–many-flowered, to 330 mm long, from each axil mostly having 2 unequal branches, bracteate, glandular-puberulent, glaucous; bract subtending peduncle leaflike, to 3-compound, decreasing upward to 2-compound and eventually 1-compound; rachis cylindric, < 5 mm diameter, slightly zigzagged, internodes to 100 mm long and decreasing upward, shorter on staminate inflorescence, glaucous around junctions; branch cyme with cylindric axis to 2 mm diameter, with a dominant axis and a late-forming minor axis (often 1-flowered); bract subtending upper cyme = a miniature, cauline leaf with spreading to reflexed, broadly triangular or rounded and fringed to jagged, winglike margins across the horizontal, sheathing petiole (resembling a pair of white stipules); bract subtending ultimate cyme much reduced; pedicel slender, variable in

length, flexible and recurved (staminate flower) or spreading to ascending and wiry (pistillate flower). **Staminate flower:** radial, ca. 7 mm across, pendent; **sepals** 4(–5 or 1 sepal deeply 2-lobed), spreading, outer pair slightly overlapping inner pair, strongly cupped and broadly elliptic-ovate with tail-like tip (caudate), 3–3.5 × 1.4–2 mm, green to flesh-colored on back, having paler margins and with 3 raised veins from base, the veins green or purple-red, central vein unbranched to tip, lateral veins sometimes branched on outer (lower) surface, entire or remotely jagged; **petals** absent; **stamens** 15–35, helically alternate, free, pendent; filaments at pollination threadlike and elastic, to 7.5 mm long, greenish at base and tip and principally white aging rose to reddish; anthers basifixed, dithecal, 2.5–3 mm long including abrupt tip ca. 0.2 mm long, light yellow and often blushed reddish, longitudinally dehiscent; pollen light yellow, copious; **pistil** absent. **Pistillate flower:** radial, 3.5–4 mm across (increasing greatly in fruit), ascending; **sepals** 4, initially ascending then spreading, outer pair slightly overlapping inner pair, ovate with tail-like (caudate), 2–2.5 × 1–2.4 mm, green with paler margins, on back with several raised veins from base, the veins green or purple-red, central vein unbranched to tip, lateral veins sometimes branched on outer side, entire or remotely jagged, abscising during fruit development; **petals** absent; **stamens** absent; **pistils** 7–20, helically alternate, free, spreading to ascending; ovaries superior, compressed side-to-side, somewhat claw-shaped, 1.5–2 mm long, green, minutely glandular-puberulent, 1-chambered with 1 ovule attached at top; style tentaclelike and curved to crooked, ca. 2.5 mm long, long-papillate and whitish, ca. 0.4 mm wide at base. **Fruits:** achenes, 5–10, formed as a radiating cluster from each flower (aborted pistils appearing with ripened fruits), short-stalked ca. 1 mm; achene 1-seeded (often seedless), hatchet-shaped and compressed-lenticular with 2 sharp edges, body 4–6 × 3–3.5 mm + stalk, inflated, glaucous, on each side having 1–3 curved lateral ribs or wavy veins but not strongly netted, with a curved, spreading to ascending persistent beak (style). **Seed:** banana-shaped, ca. 3.5–4 mm long. Late February–late April.

Native. Perennial herb mostly occurring in the shady understory of southern oak woodland in coastal canyons (SMM). *Thalictrum fendleri* is an odorous plant described as having a skunklike smell, due to the presence on axes and the lower sides of blades relatively dense, minute glandular hairs. This species begins flowering earlier and tends to finish by early April, when the other meadow rue species may be at peak flower. Fruits of this species have three veins radiating from the base on each face, but the majority of fruits are sterile. B. A. Prigge & A. C. Gibson