

Juncus dubius Engelm., MARIPOSA RUSH, WRINKLED RUSH. Perennial herb, rhizomatous, fibrous-rooted, with erect shoots from creeping rhizome, 30–120 cm tall; shoots with long, dark green photosynthetic stems, each shoot having 2–4 leaves, 1–2 basal leaves \pm lacking blades (cataphylls), with prominent cross wrinkles (rugulose), glabrous; rhizomes horizontal 20–30 mm belowground, 3–5 mm diameter, with closely spaced shoots (to 20 mm apart), with persistent scales, the scales ovate-deltate, 5–9 mm long, pale brown, veined, obtuse-rounded at tip. **Stems:** in \times -section elliptic base-to-tip, 2–4.5 mm diameter, tough, green, finely striped with narrow, dark green ridges and broader pale green strips; central tissue pale green. **Leaves:** helically alternate, essentially on sheath (cataphyll) and simple with sheath; cataphyll sheath open, 40–100 mm long (the shortest at base), pinkish brown to straw-colored, tail-like at tip (caudate), fibrous, with 2 lobes at top (auricles), the auricles ca. 1 mm long; sheath of green leaves open, 100–210 mm long, parallel-veined, rugulose (smooth), narrowly scarious on margin base to tip, auricles conspicuous, 2–5 mm long, translucent; blade cylindric, 50–380 \times 1.5–4 mm, lower cauline \gg upper cauline, rugulose, with obscure, internal, transverse walls (septa readily apparent when compressed). **Inflorescence:** panicle of headlike clusters, with several primary branches arising near base, terminal but appearing lateral because subtended by 2 alternate distichous bracts (lower and upper) with the longer bract appearing like a continuation of the stem, panicle 60–180+ mm long, the lowest primary branch having an axis to 100 mm long below fork, the inflorescence branching 3–6+ times with hemispheroid to obovoid headlike clusters at tips of ultimate branchlets, heads 4–6(–10)-flowered, bracteate, glabrous; lower bract of pair erect, cylindric and fully closed, 15–35 mm long, decreasing with each fork, \gg inflorescence, with inflorescence arising through lens-shaped gap at base, tapered to point, upper bract of pair linear, 10–15 mm long decreasing upward, many-veined with 2 prominent veins, green but aging tannish brown between scarious margin and principal vein, truncate at tip; axes green, rugulose (smooth); bracts subtending branchlets 2 (bract + prophyll), alternate distichous, \pm sheathing and appressed to axis, lanceolate; bractlets (bracteoles) subtending pedicel 2, ovate-deltate, 1.8–2.5 \times 0.7–1 mm, translucent, with tail-like tip 0.3–1 mm long (caudate); pedicel 0.3–0.5 mm long, concealed by bractlet. **Flower:** bisexual, radial, ca. 1.5 mm across, closed (cleistogamous); **tepals** 6 in 2 similar whorls, erect, acuminate-lanceolate, 2.2–2.7(–3.6) \times 0.5–0.6 mm, outer tepals slightly $>$ inner tepals and slightly narrower, green with whitish margins, 1-veined, acuminate to tail-like at tip, persistent; **stamens** 6, free, opposite tepals, included; filaments 0.4–0.6 mm long, pale green; anthers basifixed, dithecal, 0.5–0.75 mm long, light yellow to whitish, longitudinally dehiscent; pollen light yellow; **pistil** 1, 1.5–2 mm long; ovary superior, 3-lobed ovoid, 0.5–0.8 \times 0.5–0.6 mm, greenish, 3-chambered, each chamber with ca. 20 ovules; style 3-branched, basal portion 0.8–1.2 mm long; the stigmatic branches included, each branch initially corkscrewlike with 3–4 coils, 0.9–1.2 mm long when uncoiled. **Fruit:** capsule, loculicidal, dehiscent by 3-valves, many-seeded, narrowly oblong 3-sided, 2.4–3.9 mm long, chestnut brown, beaked at tip, ribbed along sutures especially approaching tip, valves veined. **Seed:** obovoid, 0.3–0.4 mm, brown, lacking tail (appendage).

Native. Perennial herb first recognized in range by Carl Wishner in shaded willow riparian woodland on the Carlisle Canyon creek bank adjacent to Split Rock at SMMNRA Circle X Ranch (SMM), but also now known from the edge of a perennial creek in shaded riparian along Arroyo Sequit at Carrillo State Park (SMM) and from upper Las Virgenes Canyon (SH). *Juncus dubius* is here treated for convenience as being synonymous with *J. rugulosus*; both forms are distinctive in having conspicuous wrinkles on the stem.
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