

*Salix* L. WILLOW

*Salix lasiolepis* Benth., ARROYO WILLOW. Tree to shrub, winter-deciduous (often retaining some old green or yellowed leaves), with several trunks, typically < 10 m tall; dioecious; shoots with terminal whiplike twigs, with flexible, soft short-hairs uniformly dense on young growth, lacking glandular hairs; bud on dormant stem  $\pm$  appressed, tongue-shaped or ovoid, 2–10 mm long and swelling prior to flowering, covered by 1 scale, the bud scale caplike and not closed, velvete (glabrous), rounded (acute) at tip, with fused margin forming a lateral ridge around bud (ridges on 2 sides); bark coarsely furrowed and commonly brownish gray on trunk, branches dull olive-brown and smooth. **Stems:** straight, green to yellowish, red-brown, or brownish, not glaucous, smooth, short-tomentose and initially velvete aging glabrate; leaf scar narrowly crescent-shaped with 3 conspicuous traces; stipule scar circular or elliptic, 0.3–1 mm long, near ends of leaf scar. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, fused to stem at node, leaflike, asymmetric ovate to ear-shaped, 2–8 mm long (vestigial), with thick stalk at base, often with lower surface exposed or having a wavy margin, midrib extending to acute tip, upper surface glabrescent and glossy, lower surface glaucous-gray with short silvery hairs, deciduous; petiole cylindrical most of length, 7–22 mm long, expanded at base, densely pubescent or glabrescent like stem; blade oblanceolate or narrowly elliptic to oblong or narrowly lanceolate, 35–162  $\times$  8–45 mm, symmetric or asymmetric at base, entire to shallowly scalloped or irregularly short-serrate on margins, mostly acute at tip, pinnately veined with conspicuous midrib slightly raised or not on upper surface and principal and minor veins raised on lower surface, sparsely to moderately tomentose, upper surface often becoming glossy and glabrate, with sunken minor veins creating textured relief, lower surface with scattered short, silvery hairs and glaucous. **Inflorescences:** unisexual catkins, appearing before new leaves from dormant buds, spikelike, with hundreds of helically alternate flowers, bracteate, densely villous on axis and bracts with soft, silky, silvery hairs. **Staminate inflorescence:** catkin (ament)  $\pm$  lax and spreading, cylindrical and 30–70 mm long when fully expanded; peduncle 2–5 mm long, with 2–4 deciduous bracts; axis  $\pm$  2.5 mm diameter; bract oblong, 3–8.5  $\times$  1.5–2 mm, green, sometimes brownish at tip, upper surface glabrous; bractlet subtending flower (“floral bract”) paddlelike to obovate, 1.2–1.8  $\times$  0.7–0.9 mm, dark brown but green at base, densely villous on both surfaces or lower (outer) surface with fewer hairs and sericeous. **Staminate flower:** **perianth** absent; **stamens** 2, fused at base, ascending; filament 3.5–5 mm long, light green to light greenish yellow; anther basifixed, dithecal, 0.5–0.8 mm long, brilliant yellow to brilliant greenish yellow, longitudinally dehiscent; pollen brilliant yellow; **nectary** on upper (adaxial) side of filaments, peglike to bottle-shaped, 0.5–1 mm long, yellow-green except having greenish yellow at tip; **pistil** absent. **Pistillate inflorescence:** ascending, ovoid-cylindrical, 15–50 mm long when fully expanded; peduncle 2–5 mm long, with 2–4 deciduous bracts; axis  $\pm$  2.5 mm diameter; bract oblong, 3–8.5  $\times$  1.5–2 mm, green, sometimes brownish at tip or completely brownish, upper surface glabrous; bractlet subtending flower paddlelike to obovate, 1.2–1.8  $\times$  0.7–0.9 mm, dark brown but green at base, densely villous on both surfaces or lower (outer) surface with fewer hairs and sericeous. **Pistillate flower:** **perianth** absent; **stamens** absent; **nectary** on upper (adaxial) side at base of stipe, peglike,  $\pm$  0.5 mm long, pale green with

paler tip; **pistil** 1, radiating to ascending on short stalk (stipe); stipe 0.5–2.2 mm long; ovary superior, ovary + style inversely club-shaped (obclavate),  $\pm$  3 mm long, green with 2 suture lines and whitish dots, glabrous; stigmas 2, each 2-lobed, short, reddish. **Fruit:** capsule, 2-valved, many-seeded, ca. 4 mm long, valves spreading or recurved. **Seed:** oblong, 0.7–1 mm long, brown, with longitudinal ridges, with fine, white hairs attached via a ring at tip. Mid-January–mid-March.

Native. A winter-deciduous tree occurring throughout the range in wetlands and in riparian woodland along rivers and creeks, often forming dense groves. *Salix lasiolepis* is the familiar local species and has no foliage glands, but is also the only tree willow species in range having just two stamens per staminate flower. The lower surface of the leaf blade is grayish glaucous and has short, silvery hairs. To identify this species during summertime, when flowers and fruits are absent, you need to examine the dormant buds; in arroyo willow the bud has one ovoid, caplike bud, velvety hairy on which the bud scale has a fused margin that forms a ridge on the sides. *Salix lasiolepis* can be confused with *S. lucida*, which has similar dormant buds but more stamens, less hair, and conspicuous glands on the petioles and stipules.

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