

## *Salix* L. WILLOW

*Salix laevigata* Bebb, RED WILLOW. Tree, winter-deciduous, with 1–several trunks, in range to 10 m tall; dioecious; shoots in spring with inflorescences appearing with new leaves, new growth short-villous soon becoming glabrate; buds on dormant stems ascending-appressed, lanceoloid, 2–7 mm long, typically acuminate at tip, swelling prior to flowering, with 1 scale, the scale margins free but overlapping on the side facing stem, glabrous but ciliate on the unexposed margin (apparent after buds begin to break), green becoming reddish or brown; bark coarsely furrowed, typically blackish brown on trunk to medium-sized branches. **Stems:** ± knobby due to flaring leaf bases, glossy green; young twigs red-brown to yellow-brown; leaf scars ± crescent-shaped but distorted on lower edge by 3 conspicuous traces; stipule scars lateral to leaf scar, elliptic to D-shaped, 0.3–1 mm long. **Leaves:** helically alternate, simple, petiolate, with stipules on some shoots; stipules 2 or vestigial (appearing absent), attached to stem, the leaflike stipules asymmetric, ovate with acute tip to earlike or ± kidney-shaped, (1–)1.5–5.5(–11) × (1–)1.3–2.5(–6) mm, the larger ones (on vigor shoots) short-dentate on margins, several-veined from base, lower surface glaucous, deciduous, the vestigial stipules resembling stalked glands, < 0.4 mm long, soon withering and deciduous; petiole 1–17 mm long, deeply channeled next to axillary bud and cylindric approaching blade, the channel conspicuously hairy; blade narrowly lanceolate or elliptic to oblanceolate, 30–195 × 9–28 mm, broadly tapered to rounded or asymmetric and oblique at base, short-serrate or crenate to sometimes short-crenate on margins, acuminate-acute to ± rounded at tip, pinnately veined with conspicuous midrib raised on lower surface, upper surface at maturity glossy green and glabrate, lower surface pale greenish blue and glaucous. **Inflorescences:** unisexual catkins, terminal on leafy shoot emerging with leaves from winter bud, spikelike with many helically alternate, sessile flowers. **Staminate inflorescence:** catkin (ament) spreading to pendent, cylindric, 35–55(–75) mm long, ± lax, many-flowered, flowers with ascending to spreading stamens, bracteate, villous; peduncle to 6 mm long; axis with fine, soft, silvery hairs; bractlet subtending flower (“floral bract”) cupped-ovate to cupped-oblong, 1.8–2.6 × 0.8–1 mm, light green to light greenish yellow, acute to rounded, truncate, or 2-toothed at tip, mostly villous except on lower surface near the tip. **Staminate flower:** **perianth** absent; **stamens** 3–5 (even on the same inflorescence), ascending to spreading, fused for ± 0.5 mm at base; filaments unequal, 2.5–3.4(–4) mm long, light green, glabrous most of length but villous at base; anther basifixed, dithecal, 0.5–0.8 mm long, bright yellow, longitudinally dehiscent; pollen bright yellow, copious; **nectaries** 1–4, if 1 always above stamens, compressed-ellipsoid, ± 0.4 mm long, slightly wider, dull yellow to orange-yellow, sometimes 1 ± below stamens and 2 others variously positioned around stamens, these similar but usually smaller; **pistil** absent. **Pistillate inflorescence:** catkin ascending, cylindric, 30–70 mm long, of 100–185 flowers, bracteate, villous; peduncle at anthesis to 6 mm long increasing 2× in fruit; axis with fine, soft, silvery hairs; bractlet oblong, 1.8–2 × 0.8–1.2 mm, not strongly cupped, light green to pale yellowish green or whitish, truncate or commonly 2-toothed or unequally 3–4-toothed at tip, mostly villous except on upper and lower surface near the tip. **Pistillate flower:** **perianth** absent; **stamens** absent; **nectary** 1, above base of pistil, kidney-shaped, 0.3–0.5 × 0.5–0.8 mm, pale yellow; **pistil** 1, radiating to ascending, glabrous, short-stalked (stipe);

stipe  $\pm$  1 mm long increasing to 2 $\times$  in fruit; ovary superior, ovary + style inversely club-shaped, 2.5–3.5 mm long, green, with 2 lateral suture lines, 1-chambered having to 8 ovules per placenta; style  $<$  0.2 mm long, slightly 2-branched = stigmas; stigmas slightly 2-lobed, very short, reddish. **Fruit:** capsule, dehiscent by 2 valves, to 16-seeded, moustache-shaped to V-shaped, 3.5–5.5 mm long, with spreading or recurved valve tips; style and stigmas persistent. **Seed:** oblong, 0.7–1 mm long, brown, with longitudinal ridges, with many hairs attached via a ring at seed base, the hairs fine, 2–2.5 mm long. Mid-January–early April.

Native. A fairly common winter-deciduous tree of wetlands and along rivers and creeks throughout SMM and SH. *Salix laevigata* can be identified in sterile condition by the basic appearance of its leaves and bark, but, to be positive, more technical features must be used. In particular, the winter bud has one scale having a free margin but overlapping on the side facing the stem, and the staminate flower has at least three stamens, versus just two stamens for *S. lasiolepis*, the other common tree willow.

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