

Vascular Plants of Williamson County
Albizia julibrissin – SILK-TREE, MIMOSA [Fabaceae]

Albizia julibrissin Durazz., SILK-TREE, MIMOSA. Small tree, winter-deciduous, not spinescent, principal branches widely spreading, in range < 5 m tall; shoots with only cauline leaves. **Stems:** initially angled soon cylindrical, with 3 ridges descending from each leaf, \pm zigzagged, young stems soon becoming woody and forming whitish lenticels and patches of light brown periderm on green stems. **Leaves:** helically alternate, even-2-pinnately compound with (3–)9–12(–15) opposite to subopposite pairs of spreading primary leaflets ($> 45^\circ$) and 10–28 pairs of secondary leaflets, leaf mostly 260–390 mm long, petiolate with pulvinus, with stipules; stipules attached at node just below pulvinus, narrowly lanceolate, 4–5 \times 0.8–1 mm, aging orangish, with several hairs on margin approaching acute tip, early-deciduous; petiole pulvinus conspicuous, to 8 \times 5 mm, green, axis above pulvinus channeled, < 30–40 mm long, on upper side touching pulvinus having 1 craterlike gland (extrafloral nectary), the gland ca. 2–2.5 mm across, green, axis mostly glabrous; blade mostly 150–180 mm wide; rachis 3-ridged on upper side with primary leaflets attached in furrows between central and lateral ridge, having a curved bridge between central and lateral ridge subtending petiolule, primary leaflets spaced to 23 mm apart, upper side short-villous, lower side rounded and glabrous; primary leaflets (40–)60–108 mm long, the lowest pair the shortest, middle leaflets always the longest; petiolule = pulvinus jointed next to bridge, 1.5 mm long, flesh-colored, short-hairy, at top of pulvinus with 2 mostly minute, triangular, stipel-like structures mostly 0.4–0.5 mm long = the lowest secondary leaflets, having several short hairs; rachilla 3-ridged on upper side with secondary leaflets attached in furrows between central and lateral ridge, to 95 mm long including extension to 3 mm, short-hairy, lacking extrafloral nectaries; petiolule of secondary leaflet = pulvinus ca. 0.5 mm long; blades of secondary leaflets asymmetric, cleaver-shaped to hatchet-shaped with straight leading edge, 7–11.5 \times 2.6–4.2 mm, the lowest leafy pair the smallest and obovate, eccentric with straight midrib 0.5 mm from leading edge, truncate at base on trailing edge, entire and appressed short-ciliate on margins, acute at tip, pinnately veined with 2–)3–4 veins radiating from pulvinus and principal veins raised on lower surface, lower surface glaucous with some short hairs mostly along midrib. **Inflorescence:** headlike spike, in bud hemi-spheroid on long peduncle, in paniclelike branch subtended by foliage leaf, the flowering branch with zigzagged axis having 8+ nodes, from each node having a condensed cyme of 1–4 spikes on peduncles blooming in different weeks, spikes 20+ per branch, head with 20–25 flowers, head in bud ca. 4.5 \times 9 mm, during pollination brushlike (stamens and styles) funnel-shaped ca. 50 \times 40–50 mm, flowers helically alternate and closely spaced, subsessile, flowers dimorphic on some spikes having 1 larger, nectar-producing, center flower bud, bracteate; bract subtending axillary bud with central blade and a pair of stipules, the blade awl-shaped, fleshy, and rounded on back, 2–3 \times 0.5 mm, dark green, short-ciliate on margins, the stipules ovate, 2–2.4 \times 0.8 mm, light green, minutely glandular-ciliate on margins, early-deciduous; peduncle pulvinus 2.5–3.5 mm long, axis above cylindrical but having several ridges approaching head, 20–55 mm, 1 mm diameter at base, green, sparsely short-villous and with minute glandular hairs; rachis of spike pitted (pedicels of flowers somewhat sunken), rims around ovaries puberulent and with minute

glandular hairs; bractlet subtending flower cupped-obovate to cupped-ovate, 1–2 mm long, greenish aging papery reddish, early-deciduous (flower buds < 3 mm long). **Bisexual flower:** radial, variable across (stamens and style); **nectary** obscure; **calyx** (4–)5-lobed, 2.4–3.1 mm long, greenish; tube \pm 5-sided and slightly 5-ribbed, mostly $2.2\text{--}2.5 \times 1.3\text{--}1.4$ mm, 5-veined, minutely strigose and with scattered, minute stalked glandular hairs; lobes triangular, 0.35–0.6 mm long, with short nonglandular hairs and minutely ciliate on margins; **corolla** (4–)5-lobed, 6–8 mm long; tube funnel-shaped with conspicuous lobes and furrows, whitish with green veins, sometimes with short split on 1 side; lobes equal to subequal, triangular-ovate, $2\text{--}2.5 \times 1.2\text{--}1.5$ mm, aging cream-colored, minutely strigose above calyx; **stamens** 20–32, monadelphous (all filaments fused into column); filament column often 5-sided or aging cylindrical, $4\text{--}10.2 \times 0.7$ mm, white, free portions of filaments conspicuously exerted, $25\text{--}40+ \times 0.1$ mm, white to midpoint then pink to dark pink or pink-rose at tips, in bud crooked and twisted straightening for pollination; anthers dorsifixed, conspicuously dithecal, 0.25–0.3 mm long, yellow sacs position on 1 side of rose connective, longitudinally dehiscent; pollen yellow; **pistil** 1, 46–52 mm long, exerted among stamens, stalked, the stalk (stipe) to 1 mm long, green and glabrous, at anthesis upper style crooked and positioned above ball of filaments and anthers; ovary superior, narrowly club-shaped, 3.5–4 mm long, light green, inconspicuously minute-strigose with upward-pointing hairs and minute glandular hairs, 1-chambered having to 18 ovules attached to upper side; style indistinct from ovary, 0.2–0.25 mm diameter, in bud crooked and twisted straightening for pollination, white at base to pale pink above midpoint; stigma at levels of anthers, terminal and depressed, minute. **Nectar flower:** functionally staminate, radial, variable across (stamens), obvious as 1 bud elevated above others and having a wide base with thick wall; **nectary** disclike surrounding base of ovary within filament column, to 0.35 mm long, producing copious thin nectar around ovary and lower style; **calyx** 5-lobed, ca. 3×2.5 mm, green; tube split to base by growth of flower bud, 5-veined, minutely strigose and with scattered, minute stalked glandular hairs; lobes triangular, 0.35–0.6 mm long, with short nonglandular hairs and minutely ciliate on margins; **corolla** 5-lobed, 11–15 mm long; tube cylindrical, ca. 2 mm diameter, fused 3 mm to filament column, whitish with green veins; lobes equal to subequal, triangular-ovate, $2\text{--}2.5 \times 1.2\text{--}1.5$ mm, aging cream-colored, minutely strigose above calyx; **stamens** 25+, monadelphous; filament column 5-sided, = corolla tube, thick, white, free portions of filaments conspicuously exerted, $25\text{--}40+ \times 0.1$ mm, white to midpoint then pink to dark pink or pink-rose at tips, in bud crooked and twisted straightening for pollination; anthers dorsifixed, conspicuously dithecal, 0.25–0.3 mm long, yellow sacs position on 1 side of rose connective, longitudinally dehiscent; pollen yellow; **pistil** 1, exerted among stamens, sterile, sessile; ovary superior, cylindrical, club-shaped, 3.5–4 mm long, light green aging rose at the top, inconspicuously minute-strigose with upward-pointing hairs and minute glandular hairs, 1-chambered; style indistinct from ovary, 0.2–0.25 mm diameter, in bud crooked and twisted straightening for pollination, white at base to pale pink above midpoint. **Fruit:** pod (legume), stalked, dehiscent by 2 valves, < 15-seeded, oblong to narrowly oblong and strongly flattened, $85\text{--}160 \times 20\text{--}23$ mm, yellowish light brown, pointed at tip, raised over seeds and dimpled between seeds, margins not indented, wall thin and brittle; stalk to 2 mm long. **Seed:** broadly elliptic strongly compressed side-to-

side, $7-8 \times 4.2-4.5 \times 1.5$ mm, brown, with small subterminal hilum, having fine mark on 2 faces.

A. C. Gibson