

Vascular Plants of Williamson County

Ulmus parvifolia – CHINESE ELM, LACEBARK ELM [Ulmaceae]

Ulmus parvifolia Jacq., CHINESE ELM, LACEBARK ELM. Small tree or shrub, winter-deciduous (some leaves persist in mild winter), multi-trunked, in range to 6 m tall and wide; shoots 2-dimensional (plagiotropic), initially axes pubescent with hairs arching toward tips of organs, foliage not scabrous; lateral buds compressed-ovoid, with dark brown bud scales and short-hairy on margins; bark on trunk tight, dull gray and having broad patches of orangish periderm. **Stems:** cylindric, slender, initially 1 mm diameter, densely short-pubescent with hairs arching toward tip, the youngest twigs with chestnut brown periderm < 2 mm diameter, somewhat zigzagged, tough and flexible, aging glabrate. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached to stem at node next to petiole, with green midrib and membranous margins, in a graded series, of the first leaf (on rapidly growing shoot) cupped-oblongate, 1.5–6 × 1.5–2 mm, reddish with purplish midvein, sparsely ciliate on margins and brown-woolly on obtuse tip, of the youngest leaf of new shoot linear and folded, 4–6 × ca. 0.5 mm, green with translucent margins and glabrescent, early-deciduous; petiole cylindric, 2–6 mm long, pale green aging whitish or beige, pubescent with short hairs, some hairs initially reddish; blade somewhat asymmetric, elliptic or ovate to oblongate or obovate, 10–60(–70) × 5.5–25 mm, flat, ± tough but not sclerophyllous, subcordate and oblique at base, crenate-serrate on margins with indentations < 0.5 mm and short hairs in sinus, acute to broadly obtuse at tip, pinnately veined with principal veins sunken on upper surface and raised on lower surface, with evenly spaced lateral veins and a fine network of minor veins, upper surface glossy aging dark green initially puberulent and glabrate with hairs ± appressed toward margins aging with persistent hair bases, lower surface with more short hairs especially along veins, having a lower principal veins often with a patch of white woolly hair (domatium) in angle with midrib, with principal vein ending in each tooth. **Inflorescence:** racemelike cyme, ca. 5-flowered, condensed; inflorescence produced in late summer to fall from axillary buds, the bud scales round to ovate, 1–2 mm long, cupped, ± amber brown, short-ciliate on margins; peduncle short; bractlet subtending pedicel scalelike, ± elliptic, < 1 mm long, membranous orange-brown, with long hairs, early-deciduous; pedicel 1–2 mm long, > peduncle. **Flower:** bisexual, somewhat bilateral and deformed from packing in inflorescence, sometimes flattened on inner side, 1.5–2 mm across; **calyx** 4-lobed, fused at base; lobes unequal, cupped-ovate to depressed-ovate or cupped-roundish to cupped-obovate, 1.2–1.5 mm long, with 1 lobe width << length, red-purple with orangey, ciliate margins; **petals** absent; **stamens** 4, free, exserted; filaments 0.6–0.8 mm long, whitish; anthers cupped by calyx lobes, basifixed, dithecal and bulky, 0.9–1.2 mm long, rose-red to strong red outside, pale yellow on inner face of each sac, longitudinally dehiscent; pollen pale yellow, copious; **pistil** 1, ca 1 mm long; ovary superior, lens-shaped, 1-chambered with 1 ovule; stigmas 2, hairy, forming a V-shape notch on top of ovary. **Fruit:** samara (winged 1-seeded dry, indehiscent fruit), papery, flattened and broadly oval or ovate to circular and short-stalked, 8–12 × 5–6.2 mm, initially light green drying light brown to brown, veiny on surfaces with widely scattered, minute glandular hairs, having short-hairy notch at top to 1.5 mm deep, not ciliate on margins; seed body 3–4.5 mm wide, bulging on 1 or 2 surfaces; wing opaque; stalk between pedicel and ovary (gynophore) 1–1.5 mm

long; calyx persistent, brownish purple, ciliate on margins. **Seed:** lens-shaped, ca. 3×2.5
 $\times 1$ mm, yellowish to yellow and brownish, mucilaginous when wetted.
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