

Vascular Plants of Williamson County

Toxicodendron radicans subsp. *verrucosum* – EASTERN POISON IVY [Anacardiaceae]

Toxicodendron radicans (L.) Kuntze subsp. *verrucosum* (Scheele) Gillis, EASTERN POISON IVY. Upright, spreading, or trailing shrub to woody climber, winter-deciduous, shrub with an open canopy, clonal, rhizomatous, fibrous-rooted, shrub mostly < 125 cm tall, as climber attached to tree trunk via adventitious roots; dioecious; shoots with only cauline leaves, with glossy, red-tinged young foliage during spring growth maturing dull green but often turning yellow to bright red before abscising during fall (chlorophyll disappearing), shoots short-soft hairy (especially short-villous) to glabrescent or with inconspicuous hairs, often short-hairy on inflorescence bracts and axes; tissues with resin ducts, the resin drying brown and having chemicals that cause severe contact dermatitis. **Stems:** cylindric, green maturing with light brown periderm, twig periderm in canopy scars at node circular (of inflorescence) above \pm broadly triangular (leaf scar). **Leaves:** helically alternate, pinnately-3-foliolate with a pair of opposite, stalked lateral leaflets, petiolate, without stipules; petiole ascending to spreading, \pm hemicylindric, 60–110+ mm long, mostly hemicylindric or with a pair of raised edges below midpoint, at base broad and flared (crescent-shaped in \times section) and often rose-red, with upward-pointing short hairs especially on lower side; rachis straight, 15–30+ mm long, with 2 raised edges, with short hairs arching upward; petiolule 2–3+ mm long, often with a raised midvein on upper side, short-hairy with dense tuft of hairs between petiolules on upper side; leaflet blades ovate in outline, 50–170 \times 45–140 mm, clones with different leaf forms and phenotypic plasticity for sun versus shade individuals, coarsely 3-lobed with several sublobes and teeth to broadly toothed (subentire), lateral lobes below midblade, sinuses V-shaped, or infrequently conspicuously pinnately lobed with sinuses to midpoint or deeper to midrib, of terminal leaflet bilaterally symmetric and of lateral leaflets asymmetric and oblique at base, broadly tapered at base or with lateral leaflets having trailing margin farther from petiole, acute to obtuse lobes, sublobes and coarse teeth, pinnately veined with principal veins slightly raised on upper surface and raised on lower surface, upper surface minor vein network slightly sunken enclosing cells with speckled crystals within, upper surface short-villous with hairs mostly along veins to glabrous or nearly so, lower surface, principal veins never straight and not ending in lobes, sublobes, or teeth, commonly short-hairy more abundant on lower surface especially along veins. **Inflorescence:** panicle of racemes, axillary on several successive nodes of emergent spring growth, functionally unisexual, (25–)60–80(–120) mm long, not stiff, branching helically alternate, flowers helically alternate and $\pm \perp$ to rachis, 15–45+-flowered (staminate) and 25+-flowered (pistillate), raceme to 30 mm long and 1–11-flowered, short-hairy or glabrescent (glabrous), the hairs short-villous or arching upward, bracteate; peduncle cylindric, to 10 \times 1 mm, rachis cylindric, with internodes 0.5–1.5 \times 0.6 mm, peduncle and rachis light green or paler, sparsely short-strigose or hairs \pm appressed, upward-arched hairs; bract subtending each branch, awl-shaped and appressed to axis aging flat, the lowest to 4 mm long decreasing upward to ca. 2 mm long, the lowest bract reddish with hairs on lower (outer) surface and slightly keeled, short-hairy on lower surface to short-ciliate on margins and some hairs often along keel, abscising early with persistent base clasping base of rachis; bractlet subtending pedicel cupped, blade < 1–1.3 mm long on projecting base, rounded on back, acuminate at tip, short-hairy on lower surface to sparsely short-ciliate, abscised before

anthesis; pedicel cylindric, 2–5 mm long (staminate) and 1.5–2.5 mm long (pistillate), diameter 0.25–0.3 mm, each clone short-hairy, glabrescent, or nearly glabrous, of staminate flower abscised at level of bractlet base. **Staminate flower:** radial, 3.5–6 mm across (corolla); **calyx** 5-lobed, bell-shaped, glabrous; tube disclike, 0.4–0.55 mm long, light green; lobes appressed to corolla, oblong or oblong-ovate somewhat cupped, 0.8–1.2 × 0.6–0.7 mm, light green or with paler to colorless margins; **petals** 5, recurved or deflexed at top of calyx (occasionally widely spreading), sometimes inrolled to lower side, ± elliptic to elliptic-ovate (not oblanceolate), ± 2.5(–2.8) × 1.1–1.4 mm, in bud pale green at anthesis greenish (no yellow), 3-veined at base, rounded at tip, at anthesis veins colorless often aging with pinnate red-purple venation; **stamens** 5, free, alternating with petals, 2 mm long; filaments initially erect later often prone (on petals), lanceoloid, 1–1.6 × 0.35–0.4 mm, white or aging narrowly triangular flattened front-to-back and pinkish, glabrous; anthers exerted, dorsifixed, dithecal, ± 1 mm long, somewhat cream-colored aging with rose in lines or connective tip, longitudinally dehiscent; pollen light yellow-orange (conspicuous in bud, residual within anthers after pollination); **nectary disc** 5-sided (± 10-lobed), ca. 1 mm across, 0.15–0.2 mm long, initially greenish fading to grayish, with filament at a notch in disc; **pistil** 1 (pistillode), 0.7–0.9 mm long, sterile; ovary superior, 0.35–0.4 mm diameter, translucent, glabrous; style short and indistinct from ovary, with 3 tiny stigmas. **Pistillate flower:** radial, 4–4.5 mm across (corolla); **calyx** 5-lobed, bell-shaped, glabrous; tube disclike, 0.4–0.55 mm long, light green; lobes appressed to corolla, obtuse-ovate somewhat cupped, 0.8–1.2 × 0.7 mm, light green with paler to colorless margins; **petals** 5(–7), widely spreading to deflexed and somewhat inrolled to lower side, ± elliptic to oblong or ovate-elliptic (not oblanceolate), 1.6–2.2 × 1.1–1.3 mm, cream-colored and greenish, 3-veined at base, rounded at tip, veins not dark and conspicuous until dried; **stamens** 5(–6), free, alternating with petals, neuter; filament suberect, narrowly triangular, 0.35–0.45 mm long, whitish; anthers appearing basifixed, dithecal, 0.5–0.6 mm long, pale green, longitudinally and laterally dehiscent; pollen sterile, colorless; **nectary disc** 5-sided (± 10-lobed), ca. 1 mm across, fleshy, 0.15–0.2 mm long and wide, initially greenish fading to grayish, with filament at a notch in disc; **pistil** 1, ca. 1.3 mm long; ovary superior, ovoid, 0.7–0.8 × 0.7–0.8 mm, pale light green, glabrous, 1-chambered (of 3 units) with 1 ovule; style short and indistinct from ovary, with 3 terminal, spreading, pale green, plump stigmas ca. 0.3 mm wide. **Fruit:** drupe, with 1 stone (endocarp), subspheroid, fully enlarged 3.5–4 × 4–5 mm + black style at top, length < width, initially (late spring) glossy green aging tannish with papery surface (exocarp), totally lacking hairs; exocarp shedding; pulp (mesocarp) drying powdery and white with black resin; stone kidney-shaped, ± × mm, with several longitudinal ribs.

A. C. Gibson