

*Toxicodendron* Miller POISON IVY, POISON OAK

*Toxicodendron diversilobum* (Torrey & A. Gray) Greene, WESTERN POISON OAK. Upright, spreading, or trailing shrub to woody climber, winter-deciduous, with  $\pm$  open canopy, to 400 cm tall (shrub) or as climber attached to tree trunk via adventitious roots; dioecious; shoots with somewhat glossy, red-tinged young foliage maturing dull green but often turning bright red before abscising during fall, pubescent to sparsely short-hairy aging glabrate or glabrescent; with resin ducts, the resin drying black and having chemicals that cause severe contact dermatitis. **Stems:** of young twigs mostly  $\pm$  2 mm diameter, limber, with grayish to light red-brown periderm, short-strigose often aging glabrescent. **Leaves:** helically alternate, pinnately 3-foliolate with a pair of opposite lateral leaflets (in range rarely 5-foliolate), petiolate, without stipules; petiole ascending, channeled, 20–85 mm long, short-hairy on lower side and along edges; petiolules 0–15 mm long (lateral leaflets) and 7–27 mm long (terminal leaflet); blades of leaflets ovate or broadly elliptic to obovate, 10–120  $\times$  10–78 mm, terminal leaflet  $>$  lateral leaflets, lateral leaflets asymmetric with trailing portion wider than leading portion, rounded to broadly tapered at base, lobed to broadly crenate on margins (entire), lobing mostly above midblade and sinuses  $<$  1/2 to midrib (rarely more deeply lobed individuals in deep shade or all leaflets entire), some lateral leaflets with teeth only on trailing margin, short-ciliate on margins especially when young, acute to obtuse or rounded at tip, pinnately veined with principal veins sunken on upper surface (on dry leaves appearing raised) and raised on lower surface, lower surface sometimes short-strigose along midrib. **Inflorescences:** raceme or panicle with 1–2 unisexual, racemelike branches, axillary forming on initial spring growth, open, ovoid to cylindrical in outline, 25–75  $\times$  7–50 mm, many-flowered, bracteate, pubescent to glabrous on axes and pedicels; bract subtending branch acute-ovate or ovate to lanceolate or scalelike, 0.5–5  $\times$  0.4–2.3 mm, semiclasping, early-deciduous and leaving a transverse ledge at base; bractlet subtending pedicel lanceolate and  $\pm$  leafy to scalelike, 0.5–2.5  $\times$  0.4–1.2 mm, pubescent, early-deciduous; pedicel 1.5–6.5 mm long increasing in fruit. **Staminate flower:** appearing bisexual, radial, 4–7.5 mm across and dishlike; **calyx** 5(–6)-lobed; tube 0.1–0.2 mm long, green; lobes deltate, 0.9–1.1  $\times$  0.8–1.1 mm (if 6 lobes 1 much smaller), erect, green with narrow, whitish margin, glabrous; **petals** 5–7, alternate with calyx lobes, narrowly ovate but inrolled, 2.3–3.3  $\times$  1.2–1.5 mm, at anthesis mostly recurved to reflexed, light greenish yellow, whitish green, or light yellowish green with green pinnate venation, rounded to acute at tip; **stamens** 5–6, free, opposite sepals, arising between lobes of nectary, 1.7–2.1 mm long; filaments 1.1–1.7 mm long, thick and fleshy at base (sometimes aging flat), light yellowish green, tapering to narrow tip; anthers dorsifixed, dithecal, heart-shaped or oblong, 0.6–1.3  $\times$  0.5–0.6 mm, yellow, longitudinally dehiscent; pollen yellow; **nectary disc** 5(–6)-lobed, surrounding base of ovary, ringlike, 1.2–1.5 mm across, greenish, the lobes rectangular, 0.2–0.3  $\times$  0.4–0.5 mm, commonly low-crenate on edge, with copious nectar; **pistil** 1; ovary ovoid to conic, ca. 0.5  $\times$  0.5 mm, 1-chambered (of 3 units) with 1 sterile ovule; styles 3,  $<$  0.2 mm long and fused at base, forming 3 unequal stigmatic lobes. **Pistillate flower:** radial, 3.5–4.5 mm across and dishlike; **calyx** 5(–6)-lobed; tube 0.1–0.4 mm long, green; lobes deltate to oblong, 0.9–1.1  $\times$  0.5–1.1 mm, erect, green with narrow whitish margin, glabrous; **petals** 5(–6), alternate with calyx lobes, spreading, narrowly ovate to triangular, 2.2–2.9  $\times$  1–1.5 mm, light

greenish yellow, whitish green, or light yellowish green with green pinnate venation, rounded to acute at tip; **stamens** 5(–6), free, opposite sepals, inserted between lobes of nectary, with abortive anthers; filaments 0.4–0.5 mm long, flattish, light yellowish green, tapering to narrow tip; **nectary disc** 5(–6)-lobed, surrounding base of ovary, ringlike, 1–1.5 mm diameter, greenish, the lobes rectangular, 0.2–0.3 × 0.4–0.8 mm, commonly low-crenate on edge, with copious nectar filling corolla; **pistil** 1, ca. 1.5 mm long; ovary superior, ellipsoid to ovoid, 0.7–0.8 × 0.6–0.7 mm, 1-chambered (of 3 units) with 1 ovule; styles 3, fused, 0.25–0.8 mm long, forming 3 unequal stigmatic lobes with central lobe longer, pale yellow, white-papillate. **Fruit:** drupelike, leathery, 1-seeded, depressed-spheroid (oblate), 4–5 × 4–6.5 mm, longitudinally ridged with resin ducts in furrows between ridges; pulp (mesocarp) ± fleshy, whitish; resin ducts aging as black stripes; stone (endocarp) compressed and irregularly lobed, nearly as wide as fruit. Late January–early May.

Native. Woody plant growing as either a shrub or climber, intermingled with taller shrubs and trees, and being especially common in deep shade of southern oak woodland, where it may be the dominant species in the understory. *Toxicodendron diversilobum* should not be touched or collected because its resin causes severe contact dermatitis to most humans. Poison oak is dioecious, and the sexes are somewhat easy to identify; staminate individuals have flowers with recurved petals and exserted, bright yellow anthers; pistillate individuals have flowers with a dishlike corolla and are less showy because fertile anthers are not present, but to aid in identification occasionally one may also observe new or old fruits on the plant. In deep shade, in any given year many of the plants do not flower, making identification of sexes for those plants impossible.

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