

Lycopersicon esculentum Miller, TOMATO. Annual, taprooted, 1-stemmed at base, with ascending to spreading branches, in range 30–50 cm tall; shoots with scattered, unbranched nonglandular hairs and densely glandular-pubescent, the glandular hairs with large, pale yellow heads, the head bursting to form a hair appearing to be nonglandular, strong-smelling. **Stems:** ± cylindrical, 8+ mm diameter, with flattened side descending from each leaf, tough, never straight. **Leaves:** helically alternate, irregularly odd-1–2-pinnately compound with lateral primary leaflets 4–14 and alternate to subopposite, often with matched, symmetric pairs of small leaflets between matched, asymmetric pairs of large leaflets along rachis, petiolate, without stipules; petiole 3-ridged most of length, to 55 mm long; blade ovate in outline, 70–250 × 35–180 mm, rachis 3-ridged, with leaflets arising on the upper side from the outer ridges, pinnately veined with principal veins mostly sunken on upper surface and raised on lower surface; primary leaflets ovate to lanceolate in outline, to 120 × 45 mm, often curled, crinkled, or somewhat shriveled when stressed; petiolules of primary leaflets 3-ridged like rachis, 2–22 mm long, not straight; terminal primary leaflet and terminal secondary leaflets narrowly ovate to lanceolate, < 80 mm long; large primary leaflets with to 5 secondary leaflets, blades of primary leaflets lanceolate to ovate, oblique at base, lobed or coarsely serrate on margins (the smallest primary leaflets entire), acuminate at tip, ultimate segments sessile to short-petiolate, densely glandular-hairy. **Inflorescence:** cyme, appearing internodal on canopy internode (developmentally = displaced from axillary position), 3–7-flowered, flowers nodding; axes with simple hairs more dense than on stem, the nonglandular hairs whitish and with bulbous bases and densely stalked glandular-hairy; bractlet subtending pedicel absent; pedicel jointed, at anthesis recurved and 3.5–5 mm long, generally reflexed and 2× in fruit; bracteoles absent. **Flower:** bisexual, radial, 15–30 mm across; **calyx** 5–6-lobed, at anthesis 10–13 mm long, with spreading nonglandular hairs having ± bulbous bases (multicellular) and dense, short-stalked to sessile glandular hairs; tube cup-shaped, 0.5–2.5 mm long, becoming cymbal-like (rotate) and increasing 3× or more in fruit; lobes ± equal, gradually tapered linear-triangular to narrowly lanceolate, at anthesis spreading and 8–11 mm long increasing to 30 mm long and recurved in fruit, green, glandular heads often aging blackish; **corolla** 5–6-lobed (sometimes with a minor lobe at 1 or 2 sinuses), cymbal-shaped (rotate) and star-shaped with spreading to recurved lobes, light yellow to yellow with a green midvein; tube cup-shaped, 3–4.5 mm long; lobes lanceolate, 8–13 mm long, with shorter nonglandular hairs than calyx and sparsely glandular-hairy, acuminate with tip short-hairy, inwardly hooked, and yellow to purplish, midvein prominent, raised on lower surface, and sometimes purplish on upper surface; **stamens** 5–8, fused to midpoint of corolla tube, alternate with corolla lobes; filaments slanted inward, flattish front-to-back, ± 1.5 mm long, glossy green to light greenish yellow, short-ciliate on margins; anthers basifixed, dithecal, fused and surrounding style, cylindrical below midpoint and conelike above midpoint, ± equal, 7–8 mm long, greenish yellow, with papillae on inner face of sac and on margins, longitudinally dehiscent from tip downward on inner side; pollen white; **pistil** 1, at anthesis 9–13 mm long, slightly exerted from anther tips and increasing in length during the pollination phase; ovary superior, subspheroid to obovoid and weakly 5–6-lobed, ca. 1.5–2 × 2.5 mm, light green, glabrous or puberulent above midpoint, appearing 5–6-chambered, each chamber with many ovules attached to center; style cylindrical, pale green, tomentose-villous on basal 2–3 mm; stigma slightly

exserted from anther tip, terminal \pm disclike, ca. 1 mm diameter, convoluted on surface, green. **Fruit:** berry, juicy, pendent, many-seeded within watery chambers, spheric to cordate-ovoid, in range to 80 mm wide, glabrous, red with a persistent, appressed, green calyx, often somewhat furrowed near calyx; pulp red at maturity. **Seed:** \pm disclike to lenticular and winged, flattened and broadly ovate to roundish in outline, $4-5 \times 3.5-4.3$ mm, tan, wing unequal, 0.3–1.1 mm wide, with straight white hairs in dense patch at the hilum. Early summer (longer for cultivated specimens).

Waif. Annual escaped from agricultural operations and gardens, especially in the vicinity of commercial tomato fields in Ventura County on the westernmost edge of the range. Seeds of *Lycopersicon* are spread when fruits or seeds are dropped along roadsides by farm equipment, or cast aside by animals and humans. Such seeds can germinate the following spring without supplemental water, and waif individuals will yield edible fruits. Cultivated tomatoes include many fruit sizes and shapes as well as variations in flower, leaf forms, and plant stature, and any form should be expected.
B. A. Prigge & A. C. Gibson