

*Sanicula* L. SNAKEROOT, SANICLE

*Sanicula tuberosa* Torrey, TURKEY PEA. Perennial herb, geophytic, with tuberlike taproot, rosetted, typically 1-stemmed at base (rarely branched near base), ascending to erect, 5–80 cm tall; andromonoecious; shoots with basal leaves and cauline leaves (most cauline leaves = bracts of inflorescence axis), feathery-leaved, glabrous, strongly aromatic like cilantro (*Coriandrum*); taproot to 100 mm belowground, spheric to irregularly warty (tuberculate), 5–30 mm diameter, brown. **Stems:** aboveground 6–12-ridged, to 7 mm diameter, with ridges descending ridges from each leaf, becoming smooth approaching ground level, belowground cylindric, green often tinged with purple and aging purplish red near base; hollow to solid. **Leaves:** helically alternate, 3-parted (ternately) 1-pinnate to 3-parted 2-pinnate or 2–3-pinnate, long-petiolate, without stipules; petiole of the first basal leaves (at the top of the tuber) partially sheathing, grading to not sheathing aboveground, in  $\times$ -section crescent-shaped, to 100 mm long, winged to midpoint or above; blade triangular to ovate in outline, 25–130 mm long, from the petiole each primary leaflet  $\pm$  equal and 1–2-pinnately compound or 3-parted, axes channeled, the smallest leaflets asymmetrically 3–9-lobed or toothed,  $1.5\text{--}7 \times 1\text{--}2.5$  mm, typically bright green but sometimes purplish and glaucous on upper surface, with darker veins on lower surface, having leaflet axis and lobes  $< 0.5$  mm wide; ultimate lobes acute to acuminate and veined to tip with a hard point, pinnately veined with principal veins slightly sunken on upper surface.

**Inflorescence:** modified compound umbel, terminal and axillary to cauline leaves, on a long peduncle, having 1 ray with terminal umbellet + 1–4 peripheral primary rays each forming (1)3 umbellets at tip in a cymelike array (terminal ray sometimes 3-umbellate), umbellet headlike, hemispheric to subspheric, 5–10 mm across, terminal umbellet opening first, in bud green becoming bright yellow, with (4–)5–15(–17) staminate flowers on pedicels and 2–6(–8) sessile bisexual flowers, bracteate, glabrous; bract subtending peduncle diminutive leaflike, gradually decreasing upward; peduncle stemlike, 8–13-ridged, 40–250+ mm long, green, hollow; **involucre** of bracts subtending primary rays (absent for terminal primary ray), bracts equal or unequal and fused at bases,  $>$  umbellet, resembling a dwarf leaf but highly reduced, with 3 pinnately dissected lobes or each lateral lobe reduced to a tooth + central lobe simple or dissected, distinctly winged; primary rays unequal, conspicuously ridged, at anthesis 5–20 mm long increasing in fruit, the longest for the terminal umbellet; involucre of 6–10 bractlets subtending outer pedicels, bractlets somewhat fused at base, ovate to obovate, 1–2 mm long, green, 3-toothed to entire; pedicel (staminate flowers) 8-ridged, green, at anthesis as long as bractlet increasing to 3–5.5 mm long after stamens shed, becoming stiff and persistent among developing fruits.

**Staminate flower:** radial, 2 mm across; **sepals** on greenish dish-shaped 0.8–1 mm across, deltate,  $0.3 \times 0.4$  mm, yellowish aging green, persistent; **petals** 5,  $\pm$  heart-shaped in outline with acuminate tip permanently incurved so tip touching base,  $0.75\text{--}0.9 \times 0.6\text{--}0.8$  mm, bright yellow, with midridge on upper (inner) surface; **stamens** 5, free, in bud strongly looped with anther caught by petals and loop exerted, at anthesis ascending to spreading, light yellow; filaments 1.9–2 mm long, light yellow; anthers versatile, dithecal,  $0.5\text{--}0.7 \times 0.3\text{--}0.5$  mm, light yellow, longitudinally dehiscent; pollen pale yellow; pistil vestigial, with ringlike depressed, nectar-producing center 0.4 mm diameter, green. **Bisexual flower:** bilateral,  $3 \times 2$  mm across, protogynous; **sepals** having dish  $\pm$  lacking, deltate,

0.3–0.4 × 0.4–0.5 mm, green; **petals** 5, ± heart-shaped in outline with acuminate tip permanently touching base, 0.75–0.9 × 0.6–0.8 mm, bright yellow, with midridge on upper (inner) surface; **stamens** 5, free, looped in bud, at anthesis ascending to spreading, light yellow; filaments 1.9–2 mm long, light yellow; anthers versatile, dithecal, 0.5–0.7 × 0.3–0.5 mm, light yellow, longitudinally dehiscent; pollen pale yellow; **pistil** 1; ovary inferior, 2-lobed with diminutive, nectar-producing, ringlike platform (stylopodium) on top, compressed bell-shaped to vase-shaped, at anthesis 0.75–1 mm long, green, deeply grooved on each compressed face, distinctly bumpy with papillalike projections, 2-chambered, each chamber with 1 ovule; styles 2, strongly recurved to nearly touching base of ovary, 1.5–2 mm long, yellowish becoming green. **Fruit:** schizocarp, of 2 dry, 1-seeded halves (mericarps), sessile and surrounding by radiating pedicels with terminal calyx of staminate flowers, mericarps D-shaped, 2.2–2.4 × 1.1–1.2 mm, compressed side-to-side, covered with bumps (tuberculate) but lacking prickles, ribs absent, glabrous. Late January–early April.

Native. Perennial herb occurring at numerous locations with other native herbs in moist meadows and grasslands throughout the range. *Sanicula tuberosa*, which emerges when stimulated by adequate winter rain, has feathery leaves that have the strong smell of cilantro (*Coriandrum*). The compound umbel terminates a very long peduncle; it is unusual in having a central primary ray commonly with only one head (umbellet) whereas the peripheral rays forms “cymes” of umbellets, often a set of three with the terminal umbellet of the cluster flowering before the lower two. On a plant you may also find the terminal ray with two or three umbellets, as on the peripheral primary rays. In *S. tuberosa*, each umbellet has sessile bisexual flowers, which form the fruits, and typically more staminate flowers. Pedicels of the staminate flowers elongate and persist, so that they appear like radiating spokes when each umbellet is in fruit.

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