

Sonchus L. SOW THISTLE

Sonchus oleraceus L., COMMON SOW THISTLE. Annual, taprooted, rosetted, 1-stemmed at base, branched at every node along main axis to unbranched (especially a short plant), erect to ascending, 10–175 cm tall; shoots with basal leaves and cauline leaves, glaucous; latex milky, copious, smelly (when crushed) and blade tasting like bitter lettuce (*Lactuca*); taproot tan-brown, white-fleshed. **Stems:** ridged, to 15+ mm diameter, with 1 or 2 conspicuous ridges descending from each leaf, green blushed pink or aging reddish, internodes long; hollow. **Leaves:** helically alternate, deeply pinnately lobed and somewhat petiolate (lower leaves) and unlobed, sessile, and clasping (cauline leaves), without stipules; petiole indistinct from winged midrib; blade of basal and large cauline leaves obovate, to 220 × 110 mm, basal leaves > cauline leaves, with 0–several pairs of ovate lobes having deep sinuses nearly to midrib, terminal lobe often deltate to heart-shaped but highly variable, often with sublobes, of upper cauline leaves lanceolate or ovate to obovate, clasping blades with acute to roundish basal lobes projecting 5–40 mm beyond stem and often overlapping, irregularly serrate on margins, acute at tip, pinnately veined with principal veins raised on lower surface, short-tomentose with soft-walled, wavy hairs often becoming glabrate, aging glaucous. **Inflorescence:** heads, in terminal, open, cymelike arrays with several–10+ heads, head ligulate, typically 15–26 mm across, many-flowered, opening morning and closing generally by noon; axes striped, with scattered, radiating, yellow-headed glandular hairs (without hairs); bract subtending lateral branch leaflike, linear-lanceolate, reduced upward, the largest ones clasping and often with linear basal lobes, glaucous; bract subtending peduncle awl-shaped, ± 2 mm long, light green, base not clasping, especially upper surface white-tomentose, lower surface with scattered hairs; peduncle cylindric, 3–40 mm long, unequal within each array, white-tomentose in bud sometimes aging glabrate, bracts along peduncle (= bracts subtending future peduncles) and at base of involucre 0–several, awl-shaped and like peduncle bracts; **involucre** urn-shaped (conspicuously so after head closes), typically 4–5 mm wide, 7–14 mm long, often white-tomentose at base, phyllaries in ± 2–3 series, outer phyllaries ± 13, appressed, lanceolate, 3–6 mm long, with wavy hairs on exposed surfaces (glabrous), flat, membranous on margins, red-tipped or not, inner phyllaries 13, ± equal, linear-acuminate, ca. 2× longer than outer phyllaries, exposed phyllaries somewhat ridged, ridges never reddish, covered phyllaries flat; receptacle concave, lacking bractlets (paleae), red hairs absent between ovaries, hollow beneath receptacle. **Ligulate flower:** bisexual, bilateral, 0.5 mm across, projecting several mm > involucre; **calyx (pappus)** of many silky capillary bristles in several series, 5–8 mm long, white, outer series fine, in other series coarser and often flattened; **corolla** minutely 5-toothed, 8–13 mm long; tube narrowly cylindric, 4–6 × 0.2–0.3 mm, colorless and finely 5-veined, with scattered, ascending short hairs above midpoint and adjacent throat; throat + limb strap-shaped, ≤ tube, pale yellow to bright yellow, of outer flowers with rose-purple stripes on lower surface leading to central 3 teeth or all 5 teeth rose-purple on lower surface; **stamens** 5, fused to top of corolla tube; filaments ± 0.8 mm long, transparent yellow but darker at base; anthers fused into cylinder surrounding style, exerted, basifixed, dithecal, 1 mm long + transparent, long tails at base, yellow with reddish tips, longitudinally dehiscent; pollen yellow; **pistil** 1; ovary inferior, compressed obovoid, at anthesis 1 mm long, whitish, 1-chambered with 1 ovule; style

exserted, ca. 6 mm long, colorless at base changing to yellowish from below anthers, yellow and with papillate hairs above anthers, 2-branched, the branches ascending, 0.4–0.8 mm long, papillate approaching and on branches and often purple. **Fruits:** cypselae, without beak, compressed club-shaped to fusiform (4-sided), 2.5–3.8 × 0.5–0.8 mm, light brown (yellow when immature), with 5 grooves alternating with low ridges, having minute barbs on 2 edges and less so in rows on the 2 broad faces; pappus of head subspheroid, ± 15 × 20 mm, dense, silky and appearing grayish white, on each cypselae with ca. 15 long, ascending central silky capillary bristles and many shorter ones spreading to recurved, the longest bristles 8 mm. January–December.

Naturalized. Annual extremely common as a weed throughout the range in any disturbed site, but mostly disappearing during summer drought and then occurring only where supplemental water is provided. *Sonchus oleraceus* is variable in plant size, and also including individuals with differences in blade size, degree of blade lobing, and teeth on margins, and some individual may be somewhat spinescent. This species often occurs in the same habitat with the less common *S. asper*, which is straight-stemmed and more prickly and has smooth, 3-sided fruits.

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