

Salsola australis R. Brown, SOUTHERN RUSSIAN THISTLE. Annual, aging spinescent, taprooted, several-stemmed at base, intricately branched, at maturity \pm hemispheric to conic, 20–150(–200) cm tall; shoots initially bluish green and glaucous to green, later developing hard, rigid, spinelike leaves and bractlets, remaining attached to taproot at end of growing season and generally not forming a detached tumbleweed. **Stems:** conspicuously striped with pale green ridges (often aging reddish rose) and glaucous green valleys, minutely pubescent with conic hairs along ridges, often with shaggy, \pm coiled to kinky hairs in leaf axils, aging with tannish bark. **Leaves:** helically alternate, simple, sessile, without stipules; blade half-cylindric at base to straight and \pm linear-cylindric above, (8–)10–40(–52) \times 0.8–1.5 mm, slightly fleshy, flared at base with narrow, erect, translucent wings on basal portion, entire or short-ciliate with conic hairs to midblade, acuminate with sharp, colorless point at tip, midrib only conspicuous, blue-glaucous but greenish along midrib. **Inflorescence:** flowers solitary, axillary, sessile, not showy, bracteate, with delicate shaggy and \pm coiled or kinky hairs in axils; bractlet (bract) subtending flower leaflike but shorter, awl-shaped to linear, at anthesis spreading and 5–12 mm long, widely spreading and arched to recurved in fruit, long-acuminate and spine-tipped, wide membranous margins at base minutely ciliate; bracteoles subtending flower 2, bractlike, suberect and 1.5–6 mm long, arched and spreading to recurved in fruit. **Flower:** bisexual, radial, minute, mostly concealed by subtending bractlet and bracteoles at anthesis; **sepals** 5, lanceolate, 1.3–3 mm long, light green where embracing ovary, above membranous and appressed to style, each with a wing primordium evident by a darker green, slightly thicker, transverse line on outer surface face at level with top of ovary, exposed portion oblong or triangular, acute to acuminate and often irregularly cut (lacinate) or sometimes with a short, fine awn at tip; **petals** absent; **stamens** 5, free; filaments fused at base to the green rim of receptacle, unequal, in range 2–2.5 mm long, colorless and translucent or whitish; anthers basifixed, dithecal, exserted, narrowly oblong, 0.5–1 mm long, whitish to light yellow, cordate at base, longitudinally dehiscent; pollen light yellow; **pistil** 1, ca. 3 mm long; ovary superior, spheroid to ovoid, 0.5–0.8 \times 0.6–0.8 mm, yellow-green or green, 1-chambered with 1 ovule; style 1.3–2.4 mm long, pale green, 2-branched, lower portion 0.2–0.8 mm long, the branches exserted and ascending to arched outward, stigmatic, tapered, minutely papillate-hairy on inner face. **Fruit:** utricle enclosed by widespread to horizontal, winged sepals (diclesium), diclesium 4.7–8.8 mm across (including wings), abscising at base; utricle broadly top-shaped (obturinate), 1–1.3 \times 1.4–2.6 mm; sepals erect, scarious basal portion cupping utricle and upper membranous portion erect; wings scarious, widely unequal, entire to crenate (wavy) on outer margin, generally strongly veined with radiating veins aging brownish, the 3 larger wings semicircular (oblate) to fan-shaped, 1.7–2.8 \times 2.8–5.7 mm, sometimes lobed (usually unequally lobed), with 5–23+ veins, the 2 small wings obovate to spatulate or trowel-shaped (trullate), 1.8–3.3 \times 1–2.3 mm, with 4–9 veins, rounded to obliquely truncate at tip, (sometimes with a small lateral lobe on each side). **Seed:** broadly inversely conic, horizontal and conforming to shape of utricle, seed coat thin and membranous, attached to fruit wall; embryo strongly coiled, green. Late July–mid-February.

Naturalized. Annual exceedingly common and occurring in disturbed and waste sites throughout the range, including coastal salt marsh. *Salsola australis* is a pioneer on freshly disturbed soil, and has C₄ leaves that are at first bluish and flexible and that age hard and spine-tipped. This is called a tumbleweed, but this species is not prone to abscising at the base, as is *S. tragus*. The plant is loaded with one-seeded fruits, typically with widespread wings surrounding the fruit, and the fruits generally separate cleanly from the bractlets and bracteoles, thus producing dense local patches from the original mother plant.

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