

Acroptilon repens (L.) DC., RUSSIAN KNAPWEED. Perennial herb, clonal from spreading, horizontal roots having adventitious buds, somewhat rosetted or not, 1–several-stemmed at base, with ascending flowering branches, erect, 30–93 cm tall; shoots with basal leaves and cauline leaves, not spinescent, cobwebby-hairy and sparsely glandular-hairy, the glandular hairs colorless with spheric heads, basal leaves withered at flowering. **Stems:** ridged, to 7 mm diameter, with 3 ridges descending from each leaf, tough, densely white cobwebby-woolly below midplant and less hairy above, with scattered glandular hairs between ridges; hollow. **Leaves:** helically alternate, pinnately lobed and petiolate (lower leaves) and unlobed and sessile (upper cauline leaves), without stipules; petiole flattish to somewhat winged, to 12 mm long, indistinct from blade, densely hairy on lower side; blade of lower leaves lanceolate or oblong to oblanceolate, 60–150 × 6–15 mm, the basal leaves sometimes deeply and asymmetrically lobed having rounded sinuses and some sinuses nearly to midrib, long-tapered at base, lobes coarsely toothed on margins, with short point on teeth and the lobe at tip, pinnately veined with principal veins raised slightly on upper surface and conspicuously raised on lower surface, cobwebby-tomentose and having scattered glandular hairs in pits; blade of unlobed cauline leaves lanceolate to narrowly oblong, 10–60 mm long, broadly to narrowly tapered at base, entire to remotely serrate on margins, acute with short point at tip, several-veined from base, cobwebby, lower surface with scattered glandular hairs in pits. **Inflorescence:** heads, in terminal, leafy, ± flat-topped, several-headed arrays, head discoid, 5–14 mm across, of 11–20+ disc flowers, bracteate; peduncle stemlike with several–10+ leaflike bracts; **involucre** narrowly urn-shaped, 11.5–13.5 mm long, 4.8–5.5 mm wide at base and 6–9 mm wide at top with spreading phyllary tips, phyllaries 26–29 in ca. 7 series, 3–13.2 × 1.6–3.8 mm, outer phyllaries broadly ovate and short grading to narrowly lanceolate and longer (the innermost phyllaries), mostly glossy green and firm but membranous above midpoint, broadly acuminate at tip on outer phyllaries to narrowly acuminate on inner phyllaries, mostly glabrous on outer phyllaries but pubescent between the green base and membranous tip, densely ascending-pubescent to short-villous on both surfaces at tip of inner phyllaries; receptacle convex, with each ovary surrounded by unequal, smooth, flattened, silvery white bristles 4–7.5 mm long, bristles persistent. **Disc flower:** bisexual, radial, ca. 2 mm across; **calyx (pappus)** of ca. 85 scalelike “bristles” in several series, bristles unequal, 0.6–9 mm long for each flower, the inner 5 the longest, flat at base and cylindric above, white, with upward-pointing barbs (barbels) along flattened base and longer above on all side, having the longest barbels at tip; **corolla** 5-lobed, in range 9–11.5 mm long, glabrous; tube 4.2–5.7 mm long, swollen and yellow at base, dilated above base and cylindric, 0.4 mm diameter, white, bent 30–45° at top; throat abruptly flaring, 3–4 mm long, 0.8–1.3 mm wide at orifice, white grading above to pale reddish purple, 5-veined but veins forking around sinuses into lobes; lobes ascending-spreading, ± narrowly oblong but wider at base, 2.3–2.9 × 0.5–0.6 mm, strong reddish purple, rounded at tip; **stamens** 5, fused to base of corolla throat, exerted; filaments ± 1.9 mm long, white, flat; anthers fused into cylinder surrounding style, basifixed, dithecal, (3–)3.8–4.4 mm long, strong red-purple striped pale purple, with delicate, slender tails at base ca. 0.3 mm long, longitudinally dehiscent; pollen white; **nectary** cuplike at top of ovary surrounding style base, ca. 0.3 mm tall; **pistil** 1; ovary inferior, obovoid to oblong compressed front-to-back, 1.8–2.2 × 1–1.3 mm, glossy ivory to pale yellow, 1-chambered with 1 ovule; style

12.5–14.5 mm long, exerted to 5 mm above corolla lobes, pale to light purple, short 2-branched, with a tuft of short, colorless glandular hairs on exposed style and minute hairs below fork, the branches appressed and adherent, 1.2–1.5 mm long, pale purple, with a groove extending down each side, minutely papillate on inner faces. **Fruits:** cypselae, obovoid compressed front-to-back, in range 2–2.4 × 1.2–1.4 mm, ivory to brown, sometimes with fine stripes (veins), smooth; pappus typically falling to leave a naked fruit with an exposed knob at top and sometimes a persistent corolla base. Early June–early October.

Naturalized. Perennial herb to date known in range from an acre of disturbed grassland at Rancho Sierra Vista in Thousand Oaks (SMMNRA), where it has become established near horse stables. Throughout western North America *Acroptilon repens* is considered to be an invasive species and noxious because it is poisonous to horses. Our population is spreading very locally from horizontal roots that survive at about ten centimeters depth in hard clay soil, and local plants are also capable of forming fertile fruits. Russian knapweed, which has several other common names, is a member of the thistle tribe but lacks spines, and like other thistles *Acroptilon* has bristles on the receptacle between the ovaries.

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