

Cynara cardunculus L. subsp. *cardunculus*, ARTICHOKE. Perennial herb, robust, taprooted, strongly rosetted, bushy and branched, ascending to erect, in range 80–140 cm tall; shoots with massive basal leaves and cauline leaves, unarmed or less commonly weakly spinescent along petiole and also blade margins and tips, in range initially woolly and glandular-hairy (concealed by wool), the glandular hairs sessile with colorless spheric heads, the spines, if present, fine, to 10 mm long, tan or yellowish to light brown. **Stems:** many-ridged, often > 20 mm diameter, with low ridges descending from each leaf, striped green alternating with whitish or red ridges, with scattered long hairs; solid, pith wide, white. **Leaves:** helically alternate, deeply 1–2-pinnately lobed, petiolate (basal and lower cauline leaves) and sessile (upper cauline leaves), without stipules; petiole half-sheathing, widely U-shaped, of the largest basal leaves > 100 mm long decreasing upward, whitish green, with poorly developed or aborted bladelike lobes (spines) along edges, ridged on lower side like celery (*Apium*); blade of basal leaves arching, in range 500–1000+ × < 250 mm (wider under cultivation) decreasing upward, upper cauline leaves 130–170 × 65–80 mm, with 5–9 lobes per side, midrib (main axis) appearing to have leafy wings, lobes spreading to ascending, lanceolate in outline with deep sinuses, tissue at base of sinus inrolled under (revolute), sublobes and teeth acute (obtuse) sometimes with terminal spine, pinnately veined with principal veins sunken on upper surface and conspicuously raised on lower surface, the lower midrib ridged like celery, grayish with long hairs and densely woolly, upper surface aging inconspicuously hairs, lower surface remaining densely woolly with scattered glandular hairs. **Inflorescence:** large heads, terminal and solitary or of several heads in flat-topped arrays, head discoid, at anthesis 75–100 mm across, with 200–500 flowers, bracteate; bract subtending peduncle leaflike = diminutive cauline leaf; peduncle thick, 50–100+ mm long, woolly, with bracts along axis reduced upward, approaching head narrowly triangular to lanceolate, 7–10 mm long; **involucre** conic to spheroid in outline (resembling a pine cone), 50–80 mm diameter increasing in fruit, with 79–135 helically alternate phyllaries arranged in 12–18 series; outer phyllaries ± appressed to involucre base, ovate or lanceolate to obovate or oblanceolate, 10–17 mm long, the ovate ones flaring at base, tough and fleshy; phyllaries of middle series increasing upward, triangular, 15–40 × 6–17 mm, the basal portion tightly appressed to involucre, green, and firm, the upper portion ascending to spreading, acute with spine < 2 mm long or without spine slightly notched at tip, light green becoming purplish red especially at tip and on margins; the innermost phyllaries 35–45 × 5–13 mm, upward becoming longer and narrower with a ± strap-shaped body, upper surface silvery white, lower surface olive green with whitish to tannish margins, acute at tip, aging purplish red with light tan margins; receptacle slightly convex to flat, without bractlets (paleae), with numerous white, cylindric bristles 14–32 mm long between ovaries. **Disc flower:** bisexual, radial, 2 mm across; **calyx (pappus)** of 75–85 capillary bristles in 3–6 series, bristles with fine, featherlike branches (plumose), silky white; **corolla** 5-lobed; tube narrowly cylindrical, 32–54 mm long, whitish to light yellow or tan; throat 3.7–7.5 mm long, basal section pale yellow to purplish red above; lobes spreading above involucre, linear to narrowly triangular, 5–12 mm long, blue (violet) but light golden yellow on 1/4 lower surface; **stamens** 5, fused to corolla at base of throat; filaments 3.5–5 mm long, pale golden yellow base-to-tip or pale golden yellow basally and at tip but midpoint whitish, grooved on upper side, ± spiny-papillate; anthers fused into cylinder surrounding style, exerted, basifixed,

dithecal, subequal, 8.5–9.5 mm long, blue-violet, fringed at arrowlike base, rounded at tip, longitudinally and inwardly dehiscent; pollen yellow; **pistil** 1; ovary inferior, ± barrel-shaped compressed side-to-side, 4–4.5 × 2–2.2 mm, glossy creamy white, with ca. 20 faint veins, glabrous, 1-chambered with 1 ovule; style exerted 6–13 mm above anthers, 39–63 mm long, violet on exerted portion, sometimes minutely 2-lobed at tip, stigmatic along a whitish groove extending down each side of slightly flattened style and across top. **Fruits:** cypselae, weakly curved ellipsoid to obovoid, 4.8–7.5 × 2.8–3.6 mm, light bluish gray and moderately to densely mottled black or dark brown, smooth or weakly 2–4-grooved; pappus bristles unequal, 16–35 × 0.2–0.5 mm, silky white becoming pale yellow, short and finely plumose at least from midpoint; receptacle bristles light golden yellow.

Naturalized. Perennial herb cultivated for its immature heads (artichokes), now established at SMMNRA Arroyo Sequit in disturbed grassland, persisting there via taproots, and known also from Rancho Sierra Vista in Thousand Oaks and several other places. *Cynara cardunculus* subsp. *cardunculus*, formerly known as *C. scolymus*, produces massive heads having edible fleshy tissue on the phyllaries of the involucre, consumed before flowers are visible. This plant has massive basal rosette of large, distinctive, pinnately lobed lobes, and it is clearly recognizable as a member of the thistle tribe when its head has hundreds of discoid flowers interspersed with capillary bristles on the receptacle. En masse in natural light the flowers are blue, but the exposed parts are blue-violet when studied under artificial light.

B. A. Prigge & A. C. Gibson