

Dimorphotheca sinuata DC., CAPE-MARIGOLD. Annual, taprooted, 1–several-stemmed at base, branched at some or many nodes, decumbent to ascending, < 35 cm tall; shoots leafy, hairy throughout, commonly bent with twisted, (septate) hairs, glandular-hairy on leaves and inflorescences, faintly aromatic. **Stem:** ± cylindrical to somewhat angled, to 3 mm diameter, with 3 low ridges descending from each leaf, often purplish red on exposed side, with scattered short hairs and fewer long hairs; pith white, aging hollow. **Leaves:** helically alternate, unlobed or shallowly pinnately lobed with wavelike margins, ± sessile (petiole of long leaves indistinguishable from blade), without stipules; blade oblanceolate to elliptic or oblong, 12–50(–120) × 1.5–12(–20) mm, long-tapered at base, short-dentate with several widely spaced teeth on margins or with shallow lobes and sinuses (large leaves), acute to obtuse at tip, pinnately veined but only midrib evident and slightly raised on lower surface, initially glandular-hairy with colorless heads and short, weak stalks, aging sparsely short-hairy. **Inflorescence:** heads solitary, terminal and axillary, or a leafy, ± cymelike array of several heads, head radiate, 45–60 mm across (sometimes wider in cultivation), in range of 11–19 ray flowers and many disc flowers, on long peduncle, bracteate, short-hairy with infrequent longer hairs; peduncle stemlike, leafless section 50–150+ mm long, with several low, reddish ridges, sparsely short-hairy, approaching involucre having subsessile glandular hairs with blackish heads; **involucre** ± bell-shaped, 8–12 mm wide increasing 2× in fruit, phyllaries in 2 series and = ray flowers, narrowly lanceolate, 10–12 mm long, green with membranous margins often purplish above midpoint, long-acuminate and somewhat spreading at tip, twisted short-hairy having scattered black-headed glandular hairs; receptacle ± flat, without bractlets (paleae), with a hollow cavity beneath, becoming somewhat domed in fruit. **Ray flower:** pistillate, bilateral, 5–8 mm across; **calyx (pappus)** absent; **corolla** minutely 3-toothed; tube cylindrical, 2.2–2.5 mm long, whitish, with radiating, thick, glistening, colorless hairs tangled with hairs of neighboring flowers; limb oblanceolate, 20–30 × 5–8 mm, ± glossy orange (bright yellow) with blackish violet or dark gray-green at base (sometimes including 3 or 4 stripes visible several mm from tube), with fine parallel veins, having glistening hairs on dark basal portion along edges and on back; **stamens** absent; **pistil** 1; ovary inferior, wedge-shaped, ± 1.5 mm long, white turning green, conspicuously warty, 1-chambered with 1 ovule; style exserted, 2-branched, whitish to pale violet below fork, the stigmatic branches ascending, 0.8–1 mm long, violet or dark purplish. **Disc flower:** bisexual, radial, 1.2–1.5 mm across; **calyx (pappus)** absent; **corolla** 5-lobed, 4–5 mm long; tube + throat narrowly tubular but slightly expanding upward, grading from white at base becoming yellow to orange below lobes, sparsely short-hairy at base or base-to-top; lobes ± erect, triangular, 0.5–0.7 mm long, orange or yellow, dark violet or dark purplish at tip with orange or yellow margins and base, some on the corolla forming a tack-shaped appendage on outer surface, the appendage 0.5 mm long, glossy blackish violet, erect before corolla opens; **stamens** 5, fused to corolla ca. 0.5 mm from base of corolla; filaments 2–2.5 mm long, whitish; anthers fused into cylinder surrounding style, exserted, basifixed, dithecal, 2– 2.5 mm long (including triangular appendages at tips), orange below and deep violet above and on appendage, longitudinally dehiscent; pollen orange; **pistil** 1; ovary inferior, compressed-obovoid, 1.5–2 mm long, pale yellowish green, with 2 wavy wings, smooth, 1-chambered with 1 ovule; style exserted, 3.7–4.9 mm long, 2-branched, pale violet below fork, the stigmatic branches, spreading, truncate or tongue-shaped, 0.3–

0.5 mm long, blackish violet. **Fruits:** cypselae, distinctly dimorphic, glabrous, lacking pappus; cypselae of ray flowers often reflexed on receptacle, wedge-shaped to club-shaped, 3.5–4.7 × 0.8–1.3 mm, brown, warty (tuberculate), ± 3-sided with triangular tubercles arranged in 3 vertical rows; cypselae of disc flowers ± erect on receptacle, strongly flattened and obovate to heart-shaped (nearly circular), 5.5–7.5 × 5.5–7 mm, thickly rimmed on margin, notched at tip, membranous between chamber around seed and rim, brown, smooth. Late February–mid-April.

Naturalized. Annual popular in the horticultural trade for its spectacular orange, late-winter and early spring heads, but occasionally escaped and temporarily growing along roadsides downhill from gardens. *Dimorphotheca sinuata* (possibly only a form of *S. pluvialis*) is from South Africa. The name *Dimorphotheca* is a reference to this plant producing two forms of cypselae, warty (ray flowers) and larger ones that are two-winged (disc flowers). Disc flowers within a head have very peculiar, glossy, nearly black, tack-shaped glands (appendages) arising on the outer surface of each corolla lobe, in its homeland perhaps serving as a food body reward for some insect.

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