Tanacetum parthenium (L.) Sch.-Bip., FEVERFEW. Perennial herb, rhizomatous, 1 (-several)-stemmed at base, after initial flowering forming ascending lateral branches from canopy downward, $50-80 \mathrm{~mm}$ long; shoots generally without basal leaves, sparsely hairy and with glandular hairs, aromatic when crushed. Stems: several-ridged, to 7 mm diameter, with 3 fine ridges descending from each leaf, internodes $10-50 \mathrm{~mm}$ long; hollow. Leaves: helically alternate, 1-2-pinnately dissected mostly with lateral lobes (primary leaflets) alternate to subopposite 3-5 per side, petiolate, without stipules; petiole $7-35 \mathrm{~mm}$ long, puberulent-tomentose and sparsely glandular-hairy; blade ovate in outline, $20-65 \times 10-40 \mathrm{~mm}$, primary divisions ovate to elliptic or oblong to obovate, $5-23 \mathrm{~mm}$ long, with ascending lobes or teeth ending in obtuse or acute tips, secondary divisions similarly shaped but entire, pinnately veined with principal veins raised on lower surface, puberulent-tomentose and glandular-hairy, the glandular hairs sessile and partially sunken in pits or sometimes superficial (along veins). Inflorescence: heads, in terminal, flattopped, cymelike arrays of several heads, array leafy, head radiate, $13-18 \mathrm{~mm}$ across, with 13-18 ray flowers and many disc flowers, bracteate; bract subtending peduncle linear to oblanceolate, $2-11 \mathrm{~mm}$ long, sometimes toothed on margins (large bracts); peduncle 7-9ridged, slender, to 50 mm long, expanded and hollow below involucre, sparsely puberulent, glandular-hairy with colorless heads on expanded portion, with $0-2$ bracts along axis, the bracts linear to awl-shaped, $1.8-4 \mathrm{~mm}$ long; bracts subtending involucre (calyculus) absent; involucre broadly cup-shaped, in range 5.5-8 mm across, phyllaries many, tightly appressed in $4-5$ series, outer phyllaries narrowly acuminate, $2-2.5 \mathrm{~mm}$ long, green with pale yellowish green to brownish membranous margins, stiff, with raised midvein, puberulent-tomentose and glandular-hairy with sessile, colorless heads, $\pm$ ciliate on margins; middle and inner phyllaries oblong to oblanceolate, mostly $2.5-3.5 \mathrm{~mm}$ long, becoming thinner and fully membranous inward, puberulent and glandular-hairy on exposed surface; receptacle broadly domed, without bractlets (paleae), glabrous. Ray flower: pistillate, bilateral, 2-3 mm across; calyx (pappus) irregular crown of membranous scales (coroniform), ca. 0.1 mm long, no scales on 1 side (adaxial); corolla $0-3$-toothed; tube compressed front-to-back, $0.7-1 \mathrm{~mm}$ long, greenish, with sessile glandular hairs; limb spreading to slightly reflexed, obovate to broadly elliptic, 4.3-5.3 mm long, white, faintly 5 -veined, with shallow, rounded teeth; stamens absent; pistil 1 ; ovary inferior, arched-oblanceoloid, $0.8-1.2 \mathrm{~mm}$ long, yellowish green, $6-7$-ribbed with glandular hairs between straw-colored ribs, 1-chambered with 1 ovule; style shortexserted, $1.2-1.5 \mathrm{~mm}$ long, pale green, swollen at base, style 2-branched, the stigmatic branches exserted, 0.4 mm long, golden yellow aging orange or reddish, truncate at tip. Disc flower: bisexual, radial, ca. 1 mm across, 2.2-3.2 mm long; calyx (pappus) irregular crown of 4-10 membranous scales (coroniform; = ribs on ovary), the fewest on the outermost flowers, $0.1-0.2 \mathrm{~mm}$ long; corolla 5-lobed, in bud with scattered glandular hairs; tube cylindric or slightly compressed, $0.5-0.8 \mathrm{~mm}$ long, glossy whitish below and greenish above midpoint; throat cylindric or slightly compressed, $1.1-1.2 \times 0.6 \mathrm{~mm}$, yellowish; lobes spreading, triangular to deltate, $0.3-0.4 \mathrm{~mm}$ long and wide, golden yellow, thick at tip; stamens 5, fused to corolla at top of tube, slightly exserted; filaments $0.6-1 \mathrm{~mm}$ long, mostly white but yellowish approaching anther; anthers fused into cylinder surrounding style, basifixed, dithecal, $0.7-0.9 \mathrm{~mm}$ long, golden yellow aging with

5 reddish stripes, longitudinally dehiscent; pollen golden yellow; pistil 1; ovary inferior, narrowly inversely conic, 4-5-angled or wedge-shaped and 4-angled (the outermost flowers), $0.8-1.2 \mathrm{~mm}$ long, $4-10$-ribbed with vertical rows of glandular hairs between ribs; style slightly exserted, $1.3-1.7 \mathrm{~mm}$ long, nectary bulbous at base, style 2-branched, whitish or pale green to above midpoint, the branches spreading, hemi-cylindric but grooved on inner face, $0.4-0.5 \mathrm{~mm}$ long, truncate at tip. Fruits: cypselae, monomorphic; fruit body narrowly wedged-shaped and $4-5$-angled, in range $\pm 1.5 \mathrm{~mm}$ long, pale greenish to brownish white, indented at base, with conspicuous ribs somewhat alternating with strips of glistening, sessile glandular hairs; pappus crown-shaped (coroniform) and 0.1-0.2 mm long. Late June-mid-August.

Naturalized. Perennial herb of gardens discovered in Zuma Creek growing in rocky soil on the floodplain, occurring there with Cyperus eragrostis, Mentha spicata var. spicata, Genista monsessulana, Mimulus cardinalis, and Hoita macrostachya. Tanacetum parthenium has daisylike heads with white ray flowers and resembles the annual Anthemis cotula, which also is a member of tribe Anthemideae.
B. A. Prigge \& A. C. Gibson

