

## Vascular Plants of Williamson County

*Crocanthemum rosmarinifolium* – ROSEMARY ROCKROSE, ROSEMARY FROSTWEED  
[Cistaceae]

*Crocanthemum rosmarinifolium* (Pursh) Janch. (syn. *Helianthemum rosmarinifolium*), ROSEMARY ROCKROSE, ROSEMARY FROSTWEED. Perennial herb, sometimes with basal leaves mat-forming, several-stemmed at base, in range spreading to trailing or ascending, forming diverging lateral shoots bearing the flowers, in range < 30 cm tall; shoots with cauline leaves or earlier with basal leaves, basal and lower cauline leaves absent on mature individuals, stems slender, stem and especially lower surface of leaves densely stellate-hairy (tomentose), stellate hairs hemispheric ca. 0.1 mm with several–many radiating straight arms, lacking glandular hairs. **Stems:** cylindrical,  $\pm$  1 mm diameter, tough, upper stem densely stellate-hairy with tan hairs, old, lower stem forming thin periderm brownish to light brown with space between individual stellate hairs. **Leaves:** helically alternate (sometimes appearing opposite at a first node on a shoot), simple with conspicuously inrolled margins to the lower side (revolute), short-petiolate, without stipules; petiole inconspicuously channeled, < 3 mm long, stellate-hairy except in channel; blade linear to narrowly oblanceolate-linear, mostly 7–45  $\times$  0.7–5.5 mm, length:width ca. 10 $\times$ , long-tapered at base, entire (true margins), acute to obtuse at tip, pinnately veined but often appearing 1-veined with midrib sunken on upper surface and strongly raised on lower surface, upper surface green with stellate hairs sparse to widely spaced, lower surface appearing white with dense cover of overlapping stellate hairs, the wider leaves commonly do not have revolute margins. **Inflorescence:** initially of axillary, solitary, bisexual, showy chasmogamous flowers on long pedicels shortly after forming clusters of smaller nonshowy cleistogamous flowers on short pedicels, cluster formed on axillary, diverging lateral shoots with 1–2 vegetative nodes thereafter having a cluster (glomerule) or compound clusters at subsequent nodes, cluster = condensed cyme, of < 12 flowers per cluster, axes and calyx densely stellate-hairy and with some longer, twisted single nonglandular hairs; bract subtending cyme = revolute cauline leaf; peduncle absent; bract (bracket) occasionally observed subtending cyme branchlet, linear, < 1 mm long, stellate-hairy; pedicel of chasmogamous flower slender, (5–)10–22 mm, in fruit appearing to be exerted from cluster, stellate-hairy, of cleistogamous flower < 3 mm long, stellate-hairy. **Chasmogamous flower:** bisexual,  $\pm$  radial (asymmetric petals), 7–10 mm across; **sepals** 5, dimorphic, slender outer 2 sepals fused to 2 of 3 inner sepals below midpoint and free above, free portion of outer sepal linear, 1.5–1.8  $\times$  0.2 mm, green, stellate-hairy but with several longer solitary hairs at and approaching tip, inner sepals overlapping, asymmetric with 1 membranous margin, acute-ovate, ca. 4  $\times$  2–2.3 incl. membranous margin ca. 0.5 mm wide, stellate-hairy with several longer single hairs at tip (hairs absent on membranous margin), persistent and appressed in fruit; **petals** 5, spreading, fan-shaped to inversely triangular, 4–6  $\times$  3–4.5 mm, light yellow, with many faint parallel veins from base, base pale yellow and notched, ephemeral (within several hours withering and abscised); **stamens** mostly ca. 20–27, free, exerted and spreading; filaments slender, 2–2.5 mm long, pale yellow aging orangish; anthers basifixed, dithecal,  $\pm$  0.3 mm long, light red, longitudinally dehiscent; pollen pale light orange; **pistil** 1, 1.5–2 mm long; ovary superior, ellipsoid weakly 3-sided, 1–1.2  $\times$  0.7 mm, whitish, glabrous, 1 chambered with 6+ attached at top of chamber; style ca. 0.7 mm long, translucent aging reddish rose, gradually flared to

top with a hemispheroid mound of 3 papillate stigma lobes at or just below levels of anthers. **Cleistogamous flower:** bisexual, radial, ca. 0.4 mm across (at pollination); **sepals** 5, dimorphic, slender outer 2 sepals fused at bases of 2 inner sepals and free above, free portion of outer sepal linear, 0.5–1 × 0.15 mm, green, inner sepals overlapping, stellate-hairy but with several longer solitary hairs at and approaching tip, inner sepals overlapping, asymmetric with 1 membranous margin, cupped-deltate, ca. 1 mm, stellate-hairy with wide membranous margin with several longer single hairs approaching tip (hairs absent on membranous margin), persistent and appressed in fruit; **petals** absent; **stamens** typically 3, free; filament slender flattened front-to-back, ± 0.7 mm long and > ovary, reddish; anther basifixed, monothecal, ca. 0.1 × 0.15 mm, pale yellow, longitudinally dehiscent along top; pollen yellowish; **pistil** 1, included; ovary superior, obovoid slightly 3-lobed, ± 0.4 × 0.3 mm, reddish, glabrous, 1-chambered with at least 1 fertile ovule; style ca. 0.2 mm long, reddish at top with 3 spreading, flat and somewhat jagged stigmas lobes at level of anther, 1–2 lobes touching 1 anther. **Fruit:** capsule, loculicidal, 1-chamber, of chasmogamous flower typically dehiscent with 3 valves and to 6 seeds, ovoid, 2–3 × 1.5 mm, larger capsules with more seeds, of cleistogamous flower dehiscent with 3 valves and 1-seeded, obovoid, 1.3–1.5 × 1 mm, valves thick-walled, ribs (sutures) inconspicuous from midpoint to tip, glabrous except sometimes having several puberulent hairs at top. **Seed:** of cleistogamous flower mostly filling chamber, of chasmogamous flower in range not observed.

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