

## Vascular Plants of Williamson County

*Acalypha rhomboidea* – RHOMBOID COPPERLEAF, COMMON THREESEEDED MERCURY  
[Euphorbiaceae]

*Acalypha rhomboidea* Raf., RHOMBOID COPPERLEAF, COMMON THREESEEDED MERCURY. Annual, weakly taprooted, not rosetted, 1-stemmed at base, often not branched, erect, in range 7– < 20 cm; monoecious; shoots with only cauline leaves, short-hairy with upward-pointing hairs, lacking latex. **Stems:** ridged, in range mostly to 1 mm diameter, with 3 ridges descending from each leaf, pubescent with abundant, upward-arching, white short hairs, stems often rose-red. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached to base of petiole, deltate, 0.3–0.5 mm, whitish or pinkish with 5–7 red veins from base, short-ciliate on margins; petiole in range to 10 mm long (ca. 1/4 of blade length), somewhat compressed on top and bottom, short-hairy with short-strigose (appressed) to upward-arching hairs, lacking glands or glandular hairs at base or top; blade in range ovate (rhombate), in range < 25–35+ × < 10–14+ mm, broadly tapered at base, in range very low-crenate on margins, acute at tip, pinnately veined and 3-veined at base with principal and many minor veins raised on lower surface, upper surface dull yellow-green, short-strigose with upward-pointing hairs, the hairs widely spaced and variable in length including sparse larger strigose hairs, lower surface short-strigose especially along veins, on margins adjacent to notch of sinus often with 1 minute glandular hair (to 0.05 mm) with a rose-colored head. **Inflorescence:** mixed spike, strictly axillary, consisting of a short peduncle, a leafy involucre, and a cymelike array with a short staminate inflorescence having 1–few flowers (exposed from the involucre) next to a sessile pistillate flower concealed within the involucre, at many nodes having a chain of 2 involucre units, bracteate; peduncle < 2 mm long, white and short-hairy; **involucre** before pollination initially bell-shaped, ca. 2 mm long, 5–9-lobed, the lobes mostly triangular, green with rose veins, outer (lower) surface and margins pubescent with short nonglandular hairs and numerous stalked glandular hairs with colorless heads, inner surface glabrous to glabrescent, enlarging in fruit. **Staminate inflorescence:** cylindric, ca. 4 mm long, pinkish, short-hairy, lower portion fused to peduncle, with darker veins, free portion appearing at top of peduncle at base of involucre, ca. 1.5 mm long, with a sessile, terminal staminate flower or several flowers clustered at top of axis; bractlet subtending flower cupped-ovate, 0.3–0.35 mm long, pale rose, short-hairy. Pistillate inflorescence: pistillate flower. **Staminate flower:** radial, ca. 0.3 mm across; **sepals (petals)** 4, triangular-linear, ± 0.25 × 0.005 mm, rose, with several short hairs; **stamens** in range 4(8), fused at base into short column; filaments minute, colorless; anthers in close proximity to stigmas of adjacent pistillate flower, dorsifixed, dithecal, < 0.2 mm long, rose, longitudinally dehiscent; pollen nearly colorless; **pistil** absent. **Pistillate flower:** radial, to 1 mm across; **sepals** 3, deltate, 0.3–0.35 mm, ± colorless, with several short hairs on outer (lower) surface; **petals** absent; **stamens** absent; **pistil** 1; ovary superior, 3-lobed, ca. 0.4 mm, rose-red, 3-chambered, each chamber with 1 ovule; styles 3, to 2 mm long increasing fruit, tinged pale rose, each style to 5-forked, with slender suberect branches (multifid), the branches unequal and not obviously papillate. **Fruit:** capsule, schizocarpic as 3 mericarps, typically 3-seeded and conspicuously 3-lobed, ca. 2 × 2 mm and length < width, stiff short-hairy, when immature green below midpoint and often purple-red above midpoint with hairs having fleshy bases; at the lowermost nodes rarely unlobed and 1-seeded (allomorphic, in range not observed);

capsule concealed by involucre (bract), at dispersal involucre cupped outward, appearing open  $\pm$  broadly funnel-shaped, (5–)6–9-lobed, in range  $< 6-7.5 \times 7-9$  mm (flattened), length  $<$  width, somewhat cordate at base, lobes unequal with the central lobe larger and wider, acute-triangular or central lobe sometimes rounded-ovate,  $< 1-3$  mm with the deepest sinuses nearly to midpoint, palmately veined with ca. 9 veins at base raised on lower surface and some veins 2-forked, each lobe having (1–)2(–3) low-raised veins, during fruiting lower portion of involucre often whitish around capsule and green above, early in development veins rose later fading, inner (upper) surface glabrous or glabrescent with inconspicuously short hairs, lower surface and lobe margins conspicuously short-hairy including many stalked glandular hairs with colorless heads (sessile red glandular hairs lacking), tissue of involucre minutely whitish dotted (crystal aggregates in internal cells, druses); styles 3 scarcely fused at base, with to 12 suberect, slender stigmatic branches, to 2 mm long, stigmas not papillate; remnant of staminate inflorescence often present at base of involucre. **Seed:** with caruncle, ovoid, in range ca.  $1.5 \times 0.8-1.2$  mm, in mature capsule glossy and steely blackish, drying mottled black and hark gray, with longitudinal files of minute pits (collapsed cells), having a line (groove) from hilum to base; caruncle attached to hilum and concealing upper portion of groove,  $\pm$  ellipsoid,  $\pm 0.8 \times 0.25$  mm, whitish; dispersed within papery mericarp or free of mericarp.

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