

## Vascular Plants of Williamson County

### *Amaranthus palmeri* – PALMER AMARANTH, CARELESSWEED

*Amaranthus palmeri* S. Walter, PALMER AMARANTH, CARELESSWEED. Annual, not spinescent, taprooted, not rosetted, 1–several-stemmed at base, with ascending branches, in range 40–95 cm tall; dioecious; shoots with only cauline leaves, appearing glabrous but initially glabrescent with very fine short hairs along veins and axes. **Stems:** strongly ridged, to 10+ mm diameter, with broad central ridge descending from leaf, internode with various unequal ridges irregular in  $\times$ -section, with limit of small pimples (enlarged bases of former hairs), light yellow green with pinkish strips and patches. **Leaves:** helically alternate, simple, long-petiolate, without stipules; petiole deeply channeled, to 140 mm long, pale green and whitish or with pinkish stripes on sides with pickles, in channel inconspicuously short-hairy; blade ovate, in range  $< 30\text{--}130 \times < 12\text{--}85$  mm, appearing tapered and asymmetric at base but also petiolelike portion extremely narrow and folded upward (indistinct from petiole), entire and often wavy on margins, mostly obtuse (acute) at tip often minutely notched with a slender point (excurrent midrib; mucronate), conspicuously pinnately veined having principal veins sunken on upper surface and raised on lower surface, upper surface dull, mostly glabrous but with inconspicuous short hairs along midrib and some principal veins, lower surface satiny with inconspicuous hairs along principal veins. **Inflorescences:** panicles of many condensed lateral cymes (1–)5–13-flowered (glomerules), spikelike and terminal on canopy shoots, tail-like,  $< 100\text{--}400 \times 7\text{--}12+$  mm, when forming ascending when longer long-tapered to slender tip and flexible-drooping, approaching base of spike the uppermost canopy leaves with diminutive axillary cyme, cymes helically alternate with 1 cyme per node, dense (pistillate, short internodes with internodes concealed) or spaced to 6 mm apart along rachis (interrupted cyme, staminate), bracteate, appearing glabrous but with fine short-hairs often on green tissues; panicle not obvious; rachis conspicuously ridged (pistillate) with a coarse ridge descending from each bract + cyme or low-ridged to cylindric (staminate), pale green; bract subtending winged with green axis and slender point at tip. **Staminate inflorescence:** each cyme initially dichasial (terminal + 2 lateral flowers) later increasing to 13 flowers, internodes horizontal and  $< 1$  mm long, glabrous; bract subtending cyme fused to short peduncle, ascending and cupped,  $4\text{--}6 \times 1$  mm, lower portion winged and colorless, ovate, to below green midblade and 1-veined, excurrent point at tip to 1 mm long and whitish, initially sparsely short-hairy on green tissue; internodes of cyme  $< 1$  mm long; bractlet subtending flower ca. 4 mm long, similar to bract, cupped with whitish point 0.6–1 mm long curved over bud. **Staminate flower:** radial, 3–4 mm across (when releasing pollen), persistent; **sepals (tepals)** (4–)5, helically alternate, in range subequal with outermost tepal longer to 3.2 mm long including short point at acute tip, membranous with dark green midvein, midvein above midpoint rounded on back often with several short hairs, other tepals ovate, 2.5– 2.9 mm long with shorter points, having a light green midvein; **stamens** 5, free; filaments suberect to ascending, ca. 3 mm long, in bud pale green aging colorless; anthers  $\pm$  versatile, conspicuously dithecal,  $\pm 1.5$  mm long, dull light yellow, longitudinally dehiscent; pollen copious, pale yellow, dry; **pistil** vestigial in center = low dome. **Pistillate inflorescence:** bract subtending cymes at lower nodes diminutive leaflike with short petiole (mostly  $< 12$  mm long with oblong blade), of other cymes winged widely spreading

(conspicuous on spike) with green axis and slender point at tip, 4–6.2 mm long and > perianth, wings cupped upward from green axis above midblade to approaching point at tip. **Pistillate flower:** radial, ca. 3 mm across; **sepals (tepals)** 5, helically alternate, ascending, spatulate to obovate and often monomorphic, in range (< 1–)2–3.2 × 1.2–1.4 mm including slender acuminate point at tip, outer 3 tepals ± cupped and inner tepals shorter and flat (the shortest innermost tepal sometimes heart-shaped lacking green stripe), obtuse (mucronate) at top, aging papery with green midvein, persistent; **stamens** absent; **pistil** 1, at anthesis 2–2.5 mm long; ovary superior, compressed ellipsoid, ca. 0.8 × 0.4 mm, greenish, glabrous; 1-chambered with 1 ovule; styles 2(–3), ascending, translucent, stigmatic. **Fruit:** utricle, dehiscent around circumference just below midpoint (circumscissile) with top easily separated as cap when touched and basal portion persistent, 1-seeded (vertically oriented), surrounded by a persistent persistent perianth, fruit obovoid compressed side-to-side, ca. 1.5 mm long and wide, shorter than outer tepals, pale green aging papery and tan, with 2 or 3 persistent styles, with a rib decurrent from each style to midfruit, having a thin wall in range bumpy (rugose) wall. **Seed:** lens-shaped, in range ca. (0.8–)1–1.3 mm, glossy dark red-brown, appearing smooth (faintly textured).

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