## Vascular Plants of Williamson County Parthenium hysterophorus – FEVERFEW [Asteraceae]

Parthenium hysterophorus L., FEVERFEW. Annual, taprooted, several-stemmed at base, with ascending lateral branch often from each axillary bud, in range to 80 cm tall; shoots with only pinnately lobed cauline leaves, with upward-curved to arching, stiff, short hairs (scabrellous) and gland-dotted with sessile, colorless glandular hairs, not odorous when crushed. Stems: conspicuously ridged, to 7 mm diameter, with 3 ridges descending from each leaf, green, with nonglandular short hairs mostly along ridges and inconspicuous glandular hairs in furrows. Leaves: helically alternate, pinnately 1–2-lobed, petiolate, without stipules; petiole broadly crescent-shaped, 1-15+ mm long, flaring at base (large leaves), whitish with narrow green margins, with 3 raised veins on lower side; blade ovate to elliptic in outline, in range  $30-90+ \times 10-50$  mm, lobes with deep sinuses but blade tissue along axes, oblong to elliptic or oblanceolate, the wider blades with sublobes or teeth, the narrow lobes often entire, tips of lobes obtuse to broadly acute, pinnately veined with principal veins somewhat sunken on upper surface and raised on lower surface, surfaces with nonglandular and glandular hairs evenly distributed. Inflorescence: heads, in terminal and axillary, cymelike arrays, arrays several-branched, heads inconspicuously radiate, 4-5 mm across, with 5(-6) pistillate marginal flowers and 20+ functionally staminate disc flowers, bracteate, with nonglandular short hairs and sessile colorless glandular hairs, in bud with dense short hairs concealing unopened disc flowers; bract subtending each branch leaflike, decreasing upward, subtending peduncle sessile to subsessile, unlobed or 3-lobed, principal lobe narrowly lanceolate or oblanceolate to narrowly elliptic, to  $15 \times 9$  mm, lateral lobes at base, ovate to elliptic, 1.5-7 m long, decreasing upward; peduncle and other axes conspicuously ridged and stemlike, to 8 mm long increasing  $2 \times$  in fruit; **involucre** cuplike and 5-pointed, short-hairy, phyllaries 10(12) in 2 series, outer phyllaries appressed, acute-ovate,  $2.3-2.5 \times 1.2-1.8$  mm, green with colorless margins, 3-veined, lower surface uniformly short-hairy with glabrous tip, upper surface glabrous, inner phyllaries subtending ray flowers (paleae), cupped fan-shaped, ca. 2  $\times$  2 mm, mostly colorless with greenish veins, 3-veined closed before reaching margins, short-hairy on outer margin glabrate on lower surface and glabrous on upper surface; receptacle flat, reddish, glabrous, with bractlet (palea) subtending each disc flower, palea wedge-shaped cupping flower, 1 mm long, colorless, densely short-hairy at top. **Ray** flower: pistillate, bilateral, < 1.5 mm across; calyx (pappus) absent, having a pair of lanceolate, pappuslike appendages on top of ovary, appendages lanceolate, 0.6 mm long, white; **corolla** ca. 1 mm long; tube cup-shaped to barrel-shaped,  $0.4 \times 0.6$  mm, light green; limb suberect on outer side, horizontally ovate or faintly 3-lobed, 0.7–0.8 mm wide, white; stamens absent; pistil 1; ovary inferior, obovate flattened front-to-back, ca.  $1.5 \times 1.2$  mm, whitish, glabrous, 1-chambered with 1 ovule; style erected, 2-branched, to 1 mm long, white, forked at midpoint with diverging, stigmatic, fingerlike branches. Disc flower: functionally staminate, radial, ca. 0.4 mm across, ca. 1.5 mm long; calyx (pappus) absent; corolla 4-lobed, club-shaped, ca. 1.5 mm long, colorless (pinkish); tube and throat narrowly funnel-shaped; lobes suberect, deltate,  $\pm 0.3$  mm; stamens 4, fused near base; filaments 0.4 mm long, colorless; anthers basifixed, dithecal, partially exserted, 0.8 mm long + deltate appendages 0.2 mm at tip, whitish, longitudinally dehiscent; pollen white; **pistil** sterile; ovary inferior, diminutive; style ca. 1 mm long, reddish, with spheroid tip.

**Fruits:** cypselae, abscised with subtending palea and 2 lateral disc flowers with paleae; cypsela 3-sided with midridge on inner side, top-shaped in outline, ca.  $2 \times 1.2$  mm, black, with papillate hairs on inner side; perianth and 2 pappuslike appendages persistent on top; palea of ray flower papery and concealing fruit, paleae of disc flowers with edge overlapped by ray palea.

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