

## Vascular Plants of Williamson County

*Urtica chamaedryoides* – STINGING NETTLE, WEAK NETTLE [Urticaceae]

*Urtica chamaedryoides* Pursh, STINGING NETTLE, WEAK NETTLE. Annual, short-taprooted, several-stemmed at base, spreading to ascending often resting on neighboring vegetation, in range to 50 cm tall; monoecious; shoots with only cauline leaves, stems and foliage with sparse but extremely painful, needlelike stinging hairs and with scattered short hairs, the stinging hairs 1.2–1.8 mm long, on a colorless to purple-red, multicellular, cylindrical base to 0.6 mm long and upper portion sharp-tipped, translucent, and minutely textured. **Stems:** 4-ridged and  $\pm$  4-sided, to 2.5 mm diameter (branches axes slender), internodes to 80 mm long, with rounded edges and deeply grooved on each face aging flat at plant base, tough (= strong stem fibers), ridges often rose-orange to purple with radiating stinging and appressed short hairs but furrow glabrous. **Leaves:** opposite decussate, simple, petiolate, with stipules; stipules 2 (4 per node), attached to stem (above stem furrows),  $\pm$  triangular, 1–4 mm long, green with whitish, 3-veined at base, short-ciliate margins, lower surface short-hairy; petiole deeply channeled, < 5–35 mm long, vein of channel mostly translucent and upper channel lined with cystoliths (cell containing a calcium carbonate crystal), the longest petioles with several stinging hairs; blade lanceolate or narrowly lanceolate to ovate, 14–65  $\times$  7–34 mm, rounded or truncate to tapered at base, serrate on margins, the teeth acute to obtuse (occasionally with minute, low shoulder), acute to obtuse at tip, 3-veined from base (basal actinodromous) but above pinnately veined with principal veins sunken on upper surface and raised on lower surface, with only a few widely spaced stinging hairs and more numerous shorter hairs especially on lower surface along veins and margins, upper surface dotted with whitish cystoliths. **Inflorescence:** cymes in interrupted, paniclelike arrays, cymes axillary, each panicle of unisexual flowers, 2 cymes per axillary bud (4 per node) and from between them arises an axillary shoot, cyme-bearing at many consecutive nodes, with many, tightly clustered, nonshowy staminate and pistillate flowers, pistillate flowers more numerous and with earlier anthesis than staminate flowers on each cyme (protogynous); peduncle < petiole, typically < 10 mm long; axes with upward-pointing short hairs; bract subtending branchlets inconspicuous, the largest ovate, colorless, with short hairs; pedicel at anthesis < 0.5 mm long, not notably constricted below staminate flower where abscission occurs, of pistillate flower elongating to 1.5 mm long, greenish to whitish and persistent with scattered short hairs. **Staminate flower:** radial, distinctly 4-lobed in bud, 1 mm across before stamens elastically unfold,  $\pm$  2 mm wide after stamens unfold, abscising from pedicel after pollen released; **sepals** 4, cupped-ovate, ca. 0.8  $\times$  0.5–0.6 mm, cupped around anthers, green but narrowly membranous on margin approaching tip, short-hairy on outer (lower) surface; **petals** absent; **stamens** 4, free, incurved with filament bent in half (inflexed); filaments springing loose and spreading at anthesis,  $\pm$  1 mm long, translucent; anthers exerted, dorsifixed, dithecal, ca. 0.6  $\times$  0.6 mm, pale yellowish white, longitudinally and inwardly dehiscent, pollen whitish; **pistil** rudimentary, sterile, dish-shaped on a minute stalk, ca. 0.3  $\times$  0.4 mm, colorless, becoming squarish on drying. **Pistillate flower:** radial, at anthesis ca. 0.5 mm across (smaller and with anthesis earlier than staminate flower), laterally compressed; **sepals** 4, dimorphic, the outer 2 sepals ovate to elliptic, at anthesis 0.2–0.3  $\times$  0.2 mm increasing to 0.4–0.8  $\times$  0.3 mm in fruit, short-hispid on outer (lower) surface, the inner 2 sepals ovate to elliptic, at anthesis 0.4–0.5  $\times$  0.3 mm increasing to 1.8–2  $\times$  1.2 mm in fruit

and having a well-developed medial ridge and short-hispid on outer surface (calyx lacking stinging hairs); **pistil** 1; ovary superior, compressed-ovoid, ca.  $0.4 \times 0.25$  mm, 1-chambered with 1 ovule attached to base; style absent; stigma at anthesis purplish red, papillate. **Fruit:** achene, ovate-lenticular, ca.  $1.2 \times 1 \times 0.3$  mm, pale orange-yellow to tannish, abscised as a unit ca. 2 mm long with ascending pale green inner sepals and smaller outer sepals attached at bases.

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