

Vascular Plants of Williamson County

Daucus carota – WILD CARROT, QUEEN ANNE'S LACE [Apiaceae]

Daucus carota L., WILD CARROT, QUEEN ANNE'S LACE. Biennial herb, thick-taprooted, rosetted, in range several-stemmed or many-stemmed at base, with ascending lateral branches at each node, each branch terminating in an inflorescence, erect, 35–120 cm tall; shoots at flowering with withered basal leaves and widely spaced, healthy cauline leaves, in range mostly short-hairy to sparsely hairy, when crushed scented like carrot; taproot carrotlike but whitish or weakly orange, with woody flesh, tall specimens also having thick lateral roots. **Stems:** cylindric, to 12 mm diameter, tough, internodes to 170 mm long, finely striped with alternating photosynthetic tissue and support tissue, sparsely pilose (lower stem) to short-hirsute; internodes with white pith or sometimes aging \pm hollow (tall specimens). **Leaves:** helically alternate, odd-2-pinnately compound having to 8 symmetric pairs of lateral primary leaflets, petiolate, without stipules; petiole sheathing and \pm closed at base, long petioles broadly channeled to above midpoint and flat approaching blade, to 80 mm long, with narrow, membranous wings either at base or along length of shorter petioles, weakly ridged on lower side, sparsely pilose with mostly slightly backward-pointing hairs; blade \pm oblong to ovate or deltate in outline, to 180 \times 200 mm; primary leaflets opposite (basal ones) to subopposite (approaching tip), pairs separated along rachis to 60 mm at base decreasing upward; rachis channeled, somewhat 5-ridged or angled on lower side, sparsely hairy, diagonally bridged by ledge across channel where petiolules of primary leaflets join rachis, with midvein visible in channel; primary petiolules 0–30 mm long, decreasing upward; primary leaflets to 100 mm long, divided into 1–7-lobed secondary leaflets; secondary petiolules deeply channeled, to 15 mm long decreasing to the sessile terminal leaflet; blades of secondary leaflets typically oblanceolate to elliptic, to 45 mm long, unlobed to alternately 7-lobed with deep sinuses, long-tapered at base, pinnately veined; ultimate lobes oblanceolate to lanceolate or narrowly ovate, to 25 \times 1.5–5 mm, glabrate but sparsely short-ciliate on margins, acute at tip, with midrib of lateral lobes asymmetric. **Inflorescence:** compound umbel, terminal on all shoots, conspicuously flat-topped, (12–)30–65 mm across, of many umbellets, each umbellet 5–10 mm across and \pm eccentric, of (1)9–50 white bisexual and fewer staminate flowers; bract subtending peduncle leaflike, finely 2-pinnately dissected, with sheathing petiole to 20 mm long; peduncle erect, low-ridged, 95–270 mm long increasing 2 \times in fruit, finely striped green and whitish, short-hispid (sometimes backward-pointing) below involucre; **involucre** of 8–10 bracts subtending outer primary rays, in 1 or 2 whorls, unequal, spreading, < primary ray length; involucral bract petioles 4.5–5.5 mm long, bract blades pinnately 3-lobed or 5-lobed at anthesis (5-lobed in fruit), 9–14 mm long increasing 2 \times in fruit, the lateral lobes spreading and linear, 2.7–9 \times \pm 0.5 mm, the terminal lobe 5–10 \times \pm 0.5 mm, with upturned lobes, striped green and white and lower surface sometimes minutely scabrous margins of lobes inrolled, membranous, and short-ciliate; primary rays 28–60+, spreading (marginal ones) to ascending (central ones), unequal, cylindric, 4–16 mm long increasing 2 \times in fruit, greenish, minutely hispid; involucre of 8–10 bractlets subtending outer pedicels in 1 whorl (only 1 bractlet for a central umbellet), at anthesis spreading becoming ascending or upturned in fruit, unequal, linear to awl-shaped, (1.3–)2–5.5(–7) \times 0.3–0.5 mm increasing 1.5–2 \times in fruit (longer and > pedicel on outer border of

umbellet), short-ciliate with inrolled margins; pedicel spreading to ascending, cylindrical, at anthesis 1–3.2 mm long, outer pedicels > central pedicels, increasing to 3× in fruit or abscising (central staminate flowers), whitish, glabrous; with larger flowers on outer border of compound umbel; 1-flowered umbellet sometimes with 1 deep purple flower in center of the compound umbel. **Staminate flower:** radial, 1 mm across, not spreading open; **sepals** 5, acute to acuminate, < 0.1 mm long, pale green to whitish; **petals** 5, strongly incurved (never spreading), ovate to obovate in outline, ca. 0.5 × 0.5 mm, symmetric or asymmetric, long-acuminate at permanently incurved tip, white, with well-developed midridge on upper (inner) surface, tip nearly as long as rest of petal; **stamens** 5, free, enclosed by petal; filaments 0.4–0.5 mm long, whitish; anthers dorsifixed, dithecal, ca. 0.2–0.35 mm long, pale yellow, longitudinally dehiscent; pollen pale yellow; **pistil** vestigial with only nectar-producing platform (stylopodium, stylar tissue) of 2 semi-circular plates, together 0.35–0.5 × 0.2–0.35 mm, pale to light yellowish green and minutely dotted, shallowly scalloped. **Bisexual flower:** irregular, ± 2 mm to 4 mm across (the widest on outer border of the compound umbel); **sepals** 5, acute to acuminate, < 0.1 mm long, pale green; **petals** 5, unequal, heteromorphic, ovate to obovate or unequally 2-lobed, 1–2.5 × 1–3 mm, acuminate at strongly incurved tip, mostly white, often greenish or reddish on midvein when young, smaller petals with midridge on upper (inner) surface, the largest and most asymmetric petals on the outermost flowers of umbellet and on side of flower facing the periphery of umbellet, initially pink with darker veins aging pure white; **stamens** 5, free, erect in bud, abscised before petals spread; filaments with recurved tip, 0.5–0.7 mm long, whitish; anthers dorsifixed, dithecal, ca. 0.3 × 0.2 mm, pale yellowish white, longitudinally dehiscent; pollen pale yellow, discharged before petals spread; **pistil** 1; ovary inferior, 2-lobed with a platform (stylopodium, stylar tissue) on top (not nectar-producing), ± semi-oblong, compressed ⊥ adjoining faces (in fruit flattened parallel to adjoining faces), 0.4–0.5 × 0.5–0.6 × 0.3 mm, rose or yellowish green with short bristles but dark green and glabrous just below petals, 8-ribbed, with 2 lines of short hairs in grooves + inconspicuous lines of bristles on ribs, each bristle with horizontal awn at tip, stylopodium of 2 semi-circular plates, together 0.25–0.5 × 0.25–0.35 mm, pale to light green, minutely dotted or papillate, shallowly scalloped, enlarged and pillow-shaped in old flowers, 2-chambered, each chamber with 1 ovule; styles 2, arising between halves of stylopodium, erect, 0.3–0.4 mm long increasing 4–6× and ascending in fruit, light green; stigmas terminal. **Central flower:** bisexual (typically sterile), 2 mm across, radial with equal petals never spreading and parts in range white. **Fruit:** schizocarp, of 2 dry 1-seeded halves (mericarps), bristly, ellipsoid before splitting; mericarps 3–3.5 × 1.5 × 0.7 mm, flattish on inside face, knobby beaked at tip with persistent stylopodium and style, conspicuously bristly with bristles in 4 longitudinal rows on outside faces, minutely 5-ribbed with a rib between rows of bristles on outer (dorsal) faces and 2 ribs on inner (ventral) face, each rib stiff hairy, the bristles 1.2–1.5 mm long, golden brown, barbed at tip, conspicuously flattened at base, fused and continuous with bases of adjacent bristles to form a longitudinal wing, the stiff hairs short, in 2 divergent rows along outside ribs, spreading outward on inside ribs; beak < 0.5 mm long (to 1.5 mm long including stylopodium and ascending style).

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