

Vascular Plants of Williamson County

Nigella sativa – BLACK CUMIN, BLACK CARAWAY [Ranunculaceae]

Nigella sativa L., BLACK CUMIN, BLACK CARAWAY. Annual, taprooted, initially rosetted, 1-stemmed at base, in range unbranched, erect, to 25 cm tall; shoots with ca. 5 basal leaves absent at flowering and several cauline leaves, leaves feathery, finely dissected with needle-shaped ultimate segments, glabrous. **Stems:** 5-angled especially conspicuous upper stem, 1 mm diameter, striped green and rose-red. **Leaves:** helically alternate, pinnately 2–3-pinnately dissected, petiolate (lower leaves) and sessile (upper leaves), without stipules, in range to 60 mm long; petiole in range to 25 mm long, triangular at base ca. 2 mm wide at base (halfway around node), with 3 principal veins, aging papery, above triangular U-shaped in \times -section; blade of lower leaves to 30 mm long, primary lobes alternate, subopposite, and opposite along cylindrical leaf axis, mostly spreading, the longest primary lobes sometimes with secondary sublobes, ultimate segments slender and long-tapered to tip, 3–13 mm long, green, 1-veined and minutely scabrous along margins and slightly raised midvein on lower surface. **Inflorescence:** solitary flower terminal on principal shoot, nested by an involucre of feathery, sessile, leaflike bracts, glabrous; pedicel stemlike, to 10 mm long, strongly ridged with 1 ridge descending from each bract; **involucre** of 5–6 bracts appearing whorled (helically alternate) in 1–2 series, to 25 mm long, 2–3 pinnately dissected, curved upward with fine segments framing flower and persistent in fruit, principal axis compressed top-to-bottom, primary lobes often paired along axis (not the lowest lobes), the longest primary lobes with cylindrical, zigzagged secondary axis, the intermediate and terminal primary lobes often 2-forked, the ultimate units 1-veined and minutely scabrous along margins and slightly raised midvein on lower surface. **Flower:** bisexual, radial, in range ca. 22–26 mm across, horizontal at flowering; **sepals** in range 5 (double forms not observed), helically alternate (pseudowhorled), widely spreading, clawed and petal-like, in range 10–12 \times 7 mm, light blue, 3-veined at base, claw ca. 2 mm long and the narrowest at the base, limb ovate with slender point at tip, upper surface and margins minutely papillate, lower surface much paler and smooth; **petals** in range \pm 8, helically alternate in 2 close series (pseudowhorled), clawed sharply bent at limb, ca. 3.5 mm long (straightened), overall appearing like a minute 2-lipped corolla (e.g., *Antirrhinum*) mostly deep purple, the claw widely spreading, cylindrical, ca. 1.5 mm long, white only at base; corollalike portion ascending to suberect; outward-facing (upper) lip ca. 1.5 \times 1.2 mm, tapered at base and having a sunken ceiling and unequally 3-toothed at \pm truncate tip, papillate-hairy around ceiling and on margins of tube; upper (inward-oriented) lip bilateral having a deep sinus with 2 elaborate lobes, each principal lobe obovate (earlike) slightly twisted toward the other lobe, ca. 1.3 mm long and scattered conspicuous hairs ca. 1 mm long facing toward the filaments, **nectaries** 2, at the base of each lobe, each nectary bulletlike, to 0.35 mm long, blackish and with several conspicuous hairs facing toward the filaments; **stamens** 20+, helically alternate in 2–several close series, mostly densely clustered around ovary, lacking staminodes; filaments slender-cylindrical, in range 6–7 mm long, purple to purplish and white at base only; anthers basifixed, dithecal, erect, \pm 1.5 mm long, green or with purplish tissue, longitudinally dehiscent; pollen nearly colorless; **pistil** 1; ovary superior, vase-shaped in range 3-lobed (to 5–6-lobed) above midpoint, 4 mm long, green, lobes acute and tapered to separate styles, green, 3-chambered (1 chamber per lobe), each chamber with several ovules; styles long-tapered to tip, exserted

above level of anthers, at anthesis 7–8 mm long increasing to 10 mm long in fruit, green, curved and often somewhat twisted, having a narrow stigmatic line along its length. **Fruit:** capsule (not observed), dehiscent on center-facing edges of lobes (folliclelike), 25+-seeded. **Seed:**

A. C. Gibson