

**Vascular Plants of Williamson County**  
*Aquilegia canadensis* – COLUMBINE [Ranunculaceae]

*Aquilegia canadensis* L., COLUMBINE. Perennial herb, rhizomatous and caudexlike, fibrous-rooted, several-stemmed at base, with ascending to spreading branches each with a lateral branch from successive nodes, in range to 55 cm tall; shoots with basal leaves and cauline leaves, leaves on long petioles conspicuously 3-parted, blades thin and easily wilted; rhizome  $\pm$  vertical with encircling leaf scars, to 7 mm diameter; adventitious roots only from rhizome. **Stems:** cylindric, to 3 mm diameter, often reddish, pilose. **Leaves:** helically alternate, 2-pinnately 3-foliolate and long-petiolate (basal leaves) and 1-pinnately 3-foliolate and short-petiolate to subsessile (cauline leaves), with stipulelike structures on petiole; petiole of basal leaves ascending, cylindric, mostly  $< 150$  mm long, purplish red to green and somewhat glaucous, at base with a pair of stipulelike wings  $3-5 \times 0.6-1$  mm, at top (2-)3-forked, primary petiolules (axes) of lateral leaflets arising from upper side and elevated, on most leaves central axis 25–50 mm long and subequal lateral axes  $<$  central axis, at top 3-forked, secondary petiolules (axes) of lateral leaflets arising from upper side and elevated, central axis to 10 mm long and  $>$  lateral axes, axes pilose with radiating fine hairs; blades of leaflets  $\pm$  fan-shaped typically asymmetric,  $20-35 \times < 20-40$  mm, principal lobes thin and easily wilted, fan-shaped with sinuses at or deeper than midblade, broadly tapered at base, entire on 2 sides, outer margin with sublobes and teeth (coarsely crenate) with ultimate teeth obovate rounded to inconspicuously notched (obtuse),  $\pm$  palmately veined at base and pinnately veined above with veins somewhat raised on lower surface, dull with scattered short-pilose hairs mostly on paler lower surface, minor veins converging at sinuses and tips of teeth; petiole of cauline leaves often only long enough as stipularlike wings, channeled; blade of cauline leaves smaller than of basal leaves, often glabrous, of the uppermost cauline leaves lacking petiolules. **Inflorescence:** cyme, terminal and axillary, open, of 1–10 flowers, flowers nodding to pendent on hooked pedicels having anthers exerted and downward-pointing below perianth, flower spurred, bracteate; bract subtending peduncle sessile and leaflike, = reduced, 3-lobed cauline leaf, sometime leaflets entire or with a small lateral tooth or asymmetrically 2-lobed, ovate in outline,  $< 20 \times 10$  mm, terminal leaflet  $>$  lateral leaflets; bractlet subtending pedicel narrowly ovate,  $7-8 \times 3$  mm, often entire, acute at tip,  $\pm$  3-veined having bridges and with midvein slightly raised on back, glaucous, upper surface glabrous, lower surface short-pilose; pedicel slender, at anthesis nodding to 35 mm long increasing 2 $\times$  and erect in fruit, short-pilose, sometimes with 1–2 unlobed, ovate bracts  $< 4$  mm long. **Flower:** bisexual, radial, in range 13–14 mm across, conspicuously 5-spurred, not fragrant; receptacle elongate aging barrel-shaped, bearing 60+ flower parts; **sepals** 5, in bud appressed to corolla later spreading, ovate, in range  $14-17 \times 5$  mm, lower portion petiolelike and channeled, to 3 mm long, blade rose-red often green approaching tip, abscising after pollination; **petals** 5, each tubular with outer lobe and having nectar-producing spur projecting backward (upward) between adjacent sepals, 20–27 mm long, spur  $\pm$  straight, rose-red with yellowish bulbous tip (1-ridged), often with some short-pilose hairs; tube narrowly funnel-shaped 5–6 mm diameter at orifice, rose-red but light yellow at orifice, outer lobe tongue-shaped gently cupped,  $5-6.5 \times 5.5-6.5$  mm, light yellow, on other side notched and short-infolded at orifice above a gland; **stamens** 40+ helically alternate fertile

stamens (concealing styles), staminodes 10 in 2 series next to pistils; filaments erect, unequal, straight, the outermost 8 mm long increasing to the innermost filaments 16 mm long, white at base with exerted portion pale yellow and light yellow; anthers basifixed, dithecal, 1.4–1.5 mm long, longitudinally dehiscent; pollen bright yellow; staminodes membranous aging scarious,  $6 \times 1$  mm, 1-veined and folded outward, persistent around developing fruits but eventually shed; **pistils** 5; ovaries superior,  $\pm$  cylindric tapered to long style (plump peapodlike), styles subequal, in range 10–11.5 mm long, green, gradually tapered to stigmatic tip, persistent but often broken. **Fruits:** follicles, 5, sessile, erect, parallel and touching in tight ring atop barrel-shaped torus, each follicle dehiscent on inner side and generally also outer side and several-seeded, body  $\pm$  cylindric, tapered at top, in range body  $14\text{--}19 \times 1.5\text{--}2$  mm, light brown to brown, reinforced with transverse veins forming prominent thickenings on surface, from body tip having a terminal, persistent style (beak) curved irregularly and often broken, in fruit mostly  $< 7$  mm long. **Seed:**  $\pm$  broadly fusiform,  $1.2\text{--}1.4 \times 0.5\text{--}0.7$  mm, glossy black, mostly rounded with well-defined edge on 1 side.

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