

Vascular Plants of Williamson County

Corydalis micrantha subsp. *australis* – SOUTHERN CORYDALIS, SMALLFLOWER FUMEWORT

Corydalis micrantha (Engelm.) A. Gray subsp. *australis* (Chapm.) G. B. Ownbey, SOUTHERN CORYDALIS, SMALLFLOWER FUMEWORT. Annual, taprooted, several-stemmed at base, with decumbent principal shoots each forming a terminal inflorescence, in fruit to 20 cm tall; shoots with dissected basal leaves and cauline leaves, essentially glabrous, sometimes slightly glaucous; latex colorless. **Stems:** angled, to 3 mm diameter, light bluish green often with reddish specks (individual cells) and slightly glaucous; solid. **Leaves:** helically alternate, 2–4(–5)-pinnately compound and dissected with alternate primary and secondary lobes commonly starting above midleaf and blade portion with alternate to subopposite leafy sublobes, basal leaves to 100 mm long, petiolate, without stipules; petiole and petiolules slender and grooved, major blade lobes \pm obovate or mittenlike, principal lobes to 15×8 mm, with sublobes and several teeth, ultimate lobes and teeth obovate to oblong or ovate, broadly acute with minute point at tip, midvein of each lobe or sublobe ending in lobe tips, light yellow-green and dull, lower surface sometime glaucous or with inconspicuous minute hairs along midvein. **Inflorescence:** raceme, terminal, ascending or suberect to spreading, often elevated above foliage, in range to 23-flowered, of horizontally oriented chasmogamous or ascending to erect cleistogamous flowers or both, bracteate, glabrous, axes and bractlets somewhat glaucous; rachis with ridges descending from bractlets; axis stemlike, conspicuously 5-angled; bractlets subtending pedicel only sessile and \pm persistent, acute-oblongate or obovate to narrowly ovate, in range $5\text{--}9.5 \times 1.5\text{--}2.3$ mm, pedicel $<$ bractlet, light green or slightly glaucous with pigmented tip and reddish, slightly raised midvein on lower surface, palmately veined from base, subentire to papillate or inconspicuously jagged on colorless narrow margins; pedicel cylindrical, 2–3 mm long increasing 2 \times in fruit, light green often glaucous, glabrous base-to-top. **Chasmogamous flower:** bisexual, bilateral, ca. 4 mm across (= spreading upper petal) and \pm horizontal (slightly curved upward) mostly 11–15 mm long, attached off-center on lower side of flower, spurred, having a keel with a yellow crest on each outer petal, the spur backward-oriented toward axis, flower orifice facing outward; **sepals** 2, opposite, appressed to lower side of flower, broadly ovate and clasping to ovate with acuminate tip, in range $< 1\text{--}1.5$ mm long, opaque without purplish midstripe, minutely dentate with several teeth on margins on margins, persistent at top of pedicel; **petals** 4, opposite decussate, heteromorphic, of light yellow outer petals (= upper and lower petals) and 2 paler, lateral inner petals, lower outer petal free to base, upper outer petal with backward-pointing saclike spur with 2 inner petals fused to its limb, pair of inner petals fused and arching upward approaching tip; upper outer petal in range = length of flower including spur, the spur $3\text{--}6 \times 3\text{--}3.5$ mm and often somewhat compressed side-to-side, the outward-oriented limb $9\text{--}11 \times 3\text{--}4$ mm, somewhat pouched with terminal portion arching upward, keel (fold) low with perpendicular, semicircular crest on arching portion ca. $3 \times 0.5\text{--}1$ mm, the crest sometimes with teeth, venation inconspicuous and lacking dark pigmentation (not reddish); **nectary gland** projecting into spur, snakehead-shaped, ca. 2 mm long, light yellow-green, producing nectar from lobed top; lower outer petal \pm straight or often low-sigmoid in outline somewhat descending at tip, to 12 mm long with lower petal $<$ upper petal, light yellow, folded and keeled with crest, axis mostly inrolled, upper portion cupped; inner petals equal, clawed, 7–10.5 mm long, pale light yellow, the claws

3–4 mm long, straplike, with green veins or overall greenish yellow, the upper portions touching and notched at top with short tips fused, limb inflated and somewhat spoon-shaped (spatulate) forming pouch, 6–7 × 2 mm, pale orangish yellow to pale yellow at tip, unevenly lobed at base (auriculate) with larger basal lobe on upper side of flower, keeled (folded) with crest approaching tip, with touching edges winglike ca. 0.5 mm wide and whitish; **stamens** 6 in 2 sets of 3, opposite outer petals and hidden within inner petals; each set of stamens fused nearly to tip into a lanceolate sheet (flattened), 6.5–7 × 1–1.2 mm, mostly colorless with 3 faint green veins, short 3-lobed at top having slender flat filaments to 0.5 mm long; anthers positioned just beneath stigma, basifixed, dithecal, 0.3–0.4 mm long, yellowish to whitish, longitudinally dehiscent early in bud; pollen copious, whitish to yellowish; **pistil** 1, at anthesis linear and slender tapered to tip, ca. 7–9 mm long and 1 mm < inner petals; ovary superior, ± tapered cylindrical, 5–6 × 0.4 mm, light green to light yellow-green and not glaucous, glabrous, 1-chambered (2 carpels) with to 20 ovules along 2 placentae projecting from outer wall appearing in 1 or 2 rows; style narrowly conic, to 3 mm long, greenish at base and tip mostly colorless; stigma to 0.8 mm across, 2-lobed, light green or paler, flattened side-to-side, often with 4 projections. **Cleistogamous flower:** bisexual, bilateral, ca. 1.5 mm across and ± vertical, 8–< 11 mm long, attached close to base of flower on lower side, short-spurred, having a keel with a yellow crest on each outer petal, the spur backward-oriented toward axis; **sepals** 2, opposite, appressed to lower side of flower, broadly ovate and clasping to ovate with acuminate tip, in range < 1 mm long, opaque without purplish midstripe, minutely dentate with several teeth on margins on margins, persistent at top of pedicel; **petals** 4, opposite decussate, heteromorphic, of light yellow outer petals (= upper and lower petals) and 2 paler, lateral inner petals, lower outer petal free to base, upper outer petal with backward-pointing saclike spur with 2 inner petals fused to its limb, pair of inner petals fused and arching upward approaching tip; upper outer petal in range = length of flower including spur, the spur to 2 mm long, the outward-oriented limb 6–8 × 2 mm, straight, ± keeled with perpendicular, semicircular crest on arching portion < 2 × < 1 mm, venation inconspicuous and lacking dark pigmentation (not reddish); **nectary gland** projecting into spur vestigial, nectar not observed, greenish; lower outer petal ± straight, lower petal < upper petal, light yellow, folded and keeled with crest, axis mostly inrolled; inner petals equal, clawed, ca. 6 mm long, the claws flat and slender, ca. 2 mm long, light yellowish green, the upper portions spoon-shaped (spatulate) with upper margins fused, ca. 4 × 2 mm, pale yellow-green, unevenly lobed at base (auriculate) with 1 lobe ca. 0.3 mm long on upper (inner) side of flower, keeled (folded) with crest approaching tip, with touching edges winglike and whitish; **stamens** 6 in 2 sets of 3, opposite outer petals and hidden within inner petals; each set of stamens fused nearly to tip into a lanceolate sheet (flattened), ca. 3 mm long, colorless with 3 colorless to greenish veins, short 3-lobed at top having slender flat filaments 0.25–0.3 mm long; anthers positioned just beneath stigma, basifixed, monotheical to dithecal, 0.3 mm long, yellowish, longitudinally dehiscent early in bud; pollen copious, whitish; **pistil** 1, at anthesis linear and slender tapered to tip, ca. 5 mm long and 1 mm < inner petals; ovary superior, ± tapered cylindrical, light green and not glaucous, glabrous, 1-chambered (2 carpels) with ca. 10 ovules along 2 placentae projecting from outer wall appearing in 1 row; style narrowly conic, mostly colorless; stigma to 0.8 mm across, 2-lobed, light green or paler, flattened side-to-side, often with 4 projections. **Fruit:** capsule, dehiscent from tip by 2 valves splitting from persistent placentae (replum), ascending to suberect, ca. 10–20-seeded,

linear and straight to gently curving upward and somewhat bulging at seeds (not angled), 12–21 × 1.6–1.7 mm + beak (persistent style), light brown to tan-brown, with rib on 1 side having groove for dehiscence, beak acuminate-conic and ca. 3 mm long, with persistent stigma; pedicel ascending, to 7 mm long in fruit, scarcely glaucous. **Seed:** plump-biconvex, ca. 1.3–1.5 × 1.2 × 0.7 mm, glossy black, minutely patterned (cell outlines), hilum off-center (eccentric); aril (elaiosome) attached at hilum, wavy and wiglike (tentlike) folded over edge, to 1 × 1 mm, colorless, with conspicuous, lengthwise wrinkles.

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