

## Vascular Plants of Milam County

*Delphinium carolinianum* subsp. *carolinianum* – CAROLINA LARKSPUR, WILD BLUE LARKSPUR [Ranunculaceae]

*Delphinium carolinianum* Walter subsp. *carolinianum*, CAROLINA LARKSPUR, WILD BLUE LARKSPUR. Perennial herb, root vertical, 1-stemmed at base, rosetted, erect, in range 45–90 cm tall; shoots with basal leaves absent at flowering and widely spaced, ascending cauline leaves present at flowering, with arching short hairs, radiating, short, ampulelike hairs with yellowish contents, and minute glandular hairs; root with several thickened tips. **Stem:** cylindric, aboveground to 6 mm diameter, green often red or blushed red, internodes to 120 mm long, slightly zigzagged, short hairs arching downward and sparse radiating ampulelike hairs. **Leaves:** helically alternate, deeply palmately dissected with 3 principal lobes, long-petiolate, without stipules; petiole ascending, hemi-cylindric, to 125 mm long, green with red edges and at base, >> blade decreasing upward to  $\geq$  blade, the largest ca. 50–100 mm, 3-divided at base and again 3-divided at midblade, principal segments  $\pm$  linear to 6 mm wide, primary and secondary segments with shorter sublobes, blade decreasing upward to the uppermost cauline leaf to 30 mm long with 3 narrower, linear segments often entire without other lobes or teeth, segments often cupped upward, palmately veined, pubescent. **Inflorescence:** raceme, terminal, many-flowered, the longest with < 15 flowers, flowers helically alternate, bracteate; rachis to 1/2 plant, cylindric, dark green, with arching short hairs, minute sessile glandular hairs, and radiating ampulelike hairs to 0.3 mm long; bractlet subtending pedicel appressed to pedicels, strap-shaped notched at tip, ca. 4  $\times$  1 mm, green and purple, with arching short hairs but lacking ampulelike hairs, persistent; pedicel lower segment erect, ca. 11  $\times$  0.7 mm, with 2 opposite bracteoles near top, axis sharply curved below bracteoles, with arching short hairs and ampulelike hairs, the bracteoles awl-shaped,  $\pm$  3  $\times$  0.7 mm, arising 90° from bractlet, acute at tip, persistent, glossy and glabrous on flat side (lacking ampulelike hairs). **Flower:** bisexual, bilateral, ca. 32 mm across, somewhat nodding with elevated, backward-pointing curved spur (sepals) on upper side; receptacle flared, green, with short hairs and ampulelike hairs; **sepals** 5, helically alternate with overlapping bases, dimorphic, 1 sepal specialized as spur; 4 sepals widely spreading and obtuse-obovate or rounded at tip, 15–17  $\times$  7–9 mm, blue, several-veined from fleshy, glossy green base, mildly scalloped above midpoint or pinched approaching tip, upper surface textured with domed cells and veins slightly raised, below tip with a greenish, circular gland raised on lower surface and sunken on upper surface, lower surface with evenly distributed, upward-arching short hairs; upper sepal outside and overlapping lateral sepals, blade 3/4 sheathing, ca. 15  $\times$  8–9 mm with spur projecting backward and spreading somewhat upward, spur in bud curved somewhat upward becoming gently curved at anthesis, spur to 18  $\times$  3.5 mm at base, blue-violet (spur blue-green on lower side (petal tissue), tissue delicate and conspicuously wrinkled and short-hairy arching toward center of flower, covering spurs of petals except on lower side and loosely fitting at tip; **petals** 4, upper 2 petals spurred and nested within sepal spur; spur petals sluglike (side view), pair = mirror images, upper portion with rounded lobe attached to receptacle and suberect, 2-lobed flange 2.5 mm long and violet-blue, cupped axis half-funnel-shaped white, spur portion slightly < sepal spur, purplish spur with green (purple on upper side), obtuse-fingerlike tip 5 mm long nectar-producing (**nectaries**), internal nectary tissue green and puberulent; lower 2 petals clawed and strongly bent at midpoint, 12–13

mm long (straightened), the claw cupped,  $\pm$  6 mm long, pale violet but green at base, pubescent, the limb obovate in outline deeply 2-lobed,  $6-7 \times 5.5$  mm, blue-violet, lower surface with radiating veins, ciliate above midpoint and long hairs in center of surfaces; **stamens** 30–35, helically alternate in several series on expanded receptacle (torus), free; filaments en masse columnlike ca. 3 mm long and upper portion spreading to twisted 3–4.5 mm, lower filament 1 mm wide blushed light violet and 1-veined, upper filament more slender and wide; anthers basifixed, dithecal, 1–1.2 mm long, brown, having several straight short hairs on anther margins mostly above midpoint, longitudinally dehiscent; pollen white; **pistils** 3, whorled, 6–6.5 mm long; ovaries narrowly ovoid and somewhat 3-sided, ca.  $4.5 \times 1.5$  mm long, pale green, mostly concealed by filaments, rounded on back, densely short-hairy, 1-chambered each with 20–25 ovules; styles 1 per pistil, erect, ca. 2.5 mm long, pale violet white at stigma. **Fruits:** follicles, 3, initially in set parallel, ascending and only touching to midpoint, each follicle dehiscent at top to base on inner side, 15–25-seeded, plump peapodlike,  $15-18 \times 3-4 \times 3$  mm + beak to 2.5 mm long (persistent style) minutely 2-lobed, light green drying light brown, not veiny, with arching short hairs; pedicel in fruit ascending, to 12 mm long, green and purplish, short-hairy including ampulelike hairs, receptacle swollen at top of pedicel. **Seed:** ovoid to pine cone-shaped, ca.  $1.5 \times 1$  mm, brown with colorless, wavy horizontal ridges 1 cell wide and high.

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