

## Vascular Plants of Williamson County

*Desmanthus velutinus* – VELVET BUNDLEFLOWER [Fabaceae]

*Desmanthus velutinus* Scheele, VELVET BUNDLEFLOWER. Perennial herb, with woody central root, not rosetted, several–many-stemmed at base, low-spreading (not procumbent), in range to 30 cm tall; shoots with only highly divided cauline leaves, axes short-hairy and somewhat velveteen (short-velutinous), mostly lacking glandular hairs. **Stems:** 8-ridged, on new growth to 2 mm diameter, with 3 ridges descending from each leaf, short-hairy, having minute green or crimson food bodies in furrows. **Leaves:** helically alternate, even-2-pinnately compound with 4–6(–7) pairs of widely spreading primary leaflets (pinnae), primary leaflet with 10–17 pairs of secondary leaflets, petiolate with pulvinus, with stipules; stipules 2, attached to petiole at base of pulvinus, 2-lobed with slender linear lobe 2–3 mm long next to petiole and a short, triangular lobe to the outside, crimson, short-hairy; petiole pulvinus 2 mm long, short-hairy, petiole above pulvinus channeled, to 11 mm long, several ridged on lower side, at top with a cauldronlike gland to spheroid (extrafloral nectary) between the lowest pair of primary leaflets (second pair), fully developed gland 0.3–0.35 mm long and wide and < axis, crimson, puberulent; rachis channeled and angled, 9–26 mm long + extension beyond last pair of primary leaflets, primary leaflets spaced to 7 mm apart, short-hairy; stipels on rachis not obvious, minute food bodies often present; petiolules of primary leaflets = pulvinus, elevated, 1.3 mm long, often red, short-hairy; rachilla of primary leaflets 3-sided, 9–28 mm long + extension, lower side rounded and short-hairy, upper sides flat with secondary leaflets attached and glabrous, and lacking stipels, leaflets along side ca. 1 mm apart; petiolule of secondary leaflet = pulvinus, 0.2 mm long, green or red; blades of secondary leaflets oblong (elliptic = small lowest pair at top of pulvinus), 1.2–4.4 × 0.35–1 mm, the lowest pair 1/2 other leaflets, asymmetric at base with larger side from petiolule truncate, entire sometimes red on trailing margin, acute at tip, with 1 vein visible and closer to leading edge, somewhat glaucous, glabrous to sparsely short-hairy. **Inflorescence:** headlike spike, axillary, ca. 15 mm diameter, 6–24-flowered, flowers helically alternate, all fertile or to 7 lower flowers sterile (lacking pistil and anthers), bracteate, short-hairy; peduncle fine-ridged, to 20 mm long increasing 2× in fruit, puberulent; rachis with closely spaced flowers sunken in shallow pits, having white and red short hairs between flowers but lacking glandular hairs; bractlet subtending flower stalked spade-shaped to 3-lobed above midpoint, 0.6–1.4 mm long, white or upper portion with some red and short-hairy on back. **Sterile flower:** radial, 3 mm across (stamens); **calyx** 5-lobed, 1 mm long; tube funnel-shaped, mostly colorless with 5 faint, green veins; lobes triangular to deltate, 0.4–0.5 mm long, red on lobes in bud, sparsely puberulent on outer (lower) surface; **petals** 5, oblanceolate, 2 × 0.4–0.7 mm, mostly colorless having faint green vein and green above midpoint; **stamens** 10, free, lacking anthers; filaments exerted, ca. 9 mm long, white but green at base; **pistil** absent. **Fertile flower:** bisexual, radial, ca. 3 mm across; **calyx** 5-lobed, 2.5 × 1.5 mm; tube bell-shaped, mostly colorless with 5 green ribs; lobes deltate, 0.5 mm long, mostly colorless with red on outer margin, having some short hairs on outer (lower) surface; **petals** 5, oblanceolate, 3.7–4 × 0.65–0.75 mm, colorless to midpoint with faint green vein and green above midpoint, in bud having red on outer margin; **stamens** 10, free, exerted; filaments 6 mm long but never straight, white; anthers dorsifixed, dithecal, 0.7–0.8 mm long, pale yellow, longitudinally dehiscent;

pollen whitish; **pistil** 1, short-stalked (stipe), stalk 0.3–0.35 mm long; ovary superior, ± cylindric, ca.  $3 \times 0.5$  mm, light green, glabrous, 1-chambered with 10+ ovules attached to upper side; style ascending, exerted 1+ mm above anthers, cylindric, 4.5 mm long, white, with a terminal, depressed stigma. **Fruit:** pod (legume), indehiscent, several–15-seeded,  $< 50\text{--}79 \times 3$  mm, green aging red, glabrous. **Seed:** somewhat ovoid to parallelogram-like, ca.  $3 \times 1.7\text{--}1.9 \times 1.4\text{--}1.5$  mm, dark brown, with darker, U-shaped mark midpoint on both broad faces.

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