

Vascular Plants of Williamson County

Tephrosia virginiana – GOAT'S RUE, CATGUT, DEVIL'S SHOESTRING, HOARY PEA [Fabaceae]

Tephrosia virginiana (L.) Pers., GOAT'S RUE, CATGUT, DEVIL'S SHOESTRING, HOARY PEA. Perennial herb, with thick, knobby caudex and long woody roots, not rosetted, many-stemmed at base, principal stems erect in canopy with ascending axillary shoot at each node, in range to 75 cm tall; shoots with only cauline leaves. velveteen, soft-villous and long-villous. **Stems:** ridged, to 3 mm diameter, with 3 ridges descending from each leaf, tough, axis sinusoidal (not straight), internodes 10–50 mm long on primary shoots but first internode on axillary branches more slender and to 70 mm long, ridges concealed by hairs, periderm on lower stems. **Leaves:** helically alternate, odd-1-pinnately compound with 12–24 lateral leaflets in pairs or not, oblong in outline, petiolate with pulvinus, with stipules; stipules 2, attached to leaf base below pulvinus, acuminate-linear, 4–8(–11) mm long, lower surface densely villous, early-deciduous; petiole = pulvinus, ca. 2 mm long; rachis ridged, to 80 mm long, green to purplish red; stipels absent; petiolules arising from ridges on rachis, ca. 1 mm long, yellowish, hairy; blades of leaflets obovate to elliptic, 7–23 × 4–10 mm, the terminal leaflet smaller or vestigial, tapered at base, entire, obtuse with fine point at tip, pinnately veined with midrib raised on lower surface, short-villous but also with longer hairs and more dense on lower surface. **Inflorescence:** raceme, terminal, erect, 12–30+-flowered, flowers helically alternate, flowers lax in bud, bracteate, soft-hairy; peduncle with projecting persistent bractlet bases, to 100 mm long; bractlet subtending pedicel stipulelike, 8–10 mm long, densely villous, in fruit internodes 3–10 mm long; pedicel curved later straight, at anthesis to 7 mm long. **Flower:** bisexual, bilateral, pealike (papilionaceous); **nectary** on receptacle around stalk of pistil; **calyx** 2-lipped, 5-lobed, 8–8.5 mm long, green with purplish tips, with mixed short and long hairs; tube bell-shaped, ca. 3 × 3.5 mm; upper lip 3.5 mm long, 2-lobed at midpoint, lobes acuminate, 2 mm long; lower lip 3-lobed, lobes 3.5–6 mm long, the lower lobe the longest, with some short hairs on inner surface; **petals** 5, clawed; banner claw broad, ca. 2 × 1.5 mm, pale yellow, glabrous, limb ± rounded, 17–18 mm, folded along midline, light to pale yellow with nectar lines on upper surface, back (lower surface) short-villous with upward-pointing hairs, inner (upper) surface glabrous; wings 2, not fused, claw ± slender, 2 mm long, whitish, limbs obovate, ca. 15 × 7 mm, < banner, with short, rounded, backward-pointing lobe at base, pink with fine veins to light pink-purple near basal lobe; keel of 2 petal fused most of lower edge to tip, claw linear, 2 mm long, white, limbs hatchet-shaped, ca. 10 × 7 mm, < wings, whitish and pale pink, with triangular lobe at base ± adherent to wings not not locked, glabrous; **stamens** 10, diadelphous (9 filaments fused and 1 free); filament sheet 11.5–12 mm long, white, with well-defined elbow 2–2.5 mm from base, filaments free portion unequal, alternating short and longer, 3.5–4.5 mm long; anthers dorsifixed, dithecal, ± 0.8 mm long, orangish, longitudinally dehiscent; pollen pale orange; **pistil** 1, stalked (stipe), the stalk < 0.5 mm long, glabrous; ovary superior, linear-oblong flattened on sides, 10 × 0.8 mm, sericeous with long white hairs concealing sides, 1-chambered with 7–9 ovules attached to upper side; style cylindrical, 8–11 mm long, green, sharply upturned 7 mm and having silky hairs on 1 side, with minute terminal stigma. **Fruit:** pod (legume), 2-valved, dehiscent by twisting valves, (6–)7–9(–11)-seeded, straight narrowly oblong and strongly flattened, 30–62 × 3–6.5 mm, slightly bulging at seeds, young pods velveteen

with short and some long villous hairs, at maturity densely soft-hairy. **Seed:** oblong \pm kidney-shaped compressed side-to-side, 3–4.5 mm long, \pm glossy, green-brown to brown mottled with black, smooth, with central hilum.

A. C. Gibson