

Vascular Plants of Williamson County
Polygala alba – WHITE MILKWORT [Polygalaceae]

Polygala alba Nutt., WHITE MILKWORT. Perennial herb, from vertical caudex, many-stemmed at base, principal branches initially lacking lateral branches and ascending with terminal inflorescence, to 35 cm tall; shoots with only cauline leaves, glabrous. **Stems:** conspicuously ridged, to 2.5 mm diameter, tough, green, internodes < 10 mm long. **Leaves:** helically alternate, simple, subsessile, without stipules; petiole to 1 mm long; blade ascending, linear to oblanceolate-linear (obovate), (3–)10–30(–43) × 0.6–1.6(–4.5) mm, entire and sometimes slightly inrolled to under side, acute at tip, 1-veined with midrib slightly sunken on upper surface and raised on lower surface. **Inflorescence:** raceme, terminal, 100+-flowered (fully developed), flowering portion cylindric and ca. 5 mm diameter, flowers overlapping and helically alternate, at anthesis lacking internodes, bracteate, glabrous; peduncle ca. 8-ridged, ± 1.3 mm diameter, ridges descending from bractlets, flexible, green, glabrous, the lowest internode in fruit ± 3 mm long decreasing upward; bractlet subtending pedicel initially appressed to and concealing flower bud, awl-shaped, ca. 1 × 0.6 mm, thickened at base, with raised purplish center and pale pink wide margins, abscising at anthesis, having 2 more delicate lateral bracteoles, narrowly ovate, ± 0.5 mm long, abscised somewhat after bractlet; pedicel ascending, at anthesis ± 0.5 mm long increasing 2× in fruit, white, conspicuously wrinkled. **Flower:** bisexual, bilateral, 2.5–6 mm across (the widest when wings spreading); **sepals** 5, dimorphic; upper sepal cupped-broadly ovate, ca. 1.8 × 1.5 mm, white with green base, having yellowish green wart on inner surface at base = **nectary** from receptacle; lateral sepals 2, petal-like, scooplike and spatulate to obovate, ca. 3 × 1.7–2.2 mm, white (sometimes with tinge of purple), wavy on margins, rounded at tip, somewhat crinkled, with yellow-green nectary tissue on inner surface at base; lower sepals 2, appressed and overlapping, acute-ovate, 0.8–1 × 0.7 mm, center green or mottled purple and margins white (pale lavender), with minute glands on green tissues, margins ± 0.25 mm wide; **petals** 5 (appearing 3), dimorphic, appearing free but fused to staminal column; upper petals not distinct, fused to lower staminal columnar; lateral petals 2 (wings) fused to staminal column, overlapping on upper side, obovate, 2.6–2.7 mm long, white; lower petal fused on outer surface of staminal column, petal + staminal column ca. 2 mm long, with 5–6 white, fingerlike members of fringe at top incurved and arching over anthers, below fringe green; petal tissues often aging purple or purplish; **stamens** 6–7(–8), fused at base to form a column (column fused with petals), included; staminal column enveloping ovary and lower style, opened along upper side and constricted at tip; free filaments flat, short–0.3 mm long, greenish; anthers mostly positioned below level of the stigma, basifixed, appearing monotheical, ca. 0.3 mm long, light orange, dehiscent at tip by a 2-lipped opening with 1 lip larger than other lip; pollen light orange, sticky; **pistil** 1, < 1.5 mm long, short-stalked; ovary superior, roundish compressed top-to-bottom (oblate), ± 1 mm, green but contents visible through wall, somewhat 2-lobed on faces, 2-chambered, each chamber with 1 pendent ovule; style fan-shaped with flat faces and cupped forward 3-lobed at top, pale green, central lobe with spheric, papillate stigma arching downward, stigma ca. 0.3 mm across, white. **Fruit:** capsule, loculicidal, 2-valved, with 1–2 arillate seeds, ovoid compressed parallel to septum, ca. 3 × 1.5–1.8 mm, appearing shallowly 4-lobed at top

with the deeper crease \perp septum. **Seed:** ovoid, ca. 2.5×1 mm, deep purple aging black, rounded side covered with colorless, stiff, straight, reclined hairs 0.25–0.35 mm long; aril attached at pointed end of seed, saddlebaglike, rounded-oblong to mid-seed, $1-1.2 \times 0.5$ mm, fleshy, white.

A. C. Gibson