

Astragalus L. MILKVETCH

Astragalus didymocarpus Hooker & Arnott var. *didymocarpus*, TWO-SEEDED MILKVETCH.

Annual, taprooted, 1–several-stemmed at base, with ascending branches along main axis, erect or ascending to decumbent, in range 5–35 cm tall; shoots with ascending leaves, strigose and short-strigose. **Stems:** ridged aging cylindric, to 2 mm diameter, with ridge descending from each leaf, green becoming reddish at base and on exposed sides, sparsely white-strigose; pith hollow. **Leaves:** helically alternate, odd-1-pinnately compound with 5–8 opposite to subopposite pairs of lateral leaflets, petiolate, with stipules; stipules 2, attached to petiole base and stem at node, typically not fused, deltate to acuminate-triangular, 1.5–3 mm long, mostly white-membranous but green along midrib, entire and ciliate on margins with white hairs or sometimes with dark reddish to blackish hairs; petiole with pulvinus and channeled above, 3–23 mm long, pale green, strigose; rachis channeled, 20–40 mm long, strigose with only white hairs or white hairs above and mostly dark reddish hairs beneath; petiolules 0.2 mm long, light green, with hairs like rachis; blades of leaflets elliptic to lanceolate or oblanceolate, in range 4–9 × 1.2–2.7 mm, decreasing slightly toward tip, flat or loosely folded up from midrib, broadly tapered at base, entire, truncate to notched at tip, with only midrib conspicuous and raised on lower surface, upper surface glabrous even when young, lower surface with ± ascending white hairs and strigose along midrib. **Inflorescence:** spikelike raceme, axillary, in range 5–25-flowered, initially crowded into ovoid to cylindric cluster 5–8 mm diameter with ascending flowers, bracteate, white-strigose also with dark reddish and blackish hairs; peduncle ascending curving upward, 5-ridged, to 35 mm long increasing 2× in fruit, ≥ leaf, tough, with ridge descending from bractlet, strigose with all or most hairs whitish; rachis < 1/3 peduncle, strigose like peduncle; bractlet subtending pedicel triangular to awl-shaped, 0.8–1.5 mm long, light green, ciliate with mostly whitish hairs and sometimes with several strigose hairs along midvein, persistent; pedicel at anthesis erect and 0.3–0.5 mm long ascending and increasing to 0.8 mm long in fruit, typically with appressed white hairs. **Flower:** bisexual, bilateral, pealike (papilionaceous), 1.5–2.5 mm across; **calyx** 5-lobed, in range 3.2–3.5 mm long, light green or light yellowish green, short-pilose with fine, ascending white hairs, internally mixed white-strigose and black-strigose or only black-strigose; tube bell-shaped not noticeably compressed side-to-side, ca. 2.3 × 1.2–1.5 mm, internally glabrous; lobes ± equal, narrow-acuminate, 0.8–1.2 mm long; **petals** 5; banner clawed, arching upward ca 30° and spreading at margins, obovate, in range 5–5.2 × 2.3–2.7 mm claw whitish, limb violet to lavender with darker veins and whitish to light yellowish center, notched at tip; wings 2, claw ca. 2 mm long, white, limb 2 × 1 mm, deep purple to red-violet with white at tip and on upper margin, with backward-pointing lobe at base, with a forward-pointing or downward-pointing conic projection on inside locked to keel petals; keel of 2 petals fused most of length along upper margins from midpoint and on lower margin, claw ca. 2 mm long, white, limb ca. 2.5 × 0.8–1.2 mm, < wings, canoe-shaped to scooplake, deep purple with narrowly whitish upper edge, with backward-pointing lobe and lateral shelf on each outer face with a conic depression for receiving tooth of wings; **stamens** 10, diadelphous (9 fused and 1 free), 3.4–4.5 mm long; filaments fused > 2/3 forming a translucent white sheet, filament free portions 0.8–1.2 mm long, curved upward conforming to curve of keel; anthers versatile, dithecal, oblong, ± 0.25 mm long, orange,

longitudinally dehiscent; pollen orange, copious, sticky; **pistil** 1, 3 mm long, stalked (stipe), stipe ca. 0.3 mm long; ovary superior, oblong, ca. 1×0.5 mm, incipiently short-strigose above midpoint, nearly 2-chambered with a partial septum but 1-chambered with 2 ovules attached to upper side; style curved upward 90° , translucent-white, glabrous; stigma discoid-capitate and slightly oblique, green. **Fruit:** pod (legume), 2-lobed, schizocarpic having 2 indehiscent, 1-seeded segments, ascending, broadly oblong, in range $2.2\text{--}2.8 \times 1.7\text{--}2.4$ mm, grooved forming deep lobes on bottom, with conspicuous, veinlike ridges extending from fruit center to margins, sparsely short-strigose mostly above midpoint but not obscuring ridges; segments D-shaped, light tan, not inflated. **Seed:** oblong, $1.6\text{--}2 \times 1.1\text{--}1.4$ mm, dull grayish brown, blunt with notch between radicle and cotyledon on basal end, rounded at other end, grooved between radicle and cotyledons on flatter side, faintly wrinkled or ridged like fruit on the more convex side. April–mid-May.

Native. Annual occurring occasionally in openings of chaparral growing with other native annuals. *Astragalus didymocarpus* tends to be very localized and not spreading from those small patches, where the plants can be found spring after spring when there is adequate rainfall. Its fruits are 2-lobed, 2-seeded, schizocarpic legumes that are conspicuously ridged and inconspicuously short-strigose, and the halves are light tan.

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