

Astragalus gambelianus E. Sheld., GAMBEL'S MILKVETCH, LITTLE BLUE LOCO. Annual, taprooted, 1-several-stemmed at base, erect, in range 5–16 cm tall; shoots with ascending leaves, strigose. **Stems:** cylindric, < 1 mm diameter, green becoming reddish at base and on exposed sides; hollow. **Leaves:** helically alternate, odd-1-pinnately compound with 4–6 opposite pairs of lateral leaflets, petiolate with pulvinus, with stipules; stipules 2, attached to petiole base and stem at node but typically not fused, narrowly triangular to ovate, 1.5–2.7 × 0.7–1.3 mm, mostly membranous but green along midvein, entire and ciliate on margins with white hairs or sometimes with several black hairs, acute to acuminate at tip; petiole slightly channeled above pulvinus, 4–20 mm long, strigose; rachis channeled, 15–16 mm long, strigose with arching hairs; petiolules 0.3–0.5 mm long, light green, sparsely strigose; blades of leaflets narrowly heart-shaped, 2.8–6.6 × 1–2 mm, flat or folded up from midrib, tapered at base, entire, 2-toothed to shallowly or conspicuously notched at tip, with only midrib slightly raised on lower surface, upper surface with ascending hairs but glabrous along midrib, lower surface strigose. **Inflorescence:** spikelike raceme, axillary, in range 4–10-flowered, flowers helically alternate, initially headlike with ascending flowers, bracteate, white-strigose but also with black hairs; peduncle ascending, 13–43 mm long, mostly white-strigose but often with a few black hairs below flowers; rachis in range at anthesis 1.5–2.5 mm long increasing to 10 mm long in fruit, mostly black-strigose; bractlet subtending pedicel narrowly triangular, 0.7–1.3 × 0.2–0.3 mm, light green with black hairs, persistent; pedicel at anthesis ascending and 0.3–0.5 mm long but descending and increasing to 0.8 mm long in fruit, black-strigose. **Flower:** bisexual, bilateral, pealike (papilionaceous), 1.5–1.8 mm across; **nectary** nectar-producing receptacle beneath ovary, inconspicuous, producing drop of nectar at base of banner; **calyx** 5-lobed, 2.1–2.3 mm long, black-strigose; tube ± bell-shaped but somewhat oblique and compressed side-to-side, 1.3–1.5 × 1.1 mm, internally glabrous; lobes triangular, 0.55–0.75 mm long, black-strigose on both surfaces; **petals** 5; banner without claw, arching upward ca 25° and spreading at margins, obovate, 2.6–3.2 × 1.5–1.8 mm, light or pale purplish to light violet along outer margin grading to whitish at base, with 7–9 veins radiating from base to margin and sometimes becoming purplish to violet near margin; wings 2, clawed, claw 0.8–1.1 mm long, white, limb 2–2.7 × 0.7–0.8 mm, sometimes narrowly purplish or violet on outer margin, with upward or backward-pointing lobe at base; keel of 2 clawed petals fused most of length along margin except for ca. 0.3 mm at base, claws tapered to base, 0.7–1 mm long, white, limbs upcurved 90°+ and scooplike, 2–2.2 × 0.9–1 mm, pale to light purple at anthesis with or without large dark purple spot opposite anthers, with an upward-pointing or backward-pointing lobe on each side above claw; **stamens** 10, diadelphous (9 filaments fused and 1 free), 1.8–2 mm long; filaments fused to above midpoint forming a rectangular sheet 0.7 mm wide, white, margins of filament sheet slightly curving upward around ovary, filament free portion 0.3–0.5 mm long, curved upward conforming to curve of keel; anthers versatile, dithecal, ca. 0.2 mm long, slightly wider, yellow-orange, longitudinally dehiscent; pollen orange-yellow, sticky; **pistil** 1, 1.5–1.7 mm long, short-stalked (stipe), stipe ca. 0.1 mm long; ovary superior, white-sericeous, incompletely 2-chambered with a descending partition and having 2 ovules attached to upper side; style 0.25 mm long, curved upward 90°, light green to light yellowish green, glabrous; stigma capitate, minute, light green. **Fruit:** pod (legume), 2-lobed, schizocarpic breaking lengthwise into 2 indehiscent, 1-seeded

segments, reflexed to pendent, ± heart-shaped compressed top-to-bottom, in range 2.3–3.5 × 2.2–3.3 mm, ridged on top, grooved forming deep lobes on bottom, having veinlike ridges extending from fruit center to margins, conspicuously white-villous somewhat concealing ridges; segments D-shaped, drying dark reddish, not inflated and pinched at opening. **Seed:** compressed-obovoid, 1.8–2.3 × 1.2–1.3 mm, dull light to dark brown with minute purple speckles, having a small notch at hilum, ± smooth. Early March–mid-May.

Native. Annual collected only a few times in range, mostly recently in Royce's Canyon in Griffith Park and in Agoura Hills, so its habitat and flowering times are not well understood. In vegetative appearance and flowers, *Astragalus gambelianus* resembles the common but taller *A. didymocarpus*, in that both species having dark red to blackish hairs in the inflorescence, and probably the rarer species is therefore overlooked. Nonetheless, it can be positively identified because pedicels of Gambel's milkvetch are spreading aging reflexed, as compared with pedicels erect later ascending in the other species. Its fruits are two-lobed, two-seeded, schizocarpic legumes that are conspicuously villous, and the collapsed halves are often reddish when shed from the plant. The corolla of Gambel's milkvetch is also much lighter in color, although the two species would have to be compared in hand to notice that difference.

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