

Vicia benghalensis L., PURPLE VETCH. Annual or short-lived perennial vine, with tendrils, taprooted, several-stemmed at base, sprawling and climbing over other plants, branching from lower nodes, with shoots to 80 cm long; shoots 2-dimensional (plagiotropic) or not, flexible, densely sericeous to \pm villous with long, soft, fine hairs giving young growth a silvery appearance; tendrils terminal + 1–2 pairs of lateral tendrils at end of leaf rachis; roots nodulated. **Stems:** unequally 5–10-ridged, typically < 3 mm diameter, with 3 ridges descending from each leaf, tough. **Leaves:** helically alternate, 1-pinnately compound, in range with (6–)10–16 opposite or subopposite (alternate) leaflets, petiolate without pulvinus, with stipules; stipules 2, with narrow base (midvein) attached to a stem ridge, in asymmetrically matched pair of sickle-shaped (falcate) to half-ovate or arrow-shaped (semi-sagittate or semi-hastate), $10\text{--}13.5 \times 1.7\text{--}7.2$ mm, acute to acuminate at tip, sometimes with an outward, basal lobe to 2.5 mm long, finely pilose; petiole channeled, 1–9 mm long, 2–3.5 mm diameter at base; rachis channeled, (45–)60–75 mm long (excluding terminal tendrils), 5-angled to 5-ridged in \times -section, concave on top between upper 2 ridges and leaflets attached to those ridges, \pm sericeous; petiolules 0.6–1 mm long, yellowish, not pulvinuslike, hairy; blades of leaflets elliptic to narrowly oblong, $11\text{--}25 \times 3.3\text{--}7$ mm, narrowly rounded to tapered at base, entire, rounded with an abrupt fine point to 0.3–0.7 mm long at tip, pinnately veined with only midrib apparent on upper surface and principal veins raised slightly on lower surface, dull, upper surface with spreading to erect soft hairs, lower surface sericeous. **Inflorescence:** raceme, axillary, 45–50(–120) mm long, \pm equaling or $>$ subtending leaf, (3–)8–12(–16)-flowered, flowers typically crowded and oriented to 1 side, lacking bracts, densely soft-hairy on all green structures with mostly appressed or some spreading fine hairs; peduncle ridged, \pm villous; axis ridged with each ridge descending from a pedicel, 25–60 mm long, 6-sided in \times -section; pedicel 0.7–1.3 mm long, finely hairy. **Flower:** bisexual, bilateral, pealike (papilionaceous), 5–6 mm across (banner and wings spreading), 16–18 mm long, asymmetrically attached to pedicel (oblique); **nectary** surrounding base, diffuse; **calyx** weakly 2-lipped, 5-lobed, 10–12 mm long, reddish purple, long-hairy; tube ca. 3.7 mm long (upper lip) and 4.4–5.5 mm long (lower lip), often lopsided, somewhat swollen to saclike above pedicel, weakly 5-veined with 1 vein to each lobe (also several fainter veins), greenish becoming reddish purple on veins, generally membranous and becoming reddish purple between veins on upper side, greenish to reddish purple between veins on lower side; lobes unequal, linear-triangular, 3.5–5 mm long (upper 2 lobes) and 4.3–7 mm long (lower 3 lobes with the central lobe the longest); **petals** 5, dark to very dark reddish purple fading toward base; banner \pm fiddle-shaped when flattened, attached by a short neck and widest near the tip, normally folded lengthwise (covering wings and keel) but at anthesis the tip 1/5 spreading and arching upward, $13\text{--}16 \times 6\text{--}7$ mm, white at base grading through violet to dark reddish purple with 13–15 darker veins above midpoint, notched at tip; wings 2, long-clawed, $13\text{--}16 \times 2.5$ mm long, = banner, claws linear, 6.5–8.2 mm long, white, to midpoint 1-veined, limb locked with but not fused to keel and extending 2–2.5 mm beyond keel, with lanceolate, backward-pointing lobe above claw, lobe 2–2.4 mm long, whitish or whitish tipped and reddish purple at base; keel of 2 partially fused petals, clawed, curved upward, claws 7–8.5 mm long, free ca. 3/4 length, limbs scooplike, very dark purple at tip, lobed at base and above claw, the lobe semicircular and ca. 0.5 mm long, white or white with violet on top edge; **stamens** 10, diadelphous (9 filaments fused and 1 free); filaments 10–13 mm long,

filament sheet white or with rosey tinge on lower side, filament free portions subequal, straight, 1.5–1.7 mm long, outer ones narrow and central 3 expanded at tip, free filament flattened to 0.4 mm wide; anthers equal, dithecal, 0.3–0.4 mm long, dark yellow or yellowish green, longitudinally dehiscent; pollen pale yellow; **pistil** 1, short-stalked, 12–13 mm long, stalk (stipe) ca. 1.1 mm long; ovary superior, white-sericeous, 1-chambered with ca. 5 ovules attached to upper side; style 5.5 mm long, curved sharply upward at top of filament sheet, pubescent on terminal 0.5 mm; stigma terminal, green, dome-shaped, not wider than style. **Fruit:** pod (legume), with stipe < 2 mm long, dehiscent by 2 twisting valves, 1–4-seeded, narrowly oblong, in range 28–33 × 7.7–8.5 × 4.3–5.3 mm, tannish, ± sericeous with fine appressed to ascending hairs, internally with hairlike boundary between seeds. **Seed:** spheric to ± cuboid, 4.1–4.4 × 3.6–4.2 × 3–3.4 mm, dull black, hilum linear, 1.8–2 mm long, light tan with attached funiculus. Late April–mid-June.

Naturalized. Herbaceous vine first collected in 2001 at SMMNRA Rocky Oaks growing in disturbed grassland along trails used by horses, and still restricted to that vicinity but potentially spreading. *Vicia benghalensis* is a vine that is easily distinguished from the other widespread vetches by having flowers with more red pigmentation, and the fruit is hairy (strigose).

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