

Vicia villosa Roth, HAIRY VETCH, WINTER VETCH. Annual vine, taprooted, typically 1-stemmed at base, tendril-bearing, sprawling and climbing over other plants, branching from lower nodes, with shoots 30–100 cm long; shoots with flexible stems and only cauline leaves, soft-hairy with villous or appressed to spreading hairs; tendrils terminal + 1–2 pairs of lateral tendrils at end of leaf rachis, tendrils sometimes also forked; roots nodulated. **Stems:** squarish to rhombic in \times -section with 4 or 8+ ridges, to 2–3 mm diameter, with ridges descending from 2 lateral veins of petiole more prominent to winglike, tough, green, villous to appressed-pubescent or strigose; hollow. **Leaves:** helically alternate, 1-pinnately compound with 4–7(–9) opposite to alternate leaflets (lower ones mostly opposite and upper ones mostly alternate), petiolate without pulvinus, with stipules; stipules 2, variously shaped, including semi-ovate, half arrow-shaped, T-shaped, 2-horned, \pm sickle-shaped (falcate), and triangular, 2–5.5(–10) \times 0.6–1.6(–2.5) mm, pair matched or not with lobes (to 2 mm long), generally entire and ciliate on margins, acute to acuminate at tip, upper surface glabrous, lower surface loosely and finely sericeous-strigose; petiole deeply channeled with 2 thick ridges, 0–13 mm long; rachis deeply channeled, 25–55 mm long (excluding terminal tendrils), with leaflets attached to thick ridges, \pm sericeous; petiolules 0.2–0.6 mm long, yellowish, not pulvinuslike; blades of leaflets narrowly elliptic to oblong, elliptic to narrowly oblong, 4.5–21.5 \times 1.7–5.2 mm, rounded to tapered at base, entire, rounded with an abrupt fine point to 0.1–0.4 mm long at tip, pinnately veined with only midrib apparent on upper surface and principal veins usually raised slightly on lower surface, dull, finely hairy, upper surface pile, lower surface with \pm sericeous-strigose hairs. **Inflorescence:** raceme, axillary, generally $>$ subtending leaf, 6–16-flowered, flowers typically crowded and oriented to 1 side, lacking bracts, strigose; peduncle 6-ridged to 6-sided, 12–28 mm long; axis ridged with each ridge descending from a pedicel, 11–27 mm long; pedicel 0.4–1.2 mm long, strigose to strigose-pubescent. **Flower:** bisexual, bilateral, pealike (papilionaceous), 4–6 mm across (banner and wings spreading), 10–13 mm long, asymmetrically attached to pedicel (oblique); **nectary** surrounding base of pistil, diffuse; **calyx** weakly 2-lipped, 5-lobed, \pm cylindrical, 5–7(–10) mm long, reddish purple, fine-hairy; tube 3–3.2(–4) \times 1.4–2 mm, saclike above pedicel, oblique at orifice, with appressed to spreading long hairs, weakly 5-veined or 10-veined, mostly purplish red but green around pedicel and on lower side, generally membranous and becoming reddish purple between veins on upper side; lobes unequal, triangular curved toward each other, 0.3–1.1 mm long (upper 2 lobes) and awl-shaped and straight, 0.8–2.8 mm long (lower 3 lobes with the central lobe the longest), hairy; **petals** 5, dark purple to very dark purple or violet at tip; 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, 13–16 \times 6–7 mm, white at base grading through violet to dark reddish purple with ca. 11 darker veins below midpoint, 2-lobed; wings 2, long-clawed, 6.5–12.5(–17) \times 1.6–2.7 mm, claws linear, 3.5–5 mm long, limbs rounded at tip and extending 2–3 mm beyond keel, dark purple to violet on exposed limbs, locked with but not fused to keel, lobe on limb backward-pointing and parallel with claws, 1–2.5 mm long, creamy white or creamy white-tipped and reddish purple at base; keel of 2 partially fused petals, clawed, curved upward 90°, claws 4–5 mm long, free 1/3–2/3 length, limbs 2-lobed and prowlike at tip, very dark purple at tip, lobed at base and above claw, the lobe semicircular and ca. 0.4 mm

long, white or white with violet on top edge; **stamens** 10, diadelphous (9 filaments fused and 1 free); filaments 6.5–9.5 mm long, filament sheet white or with rosey tinge on lower side, filament free portions subequal, straight, 0.8–2 mm long, outer ones narrow and central 3 expanded at tip, free filament flattened to 0.4 mm wide, pale yellow or white with purplish red midstripes; anthers equal, dithecal, 0.3–0.5 mm long, yellow to dark yellow or yellow-green, longitudinally dehiscent; pollen pale yellow; **pistil** 1, short-stalked, 7.5–10.5 mm long, stalk (stipe) 1.5–2.7 mm long; ovary superior, 4–5.5 mm long, white-strigose, 1-chambered with 3–6 ovules attached to upper side; style 1.5–2.3 mm long, curved sharply upward at top of filament sheet, pubescent on terminal portion; stigma terminal, yellowish, dome-shaped, not wider than style. **Fruit:** pod (legume), with stipe to 3.5 mm long, dehiscent by 2 twisting valves, 2–5(–6)-seeded, oblong compressed side-to-side, in range 25–35 × 5–7 mm, tapered at base, prowlike at tip, brown to tan, strigose with upward-pointing hairs, internally with hairlike boundary between seeds. **Seed:** spheric or rounded quadrate slightly compressed, 3.5–4.8 mm, dull dark brown mottled blackish, hilum light tan. Late February–mid-June.

Naturalized. Annual often extremely abundant in fields of disturbed grasses, because it was originally cultivated for fodder and persists, sometimes escaping into adjacent natural areas. Two subspecies of *Vicia villosa* are often recognized. In subsp. *villosa*, upper stems and leaves are villous, racemes have twenty or more flowers, the corolla is fourteen millimeters or longer, and the lower calyx lobes are two to four millimeters long. In subsp. *varia* (Host) Corb., individuals are supposed to be glabrous to appressed-pubescent, racemes have less than twenty flowers, the corolla is ten to fourteen millimeters long, and the lower calyx lobes are one to two and a half millimeters long. In range, a large population tends to be too variable to recognize subspecies. Sometimes hikers are fearful of fields with flowering winter vetch because this species supports large honeybee populations. Flowers are typically reddish purple, but a white mutant was once collected near the service road to Reagan Ranch on Malibu Creek State Park (SMM).

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