

Vascular Plants of Williamson County

Vicia sativa subsp. *sativa* – SPRING VETCH [Fabaceae]

Vicia sativa L. subsp. *sativa*, SPRING VETCH. Annual vine, with tendrils, taprooted, sprawling and climbing over neighboring plants, to 100 cm long; shoots 2-dimensional (plagiotropic) or not, with flexible stems and only cauline leaves, sparsely \pm pilose, villous, or strigose with white hairs; tendrils unbranched or 2–3-forked at end of leaf rachis; roots nodulated. **Stems:** ridged or 2-winged, to 3.5+ mm diameter, with 2 conspicuous, cordlike wings descending from each leaf and a central minor ridge descending to mid-internode, when stem dry other veins becoming raised and ridgelike, moderately strigose with mostly ascending hairs but some backward-pointing hairs, nearly glabrate on older stems; internodes hollow. **Leaves:** helically alternate, even-1-pinnately compound with 4–6 pairs of opposite to subopposite leaflets, petiolate without pulvinus, with stipules; stipules 2, attached to stem at base of petiole, asymmetrically crescent-shaped to semi-circular in outline and 3-lobed, 9.5–12.5 \times 6–7 mm, green, with long teeth (1.7–3.6 mm long) obscuring the lobing, central lobe ovate, acuminate to tail-like (caudate) at tip, ciliate only on central lobe, with an extrafloral nectary in center, the nectary broadly kidney-shaped to squarish, light green in range sometimes with a ring of small red dots on lower surface, basal lobe attached to basal part of central lobe, oblong and 2-toothed to widely ovate and 4–7-toothed, upper lobe oblong and equally 2-toothed at tip or unequally toothed having 1 tooth arise from base of the other tooth, basal and upper lobes glabrous; petiole deeply channeled, 3–5 mm long, with thick margins, villous to strigose; rachis deeply channeled with leaflets attached to thick margins on upper side, 68–90 mm long, villous to strigose with some hairs having small papillate bases; petiolules 0.5–1 mm long, villous, pale green; blades of leaflets obovate to wedge-shaped, 15–28(–35) \times 7.8–14 mm, broadly tapered at base, entire and ciliate with hairs having papillate bases, broadly notched to truncate at tip with tooth at tip of midrib 0.6–2 mm long in sinus, pinnately veined with 7–9 parallel, ascending lateral veins, upper surface dull green and glabrate, lower surface paler green and white-pilose. **Inflorescence:** raceme, axillary, in range (1–)2-flowered, lacking bracts, sparsely hairy; peduncle < 0.5 mm long; rachis 0–3 mm long; pedicel 0.5–1.4 mm long. **Flower:** bisexual, bilateral, pealike (papilionaceous), 11.5–16.5 mm across, 22.5–27 mm long; **nectary** cushionlike at base of pistil, green; **calyx** 5-lobes, moderately pilose; tube 7.3–8 \times 3.5–4.5 mm, slightly saclike at base, 10–15+-veined, 5-ribbed, pilose and becoming reddish purple on ribs; lobes narrowly triangular to lanceolate, 10.8–12.4 \times 1.6–2.2 mm, ciliate on margins with papillate-based hairs, narrowly acuminate to caudate with short spine at tip; **petals** 5, clawed; banner broadly obovate, 22.5–27 \times 11.5–16.5 mm (measured flat), clawlike base long-tapered, 8–9 mm long, whitish, U-shaped in \times -section, limb at anthesis spreading outward and curving upward, notched at tip with a small tooth in notch, purple with 17–29 veins, the veins ascending and darker than background; wings 2, \pm oblanceolate, 21–22 \times 6.5–7.5 mm, claws 9–10 \times 0.9–1.2 mm, pale yellow, limbs backward-lobed at base and firmly attached to keel by circular area beyond (distal to) basal lobe, the basal lobe oblong, 3–3.2 \times 1–1.1 mm and parallel with claw, at anthesis limbs loosely appressed to keel, rounded at tip, pale yellow at base dark reddish purple on exposed 2/3, not obviously veined; keel of 2 petals fused along most of lower edge, claws 9–9.7 mm long, free for 6.5–7.3 mm from base, light yellowish, prow \pm semicircular and

curved upward, 13.1–13.3 mm long, 2.5–3 mm wide at inner curve of prow, 4–4.4 mm tall at prow, with a short, broad beak at top of each keel petal, light yellowish at base to dark violet above; **stamens** 10, diadelphous (9 filaments fused and 1 free), < style; filaments 13–13.3 mm long, pale yellow but greenish at base, free portions 0.8–1.1 mm long alternating in length, whitish, arching upward 90°, free filament also arching upward 90° at tip; anthers basifixed, dithecal, dimorphic, 0.4 × 0.2 mm (long filaments) and 0.5–0.6 × 0.2–0.25 mm (shorter filaments), orange-yellow, longitudinally dehiscent; pollen pale yellow; **pistil** 1, sessile; ovary superior, linear with tapered ends, ca. 13 × 0.6 × 1.2 mm, green, mostly papillate at base to pubescent above with papillate-based hairs, 1-chambered with 7–12 ovules attached to upper side; style 1.9–2.2 mm long, compressed top-to-bottom, bent sharply (90°) at base, with a hairy band 0.5 mm long near style tip but 0.2 mm below stigma, the hairs ascending and white, ca. 0.2 mm long at base and on inner side of style to 1 mm long and very dense on outer side; stigma capitate, 0.3 mm diameter, yellowish green, papillate. **Fruit:** pod (legume), dehiscent by divergent and strongly twisting valves, ca. 5-seeded, ± linear, 38–47 × 4.5–6 × 4.8–6.5 mm, dark brown to black, broadly tapered at base, ribbed on top and bottom, slightly constricted along diagonal veins, long-tapered and sometimes with short, upturned beaked at tip, glabrous, valves with 1.5–2 twists. **Seed:** spheroid to thickly discoid having flat end-walls, rounded-cuboid, or ± bullet-shaped, 2.5–4.5 × 2.7–4 mm, light yellowish tan or brown and black mottled, smooth, with elongate hilum and a slight protuberance above hilum, the hilum 1.3–1.5 × 0.2–0.4 mm.

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