

Trifolium hirtum All., ROSE CLOVER. Annual, taprooted, several-stemmed at base, decumbent, ascending, or erect, in range to 45 cm tall; shoots with only cauline leaves, densely pilose; cotyledons 1-foliolate, long-petiolate; roots nodulated. **Stems:** cylindric, to 2 mm diameter, ± tough. **Leaves:** helically alternate, palmately 3-foliolate, petiolate without pulvinus, with stipules; stipules 2, sheathing stem for 0.5–1.8 mm and fused to petiole base for 4–6 mm, wing lanceolate to ovate, 5.5–11 × 1–2.8 mm, whitish with conspicuous purple veins and green at tip, entire, acuminate at tip aging bristlelike, lower surface pilose, the hairs with swollen bases; petiole channeled, 5–65 mm long, winged and strongly 3-ridged at base, villous-pilose; petiolules 0.5–1 mm long, pale green (purplish at tip); blade of leaflets obovate, 5–25 × 4–18 mm, terminal leaflet slightly larger, broadly tapered at base, minutely dentate on margins above midblade, truncate (notched) with short point at tip, pinnately veined with many closely spaced lateral veins and midrib raised on lower surface, dull, ascendingly pilose, upper surface sometimes with reddish heart-shaped mark. **Inflorescence:** headlike spike, terminal, spheroid, at anthesis 14–20 mm across (= projecting corollas), ± erect, typically 27–33-flowered in 5–6 whorls of 5–6, flowers spreading to erect at top, bracteate, densely pilose; peduncle 7–31 mm long, tough; **involucre** subtending spike of 2 bracts (bractlets of 2 flowers), closely distichous, lower bractlet leaflike and upper bractlet not leaflike, both bractlets leaflike, or both bractlets not leaflike; leaflike bract with petiole < 4 mm long, stipules asymmetrically broadly ovate to transversely oblong, 4–6 × 5–7 mm, acuminate at tip, blade = 3 slightly reduced leaflets; nonleaflike bractlet without petiole, cupped-obovate to ± round, 4–5.5 × 4.5–5 mm, colored and veined like stipules except commonly greenish on margins, veins often red; rachis 4–10(–15) mm long, with a 1–1.5 mm gap between involucre and the lowest flower, with vertical lines of hirsute hairs between flowers; bractlets subtending upper flowers absent. **Flower:** bisexual, bilateral, pealike (papilionaceous), < 3.5 mm across (calyx wider than corolla); **nectary** nectar-producing receptacle below ovary; **calyx** 5-lobed; tube bell-shaped, 2–3 × 1.5 mm, light green, 20-veined, densely feathery-pilose (plumose), internally also hairy to 0.5 mm of orifice; lobes subequal, bristlelike-linear, 4.5–7 mm long, the longest lobe on lower side, expanded basally, green; **corolla** 5-lobed, petals clawed but fused at base into short tube and also fused with stamen sheet, purple-pink; banner 13–14 mm long, claw broad, ca. 4–4.5 mm long, limb elliptic folded upward from midvein, 7–8.5 mm long, bent upward 20–45°; wings 2, claws narrow, ± 6 mm long, limbs ± lanceolate, 3.8–4.2 × 1 mm, banner >> wings, with short, backward-pointing lobe at base on upper edge; keel of 2 petals partially fused on lower edge approaching tip, slightly < wings, claws 4.3–6 mm long, limbs ovate, 3.2–3.6 × 1.2 mm, white on upper edge, pale purple along keel edge and at tip, with a large blotch of purple below tip, acuminate at tip; **stamens** 10, diadelphous (9 filaments fused and 1 free); filament sheet ca. 5 mm, white, filament free portions alternating ± 0.6 mm long (long stamens) and ± 1.6 mm long (short stamens), pinkish becoming greenish below anther; filament of free stamen ca. 7.5 mm long, mostly white but yellowish green approaching anther; anthers dorsifixed, dithecal, 0.3 mm long, bright yellow, longitudinally dehiscent; pollen bright yellow; **pistil** 1, to level of the shortest stamens; ovary superior, asymmetrically ovoid, < 1.5 mm long, green, 1-chambered with 2 ovules attached to upper side; style slender, 6.5–7 mm long, greenish, hooked at tip; stigma greenish, pointed downward. **Fruit:** pod (legume), ± dehiscent by splitting along suture but also crumbling, 1-seeded, obovoid, with papery wall and ±

leathery tip; retained tightly within calyx = dispersal unit; when immature appearing to be solid when developing fruits pressing together tightly. **Seed:** oval to subspheric, 2–2.2 × 1.4–1.7 mm, dull yellowish, smooth, with hard seed coat. Late March–late May.

Naturalized. Annual first observed in the late 1980s as a roadside weed in the Cold Creek watershed (SMM) but now found widely in range growing occasionally along roadsides and at parking spots. *Trifolium hirtum*, which is a hairy Mediterranean species, most often has one or two leaflike bracts comprising an involucre. The fruit is dispersed while still attached to the hairy calyx, which is certainly a factor why this plant has spread along roads.

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