

Vascular Plants of Williamson County

Heliotropium indicum – TURNSOLE, ALACRANCILLO [Boraginaceae]

Heliotropium indicum L., TURNSOLE, ALACRANCILLO. Annual, taprooted, in range 1–several-stemmed at base, ± erect, in range 15–50 cm tall; shoots with only cauline leaves, foliage conspicuously cobblestonelike with deeply sunken veins on upper surfaces of blades, hirsute to hispid with stiff hairs to 1.3 mm long but also having an understory of much shorter hairs, without glandular hairs. **Stems:** cylindric, to 5 mm diameter, tough, green but with persistent bases of hairs purple. **Leaves:** opposite decussate, simple, petiolate, without stipules; petiole winged most of length along pinkish midvein, < 15–40+ mm long, wing to 4 mm wide approaching blade; blade ovate, < 30–65+ × < 25–50+ mm, dull, subcordate to truncate at base (next to winged petiole), subentire to low-toothed on margins, acute at tip, conspicuously pinnately veined with all veins sunken on upper surface and strongly raised on lower surface, stiff-hairy along veins. **Inflorescence:** spikelike cyme, terminal and solitary (or second cyme axillary from base of peduncle), erect and scorpioid with tip coiled downward (to 2× coiled), spike typically > 40-flowered, 1-sided with ascending to erect flowers in 2 alternating rows on upper side having densely crowded flowers initially ca. 1 mm apart per row increasing to 4–5 mm apart in fruit, flowers and fruits sessile, lacking bracts, conspicuously hispid-strigose; peduncle cylindric, < 20 × 1.5 mm, stemlike with long hispid hairs and understory of short hairs, especially on the flower side of axis. **Flower:** bisexual, radial, 3–3.5 mm across; **calyx** 5-lobed, green but out-facing calyx purplish to midpoint; tube cup-shaped, 0.7–0.8 mm long, hispid and sparsely puberulent; lobes subequal, acute-triangular to lanceolate, at anthesis 1–1.5 × 0.5–0.7 mm gradually increasing to 2× in fruit; **corolla** shallowly 5-lobed, short trumpet-shaped, 3 mm long; tube expanded around ovary, 0.5 mm long, green and whitish, glabrous; throat expanded by anthers, initially green aging light violet and low 5-ribbed but white at orifice, short-strigose (hispid); limb 2–2.5 mm across, lobes subequal, horizontal, somewhat overlapping and semicircular, ca. 0.5 mm long, light violet aging darker; **stamens** 5, fused at top of corolla tube, included, ± sessile; anthers dithecal, 0.6–0.7 mm long, yellow tinged purplish, longitudinally and inward dehiscent; pollen pale yellow; **nectary disc** low mound surrounding base of ovary; **pistil** 1, 1 mm long, green; ovary superior, shallowly 4-lobed, 0.3 × 0.5 mm, at anthesis glabrous, with 1 ovule per lobe; style < 0.4 mm long and stout; stigma hemispheric, 0.5–0.6 mm wide, touching lower anthers. **Fruits:** 4 nutlets splitting from 2 chambers diverging laterally, each 2-lobed, before splitting overall ± ovoid, 2.5–3 × 2.5–3 × 2.5–3 mm, brown, nutlets with fruit wall on outer side and bulging seed on inner side, wall ovate in outline, ca. 3 mm long, sharply 2-ridged with ridges converging at top and base; seed 3-sided, the inner 2 faces at 90°.

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