

Vascular Plants of Williamson County

Sisyrinchium rosulatum – DOTTED BLUE-EYED GRASS [Iridaceae]

Sisyrinchium rosulatum E. P. Bickn., DOTTED BLUE-EYED GRASS. Annual (short-lived perennial), in range not rhizomatous (not clonal), fibrous-rooted, several–many-stemmed at base (even a planed, solitary unit having at least 2 reproductive shoots from ground level), ascending or spreading to decumbent, in range < 20 cm tall, often strongly bent (geniculate) at the visible “cauline” node; shoots with only basal leaves (cauline leaves = bracts subtending axillary inflorescence), at flowering at flowering having 1–2 basal leaves per shoot and lacking internodes at plant base, each leaf sheath sharply folded appressed lengthwise (replicate) and overlapping other sheath (equitant), leaves not fibrous and persistent on plant, glabrous, not glaucous; adventitious roots from nodes at base of shoots, numerous and spreading to 100 mm and slender (0.35 mm diameter). **Stems:** (= peduncle) having 1 long internode, compressed side-to-side but without 2 winglike extensions, 1.5 mm diameter to 2 mm diameter at node, tough, green (not reddish), exposed nodes not red-purple, conspicuous node (below inflorescence). **Leaves (basal):** alternate distichous, simple and sheathing; sheath of basal leaves short-closed, keeled (folded), several–70 mm long, having membranous margins to within 5 mm from tip, surfaces smooth; blade ascending, linear, 40–70 × 2–3 mm, green, minutely scabrous on folded midrib, parallel-veined, surfaces smooth. **Inflorescence:** leafy compound cyme, arising from first node, from node forming (1)2 unequal, ascending peduncles with terminal “spathe,” flowers 3–7 formed within spathe and successively exerted, bracteate, glabrous and green tissue not glaucous; bract arising from first node (cauline leaf) ascending, < 60 mm long and < inflorescence, folded appearing to be ca. 3 mm wide, closed to 10 mm, minutely scabrous on midvein; stalk of spathe flexible, stemlike, 70–130 mm long. geniculate at node at top; spathe formed at node at top of peduncle; closed narrowly fusiform (when closed) and 2-keeled (along midribs), formed by green bractlets of the 2 earliest flowers of the cyme, 22–30 mm long, spreading somewhat when flower emerging, bractlets alternate distichous, keeled and folded with membranous margins gradually tapered ending to 60 mm from tips, each exposed bractlet tapered to acute tip, outer (first) bractlet closed to 6 mm from base, tip of outer bractlet > extending beyond tip of second bractlet to 5–6 mm, spathe bractlets ca. 2 mm wide and folded with 5–6 parallel veins on each surface + midvein, other bractlets hidden and included within spathe, membranous, third bractlet to 14 mm long with green stripe, other bractlets decreasing in length often lacking green; pedicel cylindrical, at maturity to 30 mm long (elongating in bud by an intercalary meristem before the flower is pushed outward exerted from spathe), translucent at base, lower portion pale green, exposed and exerted pedicel at least 10 mm from upper portion of “spathe,” pale green in fruit green and tinged purplish red, lacking nonglandular and glandular hairs. **Flower:** bisexual, radial, 8–14.5 mm across; **perianth** 6-lobed (tepals), lobes in 2 whorls fused into ring at base, thickened lower portion of perianth bell-shaped, segments ca. 3.5 × 1.2–2 mm (outer tepals wider than inner tepals), above lobes widely spreading and ± horizontal in the same plane, having a bright yellow eye in center with 6-point or many-point star, often a zone of purple-red 0.5–1.5 mm broad sharply defining central yellow star, and above starlike dark ban lobes in range white to pale rose, lobes monomorphic, acute-oblongate (acuminate), 8–10.5 × 2.3–3 mm and 5-veined (outer lobes) and 8–10.5 × 2.1–2.5 (inner

lobes) and 3-veined, outer lobes wider than inner lobes, thickened lower portion glossy light yellowish green to light green with or without 2 pairs of parallel rose-purple stripes on outer (lower) surface, outer surface with scattered long-stalked glandular hairs on lower surface (more hairs on outer lobes), above midpoint surfaces having either all veins or only midvein red-purple, small flowers with point of yellow start triangular (acute) per lobe and large flowers with 3 or 5 points per lobe, on upper surface especially of inner lobes along yellow and red-purple midvein with a line of short-stalked glandular hairs, on inner surface at lobe bases sometimes having an inconspicuous ring of yellow glandular hairs, upper portion thin and delicate, midvein somewhat raised on lower surface, after pollination collapsed and inrolled on top of early fruit and abscising during fruit development; **stamens** 3, fused at base to above midpoint column enclosing lower style; filament column barrel-shaped to somewhat conic, ca. 1.2 mm long, bright yellow mostly densely covered with yellow, short-stalked glandular; free filaments diverging and ascending, tapered to top, ± 1 mm long, purplish to above midpoint and yellow above; anthers medifixed, dithecal, ca. 0.8 mm long, yellow, longitudinally and upwardly dehiscent; pollen yellow; **pistil** 1, ca. 3 mm long; ovary inferior, obovoid not 3-angled, ca. 1.35×1 mm, glossy light green, with scattered, radiating stalked glandular hairs, 3-chambered, each chamber with several–12 greenish ovules; **nectary** on top of ovary; style ca. 2 mm long, mostly concealed by stamens and pale yellow, 3-sided and tapered to tip, capitate and papillate stigmatic tip at level of anthers. **Fruit:** capsule, loculicidal, dehiscent with 3 valves, many-seeded (–30), before seeds mature spheric, in range 2.1–3.9 mm, tannish often with irregular purple spots and blotches of various sizes, during development having 3–6 reddish brown to brown stripes pole-to-pole, valves drying light brown to brown, turtlelike (carapace) bulging at each seed, with a line of seeds on each side of septum; fruit exerted on pedicel, pedicel tough and wiry, curved 8–10 mm from fruit so widely spreading to somewhat deflexed, 2–7 mature fruits per unit. **Seed:** subspheroid to polygonal and depressed on 1 side (hilum), 0.7–0.9 mm long, black, with short ridges and pits (rugulose); hilum 0.2 mm across.

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