

Navarretia hamata Greene subsp. *hamata*, SPINY NAVARRETIA. Annual, spinescent, sclerophyllous, taprooted, 1-stemmed at base, forming a spreading to ascending lateral branch from each axillary bud (canopy downward), erect, 3–15 cm tall; shoots with several basal leaves and mostly cauline leaves, basal leaves absent during flowering, with colorless, stalked glandular hairs of mixed lengths and having small heads, with skunklike odor. **Stems:** cylindric, to 1.5 mm diameter, tough, green turning red-purple on exposed sides, \pm zigzagged, internodes 5–25 mm long, remaining pubescent but often with heads absent on old stems. **Leaves:** helically alternate, deeply pinnately lobed, the lobes modified as spreading, spinelike teeth with some branched and those teeth oriented in different directions from horizontal, short-petiolate (basal leaves) to sessile (cauline leaves), without stipules; petiole of basal leaves broad and flat, indistinct from blade; blade of basal leaves axis narrowly oblong, 15–50 mm long, on robust plants with > 10 lobes per side, lateral lobes 1–3.5 mm long, terminal lobe $>$ lateral lobes, blade of cauline leaves axis narrowly ovate or lanceolate to oblong, to 22×2.5 –6 mm long, typically < 10 spine-tipped lobes per edge, lobes 1.5–5 mm long, at tip 3-forked with central spine longer and hooklike because oriented downward, pinnately veined with midrib and several principal lateral veins raised on lower surface, glandular-hairy sometimes aging glabrescent, principal veins white or aging reddish purple, lower surface with principal veins diverging into the largest teeth and reinforcing axis margins. **Inflorescence:** headlike cyme, spinescent, terminal, several-flowered, flowers sessile, bracteate, conspicuously glandular-hairy; bract at base of cyme cupped around flowers and partially sheathing, bract axis ovate with 3–5 teeth per edge + 3-forked at tip, inner bracts and bractlet subtending flower flatter, with fewer, shorter lateral teeth, and unforked, straight, and ascending at tip. **Flower:** bisexual, radial, ca. 6 mm across; protandrous; **calyx** 5(–6)-lobed, in range 6–7 mm long, membranous panels and green ribs with green, spine-tipped lobes; tube ± 2.5 mm long, membranous at base and narrower than green stripes at orifice; lobes unequal, 1.5–4 mm long, the longest reaching sinus and entire or 2-toothed, with glandular hairs on both surfaces; **corolla** 5(–6)-lobed, narrowly funnel-shaped, in range 8–10 mm long; tube cylindric but expanded around ovary (markedly stretched in fruit), 3–4 mm long, midtube 0.5 mm diameter, white, with 5 slightly raised ribs; throat 2 mm long, orifice ca. 2 mm diameter, pale greenish at base and then pale green and also tinged purple beneath each lobe, throat and upper tube with green or sometimes purple veins; lobes spreading, ovate-elliptic, 2–3 mm long, light violet with white at base (all white), paler on lower surface, aging and drying darker; **stamens** 5(–6), fused along corolla throat alternate with corolla lobes; filaments attached at slightly different heights, unequal, 1.4–2.5 mm long (for a single flower), light yellowish green at base then white and pale violet approaching anther; anthers exerted at \pm same level, dorsifixed, dithecal, ± 0.5 mm long, blue, longitudinally dehiscent, dehiscing at anthesis; pollen blue; **pistil** 1; ovary superior, \pm ellipsoid, ca. 0.9×0.6 –0.7 mm, green, 3-chambered, each chamber with several ovules attached at center; style ± 7.5 mm long, pale yellowish green at base to whitish above, 3-branched, the branches initially appressed when exerted from opening bud, later spreading and receptive, ± 0.7 mm long. **Fruit:** capsule, loculicidal, dehiscent by 3 valves, to 20-seeded and bulging from developed seeds, broadly ellipsoid, 2–2.5 mm long, when immature often with 3 red stripes. **Seed:** \pm faceted-ovoid, 0.7 – 0.9×0.5 mm, brown, with shallow depressions. Mid-May–late June.

Native. Spinescent annual occasionally found in small patches growing on hard-packed soil especially in full-sun, e.g., along hiking trails in chaparral or coastal sage scrub, often flowering with *Eriastrum sapphirinum*. *Navarretia hamata* has pinnately lobed leaves and bracts. In range the flowers tend to be shorter than expected for this subspecies and overlap characteristics of *N. atractyloides*. Certainly careful population studies are needed to determine the relationships of local populations. Although authors have described flowers as pink and purple for some flower forms in *N. hamata*, locally the flowers are better described as shades of violet with blue anthers and pollen. The skunklike odor appears to attract insects, which become embedded in the glandular exudate and die, and that likely is also a cue for pollinators to find these plants.

B. A. Prigge & A. C. Gibson