

*Bidens pilosa* L., COMMON BEGGARS TICK, SPANISH NEEDLES. Annual, taprooted, 1-stemmed at base, erect, 30–110 (–180) cm tall; shoots with only cauline leaves, young growth densely pubescent. **Stems:** 4-ridged, to 8 mm diameter, 4-sided in ×-section with sharp edges aging rounded, finely striped rose to purple, with scattered, ± kinky white hairs becoming glabrescent, nodal ledges hairy. **Leaves:** opposite decussate, odd-1-pinnately compound, typically 3-foliolate or 5-foliolate, petiolate with pairs connected by 2 ledges across node, without stipules; petiole channeled and upward-winged, typically 10–35 mm long; blade in outline 50–135 × 25–135 mm; rachis shallowly ridged and deeply channeled, striped rose to purple, sometimes appearing winged with wings decurrent from leaflet blades, with whitish, several-celled hairs; petiolules ± absent; blades of leaflets lanceolate to ovate, 20–60 × 10–30 mm, terminal leaflet the longest, sometimes the lowest leaflets deeply dissected forming secondary leaflets, tapered to long-tapered at base and lateral leaflets oblique at base, serrate (partially doubly serrate) and having 2 rows of short hairs on margins, acuminate at tip, pinnately veined with principal veins raised on both surfaces and midrib conspicuously raised on lower surface, upper surface dull with scattered hairs, lower surface lighter green and short-strigose to short-villous but densely so along veins. **Inflorescence:** heads, in open, terminal and axillary cymelike arrays, arrays with several–many heads, head discoid or on rare individuals radiate, ca. 8 mm across, in range of 20–40 disc flowers or occasionally with radiate heads having 3, 5, or 8 ray flowers, bracteate; bracts subtending each branch of inflorescence leaflike and typically 3-foliolate, reduced upward and eventually 1-foliolate; bract subtending peduncle narrowly oblanceolate to spatulate, < 12 mm long; peduncle irregularly 4–5-ridged, at anthesis 10–25+ mm long increasing to 90 mm in fruit, typically with 2 longitudinal grooves, pubescent, sometimes bearing a bract; bracts subtending involucre 7–9 (calyculus), appearing whorled and arising from cuplike base, ascending in flower becoming spreading in fruit, ± leafy, linear to spatulate, 2.5–5 mm long, coarsely villous at base and ciliate on margins, pinnately veined but only midrib conspicuous on smaller calyculus bracts; **involucre** bell-shaped to hemispheric, 6–8 mm wide increasing in fruit, phyllaries ± 8, lanceolate, 4.5–6 mm long, green at base to yellowish green above becoming orange-brown, wide-membranous on margins, acuminate and densely fringed-pubescent at tip, finely parallel-veined and aging striped purplish red, with minute papillae along veins; receptacle flat, with bractlets (paleae) for disc flowers, palea lanceolate-linear, 5–8 mm long, reaching corolla lobes, keeled, keel yellow with red stripes, with wide-membranous margins. **Ray flower:** pistillate or sterile, bilateral, 3–5 mm across; **calyx (pappus)** of 2(3) barbed awns, awns erect, subequal, 0.5–1 mm long, persistent; **corolla** 1–3-lobed, the central lobe ± 3-toothed, the lateral lobe or lobes smaller and unequal; tube + throat funnel-shaped, 1.5–2.5 mm long, tube greenish and throat white with 5 or 6 yellow veins, with several inconspicuous papillate hairs; central lobe ascending to spreading, roundish to oval, 3–4.5 mm long, white with yellow veins to teeth, upper surface conspicuously papillate, lateral lobes 1–3 mm long; **stamens** 5, fused to top of corolla tube, to 1.5 mm long; filaments whitish; anthers sterile, fused into cylinder surrounding style, basifixed, 0.8–1 mm long, reddish; **pistil** 1; ovary inferior, 3-sided or 4-sided, ± 1 mm long, green, ribbed, 1-chambered with 1 ovule (sterile); style exerted, 3–4 mm long, yellow, 2-branched, the branches strongly recurved and often unequal. **Disc flower:** bisexual, radial, 1 mm across, deep yellow or orange-yellow; **calyx (pappus)** of

2–3(–5) barbed awns, awns erect, subequal, to 3.5 mm long, barbed mostly above midpoint, persistent; **corolla** 5-lobed; cylindric, 4–5 mm long, with several colorless hairs along veins; tube whitish; throat translucent orange-yellow with red veins terminating in lobes; lobes equal, deltate,  $\pm 0.6$  mm, bright yellow, thickish, papillate; **stamens** 5, fused to top of corolla tube; filaments  $\pm 0.5$  mm long, yellowish; anthers fused into cylinder surrounding style, slightly exerted, basifixed, dithecal, 1.5 mm long, purplish or dark orange-red, longitudinally dehiscent; pollen orange-yellow; **pistil** 1; ovary inferior,  $\pm$  cylindric with 3 or 4 angles, ca. 1.3 mm long, greenish, at anthesis ovary  $\leq$  pappus awns, pubescent above midpoint, 1-chambered with 1 ovule; style  $\pm$  exerted,  $\pm 2.5$  mm long, yellow, 2-branched, the branches diverging,  $< 1.5$  mm long, densely papillate and short-pubescent. **Fruits:** cypselae, awned, dimorphic when head radiate; fruit body (disc flower) linear to narrowly fusiform,  $7.5\text{--}13(–16) \times 0.7\text{--}1.4$  mm (disc flowers) and 3–5 mm long (of ray flowers), blackish or dark greenish brown, flattened, 3-angled or 4-angled with 4–6 conspicuous ribs + sometimes 4 lesser ribs ( $\cong 2$ -grooved per face), with callus at base, faces minutely warty or bumpy, upper 1/3 with hairs having bulbous bases; awns ascending, 2–3(–5), 1.5–3.5 mm long, greenish yellow to light brown, with downward-pointing barbs. January–December.

Naturalized. Annual weed established throughout the range along roadsides and wet ditches, but can be found adjacent to native vegetation. *Bidens pilosa* most commonly is found with heads having only yellow disc flowers, but occasionally can one find one to several individuals within a local population having heads with white ray flowers. A fruit of this species is equipped with a pointed base plus a pair of barbed awns (usually), which are especially successful in attaching to clothing, and thereby spreading to new locations. B. A. Prigge & A. C. Gibson