

*Erodium* L'Hér. STORKSBILL, FILAREE

*Erodium cicutarium* (L.) L'Hér, REDSTEM FILAREE. Annual, taprooted, rosetted and either flat with spreading leaves or with spreading leaves, acaulous with several–many ascending to spreading inflorescences appearing like shoots (i.e., appearing several–many-stemmed at base), decumbent to ascending, 10–60 cm tall, on large plants height < width; shoots with basal leaves and bracts resembling cauline leaves (or interpreted as having several cauline leaves), basal rosette to 280 mm across, leafy inflorescences strongly 1-sided with ascending to erect axillary lateral branches, densely glandular-hairy, the hairs mixed stalked to sessile with colorless heads. **Stems:** cylindric, to 7 mm diameter, swollen just above each node, green and often purplish red where exposed to sun (node and swelling never red), glandular hairs radiating with straight stalks. **Leaves:** helically alternate (basal leaves) and opposite (bracts or cauline leaves; rarely in a whorl of 3 at node), some pairs markedly unequal (anisophyllous, odd-1-pinnately compound with 7–15 ± sessile principal lobes, the lateral leaflets and lobes alternate or opposite and deeply pinnately lobed, petiolate, with stipules; stipules attached to stem at node (between petioles if leaves opposite), triangular to deltate-ovate or lanceolate, 3–8 × 1–3 mm, membranous, semitransparent and whitish with a green midvein, ciliate on margins, often adjacent stipules on a side of node fused, the fused stipules broader (to 4 mm), 2-veined, and sometimes 2-toothed at tip; petiole slightly channeled or flat on upper side, 5–100 mm long, on basal leaves ca. as long as blade but much shorter on cauline leaves, flaring at base, hairy like stem but when glandular heads missing aging ± short-hirsute to short-villous; blade narrowly elliptic to oblong or oblanceolate in outline, 25–75 × 15–37 mm, lateral leaflets and principal lobes ± ovate in outline, 3–20 + mm long, sessile to subsessile, sublobes 1–3 mm wide and several-toothed, the teeth acute to obtuse, terminal leaflet often asymmetrically 3–7-lobed and broader than lateral leaflets, pinnately veined, glandular hairs evenly distributed and often aging without heads. **Inflorescence:** leafy, cymelike array with several umbel-bearing branches, axillary from each basal leaf of rosette, axes at each fork unequal and subtended by an unequal pair of bracts, the larger bract subtending the continuing axis, the smaller bract subtending a short lateral branch having a narrower axis, umbel from each node (2–)3–7-flowered with erect flowers, bracteate, glandular-hairy like shoot; bract at principal node leaflike and with pair of stipules, hairs at node and on bract often aging without glandular heads and appearing short-hirsute; peduncle bearing umbel ascending, slender and < 1 mm diameter, reduced upward, often 45+ mm in fruit, red-purple, with radiating glandular hairs, with involucre at tip. **Involucre** of bractlets subtending pedicels of an umbel, bractlets 3–5 in 1 whorl, stipulelike, collarlike, the stipules fused at bases except on adjacent edges of 1 pair, scarious, acute-toothed with 1 green vein to each tooth, the teeth 1–2.5 mm long, short-ciliate; pedicel at anthesis ascending (flower erect), 4–8 mm long increasing 2× in fruit, 0.3 mm diameter and swollen at base and tip, red-purple, ascending in fruit but often with a bend above midpoint making fruit axis ± erect. **Flower:** bisexual, radial, 8–11 mm across; **sepals** 5, initially spreading to slightly reflexed, overlapping, elliptic-lanceolate, 3.3–4 × 1.5–2 mm increasing to 6 mm and erect in fruit, distinctly 3–5-veined with veins dark green (reddish) and between veins light green (aging pinkish), translucent-white membranous (aging pale pink) and short-ciliate on margins, upper surface glabrous and

lower surface short-strigose and glandular-hairy,  $\pm$  hooded at tip, with a subterminal fingerlike projection 0.3–0.5 mm long having 1 or 2 bristles at tip, the bristles 0.3–0.8 mm long; **petals** 5, spreading, ovate to elliptic, 5.2–6.4  $\times$  2.1–3.2 mm, rose lavender to reddish purple slightly darker at base, ciliate, short-clawed or abruptly tapered, palmately 3-veined, the veins glossy and darker than rest of petal; **nectaries** 5, appressed to bases of stamens (alternate with petals), flattish and semicircular, ca. 0.3 mm wide, dark red or dark purplish red; **stamens** 5 fertile opposite sepals, staminodes 5 opposite petals, free; filaments erect, broadly awl-shaped long-tapered above midpoint, 2.5–3.1 mm long, ca 0.4 mm wide at base, light yellowish green at base fading to whitish at midpoint of flared base, then reddish purple fading to almost white at tip, appressed to pistil, below midpoint expanded portion thin, the slender tip thicker; anthers versatile, dithecal,  $\pm$  oblong, 0.7–1 mm long, yellow in bud aging dark reddish purple, cordate at base, rounded at tip, longitudinally dehiscent; pollen reddish orange to orange; staminodes like filaments but slightly narrower and shorter, flatter with tip not narrow, 2–2.7 mm long; **pistil** 1, ca. 2.5 mm long, densely pubescent; ovary superior, 5-lobed, the  $\pm$  ovoid in outline, ca. 1  $\times$  1 mm at anthesis, green but densely covered with white pubescence (hairs  $<$  0.5 mm long), 5-chambered, each chamber with 2 ovules attached to center; style column ca. 1 mm long with 5, free, spreading, fingerlike tips ca. 0.5 mm long, deep reddish purple, densely pubescent at base and shorter pubescent to puberulent above, the branches stigmatic, papillate on inner surface. **Fruit:** schizocarp, of 5 dry, 1-seeded mericarps, before dehiscence erect, needlelike (= beaks) with swollen base (= seed bodies), mericarp indehiscent and separating from base by coiling upward from the persistent (= awn), central style column, 33–46 mm long before splitting; seed body narrowly oblanceoloid or club-shaped, 5–6.5  $\times$  0.8–1 mm, sharply pointed at base, cinnamon-brown, densely hirsute, with 2, acutely-rimmed, circular concavities at tip (1 on each side of seed chamber), sometimes with a crescent-shaped concavity or furrow below each circular concavity, the concavities stalked-glandular (glabrous); awn initially 28–40 mm long, brown to purplish brown, becoming tightly helically twisted forming an erect shaft with to 8 gyres to above midpoint and having an arching terminal portion, short-strigose on both surface or sometimes with some very long, straight “hairs” trapped by gyres along shaft. Early November–late June.

Naturalized. Annual widespread and extremely common throughout the range, occurring in any highly disturbed situation or waste area but also potentially found in any terrestrial habitat where fruits have been transported by humans and pets. *Erodium cicutarium* forms basal rosettes following the earliest rains during fall; it does well even on the thinnest soils, and can cover a plot and thereby outcompete other annuals. Flowers can be found during November, but well-watered plants tend to have wider blossoms during spring than during drought months or on plants of diminutive stature.

B. A. Prigge & A. C. Gibson