

Elymus caput-medusae L. subsp. *caput-medusae*, MEDUSA HEAD. Annual, fibrous-rooted, 1–several-stemmed at base, ascending to erect, in range 16–55 cm tall; shoots having several basal leaves and evenly spaced cauline leaves. **Stems (culms):** cylindric, slender, to 1 mm diameter, wiry, exposed internodes aging red-purple, at least lower stem somewhat glaucous next to nodes. **Leaves:** alternate distichous, simple with sheath; sheath open with strongly overlapping margins nearly to top, < internodes (upper portion of internodes + nodes exposed), glabrous, with lobes (auricles) at top, the auricles narrowly triangular, 0.3–0.5 mm long, whitish to light tan; ligule membranous, truncate, 0.2–0.4 mm long, glabrous; blade linear, 20–70 × ± 1–2 mm, the widest at base, flat aging inrolled into cylinder, not keeled, entire and pilose-ciliate on margins, long-tapered to tip, parallel-veined with veins raised on upper surface, upper surface short-pilose to pilose along veins, lower (exposed) surface smooth and glabrous. **Inflorescence:** spikelets, in terminal, spikelike panicles, panicle dense, ± inversely narrowly conic in outline formed by 2 types of ascending awns, 55–110 mm long, shorter awns throughout (= glumes) + much longer awns of lemmas (1 per spikelet); clusters alternate distichous at 5–20+ nodes, each node with 2 spikelets having 4 fused glume awns on outer face; spikelets of 2–3 forms, the lowest 1–several nodes empty or with 2 inconspicuous, abortive, white, threadlike spikelets (= an awned, slender lemma), grading to nodes with 2 larger, sterile but nearly full-sized, mostly white spikelets (absent), and the terminal portion of array having pairs of fertile, green spikelets; peduncle < 0.5 mm diameter, wiry, glabrous or minutely scabrous approaching tip, with an inconspicuous, terminal rim having papillae; rachis several-ridged for each internode, with internodes 1–2 mm long, glossy, short-scabrous along principal ridges. **Spikelet:** 2-flowered on full-sized spikelet with lower floret sterile or fertile, upper floret highly reduced to a slender lemma lacking an awn terminal on rachilla 1.5–2 mm long; breaking above glume awns; **glumes:** = 2 awns per spikelet, positioned on outer side of spikelet and fused at base to each other and to adjacent pair at node, ascending, stiff and with backward-pointing short teeth, 11–24 mm long, increasing upward, green aging straw-colored; **lemma** awned, at the lowest node (= 1 sterile floret) slender and whiskerlike with diminutive lemma body and a flexible, crooked, terminal awn 20–40 mm long; lemma of the larger, sterile spikelets broadly lanceolate, to 6 mm long, greenish white, with strongly inrolled margins, 3(5)-veined, the 3 veins purplish red on rounded back, short-scabrous, the awn 40–55 mm long, green, flattened with short ascending teeth on margins; lemma of fertile floret broadly lanceolate, 6–7.5 mm long + terminal awn, green, with strongly inrolled margins, 5-veined with veins purplish red on rounded back, short-scabrous, the awn 55–75+ mm long, green, flattened with short ascending teeth on margins; lemma of upper floret (fertile spikelet) linear, to 3 mm long; **palea** of larger sterile floret to 2 mm long, 2-veined, not 2-keeled, whitish; palea of fertile floret lanceolate, ca. 6.5 mm long, as long as body of lemma, inrolled around flower, strongly 2-keeled, 2-veined, membranous with green veins, concave between keels, slightly notched at tip, short-scabrous along keels and short-hairy between keels from midpoint. **Fertile flower:** bisexual; **perianth (lodicules)** 2, free, ovate and bulbous below midpoint with a minor shoulder at midpoint, ca. 1.2 mm long, with side next to palea flat, translucent, short-ciliate on margin from midpoint; **stamens** 3, free; filaments threadlike, ca. 2 mm long, colorless; anthers basifixed, dithecal, 0.6–0.7 mm long, light greenish yellow, longitudinally dehiscent; pollen light yellow to pale yellow; **pistil** 1; ovary

superior, inversely conic, 1×0.7 mm, pale green, lower 2/3 glossy and smooth, upper portion weakly 2-lobed to truncate, dull, and short-hairy, flattened on palea side, 1-chambered with 1 ovule; styles 2, spreading and exerted from open floret below midpoint, ± 1.4 mm long, somewhat conic at base and conspicuously shaggy-plumose on inner side from above base, colorless. **Fruit:** achene (caryopsis), dispersed enclosed within floret including long lemma awn and with persistent rachilla, oblong compressed front-to-back, 4–5.2 mm long, brown, with groove on 1 side, short-hairy at tip. Mid-April–late May.

Naturalized. Annual first collected in a small patch in May, 2010 at the head of a hiking trail on SMMNRA Circle X Ranch. *Elymus caput-medusae* is also treated as a species of *Taeniatherum*. Elsewhere *E. caput-medusae* is a noxious weed, and steps were taken immediately to extirpate this odd-looking grass, an Old World species, so that it would not spread into native habitat in range. Medusa head receives its name from the ascending glume and lemma awns on the inflorescence. It has pairs of spikelets subtended by the two pairs of glume awns that are fused. At the lowest node or nodes, the spikelets are slender; usually but not always, the next node or two has a pair of larger, whitish, sterile spikelets; and above the green spikelets are mostly presumed to be fertile.

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