Cyperus involucratus Rottb., UMBRELLA PLANT. Perennial herb, ± aquatic, rhizomatous, fibrous-rooted, not rosetted, cespitose, several–many-stemmed at base, unbranched, erect, in range < 90 cm tall; shoots with several (−5) bladeless basal leaves + (4−)6–19 leaflike inflorescence bracts forming a reproductive canopy at tip of stem, bladeless leaves covering 50−210 mm of stem base, glabrous; rhizomes horizontal, thick, covered with fibrous bracts, internodes barely separating vertical shoots. **Stem (culm):** 3-sided (slender stems) to subcylindric, to 8 mm diameter, often with convex facets, green, tough, appearing smooth but ± scabrous. **Leaves:** alternate, sheath only; sheaths closed, forming a V-shaped opening ca. 1/4 length from tip, parallel-veined with veins slightly raised approaching tip and having evident cross venation, lower sheaths purple-black, upper sheaths scarious and straw-colored + green-veined (purplish-veined), minutely purple-spotted on upper margins; ligule absent. **Inflorescence:** spikelets clustered at ends of axes on radiating branches in a terminal, leafy paniculate array, array appearing umbel-like, to 80 mm across, primary raylike branches (4−)6−25 + several clusters of sessile spikelets at tip, each primary branch subtended by an inflorescence bract (terminal spikelet clusters bractless) + a sheathing “bract” (prophyll), glabrous; main axis condensed, vertical, 5−20 mm long, whitish to light green; inflorescence bracts appearing helically alternate, spreading, leaflike but sheathless and fused to whitish axis, linear, 30−270 × 1.3−14 mm, the widest at or above midblade, successively shorter and narrower from base to tip of array, bracts >> reproductive canopy, green bracts flat, minutely scabrous and short-serrate on margins, parallel-veined with principal veins slightly sunken on upper surface and raised and scabrous on lower surface; primary branch axes (including rachis) to 70 mm long, lower branches spreading and upper ones ascending and reduced upward, slightly compressed front-to-back forming lateral edges to cylindric, some flat on upper side, with pulvinus at base on upper side and prophyll above pulvinus, pulvinus bulbous and greenish, primary prophyll 1.5−8.5 mm long, sheathing for 1−4.5 mm, sheath closed, the larger ones strongly 2-keeled, light greenish but straw-colored on upper portion, minutely toothed along keels especially above midpoint, many-veined with veins becoming reddish or purplish above pulvinus, orifice V-shaped on lower side, acute to rounded or truncate at tip but sometimes splitting and 2-toothed on upper side, upper prophylls reduced, whitish-membranous, lacking pigmented veins; bract subtending secondary branches scalelike to triangular and partially clasping, 1−3 mm long, acute to acuminate at tip and white-scarious, with veins converging at tip; secondary branch axes (including rachis) to 18 mm long, with secondary prophyll smaller than of primary branches and with or without pulvinus; third-order branchlets (if present) to 3 mm long, each subtended by reduced bract + prophyll, membranous and lacking pigmented veins, alternate distichous cluster of spikelets 2−7, to 10 mm across. **Spikelet** (3−4-order) 8−18(−28)-flowered, flattened lanceolate to lanceolate-ellipsoid, in range 3.5−6.5 × 1.5−2 mm, with alternate distichous bractlets (floral scales) subtending sessile flowers; **glumes** (bracts subtending spikelet) 2, lower glume deltate, ± 1 mm, upper glume broader and sheathing, membranous, rounded at tip; spikelet without pulvinus and not jointed, axis (rachilla) internodes < 0.5 mm long, minutely and incompletely 4-winged, wing segments scarious and brownish, persistent;
bractlet appressed, overlapping, sheathing and clasping, ± prow-shaped, 1.4–1.9 mm long, closely 2-keeled from base and merging at or just below tip, concave and green between keels, pale green and membranous between keel and margins, obtuse or minutely pointed at tip, 3-veined with lateral veins pronounced on keels, glabrous, deciduous. **Flower:** bisexual; **perianth** absent; **stamens** 3, free, exserted; filaments linear, 1.5–2.2 × 0.2 mm, translucent, flat; anthers basifixed, dithecal, 0.8–1.2 mm long (including sterile appendage at tip), yellow to light yellow, appendage narrowly tapered and whitish to reddish, longitudinally dehiscent; pollen yellow to light yellow; **pistil** 1; ovary superior, 3-angled ellipsoid, 0.35–0.6 mm long, greenish, 1-chambered with 1 ovule; style 1.2–1.5 mm long, 3-branched, the branches exserted, ± equal, ascending or later coiled, threadlike, 0.7–1 mm long, light yellow. **Fruit:** achene, 3-sided ellipsoid, 0.7–0.8 × 0.4–0.6 mm, light yellowish brown to light brown, broadly tapered at base, broadly acuminate to obtuse at tip, finely textured.

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