

*Gnaphalium palustre* Nutt., WESTERN MARSH CUDWEED, LOWLAND CUDWEED. Annual, taprooted, 1–several-stemmed at base, with basal branches decumbent or ascending (unbranched individual  $\pm$  erect), in range 6–23 cm tall; shoots with cauline leaves, terminated by densely clustered leaves and inflorescence, densely tomentose-woolly with loose, long, soft, white hairs, lacking glandular hairs, unscented. **Stems:** cylindric, to 3 mm diameter, not straight, tough, pale green densely covered with white woolly hairs matted and longitudinally oriented. **Leaves:** helically alternate (opposite at first node above cotyledons), simple, petiolate (lower leaves) and sessile, without stipules; petiole mostly indistinct from blade; blade narrowly spatulate (the lowermost leaves) to oblanceolate-oblong,  $10\text{--}35 \times 3\text{--}8$  mm,  $>$  internode, not clasping at base, entire and sometimes wavy on margins, obtuse or acute at tip, inconspicuously pinnately veined (veins not raised), densely white-woolly, both surfaces green beneath hairs. **Inflorescence:** heads, in terminal, hemispheric clusters of 7–25+ heads (glomerule), cluster mostly 10–20 mm across,  $\pm$  flat-topped, at start of first anthesis  $<$  the uppermost cauline leaves, with immature heads buried in dense wool, head disciform, of 40–130 pistillate peripheral flowers and 4–7(–8) bisexual central flowers, bracteate, densely white-woolly throughout; bract subtending each branch, branchlet, and head leaflike, oblanceolate to  $\pm$  obovate, 4–12 mm long, grading to the short, narrowly oblanceolate bracts on ultimate branchlets; peduncle short increasing to 2 mm long in fruit; **involucre** broadly bell-shaped,  $2.5\text{--}3.5 \times 2\text{--}3.5$  mm, phyllaries many in  $\pm$  4 series, initially appressed, narrowly oblanceolate to oblong, green and herbaceous below midpoint drying brownish, translucent above midpoint shiny white-scarious at acute tips, long-woolly on outfacing green area, tips ascending to spreading (appearing like perianth); receptacle flat, without bractlets (paleae), with short bases beneath flowers. **Peripheral flower:** pistillate, radial, 0.2 mm across; **calyx (pappus)** of 8–12 capillary bristles, bristles not united at base, 1.6–2.1 mm long, typically  $>$  corolla, whitish translucent; **corolla** minutely toothed,  $1\text{--}1.3 \times 0.2$  mm; tube angular in  $\times$ -section, pale greenish; teeth  $\pm$  0.1 mm long, pale yellow to pale green-yellow; **stamens** absent; **pistil** 1; ovary inferior, sausage-shaped,  $0.2\text{--}0.3 \times 0.2$  mm, greenish, glabrous, 1-chambered with 1 ovule; style slightly exerted from corolla but  $<$  appressed pappus bristles, **nectary** swelling at base, style 2-branched, the branches spreading to somewhat recurved. **Central flower:** bisexual, radial, 0.4–0.5 mm across; **calyx (pappus)** of  $\pm$  12 capillary bristles, bristles not united at base, 1.6–2.1 mm long, typically  $>$  corolla, whitish translucent; **corolla** 5-lobed; tube-throat cylindric,  $1.2\text{--}1.5 \times < 0.5$  mm, yellowish green (greenish at base), slightly constricted beneath throat, tube faintly 5-ribbed; lobes ascending to spreading, acute,  $\pm$  0.2 mm long, light greenish yellow; **stamens** 5, fused to top of corolla tube, slightly exerted; filaments  $\pm$  0.3 mm long; anthers united into a cylinder surrounding style, basifixed, dithecal,  $\pm$  0.7 mm long, yellow, longitudinally dehiscent; pollen yellow, sticky; **pistil** 1; ovary inferior, sausage-shaped,  $\pm 0.3 \times 0.1$  mm long, greenish, glabrous, with short, rimlike base, 1-chambered with 1 ovule; style spreading, = corolla, **nectary** swelling at base, style 2-branched, the branches included,  $\pm$  0.3 mm long, yellow, truncate. **Fruits:** cypselae, monomorphic, sausage-shaped,  $0.35\text{--}0.5 \times 0.15\text{--}0.2$  mm, glossy brownish, with minute rim at base; pappus bristles 8–12, fine, 1.5–2.1 mm long, silvery-white, not united at base and falling

separately, with upward-pointing barbs (antrorse); with persistent corolla. Late May–mid-August.

Native. Annual in range occasionally found thriving during summer in drying mud, often occurring in a dense population on the fringe of standing water or in a depression where water had collected. *Gnaphalium palustre* is densely woolly, so that the white hairs often hide the blade surface and stem, and numerous heads form a dense, woolly cluster at the tip of each shoot. The leaflike bracts surrounding the cluster of heads are approximately as long or sometimes slightly longer than the corresponding flowering branchlet. The genus *Gnaphalium* is now considered distinct from *Pseudognaphalium*; *Gnaphalium* s.s. has woolly phyllaries, the pappus bristles are not united and fall separately from the top of the ovary, and there are only four to seven bisexual flowers.

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