

Agoseris grandiflora (Nutt.) Greene var. *grandiflora*, GRASSLAND AGOSERIS. Perennial herb, taprooted on woody caudex, rosetted with ascending to erect leaves, acaulous, several-many-stemmed at base, each branch having an erect scape with a solitary head, in range (35-)45-85 cm tall; shoots with only basal leaves, densely soft-hairy, mostly villous; latex milky, copious; caudex + taproot thick and tapered, deep-seated, to 20 mm diameter, brown with whitish flesh, bearing some persistent leaf bases. **Stems:** mostly belowground with new basal leaves produced at ground level. **Leaves:** helically alternate, simple often with alternate to opposite lobes, petiolate, without stipules; petiole with winglike margins, to 80 mm long, sheathing, in \times -section U-shaped with margins erect to spreading, somewhat ridged especially along lower midvein, often purplish, ciliate to tomentose on margins; blade narrowly oblanceolate (linear), 40-270 \times 10-25 mm, long-tapered at base, low-dentate to having \pm spreading to ascending lobes 1-7 mm long, lobes widely spaced and toothlike on margins, margins entire approaching tip, acute to obtuse at tip, pinnately veined with midrib channeled on upper surface and conspicuously raised and lateral veins slightly raised on lower surface, densely villous, upper surface with a whitish midrib. **Inflorescence:** heads solitary, terminal on long peduncle (scape) (erect in bud), head ligulate, 15-25 mm across, of 40-500 flowers, flowers withering by midday, bracteate; peduncle many-ridged, ridges low and slowly twisting along axis, lower peduncle often striped or blushed rose-purple, sparsely hairy except densely woolly at base and just below head, hollow, sometimes with 1 bract < 10 mm below head, that bract sessile, oblanceolate to lanceolate, to 60 mm long, entire to toothed on margins; bracts surrounding head (calyculus) absent; **involucre** bell-shaped, at anthesis 15-25 mm wide increasing and narrowly conic in fruit, phyllaries many in 4+ series, unequal, phyllaries of outer 3 series ascending, obovate to ovate or elliptic, 9-13 \times 3-5 mm, green to red-tinged, with midvein slightly raised, soft-hairy and often woolly at base, phyllaries of inner series acute-lanceolate, 14-24 mm long, >> outer phyllaries with some increasing to 38 mm long in fruit, green or purplish red with whitish to pale green margins, glabrous or with hairs along midvein or at tip; receptacle flat to somewhat concave becoming strongly convex in fruit, without bractlets (paleae), shallowly pitted with a low crown of short teeth surrounding each sunken ovary, sparsely short-hirsute, hollow; receptacle lacking bractlets (paleae), having persistent, dark brown stalks after fruits abscise. **Ligulate flower:** bisexual, bilateral, ca. 1.5 mm across, 13-15 mm long, in range mostly < inner phyllaries; open after sunrise and closing by midday; **calyx (pappus)** of > 50 fine capillary bristles in 2-3 series, at anthesis 6-7.5 mm long, silky white, erect and unbranched, inconspicuously barbed; **corolla** minutely 5-toothed, 10-11.5 mm long; tube cylindric, (4-)6-7 \times \pm 0.35 mm, white, glabrous or with several hairs approaching throat or also on throat; limb ca. 1.5 mm wide, throat and limb bright yellow, of the outermost flowers purple-red on lower surface; **stamens** 5, fused to top of corolla tube; filaments ca. 0.7 mm long, yellow; anthers fused into cylinder surrounding style, exerted, basifixed, dithecal, \pm 1.3 mm long, orange-red, with short tails at base and minute appendages at tip, longitudinally dehiscent; pollen yellow-orange; **pistil** 1; ovary inferior, ellipsoid to narrowly obovoid, with narrow beak 1-1.5 mm long, greenish, 10-ribbed, the ribs having minute teeth; style exerted 2 mm, 2-branched, reddish, the branches short and with barblike hairs. **Fruit:** cypselae, with silvery white pappus in spheric display 55-65 mm diameter, beaked; fruit body oblanceoloid and conspicuously 10-pleated, 3.5-7 \times 0.7-0.9 mm, brown to pale brown,

oblique, calluslike, and whitish at base, ribs straight and edge minutely toothed (nearly smooth); beak slender, in range, 13–17 mm long, ca. 3× fruit body, gently twisted, finely ribbed above fruit body, mostly lacking barbs; pappus bristles ascending, straight, in range 7–11 mm long, silky white. Early April–early June.

Native. Perennial herb occurring commonly throughout the range in native or partially to highly disturbed grasslands. *Agoseris grandiflora* persists in disturbed habitats by having a deep-rooted caudex that produces new shoots every year. Unlike dandelion (*Taraxacum*), the ligulate flowers are shorter than the inner phyllaries, so they do not spread, and therefore the head appears not to be very showy. The head of flowers is displayed in the morning, remains somewhat parted for several hours, and then normally closes before noon, except on dim and rainy days; each flower gives rise immediately to a developing fruit. The involucre increases in basal diameter and length, and eventually the phyllaries become reflexed beneath the spheric display of pappus, overall resembling dandelion (*Taraxacum*) but larger.

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