

This subspecies resembles subsp. *Andersonii* in its leaves and in the broad, strongly imbricated bracts of its involucre, but the heads are the same size as those of subsp. *typica*, while the achenes are not at all beaked.

9f (6). *Crepis runcinata* subsp. *Andersonii* (Gray) comb. nov. (Fig. 12.)—Leaves as in subsp. *imbricata*, but often larger, up to 2 cm long and 5 cm broad; stems mostly robust, 2.5–5 dm high; inflorescence generally with 6–20 heads; involucre 13–21 mm high, glandular-pubescent; inner bracts more or less strongly attenuate at the apex; outer bracts similar, 2–3 mm broad, the longest about 2/3 the length of the inner; achenes 6–8 mm long, pale yellow to reddish brown, more or less strongly rostrate at the apex; pappus 6–9 mm. (*Crepis Andersonii* Gray, Proc. Am. Acad. 6:553, 1865.)

Western Nevada and adjacent California, in damp, alkaline meadows. The following have been seen: NEVADA: near Carson City, Ormsby County, *Anderson* in 1865 (type G, US); about Carson City, alt. 1446 m, *Baker 1062* (UC, G); Reno, Washoe County, *Brandegee* in 1883 (UC); Washoe Lake, *Bryant* (UC); Soda Springs, Esmeralda County, *Shockley 266* (UC, G, DS). CALIFORNIA: Sierra County, *Lemmon* in 1874 (G); Loyalton, Sierra County, *Eastwood 7792* (CA); Purdy, Sierra County, *Heller & Kennedy 8666* (UC, G, DS, Nev). The specimens from Sierra Valley differ strikingly from typical *C. Andersonii* in their deeply pinnatifid leaves, which, along with the stems, are strongly hispidulose.

Subsp. *Andersonii* is by far the most marked variant of *C. runcinata*, but the specimens now available indicate that it intergrades with the other subspecies at the limits of its range. Although the beaked achenes have been generally used to keep it distinct from all its relatives, there is every transition from truly beaked achenes to those merely attenuate at the apex, even in plants otherwise typical of subsp. *Andersonii*, while well-developed beaks occur on some plants cited below which have involucre typical of *C. runcinata*. The large involucre and attenuate bracts are also in their most typical form strikingly different from those of *C. runcinata*, but the specimens from Purdy and from Washoe County show all degrees of transition in these characteristics. The following may be considered transitional forms (cf. *C. subcarnosa* Greene, Pittonia 3:107, 1896; *C. runcinata ciliosa* Greene, *ibid.* ? ex descr.): NEVADA: Lemmon Valley, Washoe County, *Kennedy 2061*, part (UC), involucre transitional from subsp. *Andersonii* to subsp. *imbricata*; Humboldt Wells, *Greene* in 1893 (type of *C. subcarnosa* Greene, UC), leaves and achenes as in subsp. *Andersonii*, involucre more as in subsp. *typica*, whole plant densely hispidulose.

9g (7). *Crepis runcinata* subsp. *Hallii* subsp. nov. (Fig. 13)—Folia glauca, 6.5–27 cm longa, 1.5–3 cm lata, oblanceolata vel anguste obovata, in petiolum latum alatum angustata, dentata vel subpinnatifida; capitula 4–14 pro inflorescentia; involucre 9–13 mm longa, minute glandulosa; phylla exteriora brevia, anguste deltoidea; phylla interiora angusta, apice acuta nec acuminata vel attenuata; achenia 4.5–6.5 mm longa, ad apicem longe attenuata vel rostrata.



FIG. 13. *Crepis runcinata* subsp. *Hallii*. *a*, from Hall 11824, plant, $\times \frac{1}{4}$. *b-h*, from the type Hall 12281: *b*, *c*, basal leaves, $\times \frac{1}{2}$; *d*, fruiting head, $\times 2$; *e*, old heads and peduncles, $\times 2$; *f*, *g*, achene and pappus-bristle, $\times 8$; *h*, outer and inner involucre bract, outer face, $\times 4$. *k-m*, from Linsdale 624: *k*, corolla, $\times 4$; *k'*, detail of ligule-teeth, $\times 50$; *l*, anther-tube, $\times 8$; *m*, detail of appendages, $\times 32$.

Leaves glaucous, 6.5-27 cm long, 1.5-3 cm broad, oblanceolate or narrowly obovate, gradually narrowed to a short, broadly winged petiolar base; closely and coarsely dentate or subpinnatifid, the teeth slightly whitish-tipped; stems 20-62 cm high; inflorescence of 5-14 heads on elongate ascending peduncles; involucre 9-13 mm high, minutely glandular, outer bracts narrowly deltoid, the longest about $\frac{1}{2}$ the length of the inner; inner bracts 1.2-1.8 mm broad, acute but not acuminate or attenuate; achenes 4.5-6.5 mm long, chestnut brown, short-rostrate or at least strongly tapering toward the apex.

Eastern California to central Nevada. The following have been seen: CALIFORNIA: in *Distichlis* sod, Benton, Mono County, *Hall 12281* (type, UC no. 313486); Adobe Valley, north of Benton, *Hall 11824* (UC); Bishop, Inyo County, *Davidson 2570* (UC); near Bishop, *Jones in 1927* (Po); Bridgeport, Mono County, *Blake 11837* (UC). NEVADA: between Battle Mtn. and Austin, alt. 1950 m, Lander County, *Hitchcock 698* (US); southeast of Millet, Nye County, alt. 1660 m, *Linsdale 613, 624* (UC); Trail Creek, White Mtns., Esmeralda County, alt. 2530 m, *Duran 2501* (UC).

This subspecies occurs south of the range of subsp. *Andersonii* and west of that of subsp. *glauca*. Both in morphological characteristics and in geographic distribution it is intermediate between these two subspecies. Although most specimens have the achenes definitely beaked as in subsp. *Andersonii*, the involucre are much smaller and the bracts are narrower and not attenuate. Occasional specimens, like those of Blake from Bridgeport, have the achenes hardly at all beaked, and these are very difficult to distinguish from subsp. *typica*. However, the more closely dentate, broader-based, glaucous leaves are quite distinct from most of subsp. *typica*, while the big gap in the range of the two subspecies, and the very different ecological habitats that they occupy, are further reasons for keeping them separate.

10. *Crepis pleurocarpa* Gray, Proc. Am. Acad. 17:221, 1882 (Fig. 15)

Root slenderer than in other species of this group; leaves and stem usually greenish rather than grayish, tomentulose or glabrate, sometimes glandular-pubescent; basal leaves 7-28 cm long, usually runcinate-pinnatifid with deltoid or lanceolate, acute or acuminate, entire or dentate lobes, the lobes generally separated by shallow U-shaped sinuses, the terminal segment rather short, 1-5 (-7) cm long, acute or acuminate, but rarely attenuate; stems 1.5-6 dm (mostly 2-4 dm) high, mostly divaricately branching near the base; cauline leaves few and all but the lowest much reduced in size; heads 7-40, generally 15-30 in an inflorescence, mostly on elongate peduncles; involucre 8.5-17 mm high; inner bracts generally 5, in a few forms 6-8, rather broad (2-4 mm), acute, or somewhat obtuse at the apex; deep green or blackish in drying, with conspicuous scarious margins, these densely floccose-tomentulose, the central portion glabrate; florets 5-8, in the larger heads of some forms 10-12; outer bracts broadly deltoid, small, the longest 1.5-4 mm long,