

many characters, and the existence of intergrading variants (cf. m.v. 19, 20, 22) are good reasons for its recognition as a subspecies.

18. Nearly glabrous; leaves sparsely tomentose on midrib and petiole; involucre bracts tomentose on margin. *Pau* in 1925 (BML), Teruel Prov. (¶), Aragon reg., Spain.

19. Plant 4.5 dm high, very robust; stem 3-furcate; leaves coarsely and irregularly dentate or closely lobed, lobes acute, dentate. *Font Quer* in 1923 (Bar), Montgo, calcareous rocks, 300 m, in regno Valentini (= Mongo, between Denia and Javea, Alicante), Spain.

20. Leaves up to 23 cm long, oblanceolate, coarsely and irregularly dentate or runcinately lobed, segments acute or obtuse; heads smaller than usual. *Gros* in 1922 (Bar, UC), Sierra de la Nieve, Ronda, Spain.

27, *e. Crepis albida macrocephala* (Willk.) Bab., Univ. Calif. Publ. Bot. 19: 399. 1941. Plant (1.5) 2.5–7 dm high, robust, ± tomentulose and/or hispidulous with or without glands, or glabrate; stems simple or 1–3-furcate, striate, fistulose; caudical leaves oblanceolate, acute or obtuse, denticulate, sinuately or runcinately dentate, or pinnately or bipinnately lobed, the lateral segments oblong, acute and dentate, petiole short or long, with a narrow wing above the broader base; cauline leaves lanceolate, sessile or nearly so, acute or acuminate, or bractlike; peduncles in furcate plants 5–25 cm long; heads not so large as in some forms of subsp. *scorzoneroides* or subsp. *longicaulis*; involucre cylindrical, up to 13 mm wide at middle; outer bracts 12–18, ovate; inner bracts 14–24, lanceolate, acute, or acuminate; corolla 18–22 mm long; ligule 2–3 mm wide; corolla tube about 8 mm long; anther tube (4.5) 6 × 1.5 mm dis.; appendages 0.65–0.85 mm long, narrow, acute; filaments 0.5 mm longer; style branches 3.5–4 mm long, 0.15 mm wide; achenes chestnut brown, 8–12 mm long; pappus 9–11 mm long. Flowering May–Aug.; flowers sulfur yellow. Chromosomes,  $2n = 10$ . See fig. 50.

*Barbahausia macrocephala* Willk., Bot. Zeitung, 5(49): 860. 1847.

*Crepis albida* var. *major* Willk. et Lange, Prod. Fl. Hisp. 2: 248. 1870, part.

*Barbahausia albida* var. *macrocephala* Rouy, Fl. Fr. 9: 210. 1905.

Catalonia, Spain, coastal mountains and lower Pyrenees, calcareous formations, 700–1000 m alt.

Spain: Catalonia, Monserrat, *Font Quer* in 1917 (Bar) type locality; Monserrat, *Fremolo* in 1869 (Bar); Monserrat, Vallfogona de Rincorb, *Garriga* in 1918 (Bar); Catalonia, Igualada, *Font Quer* in 1926 (Bar); Catalonia (¶), Castella Nova, Espinosa de los Monteros, *Font Quer* in 1926 (Bar); Catalonia, between Baños de S. Vicente and Sierra del Cadi, along trail from Arseguello to Ansovell, *Babcock 391* (UC).

Besides being definitely characterized by its tall stature and its comparatively short, deep brown achenes, this group of variants occupies a definite geographic area. The less robust specimens and some of the leaf variations, however, exhibit intergradation with subsp. *typica*; and the whole ensemble certainly requires its inclusion here as a subspecies.

27, *f. Crepis albida longicaulis* subsp. nov. Planta robusta 2.5–5.7 dm alta glanduloso-hispida vel -hispidulosa et tenuiter tomentulosa; caules 1–2-furcati fistulosi; pedunculi (5) 10–28 cm longi; folia caudicalia interdum 23 cm longa 5 cm lata oblanceolata vel lanceolata; folia caulina lanceolata acuminata dentata vel pinnatifida; capitula magna; involucre cylindrica 20–25 mm longa 17–18 mm lata, squamis exterioribus 14–20 ovatis vel lanceolatis acutis, interioribus 14–28 lanceolatis acutis vel acuminatis; corolla circa 20 mm longa, ligula flavida circa 12 mm longa 2.5 mm lata, tubo pubescenti, pilis brevis crassis acicularibus; antherae 5–6 mm longae flavae; rami styli circa 4 mm longi flavi; achaenia fulva vel straminea 12–18 mm longa 10–20-costata; pappus albus vel flavidus copiosus persistens, setis inaequalibus 6–11 mm longis.

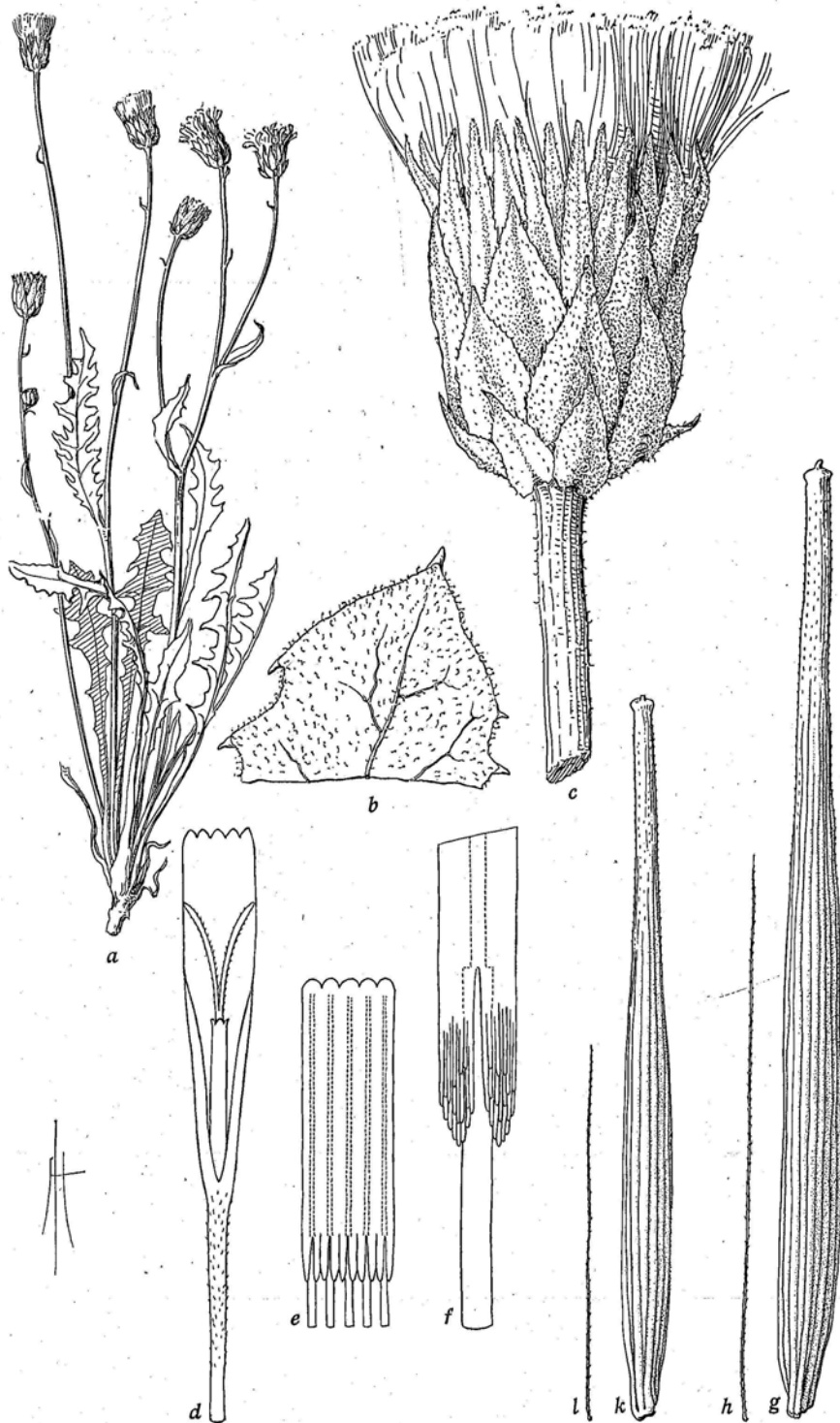


Fig. 51. *Crepis albida longicaulis*, from type (UC 346610): *a*, plant,  $\times \frac{1}{4}$ ; *b*, tip of caudal leaf,  $\times 2$ ; *c*, fruiting head,  $\times 2$ ; *d*, floret lacking ovary,  $\times 4$ ; *e*, anther tube,  $\times 8$ ; *f*, detail of appendages,  $\times 32$ ; *g*, *h*, *k*, *l*, 2 achenes, with pappus setae,  $\times 8$ .

Plant robust, 2.5–5.7 dm high, glandular-hispid or -hispidulous and sparsely tomentulose; stems 1–2-furcate, striate or sulcate, fistulose; peduncles (5) 10–28 cm long, with 1 or 2 small scarious bracts, not thickened at base of head; caudical leaves up to 23 cm long, 5 cm wide, oblanceolate or lanceolate, acute or obtuse, denticulate or irregularly runcinate-dentate or lobed, the segments triangular, acute and dentate, petiole long or short, alate; cauline leaves lanceolate, acuminate, denticulate, dentate or lobed; heads very large; involucre cylindrical, 20–25 mm long, 17–18 mm wide at middle; outer bracts 14–20, ovate or ovate-lanceolate, acute; inner bracts 14–28, lanceolate, acuminate or acute; corolla 20 mm long; ligule 2.5 mm wide; corolla tube 8 mm long, beset with short stout acicular hairs; anther tube (5) 6 × 1.7 mm dis.; appendages 0.75 mm long, oblong-acute; filaments 0.75 mm longer; style branches 4 mm long, 0.15 mm wide; achenes tawny with yellowish beak or straw colored, 12–18 mm long, 10–20 ribbed, ribs rounded and very finely spiculate, slightly swollen below pappus disk, the basal callus whitish; pappus 6–11 mm long in the same head, copius, white or tinged yellow, persistent. Flowering June; flowers sulfur yellow (?), but, according to Lacaita, "very pale lemon yellow, some almost whitish." See fig. 51.

Central Spain, Segovia and Avila Provinces; and variants which intergrade with subsp. *scorzoneroides* in Alicante Prov. (see m.v. 22).

**Spain:** Avila, Pinar de Hoyocasero (Avila, toward Sierra de Gredos), Lacaita 378/27 (UC) type locality; Segovia, Sierra de Guadarama, Cercidillo, gravelly soil in woods and in rocky fissures, montane, *Vicioso et Beltran* in 1912 (Bar, UC); Alicante (?), Mt. Nariola, Gros in 1923 (Bar, UC) m.v. 21; Alicante, Bernia Mts. (near Benissa), Gros in 1923 (Bar) m.v. 22.

Although represented by very few collections, this subspecies is clearly set off from the others by its tall stature and very large heads, by the yellowish-green color of the herbage and the similarity of the achenes to those of subsp. *typica*.

#### *Minor Variants of C. albida longicaulis*

21. More tomentose than the type of the subspecies, as well as densely glandular-hispidulous, tomentum yellowish; leaves lanceolate, acute, runcinately dentate, teeth triangular, acute. Gros in 1923 (Bar, UC), Mt. Nariola, Alicante (?), Spain.

22. Leaves more as in subsp. *scorzoneroides*, broadly obovate, obtuse, dentate, teeth retrorse, acute; tomentulose only on midribs and lower part of stems, densely gland-hispidulous; achenes broader and less definitely beaked than in type of subspecies, straw-colored, rather strongly ribbed. Gros in 1923 (Bar), Bernia Mts. (near Benissa), Alicante, Spain.

#### *Relationship*

*Crepis albida*, in its tall forms, like subsp. *longicaulis*, shows more resemblance to *C. achyrophoroides* than to any other species, but the 2 species differ in many characters. In *C. albida* the heads are larger, the involueral bracts mostly broader, the florets larger, and the achenes are very gradually long-attenuate to the apex, instead of being definitely beaked, as in *C. achyrophoroides* and *C. elymaitica*. Thus, *C. albida* is the most primitive of the 3 species morphologically; but it is not closely related to any of the more primitive species in the genus.

#### 28. *Crepis achyrophoroides* Vatke

Linnaea, 5: 514. 1875. (Pl. 6. Figs. 52, 53.)

Perennial, 5–12 dm high; root strong, vertical, woody, elongated; caudex 12–15 mm wide, brown-scaly, simple or 1-furcate; caudical leaves about 15 cm long, 4–5 cm wide, oblanceolate, obtuse or acute, runcinately or sinuately dentate and ± denticulate, gradually attenuate into a very short winged petiole, pubescent on