

## Relationship

*Crepis spathulata* is closest to *C. Salzmannii* and, like it, is related, but less closely, to *C. Clausonis*. From both of these species *C. spathulata* is very distinct in the low stature, the few and larger heads, and the much larger florets. It is less close to the other more primitive species of this section.

171. *Crepis Salzmannii* sp. nov.

(Pl. 27. Fig. 263.)

Herba perennis 1.5–3.5 dm alta; radix recta lignea; caudex ligneus 1–1.5 cm latus foliatus simplex vel furcatus; folia caudicalia 8–16 cm longa 1.3–2.5 cm lata oblanceolata vel spathulata gradatim attenuata in petiolum alatum obtusa vel acuta denticulata pubescentia, pilis brevis pallidis eglandulosis; folia caulina similia vel pinnatifida superiores lanceolata acuta vel acuminata late auriculato-amplexicaulia, auriculis dentatis pubescentibus; caulis centralis erectus teretus sulcatus pubescens ab basi remote 4–5-ramosus, ramis strictis vel arcuatis oligocephalis; caules laterales arcuati vel semidecumbentes; pedunculi 1.5–5.5 cm longi stricti tomentosi interdum scabriduli; capitula erecta parva ad mediocria multiflora; involucre campanulata circa 10 mm longa 6 mm lata tomentosa interdum setulosa vel glanduloso-pubescentia, squamis exterioribus 8–10 aequalibus circa 2-plo brevioribus lanceolatis acutis, interioribus 12–16 lanceolatis obtusis ventraliter pubescentibus in dorso carinatis et spongioso-incrassatis; receptaculum areolatum breve ciliatum; corolla circa 10 mm longa, ligula 1.5 mm lata, tubo 3 mm longo pubescenti pilis brevis acicularis; antherae 3.5 mm longi; rami styli 2 mm longi virentes; achaenia straminea 4–5 mm longa subtereta in rostrum crassiusculum attenuata 10-costata ad apicem spiculata; pappus albus 4–5 mm longus 2-seriatus tenuis mollis deciduus.

Perennial, 1.5–3.5 dm high; root vertical, woody; caudex woody, 1–1.5 cm wide, simple, leafy, bearing 1 erect stem or ultimately divided with 2–3 lateral stems; caudical leaves 8–16 cm long, 1.3–2.5 cm wide, oblanceolate or spatulate, obtuse or acute, obscurely to definitely denticulate, gradually attenuate into a winged petiole with broader clasping base, pubescent on both sides with short pale glandless hairs, finely ciliate on margin; lower cauline leaves similar or  $\pm$  pinnatifid, middle and upper lanceolate to linear, acute or acuminate, broadly auriculate-amplexicaul, auricles denticulate or dentate, pubescent; central axis erect, lateral stems arcuate or semidecumbent, terete, sulcate, pubescent or puberulent, remotely 4–5-branched beginning near base, branches strict or arcuate, shortly branched at summit, bearing few-headed cymose clusters; peduncles 1.5–5.5 cm long, strict, striate, tomentulose or tomentose, sometimes scabridulous; heads erect, small to medium, many-flowered; involucre campanulate, about 10 mm long, 6 mm wide at middle, canescent-tomentose, sometimes setulose or gland-pubescent; outer bracts 8–10, nearly equal,  $\frac{1}{3}$ – $\frac{1}{2}$  as long as inner bracts, lanceolate, acute, scarious-margined, sometimes setulose; inner bracts 12–16, in 2 ranks, inner broadly scarious-margined, lanceolate, obtuse, white-ciliate at tip, pubescent on inner face with appressed shining hairs, becoming carinate and spongy-thickened dorsally in fruit; receptacle areolate-fimbriate, fimbriae low, shortly ciliate; corolla about 10 mm long; ligule 1.5 mm wide; teeth 0.1–0.15 mm long; corolla tube 3 mm long, pubescent with acicular hairs 0.1–0.6 mm long, extending onto base of ligule; anther tube  $3.5 \times 1.1$  mm dis.; appendages 0.75 mm long, narrow, acute; filaments 0.5 mm longer; style branches 2 mm long, 0.1 mm wide, green; achenes stramineous or pale brown, 4–5 mm long, 0.4–0.8 mm wide, subterete, broadest near base, gradually attenuate upward into a rather coarse beak 0.5–1 mm long, with expanded pappus disk, con-



Fig. 263. *Crepis Salzmanni*, from *Font Quer 739* (UC 485069): a, plant,  $\times \frac{1}{2}$ ; b, lower cauline leaf, upper face,  $\times 1$ ; c, peduncle and head,  $\times 2$ ; d, outer face, d', inner face of an inner involucre bract,  $\times 4$ ; e, floret lacking ovary,  $\times 4$ ; f, anther tube,  $\times 8$ ; g, detail of appendages,  $\times 32$ ; h, k, l, 2 achenes and a pappus seta,  $\times 8$ .

stricted at the calloused base, 10-ribbed, ribs rather strong, rounded, finely spiculate toward the apex; pappus white or dusky, 4-5 mm long, exceeding the involucre, 2-seriate, fine, soft, deciduous. Flowering Jan.-Apr.; flowers yellow.

N.W. Morocco and maritime Algeria.

The type of *C. Salzmannii* was previously identified by others as *Barkhausia taraxacifolia* and as *B. spathulata* (?), but see discussion of relationship below. The plant from Oran, identified by Battandier and Trabut (Fl. Alg., 563. 1888-1890) as *C. spathulata* Guss., may be this species. It is unfortunate that the material used for the drawings (fig. 263) was not taken from the type; but the specimen used (*Font Quer 739*, cited below) corresponds fairly well with the type, if allowance is made for the later date of collection (Apr. instead of Feb.) and for minor variations in leaf shape. A photograph of the type is in Herb. UC.

**Morocco:** meadows around Tangier, *Salzmann misit*, Aug., 1825 (K ex herb. J. Gay) type; Tangier and Tetuan, *Hooker* in 1871 (G); *ibid.*, *Hooker* in 1871 (K) m.v. 1, p.p.; Tandja (= Tangier), Mt. Djebel Quebir, *Font Quer 739* (UC) as *C. intybacea* Brot.; Daxar Riffien (Anyhera), fields, *Vidal and Lopez 42* (Bar). **Algeria:** maritime, *Ball* in 1856 (G).

#### Minor Variant of *C. Salzmannii*

1. Plant low, caudical leaves lyrate-pinnately parted, terminal segment hastate, lateral segments retrorse, and peduncles gland-pubescent. Although the plant is only 1.2 dm high, the habit, heads, flowers, and fruits are typical. The difference in the leaves, although striking, is no greater than the leaf shape variations found in many species of *Crepis*. The plant was identified by *Hooker* as a variety of *C. taraxacifolia* approaching *C. taraxacoides*. *Hooker* in 1871 (K), Tangier and Tetuan, N. Morocco.

#### Relationship

*Crepis Salzmannii* is intermediate between *C. spathulata* and *C. Clausonis*. It shows more resemblance to the latter in size and habit of the plant, size of corolla, and surface of the receptacle, whereas it resembles the former in size and shape of the achenes, pubescence of the corolla tube, and shape of the anther appendages. Yet *C. Salzmannii* is certainly distinct from its two nearest relatives in the simple but recalcrescent caudex, the auriculate-amplexicaul cauline leaves, and the congested cymose clusters of flower heads. It also differs from the two species mentioned above in its strictly spring-flowering habit. These three species are all distinct from *C. Fontiana*, *C. Bourgeaui*, and the other species of this section with shortly beaked achenes.

#### 172. *Crepis Clausonis* (Pomel) Batt. et Trab.

Fl. Alg. 564. 1888-1890. (Fig. 264.)

Perennial, 1-3 dm high; root vertical, woody, 0.3-1 cm wide, elongated, strongly branched; caudex very short, densely pitted with old leaf scars; caudical leaves 8-15 cm long, 1.5-3 cm wide (in cult. spec. up to 32 cm long, 5 cm wide), oblanceolate, acute, gradually attenuate into a long winged petiole, denticulate or sinuately dentate, teeth corneous-mucronate, glabrous or finely pubescent with short pale glandless hairs; cauline leaves small, linear, or bractlike; stem or stems decumbent, cymosely branched and rebranched, branches several, remote, 1-3 headed, tomentulose, finely gland-pubescent or glabrescent; peduncles 1.5-12 cm long, strict or arcuate, tomentulose, often gland-pubescent, not thickened below fruiting heads; heads erect, medium, about 100-flowered; involucre campanulate, 10-12 mm long, 6-8 mm wide at middle in fruit, dark green, canescent-tomentose, finely gland-pubescent; outer bracts 6-8, nearly equal, about  $\frac{1}{3}$  as long as the inner, lance-linear, acute, somewhat scarious; inner bracts 12-14, lanceolate, acute or acuminate, membranous-margined, often with a few short black setae near apex, appressed-pubescent on inner face, becoming convex and spongy-thickened at the base at full