

crinita. In this connection he says in part: "The discovery of numerous intermediate forms necessitates the fusion even of Solander's plant (*C. auriculata* Sol.) together with my own two former species (*C. comata* and *C. dubia*) into one, though the shaggy bearded involucreal scales and peduncles of extreme forms, such as the original type of *C. comata* in BH. (= BM) give that variety a most distinct and peculiar aspect. It passes however gradually back through β (= var. *nigricans*), which seems to be the normal form of the species, into the comparatively denuded state, (= var. *laevigata*, cf. m.v. 76); the main distinctive features of all three in common being the peculiar light shining apple-green foliage, the mostly low habit, branched from base, the (tomentum) of peduncles and involucre, the peculiar black setules, the pale yellow flowers. The leaves vary from undivided to runcinate-pinnatifid in each of the three forms." The intermediate forms mentioned by Lowe are represented by m.v. 72-75.

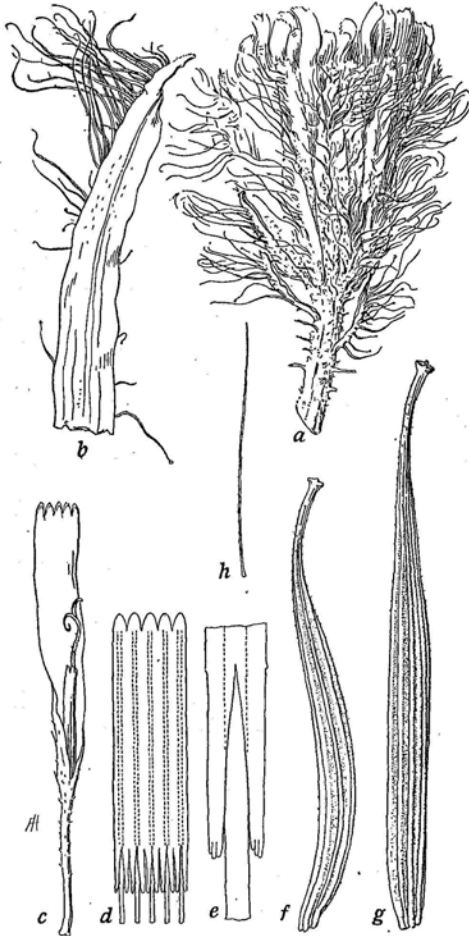


Fig. 282. *Crepis vesicaria andryaloides*, m.v. 71, from Mandon 150 (Bo, as *C. comata* [Lowe] Banks et Sol.; *C. hieracioides* var. *crinita* Lowe): a, head, $\times 2$; b, inner involucreal bract, $\times 4$; c, floret lacking ovary, $\times 4$; d, anther tube, $\times 8$; e, detail of appendages, $\times 32$; f-h, achenes and pappus seta, $\times 8$.

branched from near base upwards; branches long, arcuate, branched at extremity with 2-5 heads; peduncles short; heads medium, many-flowered; involucre 10-12 mm high, canescent-tomentose; outer bracts 10, about $\frac{1}{3}$ as long as the inner, with median dorsal black setae, becoming scarious; inner bracts 12, lanceolate, obtuse, with median dorsal black setae; ligules light yellow; style branches green; mature achenes lacking; pappus 5 mm long. Other hybrid forms, exhibiting more characteristics of subsp. *taraacifolia*, were found in the same district. Babcock 223b (UC), N. coast, in grass near road east of Passo d'Areia, Madeira.

181, g. *Crepis vesicaria proleptica* subsp. nov. Herba perennis vel biennis 5-7 dm alta; caudex ligneus 0.5-1.5 cm latus; folia caudalia circa 30 cm longa 5 cm lata

72. Closely similar to m.v. 71 in heads, florets, and achenes, but it also resembles m.v. 70 in habit and leaf shape (cf. pl. 33, b). Mason 97 (Bo), no definite locality, Madeira.

73. Robust, as in m.v. 71, gland-hispid on upper stem and less hairy on upper leaves and heads; achenes 6-7 mm long, dark brown. Mason 216 (Bo), no definite locality, Madeira.

74. Resembles m.v. 71 in the hirsute involucre and uppermost leaves; plant tall (probably 6 dm high) and slender; cauline leaves resembling those of m.v. 71. Mason (Bo), no definite locality, Madeira.

75. Branches more strictly erect; cauline leaves acuminate auriculate; heads up to 5 mm wide at base; involucre bracts sparsely pubescent; achenes dark brown. Lowe in 1848 (G), seacliffs, Entroza, Madeira.

76. (*C. hieracioides* var. *laevigata* Lowe, loc. cit.) Plants 2-2.5 dm high; caudal leaves lanceolate, acute or acuminate, narrowly petiolate with broad clasping base; stem branched from middle or near base upwards; branches short, 1-3-headed; involucre 10 mm high; ligules pale lemon yellow, somewhat lax, making the flower heads appear somewhat larger than in the typical form; achenes and pappus typical. (Fig. 281, a-f.) Babcock 222a (UC), N. coast, along path from Sao Vicente to Ponta Delgada at Passo d'Areia; Babcock 229b (UC), N. coast, cliff east of Entroza, about 333 m, Madeira.

77. A hybrid of subsp. *andryaloides* \times *taraacifolia*. Plant 2.5 dm high; caudal leaves oblanceolate, pinnately parted with narrow acute lateral segments; cauline leaves linear with broad lacinate auriculate-amplexicaul base; stem

oblanceolata dentata vel lyrato-pinnatifida; folia caulina similia vel sessilia amplexicaulia; caulis erectus 8–10-ramosus, ramis inferis elongatis ad summitatem cymose ramosis; pedunculi 3–11 cm longi stricti vel arcuati hispidulosi; capitula 50–60-flora; involucria 11–13 mm longa 6–8 mm lata nigro-virida setulosa; squamae exteriores 6–8 lanceolatae, interiores 12–16 lanceolatae ad maturitatem carinatae et spongioso-incrassatae; receptaculum alveolatum strigosum, setis crassis flavis; corolla 15–16 mm longa, ligula 1.75 mm lata flava in dorso purpurea, tubo 4 mm longo pubescenti; antherae 4 mm longae; stylus flavus, ramis 3 mm longis nigro-viridis; achaenia uniformia virido-flava 7–8 mm longa 0.6 mm lata in rostro crassiusculo gradatim attenuata 10-costata; pappus albus 5 mm longus 2-seriatus.

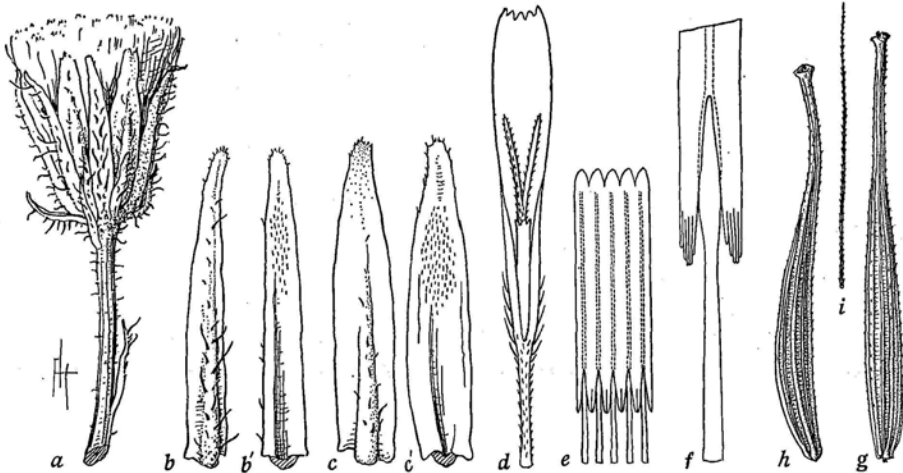


Fig. 283. *Crepis vesicaria proleptica*, from type (K): a, fruiting head, $\times 2$; b, b', c, c', 2 inner involucrial bracts, outer and inner faces, $\times 4$; d, floret lacking ovary, $\times 4$; e, anther tube, $\times 8$; f, detail of appendages, $\times 32$; g-i, achenes and pappus seta, $\times 8$.

Plant 5–7 dm high; caudex woody, 0.5–1.5 cm wide; caudical leaves about 30 cm long, 5 cm wide, oblanceolate, acute, sinuate-dentate or lyrately pinnately parted, gradually attenuate into a long winged petiole; upper cauline leaves lanceolate, acuminate, auriculate-amplexicaul; stem erect, remotely 8–10 branched beginning near base, lower branches elongated, strict, cymosely branched above, forming few-headed open corymbiform clusters; peduncles 3–11 cm long, somewhat thickened near head, hispid with green glandless setules; heads erect, rather large, 50–60-flowered; involucre 11–13 mm long, 6–8 mm wide, cylindric-campanulate, dark green, the dorsal keels and setae of the inner bracts dark green; outer bracts 6–8, lanceolate, acute, $\frac{1}{4}$ – $\frac{1}{3}$ as long as the inner; inner bracts 12–16, strongly nerved and densely pubescent on inner face with coarse shining hairs, becoming carinate dorsally, spongy-thickened near base; receptacle strigose, the trichomes coarse, yellow, shining; corolla 15–16 mm long; ligule 1.75 mm wide, yellow, reddish-purple on outer face; teeth 0.1–0.2 mm long; corolla tube 4 mm long, densely pubescent with papilliform hairs and, near summit and base of ligule, with several-celled acicular hairs up to 0.7 mm long; anther tube 4×1.25 mm dis.; appendages about 0.7 mm long, lanceolate, acute; filaments 0.75 mm longer; style branches 3 mm long, 0.15 mm wide, dark green; achenes greenish-yellow, 6–7 mm long, 0.6 mm wide, 10-ribbed, the beak coarse and definitely ribbed to the apex; pappus 5 mm long, 2-seriate. See pl. 34; fig. 283.

N.W. Morocco, where it is known from only two localities, one certainly and the other probably at a low elevation.

A photograph of the type is in Herb. UC.

This subspecies, like the next, is of special interest because it appears to be a connecting link between the more advanced subspecies, such as subsp. *taraxacifolia* and *typica*, on one hand, and, on the other hand, such primitive species as those comprising sec. 7, particularly *C. achyrophoroides* and the tall, single-stemmed forms of *C. albida*. It is with the idea that this subspecies represents a transitional stage in the evolution of the genus and, in this sense, that it was preliminary to the more recently evolved forms that it is given the name subsp. *proleptica*. I was at first inclined to recognize it as a species; but the discovery of the very similar subsp. *congenita*, which is evidently hybridizing naturally with subsp. *taraxacifolia*, and the fact that the only other specimen of subsp. *proleptica* known to me besides the type is somewhat atypical, seemed sufficient reason to recognize both subsp. *proleptica* and *congenita*.

As already stated, this subspecies is intermediate between *C. achyrophoroides* of Abyssinia and *C. vesicaria taraxacifolia* of N.W. Africa and S.W. Europe. It also resembles somewhat the taller subspecies of *C. albida* which are endemic in Spain. Apparently, *C. vesicaria proleptica* represents an intermediate phase in the evolution of subsp. *typica* and *taraxacifolia* and other widespread species the advanced phylogenetic position of which is marked by greater reduction in size of heads, flowers, and fruits, and further specialization of the finely beaked achenes.

The robust appearance of the plants of subsp. *proleptica* naturally suggests that this may be a polyploid species. But in the type the pollen is abundant and the grains are 3-pored, regular in size, averaging about 28μ in diameter. (In two normal plants of subsp. *taraxacifolia* the pollen was 3-pored and averaged $26-28\mu$ in diameter.) In m.v. 78 the pollen is also abundant, but the grains are irregular, ranging from 21 to 32μ and averaging 27μ in diameter. Such irregularity could be caused by either environmental or genetic conditions; the size of the grains seems to indicate that this variant is a diplont, but it may be a hybrid of some sort.

That subsp. *proleptica* shows strong affinity with *C. achyrophoroides* is shown by the habit of the plant, the size and shape of the leaves, the indumentum of leaves, stem, involucre and corolla, and the straw-colored, coarsely beaked achenes. That it is a more advanced form is shown by the more numerous, smaller heads, the reduced outer involucral bracts, the smaller florets and achenes, and the shorter, finer, white pappus. These latter features and the green style branches of subsp. *proleptica* indicate an approach to subsp. *taraxacifolia*.

Morocco: Casablanca Prov., Rabat R., *Grant* in 1888 (K, UCf) type; around Tangier, rich meadows, *Salzmann misit Aug., 1825* (K) m.v. 78.

Minor Variant of C. vesicaria proleptica

78. Caudical leaves lyrate pinnately parted, terminal segment rhomboid, subcordate, lateral segments broad, rounded, recurved; involucre with or without dark setules; outer bracts somewhat broader than in the type of the subspecies and with wider scarious margins; corolla 16 mm long; corolla tube pubescent, as in type, except that the acicular hairs at summit of tube and base of ligule are more numerous, coarser, somewhat tortuous, and up to 1 mm long. Otherwise typical. *Salzmann misit, Aug., 1825* (K), fertile meadows around Tangier, Morocco.

181, *h. Crepis vesicaria congenita* subsp. nov. Herba perennis vel biennis 5-7 dm alta; caudex ligneus 0.5-1.5 cm latus; folia caudicalia 12-30 cm longa 3-7 cm lata, oblanceolata dentata vel subpinnatifida; folia caulina similia vel sessilia amplexicaulia; caulis erectus 8-10-ramosus, ramis inferis elongatis ad summitatem cymose