

Crepis papposissima sp. nov. Herba perennis 2–4.5 dm. alta; radix tenuis lignea; caudex brevis ca. 8 mm. latus foliosus; folia caudicalia 8–12 cm. longa 1–2 cm. lata oblanceolata acuta irregulariter dentata vel subpinnatifida gradatim attenuata petiolata tomentulosa glanduloso-pubescentia, pilis brevibus; folia caulina similia vel linearia et bracteiformia; caulis erectus sulcatus infra glanduloso-pubescentia cymose ramosus, ramis brevibus pedunculatis arcuatis tomentulosis 1–ad 3-bracteatis; capitula erecta multiflora; involucrium campanulatum in fructum 12–15 mm. longum 5–10 mm. latum tomentosum, squamis exterioribus 6–8 valde inaequalibus linearibus subnigris, interioribus 13 lanceolatis acutis in dorso tomentosis et in virga media subnigris ventrale sparse strigosis in maturitate spongioso-incrassatis; receptaculum alveolatum fimbriatum, fimbriis albociliatis; corolla 17 mm. longa, ligula 2 mm. lata, dentibus 0.2–0.3 mm. longis, tubo 5 mm. longo pubescente; antherae 5 mm. longae; rami styli 2.5 mm. longi flavi; achaenia straminea 7–10 mm. longa 0.8–1 mm. lata ad apicem attenuata ad basim truncata 12- ad 15-costata, costis glabriusculis inaequalibus; pappus copiosus subalbus 8–9 mm. longus multiseriatus, setis inaequalibus deciduis.

Perennial, 2–4.5 dm. high; root slender, woody; caudex ca. 8 mm. wide, leafy; caudical leaves 8–12 cm. long, 1–2 cm. wide, oblanceolate, acute, irregularly dentate or shallow-lobed with acuminate teeth, gradually attenuate into a winged petiole, broader at base, shortly gland-pubescent, canescent-tomentulous, becoming scarious; lower cauline leaves similar to the caudical or longer, broader and acuminate, middle and upper ones linear or bractlike; stem erect, terete, sulcate, gland-pubescent below, canescent-tomentulous, cymosely branched from near or above the mid-region, or, later, from lower down, branches short, the upper rather stout, pedunculate or rarely 2-headed, arcuate, gradually thickened upward, canescent-tomentose, often with 1–3 linear dark bracts; heads erect, rather large, many-flowered; involucre campanulate, 12–15 mm. long, 5–10 mm. wide near base in fruiting heads, 10–12 mm. long, 3–5 mm. wide in anthesis; outer bracts 6–8, very unequal and always with 1 or 2 nearly as long as the inner, linear, dark green; inner bracts 13, lanceolate, acute, dorsally canescent-tomentose with a median dark region bearing short dark setae, scarious at margins, becoming carinate and somewhat spongy-thickened toward the base, glabrous on inner face except for a few white shining strigae; receptacle alveolate, fimbriate, the fimbriae white-ciliate; corolla in marginal florets 17 mm. long; ligule 2 mm. wide; ligule teeth 0.2–0.3 mm. long; corolla tube 5 mm. long, pubescent with papilliform and acicular hairs up to 0.2 mm. long, pubescence extending onto ligule; anther tube 5 mm. long, 1.5 mm. wide when slit and opened out; appendages 0.5 mm. long, lanceolate; filaments short, extending beyond the appendages only 0.4–0.5 mm.; style branches 2.5 mm. long, 0.1 mm. wide, attenuate, yellow; achenes stramineous or tawny, 7–10 mm. long, 0.8–1 mm. wide, slightly curved, gradually attenuate to the apex, with expanded thickened pappus disk, constricted above the pale-calloused truncate base, 12- to 15-ribbed, the ribs rounded, nearly smooth or spinulose near apex, unequal with 3 somewhat stronger ones on ventral face; pappus yellowish white en masse, 8–9 mm. long, abundant, multiseriate, $\frac{2}{3}$ extruded at maturity, the setae unequal, the coarsest 45μ wide at base, stiff but pliable, deciduous. Flowering June–July; flowers yellow. (Fig. 3.)

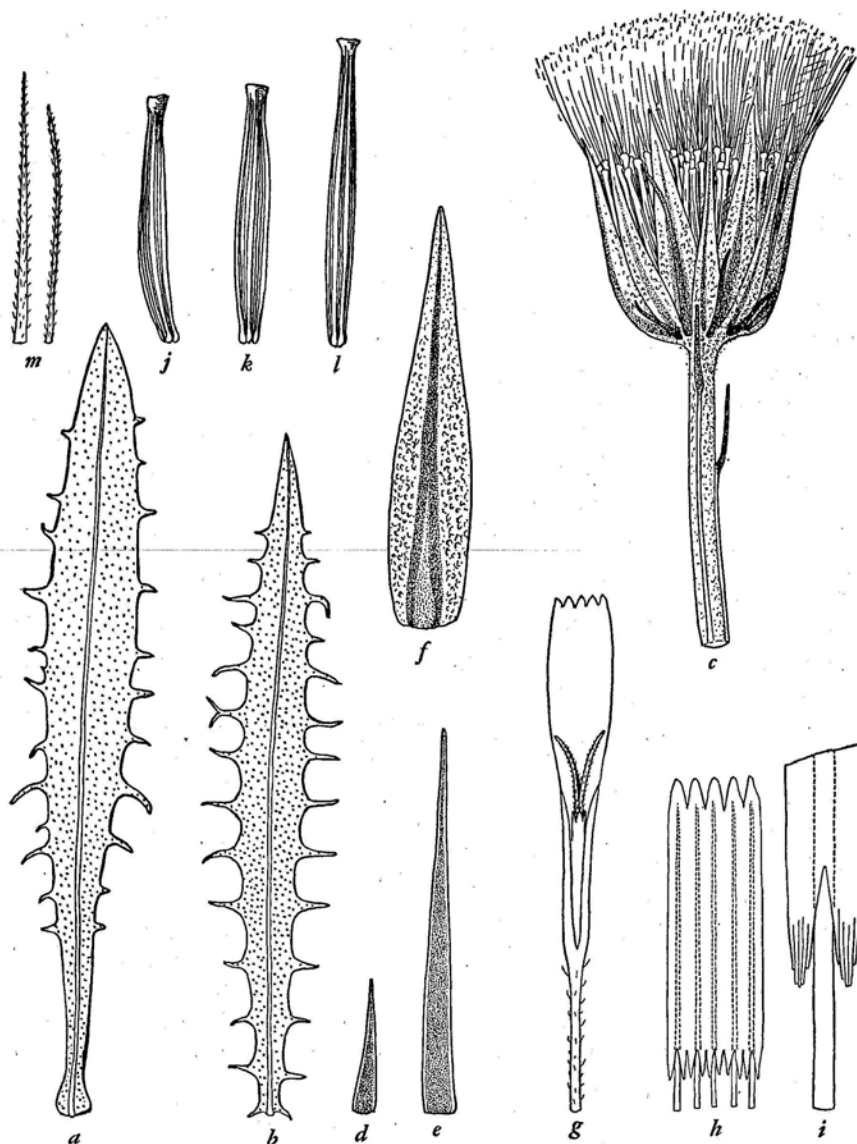


Fig. 3. *Crepis papposissima*, from type specimen. *a* and *b*, caudical and cauline leaves, $\times 1$; *c*, mature head, $\times 2$; *d* and *e*, shortest and longest outer involucre bracts, $\times 4$; *f*, inner involucre bract, $\times 4$; *g*, floret lacking ovary, $\times 4$; *h*, anther tube opened out, $\times 8$; *i*, detail of appendages, $\times 32$; *j* and *k*, marginal achenes, lateral and ventral faces, $\times 4$; *l*, inner achene, $\times 4$; *m*, coarsest and finest pappus setae, $\times 4$. (Drawings by the author; inking by Miss Anna Hamilton.)

Type.—Northeastern Iran: Mazanderan (Asterabad region), Shah Kuh (southeast of Asterabad), edge of field, July 19, 1940, *Koelz 16449* (USNA: type, UC).

Known only from the type collection of three plants, the tallest of which has both flowers and mature fruits.

This distinctive species is fairly similar to *C. songorica* and *C. sonchifolia* of

section 10, Berinia, subsection C, Corymbiforae, and is therefore considered to be one of the more primitive members of this section. Like *C. songorica* and *C. darvasica*, it serves as an indicator of the route of migration from north-central Asia that presumably was followed by the ancestors of this group of species. Its most distinctive features are (1) the very abundant, pale yellowish white and well-extruded pappus; (2) the few and very unequal, linear, dark green outer involucre bracts; (3) the shining white strigae on the inner face of the inner bracts; (4) the very short filaments and anther appendages; and (5) the deeply toothed or subpinnatifid leaves. Abundant pollen is produced and the grains are regular, three-pored and about 32μ in diameter. These pollen features may indicate that the plants are diploid and that the chromosome number is perhaps $n=5$ or 6.

Crepis sancta (L.) Babc. subsp. *obovata* (Boiss. et Noë) Babc. One collection of typical plants, *Edelberg 1906* (C), from east-central Afghanistan (exact locality not given), extends the known geographic distribution of this subspecies to the east and north from Iran and Baluchistan. Another collection of a single plant (without achenes), *Edelberg 1544* (C), from northeastern Afghanistan, is atypical in being 18 cm. high; in this specimen mature achenes were not seen.