

near base, scabrous with very short black glandless setules; outer bracts absent or displaced to summit of peduncle; inner bracts 9–10, lanceolate, acute or obtuse, white-ciliate at tip, membranous-margined, appressed-pubescent on inner face with short fine shining hairs, becoming indurate but not much thickened in fruiting heads; receptacle (?); corolla 11–12 mm long; ligule 1.5 mm wide; teeth nearly equal, 0.2 mm long; corolla tube about 5 mm long, densely pubescent with very short papilliform hairs and near summit a few coarse acicular hairs up to 0.5 mm long; anther tube 3.7×1 mm dis.; appendages 0.6 mm long, lanceolate, acute, united; filaments equal, 0.75 mm longer; style branches 1–1.25 mm long, 0.1 mm wide, attenuate, yellow; achenes (almost mature) reddish-brown, 5.5 mm long, 0.75 mm wide, fusiform, strongly attenuate upward to the 0.3 mm wide summit, with white pappus disk 0.4 mm wide, constricted above the prominently calloused oblique hollow base, 12-ribbed, ribs rounded, densely spiculate toward summit; pappus yellowish-white, about 6 mm long, 2-seriate, setae nearly equal in length and width, about 33μ wide at base, rather soft, persistent. Flowering Dec.; flowers yellow.

Crepis Rueppellii var. *centrali-africana* R. E. Fr., Svensk Bot. Tidskr. 22: 366. 1928.

Known only from the type specimen, which is the "specimen originale" of *C. Rueppellii* var. *centrali-africana* R. E. Fr. However, not only this, but still another species (cf. *C. Mildbraedii*) was determined by Fries as the above-named variety of *C. Rueppellii*, whereas the other two specimens cited by Fries under this variety are actually of that species.

Monomorphic.

Belgian Congo: Ruanda reg., Rusisi-Tal, mountains at south end of Lake Kivu, in short-grass meadows, about 1500 m, *Fries 1507* (Upsala, UCF).

Relationship

In the subtending outer involueral bracts, *Crepis Friesii* is very distinct from every other species of *Crepis*, but it is certainly related to several other central African species, most closely, perhaps, to *C. congoensis*. From the latter it is easily distinguished by the smaller, nearly entire leaves, the single flower stem, the much smaller heads, and the shorter unbeaked achenes, as well as by the peculiar involucre. From *C. Rueppellii* this species differs greatly in habit and leaf characters, as well as in certain floral details, especially the much shorter style branches, and most of all in the scarcely thickened involueral bracts and the reddish, unbeaked achenes. From *C. Mildbraedii* it is equally distinct in its very small, almost entire leaves, its fewer, larger heads, larger florets, and flower parts, and its larger, reddish achenes with coarser ribs and longer, equal pappus setae. Since the pollen grains are regular, 3-pored, and about 26μ in diameter, this is very probably a diploid species.

54. *Crepis Mildbraedii* sp. nov.

(Fig. 91.)

Herba perennis circa 5 dm alta; radix anguste napiformis elongata 7 mm lata; caudex 5 mm latus fuscus; folia caudicalia 10 cm longa 3 cm lata elliptica obtusa irregulariter denticulata in petiolum anguste alatum attenuata pubescentia; folia caulina 2 (bracteeae exclusae) 7 et 2 cm longa linearia sessilia; caulis rectus ad basim glanduloso-pubescentis remote 3–5-ramosus super partem mediam, ramis strictis 1–3-capitulis; inflorescentia aggregata subcorymbiformis; pedunculi 1.5–7 cm longi tenui ad summitatem scabridulosi; capitula recta parva circa 30-flora; involucri campanulata 6–7 mm longa circa 4 mm lata tomentulosa scabridulosa, squamis exterioribus 5–6 aequalibus circa 2 mm longis et 0.4 mm latis linearibus, squamis interioribus 10 inaequalibus lanceolatis obtusis ventraliter glabris in maturitate

paululum carinatis et induratis non incrassatis; corolla 9 mm longa, ligula flava 5.5 mm longa 1 mm lata, tubo dense pubescenti, pilis breve papilliformibus et acicularibus; antherae flavae 3 mm longae; rami styli 0.75 mm longi flavae; achaenia (paene matura) nigro-fusca circa 5 mm longa 0.5 mm lata \pm attenuata 10-costata, costis tenuis spiculatis; pappus flavidus 5 mm longus 2-seriatus, setis inaequalibus ad basim 15–33 micron latis, molliuseculus barbellulatus persistens.

Perennial, about 5 dm high; root narrowly napiform, elongated, 7 mm wide below the contracted summit; caudex 5 mm wide, covered with brown bases of old leaves; caudical leaves up to 10 cm long, 3 cm wide, elliptic, obtuse, irregularly or retrorsely denticulate, teeth mucronate, attenuate into a narrowly winged petiole with broader clasping base, \pm pubescent on both sides with brown or yellow glandless setiform hairs and some shorter gland hairs on midvein beneath; cauline leaves 2, excluding bracts, the lower 1–3 cm above base, 7 cm long, linear, acute, denticulate, and shallowly 4-lobed near base, sessile, the upper 18–35 cm above base, subtending the first branch, 2 cm long, linear, acuminate, sessile; stem erect, terete, striate, sparsely gland-pubescent near base, glabrous above, remotely 3–5-branched above middle, branches strict, 1–3-headed, aggregate inflorescence a paniculate subcorymbiform compound cyme; peduncles 1.5–7 cm long, slender, sparsely tomentulose, finely scabridulous near summit; heads erect, small, about 30-flowered; involucre campanulate 6–7 mm long, about 4 mm wide at middle, sparsely tomentulose, scabridulous; outer bracts 5–6, nearly equal, about $\frac{1}{3}$ as long as inner bracts, 0.4 mm wide, linear, acute, darker at apex; inner bracts 10, unequal, innermost slightly longer, lanceolate, obtuse, darker and white-ciliate at apex, glabrous on inner face, with numerous short black glandless setae scattered over the outer face, becoming somewhat carinate and indurate but not spongy-thickened in fruit; receptacle (?); corolla about 9 mm long; ligule 1 mm wide; teeth 0.15–0.25 mm long; corolla tube 3.5 mm long, densely pubescent with short coarse papilliform or acicular hairs; anther tube 3×1 mm dis.; appendages 0.5 mm long, lanceolate, acute; filaments 0.4 mm longer; style branches 0.75 mm long, 0.1 mm wide, acute, yellow; achenes (nearly mature) dark brown, about 5 mm long, 0.5 mm wide, \pm attenuate upward, with slightly expanded pappus disk, 10-ribbed, ribs narrow, paler, finely spiculate; pappus yellowish-white, about 5 mm long, 2-seriate, setae unequal in length and width (15–33 μ wide at base), rather soft, persistent. Flowering Oct. (?) or Jan. (?); flowers golden yellow.

Belgian Congo and Uganda, apparently rare.

Known only from 2 specimens. The type had been previously identified by Fries as *C. Rueppellii* var. *centrali-africana*, along with the type of *C. Friesii* and 2 other specimens (cf. *C. Rueppellii*, m.v. 5 and 6). The second specimen differs from the type only in having the caudical leaves glabrous instead of pubescent and in the stem being wholly glabrous. Also, the florets are slightly smaller, but the only florets available on this specimen are from a small secondary head; the flower parts are similar to those of the type. The achenes are more nearly mature than in the type specimen and are similar but about 6 mm long.

Monomorphic.

Belgian Congo: north end of Lake Kivu, Kissenye, Ninagongo, plateau, lava substrate, 1800–2000 m, *Mildbraed 1276* (B) type. **Uganda:** Kipayo and Utakapunon, grassland, hilltop, 1212 m, *Dümmer 697* (K).

Crepis Mildbraedii is closest, perhaps, to *C. Friesii*, from which it is easily distinguished by the larger dentate leaves, the more numerous smaller heads, smaller florets and flower parts, and the notably smaller brown achenes with finer ribs and

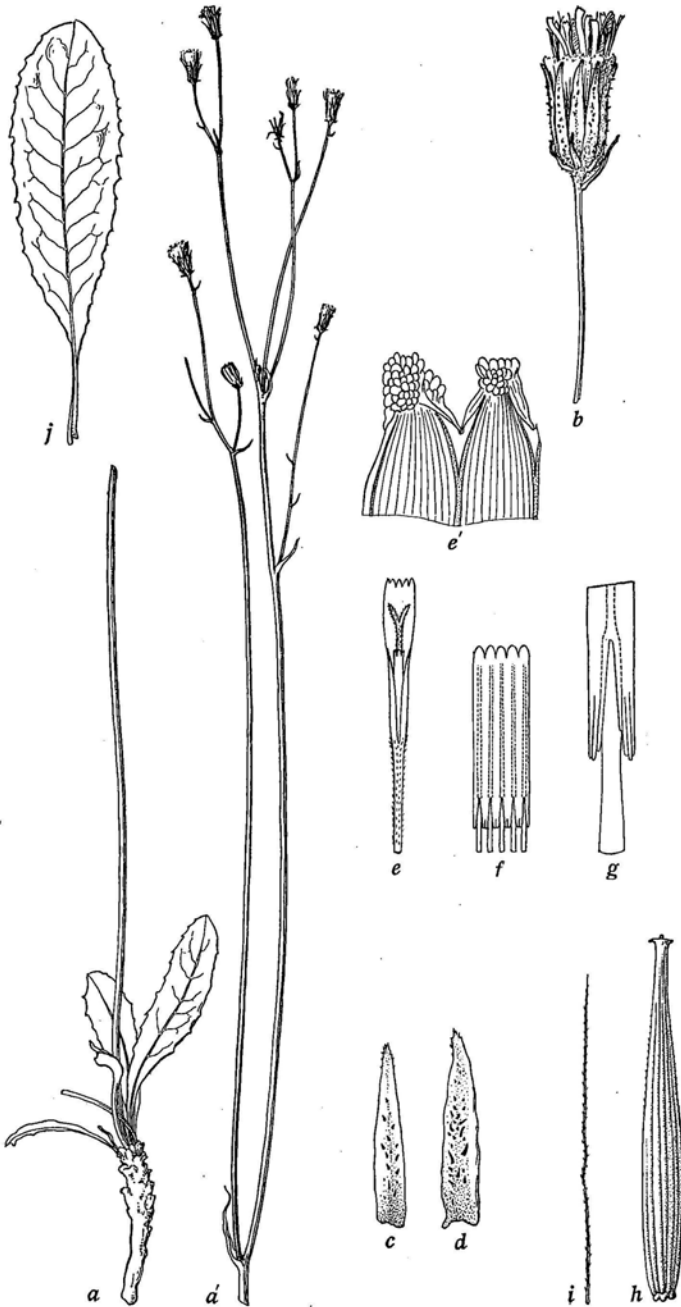


Fig. 91. *Crepis Mildbraedii*, from type (B): *a*, plant, $\times \frac{1}{2}$; *b*, flowering head, $\times 2$; *c*, *d*, inner involucre bracts from a flowering head, $\times 4$; *e*, floret lacking ovary, $\times 4$; *e'*, detail of ligule teeth, $\times 50$; *f*, anther tube, $\times 8$; *g*, detail of appendages, $\times 32$; *h*, *i*, achene and a pappus seta, $\times 8$; *j*, caudical leaf, $\times \frac{1}{2}$.

unequal pappus setae. It also shows resemblance, but less close, to *C. Newii* and *C. congoensis*. See also *C. Rueppellii*, m.v. 5 and 6. Since the pollen grains are regular, 3-pored, and 26–30 μ in diameter, this is probably a diploid species.

55. *Crepis Bruceae* sp. nov.

(Fig. 92.)

Herba perennis 1.5–3 dm alta; caudex rectus brevis 1 cm latus in radiei robusto attenuatus superne foliatus; folia caudicalia ad 10 cm longa 3 cm lata oblanceolata obtusa sinuato-denticulata breve petiolata glanduloso-pubescentia; folia caulina pauca plerumque bracteiformia; caulis rectus fistulosus paululum pilosus et tenuiter glanduloso-pubescent; inflorescentia aggregata cymoso-corymbiformis; capitula parviuscula multiflora; involucre 9–10 mm longa ad basim 3–4 mm lata campanulata, squamis exterioribus 10–12 inaequalibus linearibus, interioribus circa 14 lanceolatis acutis carinatis sed in fructu non incrassatis; receptaculum nudum; corolla 9 mm longa, ligula 6 mm longa 1 mm lata flava, tubo pubescenti pilis brevis; antherae 1.6 mm longae; rami styli 0.7 mm longi flavi; achaenia nigro-fusca 4 mm longa 0.3–0.4 mm lata breve rostrata 10-costata; pappus pallido-flavidus 5 mm longus 1-seriatus persistens.

Perennial, 1.5–3 dm high; caudex vertical, short, 1 cm wide, covered with black bases of old leaves, attenuate into a strong taproot, bearing several rosette leaves and 1 or 2 stems; caudical leaves up to 10 cm long, 3 cm wide, oblanceolate, obtuse, finely sinuate-denticulate, denticles mucronate, constricted at base into a short winged petiole, midrib dark, conspicuous, finely pubescent with short brown gland hairs; stem erect, terete, striate, fistulose, \pm canescent-pilose, finely gland-pubescent, 1-branched near summit or 2-branched, the lower branch near middle, and then the first cauline leaf lanceolate, acute, closely dentate or shallowly lacinate near base, upper cauline leaves bractlike; aggregate inflorescence a few-headed corymbiform compound cyme; peduncles 0.5–2 cm long, canescent-pilose and finely gland-pubescent; heads erect, rather small, many-flowered; involucre 9–10 mm long, 3–4 mm wide near base in fruit, campanulate; outer bracts 10–12, unequal, longest $\frac{1}{2}$ as long as inner ones, linear, acuminate, \pm brown-scarious, gland-pubescent, sometimes with a few black setules near apex; inner bracts about 14, lanceolate, acute, very dark, pale membranous-margined, canescent-pilose, gland-pubescent, often with a few black glandless setules near apex, ventrally glabrous, becoming dorsally carinate enclosing marginal achenes, but merely indurate, not spongy-thickened in fruit; receptacle areolate-fimbriate, fimbriae membranous, naked; corolla 9 mm long; ligule 1 mm wide; teeth 0.2 mm long; corolla tube 2.5–3 mm long, pubescent, like base of ligule, with very short (up to 0.13 mm long) stalked acicular hairs; anther tube 1.6 \times 0.75 mm dis.; appendages 0.4 mm long, oblong, acute or obtuse; filaments unequal, 0.5–0.8 mm longer; style branches 0.6–0.8 mm long, 0.1 mm wide, attenuate, yellow; achenes (nearly mature) dark brown, 4 mm long, 0.3–0.4 mm wide, marginal slightly curved, inner straight, gradually attenuate upward into a beak 0.5–1 mm long and 0.15 mm wide, with expanded pappus disk, constricted at the narrow hollow base, with a unilateral lip or callosity, 10-ribbed, ribs equal, rounded, finely spiculate to summit; pappus yellowish-white, 5 mm long, 1-seriate, rather fine, soft, united at base, persistent. Flowering Jan.; flowers yellow.

Known only from the type locality, where it was reported as "not infrequent."

Monomorphic.

Tanganyika: Morogoro, Uluguru Mts., Lukwangule, summit grassland, 2484 m, *Miss E. M. Bruce*, Jan. 30, 1935 (K, UC 557860) type, isotype.