

45, *b*. ***Crepis Newii Greenwayi*** subsp. nov. Planta 1–2 dm alta; folia caudicalia obtusissima mucronata denticulata; involuera 9–10 mm longa 4–5 mm lata, squamis exterioribus 12–15 circa 0.5 mm latis glabris, interioribus tomentulosis; corolla circa 10 mm longa, tubo 3 mm longo pubescenti; antherae 3.5 mm longae; achaenia nigrofusca 4–5 mm longa fusiformia erostrata 10–12-costata; pappus albus vel flavidus 5 mm longus.

Plant 1–2 (in cult. 3) dm high; caudex 1-stemmed; caudical leaves very obtuse, mucronate, denticulate; peduncles canescent-tomentulose; involucre 9–10 mm long,



Fig. 75. *Crepis Newii Greenwayi*, from type (UC 513276): *a*, plant, $\times \frac{1}{2}$; *b*, fruiting head, $\times 2$; *c*, floret lacking ovary, $\times 4$; *c'*, detail of ligule teeth, $\times 25$; *d*, anther tube, $\times 8$; *e*, detail of appendages, $\times 32$; *f-h*, 2 achenes and pappus seta, $\times 8$; *i*, somatic chromosomes of seedlings grown from type collection (hort. genet. Calif. 3274), $n = 4$, $\times 1250$.

4–5 mm wide at middle; outer involucre bracts 12–15, the widest 0.5 mm or less wide at base, glabrous; inner bracts canescent-tomentulose; corolla about 10 mm long; corolla tube 3 mm long, sparsely beset with minute papilliform hairs 0.05 mm long; anther tube 3.5 \times 1 mm dis.; appendages 0.6–0.8 mm long, oblong, acute; filaments unequal, 1–1.25 mm longer; style branches 1.4 mm long, 0.15 mm wide; achenes deep purplish-brown, 4–5 mm long, 0.7–0.8 mm wide, with a narrow white ring at both pappus disk and base, fusiform, definitely attenuate to summit, constricted at the narrow hollow base, 10–12-ribbed, ribs nearly equal, rather strong, rounded; pappus white or yellowish, 5 mm long, 1-seriate, rather fine, soft. Flowering Aug.–Nov. Chromosomes, $2n = 8$. See fig. 75.

Tanganyika Terr.: Iringa Prov., Msima Stock Farm, grassland, 1636 m, *P. J. Greenway 3529B*, (UC 513276, Amani) type, isotype; Iringa Prov., Njombe (west of Msima Stock Farm), *Lynes D49* (K) m.v. 2. Cultivated specimens grown in a greenhouse at Berkeley from seed taken from the type material have faithfully reproduced the distinguishing features of this subspecies.

Minor Variant of C. Newii Greenwayi

2. A reduced form, due, perhaps, to drought or competition. Plant 1–1.5 dm high; caudical leaves 2.5–3.5 cm long; stem slender, 1–2-headed, but with 3–5 abortive heads borne racemously; heads rather small; involucre 6–7 mm high. Floral characters typical; corolla about 10 mm long; anther tube about 3 mm long; style branches 1.25 mm long; pappus yellowish-white, 5 mm long; achenes lacking. *Lynes D49* (K) Njombe, Iringa Prov., Tanganyika Terr.

45, *c. Crepis Newii bumbensis* (Hiern) comb. nov. Plant about 4 dm high; caudical leaves 5–7 cm long, 1–1.8 cm wide, puberulous on lower face with minute gland hairs or spreading glandless hairs; involucre 10–11 mm long; inner involucral bracts gland-pubescent with very short pale hairs and slightly longer black setae scattered from base to apex, \pm thickened at base in fruit; corolla about 13 mm long; anther tube about 4.25×1 mm dis.; achenes 5–6.5 mm long, shortly and coarsely beaked; pappus 4.5 mm long. See fig. 76, *a–h*.

Crepis bumbensis Hiern, Cat. Welw. Afr. Pl. 3: 616. 1898.

Crepis bumbensis typica Babc., Bull. Jard. Bot. Etat (Bruxelles), 15: 298. 1937.

The type locality is given by Hiern as Bumbo, in the wooded meadows of Catumba, with the observation, "rather rare; flowers and fruits, Dec., 1859."

Angola: *Benguella*, Bumbo dist., *Welwitsch 3667* (BM, UCf, K) type, isotype; *Loanda*, Malange dist., *Gossweiler* in 1903 (P) m.v. 3; *Malange Gossweiler* (K) m.v. 3.

Minor Variant of C. Newii bumbensis

3. Very robust; plant 7.5 dm high; leaves broader and petioles narrower than in typical subsp. *bumbensis*; stems unbranched for $\frac{2}{3}$ of their length; aggregate inflorescence corymbiform; involucral bracts lacking black setules; pappus 5–6 mm long. *Gossweiler* in 1903 (P, K) Malange dist., *Loanda*, Angola.

45, *d. Crepis Newii kundensis* (Babc.) comb. nov. Plant 4–5 dm high; caudical leaves 6–16 cm long, 1.5–4 cm wide, puberulous, especially on veins, or glabrescent; involucre 9–10 mm long; inner involucral bracts gland-pubescent and black-setose toward apex, the setae short and broad based, becoming strongly carinate and pale spongy-thickened at base at full maturity; corolla about 11 mm long; ligule 1.5 mm wide; teeth 0.25–0.3 mm long, obtuse; corolla tube pubescent from base to summit, as on lower part of ligule, with stout papilliform and acicular hairs 0.05 mm long disposed singly or in groups; anther tube 3.5×1 mm dis.; appendages 0.6 mm long, oblong, acute; filaments 0.75 mm longer; style branches 1.25 mm long, 0.1 mm wide; achenes about 7 mm long, coarsely beaked, ribbed to summit; pappus 6 mm long. See fig. 77.

Crepis bumbensis kundensis Babc., Bull. Jard. Bot. Etat (Bruxelles), 15: 300. 1937.

Cameroon and S.E. Nigeria, in grasslands of the middle altitudes.

Cameroon: savannas of the lower highlands, about 6° N., 14° E., near Kunde, Kisare, *Mildbraed 9214* (B) type, in fruit in Feb. (?) or May (?). **S.E. Nigeria:** *Bamenda*, *Bambulue*, *Thorbecke 241* (B).

45, *e. Crepis Newii niasensis* subsp. nov. Planta 6–7.5 dm alta; folia caudicalia 10–15 cm longa 2–3 cm lata glabra; involucra 9–10 mm longa 4–5 mm lata, squamis exterioribus numerosis carinatis ad basim spongioso-incrassatis pallidis scariosis, interioribus glanduloso-pubescentibus et setulosis intermixtis; corolla 11–13 mm