

1. *Crepis atripappa* sp. nov.

Crepis gracilis Hook. f. et Thoms. ex C. B. Clarke, Comp. Ind.:254, 1876.

Perennial, 24–40 cm. high, with short praemorse rootstock and strong branched secondary roots; radical leaves 4–6, up to 4 (8?) cm. long and 2 cm. wide, semi-erect, oblanceolate or lanceolate, acute, margins rather strongly retrorsely revolute and sinuate-runcinate or -dentate, lateral segments or teeth mostly papillose mucronate, tapering into a very short winged petiole with clasping base, finely pubescent on both sides with short appressed yellow eglandulose hairs and a few stout hairs on margins and lower side of midrib, paler beneath, the prominent veins branching and anastomosing at broad angles; cauline leaves 6–8, mostly similar to radical ones or acuminate, uppermost linear, bract-like; stem very slender, erect, sinuate or zigzag with the angles at the nodes, terete, striate, glabrous or tomentulose at nodes, unbranched or branched near top or at each node, the short (3–7 cm.) branches with 1–8 heads in a close corymb; peduncles 1–1.5 cm. long, glabrous; heads rather small, half-nodding; involucre cylindrical, 8–9 mm. high, glabrous; outer involucre bracts 6–7, *ca.* 1 mm. long × 1 mm. wide, ovate, dark green; inner bracts 8, lanceolate, acute or obtuse; innermost scarious-margined, ventrally glabrous, with a darker dorsal median rib becoming carinately spongy-thickened at maturity; corolla 8 mm. long; ligule 5.5 mm. long × 1.25 mm. wide, teeth 1 mm. long, narrow, acute, gland-tipped; corolla-tube 2.5 mm. long, sparsely pubescent with short white spreading hairs; anther-tube green, 3 mm. long × 1.25 mm. wide dissected (length/width = 2.4), appendages 0.5 mm. long, acuminate; style-branches dark brown or green, *ca.* 1 mm. long; achenes brownish purple with yellow summit and pappus-disk, *ca.* 4 mm. long, narrow, fusiform, subcompressed, rather strongly attenuate toward the narrow (0.2–0.3 mm. wide) summit below the slightly expanded pappus-disk, somewhat narrowed to the hollow base, *ca.* 15-ribbed, ribs nearly equal, finely barbellulate; pappus inky gray *en masse*, 4–5 mm. long, of one series of rather coarse barbellulate bristles, persistent. Flowers yellow.

Himalayas: Sikkim, 3000–3600 m. alt. (type locality), *Hooker f. and Thomson* (G, NY)¹; Sikkim, below Tangu, 3030 m., *Smith and Cave 2296* (Calcutta); Sikkim, Lachin, *Prain's Collector 333* (Po 10571) form 1.

¹ The following abbreviations for herbaria are used in this paper:

- B, Berlin, Botanical Museum of the University, Berlin-Dahlem.
 BB, Barbey-Boissier Herbarium, University of Geneva, Switzerland.
 Fl, Florence, Italy, Institute of Botany of the University.
 G, Gray Herbarium of Harvard University.
 K, Kew, England, Royal Botanic Garden.
 MW, Vienna, Naturhistorische Museum.
 NY, New York Botanical Garden.
 P, Paris, Museum d'Histoire Naturelle.
 Po, Pomona College, Claremont, Calif., Department of Botany.
 US, United States National Herbarium, Washington, D. C.

NUMBERED FORM

1. *CREPIS ATRIPAPPA*, but leaves glabrous. Peduncles of fruiting heads prominently striate; involueral bracts becoming spongy-thickened at base; receptacle faintly areolate, the areolae centrally pitted. *Prains' Collector 333* (Po 10571) Sikkim Himalaya, Lachin.

Relationship.—Close to *Crepis fuscipappa* and *C. cineripappa* but very distinct from both in the praemorse rootstock, size and indumentum of leaves, length of corolla-teeth, size of anther-tube and appendages and more attenuate achenes. Less close to other species of *Youngia*.

2. *Crepis cineripappa* sp. nov.

Perennial, 45–85 cm. high, with rhizomate rootstock bearing fleshy fibers; radical leaves 4–8, up to 16 or 22 cm. long and 4.5 cm. wide, semi-erect, obovate or oblanceolate, obtuse or acute, margins very narrowly retrorsely revolute and coarsely sinuate-runcinate or -dentate, terminal and lateral segments papillose-mucronate, tapering gradually into a winged petiole one-fourth to one-half as long as the blade and with broader clasping base, glabrous above, fuscous-tomentulose below especially along the veins, the secondary veins branching and anastomosing at broad angles; cauline leaves 4–7, the lower similar to radical ones or sessile and acuminate, intermediate entire, uppermost linear, bract-like; stem erect, straight, terete, striate, fuscous-tomentose at nodes and base and gland-pubescent above, branched only near top, the short branches bearing 1–5 heads in a small corymbiform cluster, the terminal portion of the aggregate inflorescence a dense few-headed simple or compound paniculate corymb; peduncles 2–12 mm. long, slender, fuscous-tomentose and gland-pubescent with short thick hairs and oblate or ellipsoidal brown glands; heads rather small, erect; involucre cylindrical, 7–8 mm. high, gland-pubescent; outer involueral bracts 5–6, *ca.* 1 mm. long \times 0.5 mm. wide, acute, \pm scarious; inner bracts 8, lanceolate, obtuse or acute, innermost scarious-margined, ventrally pubescent with short white hyaline appressed hairs, dorsally becoming carinately spongy-thickened, ultimately reflexed; receptacle areolate, with slightly raised fimbriae and central stipe; corolla 8–9 mm. long; ligule 4–5 mm. long \times 1 mm. wide, teeth 0.25 mm. long, triangular; corolla-tube 4 mm. long, narrow, with expanded base, sparsely pubescent with spreading white hyaline hairs; anther-tube dark green, *ca.* 2 mm. \times 1.25 mm. dissected (length/width = 1.6), appendages *ca.* 0.2 mm. long, acuminate; style-branches yellow, 0.7 mm. long; achenes brown, pale near summit, 4.5 mm. long \times 0.6–0.8 mm. wide, fusiform, more attenuate toward summit, with slightly expanded pappus-disk and narrow yellow basal callus surrounding the hollow base, marginal ones dorsoventrally compressed, *ca.* 12-ribbed, with one stronger median rib on ventral face and two stronger ribs on dorsal face, inner ones 4-angled by the stronger ribs; pappus pale inky gray *en masse*, 4–5 mm. long, of one series of fine soft barbellulate bristles, persistent. Foregoing description based on type and cotypes. Flowering May–June; flowers yellow. Stems rarely two from a caudex, ultimately probably branched from below.