

part of Chinese Turkestan, and in this area approach more nearly the range of subspecies *typica* than is apparent from present collections. Like *typica*, this subspecies appears to be a diploid with the chromosome number $n=5$, but it has not been seen in living condition.

8c. *Youngia tenuifolia tenuicaulis* subsp. nov.—*Planta suffruticulosa*; caules plures, tenues, rigidi, ramosissimi; rami dichotomi; pedunculæ 0.3–4.3 mm longæ, tenuissimæ; involucrem 7–10 mm longum; squamæ glabræ vel minute tomentulosæ; achænia nigra, fusiformia, erostrata, 3.5–4 mm longa.

Plant 10 to 15, 20 cm high, suffruticulose; caudical leaves small, narrow, acutely dentate or pinnately parted into linear acute or acuminate segments; stems many, slender, rigid, from near base dichotomously many-branched forming a dense globose obconical mass crowned with many flower-heads; peduncles 0.3 to 4.3 cm long, very slender, rigid, usually 1-bracteate; heads about 10-flowered; involucre 7 to 10 mm long, about 3 mm wide at middle in anthesis, glabrous or slightly pubescent; outer involucral bracts 5 or 6, unequal, longest $\frac{1}{4}$ as long as inner bracts, like inner bracts mediodorsally nerved and crested with a short narrow curved claw near tip; inner bracts 8, obtuse; corolla 10.5 to 13.5 mm long; ligule 2 to 3 mm wide; teeth 0.3 to 0.8 mm long, conspicuously gland-crested, not or slightly hooded; corolla-tube 2.5 mm long, sparsely pubescent; anther-tube 3.25 to 5.2 \times 1.25 mm dis.; filaments long, extending beyond appendages 1 mm; appendages 0.75 to 1.2 mm long, oblong, obliquely acute or unequally notched at tip; style-branches 1.25 to 2.25 mm long, 0.15 mm wide, obtuse at tip, yellow; achenes black or blackish, 3.5 to 4 mm long, 0.75 mm wide, fusiform, nearly equally attenuate to both ends, with a short neck at summit 0.4 mm wide, pappus-disk slightly expanded, constricted at the yellow-calloused oblique hollow base, 10-ribbed, ribs unequal, 4 to 5 stronger, rounded, spiculate; pappus white or dusky white, 4 to 5 mm long, 1-seriate, fine, soft. (Pl. 1; fig. 11.)

No cultures have been grown of this subspecies, but it is presumably a polyploid apomict. The pollen is irregular in size and both 3-pored and 4-pored grains occur. But it is very distinct from all other forms of the species in its low stature, small leaves, many stems, and diffuse habit. And sufficient collections have been seen to indicate a fairly wide distribution.

Central and western Outer Mongolia and western Dzungaria, mountain slopes and cliffs, in rock crevices, among stones, and in sandy places.

OUTER MONGOLIA: south central part, Artsa Bogdo Mountains, foothills, steep slopes, 36.8 km east of camp 16 in Andrews' Third Asiatic Expedition, *Chaney 352* (UC 295342), *type*; central part, Ologai River, rocks, *Gorbunov 1354* (Mosc); northern part, Lake Kosogol region, near Hathyl, southern stony mountain slope, *Dadochkin 1358* (Mosc); western part, Chan gai (Khan gai) Mountains, Sharagalsa River valley, steppe, sandy and rocky places, *Pavlov 1496* (Mosc); *ibid.*, Chan gai Mountains, Halzinchinbulyk River, near Zany-gechen, stony slope, *Pavlov 1356* (Mosc); *ibid.*, Chan gai Mountains, Shara-usu River, cliffs, *Pavlov 1357* (Mosc); *ibid.*, near Choiren, rocks, *Kondratiev 1355* (Mosc); *ibid.* (?), Altai Mountains, *Littledale* in 1897 (K). CHINESE TURKESTAN:

No. 352

FLORA OF MONGOLIA
THIRD ASIATIC EXPEDITION

Common name *Serratiff hardbians*

Collector *E*

Exact locality *23 mi. E. of Camp 16*

Habitat *Steps slope of la. foothills*

Altitude above the sea

Tree; shrub; bushy vine; herb

Height of plant *6-8 W* Diam.

Flower *yellow* (Odor, color, etc.)

Fruit (Shape, color, odor, etc.)

Special notes
Hay = # 68

Economic uses

Date *July 17*



Flora of Mongolia

Third Asiatic Expedition, 1908-1909. Herbarium of the Academy of Natural History



Crepis tenuicaulis Bab.

1927.

W. W. STEBBINS

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Youngia tenuifolia tenuicaulis, type (UC)

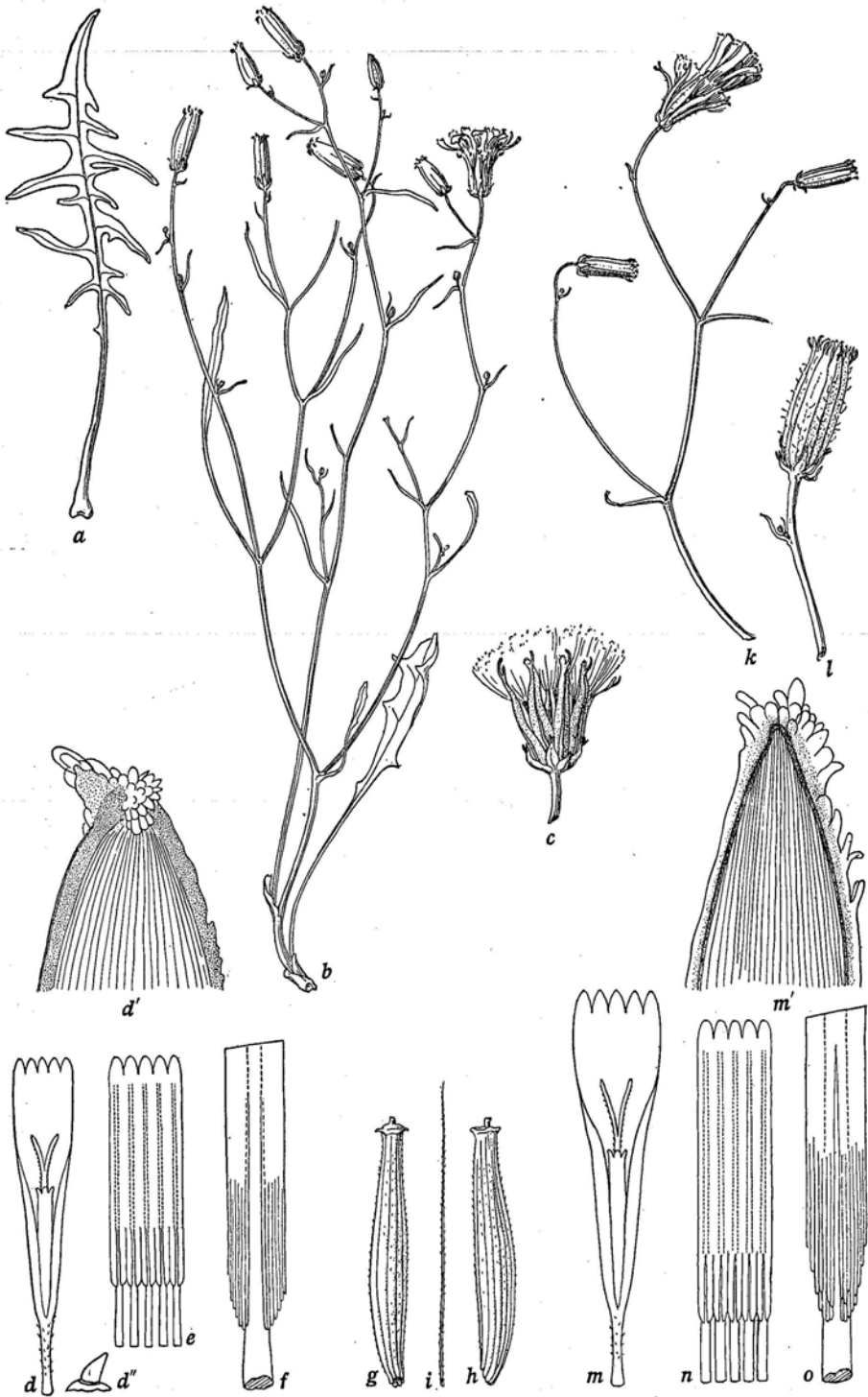


FIG. 11.—*Youngia tenuifolia tenuicaulis*, a, c–i, from type (UC 295342); b, from *Kondratiev 1355* (Mosc); k–o, from *Pavlov 1356* (Mosc): a, typical rosette leaf, $\times 2$; b, young leaf, stem, and branches with heads, $\times 2$; c, mature head, $\times 2$; d, floret lacking ovary, $\times 4$; d', detail of ligule-tooth, $\times 50$; d'', detail of trichome from corolla-tube, $\times 50$; e, anther-tube, $\times 8$; f, detail of appendages, $\times 32$; g, h, achenes, $\times 8$; i, pappus-bristle, $\times 8$; k, part of branch with 3 heads, $\times 2$; l, head, $\times 2$; m, floret lacking ovary, $\times 4$; m', detail of ligule-tooth, $\times 50$; n, anther-tube, $\times 8$; o, detail of appendages, $\times 32$.

Tarbagatai, Liazug Basin, source of the Liazug River, *Roshevitz 1036* (UC).

8d. *Youngia tenuifolia diversifolia* (Ledeb.) comb. nov.—Plant 13 to 40 cm high; leaves extremely variable, sometimes short, narrow, with few or many filiform linear or narrowly lanceolate segments, sometimes much longer, with linear segments up to 5 mm wide; stems 1 to 3 or more, 1 to 4 mm wide at base, remotely paniculately branched from middle or near base, aggregate inflorescence corymbiform; peduncles 0.7 to 2.7 cm long; heads 10- to 16-flowered; involucre 10 to 12 mm long, 3 to 4 mm wide at middle in anthesis, pubescent with pale waxy many-celled piliform trichomes; outer involucral bracts 5 to 7, unequal, $\frac{1}{4}$ to $\frac{1}{3}$ as long as inner bracts, like inner bracts mediodorsally nerved and crested with a narrow grayish-black curved claw near tip; inner bracts 7 to 8, obtuse; corolla 12 to 20 mm long; ligule 2.5 to 3.25 mm wide; teeth 1 to 1.5 mm long, conspicuously gland-crested; corolla-tube about 4 mm long, densely pubescent with coarse broad-based conical hairs; anther-tube 5 to 6 \times 1.5 mm dis.; filaments long, extending beyond appendages 1.25 mm; appendages 1.25 mm long, oblong, obliquely acute, united; style-branches up to 2.5 to 3 mm long, 0.15 mm wide, attenuate at tip; achenes brown (except in one specimen noted below), 5.75 to 7.5 mm long, 0.75 to 1 mm wide, fusiform, gradually strongly attenuate to the 0.25 to 0.4 mm wide neck, summit very slightly expanded, pappus-disk relatively narrow, constricted at the pale-calloused hollow base, 10- to 12-ribbed, ribs unequal, 5 stronger, rounded, strongly spiculate; pappus white, 6 to 7 mm long, 1-seriate, rather fine, soft. Flowers bright yellow, anthers green, style brown *in sic.* (*Prenanthes diversifolia* Ledeb., ex Spreng., Syst. Veg. 3:657, 1826; *Youngia diversifolia* Ledeb., Fl. Ros. 2:837, 1844–1846, excl. syn.) (Fig. 12, k–q.)

From the Altai Mountains, through the mountains of Turkestan and western Tibet to the Himalayan mountain region.

SIBERIA: Altai, Oirotsk, autonomous region Khrebet, Saliugem Mountains, Bugusun Pass, *Shishkin and Chilikina* in 1931 (Lenin). RUSSIAN TURKESTAN: Semiriche (Semirychensk), Leisinsk district, *Lipshitz* in 1928 (Lenin); Talask Alatau, Tenisman gorge, *Iljin 355* (Lenin). WESTERN TIBET: without definite locality, 3636 to 4545 m alt., *Falconer 4188* (K). INDIA: Kashmir Province, Ashkoley (Askole), 3333 m alt., *Clarke 30322* (K); Karakorum (Mountains), 3636 m alt., *Clarke 30143* (K); Ladak, Khalotse Yuru, *Stewart* in 1911–1912 (UC); Sonamarg, rock crevices, 2727 m alt., *Stewart 12386a, b, c* (UC); Kashmir, *Jacquemont 995* (K, P); Punjab, Kulu-Lahaul, *Drummond 22801* (K, UC); *ibid.*, Lahaul, between Fugiling and Gondla, about 3030 m alt., *Drummond 22799* (K, UC); *ibid.*, Kyelang, *Drummond 25569* (K); western Nepal, near Kaiva, 3030 to 3333 m alt., *Duthie 5726 part* (K); Kumaun, Kali Valley, Nepal side, near Kaiva, 3030 to 3333 m alt., *Duthie 5726 part* (Calcutta), form with black achenes; (?) Assam Province, Khasia, 1500 to 1800 m alt., *Hooker and Thompson*, as *Prenanthes alata* (NY).

The excellent habit drawing of Ledebour's *Prenanthes diversifolia* (Ic. Pl. Flor. Ross. 2: t. 152, 1830) is unquestionably of this large-headed subspecies. It is nearly matched by the specimen of Lipshitz from Semirychensk cited above, and, if drawn life size, as was most probably the