

cm long, very slender, strict or arcuate; heads erect, small, 7- to 10-flowered; involucre cylindric, 7 to 9 mm high, 2 mm wide; outer involucral bracts 5, ovate, obtuse, 1 to 2.5 mm long; inner bracts 7, lanceolate, acute or obtuse, scarious-margined, ventrally sparsely pubescent with short white appressed hairs, dorsally 1-nerved, neither corniculate nor tuberculate, becoming narrowly carinate at base; receptacle areolate, naked; corolla about 11 mm long; ligule about 2 mm wide; teeth 0.5 to 0.7 mm long, gland-crested, hooded with anterior protuberance at tip; corolla-tube about 2 mm long, pubescent with 2-celled acicular hairs up to 0.25 mm long; anther-tube 4×1.3 mm dis.; filaments extending beyond appendages about 1 mm; appendages 0.6 mm long, lanceolate, acute, free; style-branches 1.25 mm long, 0.1 mm wide, yellow; achenes light brown, 3 to 3.5 mm long, 0.5 mm wide, oblong, attenuate near the narrow (0.25 mm wide) summit, with slightly expanded pappus-disk, slightly constricted at the 0.3 mm wide finely calloused hollow base, dorsoventrally compressed or subcompressed, about 12-ribbed, ribs unequal with 4 to 5 stronger ones, rounded, spiculate; pappus white, 4.5 to 5 mm long, 1- to 2-seriate, bristles fine, somewhat thickened, united and densely barbellulate at base, persistent. Flowering July; flowers yellow, anther-tube green, style-branches yellow. (*Crepis Henryi* Diels, in Engl. Bot. Jahrb. 29:633, 1901.)

China in western Hupeh and western Szechwan, moist places in mountains, roots sometimes embedded in moss.

CHINA: Hupeh, "So. Patung," cliffs, 1818 m alt., *Henry 6069* (B type, K, G, US 801537 cotypes); *ibid.*, Paokang, *Wilson 2272* (K, NY); Szechwan, Waschan, south of Yatschou (Yachowtu?), *Weigold* in 1915 (MW).

RELATIONSHIP

Closest to *Y. terminalis*, from which it is very distinct in habit, in the pinnatifid cauline leaves, and in various characters of the flowers and fruits, cf. *terminalis*. From *Y. Pratti* it is easily distinguished by the more slender, delicate appearance, the peculiar juvenile leaves with broad terminal segments, the more salient, dentate, lateral leaf segments, the corolla smaller, anther-appendages much shorter, achenes more attenuate upward and strongly spiculate, and the finer, white pappus. Less close to *Y. Wilsoni*, and still less to *Y. tenuifolia*.

19. *Youngia terminalis* sp. nov. (Pl. 4; fig. 24, *k-r*)

Herba perennis, omnino glabrata; caudex tenuissimus; folia caudicalia longissime petiolata, integria vel lyrata, lobus terminalis amplus, lobi laterales parvi vel absentes; folia caulina pauca, parva, plerumque linearia; caulis tenuissimus, rami pauci, paniculati; pedunculi filamentosii, arcuati; capitula parva, 11-13-flora; involucre angustum; squamæ externæ 5, parvæ, ovatæ; squamæ internæ 8, lanceolatæ; corolla 10 mm longa, flava; antheræ 3.5 mm longæ, virides; achænia fusca, 3 mm longa, forte attenuata, paululum compressa, cum costis inæqualibus; pappus albus, 4 mm longus, persistens.

Perennial, 20 to 50 cm high, glabrous throughout except inner involucral bracts at tip and within; caudex very slender, prolonged into

a fine root, few-leaved; caudical leaves spatulate with very long slender petioles, simple or lyrate-pinnatifid with 1 to 4 lateral lobes, blade or terminal lobe up to 4 cm long, 3 cm wide, orbicular, ovate or oblong, obtuse or acute, truncate or sagittate, entire or sinuate-dentate, lateral lobes absent or small, triangular, obtuse, petiole 2 to 9 cm long, obscurely winged, with broad clasping base; cauline leaves 2 to 4, at the remote bifurcations of stem, mostly linear, filamentous or bractlike; stem erect, very slender, terete, remotely paniculately 2- to 5-branched, branches narrowly arcuate, fine, 1- to 3-headed; peduncles 1.5 to 12 cm long, very fine, arcuate; heads erect, small, 11- to 13-flowered; involucre cylindrical, narrow, 7 to 8 mm long; outer involucral bracts 5, ovate, 1.5 mm long; inner bracts 8, lanceolate, acute, scarious-margined, finely appressed-pubescent within, with median dorsal nerve, somewhat thickened or tuberculate near the white-ciliate tip; corolla 10 mm long; ligule 1.5 mm wide; teeth about 1 mm long, gland-crested, hooded; corolla-tube 2 mm long, glabrous; anther-tube 3.5×1 mm dis.; filaments extend beyond appendages 0.75 mm; appendages about 0.8 mm long, narrow, sagittate; style-branches 1.25 mm long, 0.1 mm wide, yellow; achenes dark brown, somewhat curved, 3 mm long, 0.5 mm wide, strongly attenuate to the 0.2 mm wide summit, with slightly expanded pappus-disk, narrowed at the small calloused hollow base, subcompressed, about 12-ribbed, ribs unequal with 3 to 4 stronger ones, obscurely spiculate or muriculate; pappus white, about 4 mm long, 1-seriate, bristles fine, slightly thickened and united at base, persistent. Flowering August; flowers yellow, anther-tube green, styles yellow. The long, fine petioles, slender stems, and massed fibrous roots of a clump of young plants suggest that the plants are found in moist, shady places and that they spread by stolons or root-sprouts.

Known only from the region of the type collection, which, according to the label, is Tongol in eastern Tibet. Such a locality is not given in eastern Tibet by the standard atlases. The station is probably Tongolo in western Szechwan, north of Tatsienlu at an elevation between 900 and 1800 m. This supposition is supported by a second collection from Tatsienlu, "eastern Tibet."

CHINA: western Szechwan, Tongolo?, *Soulié* 2652 (B type = 2562A); *ibid.*, Tatsienlu, *Soulié* 2118 (B).

RELATIONSHIP

Close to *Y. Henryi*, and the caudical leaves remind one of the juvenile leaves of the latter species. But *terminalis* is very distinct in the cauline leaves and habit, the glabrous corolla-tube, smaller anther-tube, longer anther-appendages, and dark brown achenes with nearly smooth ribs.

SECTION 6. *EUYOUNGIA*

RELATIONSHIPS OF THE SPECIES

Although extreme reduction in size of heads, flowers, and fruits is characteristic of all the species in this section, there are marked differences between species in other respects. Two of the species, *heterophylla* and *bifurcata*, are either perennial or biennial. The former is the only

minal lobe narrow, lateral lobes 8 to 12, lanceolate, acute or acuminate, salient or horizontal, entire or 1-dentate, petiole narrow, equal to or shorter than blade; lower cauline leaves similar or sessile; upper cauline leaves linear, acuminate or bractlike; stem erect or sinuate, slender, terete, paniculately branched above, branches 1- to 4-headed; peduncles 1 to 4

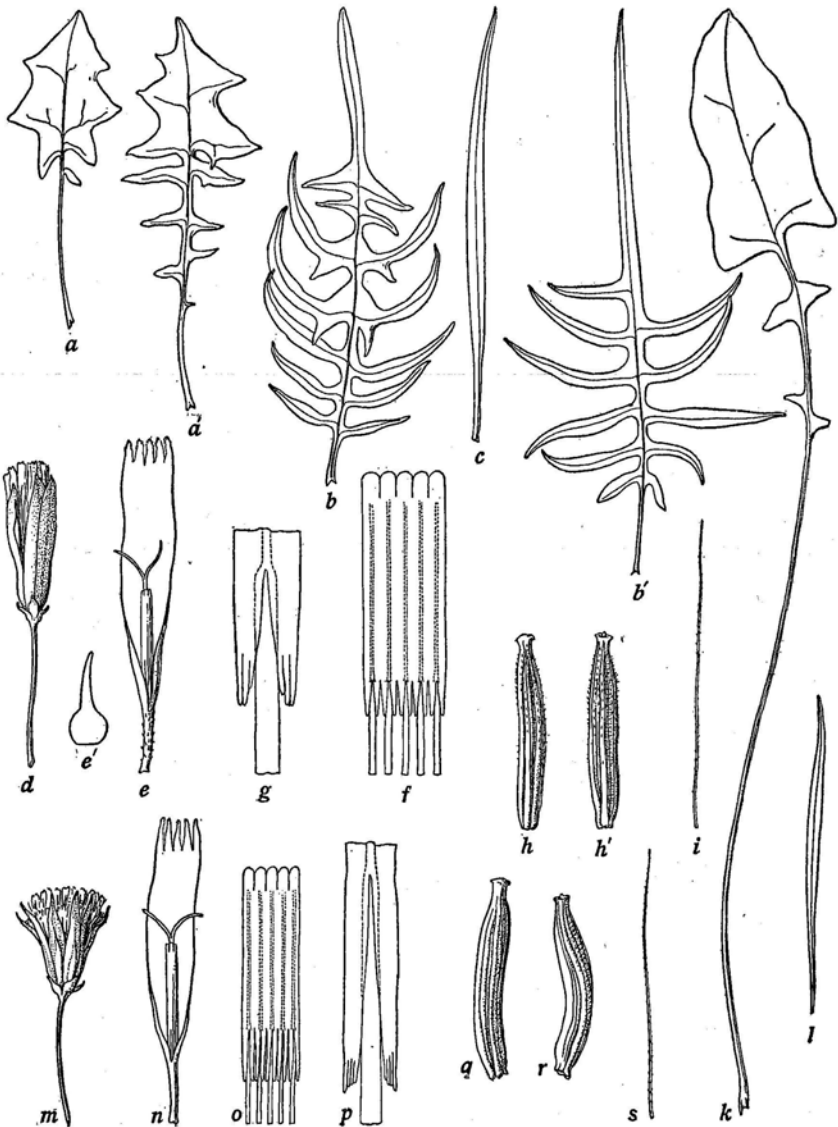
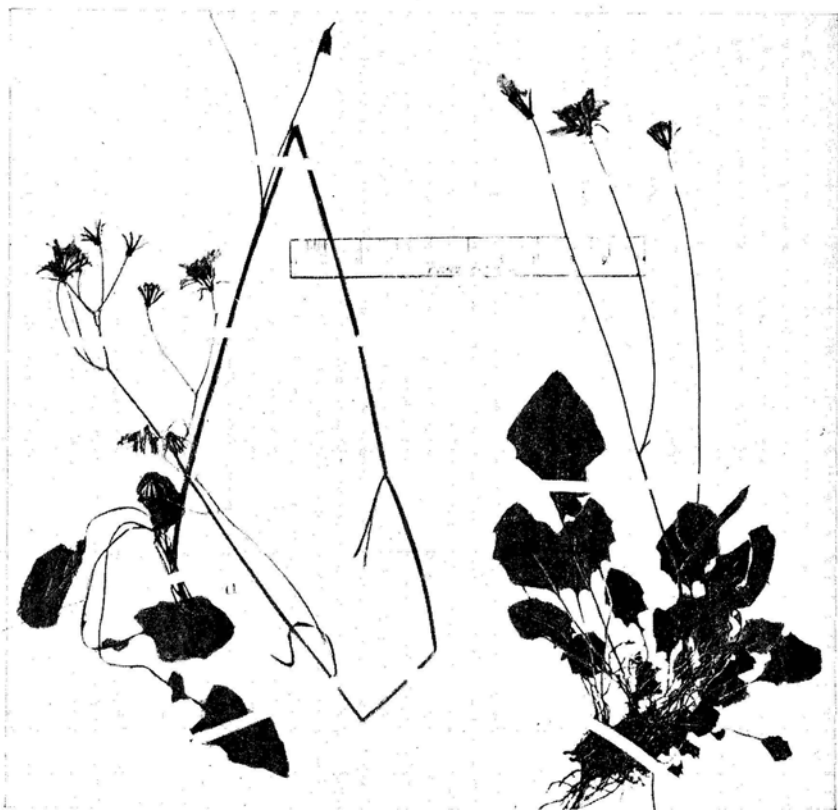


FIG. 24—*a-i*, *Youngia Henryi*, from type and cotypes (B, K): *a*, *a'*, juvenile leaves, $\times 1$; *b*, *b'*, middle cauline leaves, $\times 1$; *c*, upper cauline leaf, $\times 1$; *d*, young head, $\times 2$; *e*, floret lacking ovary, $\times 4$; *e'*, trichome from corolla-tube, $\times 125$; *f*, anther-tube, $\times 8$; *g*, detail of appendages, $\times 32$; *h*, *h'*, *i*, achene, dorsal and ventral, and pappus-bristle, $\times 8$.

k-s, *Youngia terminalis*, from type (B): *k*, caudical leaf, $\times 1$; *l*, cauline leaf, $\times 1$; *m*, head, $\times 2$; *n*, floret lacking ovary, $\times 4$; *o*, anther-tube, $\times 8$; *p*, detail of appendages, $\times 32$; *q*, *r*, *s*, achenes and pappus-bristle, $\times 8$.



Youngia Henryi, cotypes (K) below; *Y. terminalis*, type (B) above. Note similarity of the two species particularly in the juvenile leaves.