

Distributed throughout the range of the species. Extremely variable in size of plant, shape of leaves, form of aggregate inflorescence, and amount of indumentum on leaves. Among the herbarium material examined, certain forms were found which might easily be confused with other subspecies or species. These will be noted by number below.

JAPAN: Miyazaki, *Tanaka 383* (UC); Shikoko Island, *Krug 1308, 1309* (B); Takaoka, mountain near Takao, *Dorsett and Morse 908* (US); Chikuzen Province, Yamaguchi, *Ikedo* in 1926 (Wellesley). KOREA: Hongno, *Taquet 1059* (E, as *C. Taquetii* Lévl.). CHINA: Kiangsu Province, Chinkiang, Wuokowsan, *Kolthoff 160, 214 part* (Upsala); *ibid.*, *Kolthoff 194, 214 part* (Upsala), form 3; Szechwan Province, *Morse 413 part* (NY), form 2; Chekiang Province, Mokanshan, *Cheo and Wilson 12703* (UC); Fukien Province, Foochow, *Chung 2441* (UC); *ibid.*, Amoy Island, *Chung 1434* (UC); *ibid.*, pavement, *Chung 433* (UC), form 1; *ibid.*, Hinghwa, *Lin Pi 6331* (UC), form 4; Kwangtung Province, Canton, *Shih 49, 51* (B); *ibid.*, Lung Tau Mountain, near Iu, *C. C. C. 12007* (UC); Yunnan Province, Mengtze, mountain forests, 1500 m alt., *Henry 10681* (NY, Mo); *ibid.*, Yunnansen, *Maire 489* (UC), form 1; central Yunnan, west of Dsolinho River, 2000 m alt., *Handel-Mazzetti 6222* (UC), form 1. INDO-CHINA: Hue and vicinity, *Squires 54* (B); Cho Gouh, *Petelot 1221* (UC). INDIA: western Himalaya, Saharanpur, *Duthie* in 1897 (UC); northwestern Himalaya, Punjab, Murree, *Stewart 6158* (UC); Madras, Madura, Kodaikanal, *Saulière 150* (UC); Ceylon, Peradeniya, *Silva 181* (UC). PHILIPPINE ISLANDS: Luzon, Ilocos Norte Province, Bangui to Claveria, *Ramos 33055* (UC); *ibid.*, Benquet Province, Mount Pulog, *Ramos 44898* (UC); *ibid.*, Zambales Province, Mount Pinatubo, *Clemens 17513* (UC). MALAY ARCHIPELAGO: Celebes, G. Bonthain, about 1500 m alt., *Bunnemeyer 12130* (UC); New Guinea, Kaiser-Wilhelmsland, 800 m alt., *Schlechter 18972* (UC). HAWAIIAN ISLANDS: Oahu, Waianae Mountains, Haleauau Valley, *Fosberg 12978* (UC).

24b. *Youngia japonica longiflora* subsp. nov.—Planta 30–85 cm alta; folia caulina abrupte reducta, plerumque bracteaformia; capitula 18–20-flora; involucrem 6–7 mm longum; corolla flava, circa 10 mm longa; antheræ virides, circa 4 mm longæ; stylus flavus, rami circa 1 mm longi; achænia fusco-purpurea, circa 2.5 mm longa; pappus albus, 3.5 mm longus.

Plant 30 to 85 cm high; lower cauline leaves similar to caudical leaves, sometimes sessile, sometimes reduced to bracts like all the others; heads mostly 18- to 20-flowered; involucre 6 to 7 mm long; corolla about 10 mm long; ligule about 1.25 mm wide; teeth 0.4 to 0.5 mm long, slightly crested and hooded with small apical anterior protuberance; corolla-tube 2.5 mm long, densely pubescent on upper half with tortuous 1- to 2-celled, hyaline hairs up to 0.4 mm long; anther-tube about  $4 \times 1$  mm dis.; filaments extend beyond appendages 0.75 mm; appendages 0.5 mm long, lanceolate, acuminate, united; style-branches about 1 mm long, very narrow; achenes dark purplish brown, 2 to 2.6 mm long, 0.6 to 0.7 mm wide; pappus 3.5 mm long. (Fig. 28, *k-t*.)

Southeastern China in Kiangsu, Chekiang, and Hunan Provinces, mostly at low altitudes. Type locality, Nanking.

CHINA: Kiangsu Province, Nanking, *Tsu* 797 (UC 230671), *type*; *ibid.*, Nanking and vicinity, *Nyi* 13 (UC); *ibid.*, Nanking, near university campus, *Chang* 30 (B); *ibid.*, Nanking, *Chun* 952 (B); *ibid.*, Nanking, Purple Mountain, *Chang* 11 (B, UC); *ibid.*, Chingkiang, Wuohowsan, *Kolthoff* 100 (Upsala); *ibid.*, south of Ishing, *Ching and Tsoo* 391 (B); *ibid.*, Poahwashan, *Tsoo* 200 (B); Chekiang Province, Hangchow, *Steward* 2877 (UC); southwestern Hunan Province, Yunshan Mountains, 400 to 1420 m alt., *Handel-Mazzetti* 65 (B, UC).

24c. *Youngia japonica Elstonii* (Hoehr.) comb.<sup>1</sup> nov.—Plant 55 to 100 cm high or higher; cauline leaves, all but uppermost bracts of inflorescence, large, conspicuous, only gradually reduced from base upward; lower cauline leaves up to 27 cm long, 7 cm wide, oblanceolate, acute, pinnately parted or divided, terminal segment somewhat wider than lateral segments, lateral segments remote, oblong or triangular, acute, irregularly dentate, attenuate into a strong narrowly winged petiole; heads arranged in congested corymbiform clusters at the ends of the paniculate branches, about 20-flowered; involucre 4 to 5.5 mm long; corolla 5 to 6.5 mm long; ligule 0.5 to 0.6 mm wide, often with only 4 teeth; teeth 0.1 to 0.25 mm long, slightly crested, hooded with small apical anterior protuberance; corolla-tube 1.5 mm long, densely pubescent on upper half with 1- to 2-celled tortuous hyaline hairs; anther-tube 0.75 to 1 × 0.5 mm dis.; filaments extend beyond appendages 0.4 to 0.5 mm; appendages 0.3 to 0.4 mm long, very narrow, acuminate, united; style-branches 0.4 mm long, 0.05 mm wide; achenes 1.75 to 2 mm long, 0.3 to 0.4 mm wide; pappus 3 to 3.5 mm long. (*Prenanthes lyrata* Thunb., Fl. Jap. 303, 1784; *Crepis japonica* var. *Elstonii* Hoehr., in *Candollea* 5:340, 1931–1934.) (Fig. 29.)

Southeastern China in Chekiang, Kwangtung, and Kiangsu Provinces, mostly at low altitudes; Hawaiian Islands. Type locality, Hawaii, Kauai, Weimea, Koholuoma.

The type of *Prenanthes lyrata* Thunb. is apparently the same as certain slender forms of this subspecies (cf. UC 346575). Since, however, the combination *Y. lyrata* was used by Cassini for subspecies *genuina*, the authors feel that the application of this epithet to the subspecies here described would be a source of confusion. The type selected is a more extreme form of this subspecies than either of the two specimens of *P. lyrata* in the Thunberg herbarium, which have been examined through the kindness of the curator.

CHINA: Chekiang Province, Soochow University, east of Allen Hall, north side of low wall, *Chang* 540 (UC 346580); *ibid.* (UC 5 sheets); *ibid.*, Mokanshan, Hangchow, *Klautke* 127, 161 (B); *ibid.*, Chekiang, Westlake, *Hu* 1502 (B); Kiangsu Province, Nanking and vicinity, *Nyi* 25 (UC); Kwangtung Province, Canton Delta, *Groff* 2240 (CA). HAWAIIAN ISLANDS: Oahu, Waianae Mountains, Haleauau Valley, *Fosberg* 12981 (UC); Oahu, Kolan Mountains, *Kelly* 168 (CA).

<sup>1</sup> We are indebted to Dr. F. R. Fosberg, of the University of Hawaii, for calling our attention to this subspecific name.

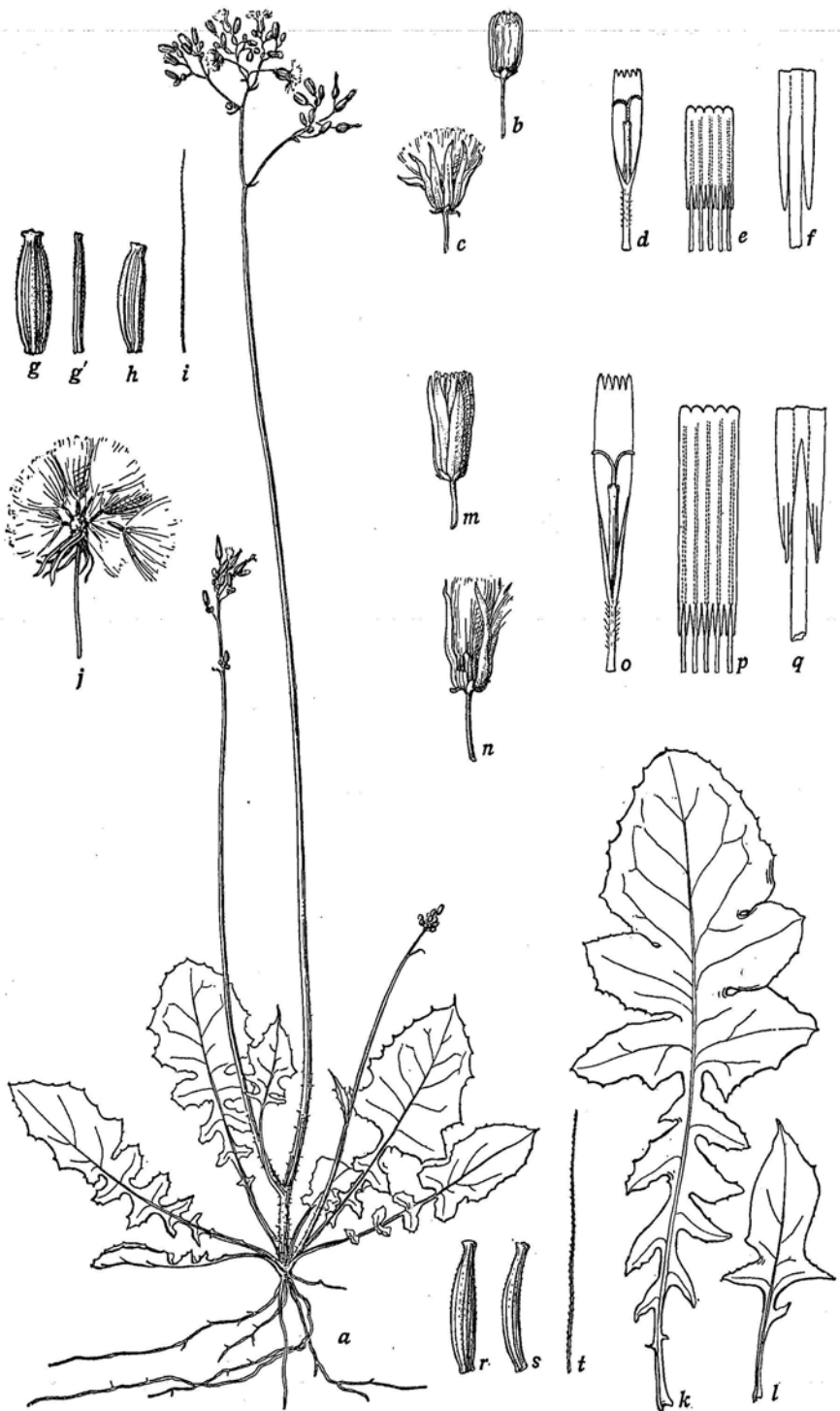


FIG. 28—*Youngia japonica*, a-j, *genuina*, from Tanaka 383 (UC 274336); k-t, *longiflora*, from Tsu 797 (UC 230671): a, plant,  $\times \frac{1}{2}$ ; b, c, young and old heads,  $\times 2$ ; d, floret lacking ovary,  $\times 4$ ; e, anther-tube,  $\times 8$ ; f, detail of appendages,  $\times 32$ ; g, g', marginal achene, front and side views,  $\times 8$ ; h, i, inner achene and a pappus-bristle,  $\times 8$ ; j, mature head,  $\times 2$ ; k, l, radical and cauline leaves,  $\times \frac{1}{2}$ ; m, n, young and old heads,  $\times 2$ ; o, floret lacking ovary,  $\times 4$ ; p, anther-tube,  $\times 8$ ; q, detail of appendages,  $\times 32$ ; r, s, t, marginal and inner achenes and a pappus-bristle,  $\times 8$ .