

very distinct from each other in a number of characteristics. Judging from the number of collections seen, it must be rather common within its range. The nomenclatural problem connected with this species has been discussed elsewhere (Stebbins, loc. cit.).

2. *Dubyaea glaucescens* sp. nov. (Fig. 2, *e-h*).—Caulis 40–50 cm altus, striatus, glaber; folia basalia sessilia anguste obovata, ca. 20 cm longa, 6 cm lata, sinuato-dentata vel pinnatifida, apice acuta vel acuminata, margine remote denticulata, glaberrima, glaucescentia, subtus pallida; folia caulina inferiora basalibus similia, basi amplexicaulia; folia superiora minora, elliptica vel ovata, cordato-amplexicaulia; capitula 3–4, longissime pedunculata, cernua, pedunculis 8–17 cm longis glaberrimis striatis; involucria 18–20 mm longa, late campanulata, multiflora, phyllis imbricatis glaberrimis, exterioribus deltoideis vel ovatis, acutis, interioribus lanceolatis acutis, corollae purpureae (ex nota collectoris), 17 mm longae; antherae pallidae, 6–6.5 mm longae; rami stigmati 2 mm longi, pallidi; achaenia oblonga, 3.5 mm longa, apice truncata vel paulo contracta, inaequaliter ca. 12-costata, pallide fusca; pappi setae uniseriatae, sordide flavescens, rigidae, 9–10 mm longae; receptaculum profunde foveolatum; foveolis margine valde erosis.

Perennial from a taproot, glabrous throughout; stem 40–50 cm tall, striate, glabrous; basal leaves sessile, narrowly obovate, about 20 cm long and 6 cm broad, sinuate-dentate or shallowly pinnatifid, acute or acuminate at the apex, the margin remotely denticulate, completely glabrous, glaucescent, paler below; lower cauline leaves similar to the basal, auriculate-clasping at the base, upper leaves smaller elliptic or ovate, cordate-clasping at the base; heads 3–4 per plant, nodding, solitary on the ends of elongate, stout, striate, glabrous peduncles, these 8–17 cm long; involucries 18–20 mm long, broadly campanulate, many-flowered, the bracts rather evenly imbricated, completely smooth and glabrous, lead-color, the outer deltoid or ovate, acute, the inner lanceolate, acute; corollas "purple" (collector's note), 17 mm long, the tube 5 mm, the ligule 12 mm long; anthers pale, yellowish or bluish, 6–6.5 mm long; branches of the stigma about 2 mm long and 0.2 mm broad, pale; achenes oblong, 3.5 mm long, truncate or slightly contracted at the apex, unequally about 12-costate, pale brownish; pappus bristles uniseriate, dull yellowish, coarse and stiff, 9–10 mm long; receptacle deeply pitted, the margins of the pits strongly erose.

Known only from the type collection: CHINA: Szechuan Prov., Omei Hsien, cliff, alt. 910–1210 m, *Wilson 2493* (G type, B, K, US).

This species is closest to *D. atropurpurea*, but is strikingly different from it, as well as from all other species of the genus. Its completely glabrous and glaucous habit, as well as its broad outer involucral bracts, set it off sharply from any other species of this section, and recall *D. tsarongensis* of the section *Ixeridopsis*. *D. glaucescens*, however, is totally

different from *D. tsarongensis* in other respects. The oblong, almost columnar achenes and yellow, uniseriate pappus of *D. glaucescens* suggest those of *Prenanthes* subg. *Nabalus* and *Hieracium*, but it does not approach these genera in other respects. The pollen grains are very large, 38–40 μ in diameter, and are nearly all 4-pored. Since all species of Cichorieae with 4-pored pollen grains of which the chromosome number is known are cytologically polyploids, this suggests that *D. glaucescens* is also a polyploid.

The habitat of *D. glaucescens* differs from that of all other species of *Dubyaea*, since it occurs at low altitudes, in a zone characterized by a warm temperate climate and by the presence of a mixed deciduous forest containing a great wealth of genera and species of woody plants.

3. *Dubyaea rubra* sp. nov. (Fig. 3, e-f)—Herba perennis; caulis 4.5–6 dm altus, ad basim glaber, ad apicem hirsutus pilis glandulosis; folia basalia petiolata, sagittata, 3.5–7 cm longa, 2.5–4.5 cm lata, margine remote denticulata vel dentata; folia caulina elliptica, inferiora petiolata, superiora sessilia, nec cordata nec amplexicaulia; capitula 4–6 pro planta, longe pedunculata, cernua, multiflora; involucria 15–17 mm longa, phyllis imbricatis, linearis vel lanceolatis, dense nigro-hirsutis, acutis vel acuminatis; corollae roseo-rubescens, 17–18 mm longae; antherae 5 mm longae, nigrescentes; achaenia ignota; pappi setae multiseriatae, albae vel lacteae, 9–10 mm longae.

Perennial herb; stem 4.5–6 dm high, glabrous toward the base, hirsute toward the apex with glandular hairs; basal leaves petiolate, sagittate, 3.5–7 cm long, 2.5–4.5 cm broad, remotely denticulate or dentate on the margin; cauline leaves elliptic, acute, the lower petioled, the upper sessile but not cordate-clasping; heads 4–6 in a corymbose inflorescence, nodding on elongate peduncles; involucries campanulate, about 50–60-flowered, 15–17 mm long, the bracts imbricated in several series, the outer shorter, all linear or lanceolate, densely blackish-hirsute, acute or acuminate; corollas "pinkish crimson" (collector's note), 18–19 mm long, the tube 8 mm, the ligule 10–11 mm long, 1.8–2 mm broad; anthers 5 mm long, greenish or blackish; branches of the stigma 1.8–2 mm long; pappus setae multiseriate, white or cream color, 9–10 long; achenes not seen.

Known only from the type. CHINA: Szechuan Prov., Muli, alt. 3940 m, *Ward 4836* (E).

This species is very close to *D. hispida*, from which it differs chiefly in the shape of its basal leaves, the lower cauline leaves petioled, the upper cauline leaves not at all cordate-clasping, and in its smaller, pinkish-crimson corollas and dark anther tubes. It is taller than most of the *D. hispida* seen from China, but is equalled in height by specimens of that species from the western Himalaya.

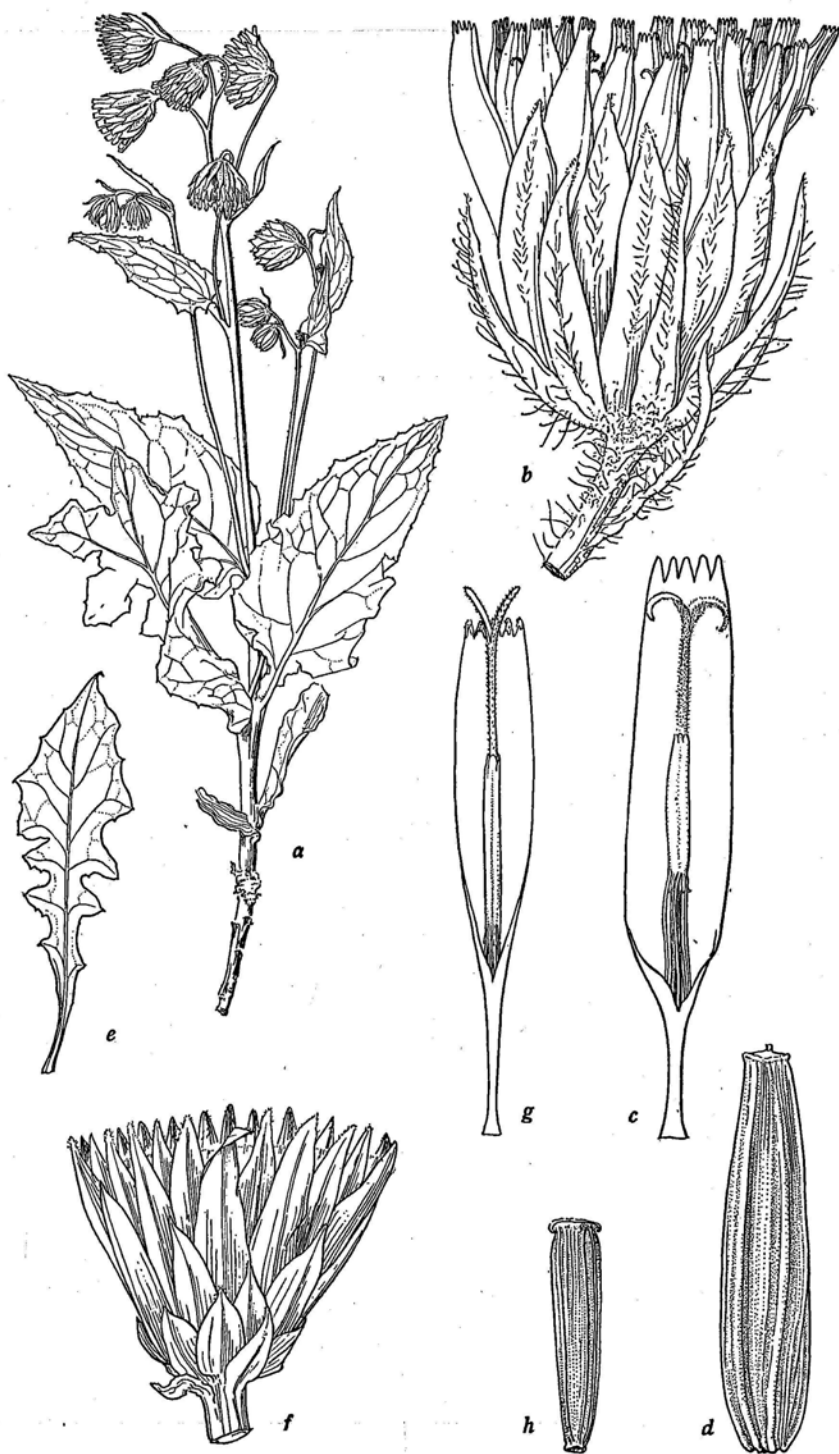


Fig. 2. a-d. *Dubyaea atropurpurea*; a-c, from Rock 24626 (UC), d, from Forrest 9025 (E); a, habit $\times \frac{1}{2}$; b, involucre, $\times 2$; c, corolla, $\times 4$; d, achene, $\times 8$. e-h, *D. glaucescens*, from cotypes (B, K); e, leaf, $\times \frac{1}{4}$; f, involucre, $\times 2$; g, corolla, $\times 4$; h, achene, $\times 8$.