

New species of western plants

ALICE EASTWOOD

***Clematis biflora* sp. nov.**

Lower leaves pinnately compound, with 5 ternate or quinate leaflets; petioles and rachis tomentose especially at the axils, horizontally spreading; leaflets ovate-acuminate, the terminal about twice as long as the lateral, 4 cm., dentately lobed, the teeth or lobes mucronate, base obtuse, surface somewhat pubescent but not tomentose, veiny, bright-green; leaves of the flowering stems simpler, much smaller, the leaflets cuneate at base: peduncles axillary, 2-flowered (sometimes 1-flowered from the abortion of the other bud); bracts minute, simple or trifoliate: flowers perfect, with sepals elliptical to oblanceolate, rather thin, 15 mm. long, about half as wide, obtuse or mucronate, tomentose: stamens shorter than the sepals, with flat filaments in 2 or 3 sets; anthers narrowly oblong, 1.5 mm. long, as broad as the filaments: carpels bristly-ciliate with discontinuous cilia, hispid at the top and with densely plumose tails an inch or more in length.

This species was collected by Mr. T. S. Brandegee on the Island of Santa Cruz, off the coast of Santa Barbara, California, April, 1888, and listed as *C. pauciflora* Nutt., in the list of the plants of the island published in *Zoe* (1: 131). From this species it differs in the acuminate, more numerous, and larger leaflets; flowers equal in size to those of *C. lasiantha* Nutt.; sparingly hispid akenes and densely plumose tails. It is also allied to *C. lasiantha*, but differs in the absence of tomentose pubescence, the more numerous leaflets, the thinner and less tomentose sepals and the more glabrous carpels, and most especially in the two-flowered peduncles.

***Aquilegia Shockleyi* sp. nov.**

Stems branching, glabrous on the lower part, viscid-pubescent on the upper, clothed at base with the bleached persistent remains of the leaves, about 4 dm. high: radical leaves varying in length

This belongs to the same group as *A. canescens* Eastwood. The rosy flowers, the glaucous foliage, and the branching roots are features in which the species are alike, but *A. auriculata* has leaves of a very different shape, branches more erect, and an appearance so different that they could never be confused by even the most superficial observer. In the shape and arrangement of the leaves and hairiness of stem the species resembles *A. Andersoni* Gray.

***Cynoglossum Austinae* sp. nov.**

Stems about 5 dm. high, glabrous throughout, scaly at base: lower leaves suborbicular, 8 cm. in diameter; the other leaves oblong, acuminate, 8–12 cm. long, 4.5 cm. wide, undulate, decurrent on the broad petiole which varies in length from 13 cm. on the lowest leaves to 5 mm. on the topmost; upper leaves much smaller, ovate, upper surface glaucous, lower canescent with irregularly appressed pubescence: panicle somewhat contracted in flower, widely expanding in fruit; peduncles and pedicels glabrous, the latter filiform, lengthening in fruit: calyx deeply divided, the divisions linear-oblong, unequal, about 7 mm. long, 2 mm. wide, obtuse or acute, canescent: corolla purplish, the tube generally longer than the calyx, 7 mm., divisions oblong-orbicular, 4 mm. wide, slightly undulate; crests short, ligulate, conspicuous, truncate, 2 mm. broad and long: anthers almost sessile, nearly 2 mm. long, the tips exserted: only one or two nutlets maturing, these obovate or oblong, 1 cm. long, the lower part smooth or slightly wrinkled, the upper muricate with spines confluent, subulate, a few only tipped with stellate hooks.

Collected by Mrs. C. C. Bruce, the daughter of Mrs. R. M. Austin, in whose honor it is named, at Butte Creek, California, March and June, 1897, being 2092 of her collection.

It differs from the other California species in the peculiar nutlets. These are not at all flattened or depressed. The crests in the throat, too, are more conspicuous.

***Cryptanthe trifurca* sp. nov.**

Stems diffusely branched from the base and above (occasionally simple in depauperate specimens), 1–1.5 dm. high, cinereous with stiff, white, horizontally spreading hairs 2 mm. long, also with appressed pubescence beneath: leaves linear, callous-tipped, strongly ribbed, becoming keeled, with thickened margins, 1–3 cm. long, 1–3 mm. wide, the pubescence like that of the stems

but with pustulate bases to the bristle-like hairs: inflorescence generally 3-forked, the spikes bractless with the flowers secund, subsessile, close but not crowded except when in bud, one flower in the forks: divisions of the calyx linear-lanceolate, obtuse, 3 mm. long, with pubescence like the leaves, connivent in fruit but with tips free, midrib keeled and very bristly: corolla white, salver-form, the limb 5.5 mm. in diameter, with orbicular divisions 2 mm. broad, the tube shorter; crests in the throat white, minutely papillate, slightly emarginate, each one distinct and with a smaller, rounder crest below on a level with the tops of the anthers: stamens inserted along the middle of the tube; filaments very short; anthers with cells united only near the middle: lower part of calyx-tube somewhat pubescent: nutlets 2-3 maturing, ovate, obtusely pointed, truncate at base, a little more than 2 mm. long, 1 mm. wide, mottled in two shades of brown, obscurely and sparsely papillate, very glossy; dorsal surface flattened, the groove on the ventral surface forked at base but closed throughout, $\frac{2}{3}$ attached to the subulate gynobase.

Collected by Dr. Edwin Bingham Copeland at Klamathon, Siskiyou County, California, July 5, 1903 (*no. 3550* of Baker's distribution).

This species is nearest to *Cryptanthe ambigua* (Gray) Greene, but differs in habit of growth, being more erect and rigid, in the inflorescence, in the color and surface of the nutlets and the closed scar; the flowers are similar but the crests in the throat are not identical. The original figure of *C. ambigua*, which was described as *Eritrichium muriculatum* Torr. (*Bot. Wilkes Exped. pl. 13*), has no crests in the throat of the corolla-tube; the calyx-segments are more connivent, the nutlets are dull instead of glossy and the muriculations are more evident.

***Phacelia eximia* sp. nov.**

Annual, about 3 dm. high, branching widely, with weak stems, clothed with fine white spreading bristles and glandular tomentum beneath: leaves compound, with generally one large leaflet at the end and 2 or 3 smaller ones below; terminal leaflet petiolulate, obovate in outline, deeply 3-lobed or undivided, laciniately crenate, hispid and glandular: peduncles flat, about the entire length of the leaf: racemes axillary from even the lowest leaves, spreading, 10-15 cm. long, the peduncle about $\frac{1}{3}$ the entire length; bracts none, pedicels 1-2 mm. long: calyx with narrow, oblanceolate divisions, attenuate at base, loosely spreading, in flower 5 mm., in fruit