

## NEW SPECIES OF CRYPTANTHE.

*C. MONOSPERMA.* Very erect, rather slender and strict, a foot high, leafy up to the middle, thence parting into a few slender rigidly ascending branches ending in a simple or forked lax spike: both stem and foliage rather softly hirsute and without other pubescence: spikes seldom more than 2 inches long in fruit; calyx scarcely more than  $1\frac{1}{2}$  lines long; sepals linear-lanceolate, not attenuate at tip, nor spreading, equally stiff-hirsute from base to apex with ascending bristly-hairs, a more short and densely appressed villosity underneath the bristles: nutlet solitary, almost filling the calyx, ovate from a truncate base and acute, the forked groove completely closed throughout, the rounded back sparsely tuberculate and densely scabrous-muriculate, the muriculation not very acute.

My type of this very neat species is Mr. Suksdorf's n. 180, obtained on the Columbia River in 1885, and distributed for *C. muriculata*. Later, Dr. Gray would have referred it to *C. ambigua* to which it is more akin, and it is from the habitat, nearly, of the original *C. ambigua*, and, in view of Dr. Torrey's remark that, in his plant the nutlets are often solitary, I should like to have felt warranted in taking this for the real *C. ambigua*, but such an assumption could not be made in the face of that other statement that in his plant the nutlet has an open groove divaricately forked at base. The figure of the nutlet represents something certainly very unlike that of what I have here in hand.

*C. GRISEA.* Stoutish, almost fastigiately branched from near the base,  $\frac{1}{2}$  foot high, both stem and leaves cinereous with a copious stiff-hirsute or almost hispid coat of spreading hairs, and a less copious indument of fine closely-appressed ones underneath: spikes short and sessile, always in pairs or threes: rather dense: fruiting calyx 2 lines long; sepals lanceolate, his-

pid with deflexed hairs and also villous: nutlets 4, small, about  $\frac{1}{2}$  line long, rather narrowly ovate-trigonous, the groove divaricately forked and open, the surface rather strongly tuberculate-roughened, and with the dense lesser and scabrous muriculation very minute, appearing under an ordinary lens as mere white dots.

Specimens from Shasta Co., California, 25 May, 1894, collected by M. S. Baker and Frank Nutting, and distributed as *C. ambigua*. The nutlets of this, as to their ventral-face characters, respond to the figure of those of true *C. ambigua*; but their outline, and tuberculation are very different.

*C. SIMULANS.* Rather slender, bushily branched from the base or near it, often 2 feet high, the stems and branches only scantily strigose-pubescent, the scattered leaves more so beneath, less so above: spikes lax, in pairs or solitary, often 6 inches long: fruiting calyx 3 lines long or more, narrowly lanceolate, attenuate at tip, appressed villous toward the base, and with some short deflexed bristles up and down the back: nutlets ovate, abruptly blunt-pointed, sparsely low-tuberculate, and very minutely and closely white-muriculate: groove forked at the very base and closed throughout.

Common in the foothills of the Sierra Nevada, California, distributed from Amador Co., by Geo. Hansen in 1896, under n. 1903, as to my set. In habit, characters of inflorescence and calyx the species curiously simulates *C. Torreyana*, while its nutlets, (with a slight difference) are those of *C. ambigua*, and its allies.

*C. FALLAX.* With much the aspect of a slender *C. muriculata*, less than a foot high, the branches with scattered oblong-linear obtuse foliage and terminating in 3 divergent short and rather dense spikes; stem sparsely villous-hirsute, the foliage as sparingly somewhat strigose, the calyxes with a dense pubescence under the rather few very hispid spreading hairs: calyx-segments lanceolate, short, the tips not attenuate: corolla minute: nutlets ovate-lanceolate from a truncate base, traversed ventrally by

a closed scar, this shortly forked at base, the whole surface grayish, smooth and shining, the back but slightly convex and distinctly sharp-edged.

A very remarkable species in the almost wing-margined character of the smooth nutlets; for the plant has the aspect of that group of species whose nutlets are obtuse all around, and muricate. The only specimen known was collected by myself in the mountains above Tehachapi, California, 22 June, 1889, and was mixed with my duplicates of *C. muriculata* until now.

*C. HORRIDULA.* Stoutish, mostly less than a foot high, branched from near the base, the branches either spreading or suberect, but soon parted into mostly 3 suberect long dense spikes; the whole plant rather shortly but densely hispid, fruiting calyxes forming two close ranks on the rachis, the segments short, scarcely twice the length of the ovate-trigonal muriculate brown nutlets.

An ally of *C. muriculata*, but smaller, much more stiffly and densely hispid, and with a mode of branching into long, not divergent but suberect two-ranked spikes. Habitatly, it is more like *C. Jonesii*; from which, again, its strong hispidness and dense spikes separate it. I know *C. horridula* in only two specimens; one from the Salinas Valley, Monterey Co., Calif., collected in 1885; the other obtained in 1889 on the summit of the dividing ridge between the San Bernardino Valley and the Mojave Desert.

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## A FASCICLE OF NEW COMPOSITÆ.

*HELENIUM BADIUM.* *H. tenuifolium* var. *badium*, Gray, Proc. Am. Acad. xviii. 108. I know of no other instance in which Dr. Gray allowed a composite with dark-brown or purple disk-corollas to stand as a mere variety of a species with the usual yellow disk. It is not, however, the only character marking this as distinct from ordinary *Helenum tenuifolium*. Indeed,