

A well marked species, probably most related to *C. racemosa*, from which it differs in such developments as smaller and sessile calyces, much smaller nutlets, and narrower leaves. To judge from the description of *C. inaequata* it differs from that species in its denser spikes, and much smaller calyces and nutlets. Except for the very narrowly winged margin, the nutlets of *C. angelica* are very suggestive of those of *C. Grayi*.

4. *C. inaequata* Johnston. Loosely and sparingly branched herb 3-4 dm. high; stems erect or ascending, hispid and strigose or hirsute towards the base; leaves oblanceolate to linear, 2-4 cm. long, acute, not numerous, more or less hispid, pustulate especially underneath; spikes geminate or solitary, 4-12 cm. long, at times sparsely bracted below; corolla inconspicuous, tube shorter than calyx; fruiting calyx ovate-oblong, 2.5-3 mm. long, ascending, pedicels less than 0.5 mm. long; mature calyx-lobes lanceolate, midrib thickened and hirsute, axial lobe most pubescent and thickened; nutlets 4, heteromorphous, triangular-ovate, dark with small pale tuberculations, margins decidedly acute, groove closed above but below gradually dilating into a shallow triangular areola; odd nutlet ca. 1.7 mm. long, somewhat persistent, slightly lighter than the others, next the abaxial calyx-lobe; consimilar nutlets ca. 1.3 mm. long; gynobase equalling the consimilar nutlets but surpassed by odd nutlet; style much surpassing the nutlets.—Univ. Calif. Pub. Bot. vii. 444 (1922). *Johnstonella inaequata* Brand, Fedde Repert. in press.

Southeastern California.

CALIFORNIA: among rocks, Pleasant Canyon, Panamint Mts., 600 m. alt., *Hall & Chandler 6925* (UC, TYPE); Baxter, *Parish 9859* (UC).

The status of this species is problematic, since the collections upon which it was based have not been available to me for several years. The description given above is adapted from a preliminary diagnosis made in 1922. It is possible that the plant is only a form of *C. racemosa*, although it has been noted as differing in its subsessile calyces and less extended duration.

5. *C. pusilla* (T. & G.) Greene. Low plant usually with very numerous prostrate-ascending stems; these very slender, usually strictly branched, 3-15 cm. long, canescent, appressed villous-hirsute; leaves crowded near base of plant but distant above, spatulate-linear to linear, 1-3 cm. long, 1-2 mm. wide, somewhat pustulate and hispid below but less so above; spikes solitary or geminate, 2-8 cm. long, naked or with a few minute bracts; corolla inconspicuous, shorter than calyx, 1.5-2 mm. long, lobes slightly spreading oblong ca. 0.3

mm. long; fruiting calyces 2-2.5 mm. long, broadly ovate, symmetrical, sessile or subsessile, early deciduous; mature calyx-lobes lance-ovate or oblong-lanceolate, hirsute, midrib only slightly thickened; nutlets 4, homomorphous, lucid, ca. 0.8-1.2 mm. long, triangular-ovate, bent, tan-colored with low light-colored tuberculations, margin angled and beveled, groove opened or closed above but expanding below into a shallow open triangular areola; gynobase narrowly pyramidal, about equalling the nutlets; style much surpassing the nutlets, ca. $\frac{1}{2}$ length of gynobase.—*Pittonia* i. 115 (1887). *Eri-trichium pusillum* T. & G. Pacif. R. R. Rep. ii. pt. 2, 171 (1856). *Krynitzkia pusilla* Gray, Proc. Am. Acad. xx. 274 (1885).

Southern Arizona and New Mexico southward to Durango.

ARIZONA: near Nogales, 1902, *Orcutt* (UC); Douglas, 1907, *Gooding 2264* (UC). NEW MEXICO: without locality, *Wright 1571* (G, NY). TEXAS: Fort Davis, 1880, *Giard 65* (G); Kent, *Tracy & Earle 105* (UC); El Paso, *Jones 3741* (UC); Llano Estacado, *Pope* (NY, TYPE). CHIHUAHUA: hills and plains near Chihuahua, *Pringle 184* (G, UC); vicinity of Chihuahua, 1300 m. alt., *Palmer 65* (G). DURANGO: Tepehuanes, *Palmer 28* (G, UC); Durango, *Palmer 139* (G, UC) and *227* in pt. (G).

A very distinct species readily recognized by its beveled, bent, lustrous nutlets that just equal the somewhat basally constricted gynobase. The type is given as coming from "Rio Pecos to Llano Estacado, etc. in sandy soil, March." From a study of the journal in Pope's Report, the locality given is found to be within about 100 kilometers traveled between March 24th and 26th 1854. This would make the type locality lie somewhere near the juncture of Ward, Crane and Ector counties, Texas.

6. *C. costata* Brandg. Coarse stiff few-branched herb 1-2 dm. high; stems (especially younger parts) canescent, densely villous-strigose and usually somewhat hirsute as well; leaves lanceolate to linear, 1-3 cm. long, 2-4 mm. wide, broadest near base, apex acute, above villous-strigose and sparsely hispid, beneath more hispid and frequently also pustulate; spikes rigid, 2-5 cm. long, solitary or geminate, sparsely leafy-bracted; corolla inconspicuous, ca. 2 mm. long, tube shorter than calyx, lobes broad and ascending; fruiting calyces ovate-oblong, 4-6 mm. long, subsymmetrical, spreading, deciduous, subsessile; mature calyx-lobes linear-lanceolate, somewhat connivent above with tips slightly spreading, midrib thickened hirsute, margins strigose; nutlets 4, homomorphous or subheteromorphous with the nutlet next the abaxial calyx-lobe slightly the largest, ca. 1.8 mm. long, triangular oblong-ovate, back strongly convex, inconspicuously rugulose or faintly verrucose, face noticeably flat or even