

1902, *Brandegee* (UC); desert sand, Indio, 30 m. alt., *Spencer 1517* (G); sandy wash, Shaver's Well near Mecca, 59 m. below sea-level, *Munz & Keck 4763* (G); sands, Mecca, *Spencer 1512* and *1785* (G); Cameron Lake, *Brandegee* (UC); Yaqui Wells, *Eastwood 2632* (G); bottom lands near Colorado River, 750 m. alt., *Hall 5922* (UC); in sandy places. Colorado Desert, *Spencer 195, 196, 197* and *201* (G); without locality, *Coulter 500* (G). LOWER CALIFORNIA: stony ridges, Los Angeles Bay, *Palmer 606* (G); San Agueda, *Palmer 241* (G, UC); Angel de la Guarda Island, *Johnston 4227* (G). NEVADA: Moapa, *Goodding 2181* (G, UC); Overton, 450 m. alt., *Heller 10439* (G); Amargosa in moist place near station, 900 m. alt., *Heller 10976* (G); sandy wash, Meadow Valley Wash, *Goodding 2169* (G); Muddy Valley, *Kennedy & Goodding 26* (UC). ARIZONA: Fort Yuma, *Thomas* (NY, TYPE); Fort Yuma, *DuBarry* (NY, COTYPE); Gila River, *Thurber 690* (G); Tucson, 1907, *Lloyd* (G); Tucson, 1884, *Parish* (G); Tucson, 1894, *Toumey* (UC); campus of University of Arizona, *Thorner 407* and *516* (UC); without locality, 1876, *Palmer* (G); without locality, 1881, *Pringle* (G). SONORA: Torres, 1902, *Purpus* (UC); dry places, Canyon of Guadalupe, *Smith* (NY); Las Durasnillas, 1892, *Brandegee* (UC); Guaymas, *Palmer 169* (G, UC). NEW MEXICO: mesa west of Organ Mts., 1905, *Wootton* (UC). TEXAS: El Paso, 1884, *Jones* (G).

Probably the most common *Cryptantha* in the lower deserts of California. It is readily recognized by its characteristic ashy herbage, dense spikes, and heteromorphous dark nutlets which are covered with small light colored low tubercles. It is a well marked species, having its closest relation in *C. Grayi*.

9. *C. Grayi* (Vasey & Rose) Macbr. A small slender herb 5-15 (-18) cm. high; stems usually several, strict or spreading, appressed or spreading villous-hispid; leaves quite numerous, linear, 1-4 cm. long, 1-2 mm. wide, densely pustulate-setose beneath but much less so above, basal ones somewhat aggregated, upper ones reduced; spikes usually geminate, naked, densely flowered, 1-4 cm. long; corolla minute to medium-sized, tube shorter than calyx, limb 0.5-3 mm. broad; fruiting calyx oblong-ovate, 1-2 mm. long, sessile or subsessile, decidedly biseriate; mature calyx-lobes lance-linear, rigid, slightly connivent, midrib short-hirsute, margins somewhat villous-hispid, axial lobe most pubescent; nutlets 4, homomorphous, very small, 0.5-0.7 mm. long, triangular-ovate, dark colored, usually bearing light-colored low tuberculations, edges angled or rounded, areola shallow and deltoid with the groove above it commonly closed; gynobase subulate, equalling or a little shorter than the nutlets; style much surpassing the nutlets.—Contr. Gray Herb. n. s. xlviii. 43 (1916).

Var. *genuina*. Corolla conspicuous, 2-3 mm. broad; nutlets tuberculate.—*Krynitzkia Grayi* Vasey & Rose, Proc. U. S. Nat. Mus. xi. 536 (1888). *C. Grayi* Macbr. l. c.

Middle Lower California.

LOWER CALIFORNIA: Lagoon Head, *Palmer 801* (G, UC, ISOTYPES); Calmalli, *Purpus* (UC); Magdalena Island, *Orcutt 27, 52 and 80* (G); Magdalena Bay, 1889, *Brandegee* (UC); Santa Margarita Island, 1889, *Brandegee* (UC).

Var. **nesiotica** Johnston. Corolla inconspicuous, 0.5–1 mm. broad; nutlets very sparsely or not at all tuberculate.—Proc. Calif. Acad. Sci. ser. 4, xii. 1146 (1924).

Dunes on islands in southern part of Gulf of California.

LOWER CALIFORNIA: very common on dunes, San Francisco Island, *Johnston 3947* (G, UC, ISOTYPE).

Var. **cryptochaeta** (Macbr.) Johnston. Corolla inconspicuous, 0.5–1 mm. broad; nutlets abundantly tuberculate.—Proc. Calif. Acad. Sci. ser. 4, xii. 1145 (1924). *C. micromeres*, var. *cryptochaeta* Macbr. Contr. Gray Herb. n. s. xlvi. 46 (1916). *C. filiformifolia* Macbr. l. c. 45.

Extreme southern Lower California and Sonora.

LOWER CALIFORNIA: Cape San Lucas, *Xantus 76* (G); sandy clearings, La Paz, *Johnston 3071* (G); San José del Cabo, *Anthony 347* (G, TYPE of *C. micromeres*, var. *cryptochaeta*). SONORA: Alamos, *Palmer 397* (G, TYPE of *C. filiformifolia*; UC, ISOTYPE); Alamos, *Goldman 308* (G).

Cryptantha Grayi is very closely related to *C. angustifolia*, and from the infrequent extremely slender forms of the latter it is distinguishable only by its decidedly homomorphous nutlets. Usually, however, it is readily recognized by its very slender habit, and by its herbage which usually dries a darker color than that of *C. angustifolia*.

Ser. II. CIRCUMSCISSAE. Nutlets 4, smoothish or inconspicuously muricate, dark, triangular-ovate, with acute sides, homomorphous or subheteromorphous with the abaxial nutlet just appreciably the largest; style equalling or barely surpassing the nutlets; calyx circumscissile at maturity.

10. **C. circumscissa** (H. & A.) Johnston. Low herb 2–10 cm. high, trimly erect or much branched and forming hemispherical masses; stems few to numerous, more or less branched above, strigose or hirsute, the outermost somewhat decumbent; leaves oblanceolate, 3–15 mm. long, 1–2 mm. broad, obtusish, surface siliceous especially toward the pale base, strigose or hirsute, obscurely pustulate, upper ones scarcely reduced and extending through the inflorescence as foliaceous bracts; flowers axillary, the racemose arrangement obscure; corolla more or less inconspicuous, 1–2(–3) mm. broad; fruiting calyx 2.5–4 mm. long, oblong-ovate, united to near the middle, at maturity upper half falling away by a circumscission just below the sinuses;