

seems to answer well to the above diagnosis. Its range appears to be restricted to this coast, and it should be looked for on some of the northern Santa Barbara Islands. In Proc. Calif. Acad. II. 4:202. 1894-5, Mrs. KATHERINE BRANDEGEE writes that in her opinion it appears to be nothing but a stocky southern form of *C. dentatus* T. & G. growing on unsheltered sandhills. In the same paragraph she states that *C. dentatus* in its typical form appears to be confined to the vicinity of Monterey. Still there are quite remarkable differences between the two forms or species, and to one observing them in the field they would not for one moment be taken for the same. *C. dentatus* at Monterey has not the dense prostrate habit. The leaves of *C. impressus* are broadly elliptical to nearly orbicular, while in *C. dentatus* they are oblong-cuneiform; furthermore, the branches of *C. impressus* are rigid and spinescent, while in *C. dentatus* they are flexible and not spinescent—a character also contrasting *C. thyrsiflorus* Esch. and *C. sorediatus* H. & A.

Malacothrix succulenta, n. sp.—Succulent maritime perennial herb, with long fleshy creeping and numerous branched stems forming dense mats: stem above the sand branching near the base or at least below the middle, 1-2^{cm} high, rarely erect but usually reclining, when young floccose especially on the concealed portion, soon becoming glabrous: lower leaves persistent after they become dry, linear-oblongate, sessile when mature, glabrous on both sides, 5^{cm} long, 8^{mm} across the widest part, obtusely rounded, rarely undulate or dentate along the upper margin: scapes gradually thickened at the apex, usually branching from a little below the middle, its bracts minute, weak and sub-flexuose: heads solitary, turbinate, 2^{cm} long, about that in width at the top: involucre bracts chiefly in one series, 10^{mm} long, thin, glabrous, linear, loosely imbricated, subtended by numerous smaller triangular bracts of the scape: flowers many, all with lemon-colored ligulate corolla: receptacle naked, flat: achene smooth, 1.5^{mm} long, with semi-truncate or short obtuse ends, bearing a soft silky white pappus whose bristles are finely scabrous and equally 6^{mm} in length: corolla 7^{mm} long, gradually tapering into the 4-toothed ligulate expansion, much exceeding the pistil, its tube 3^{mm} long and glabrous: stamens exerted; anthers linear, united, 3^{mm} long; filaments 5^{mm} long, distinct, thread-like style exceeding stamens, barely cleft.

Dunes and terraces about Surf, Santa Barbara county, California, May 1902. Type specimen, no. 3639, in Herb. Stanford University.

It is now just sixty-six years since NUTTALL first discovered on an island in San Diego Bay a *Malacothrix* which Torrey and GRAY described (Fl. N. Am. 2:486. 1838-40) as *M. incana*. Fifty years later GREENE rediscovered it growing abundantly on San Miguel, the smallest and remotest of the Santa Barbara Islands; he also found it on the western extremity of Santa Cruz Island, a distance of 200 miles northwestward from its type locality. My plant from Surf is similar, but in my opinion is specifically distinct, though very closely related to *M. incana*.

***Carduus maritima*, n. sp.**—Succulent maritime biennial or perennial, from strong thick tap roots: stems 1^m long, much branched from the base and up to the middle, giving the plant a rounded bushy appearance; branches covered with long white appressed hairs and terminating in 1-3 heads: leaves thick, felty, densely and thickly lanate pubescent, 1-2^{cm} long, the blade proper ovate in outline, the lower one-third abruptly narrowed, its base semi-auriculate, the entire margin irregularly and dentately lobed and beset with straight needle-pointed spines which are more numerous toward the base than on the coarse lobes of the blades: heads large, dull white, 5^{cm} long, nearly that in width, loosely corymbose: bracts many, imbricate, nearly equal in length; the exterior ones similar to the leaves in lobation, spinescence, and pubescence; the interior ones linear-lanceolate, sharply acuminate, the lower and inner surface wholly glabrous, finely spinescent on the margins above the middle: the dense bristly hairs of the receptacle not hispid, dark brown, 12^{mm} long: achene 6^{mm} long, flattened, narrowly obovoid or cuneate, brown and shining, usually somewhat curved: pappus bristles interlaced with fine secondary ones except at the apex, 2^{cm} long, dull white, attached as a whole to the apical rim of the achene: corolla tubular, 2.5^{cm} long, segments 4^{mm} long, the tube funnellform or slightly inflated immediately beneath the lobes: anthers united and pubescent, 7^{mm} long: stigma barely notched.

Surf, Santa Barbara county, California, May 1902. Type specimen, no. 3631, in Herb. Stanford University.

The habitat of this species is strictly saline and most probably it can be found on the islands and possibly in other localities along the coast. I found only a few plants on the most exposed dunes, on which they formed low spreading bushes not very dissimilar to the Russian thistle. Its low succulent halophytic habit, remarkable pubescence and peculiar lobation and spinescence of its leaves readily distinguish it from all other species of this genus.