

data included with the herbarium sheet indicate the plant was "locally abundant." Likewise, information on *Howell 41107* indicates the plant was "locally common." No comparable information is available for *Smith 1336*. The recent discovery of such widely scattered populations considerably south of the earlier known range suggests that additional populations are to be expected, particularly in the foothills of Tulare County.

In addition to expansion of known range for this species, the populations cited are interesting for their pappus characteristic. Cronquist (*Vascular Plants of the Pacific Northwest* 5:157,—1955) stated that forms of this species with pappose and epappose rays may occur in a single population. More recently Ornduff (*Leafl. West. Bot.* 9:84, 85—1960) concluded that both forms "occur nearly throughout the range of *Crocidium*, the possible exception being collections from the central Sierra Nevada foothills in which no epappose plants have been seen." In my collections 102 plants from the population represented by 64008 and 64012, and 56 plants from 64116 were studied for presence or absence of pappose rays. Quibells' collection of 7 plants was also observed. All plants had pappose rays. Information on the Madera and Kern County collections, generously supplied by John Thomas Howell (personal communication) also indicated all plants sampled (seven each for *Howell 41107* and *Smith 1336*) had pappose rays. This is in agreement with Ornduff's observation cited above and with those of Raven and Mertens for the population in San Luis Obispo County. The specimens cited by Twisselmann from Kern County should be studied for this character but it appears that plants having epappose rays are rare or non-existent in the southern portions of the range for *Crocidium*.

---

## A NEW CALIFORNIA STEPHANOMERIA

BY ROBERT F. HOOVER

*California Polytechnic College, San Luis Obispo*

*Stephanomeria carotifera* Hoover, spec. nov. Perennis e radice carnosae carotiforme 4–15 mm. diametro in caulem abrupte contracta, sensim desuper attenuata; caulibus e basi ramis late divaricatis, 3–39 dm. longis; foliis basalaribus prae anthesi evanescentibus; foliis caulinis anguste linearibus, 5–25 mm. longis, integris vel basi auriculata sparse dentatis; foliis superioribus reductis 1–2 mm. longis, triangularibus vel ovatis; capitulis solitariis



in extremis ramulorum brevium; involucris 6–9 mm. longis, extra bracteis paucis brevibus ovatis usque ad lanceolatis; bracteis involucralibus interioribus 6–8, linearibus, obtusis vel abrupte acutis, margine scariosis, saepe apice fimbriatis; floribus circa 8 in capitulo; corolla intus alba, extra plus minusve purpureo-tincta; acheniis 3–3.5 mm. longis, costis 14–16, rugosis; pappo albo, circa 15–20 capillis, plumoso usque ad basim, facile deciduo.

Perennial with fleshy tap-root 4–15 mm. in maximum diameter, abruptly narrowed into the stem, gradually tapering downward; stems branching from base, the branches widely spreading, 3–9 dm. long (in young plants the stem erect, simple at base, with divaricate branches from below the middle); basal leaves absent at flowering time; cauline leaves narrowly linear, 5–25 mm. long, entire or sparingly dentate at the auriculate base; upper bract-like leaves triangular to ovate, 1–2 mm. long; heads solitary at the ends of short branchlets; involucre 6–9 mm. long, with a few short ovate to lanceolate bracts at base; inner involucral bracts 6–8, linear, obtuse or abruptly acute, scarios-margined, some of them fimbriate at the tip; flowers about 8 in a head; corolla white on upper surface, more or less purple-tinged on back; achenes 3–3.5 mm. long, 14–16-ribbed, rugose; pappus white, of about 15–20 bristles, plumose to base, readily deciduous.

Open south-facing hill near San Bernardo Creek east of Morro Bay, in clay among serpentine rock, July 11, 1964, *Hoover 9191* (type, CAS No. 453,631). Plants were also collected at the same place August 13, 1964, *Hoover 9206*. The plants constitute one element in a most unusual, entirely herbaceous plant community, including *Selaginella Bigelovii* and such geographically restricted plants as *Pellaea andromedaefolia* var. *pubescens*, *Chorizanthe Palmeri*, *Dudleya parva*, and *Astragalus curtipes*.

The closest affinity of *Stephanomeria carotifera* is with the widely distributed annual species *S. virgata*. The large perennial *S. cichoriacea*, with a heavy woody caudex, is present in the vicinity but is not immediately related. None of the other perennials in the genus seems to resemble *S. carotifera* very closely, and none of them occurs in coastal California.

No characters in the heads, flowers, or achenes have yet been discovered to differentiate *S. carotifera* from all plants of *S. virgata*, but in vegetative structure it is wholly distinct. *Stephanomeria virgata* in the Morro Bay region, as well as elsewhere throughout its extensive range, has a slender tap-root no thicker than the base of the stem and a strictly erect axis which branches only above the base. The fleshy root and divaricate branching of *S. carotifera* are in marked contrast. In case these features should be interpreted as a reaction to grazing, it should



be explained that even young plants which have not been grazed show the fleshy root and divaricate branching. Some of these young plants show white-woolly buds where the root and stem join, which presumably would give rise to spreading branches in the second year.

---

## A NEW POTENTILLA FROM THE SIERRA NEVADA, CALIFORNIA

BY JOHN THOMAS HOWELL

*Potentilla* (§ *HORKELIA*) *tularensis* J. T. Howell, spec. nov. Herba inodora compacta caespitosa vel laxe pulvinata caudice multicipitali ex radice lignosa, cinereo-pallida, pilis et tenuibus et crassioribus, vel patentibus vel strigoso-subappressis, atque pilis sparsis minimis glandulosis vestita; caulibus tenuibus erectis 3–10 cm. altis; foliis basalaribus rosulatis, 2–4 cm. longis, petiolis 0.5–1.5 cm. longis, foliolis 6–10-jugatis, infimis plus minusve petiolulatis, discretis, supremis confertis vel subimbricatis, 3–5-palmatifidis, segmentis oblongis usque ad obovatis, obtusis vel acutis, stipulis integris triangularibus, acutis vel acuminatis foliis caulinis paucis, reductis, stipulis divisis; cyma laxe pauciflora, ramis ascendentibus; floribus 4–5 mm. longis; hypanthio cupulato, 1–1.5 mm. alto, intus piloso; bracteolis 1–2 mm. longis; sepalis 2–3.5 mm. longis; petalis albis, lineari-oblongatis, plerumque sepala brevioribus, 2–3.5 mm. longis, 0.5–1 mm. latis, subobtusis; staminibus 10, filamentis 1 mm. et 1.5 mm. longis, subulato-dilatatis, 0.25–0.5 mm. latis basi, glabris vel raro pilem ferentibus, antheris oblongis, 0.6 mm. longis; stylis circa 11, minute glandulosis basi; acheniis turgidis, 2.5 mm. longis, ferrugineis, paulum reticulatis, nitentibus.

Type: Herb. Calif. Acad. Sci. No. 456,724, collected in metamorphic gravel along the exposed summit ridge of Bald Mountain above a forest of *Pinus Jeffreyi* at an elevation of 9430 feet, Tulare County, California, by Ernest C. Twisselmann, No. 11472, on August 19, 1965. Most of the plants are in fruit.

*Potentilla tularensis*, known only from a rocky ridge top on the Kern Plateau in the southern Sierra Nevada, is closely related to the rare endemic *P. hispidula* (Rydb.) Jepson of the subalpine forest of the White Mountains east of Owens Valley. The Sierran plant differs in its more congested habit and heavier caudex, grayer and denser pubescence, smaller leaves, shorter stems, shallower hypanthium, narrower and shorter petals, and shorter and narrower filaments. In *P. tularensis* the antisepalous filaments are usually glabrous, although very rarely one may bear a hair like those on the hypanthium; in *P.*