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## A MONOGRAPH OF THE SECTION OREOCARYA OF CRYPTANTHA<sup>1</sup>

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### INTRODUCTION

The group of plants treated in the present monograph is remarkably characteristic of the Upper Sonoran areas of the Great Basin region, although a few species are native to the eastern foothills of the Rocky Mountains, one or two have penetrated to the Canadian plains and two or three occur in northern Mexico and adjacent Texas. In western Colorado, Utah, Nevada, and southern Wyoming one or more species may be found on almost any barren hillside. Many seem to prefer soils that are so strongly impregnated with mineral salts that few other plants can compete with them. No species seems to be able to tolerate a moist or undrained situation.

These plants are often transient occupants of any habitat. They seem particularly at home on shifting or disturbed soil. A loose hillside or shale outcrop is a favorite locality for the commoner kinds. And yet they are never weeds in cultivated ground—that distinction is reserved for the annual members of the genus. What the factors are that determine this tendency to occupy changing habitats is as yet unknown to the author—one of many ecological problems suggested by the present study.

The members of the section *Oreocarya* are very similar in general appearance. They are usually gray with numerous trichomes and in most cases are beset with harsh bristles that render

<sup>1</sup> Issued October 8, 1927.

<sup>2</sup> Since the receipt of the manuscript of this paper, Dr. Payson passed away on May 15, 1927.

23. *C. aperta* (Eastw.) new comb. Plate 28, figs. 62–64.

*Oreocarya aperta* Eastw. Bull. Torr. Bot. Club 30: 241. 1903.

Perennial, caudex branched from a woody root; stems several, rather slender, 1–2 dm. high; leaves densely clustered at base and the dilated petioles imbricated, pubescence of upper and lower leaf surfaces similar, sparsely strigose and abundantly pustulate-setose, bristles conspicuous, spreading; radical leaves spatulate to oblanceolate, 3 cm. long, 8 mm. wide; cauline leaves oblanceolate, about as long as the radical leaves but narrower; inflorescence branched from near the base with many spreading, simple or 2-forked spikes, those of all the stems aggregated into a closely branched thyrsus, spikes peduncled, longer than the subtending leaves, pedicels very short, about 0.5 mm. long; calyx densely setose, sepals in anthesis linear or linear-lanceolate, acute, about 3 mm. long, in fruit 8–10 mm. long, exceeding the nutlets about 5 mm.; corolla white, tube 2.5–3 mm. long, equalling or somewhat shorter than the sepals, crests at the base of the tube evident, fornices conspicuously papillose, probably yellow, nearly 1 mm. long, limb about 6 mm. broad, tube and limb subequal, the lobes united for about  $\frac{1}{4}$  their length; fruit ovoid, all four nutlets commonly maturing, style exceeding the nutlets by about 2 mm.; nutlets lanceolate, acute, 2.5–3 mm. long, margins in contact, acute, surfaces of nutlets somewhat glossy, the dorsal tuberculate, more or less rugose and somewhat muriculate, ventral surface irregularly and ambiguously roughened, scar extending from near the base to near the apex, straight, closed, no elevated margin present.

Distribution: Upper Sonoran Zone, Grand Junction, Colorado, June 27, 1892, *Eastwood*.

Specimen examined:

Colorado: Grand Junction, May 17, 1892, *Eastwood* (Calif.).

*C. aperta* is another species of this genus of which more material is badly needed. Presumably it is distinct from all others but it is so imperfectly known that it is impossible to know to what other species to ally it.

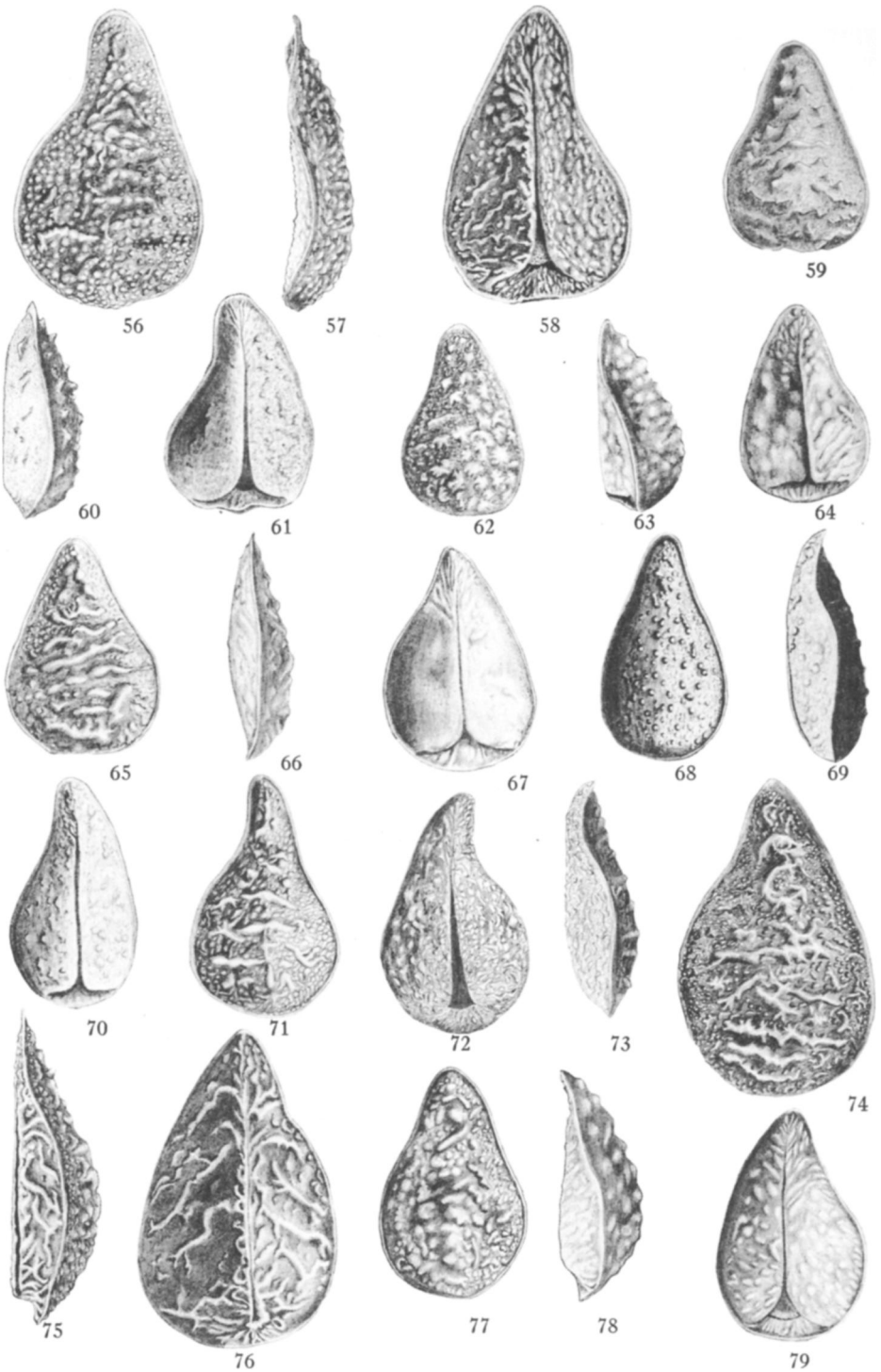
24. *C. rugulosa* (Payson) new comb. Plate 28, figs. 65–67.

*Oreocarya rugulosa* Payson, Univ. Wyo. Publ. Bot. 1: 166. 1926.

## EXPLANATION OF PLATE

## PLATE 28

- Figs. 56-58. *C. elata*. Drawn from *Osterhout 5996*.  
Figs. 59-61. *C. sericea* var. *typica*. Drawn from *Payson & Payson 2528*.  
Figs. 62-64. *C. aperta*. Drawn from type, *Eastwood*, Grand Junction, Colorado.  
Figs. 65-67. *C. rugulosa*. Drawn from type, *M. E. Jones*, Fish Springs, Utah.  
Figs. 68-70. *C. interrupta*. Drawn from *Heller 9185*.  
Figs. 71-73. *C. spiculifera*. Drawn from type, *Sandberg & Leiberg 164*.  
Figs. 74-76. *C. celosioides*. Drawn from *Suksdorf 888*.  
Figs. 77-79. *C. Sheldonii*. Drawn from type, *Sheldon 8315*.



PAYSON—SECTION OROCARYA OF CRYPTANTHA