Biennial and perennial Cryptantha taxa segregated from annual Cryptantha taxa and placed in genus Oreocarya based on Hasenstab-Lehman, K. E. and M. G. Simpson. 2012. Syst. Bot. 37(3): 738-757. Genus description revised accordingly.

## Oreocarya Greene Cat's Eye

Infl terminal and axillary in a series of raceme- or spike-like cymes, tips helicoid, bracteate (ours) or not, often accrescent in fr; fls radially symmetric; calyx cleft to the base or nearly so, accrescent in fr; corolla white (ours), rarely yellow, fornices 5 , yellow fading to white, the limb gen $\pm$ rotately spreading, conspicuous; stamens 5 , included; nutlets 4, or 1-3 by abortion, affixed to the somewhat elongate gynobase for much of their length, the scar narrow and gen appearing as an elongate, closed to narrowly open groove that is either forked at base or opened into a basal areola (open gap); taprooted bien or per herbs often with well-developed basal rosette and heavily br caudex, strigose to more often hirsute or partly hispid-setose. (Gr oreo, mountain, and carya, nut, referring to mont habitat of most spp.). (Cryptantha, in part).
Pls wholly e Cas in our area. Lf length in the key includes the petiole. Specimens of C. stricta (Osterh.) Payson from Clark Co, ID are well $n$ of the range of this sp. and likely misidentifications.


1a Nutlets smooth; scar closed; pls per, 1.5-4 dm
2a Corolla tube > calyx at anthesis; corolla limb 5-9 mm wide; lvs all relatively slender and tapering gradually to an acutish tip, the lower ones $5-10 \mathrm{~cm} \times 3-6 \mathrm{~mm}$; dry plains and sand dunes; endemic to c and sc WA; gray c. (C. l.)

1 O. leucophaea (Douglas ex Lehm.) Greene
2b Corolla tube $\leq$ calyx; corolla limb $8-11 \mathrm{~mm}$ wide; lower lvs more broadly rounded or obtuse, oblanceolate, gen broadly so, gen $4-10 \mathrm{~cm} \times 6-12 \mathrm{~mm}$; dry slopes and cliffs; along Salmon R from Challis to E Fork Salmon R; Salmon R c. (C. s.)

2 O. salmonensis A. Nelson \& J.F. Macbr.
1b Nutlets $\pm$ roughened, at least on the back, the scar open or closed; pls bien or per, to 5 dm ; corolla tube ca $=$ or occ < calyx
3a Nutlets tuberculate to muricate on both sides, occ rugose; upper surface of lvs pustulate or not; pls per, multi-st from base
4a Upper surface of lvs setose-pustulate and tomentose; style $\pm=$ to nutlets, occ up to $1.25 \mathrm{~mm}>$; corolla limb 6-10 mm wide; basal lvs $1.5-6 \mathrm{~cm} \times 2-9 \mathrm{~mm}$; pls $1-$ 2 dm ; open slopes and flats in sagebr des; app our area in Malheur Co, OR and sw ID, s to CA, e to CO, and AZ (C. h.) 3 O. humilis (A. Gray) Greene
4b Upper surface of lvs uniformly short-hairy or with some poorly developed and inconspicuous longer setae, not pustulate; style $1.5-2 \mathrm{~mm}>$ nutlet; corolla limb 6-8 mm wide; basal lvs 3-10 cm $\times 5-10 \mathrm{~mm}$; pls $1-2.5 \mathrm{dm}$; dry, open hillsides; n Harney Co, OR, e to adj ID, and in Custer Co, ID; ID c. (C. p.)

4 O. propria A. Nelson \& J.F. Macbr.
3b Nutlets variously roughened, but scarcely as above; upper surfaces of lvs gen with well-developed, gen pustulate-based setae in addition to fine, short hairs; pls bien or per, multi-st or not
$\mathbf{5 a}$ Nutlets smooth or nearly so ventrally, slightly to moderately roughened dorsally; pls 1-3 dm; mont to high elev (no 6 sometimes descending to the foothills)
6a Pls endemic to mont and alp areas of Wen Mts, WA; pls 1.5-3 dm; basal lvs $4-8 \mathrm{~cm} \times 4-8 \mathrm{~mm}$; fr calyx $9-12 \mathrm{~mm}$ long; nutlets $4-6 \mathrm{~mm}$, scar evidently open for most of its length; ponderosa pine belt upwards, often on serpentine; Thompson's c. (O.t.)

5 O. thompsonii (I.M. Johnst.) Abrams $\mathbf{6 b}$ Pls e or s of WA; nutlet scar closed for all or most of its length; pls $1-2 \mathrm{dm}$
7a Basal and lower st lvs with apices $+/-$ truncate to obtuse; lvs to $3.5 \mathrm{~cm} \times 8$ mm; fr calyx 6-7 mm long; nutlet ca 3 mm , scar gen closed; open mont to alp slopes with shale; w MT to se OR and NV; Waterton Lakes c. (C. s., $O$. nubigena misapplied)

6 O. sobolifera (Payson) R.B. Kelley
7b Basal and lower st lvs with apices $+/-$ acute; lvs $1-2.5 \mathrm{~cm} \times 2-5 \mathrm{~mm}$; fr calyx 4-9 mm; nutlets 2.6-3.7 mm, scar closed for most of its length; open slopes, mont to alp; endemic to alp areas of Blaine and Custer cos, ID, possibly adj w MT; alpine c. (C. h.)

7 O. hypsophila (I.M. Johnst.) Hasenstab \& M.G. Simpson
$\mathbf{5 b}$ Nutlets roughened on both sides, $\pm$ rugose; scar closed to narrowly open; pls $0.4-$ 6 dm
8a Corollas gen small, limbs 3-6 mm wide; basal lvs narrowly spatulate, 1.5-4 cm ; nutlets shiny, lanceolate to ovate, $2-3 \mathrm{~mm}$, dorsal surface $+/-$ tuberculate, weakly cross-rugose; short-lived per, often monocarpic, gen 1-few-std from base, pls 0.4-3 dm; low elev volcanic ash beds and eroded slopes; ec OR to CA and NV; ash c.

8 O. schoolcraftii (Tiehm) R.B.Kelley


10b

8b Corolla relatively showy, limbs 6-12 mm wide; basal lvs 2-7 cm; nutlets shiny or dull
9a Nutlets shiny, ovate, $3-3.5 \mathrm{~mm}$, lineate-rimmed, dorsal surface cross-rugose, ventral surface +/- papillate; basal lvs oblanceolate to spatulate, $2-7 \mathrm{~cm}$; longlived per, gen few-std from base, pls 1-3.7 dm; mont dry, open slopes; Lemhi Co, ID to n UT, e to WY, CO; narrow c. 9. O. stricta (Osterh.) Payson
9b Nutets dull, lanceolate to ovate-lanceolate, $2.5-5 \mathrm{~mm}$, lineate-rimmed or not, dorsal and ventral surfaces rugose and tuberculate
10a Sts stout; basal lvs widely spatulate to widely oblanceolate, $2-9 \mathrm{~cm}$, apices $+/-$ truncate to obtuse; nutlets lineate-rimmed to narrowly winged; pls $1-5 \mathrm{dm}$; sagebr flats, dry slopes, and for openings; s BC to n CA and n NV , e to n Gr Pl and CO ; cockscomb c., northern c. (C. celosioides, O. c.)

10 O. glomerata (Pursh) Greene 10b Sts slender; basal lvs +/- linear-oblanceolate, $2-7 \mathrm{~cm}$, apices +/- acute; nutlets lanceolate to ovate-lanceolate, $2.5-4 \mathrm{~mm}$, margins acute; dry places at low to middle elev; largely disjunct and scattered in c WA, otherwise e OR to n NV, e to ne MT, nw WY, and n UT; bristly c. (C. interrupta misapplied, C. s.)

11 O. spiculifera Piper

