

56. *Cryptantha mensana* (Jones) Payson

Cryptantha mensana (Jones) Payson, Ann. Mo. Bot. Gard. 14:333. 1927.

Krynitzkia mensana Jones, Contr. West. Bot. 13:4. 1910.
Oreocarya mensana (Jones) Payson, Univ. Wyo. Publ. Bot. 1:171. 1926.

Short-lived perennials, 1-1.5 dm tall; stems 1-several, 0.5-1.2 dm long, setose-hirsute, with some finer strigose hairs beneath; leaves oblanceolate to spatulate, obtuse, 3-8 cm long, 0.5-1.4 cm wide, lower surface setose with pustulate hairs, also finely strigose, ventral side strigose, less setose, and with fewer pustules; inflorescence broad, open, 0.4-1.2 dm long, setose, foliar bracts well developed; calyx segments lanceolate, in anthesis 4-5 mm long, in fruit becoming 7-8 mm long, setose-hirsute; corolla white, the tube 3-4 mm long, crests at base of tube lacking or nearly so, fornicees yellow, rounded, slightly papillose, about 0.5 mm long, limb 5-8 mm wide; style exceeding mature fruit 1.5-2 mm; nutlets ovoid, 3-3.5 mm long, 1.6-1.9 mm wide, margins obtuse, not in contact, dorsal surface rugose, tuberculate and somewhat muricate, ventral surface conspicuously tuberculate, scar open, constricted at the middle and surrounded by a high elevated margin. Collections: 20 (vi); representative: B. F. Harrison 5625 (RM); M. E. Jones 5445 (POM); S. L. Welsh 6915 (BRY); B. Maguire 18596 (UTC); A. Nelson 5625 (RM); G. L. Pyrah 15 (BRY); D. Atwood 1270, 1284 (BRY); Higgins and Reveal 1298 (BRY); Higgins and Welsh 1043 (BRY); L. C. Higgins 996, 1039, 1318, 3323 (BRY).

Holotype: M. E. Jones 5445p, collected in Emery County, Utah, 16 May 1894, POM. Photograph at BRY. Isotype at US.

Distribution: Central and eastern Utah in Emery, Carbon, and Grand counties. Growing on clay soils, 4,500 to 6,500 feet. Map No. 56. Late April to July.

Cryptantha mensana is closely related to *C. flavoculata*, but the short corolla and the more open inflorescence serve to distinguish it from that species.

57. *Cryptantha flavoculata* (A. Nels.) Payson

Cryptantha flavoculata (A. Nels.) Payson, Ann. Mo. Bot. Gard. 14:334. 1927.

Oreocarya flavoculata A. Nels. Frythea 7:66. 1899.

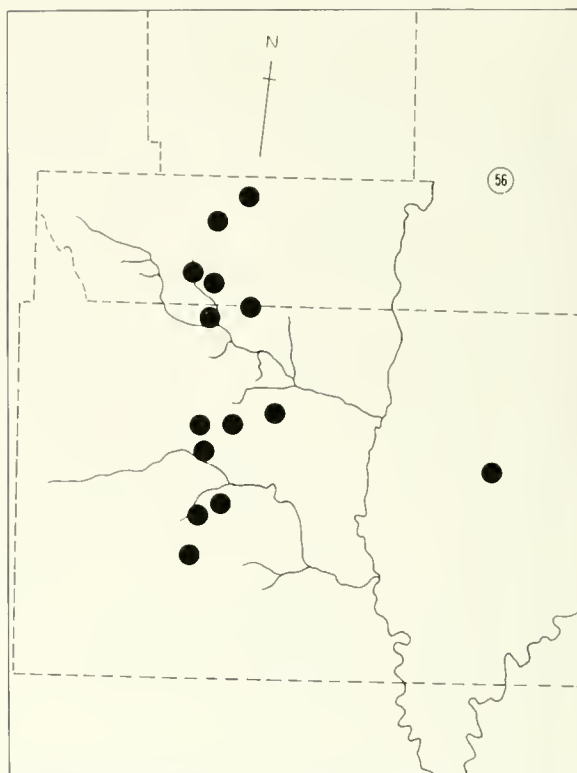
Oreocarya flavoculata spatulata A. Nels. Frythea 7:67. 1899. (Type: from gravelly hilltops near Evanston, Wyoming, Nelson 2977, 29 May 1897.)

Oreocarya cristata Eastw. Bull. Torrey Bot. Club 30:244. 1903. (Type: Grand Junction, Colorado, 17 May 1892, Eastwood.)

Oreocarya shockleyi Eastw. Bull. Torrey Bot. Club 30:245. 1903. (Type: Miller Mountain, Esmeralda County, Nevada, elevation 7,500 feet, Shockley 244.)

Oreocarya eastwoodae Nels. & Kennedy, Muhlenbergia 3:141. 1908. (Type: Mormon Mountains, Lincoln County, Nevada, P. B. Kennedy and L. N. Goodding 146.)

Caespitose perennial, 1-3.7 dm tall; stems 1-several, slender, 0.5-2 dm long, strigose and spreading



Map No. 56. Central and eastern Utah. Range of *C. mensana* (M. E. Jones) Payson.



Map No. 57. Parts of western United States. Range of *C. flavoculata* (A. Nels.) Payson.

setose with slender bristles; leaves linear-oblongulate to spatulate, obtuse to sometimes acute, 3-11 cm long, 0.3-1.5 cm wide, densely strigose and weakly setose, dorsal surface conspicuously pustulate, ventral surface with few pustules or sometimes silky-strigose; inflorescence narrow, or sometimes slightly open and lax, 0.5-3 dm long, foliar bracts evident but not conspicuous; calyx segments in anthesis linear-lanceolate, 5-6 mm long, in fruit becoming 8-10 mm long and becoming broadly lanceolate to ovate; corolla white or pale yellow, tube 7-10 mm long, crests at base of tube lacking, fornicies yellow, minutely papillose, 1-2 mm long, limb 8-12 mm wide; style exceeding mature fruit 4-8 mm (heterostyled); nutlets lanceolate to lance-ovate, 2.5-3.5 mm long, 1.8-2 mm wide, usually all four maturing, margins obtuse, in contact or slightly separated, dorsal surface muricate, tuberculate, and with conspicuously ridges, sometimes nearly foveolate, ventral surface tuberculate, rarely with ridges, scar open, constricted near the middle and surrounded by a high elevated margin. Collections: 188 (xix); representative: Maguire and Holmgren 26064 (ORE, UTC); I. W. Clokey 7668 (ARIZ, ORE, LL, UTC); B. Maguire 25234 (ARIZ, BRY, ORE, UTC); J. Beatley 4007 (BRY, LA); B. F. Harrison 10320 (BRY, UTC); A. Nelson 4572 (RM); A. Eastwood s.n. (UC); G. E. Osterhout 6006 (GH, RM, US); Kennedy and Goodding 146 (RM, US);

Shockley 244 (UC) L. C. Higgins 557, 997, 1026, 1061, 1112 (BRY); L. C. Higgins 3291, 3324, 3403 (BRY, WTSU).

Holotype: A. Nelson 4572, collected at Piedmont, Wyoming, 7 June 1898, RM.

Distribution: Southern Wyoming, western Colorado, Utah, Nevada, and southeastern California. Growing in a wide variety soils, 3,000 to 8,500 feet. Map No. 57. April to July.

This widespread species may be distinguished by its long corolla tube, very rugose nutlets with the scar open and the margin elevated, and the only slightly heterostyled flowers.

This species possesses a number of different forms, but they seem to be unworthy of named segregation from the main specific complex. In western Colorado the author is familiar with two forms, on the basis of setose-hispid and silky-strigose indument. For a limited locality it would seem that these two forms are worthy of some subspecific rank, but on an examination of a series of specimens it appears the variation is only local. *Oreocarya cristata* has very narrow leaves and so has a slightly different aspect. On the same basis of leaf width *spatulata shockleyi*, and *eastwoodae* were described. At the present time the author can see no difference on which to separate them.

ACKNOWLEDGMENTS

The author is particularly indebted to Dr. Stanley Welsh for his suggestion of the problem and his guidance and interest. Thanks is due my wife for her active cooperation. Appreciation is likewise extended to Dr. James Reveal for many valuable suggestions and constructive criticism; to Drs. Glen Moore, Stephen Wood, and Dayna Stocks for critical reading of the manuscript. Appreciation is also given to the Society of Sigma Xi, West Texas State University,

The Kilgore Research Center, and Brigham Young University for their financial help which made it possible to do the necessary field work. Special thanks is given to the curators of the many herbaria for making specimens available for study. What authenticity this study may possess is due in large part to the 7,000 sheets they made available for study, including the vast majority of types.