

Taxonomic Key to the Saskatchewan *Cryptantha*

Sarah Vinge-Mazer (Saskatchewan Conservation Data Centre) on behalf of the Botanical Assessment Working Group

Introduction

The [Botanical Assessment Working Group](#) has been working on placing Saskatchewan's two perennial *Cryptantha* species since around 2011, following many questions and confusion from the local botanical community. The use of the name *Cryptantha macounii* was the source of much of the confusion, for which an explanation is now provided. The name *Cryptantha macounii* (= *Oreocarya macounii*) is a true synonym for *Cryptantha celosioides* (see Simpson). In Saskatchewan (and apparently Montana, see Lesica 2012) this name has instead been applied to *Cryptantha spiculifera* material. Furthering the confusion, the name *Cryptantha nubigena* has been applied to both *C. spiculifera* and *C. celosioides* in Saskatchewan and appears regularly in older taxonomic keys. The name *C. macounii* has to be maintained for *C. spiculifera* material in Sask. for now until the SKCDC can update its database with the name. *C. spiculifera* has been included as a synonym for *C. macounii* in the SKCDC vascular plant species list.

This key was compiled from several sources and was written to clarify the placement of the Saskatchewan *Cryptantha* species and serve as interim information until the Flora of North America (FNA) on Boraginaceae is published. It is accurate to the best of our knowledge.

Notes

- Our two perennial species are retained in *Cryptantha* in this key but are expected to be moved under the genus *Oreocarya* in the FNA treatment (see Simpson)
- The *Manual of Montana Vascular Plants* (Lesica 2012) provides species descriptions for all species that occur in Sask. although we found that the nutlet measurements provided there may not match our material.
- The inflorescence type (appearing racemose vs. with scorpioid racemes), once thought to distinguish material in Saskatchewan, is not diagnostic in differentiating between *Cryptantha spiculifera* and *C. celosioides*.
- Provincial S-ranks may change over time; see the current SKCDC species list for the most up-to-date ranks.

Taxonomic Key

1. Plants biennial or perennial; caudex often branched; vegetative leaves mostly basal or tufted; stems ≥ 3 mm thick.....2
1. Plants annual, without a caudex; vegetative leaves generally cauline; stems 1-2mm thick.....(*Cryptantha* s.s.) 3
2. Plants biennial or short-lived perennial; caudex usually simple though stems sometimes branched at base; stems stout or robust; leaves oblanceolate to spatulate, margins not strongly setose-ciliate; corolla 6-11 (12)mm across the limb, calyx (4)7-10mm long in fruit*Cryptantha celosioides*
2. Plants perennial; caudex usually branched or caespitose; stems slender; leaves narrowly oblanceolate, strongly setose-ciliate on the margins; corolla 6-8mm wide across the limb, 5-9mm long; calyx 5-8mm long in fruit*Cryptantha spiculifera*
3. All nutlets with smooth surfaces.....*Cryptantha fendleri*
3. One nutlet with a smooth dorsal surface, the other three with muricate dorsal surfaces.....4
4. Cymes bracteate to the tip.....*Cryptantha minima*
4. Cymes ebracteate or bracteate just at the base.....*Cryptantha kelseyana*

Species Information

Cryptantha celosioides (Eastw.) Pays.

(=*Oreocarya glomerata*)

SKCDC 2017 rank – S2

Note inflorescence (appearing racemose vs. with scorpid racemes) is not diagnostic between this and *Cryptantha spiculifera*.

Saskatchewan range: southern Grassland Ecoregion, Roche Percee to Matador (Harms 2017)

Habitat: dry, eroding prairie hilltops and slopes (Harms 2017)

Cryptantha fendleri (Gray) Greene

SKCDC 2017 rank – S4

Saskatchewan range: west Cypress Hills, Grassland and Parkland Ecoregions, north to Macdowall (Harms 2017)

Habitat: dry prairie hills and plains (Harms 2017)

Cryptantha kelseyana Greene

SKCDC 2017 rank – S2

Saskatchewan range: Cypress Hills and western/southern Grassland Ecoregions (Harms 2017)

Habitat: dry, often eroded, prairie hills and flats (Harms 2017)

Cryptantha minima Rydb.

SKCDC 2017 rank – S1

COSEWIC status – Threatened

SARA status - Threatened

Saskatchewan range: southwest South Saskatchewan River valley at Empress, Estuary and Westerham (Harms 2017)

Habitat: dry, eroded, sandy slopes (Harms 2017)

Cryptantha spiculifera (Piper) Payson

(=*Oreocarya spiculifera*, previously referred to as *Cryptantha/Oreocarya macounii* in Saskatchewan)

SKCDC 2017 rank – S4

Note inflorescence (appearing racemose vs. with scorpid racemes) is not diagnostic between this and *Cryptantha celosioides*.

Saskatchewan range: Cypress Hills, Grassland and Parkland Ecoregions (Harms 2017)

Habitat: open, dry, often eroded or gravelly prairie hills (Harms 2017)

Sources

Harms, V.L. 2017. Annotated Catalogue of Saskatchewan Vascular Plants (Draft). Unpublished.

Lesica, P. 2012. Manual of Montana Vascular Plants. BRIT Press.

Moss, E.H., revised by J.G. Packer. 2000. Flora of Alberta. Second edition. University of Toronto Press.

Simpson, M.G. *Cryptantha* s.l. Taxonomy & Images. Plant Systematics, San Diego State University. [Accessed online] <http://www.sci.sdsu.edu/plants/cryptantha/>