

# Barren valley collomia (*Collomia renacta*)



ENDANGERED



FIG. 1. *Collomia renacta*. A. Habit,  $\times 1$ . B. Corolla,  $\times 10$ . C. Calyx,  $\times 10$ . (Drawn from Joyal 376.)

There are no photos of live *Collomia renacta*. This specimen (left) was collected by E. Joyal in 1983 from Malheur County (Catalog# OSC0001550). The botanical diagram (right) showing habit (A), corolla (B), and calyx (C) is from Joyal 1986.

## Family

Polemoniaceae

## Plant description

*Collomia renacta* is a small annual species measuring only two to six inches tall and branching when developed. The species is glandular and puberulent throughout, and densely so on the peduncles and calyx teeth. *Collomia renacta* is ciliate on petioles and along lower edges of leaf blades and bracts. There are few leaves on *C. renacta*, and they are entire with the lower leaves petiolate and spatulate to spatulate-oblongate. The leaves are 1.7–2.2 cm long and 4–5 mm wide. The main stems and branches of the plant end in dense leafy-bracteate flower clusters with flowers subtended by bracts that are linear 1.5–2.5 cm long tapering to a slender point. The calyx teeth are narrow, firm aristate-attenuate, and unequal with longer teeth 3–5 mm long when in fruit. The corolla of *C. renacta* is funnellform and only about 1 cm long with rounded lobes being 2–2.5 mm long and blue with a white throat. The filaments are 0.5 mm long and somewhat unequally inserted slightly below the corolla throat. The style is 5–6 mm long and the stigma is about level to the stamens. The fruits of *C. renacta* are capsular with three locules each producing a single seed. The seeds are mucilaginous when wet.

## Distinguishing characteristics

*Collomia renacta* occurs within the ranges of *C. macrocalyx* and *C. tinctoria*. *Collomia renacta* and *C. macrocalyx* have urn-shaped calyx tubes, teeth that are slightly to very unequal in length and the longest teeth usually greater than 4 mm while in fruit, and filaments 0.5 mm long and unevenly inserted below corolla throat. *Collomia tinctoria* has a flared calyx tube, teeth more or less equal and usually less than 3 mm while plant is in fruit. *C. renacta* and *C. macrocalyx* can be differentiated by *C. renacta*'s calyx teeth being more or less regular and corolla tube being essentially glabrous whereas *C. macrocalyx* has a calyx with teeth very unequal while in fruit and a sparsely pubescent corolla tube.

## When to survey

Surveys should occur when the plants are in flower, from May to June. The flowering window is very short and often can be easily missed, making it difficult to find plants and confirm that *Collomia renacta* still exists at known sites.

### **Habitat**

*Collomia renacta* is known from Malheur County, Oregon and the Pequop Mountains of Elko County, Nevada. The species occurs at elevations ranging from 5,400–7,500 feet, where it grows in scabland with south-facing slopes and shallow soil of small, weathered rock fragments called lithosolic soils. This soil type is often subjected to extreme temperature and soil moisture fluctuations. Commonly associated species include *Artemesia tridentata* ssp. *wyomingensis*, *Balsamorhiza sagittata*, and *Eriogonum caespitosum*.

### **Range**

*Collomia renacta*'s range extends from southeast Oregon to northeast Nevada with plants only known from Malheur County, Oregon, and Elko County, Nevada.

### **Oregon counties**

Malheur

### **Federal status**

Species of concern

### **Threats**

Barren valley collomia's greatest threat is invasive annual grasses competing for resources. There are several weedy annual species present at sites in both Oregon and Nevada including *Bromus tectorum* and *Taeniatherum caput-medusae*. Cattle grazing is another concerning threat to *Collomia renacta* as it can result in direct damage to plants and populations from trampling, and can introduce and spread invasive plants. Small population sizes of *C. renacta* can also cause issues related to decreased genetic diversity, including impacts to seed production. Climate change could impart further stress on this species as the harsh environment it resides in may become even less hospitable.

### **References**

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