

# Bristlecone Pine



5201 St. Vrain Rd., Longmont CO 80504 303-678-6200 BoulderCountyOpenSpace.org



Rocky Mountain bristlecone pine is a conifer most often found at higher elevations on ridges and mountain tops.

*Photo credit: BCPOS employee*

## Species Description

**Tree:** Trees rarely exceed 50 ft. in height and often occur as single stems; however multi-stemmed growth is not uncommon.

**Needles:** Needles occur in bundles of 5 and are clustered at the end of branches, giving a “bottlebrush” appearance. The needles produce small specs of sap that can be used as a distinguishing characteristic from the similar looking limber pine.

**Cones:** Female cones produce a spike or bristle on the end of each scale and mature in fall of their second year. Winged seeds drop from the cones soon thereafter.

**Look Alikes:** Limber pine

**Habitat:** Occurs at high elevations on ridges and mountain tops; elevations in Colorado range between 7,000-13,000 ft.

## Background

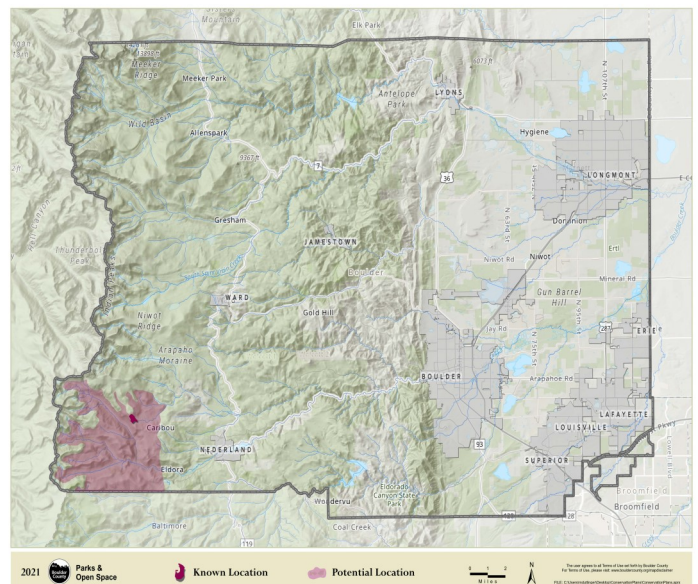
Bristlecone Pines belong to the Family Pinaceae.

In Boulder County, bristlecone is listed as a species of special concern. The northern most extent of Rocky Mountain bristlecone pine occurs in Boulder County, 3 1/2 miles northwest of the Eldora townsite.

Because of its ability to survive in the sub-alpine and alpine environments, it is often referred to as a high-elevation pine. Like other high-elevation pines, bristlecones are ecologically important and provide valuable ecosystem services, such as soil stabilization, snow retention, controlled water runoff, and high elevation biodiversity .

## Distribution & Range

Rocky Mountain bristlecone pine is endemic to the southern Rockies, occurring from central Colorado south to northern New Mexico with an outlying population in northern Arizona.



## Threats

- *White pine blister rust (WPBR)*: WPBR on Rocky Mountain bristlecone pine is not widespread, with the only known occurrence observed near the Great Sand Dunes.
- *Climate change*: With a changing climate, we can expect Rocky Mountain bristlecone pine populations to shift their distributions in response to these changes.
- *Wildfire*: Fires alone do not threaten long-term survival; however a changing climate could increase the size and frequency of wildfires, which could threaten certain populations that previously were not subject to this disturbance.



Photo credit: BCPOS employee



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## Management Considerations

- *Mapping*: Continue to locate unmapped populations, both County wide and on Boulder County Parks & Open Space (BCPOS) properties.
- *Monitoring*: Monitor existing populations for WPBR, Dwarf Mistletoe, and Mountain Pine Beetle.
- *Coordinate management actions with BCPOS*:
  - Collect cones and have seed grown out to test for WPBR resistance.
  - Report any existing populations.



2021

The areas displayed in this map indicate known and potential locations of the following species in Boulder County:

*Pinus aristata*

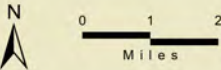


Bristlecone Pine

Rocky Mountain bristlecone pine (*Pinus aristata*) is a long lived, five needle white pine found in Colorado, northern New Mexico, and northern Arizona. It is listed globally as vulnerable (G3), federally as a species of least concern and designated as a Boulder County Species of Special Concern due to multiple threats including White Pine Blister Rust and Dwarf Mistletoe.

This map shows the only known occurrence of Rocky Mountain bristlecone pine in Boulder County and represents the northern most extent of its range.

- Known Location
- Potential Location



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FILE: C:\Users\mdutlinger\Desktop\ConservationPlans\ConservationPlans.aprx

