

December 15, 2014

Re: Bristlecone pine in Mystic Ranger District - 2014, RCSC-04-15

To: Forest Supervisor, Black Hills National Forest

Cc: Blaine Cook, Margaret M Farrell, Chelsea Monks, Mark Vedder, Matthew Scott, Cheryl L Mayer, David Mertz, Deanna Reyher, Justin McConkey, Jeri Lyn Harris, Roy Mask

James T Blodgett (Plant Pathologist)

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On December 12, 2014 James T Blodgett (Plant Pathologist) looked for bristlecone pine (BCP) in the Mystic Ranger District of the Black Hills National Forest (BKF) of South Dakota. An approximate location was suggested by Thomas Erickson (Forestry Technician) who found an unusual tree in 2010. The objectives were to locate potential bristlecone pine and assess their condition.

Observations

Only one BCP, likely Rocky Mountains BCP (*Pinus aristata*) was found. Rocky Mountains BCP are native to Colorado, New Mexico, and Arizona. This is the only documented BCP on BKF administered land. A survey of approximately 13 acres around the BCP revealed no other BCP in the area.

The pine was found at latitude 43.99490, longitude -103.61735, and altitude 5,652 ft; just off Forest Road 643; about 1.6 miles from Mystic Road. The tree was 2.8 inches DBH and 39 ft tall. No cones were found on or under the tree. Since it was less than 3 inches DBH no core was taken. Age is estimated between 40 and 60 years. There are three metal fence posts placed around the tree. The fence posts are not as old as the tree.

The tree looked healthy overall, but had a wound at the base that was 32% of the circumference (**Fig. 1**). There were scattered dead branches, some due to hail and some from an unknown cause. Branch mortality was not caused by white pine blister rust or twig beetles; causes found in Colorado BCP. Although the area around the tree is open due to recent mountain pine beetle mortality and tree removal, a potential cause for branch mortality is past shading.

Management Recommendation

- The origin of the tree is unclear, thus no management recommendations are suggested.



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Figure 1. Bristlecone pine on the Black Hills National Forest, wound on pine, scattered dead branches, and close up of bud/needles (left to right, respectively).