

Condition of Douglas Fir in PBH

May 20, 2013

Location

Pine Brook Hills community NW of Boulder. Elevation 6,100 to 6,300'.

Background

This area was examined with forest pathologist Kelly Burns in the fall of 2012 at the request of concerned homeowners. The conditions observed were thinning crowns, poor color and a 'droopy' appearance. The conclusion at that time was that trees were suffering from the drought conditions, old age, and that road salt (MagChloride) was causing a general decline in the vigor of DF below the roads via drainage of salts dissolved in runoff from the road and above the road via salt sprayed into the air by vehicles. There was no evidence of root rot or insect activity to explain the condition of the trees.

Condition in the spring 2013

On May 20, 2013 one of the properties was revisited. This location is not subject to road salt delivered by any mechanism. Brown needles are now quite evident on young and older trees.



Trees with brown needles are interspersed with trees that are all green. There is no obvious pattern consistent with freeze damage



Recent discussion has pointed to dry weather last summer through February 2013 as a reason to expect damage to foliage.

The sample at left seems to fit that scenario. The needles appear to be browning from the tips back. However, this is mixed with the banding pattern shown below.

The pictures below are a common symptom.

The following two samples do not appear consistent with the drought scenario.

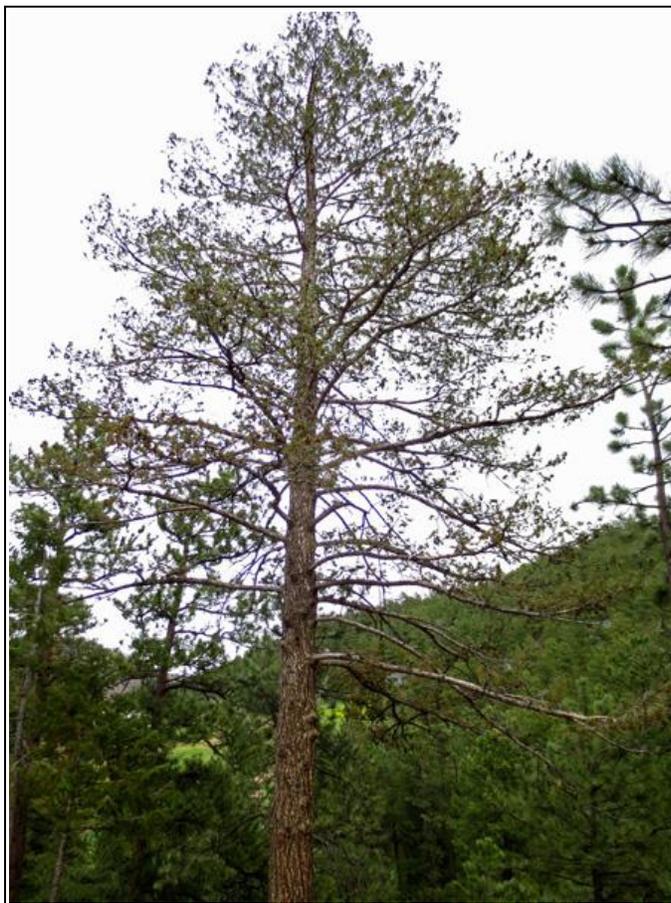
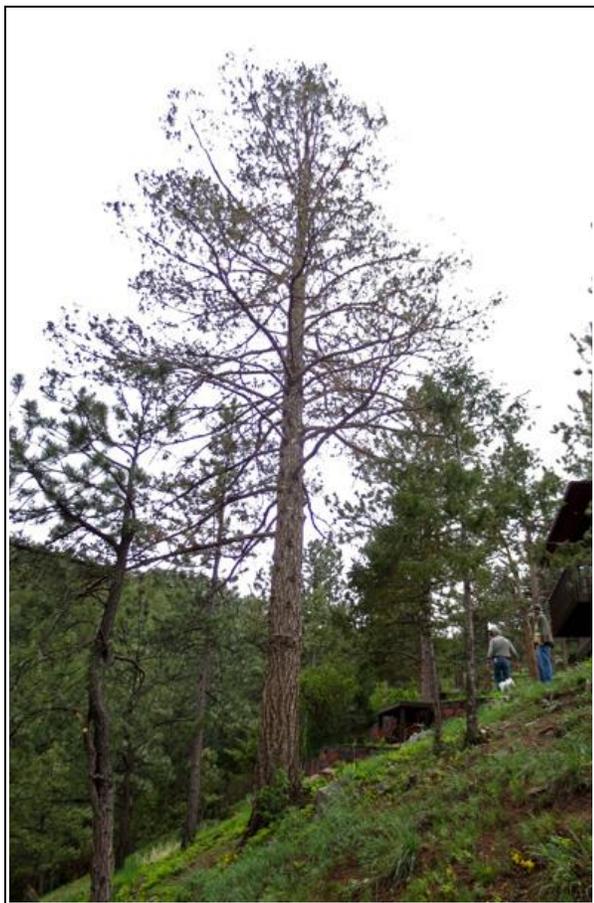


Only one needle showed the symptom below. Note the two holes.

Are the insects causing the holes in the needles associated with the banding? Perhaps just at different development stages?



The foliage issues above may or may not be connected with the condition of this tree. It is large and old, but shows no visible sign of decay. The foliage is very thin.



Does any of this suggest reasons why the needles are turning brown?

What agent causes red banding on Douglas fir?

What other indicators of other pests should we be searching for?

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303-978-1284