



## Inside Grand Canyon

### Ponderosa Pines: Living With Fire Transcript by Haley Bercot

Hi, there, I'm Ranger Haley, and I'd like to introduce you to the Ponderosa Pine. If you're planning on visiting a Western National Park, you're likely to come across this fella. Ponderosa Pines dominate all over the American West. They range from British Columbia out east to the Great Plains and down south to Texas. This makes me wonder, what is so special about this tree is able to grow all the way from Canada down to Texas. Well, the secret to the Ponderosa Pine's success is how well it is adapted to fire.

First of all, check out this bark. Ponderosas have adapted a unique bark that helps them survive fires. Their bark is made up of many different thick plates that encase each tree like a set of armor. Then, when the tree is exposed to fire, the second line of defense kicks in, as thick gobs of resinous pitch seep in between each plate to fill in the cracks and further protect and toughen the tree. The unique bark allows Ponderosas to survive when other trees perish.

But, Ponderosas aren't just adapted to survive fire, they thrive in fire.

Studies of tree rings indicate that these forests historically burn every 5 to 10 years in low intensity, small surface fires. Now these surface fires aren't hot enough to penetrate the bark and kill off the mature trees, rather, they just do some pruning and fertilizing. They clear out the underbrush and literally convert tons, I mean tons, of plant debris into ash, releasing nitrogen, potassium, and other nutrients into the soil. The end result isn't a blackened, dying forest, but rather a healthy forest with trees well spaced apart, renewed soils, and lots of wildflowers. In fact, Ponderosas are so adapted to fire, that they need fire or else they sicken.

They become choked with underbrush, compete for limited resources, and become more susceptible to insects and disease. It's a good thing for Ponderosa Pines that lightning strikes naturally set over 10,000 fires per year in the American West, ensuring that ponderosas will continue to survive and thrive.

But, what about people, what about those of us who live in these fire prone ecosystems? What about our homes? Our belongings? Our lives? We're not naturally adapted to fire, but I think we can make a start by following the example of the Ponderosa Pine. Ponderosas protect themselves from fire with their armor of thick bark. We can do the same by using fire resistant building materials in our homes, and surrounding our homes with a defensible space.

Clear your yard 30 ft out in every direction. That means removing leaf litter, trimming shrubs, and no stacking of firewood against the house. Check in with your local fire department for other ways you can adapt your life to fire. That way, the next time lightning strike, you too can survive and thrive like the Ponderosa Pine.