

Ruidoso News New Mexico – Gannett newspaper

OpEd

Fire, Smokey Bear, Beetles and Climate Change

By Dr. Reese Halter

Since the 1988 fires in Yellowstone National Park, it seems that every summer fire is a big part of the landscape. Is one of the most recognizable American icons – Smokey Bear – telling the right message? And why have 90 percent of the tenacious and water thrifty pinyon pines of New Mexico died? Could the climate really be changing so quickly?

Lightning induced fire has an important role in our western forests - particularly in ponderosa pine forests which make up the largest forested ecosystem in the United States. Fires in this ecosystem naturally occur at intervals of between 15 and 25 years.

After more than a half-century of meticulous research, scientists know that when they work with Mother Nature, and not against her, predictable outcomes in our forests will occur. That is, some fire must be allowed to occur on our landscape, because fire is one of Mother Nature's agents of change. And forests are always undergoing change.

Bark beetles are also another of nature's agents of change. Fire enables forests the opportunity to start fresh and regenerate. Fire also keeps beetle populations in check.

But isn't Smokey Bears message "only you can prevent fire" valid? Yes. And everybody must be careful in the forest. Starting accidental fires is unacceptable.

After more than 60 years, Smokey's message is important for everyone who enjoys our forests. But he too has learned from scientists that we must have some fire in the forest. Otherwise there's a lot more wood to burn and fires burn with more intensity, ferocity and severity. And as the West gets drier, we are going to see more fires.

Why have 90 percent of New Mexico's Sate tree – pinyon pines – died?

The prolonged drought of 2002 and 2003 coincided with average temperatures rising about one degree Celsius higher than normal. This rise in temperature along with a lack of moisture in the semi-arid pinyon pine ecosystem significantly weakened the trees.

Thirsty pines don't produce gooey pitch which is their only protection against deadly bark beetles. In addition, water-starved pines emit a chemical

message that bark beetles pick-up. They swarm, bore into trees, introduce a lethal fungus that plugs the trees' plumbing and cause death. In the meantime the beetles eat, breed and produce millions of offspring.

The beetle infestation is not just limited to New Mexico. Millions of pines are dead in Arizona and southern California. Further north in British Columbia, tens of millions of pines are dead in the largest ever beetle outbreak in modern times. Because of warmer temperatures the beetles are marching into the northern or boreal forests for the first time ever.

So what is going on?

Climate change is affecting forests throughout the West. Trees are dying from lack of water and massive beetle infestations. Cold winter temperatures that normally kill bark beetles haven't occurred for a decade.

Is there anything that can be done? Yes. Some fire must be allowed carefully back onto the landscape. By deliberately stopping fire, beetle populations have run amuck. Fire will cleans the forest, rid the beetles and promote healthy regeneration.

Copyright 2007, Lu & Stoot LLC

See New Mexico with Dr Reese

White Sands National Monument, New Mexico

http://www.amazon.com/white-sands-national-monument-mexico/dp/B000K98616/sr=1-1/qid=1168922931/ref=sr_1_1/002-1043420-2182462?ie=UTF8&s=dvd

Smokey Bear & Lincoln National Forest

http://www.amazon.com/smokey-bear-lincoln-national-forest/dp/B000K9861G/sr=1-15/qid=1168972300/ref=sr_1_15/002-1043420-2182462?ie=UTF8&s=dvd