



## **Roads Scholar** **Educational Adventures in Our Own Backyard**

By Kathleen Williams  
CRIZMAC Art and Cultural Marketplace

# *Only You Can Prevent Forest Fires*

When Tucson's temperatures soar well above one hundred degrees, many people have just one thought on their minds: Mt. Lemmon! While the desert floor is scorching under the hot summer sun, a quick, one-hour drive into the Catalina Mountains promises a cool respite—with pine trees and temperatures that average about twenty degrees less than in the city below. On Mt. Lemmon you can camp, hike, throw a Frisbee around or picnic by a mountain stream. The town of Summerhaven near the top of the mountain offers restaurants and shops to visit. Many people have vacation cabins on Mt. Lemmon and some live there year round.

The best way to begin your visit is with a stop at the Palisades Visitor Center just past mile marker 19 on the Catalina Highway. The center has a friendly staff to answer your questions, a small gift shop, and several interesting displays, including information about forest fire prevention and management. It's an important topic—and timely. Fire danger is currently extremely high—and the area has already experienced the devastation of a forest fire.

Three years ago today, on June 19, 2003, the Aspen Fire swept through the town of Summerhaven, destroying 314 buildings. The fire was human-caused, beginning two days earlier in Marshall Gulch, about two miles from Summerhaven. The fire spread rapidly because of high winds, growing to 450 acres by the early morning of June 19<sup>th</sup> and to 4,000 acres by nightfall. Governor Napolitano declared a state of emergency for Summerhaven and nearby communities.

Efforts to curtail the fire began almost immediately and evolved into a full-scale operation that involved the coordination of many different individuals and groups. Planes flew over the area dropping tons of chemical fire retardant. As usual, smokejumpers were some of the first on the scene, diving out of airplanes to launch rapid initial attacks on areas that were otherwise hard to access. Hot shot crews were also brought in. These highly-trained firefighters worked on the ground to fight the fire. In all, more than 900 firefighters from ten western states battled the blaze. In Tucson, large clouds of smoke blew down onto the city, and on some evenings, the mountain glowed red as the fire burned on the front range of the Catalina Mountains. Despite all of the efforts, the Aspen Fire wasn't completely extinguished until the summer monsoons arrived on July 15<sup>th</sup>. A total of more than 84,000 acres had burned.

Although the Aspen Fire was unusually devastating, forest fires are a common occurrence in the Southwest, where we have more distinct vegetation zones than in other parts of the country. Because fire behaves differently in each vegetation zone, firefighting in the Southwest is complex and difficult.

Through the study of tree rings and fire scars, scientists have determined that the ponderosa pine forests burned on the average once every five to twelve years before settlers arrived in the area. These periodic fires provided many benefits to the forest. First, they reduced the fuel accumulations on the forest floor. They also encouraged the growth of native vegetation and even benefited many plants and animals whose habitats depended on periodic burning. After the settlers came, they began to extinguish the fires. The result was fewer fires, but an accumulation of fuel. The policy of extinguishing naturally-occurring fires was followed for many highly flammable. Today when a forest fire starts, it burns hotter and more intensely than it would if previous

years. As a result, the current conditions with the vegetation in the Southwest are unnatural and potentially despite our best efforts to prevent and suppress them, catastrophic fires like the Aspen fire, are more likely to occur.

Although we will never see Mt. Lemmon looking the way it did before the Aspen Fire, it remains a beautiful place to go to escape the heat in Tucson. While you're there, take time to notice the areas that were burned and marvel at the beauty of a forest coming back to life.

## Preventing Forest Fires

Based on tips from [www.smokeybear.com](http://www.smokeybear.com)

- If a parent or other adult smokes, encourage him or her to use an ashtray. When outdoors, safe practice requires a 3-foot clearing around the smoker.
- Don't park vehicles on dry grass
- Know and follow the rules regarding burning trash
- At the first sign of a wildfire, leave the area immediately by established roads or trails. Contact a Ranger as soon as possible. If the escape route is blocked, go to the nearest stream or lake
- Leave the campsite as natural as possible, traveling on trails and other durable surfaces.
- Inspect your site upon leaving
- Never take burning sticks out of a fire.
- Never take any type of fireworks on public lands
- Keep stoves, lanterns, and heaters away from combustibles
- Store flammable liquid containers in a safe place
- Never use stoves, lanterns, and heaters inside a tent.

## Tune Up Your Mind

**Look for these related books:**

*Hotshots!* by Chris L. Demarest (M.K. McElderry Books, \$17.95 )

*Firestorm* by Jean Craighead George and Wendell Minor (HarperCollins, \$15.99 )

*Escape from Fire Mountain* by Gary Paulsen (Bantam Doubleday Dell Books for Young Readers, \$4.99)

*Smokejumpers* by Elaine Landau (Middlebrook Press, \$23.90)

## Details

**What:** Palisades Visitor Center

**Where:** Milepost 19.9 on the Catalina Highway

**When:** 8:30 a.m. – 4:30 p.m. daily during the summer months

**Admission:** Free, however, there is a \$5.00 per vehicle recreation fee for many areas in the Coronado National Forest, including Mt. Lemmon (weekly and annual passes are also available).

**Information:** 749-8700 (Santa Catalina Ranger District)

## Think Tank

**Discussion questions for the whole family to consider:**

People often use the expression, “you’ve got to fight fire with fire” when describing situations that have nothing to do with fire literally. Taking into account what you’ve learned about the various methods of managing forest fires, how do you think this common expression might have originated? What do the people mean when they use it?

## Discovery Detours

Did it surprise you to learn that a forest fire can be good for a forest? This makes the job of the U.S. Forest Service more difficult. Even when it's possible, the best course of action isn't always to fight a forest fire. Visit [www.smokeybear.com](http://www.smokeybear.com) and learn about the decisions the Forest Service has to make when confronted with a forest fire.

Forest fire management is based on three basic options:

1. Let the fire burn

Letting the fire burn is based on the idea that it is natural and even beneficial for a forest to burn on a periodic basis. The problem with this approach is that when a forest has not been allowed to burn for a long time, a great amount of fuel has often accumulated, which causes the fire to burn much hotter and more extensively than it would have under natural conditions. There can also be problems with interaction with the human element—the need to save homes, for instance

2. Attempt to suppress the fire

When fires are not allowed to burn, fuel accumulates on the forest floor. Under these conditions, when a new fire starts, it often burns hotter, spreads faster, does more damage to old growth trees, and is more difficult to suppress it would be if the forest had burned periodically, as is natural. Again, the needs of humans living in the area often take precedence over what would otherwise be best for the forest.

3. Prescribed burning

Prescribed burns are planned burns. The goal is to return a forest to the condition it would be in if natural periodic burns had taken place and to create an environment in which an unplanned fire would not have the catastrophic effects it might otherwise have. Prescribed burns require very careful planning to assure they don't become out of control.

### If you go...

Visit the informative display in the Visitor's Center dedicated to forest fire prevention and management. Here you can see some of the tools that firefighters use. There is also a slice from a Douglass fir that dates to 1672 and a display about the choices involved in forest fire management and the consequences of each. Read about the options and then check your answers. You might be surprised to learn that the best way to fight a fire is sometimes with a fire!

Pick up or request a copy of the "Fire Protection Starts With You" flyer. There are some fun activities for kids on the reverse side.

## Fuel for Thought

### Did you know...

There really was a Smokey Bear. On May 9, 1959, a fire crew working in the Lincoln National Forest near Capitan, New Mexico brought in a badly singed bear cub that they had found clinging to the side of a burned pine tree. At first, the cub was given the name Hotfoot, but that was soon changed to Smokey Bear. The Game Warden, Ray Bell, flew him to the veterinary hospital in Santa Fe, and after the little bear had recovered sufficiently, brought him back to his home (where Smokey reportedly caused quite a few problems with the other household pets). Eventually Smokey left the Bell house for a permanent home at the National Zoo in Washington, D.C., where he would be visited by millions of children.

The Forest Service had been promoting fire prevention with a poster by artist Rudolph Wendelin that featured a bear named Smokey since 1944. Now that there was a real, live Smokey Bear, he became even more popular. At one point, Smokey was receiving so much mail that he was given his own zip code. Visit Smokey's website at [www.smokeybear.com](http://www.smokeybear.com) for information on forest fire prevention and management. The site also offers a new "Smokejumper" computer game that you can play.

### **For the Mouse-bound**

[www.smokeybear.com](http://www.smokeybear.com)  
[www.fs.fed.us/r3/coronado](http://www.fs.fed.us/r3/coronado)

### **Wheels Are Turning**

Parents and Caregivers: These activities can help your child meet Arizona's educational standards. The standards addressed here include:

1SC-R4. State simple hypotheses about cause-effect relationships in the natural environment. (K)

3SC-F2. Use scientific findings to propose and evaluate solutions to problems (Grades 1-3)

3SC-E3. Identify a specific need and propose a solution or product that addresses this need, taking into consideration various factors. (Grades 4-5)