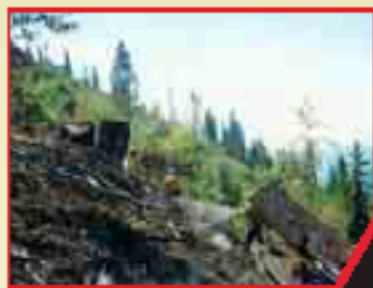


# FIGHTING WILDFIRES

**F**ighting wildfires is very different than fighting house fires. Structural (house) fires are usually contained within one or two buildings, while wildfires move along the ground and often spread over hundreds or thousands of acres. Wildfires are usually affected by the weather and can thus behave very unpredictably. House fires are usually located near a water source or are easily reached by fire trucks that have water; wildfires often occur in remote locations with no available water sources.



Wildfires are most commonly fought by removing fuel (leaves, grass, branches, etc.) from the path of the fire, so that the fire burns itself out. This is also known as constructing a fire line.

Fire is actually a chemical reaction that needs three ingredients in order to burn:

**fuel** (any flammable material that enables the fire to feed itself), **heat** (to ignite the fuel), and **oxygen**. These three ingredients are commonly referred to as the "fire triangle." Every firefighting strategy attempts to stop the fire by removing at least one side of the "triangle."

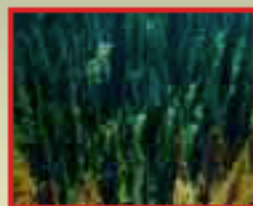


# FIRE friend OR FOE?

Since the large, deadly wildfires of the late 1800s and early 1900s, many people have been taught that all forest fires are bad. Smokey Bear has helped reinforce this message for over 50 years. While there is no doubt that uncontrolled wildfires can devastate our environment, property, and wildlife, fire is nonetheless a vital part of the natural lifecycle of many kinds of forests.

## REPRODUCTION

Without fire, some trees could not reproduce. For example, the lodgepole pine in the western



United States has serotinous cones—cones that only release their seeds when heated by fire. Many tree species, particularly those that need full sunlight to survive, also thrive after fires because the fires create openings in the forests where new seedlings can grow. Seedlings use the nutrient-rich ashes left from burned leaves, twigs, and limbs.

## COMPETITION REDUCTION

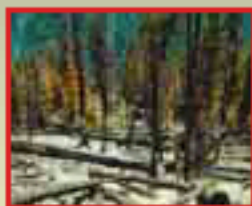
Many species, including loblolly pine, benefit from fires as they help reduce competition from other



tree species. In fact, foresters often use intentionally set, carefully controlled (prescribed) fires to minimize competition in loblolly pine forests. Tree species whose seedlings germinate after a fire are often well adapted to low-intensity fires. The loblolly pine in southern Delaware is a prime example of a fire-adapted species as its thick bark protects it from fires. Other pine species in the western United States have clusters of needles around their buds to protect them from the heat of a fire.

## FOOD PRODUCTION

Fires also produce food for numerous species of wildlife. Many grasses, berries, and shrubs need full



sunlight to grow, and fires often create openings for these plants because fires kill the surrounding less-fire tolerant plants.

## FUEL REDUCTION

Regular, low-intensity fires (such as a prescribed fire) also help to prevent large,



catastrophic wildfires. Without periodic fires, fuels (leaves, twigs, limbs, etc.) continue to accumulate and can eventually lead to large, uncontrolled wildfires. Fire can also help to control disease and insect populations.

# THINK YOU KNOW SMOKEY BEAR?

**S**mokey Bear is one of the most recognized advertising symbols in U.S. history. Smokey is all around us, appearing at special events as well as on billboards, television, and a wide variety of merchandise (from Frisbees to pencils).

However, few of us know the true history of this American icon.

## THE HARD FACTS

Contrary to popular belief, Smokey Bear was not originally based upon a real bear. Instead, this lovable character began as an advertising symbol created from the imaginations of U.S. Forest Service employees in 1944.

The nation's timber supply was vitally important to national security during World War II. In order to protect this valuable resource, the U.S. Forest Service developed a massive advertising campaign urging Americans to help prevent forest fires. To help deliver this message, advertisers first turned to another much-loved animal figure—Walt Disney's Bambi.

But Bambi was only loaned from Disney for a short time; the U.S. Forest Service needed a character of its own. This led to the creation of an adult cartoon bear named Smokey.

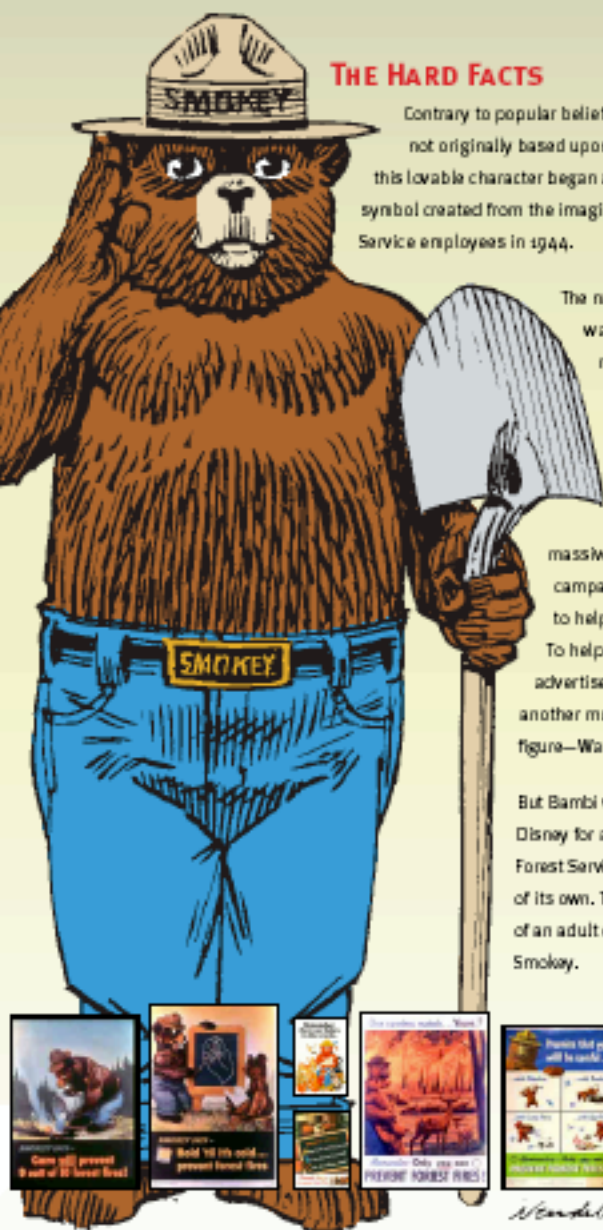
## A STAR IS BORN

For five years, Smokey existed only on paper. Then, in the spring of 1950, wildland firefighters rescued an injured, orphaned brown bear cub from a devastating fire in New Mexico's Lincoln National Forest. Rescuers named the cub "Smokey" after the bear depicted in the U.S. Forest Service's new advertising campaign. The U.S. Forest Service soon adopted the cub as the official living Smokey Bear. Later that year, Smokey was sent to live at the National Zoo in Washington, D.C., where millions of people visited him until his death in 1976.

## TOO MUCH OF A GOOD THING?

Thanks to the efforts of Smokey Bear and many foresters throughout the country, the number of wildfires in the U.S. was greatly reduced during the last few decades. However, wildfire is a natural process in the life cycle of many forests; in fact, many trees and other plant species need fire in order to survive and reproduce. Furthermore, the absence of fire in many forests has resulted in the build-up of dangerous fuel loads—large amounts of leaves, limbs, and dead trees; thus, when a fire does occur, it is large and difficult to control.

Foresters are now working to perfect Smokey's message. His new message is to prevent wildfires (instead of forest fires). Today's foresters now permit some wildfires to burn, and in some cases start fires, to help reduce wildfire danger and encourage tree growth. With a little help, Smokey will continue to help foresters protect our forests for many years to come.



Wendell '93

# FIREFIGHTER EQUIPMENT

