Thad Box

Smokey's Altered Habitat

One spring day in 1950, a major forest fire swept through the Capitan Forest in New Mexico. It was driven by a strong wind, often out of control. A black bear cub wandered nearby. Firefighters, busy with containing the blaze, had no time to spare.

Later they found the cub had been caught in the fire. He had not fared well. He was badly burned on paws and hind legs. Those who found him passed him to a rancher who in turn called state officials. His wounds were treated and he survived. He eventually became an American icon: Smokey Bear, the symbol for fire prevention for the USDA Forest Service.

Created in 1944, the Forest Service's fire prevention campaign had a jerky start. Then, in the 1950s, with Smokey Bear as the central figure, it became the longest running public service campaign in history. Smokey's first forest fire prevention message remained unchanged for 50 years until April 2001, when the Ad Council updated his message to address the increasing number of wildfires in the nation's wildlands. Smokey remains one of the world's most recognizable fictional characters.

The ponderosa pine forest where the cub was found is now surrounded by summer cabins, vacation homes, and permanent residences. Like many throughout the West, they are threatened almost annually by fire. Debates rage from local coffee shops to the halls of Congress on ways to protect property in areas where fire has been rigidly excluded from forests.

The theme for this issue of *Rangelands* is "wildlife and fire." The theme for the last issue, "grazing management," was clearly about a tool. This issue's theme deals more directly with components of the ecosystem. Although both are manipulated in land management, neither is distinctly a tool, each being an integral part of the system.

The story of the orphan cub that became an icon highlights many of the hazards a land care professional faces when he ventures into the minefield where these 2 parts of the ecosystem come together. There science is often trumped by emotion. Fear causes normally rational people to demand security even if it sacrifices land health. Feelings often replace facts. Land management policies become more political than scientific.

I write not to defend or condemn the Smokey Bear fire program or to lambaste politicians for their policies. Instead, I want to examine the roles of wildlife and fire in the ecosystem and try to sort out how they can be used by land care stewards.

Wildlife is part of the consumer organism subset of the controlling factors of ecosystems: climate, geological materials, and organisms. Technically, I suppose any native animal is wildlife. But our cultural definition usually limits wildlife to native vertebrates, especially those we enjoy, consider useful, or think are pests. Traditionally, many "wildlife" specialists were people who worked with game animals, those mammals many now describe as charismatic megafauna. Modern wildlife people find themselves spokespersons for most native animals.

Fire is an important abiotic component in ecosystems, but ecologists differ on how it fits. Some argue it is a controlling factor or a part of climate. Others consider it a dependent fac-

tor being influenced both by biomass and climate. Whatever its classification, managers find it a useful tool. Fire has been associated with humanoids for about a half million years. Early humans feared it. Some worshipped it. It was important in early human health, its use one of the important events that led to the development of civilization.

Prior to domestication of animals, the relationships between wild animals, humans, and fire were part of human strategy for survival. Wildlife was a major food source. Fire was often used as a tool to increase food supply or to ease capture of animals. Jared Diamond, in *Guns, Germs, and Steel*, describes what he calls "firestick farming" among early Australians. Although the techniques differed, similar situations occurred on every major continent.

Diamond described the relationship between fire and wildlife: "The Aborigines modified and managed the surrounding landscape in ways that increased its production of edible plants and animals, without resorting to cultivation. In particular, they intentionally burned much of the landscape periodically. That served several purposes: the fires drove out animals that could be killed and eaten immediately; fires converted dense thickets into open parkland in which people could travel more easily; the parkland was also an ideal habitat for kangaroos, Australia's prime game animal; and the fires stimulated the growth both of new grass on which kangaroos fed and of fern roots which Aborigines themselves fed."

As plants and animals were domesticated, human relationship to wildlife and fire changed. Farming systems provided both plant and animal foodstuffs. Although wild animals still provided food, they also destroyed crops. Uncontrolled fires were a danger. Gradually, both wildlife and wildfire became an unwelcome part of human existence. Humans found strategies to protect themselves from natural dangers. Killing animals, ranging from rats to tigers, just to eliminate them, made life more secure. Fire protection became a societal concern.

By the time Europeans arrived in the American West, the removal of pests and control of nature were seen as marks of civilization. Firearms were commonplace, and wildlife was soon reduced to small populations. Native grazers were replaced with domestic animals. Predators were controlled. Human-caused fires increased and were added to those naturally caused or started by native people. Most of the West was overgrazed or overburned by the beginning of the 20th century.

Today's land care steward inherited a landscape severely changed by the early European conquest. Current conditions also reflect almost a century of use as professions such as forestry, range management, and wildlife management developed. As science improved and was applied to the land, attitudes about wildlife and fire changed again.

Wildlife, especially those considered game animals, became culturally important as sport hunting became popular. Protected and managed, their numbers increased. As human populations moved from rural to urban, attitudes toward wildlife changed again. After the Vietnam War, public resistance to guns and violence increased. Sport hunting declined in popularity.

Wild animals became appreciated for their aesthetic or ecological value. Butterflies, owls, snails, salamanders, and pupfish demanded their share of the wildlife attention. Protection of less abundant wildlife was more likely to be for biodiversity than for any economic use. Endangered species were protected.

Societal interest in wildlife slowly shifted to aesthetic, scientific, and ecological concerns. Public attitudes about wildfire remain largely economic: how can I protect my property? News media, reporting on wildfires, list structures burned but seldom comment on ecological values. Politicians approve emergency funds to build or protect houses, not to improve habitat for hummingbirds or to save a population of rare vetch.

Land care professionals should look to the burned black bear cub saved from a New Mexico forest and learn from its successes and mistakes. We should examine again what happens when fire and cute, fuzzy critters raise emotions to high levels. Fear, shame, pity, embarrassment, and guilt drive people to want to right whatever wrong. Science is not as important as salving guilt. But we had better be careful what we ask for. Rigid, widespread control of wildfire has caused a new set of land management problems where Smokey was born.

We can minimize mistakes in the emotional arenas of wildlife and fire if we test each proposed action with our best science. Our science is better than when Smokey became the icon for wildfire control. We have better tools. High-speed computers can run models of "what if" scenarios, including social science estimates of what people will accept. The science available to use managing rangelands and forests is improving daily. It is our role to get that science before policymakers who are conditioned to respond to one-issue problems. We have the power to manage rangeland and fire to leave the world better for our grandkids. That power rests in our application of science.

Thad Box, thadbox@comcast.net.