Change: Natural & Unnatural

We often think of parks as outdoor museums. Caretaking a living ecosystem, however, is very different than protecting unchanging objects.

Both natural features and human facilities may be different each time you visit. Both are changing all the time. How we take care of those features and facilities may also affect your visit. You won't notice the ozone monitor that works 24 hours a day, but you will see other activities such as revegetation, road work, painting, or trail maintenance. Some activities may unavoidably affect you, such as smoke from a prescribed fire, campsite closures due to revegetation, or bear management.

The park staff uses such actions as tools to maintain the landscape and protect its inhabitants and visitors. Your visit gives you but a snapshot of this process; Nature decides the timing of many of these actions. They all share one goal: preservation of these parks for us all, now and in the future.

Prescribed fire in a sequoia grove

Fire: A Natural Change Agent

Years ago, we tried to banish fire from the landscape, believing it was destructive. In sequoia groves, that meant putting out lightning-caused fires that naturally start as frequently as every 5 to 15 years.

As time passed, we saw unanticipated consequences from this. Fire suppression blocked important natural processes. Two of these resulted in big problems:

First, sequoias were not reproducing. We learned that fires create the conditions that sequoias need to regenerate: Fires leave behind a seedbed fertilized with ash and they open the forest canopy, allowing sunlight to reach the seedlings.

Second, the amount of dead wood and dense growth of small white-fir trees increased tremendously. Natural fires used to burn these away frequently. Now, after fire's long absence, these fuels feed bigger, hotter blazes that are more dangerous for people, plants, and wildlife.

For over 40 years at Sequoia and Kings Canyon, we have studied fire and its effects on the land. Now, to protect human safety and benefit giant sequoia trees, the National Park Service works with fire to restore the benefits it brings.

We still put out fires that threaten life and property but, when and where it's appropriate, we ignite prescribed fires or allow lightning fires to spread naturally, reducing fuels and improving resource conditions. Strong evidence shows that we are succeeding.

Why is this important? The National Park System exists to conserve resources "unimpaired for the enjoyment of future generations." We once thought that aggressive fire suppression met this goal. A more complete understanding of fire tells us that excluding this important natural agent of change only hurts what we are trying to protect.

Unnatural Change: Alien Invaders

Plants and animals evolve together in communities over time. Often, they keep each other in check.

When species get brought in from other places, the newcomers may multiply wildly. This is because the competitors, predators, and diseases that keep them in check in their home communities are not here. This imbalance breaks links in the local web of life, badly disrupting native species that depend on each other. Sometimes the non-native aliens completely replace local plants and animals.

Practice alien hygiene! Look for seeds and tiny animals attached to shoes, clothes, waders, equipment, tires, and pet fur. Wash mud from under cars and on tires before coming into the parks.

The natives will thank you!

Imminent Alien Threats!

Star thistle is one of the most damaging non-natives in the state. Dense, thorny growth completely excludes native plants and limits wildlife movements. It is not yet established in these parks, but it is close! If you recognize its yellow flower and thorny spines from your home or travels, make sure not to bring it in. If you see it here, tell a ranger.

New Zealand mud snails completely take over and change waterways that they invade. Due to their biology, just one snail can start a huge population! These tiny light-brown animals—less than 1/8-inch long—stick on gear. Check boots & waders thoroughly for this little invader. Common just east of the parks, they could easily be carried into the High Sierra.