

Santa Monica Mountains

National Park Service
U.S. Department of the Interior



Santa Monica Mountains
National Recreation Area

WILDLAND FIRE

SOUTHERN CALIFORNIA is well known for periodic wildfires that sweep across thousands of acres in a single fire event. With a unique combination of vegetation and climate, fires in the Santa Monica Mountains are among the most intense in the world. These fires can destroy hundreds of homes. The 1961 Bel Air Fire burned 484 homes and 6,000 acres. In 1993, 350 homes and 17,000 acres burned in the Old Topanga Fire.

FIRE ENVIRONMENT



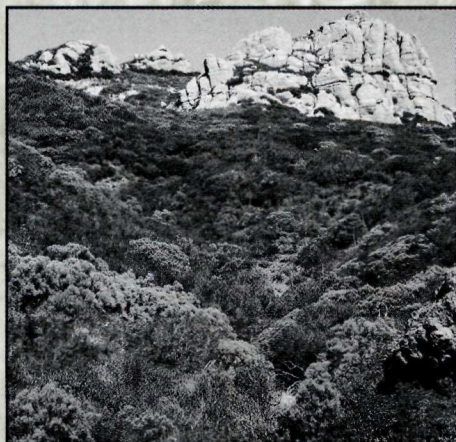
Toyon
(*Heteromeles arbutifolia*)
Illustration by Jim W. Dole

In the Santa Monica Mountains, vegetation and climate combine to create one of the most extreme fire environments in the world. The vegetation is dominated by two shrubland types known as *chaparral* and *coastal sage scrub*. These shrubs are extremely flammable because they grow close together in dense stands and many species contain volatile oils. The accumulation of dry, dead branches mixed in with the live plants provides fuel during a fire. Every year these plants experience a long drought that follows the winter rains, a pattern characteristic of the Mediterranean climate of southern California. By the end of summer, even the live shrubs are extremely dry and can be easily ignited. Finally, in autumn, hot and dry winds, called Santa Anas, blow across the mountains toward the ocean. If a fire starts under these conditions, it can move at a rapid rate and the chance that it will become a major wildfire is high.

MODERN FIRE HISTORY

Most of the Santa Monica Mountains has burned at least once since fires began to be documented in the early 1900s. Some areas have burned as many as seven times. Lightning, the only natural ignition source of fire, is very uncommon in coastal California. Ninety-seven percent of Santa Monica Mountains' fires have been from human causes, primarily from arcing power lines and arson. The number of fires in the Santa Monica Mountains has increased as the population has grown.

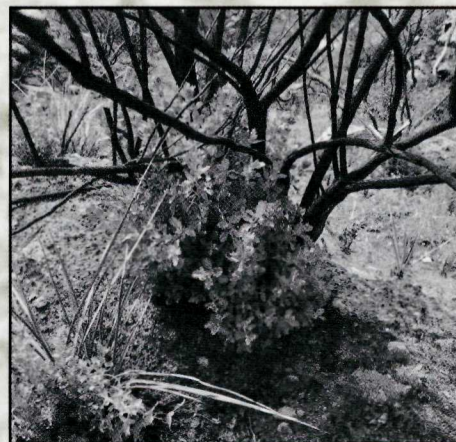
ECOLOGICAL ROLE OF FIRE



Dense chaparral before a fire



This post-fire landscape looks black and barren



Close up we can see the rapid resprouting of burned plants

Fire is a natural part of the Mediterranean ecosystem of southern California with the vegetation and wildlife adapted to recover from wildfire. Shrubland fires in the Santa Monica Mountains are intense crown fires that consume the vast majority of the above ground plant material. Despite the apparent devastation of the blackened landscape, vegetation recovery begins rapidly with resprouting shrubs from underground root crowns. Once the first winter rains have fallen, seedlings are abundant from the germination of soil-stored seeds. Most spectacular are the fire-followers, flowering annuals and herbaceous perennials which only appear in the first few years after the fire.

Although fire is natural, it can also be a force of major disturbance. Changes following fires include increased soil nutrients but can also include increased runoff and erosion. There can be major changes in plant and animal communities as the bare soil provides the opportunity for aggressive non-native plants to become established, crowding out native species.



Parry's Phacelia (*Phacelia parryi*)

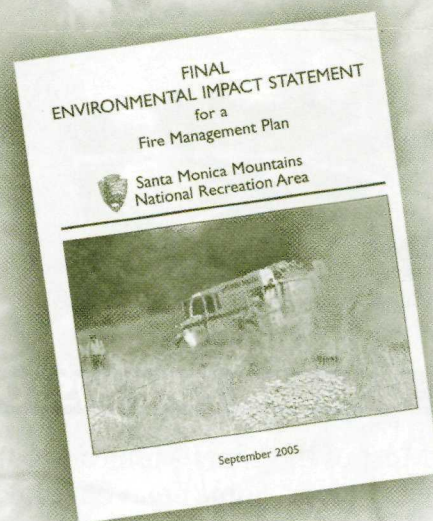
FIRE THREATS TO NATIVE PLANT COMMUNITIES

While some forest ecosystems have been damaged by unnatural fuel buildup and increased fire severity due to fire suppression, this is not the case in the Mediterranean shrublands of southern California. Fires that are frequent and occur within short intervals are a threat to the Santa Monica Mountains and its highly diverse plant communities. Chaparral shrubs, particularly those that reproduce from seed following fire, are threatened by fire returning too quickly. Plants need sufficient time between fires to produce enough seed for regeneration after fire. When there is too little time between fires, the landscape can change from shrubland to predominately non-native annual grassland.

FIRE MANAGEMENT

Due to our climate, vegetation, and geography, fire will always be a part of our landscape. However, in order to protect the lives and property of the people who live in the mountains as well as our threatened plant communities, we need to work hard to reduce the amount of fire in our mountains. Possible harm to people and property from fire has increased with the expansion of the *wildland-urban interface*, the area where open space meets development. Wildfires in the Santa Monica Mountains have destroyed hundreds of homes. The cost of fighting a wildland fire can be in the millions of dollars and endanger firefighters' lives.

The National Park Service actively protects the people, homes, and biodiversity of the Santa Monica Mountains by suppressing all wildfires and working with land owners to prevent fires and provide defensible space around their homes. The Santa Monica Mountains National Recreation Area developed a Fire Management Plan in 2006, which states the broad principles directing specific management objectives and associated actions. A key ingredient to the success of this plan is the individual responsibility of every property owner to appropriately clear vegetation and other burnable material away from their home. Simply put, the creation of defensible space saves human lives and property.



FOR MORE INFORMATION...

The National Park Service has professional staff that enjoys helping you learn more about park resources and their management.



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