





A PARK FOR ALL FOREVER

CRITICAL ISSUES FACING MUIR WOODS

ENDANGERED SPECIES

Muir Woods is home to several federally endangered and threatened species, including the northern spotted owl, coho salmon, and steelhead trout. The latter two species, both "salmonid" fish, come up from the ocean to spawn in Redwood Creek, which flows through Muir Woods. Due to habitat degradation, these fish populations have declined over recent decades, but efforts to improve habitat have bolstered their numbers since 2003. The northern spotted owl, a species native to Muir Woods, has been challenged by an invasive species called the barred owl. This owl is larger, more aggressive, and possesses some hunting advantages over the native bird. The two species are currently in direct competition for habitat here at Muir Woods, and scientists have been closely monitoring the balance through studies of the owl populations.

SUDDEN OAK DEATH & TANOAKS

Sudden Oak Death (SOD) is a common name given a pathogen (*Phytophthora ramorum*) responsible for widespread tree death throughout northern and central California. This pathogen first appeared in Muir Woods during the mid-1990s, and although many plants in the redwood forest are affected, the tanoaks have suffered the most. Infected trees develop black bleeding cankers on the bark and the trees' foliage thins drastically in only a few weeks' time. Due to the widespread death of tanoaks, there is growing concern for the animal species that eat their acorns. There are currently no known cures for SOD, but researchers are trying to understand the disease's spreading mechanisms and find ways to create immunity for native oaks.

NATURAL SOUNDSCAPE

Studies have shown that high levels of noise can cause dramatic behavioral and physiological changes in

animals—not to mention unpleasant experiences for park visitors. For the last three summers, Muir Woods has hosted soundscape studies to find out the causes, locations, and times of the highest sound levels in the woods. The most recent work (by the National Park Service, Colorado State University, and the University of Vermont) employed various methods for reducing park noise like implementation of "quiet areas" and "quiet days." Muir Woods, the first national parkland to institute such a "quiet day," will enjoy another on January 8, 2008, and visitors are invited to experience the forest in all its tranquil beauty.

RISING VISITATION

As a national monument in close proximity to an urban area, Muir Woods experiences a very high visitation rate. Annually, the woods receive between 800,000 and 1 million visitors. During summer 2007, about 3,000 to 5,000 people visited the monument each day. The popularity of the park has triggered a number of pressing concerns, chief among them parking. With demand far exceeding lot capacity, it is not unusual during the summer for visitors to park up to one mile down the road and walk in. Park managers have been promoting alternatives—such as shuttle-bus services during peak season—to alleviate the congestion at Muir Woods.

GLOBAL CLIMATE CHANGE

If global warming continues at the current rate, climate change will transform the Golden Gate National Parks in many ways—such as variability in moisture at Muir Woods. The Bay Area might also witness a sea-level rise of three feet or more by the end of the century, and the parks would lose its beaches and suffer severe coastal erosion. The Climate Change Task Force for the Golden Gate National Recreation Area is crafting an action plan to help identify and counteract the effects of climate change.