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Yosemite's Meadows: Nature Versus Nostalgia

Yosemite embodies a microcosm of the problems that face ecologists who are charged with managing natural systems in places that also are used for recreation. Basic to this problem is the conflict between the dynamic nature of vegetation and our nostalgia for earlier landscapes.

This nostalgia seems to be inherent in human psychology. People often consider their early childhood outdoor environments as “best” environments. Many of us treasure our recollections of our first visits to places like Yosemite and compare subsequent visits to that experience.

Our nostalgia is also stimulated by nature writers, paintings and films. Wilderness advocates have reinforced it by convincing the American public to love the wilderness even if the public cannot experience it. The word “wilderness” itself conveys a sense of earliest times, not changing times.

Yosemite Valley is the premier laboratory in which the conflict between vegetation change and our nostalgia for early landscapes must be worked out. The flat, expansive meadows provide vistas with unobstructed views of the massive granite walls and wonderful waterfalls from great distances. Many visitors treasure their memories of camping, picnicking and hiking in the meadows. The meadows are the place both to see and to experience Yosemite.

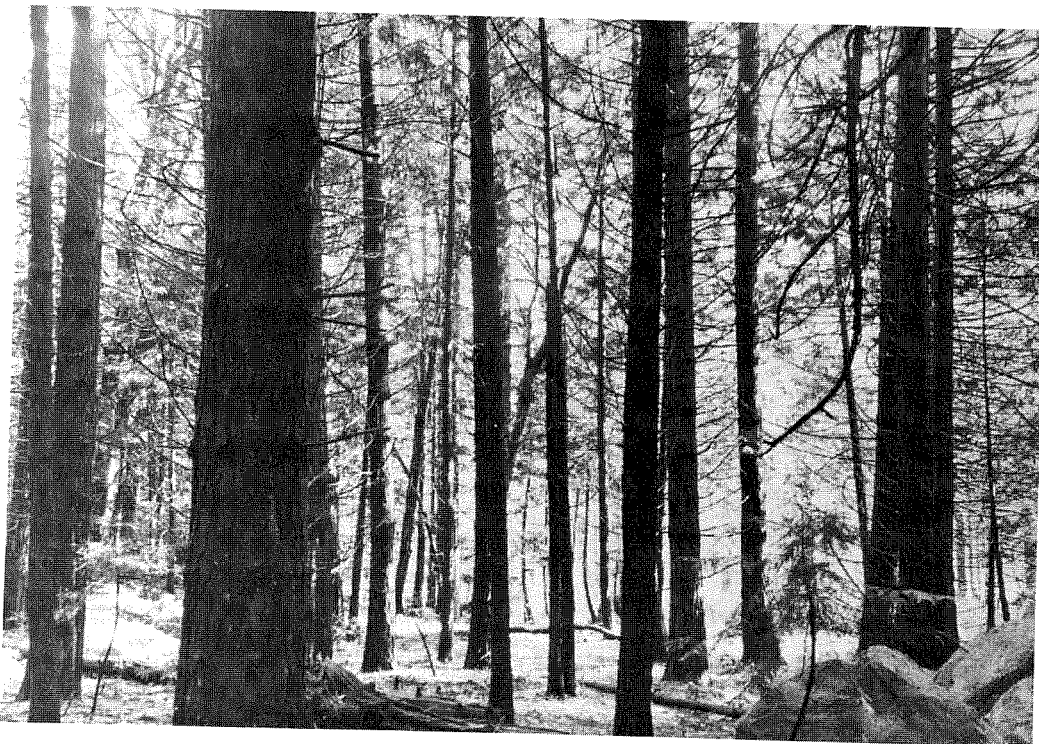
The meadows are prone to invasion by ponderosa pine trees. For 4,000 years, before President Lincoln set aside Yosemite Valley as a park in 1864, the Miwok Indians living there burned the meadows and adjacent forest stands every year. They did this in order to improve the efficiency of acorn collection, to make it easier to collect certain bulb plants and to prevent saplings from taking root in the adjacent forest understory (thereby minimizing the risk of surprise attacks from Shoshoni raiders).

With the removal of the Native Americans and the institution of a policy of fire prevention and suppression, ponderosa pine finally established a foothold in many of the original meadows. Dense populations of seedlings, which would have succumbed to burning, survived to produce forests.

Succession from meadow to forest was also enhanced by the lowering of the Merced River's bed in 1879. The granite bed and rocks in the river channel at Bridalveil Fall were blasted away with dynamite, effectively lowering the water table in several wet meadows and allowing further invasion of ponderosa pine. Consequently, more than half the meadows that existed in 1867—some 411 acres—have been lost.

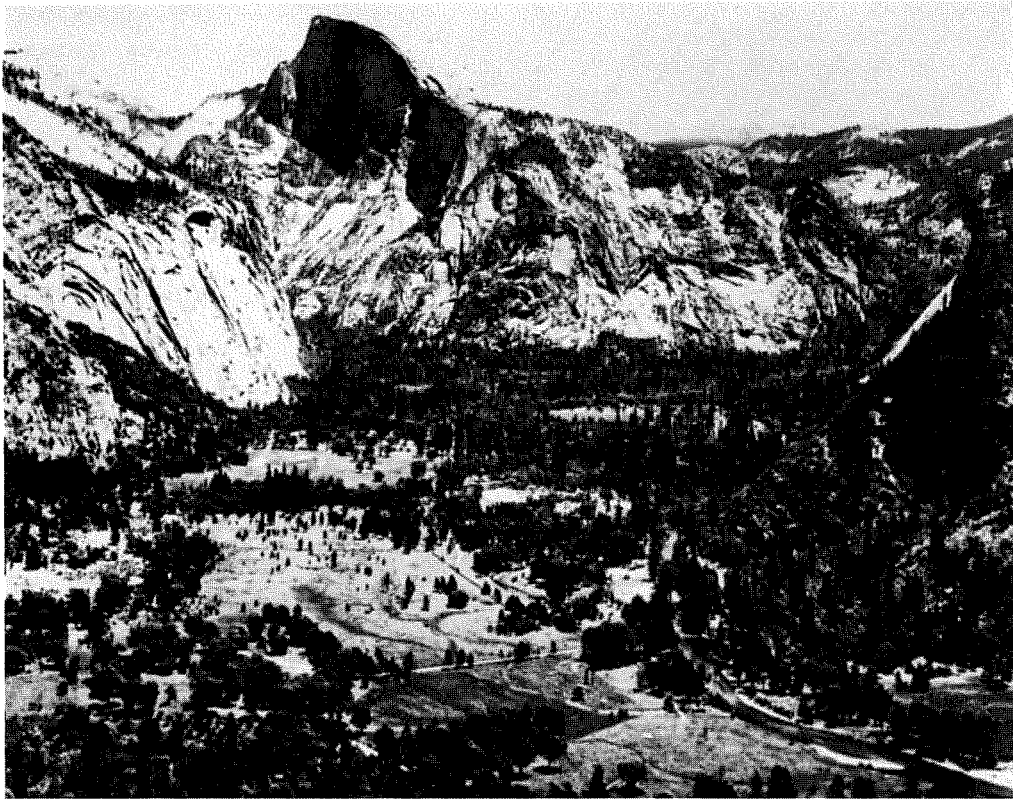


**View from Black Springs, 1866.
Photo by Carleton E. Watkins.**



**View from identical spot, 1943.
Courtesy National Park Service.**

From the mid-nineteenth century to the mid-twentieth century, half of Yosemite Valley's meadows were lost to the invasion of ponderosa pine, as these two pairs of photographs show.



View from identical spot, 1961.

Photo by R. P. Gibbens.



View of upper end of
Yosemite Valley from Columbia
Point, 1899.

Photo by H. G. Peabody.

By the mid-1960s, the National Park Service (NPS) embraced the notion that national parks should be managed to maintain “vignettes” of the wilderness as it was first observed by European or American explorers. As a result, the NPS began periodically burning Yosemite Valley meadows to prevent further succession to forests. The Valley was insured against the disappearance of a nostalgic view of the early American landscape.

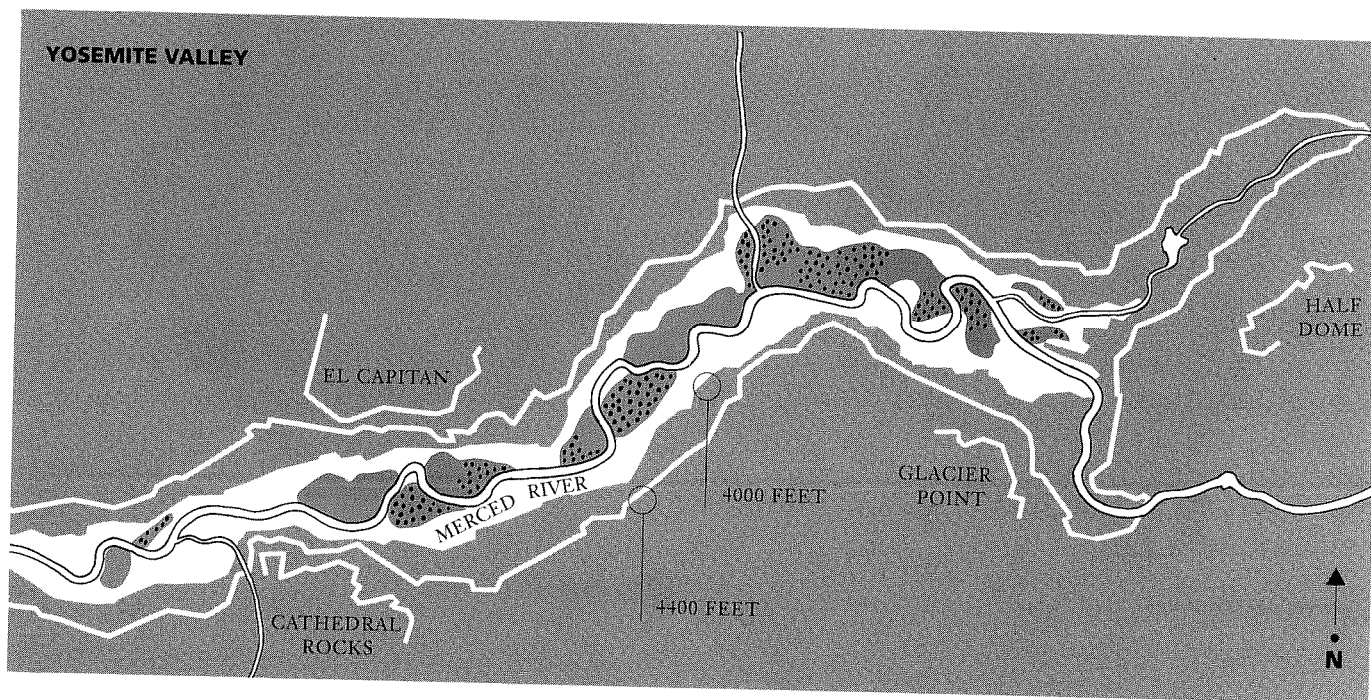
In the 1970s a new generation of ecologists re-examined this policy and suggested any attempt to manage the landscape to protect specific patterns of vegetation (or even specific individual plants, such as the giant sequoia trees near Wawona) was misguided and doomed to failure. They contended that natural processes should not be impeded and a vegetative mosaic should be allowed to emerge. They assumed that these processes would restore and maintain wilderness ecosystems in national parks.

Since then the meadows have burned only when lightning strikes or when NPS managers, using a timetable based on the frequency of lightning-caused fires, determine a fire should be set. Similar practices govern burns in other parts of Yosemite and in other national parks.

This “let-burn” policy is currently being reconsidered. In the summer of 1988, a series of human- and nature-caused fires burned much of Yellowstone National Park. Public outcry over the loss of vistas traditionally associated with the Park caused the NPS to wonder again whether even naturally caused fires should be suppressed.

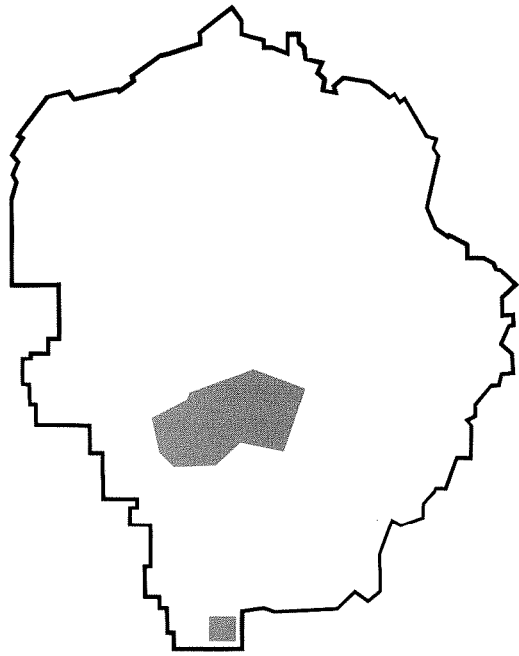
The conflict between a program that uses periodic burning to simulate Native American management and restore nostalgic “vignettes,” and a program that resorts to natural processes and lets succession take its course has yet to be resolved. Debate over the fire management program in Yellowstone is but one example of this conflict in approaches.

As a student of ecology and NPS policy, I look forward to watching the evolution of the debate and its impact on the meadows in Yosemite Valley. The NPS should see the value of the Native American practice of burning meadows in the Valley. That burning, and the periodic burns of the 1960s, halted the invasion of ponderosa pine and prevented further loss of the landscape the Park was established to preserve.

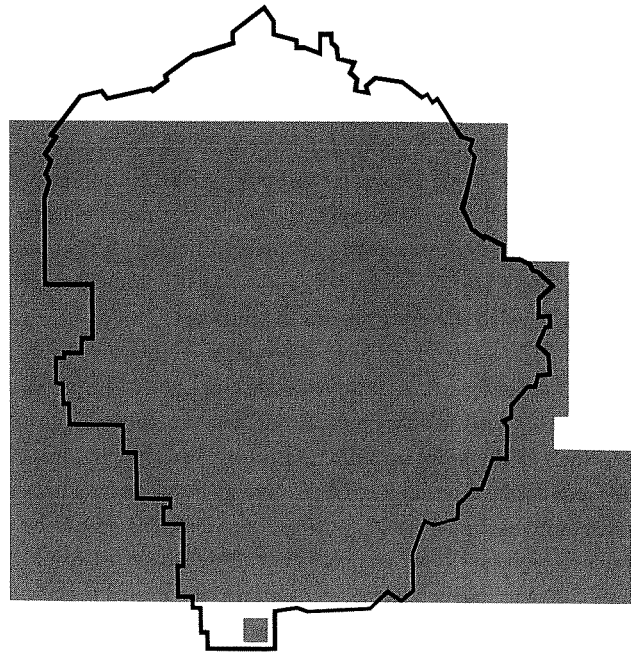


 Areas invaded by ponderosa pine.

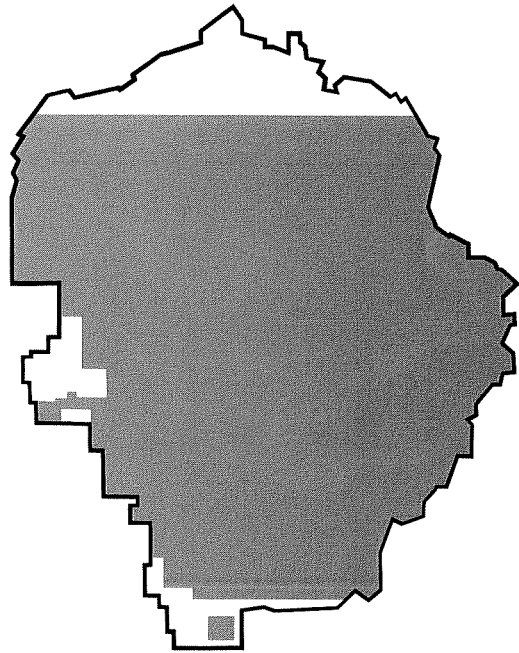
 Meadows, 1867



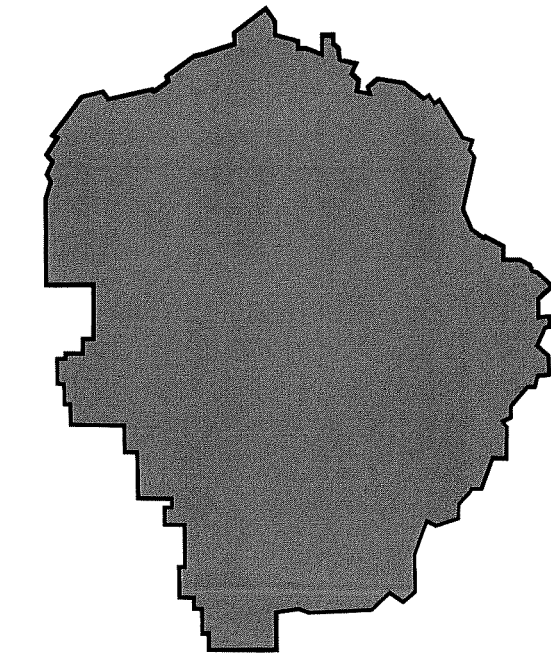
1864 grant.



1890 park boundaries.



1905 park boundaries.



Current park boundary.

Yosemite National Park's boundaries have been revised many times, a reminder that many of the issues facing the Park do not stop at its borders.