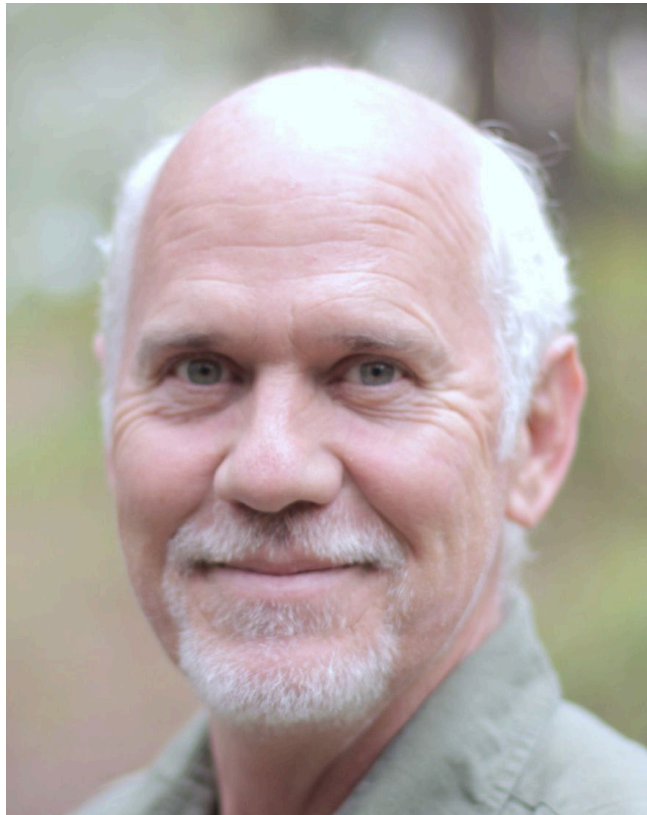

In My View: Can humans really restore nature?

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It makes me sad to think about the local forests that burned in the recent fires. Friends have tried to console me saying, “They will grow back.” I know the forests will grow back, but not in my lifetime. Even if we help them grow back will they be the same ecosystems that existed before? Can humans really restore nature?

Eco-Hubris

Years ago, I attended a meeting with the US Forest Service. They were describing how they planned to restore forests that had been logged. These well-educated biologists and ecologists thought they had it all figured out. I remember doubting that they would be capable of restoring a natural forest that had been decimated.

Especially when a forest is clear cut, more than trees die. All the plants and animals that have adapted to live under the forest canopy lose their home and die off. A natural forest ecosystem is a complex interconnected web. It is eco-hubris to think we can recreate a natural biome after it is dismantled.

This does not mean we shouldn't try to preserve and restore nature. I commend the people that are making efforts to protect and conserve our natural environment. Sadly, we will have a need for more of this in the coming years as climate change takes its toll on our global ecology.

Save the Sequoias

I read an article in the San Francisco Chronicle (8/15/23) "Are sequoias doomed without help of humans? Parks system wants to replant groves after fires; environmentalists disagree." This headline got my attention. Usually, environmentalists support planting trees. What is their beef with this?

"Officials at Sequoia and Kings Canyon national parks say that with a fifth of the world's sequoias (over 14,000) wiped out by flames since 2020, planting tens of thousands of sequoia seedlings is necessary to ensure a future for the planet's largest and now threatened trees."

"Twenty percent of the sequoia seedlings will come from areas outside the genetic community with more diversity and tolerance to hot weather. Hundreds of people will be involved with this \$4.4 million project which includes five years of planting and 30 to 40 years of monitoring."

Leave Nature Alone

Several environmental groups have spoken up in opposition to this proposed planting plan. For millennia, sequoias have relied on fire to disperse seeds and clear the ground for new seedlings. These environmentalists argue that forests will plant themselves and there is no need to intervene.

"This is a terrible idea," said the Director of the John Muir Project, "Forests don't need to be planted after high intensity fire. That's a myth. There have been enough seedlings sprouting in the burned sequoia groves to hatch the next generation of trees. The forest will be tainted if seeds from outside the area are brought in."

"Wilderness is supposed to be self-willed and not manipulated," said an attorney representing a Sierra Club Chapter and other groups that have come out against this plan. "There are all sorts of potential unintended consequences. We don't necessarily know what those will be. We should be very cautious."

"The difference of opinion comes from the uncharted reality of climate change. Never before have these 3000-year-old trees experienced the calamity of the last few years. Simply put, there is no playbook for managing nature – or not – amid climate catastrophes."

Sequoias of the Sea

Another endangered ecosystem is getting more attention lately. The Nature Conservancy magazine (5/26/23) has an excellent article about efforts to restore kelp forests. These forests are not being destroyed by wildfires but are affected by climate change in a different way.

"Kelp forests as lush and impressive as the towering redwoods once dominated our nearshore waters. Some call kelp the sequoia of the sea. Stems of Bull Kelp soar more than 100 feet high and its canopies are visible

from space. They represent vibrant underwater ecosystems that provide food and shelter for thousands of marine species.”

“Kelp forests temporarily store staggering amounts of carbon, about 20 times more per acre than forests on land, which helps temper ocean acidification in coastal waters, a symptom of climate change. The seaweed also pumps more than \$250 million into the state’s economy each year.”

Help the Kelp

“In temperate oceans across the globe, kelp forests are in decline, because of warming waters, overharvesting, and overgrazing by predators. They are on the verge of collapse in Northern California where only a few strongholds remain. In the past 10 years, 96% of the kelp forests have disappeared.”

“In 2013 a massive heat wave began to envelop the eastern Pacific. This raised the ocean temperature by as much as 7 degrees Fahrenheit, triggering a slow cascade of underwater turmoil. The balmer conditions wreaked havoc on Northern California’s bull kelp which thrives in the typically cold nutrient rich waters.”

“Meanwhile a mysterious disease broke out in the same stretch of the Pacific, annihilating sea stars, including the sunflower sea star, a voracious predator. As billions of sea stars waste away, native purple sea urchin populations have exploded 10,000 percent and they are devouring kelp faster than it can reproduce.”

The California Department of Fish and Game in partnership with others is experimenting with trapping purple sea urchins to put this ecosystem back in balance. I am not aware of a proposal to restore the sea star population as a natural predator to the purple sea urchin. This may be out of reach.

Keep Swinging

A mission to restore a sequoia forest whether on land or in the ocean is a worthwhile effort. We are facing long odds and an uphill battle, but we need to try. Even though we may be losing the ecological ball game, we must keep swinging for the fences and hope we can occasionally hit a home run.

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