

Can Ancient Hawaii Guide Modern Rhode Island?

By Peter B. Lord

Editor's note:

This op-ed essay was adapted from a speech given at an annual meeting of the New England Estuarine Research Society on Block Island, R.I.

Last May I was sitting in a classroom overlooking the National Tropical Botanical Garden on the island of Kauai in Hawaii. It was as if I was looking down at heaven.

The garden filled a narrow valley that spilled down to white sands and then the blue waters of the Pacific. It was so beautiful that visitors tended to grow quiet as they took in all the visual delights provided by the carefully planted ferns, flowers, and trees.

I joined a dozen other journalists at the garden for some sobering work. Most biologists are probably well aware of what's going on in Hawaii, but the general public doesn't know, and that's why the national garden is bringing in groups of journalists to learn and then spread the word.

As beautiful as it is, Hawaii's plants and animals are going extinct faster than anywhere else in the United States. More than 100 species of plants disappeared in just the last 100 years. More than 50 percent of what remains is either endangered or threatened. That's some 500 species in trouble. Twenty-six of the 71 bird species found only in Hawaii are gone forever. In what amounts to just one of a stunning array of challenges, Hawaiian conservationists are struggling to preserve an endangered hawk that feeds on endangered crows.

The garden's job is to serve as something of a Noah's Ark. It collects the rarest plants and cultivates them in its Lawai garden. Sometimes the biologists rappel hundreds of feet down cliff faces to grab plants that the wild goats and pigs haven't eaten. One developed a harness system that allows him to climb jungle trees and harvest flowers growing in the treetops. Sometimes the biologists spend days wandering the jungles, looking for plants that haven't been seen since the last hurricane devastated the island. The hope is that one day the plants can be replanted in the wild and allowed to thrive again on Hawaii.

No one predicts that will happen anytime soon. So in the meantime, gardeners took us on a walk through this unique place and pointed out the rare plants they are trying to save. Time and again, the gardeners would point and say, there are the last two of those plants, or the last three of those. It was an incredibly chilling experience. I was scared to death I was going to knock something over or step on a seedling.

It was during these lessons that a local biologist introduced us to a watershed management strategy called Ahupua'a. Ahupua'a is a holistic system that manages each watershed in its entirety with an awareness that what happens in one part of the watershed will invariably affect what happens in the rest.

I paid special attention to this lecture because I was struck by the similarities to the new watershed management efforts being launched by the [U.S. Environmental Protection Agency](#) and the [R.I. Department of Environmental](#)

Management. Instead of regulating individual sources of pollution and environmental degradation town by town and state by state, they are trying to assemble partnerships of various federal, state, and community interests to work together to protect watersheds.

As I listened to the presentations in Hawaii, I remember thinking, I can't wait to get home and talk about this with people in Rhode Island.

An Ahupua 'a is a subdivision of land in Hawaii that corresponds with watersheds that travel from mountain tops through fertile valleys to the point where streams and rivers meet the sea, and out to offshore reefs. They vary in size from 100 to 100,000 acres. Bureaucracy is kept to a minimum. One person is appointed to be in charge of each Ahupua 'a. That person appoints someone else to run day-to-day operations focusing on land-use issues. There are several lower level jobs—someone in charge of water, another in charge of land boundaries, a master fisherman and master farmer. These people manage freshwater used for drinking, bathing, and irrigation. They supervise farming efforts and fishing in the stream and offshore. Clearly, this is a system for an agricultural society.

A research paper by Luciano Minerbi describes how it works on the island of Molokai.

The Ahupua 'a is based on:

- * Respect for nature
- * Regulation of land uses
- * Access to resources
- * A search for balance and harmony with nature
- * Taking care of the land

There are three major ecological zones: The mountain zone provides firewood, timber, birds, and plants. The agricultural zone is where taro is grown dry or irrigated. In the fishing zone, people harvest shellfish and finfish, gather seaweed and salt, and tend ponds where sophisticated aquaculture takes place. All the activities are tightly regulated. No more than 10 percent of the water is withdrawn from the estuary. When trees and plants are harvested, they are quickly replaced. There are closed places and seasons for fishing.

This system in Hawaii has actually been around for a while. How long? Here's a hint: Anyone who violates the rules by taking too much water or polluting can be instantly put to death. The Ahupua 'a system actually dates back some 1,600 to 1,800 years. By some estimates it fed nearly a million people, close to the present population of Hawaii.

It was all but destroyed by Westerners and the Hawaiian land decision of 1848. The ruling allowed foreigners to purchase thousands of acres at 25 to 50 cents an acre. It destroyed the Hawaiian system for managing the land in a sustainable fashion.

When Captain Cook reached Hawaii in 1778, he found at least 360 fish ponds producing 900,000 kilograms of fish a year. The Hawaiians tended saltwater fish ponds and freshwater ponds where the fish fertilized taro plants growing in the shallow water. By 1985, only seven ponds remained, producing 1 or 2 percent of the earlier yield.

The Westerners converted the Hawaiian landscape to huge ranches and pineapple plantations. Its ecology was devastated. Many of its natives died or left. So why even bring it up now? Because native Hawaiians are struggling to bring back the Ahupua'a concept, as well as many other practices and beliefs that prevailed so successfully for so long before the Westerners arrived. It's called the Hawaiian Renaissance. And a few scientists are taking note. After all, Hawaiians were successfully practicing aquaculture 1,600 years before we even tried raising fish in New England.

Hawaii has approved some small-scale projects, and there is a statewide [Ahupua'a Action Alliance](#) with its own Web site. The courts are approving measures allowing people to use undeveloped land, even if they don't own it. The movement has its own bumper stickers and T-shirts. Its concepts are being taught in local schools. This land use management system is sustainable. It's healthy. Some consider it the key to restoring the islands' ecosystems.

Much of this was presented to me by state biologist Don Heacock. Heacock took us swimming with green sea turtles and strolling along beaches. But he also showed us hillsides where all the earth is washing away into the sea, stream diversions that helped destroy local fisheries, and vast stretches of fields that once grew pineapples. He bemoaned the fact that his state devotes such miniscule resources to saving its own environment.

Those who support the old system readily concede they face an uphill battle to bring it back. One day we journalists met with a group of conservationists and state park supervisors, restoration ecologists, and a Buddhist hunter who shot a wild pig for a luau after the meeting. They told us that Hawaii spends \$30 million on land conservation and \$60 million to promote tourism. Its parks are understaffed. Its biggest environmental group, the Sierra Club, has only a few thousand members. Conservationists can't even persuade the airlines to put conservation tips on the movie trailers they show on the planes—they fear it will dampen tourism.

Being good at asking dumb questions, I pointed out that in little Rhode Island, our key environmental advocacy group is five times larger than the one in Hawaii, our state was planning to vote on a \$34 million bond issue for open space, our state officials line up to support environmental causes, and our congressmen sponsor millions of dollars each year for our wildlife refuges.

What's the matter with Hawaii? I asked. That's when the conservationists pointed out the people differences. Hawaiians are not as well educated, they said. Many now live in the cities [and lack an appreciation of open space]. And for 150 years, Hawaii has had basically a plantation economy. "People here aren't accustomed to taking charge of things. They are accustomed to taking orders," said one local activist. Tourism in some ways continues the plantation economy.

So why bring all this up now, in Rhode Island?

Well, we've spent the last few hundred years blindly doing everything we could to destroy our environment. We cut down all the trees, killed most of the wild animals, poured incredible quantities of sewage and industrial wastes into

Narragansett Bay, and drew off vast quantities of freshwater for drinking and power.

If the Ahupua'a system were in effect here, the executions of violators would be endless.

If you step back, it's amazing our environment survived. In the last 20 years we've done a lot to clean up the mess that preceded us. We've vastly reduced the amount of toxins and sewage we dump in the Bay. The air is cleaner. The forests have returned. Wildlife is coming back.

Yet, we've slipped in other directions.

Last fall, Bill McKibben, the journalist who sounded the alarm on global warming 10 years ago with his book, *The End of Nature*, gave a talk to the Society of Environmental Journalists in Michigan. Much of it was pessimistic. He described the '90s as a decade of lost opportunities. In 1990 people saw the environment as a crisis needing vast changes in our culture, but during the last 10 years we responded with a period of unprecedented materialism, he said.

He spoke about the trend toward huge new houses, of a "lust for Internet-equipped SUVs, stocked with 'Olestra Lunchables,'" carbon dioxide emissions rising 13 percent, and genetic technology spreading like wildfire.

We live in a utopia where we live a long life, eat well, and don't suffer with unpleasant working conditions, McKibben said. But why doesn't it seem like utopia?

What's next? McKibben suggests we look at society as if it were an individual organism. It needs to stop growing. It needs to accept the concept of maturation, just as all of us do individually. Despite what you see on TV, there are benefits to maturing. You stop putting yourself first and you take care of your children, and often your parents. You take a longer view. You need less. You spend more time reflecting. These concepts, he said, are taught in church. Our intuition tells us they are right.

McKibben didn't say it, but maybe it is time to look at some of the old ways, such as Ahupua'a, that recognize we are merely part of nature, not its controller.

Here in Rhode Island, we have well-educated people. People here don't like anyone telling them what to do. We love politics. We want to do something. We want our fish to return. We want clean beaches and freshwater and farms. We want to be healthy.

Maybe we just need someone to show us the big picture. We are gradually working to clean up the environment. But I don't think we know where we are going. Someone needs to articulate what the Bay would look like if it were really healthy again. Show how we'd all benefit. People need to learn how it used to be. Then they can work to bring it back.

The Hawaiians have shown the value of looking to the past in order to figure out where to go in the future. And despite tremendous obstacles, they are working to bring back some of those old, beneficial ways.

—Peter B. Lord is an Environmental Journalist for the [Providence Journal](#) and Journalism Director of the [Metcalf Institute for Marine & Environmental Reporting](#) at the University of Rhode Island.

