

Dan Botkin's Newsletter

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If We Take Actions to “save” a wilderness, is it still a wilderness? Adding wolves to Isle Royale National Park



Wolves hunting moose at Isle Royale National Park in the 1960s. (Photo courtesy of Peter A. Jordan, University of Minnesota)

In one of my first newsletter issues (Vol. 1 No. 8), I wrote about the problem the National Park Service faced concerning the wolves at Isle Royale National Park. Then the wolves were down to nine, and I wrote that as a result “the population is likely to go extinct on the island.” Today, there are just two left, and according to Rolf Peterson, the excellent scientist who has done the most thorough research on the wolves of Isle Royale, these two are “a male and female (but they are father-daughter and also half-siblings because they share the same mother). They are also 6 and 8 years old, so they

won't last much longer.” Wolves have traveled back and forth between the mainland of Minnesota and Ontario, Canada, by running over Lake Superior's ice, when that ice froze enough for such travel. But Rolf writes, “No ice this winter so no possibility of escape (or immigration).”

The park service's dilemma is whether to introduce a few more wolves onto the island or just let nature take its course, and see what happens. Wolves hunting moose are one of Isle Royale's main attractions, along with its wilderness, for those who want to get out on their own and experience it.

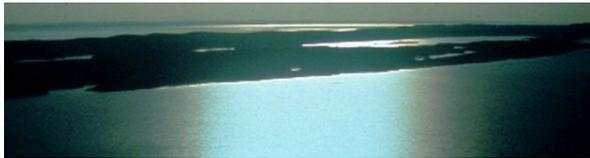
The policy decision at Isle Royale might affect government and environmental nonprofit policies broadly. A general policy that might arise from the one decision would have effects on land use and land economics throughout the park system and beyond, possibly influencing America's general approach to the conservation of biological diversity, one of the major environmental concerns of our times, especially focused on by those expecting major climate warming. And as America goes with its national parks and wildernesses, so are other nations likely to go.

At the heart of the matter is the prevailing view in America about nature and people, especially about wilderness and people. The still dominant belief, as I've made clear in other issues of the newsletter, is the “balance of nature,” that nature left alone by us achieves a balance that is constant, beautiful, most biologically diverse, and the only kind of nature in which a human being, allowed to be a visitor only, can find that spiritual connection to nature that our society associates with John Muir and Henry David Thoreau. Following from this belief that nature is

true only if left alone, we cannot interfere, cannot take any actions.

Extinction of the wolves will have wide effects on Isle Royale. In the past, when the moose population got very large, these feeders on leaves and twigs of trees and shrubs greatly changed the island. They converted a mostly woody wilderness to open, heavily browsed countryside, not nearly as pretty nor as wild as it has been when heavily forested.

Isle Royale's rugged landscape has hills and valleys. Some of the valleys are deep enough to have lakes, and there are some 45 lakes



there.

The island is one of the places in the United States least altered at any time directly by people. A series of parallel ridges and valleys, 45 miles long and 8 miles wide, rising up out of Lake Superior, the island has rugged scenery. Before European settlement, the Indians visited it occasionally to collect native (pure) copper, but never settled on its cold and inhospitable shores. In the 19th century a few people tried farming on small parts of the island, and some commercial fishermen built cottages along the shore. But mostly the island has been left to nature.

Getting in touch with nature's wilderness on the island



When I did ecological research on the island, I came to love its 45 lakes, and especially the view from the summit of Feldtmann Ridge looking north, a view from hillside trees down to a large wetland, then across a lovely variety of upland and lowland forests to Lake Superior beyond and, in the hazy distance, the shores and hills of Minnesota and Ontario.

Not the easiest park to get to, it averages only about 16,000 visitors a year, providing a wonderful opportunity to wander far from others and get a deep personal sense of the connections between oneself and nature. Peter A. Jordan, my colleague in my research on the island, who had worked there for many decades and hiked off the trails much of his time there, never came across another person more than a quarter mile from a trail.

One of the ways we used to get to Isle Royale



Getting to This Wilderness. You can take a six-hour ship ride from Houghton, a town at the very top of the arm-like stretch of land, Keenewenau Peninsula, of northernmost Michigan. You can take smaller boats, one of which circles the island and lets you off in the wilderness, from Grand Portage, Minnesota. You can char-

ter a small float plane from Houghton, or get there in your own boat, if you have one.

Past dominant National Park Service policies

The document that has most influenced National Park Service policy since the 1970s is known as the Leopold Report (the lead author was Starker Leopold, a professor at U.C. Berkeley). It said that the primary goal should be that *“each park be maintained, or where necessary recreated, as nearly as possible in the condition that prevailed when the area was first visited by the white man. A national park should represent a vignette of primitive America.”*

In 1976 the park was also included under the protection of the 1964 Wilderness Act, which states that a legally designated wilderness *“is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. . . undeveloped Federal land retaining its primeval character and influence . . . and which . . . generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.”*

To introduce wolves would therefore seem to violate the very purpose of the park and, at the same time, ironically, destroy the very things that gave the park its *“outstanding opportunities for solitude or a primitive and unconfined type of recreation,”* which is another condition within the Wilderness Act.

What would seem a simple decision becomes a complicated and difficult one. On the one hand, it will do the park good to add more wolves, to keep the visitorship high enough so that staffing the island with park personnel continues to make sense. But on the other hand, it

would seem to violate America's idea of wilderness. Damned-if-they-do, damned-if-they-don't, sort of thing.

In 2014 the National Park Service made a decision, which was to do nothing for a long time. It stated that *“after two years of discussions with wildlife managers and geneticists and input from the public,”* the Service will fund an environmental impact assessment that is expected to take three years, after which the Service will consider what to do. That means do nothing again for another long time. Meanwhile, nature may not wait for government bureaucracies.

Isle Royale is an always changing wilderness, not in a balance of nature as no-touch wilderness is often believed to be. Until the 20th century, caribou and beaver were the only major large mammals. For reasons nobody seemed to understand, the caribou left and moose arrived on their own around the turn of the 20th century, probably getting there by swimming from the mainland.

Moose are very good swimmers. One day when I was doing research there, a big storm came up, creating six-foot-high waves. A big bull moose came to the shore of Washington Harbor near where we were camping. He stood for a while looking across the quarter-mile of water, then walked in and swam across as easily as if he were on vacation in sunny Florida on a calm day.

The wolves are even more recent self-arrivals, getting to the island around 1945. They almost certainly traveled in the winter across the ice. Sometimes Lake Superior freezes from the mainland to the island and wolves are well known to run 60 miles or so a day on the ice.

Intense storms on Lake Superior periodically take their toll on the island, knocking down trees and creating wildfires with lightning strikes.

Given this history, the island is not what “was seen by the first white man,” not a “vignette of primitive America” in the sense of being exactly like it was, species by species, many hundreds of years ago. Like the rest of northern Minnesota and Michigan, the island was covered by several miles of ice during the past ice age, which ended about 12,500 years ago. To meet the Leopold Report criteria of a place as seen by the first white man, the park service would have to get rid of all the wolves and moose and reintroduce caribou, the opposite of a no-touch landscape that in American mythology is believed to be the condition of true wilderness.

A Young Moose on the Island. These forest dwellers are not easy to see and many hikers pass quite near them without realizing that what they have come to see is nearby.



The two laws that govern the national parks--- the Organic Act of 1916 and in some places, including Isle Royale, the Wilderness Act of 1964---allow a set of human activities that lead to management that will be much more satis-

factory to the public and to environmentalists and require less effort and cost than the “do nothing” alternative popularly known as “letting nature take its course.”

The National Park System was set up in 1916 with Congressional passage of the National Park Service Organic Act, which states that its purpose “*is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*”

The Act is quite open and makes no statements about what kinds of actions people can take, nor the limitations of any such actions. The “hands-off” idea for nature is not mentioned. The Act states simply that the parks should be managed “to provide for the enjoyment of the same [scenery and wildlife] in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” “Such manner” and “by such means” would seem to include introducing more wolves to Isle Royale so that “future generations” can “enjoy” the wolf-moose predator-prey in action.

The Wilderness Act specifically says that it does not override any of the provisions previously enacted for the U.S. National Park System, stating: “*Nothing in this Act shall modify the statutory authority under which units of the national park system are created. Further, the designation of any area of any park, monument, or other unit of the national park system as a wilderness area pursuant to this Act shall in no manner lower the standards evolved for the use and preservation of such park, monument, or other unit of the national park system.*”

Excellent Ecological Research has gone on for decades on the Island. Today’s leading Island

researchers propose a genetic rescue. The longest study of big game predators and prey has been done at Isle Royale. The island is also famous among scientists for its long-term research on wolf-moose predator-prey interactions. Isle Royale's wolves and moose, their main prey, have been monitored and studied for over 50 years, making it the longest of any study of large vertebrate predator/prey interactions.

According to John Vucetich and Rolf Peterson, the leaders of the wolf research on the island, *"the genetic health of the Isle Royale population has very likely been maintained by periodic gene flow, which is only possible during winters in which an ice bridge has formed."* During the recent warming in this part of the world *"the frequency of ice bridges has steadily declined throughout the past five decades."* They and fellow scientists therefore call for reintroducing a few wolves from the mainland, to provide for genetic rescue.

Dynamic Ecology to the Rescue

The new understanding of nature, which we call "dynamic ecology," is that change is natural, that the environment has always changed and is always changing at many scales of space and time, and that as a result, all life has evolved with and adapted to change. Species that exist today have had to make this adaptation, and in many cases species promote change, in this way outcompeting other species less adapted to certain kinds and rates of change. Furthermore, dynamic ecology places people within nature, and acknowledges that many landscapes that people appreciate most deeply and consider "natural" are products of human actions combined with nature's dynamics.

This is not to say that all actions are good or desirable. On the contrary, it is clear that people have harmed nature in many places in many ways. As I've written elsewhere, once we accept the naturalness of change, nature becomes our guide. If a change is natural in kind and rate, then species have had time to evolve and adapt to it, often requiring it. Therefore, if we make those kinds of changes, the results are likely to be good or at least benign. It is novel changes--like the introduction of novel chemicals as pollutants--that we need to be more concerned about.

Putting It All Together, Briefly

- Deciding what to do about the wolves of Isle Royale National Park could set a precedent for America's conservation of biological diversity, with many effects on land use and value.
- The wolves of the island are in trouble and may go extinct. This creates a Park Service dilemma. The island is one of America's best wildernesses in the sense of having been little touched by people. On that basis, the policy might be to do nothing, let the wolves go extinct if that's nature's way.
- But one of the main reasons people value Isle Royale and go there is to see the moose and the wolves, prey and predator. On that basis, genetic rescue seems the solution.
- The resolution: understand dynamic ecology, how nature really works, and then take action, and do so quickly.

Who Said That? A Regular Newsletter feature. A lot of pundits make assertions that are supposed to be true, but don't back them up. For those who want to check what I write about, here are the sources for this issue:

Genetic Rescue of the Isle Royale Wolves
Vucetich, J.A., M.P. Nelson, and R.O. Peterson, 2012, Should Isle Royale Wolves be Reintroduced? A Case Study on Wilderness Management in a Changing World. The George Wright Forum, 29(1): p. 126-147.

The Classic Book about Isle Royale's Wolves
L. David Mech. 2002 *The Wolves of Isle Royale* reprint. University Press of the Pacific. Originally published in 1966.

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