



## Marine Reserves - Oregon Style by Wynn Cudmore

Although land-based reserves such as national parks, wilderness areas and wildlife refuges have been part of the U.S. conservation strategy for quite some time, only recently have they been used in marine conservation. Marine reserves are the most restrictive type of “marine protected

reserves are designed to protect a portion of the fish population to help ensure the persistence of that population. In a more general context, networks of marine reserves are designed to protect marine biodiversity and the ecosystem services that biodiversity provides. In general,



Arch Rock at Depoe Bay, Oregon.  
Photographer: Rear Admiral Harley D. Nygren, NOAA Corps (ret.)

area” and, as such, prohibit extractive activities such as fishing, mining and oil drilling. Other types of marine protected areas afford some protection but not to the same comprehensive level as marine reserves. Networks of marine reserves have been proposed as one component of an ecosystem-based approach to reverse fishery declines and to conserve the natural biodiversity of marine ecosystems. In the context of fisheries management, marine

marine reserves serve as an “insurance policy” against fishery declines and marine ecosystem degradation. The biological diversity supported by marine reserves builds in some resiliency to disturbances and catastrophic events (e.g., ocean acidification and warming due to climate change, marine pollution, oil spills) that may further degrade marine ecosystems.

In the past *de facto* reserves existed throughout the world’s oceans because many areas were too far from fishing ports or were inaccessible to the type of fishing gear that was available at the time. However, with increased demand, larger vessels and improved technology (e.g., on-board electronics, dredges and trawls designed for rocky bottoms and for fishing at great depths), many of these areas are now accessible to fishermen.

As of 2006, approximately 0.01% (13,900 mi<sup>2</sup>) of the ocean was designated as marine reserves.

Thus far in the U.S., the establishment of marine reserves has been implemented only in state territorial waters (i.e., 0-3 miles from the coast). On the Pacific Coast, although Washington and California have already established marine reserves, Oregon has had no areas designated. However, prompted in part by recent events such as the decline of Pacific salmon and several rockfish species and the appearance of a hypoxic dead zone off the Oregon Coast, the designation of marine reserves in Oregon appears imminent.



Map of Oregon Coast, adapted from Oregon Parks and Rec. Dept.

Oregon has been in a lengthy and sometimes contentious process of marine reserve designation since 2005. Oregon's governor called for the establishment of marine reserves in state waters off the Oregon Coast provided they did not result in significant negative impact to coastal communities (particularly fishing interests). The governor directed the Oregon Ocean Policy Advisory Council (OPAC), a legislatively mandated marine policy advisory body, to evaluate marine reserve proposals and to make a recommendation to the governor. After soliciting public comment, the council found that 9 locations received sufficient public support to explore further. In November of 2008 OPAC recommended the establishment of two pilot marine reserves – one off Port Orford and one off Depoe Bay. Four others were recommended for further study.

After near unanimous support in the Oregon House and Senate, this summer the governor signed a bill that authorizes the state's first two marine reserves and requires further study of four other areas. Although the governor has allocated funds in his current (2009) budget to establish the two pilot reserves, it is not clear how or when official designation will occur. The process has been contentious with fishing interests (both commercial and recreational) concerned that these reserves will place traditional fishing grounds off limits with little benefit to them. Fishery biologists believe that reserves are essential to protecting nearshore marine ecosystems and the fisheries they support.

continued on page 6 "Marine Reserves"

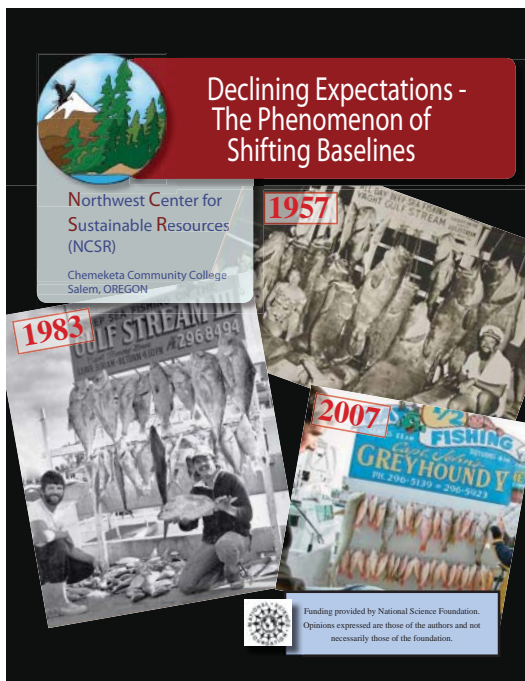
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### Why the Past May Not be Prologue

The recently published Marine Fisheries module, *Declining Expectations – The Phenomenon of Shifting Baselines* explores the concept that our perception of “how things should be” are based on what we see and experience rather than the way they actually were. As a result, conditions that change gradually over time are not recognized as significant shifts. Although the module focuses on explaining why dramatic changes in marine fisheries are often overlooked, and current conditions are accepted as the norm, the concept of shifting baselines has wide application in other disciplines. The module is now available on NCSR’s website for download or to order in print with a CD.

Cover Photos: Marine Reserves - (c) Pete Naylor, uwphoto.geckoworks.com 2005/Marine Photobank;  
Shifting Baselines - Monroe County Library Collection and Smithsonian Magazine (September 2008), Loren McClenachan

## The Wolf Today By Lester Reed

*“A big black wolf with a silver streak on his throat lay quietly in a bed he’d dug in the snow, muzzle resting on his paws. Snow sifted down and stuck to the white-flecked guard hairs on his face and neck. He was tired – wolf tired.”*

This passage introduces Hank Fisher’s account of the history and reintroduction of wolves in Yellowstone National Park in his book, *Wolf Wars*. Fisher ends his story on an optimistic note saying, “On March 21, 1995, the Park Service biologists began releasing the wolves from their pens. The metal gates swung open, and Yellowstone Park was on the road to being whole again.”



Gray Wolves courtesy of USFWS.

Fast-forward to 2009. Was Fisher’s optimism justified? There is no single answer to the question. “Yes” seems to be the government’s answer. After all, the U.S. Fish and Wildlife Service (USFWS) removed the Northern Rocky Mountain (NRM) population of the gray wolf from the list of endangered and threatened wildlife in February 2008. A resounding “No” comes from a coalition of conservation groups who filed a lawsuit to overturn the delisting. A federal district court found that the conservation groups were likely to prevail in the case and granted a preliminary injunction in July 2008, reinstating the Endangered Species Act protections for the NRM gray wolf

pending final resolution of this matter on the merits. You would also get a “No” from ranchers in the NRM area citing loss of their livestock to marauding wolf packs.

In March 2009, after reviewing their order to delist, the USFWS reaffirmed its original decision: removal of the gray wolf from the endangered species list in the Upper Midwest, Idaho and Montana. In announcing the decision, Interior Secretary Ken Salazar, said the finding by the USFWS in 2008 was “a supportable one. Scientists have concluded that recovery has occurred.” He agreed that the wolf remains threatened

in Wyoming and should continue to have

federal protection there. This did not end the controversy and on June 2, 2009, 13 conservation organizations filed a new lawsuit against the USFWS challenging the removal of federal protection. The plaintiffs applied for an injunction to stop planned wolf hunts under the state management plans in Idaho and Montana. In September, the U.S. District Court of Montana agreed with plaintiffs that the USFWS likely violated the Endangered Species Act by delisting wolves in Idaho and Montana, but decided not to grant an injunction stopping the planned hunting until the court case was settled.



Gray Wolf in snow. Courtesy of National Park Service

The hunt in Montana had a direct impact on the Yellowstone wolf population. Packs on the periphery of the park routinely cross from protected to un-protected territory. One such pack, the *Cottonwood* pack, was especially hard hit in the first two weeks of hunting season when four of its ten members were killed. Those killed included the alpha male and female. The impact was more than the loss of pack leadership, but loss of a valuable study group. "Whether the pack exists anymore or not, to us the pack is gone," said Doug Smith, the biologist in charge of the Yellowstone reintroduction program. *Cottonwood* "was a key pack on the northern range," he said, giving researchers a window into the existence

of animals that had little or no interaction with humans.

The question of the success of the re-establishment of wolves in the Northern Rockies is still not answered. The next chapter will be the outcome of the federal lawsuit which is still pending a formal trial. As the legal challenges drag on, the wolves may need to stay out of the cross hairs of the hunter.

The story of the eradication, reintroduction, federal protection and delisting of the NRM wolves make an excellent case study. Abundant data and materials are available in print and on-line and the opinions and actions of various stakeholders are well-publicized. Evaluation of the published data and the criteria used to reach delisting decisions serve as an excellent vehicle to strengthen students' analytical skills.

continued from page 2 "Marine Reserves"

# NCSR NEWS

Local "community teams" representing a broad range of interests including the fishing industry, scientists, conservation groups, recreationalists and local government will help guide the management of the new reserves. Initial community team meetings were held in January 2010.



Port Orford, Oregon  
Courtesy of Commander Bruce Hillard, NOAA Corps

Curriculum materials that address marine reserves in more detail can be found in the recently published NCSR Marine Fisheries series (See *The Role of Marine Reserves in Ecosystem-based Fisheries Management*). For those interested specifically in the designation of marine reserves in Oregon, the process can be monitored at:

[www.oregonmarinereserves.net](http://www.oregonmarinereserves.net)  
[www.ouregonocean.org](http://www.ouregonocean.org)

## NCSR Summer Institute: *Connecting Classrooms to the Community*

NCSR is offering a professional development institute for sixteen middle school and high school instructors from August 8-13, 2010 in Salem, Oregon. Jon Yoder, a nationally recognized expert in community-based education, will be the primary instructor for the institute. The institute's goal is to assist teachers in learning how to get students involved in meaningful community projects and still fulfill the educational curriculum outcomes that teachers are required to meet. Specifically, activities will provide experiences that will enable teachers to connect their students to their communities through community exploration lessons, to conduct community needs and opportunities assessments, and design and conduct community projects that focus on the environment and the use and management of natural resources. Participants will be provided lodging, meals, institute materials and a \$500 stipend. A printable brochure and applications are available on our website [www.ncsr.org](http://www.ncsr.org) (see "announcements" on the right side of the page) or you may contact us to request an application at:

Email: [ncsradm@chemeketa.edu](mailto:ncsradm@chemeketa.edu)  
Phone: 503-399-5270

Applications must be submitted by June 15, 2010.

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