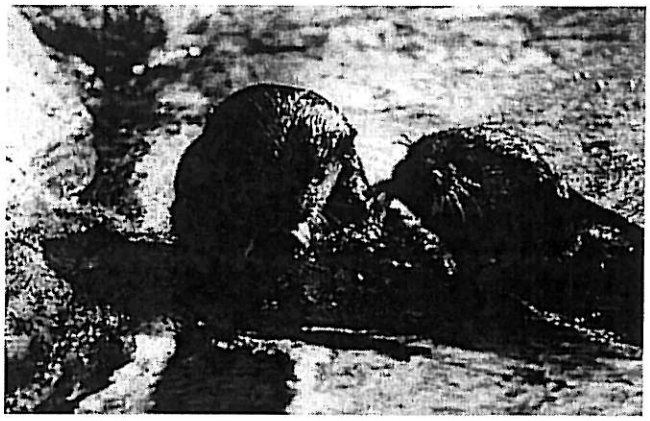
Otters critical to past, future ecosystems



MICHAEL DURHAM – Courtesy of the Oregon Coast Aquarium

Researchers at Portland State University are examining the genetic structure of the extinct Oregon sea otter. DNA studies may eventually reveal whether the Alaska or California sea otter might be adaptable to the Oregon coast.

Scientists seek close relative to take place of extinct species

By SHANE POWELL

The Daily Astorian

OREGON COAST -- Stationed at Fort Clatsop in January 1806, Meriwether Lewis became frustrated when a Clatsop Indian refused his offer of blue beads for "t(h)ree very elegant sea otter skins." The Indian demanded 10 beads; Lewis had only four. Today, if Lewis were to traipse into Astoria with enough blue beads to buy the town, he still wouldn't get the coveted otter pelts. Not because he would be short of currency, but because there would be none to sell.

The original sea otter along Oregon's coast has been extinct for more than 130 years. However, recent scientific research may eventually fill the void left by the small, thick-coated sea mammal.

A species lost

The Oregon sea otter - known to Native Americans as "elakha" - met its fate at the hand of early hunting explorers who prized the creature for its flesh and fur. Coastal traders, including Robert Gray - the Columbia River's modern discoverer - treasured the animal, especially for its high trade value in tea with the Chinese. Early reports estimated a pelt to hold 500,000 hairs per square inch - or 50 times that of today's costly garments.

But enticements like these pushed the fur trade swiftly throughout the Northwest, and the entire otter species fell victim.

Initial population estimates of up to 300,000 plunged to a total of less than 2,000 by 1911. The last native sea otter on Oregon's coast was spotted near Newport in 1906. Its finder promptly killed the animal and sold the pelt for $900.

When Oregon's otter vanished, it took along more than just its plush coat. Native coastal plant communities, devastated by the unchecked herbivores the animal once fed upon, have largely followed its fate. And without the keystone sea otter, some coastal ecosystems and fisheries have undergone substantial shifts - which have clearly been for the worse, biologists say.

But lately, not all the news is dismal.

In addition to recent otter sightings (one as near as the South Jetty at the Columbia River's mouth), researchers are seeking a non-native otter that is genetically similar to the historic Oregon sea otter. And the hope is that investigations will eventually reveal an adaptable species that could successfully be relocated to Oregon.

Past efforts

With nuclear tests planned for Alaska's Aleutian Islands in 1970, researchers attempted to relocate otters from Amchitka Island to Oregon and Washington.

The Washington population survived. Oregon's did not.

A total of 93 otters were released between 1970 and 1971 near Coos Bay and Port Orford on the southern Oregon coast.

"But the populations dropped almost immediately to 20 or 30," said Ron Jameson, who works for the U.S. Geological Survey in Corvallis and has tracked the animals for more than two decades. "There was bad reproduction, and they just didn't take here."

Jameson explained that although the otters weren't showing up dead, they steadily disappeared, and the population eventually eclipsed with a last sighting in 1981. They were thought to be gone for good in Oregon, possibly migrating homeward toward Alaska. But then in 1992, another was spotted and sightings have been verified sporadically ever since.

"Over time, Washington's population was showing southward expansion," Jameson said. "We're making the guess that that's where those seen lately have come from."

Many hope the migrations will continue and that a local population will stabilize at some point. But Jameson and others have speculated that Alaska's relocated otters may have been doomed from the outset.

Finding the Mold

Examinations of prehistoric Oregon otter bones have revealed a jaw that differs from the Alaskan and Californian otters. The finding suggests what a few presumed: that Alaska's relocated otters may have been at a genetic survival disadvantage from their native cousins.

Beginning this week, researchers at Portland State University are preparing to examine the genetic structure of remnant native Oregon otter bones, ranging in age from 300 to a few thousand years old.

The studies, researchers hope, will produce a DNA map that will point to a closer connection between Oregon's and either the Alaska or the California otter. If the genetic bar-code reveals more similarities on one species' behalf, those otters may be selected for the next attempt at local relocation.

"If we can estimate the best population to draw from, it'll be our best hope for reintroducing these creatures to our state," said Virginia Butler, project leader with the anthropology department at Portland State. "If something distinguishes Oregon's otter, that feature might eventually help to decide who has the best chance of survival here."

A recent $5,000 grant from the Confederated Tribe of the Siletz Indians will fund a full, forthcoming year of research by a PSU graduate student.

Oregon's otter forecast

Most scientists agree that successfully establishing the otter along the Oregon Coast would equate with healthier native ecosystems. Specifically, the resulting decline in sea urchins would likely mean an increase in kelp beds and a more robust coastal salmon fishery.

It's this idea of reinvigorating Oregon's coastal waters that holds special appeal to David Hatch, an engineer with the city of Portland who took interest in reintroducing the otter to the coast after serving on a committee that named the Oregon State University research vessel Elakha for the sea otter.

Last year, Hatch, a member of the Confederated Tribes of Siletz Indians, co-founded the Elakha Alliance - a consortium of institutions and groups working to aid a successful reintroduction effort. In mid-November, the pursuit earned him a finalist status for Portland-based Ecotrust's Buffet Award for "Indigenous Leadership in Conservation."

"We know that it's very difficult to relocate a species," Hatch said. "But there are those out there saying we can do it right this time."

Hatch explained that it's been generations since one of his family members has witnessed a healthy coastal ecosystem - something that although he concedes may take many years, he would like to see change.

"I hope within my son's lifetime it will happen," he said.