

We Otter Bring 'Em Back!

The Centuries-Long Plight of the Southern Sea Otter

The year is 1803; the location is Sotsin Point, California. A playful sea otter pup lies wrapped in a blanket of kelp on the surface of the water, waiting for his mother to return from her dive. Suddenly, large hands snatch him from the water. He thrashes wildly as the hands force a loop of rope onto his back left foot, wrench it tight, and then pitch him back into the sea. The mother returns, the owner of the hands now long since disappeared. Clamping an abalone between her teeth, she looks around for her pup; a shrill cry of pain greets her as he moves slowly away from her. She rushes towards him but feels a sharp, painful snag on her back as long barbed fish hooks pierce and rip holes into her skin. Both mother and pup are mercilessly dragged, writhing, toward shore, both captive to the same coarse line, prisoners to the same gruesome fate.

Continuing down the coast brings a similar macabre sight. Hunters shoot groups of otters that lie peacefully in kelp beds, capture and kill those struggling in nets, and club to death those resurfacing for air. Curious little pups are allowed to get close enough to rub their noses against the legs of the hunters, only for the hunters to reach out and snap their necks. “When it receives a vigorous blow upon the head,” one hunter wrote in his journal, “the otter falls upon the ground, covers its eyes with its paws, and keeps them so, no matter how many times it is struck [9].”

This grisly outcome was shared by the thousands of sea otters who fell victim to the fur trade which thrived during the 18th and 19th centuries. [9] Sea otters were sought for their luscious pelts; with up to a million hairs per square inch, sea otters have the densest fur in the animal kingdom [2]. Acquiring the name of “soft gold”, sea otter pelts were made into belts,

capas, and trim for silk robes [8]. In fact, when Catherine the Great, Empress of Russia, saw one of the pelts, she ordered a robe to be made to cover her from her throat to her ankles, launching an onslaught of hunting.

Once numbering as many as 20,000 and stretching from Oregon to Baja California, the southern sea otter (*Enhydra lutris nereis*) was thought to be extinct in California by the early 20th century [3] and commercial harvest essentially ceased due to the difficulty in locating a sea otter. In 1911, the Northern Fur Seal Treaty was signed by Japan, Russia, Great Britain, and the United States, ending the hunting of marine mammals [8]. Fortunately, a small colony of about fifty southern sea otters was found off the coast of Big Sur in 1938. All southern sea otters alive today (estimated 2000 animals) are descended from this group and eighty percent of the total population lives in Monterey Bay. However, no known colonies live in southern California. The sea otter is listed as Endangered by the International Union for Conservation of Nature (IUCN) Red List, and is protected by the Marine Mammal Protection Act of 1972 (MMPA) and the Endangered Species Act of 1973 (ESA) [4].

This diminishment in numbers has come with other consequences. Sea otters are a keystone species, meaning they play an essential role in their ecosystem. As the top predator in the kelp forest ecosystem, the southern sea otter is vital in keeping in check the populations of other animals lower in the food web [10]. Without the keystone species, overpopulation of sea urchins is causing destruction of the kelp, leaving behind urchin barrens where once stood magnificent, incredibly diverse kelp forests. Over the past hundred years, the California Giant Kelp ecosystem has been deforested by more than eighty percent [12].

In the 1980’s, the importance of preserving this species to save it from extinction was recognized. Beginning in 1987, the U.S. Fish and Wildlife Service (USFWS) Sea Otter Translocation Program attempted to relocate some otters from Monterey to the southern California waters off of San Nicolas Island, to establish a colony away from the mainland [5]. This secondary colony was intended to be a fallback for the species in case a drastic event such as an oil spill wiped out the remaining mainland population. While the intent was noble, the methods used to relocate the animals, however, were flawed, and the sensitivity of the otters to their environment was not well understood. Many otters died from shock, while others, once moved, became lost while attempting to swim back to their parent colony and also perished [5].

Not only did the Translocation Program decrease the population through failed relocation, it called for the creation of a “no-otter zone” along the coastline of central California south of Point Conception [5]. In this zone, otters would be captured and moved back north of the zone’s boundary. This zone was put into place in order to appease commercial fishermen, who insisted that the sea otters were only competitors for their catch and were harmful towards their businesses. These fishermen and the USFWS, who agreed to it, did not take into account that without the otters there would ultimately be no catch, as the ecosystem would continue to fall apart. The otters that would swim into the zone would not be protected by the Endangered Species Act. Therefore, harm could still be legally done to them and any otters found within the zone could be captured and/or killed. The “no-otter zone” prevented the threatened southern sea otters from naturally expanding their territory and reoccupying historic habitat that is needed for their recovery [6].

The pro-otter group, The Otter Project and the Environmental Defense Center sued the USFWS in 2010 to force a decision on ending the no-otter zone. The USFWS ultimately ended

the no-otter zone in December of 2012, stating that enforcement of the zone jeopardized the continued survival of the species. The entire program, as it had only succeeded in further reducing the population, was deemed a failure and was finally terminated [5]. However, some fishing groups continue to be ignorant of the consequences of keystone species removal and still are adamant about reinstatement of the no-otter zone [13].

Additionally, the southern sea otter is highly subject to land-based pollution. Scientists have found that otters are swimming in contaminated waters, dying from a “deadly cocktail” [11] of chemicals, diseases, toxic compounds, and parasites. Even though use of DDT was banned in 1972, DDT levels in some otters have been found to be high enough to cause immune suppression and even outright death. Oil spills pose an extreme hazard to otters, with potentially irreparable results; a major oil spill along the central coast could eradicate the entire population [1]. Clearly, measures must be taken to improve the water quality to aid in this species’ recovery.

Little is known by the public about the predicament of the southern sea otter. Many people in the world have heard of and are adamant about, for example, the situation of the polar bear, but few are aware that otters used to roam off our coasts since nobody alive today has ever seen them in large numbers swimming off the coast of southern California. If an effort to bring back the southern sea otter is to be initiated, the first and most important step is to educate the public about this issue.

As an environmentally-conscious teen who wants to make a difference, last year I organized a group of friends and myself to create to teach an original lesson plan about the plight of the southern sea otter and its impact on the kelp forest ecosystem. We did this as a part of our Girl Scout Silver Award in conjunction with a science competition. We taught multiple

elementary school classes and reached over 230 students. Although we won the competition, I believe the most important outcome from that experience is that we helped make a difference about this issue.

Once the public is educated and passionate about the matter, they are more likely to want to fund an effort to reintroduce the sea otter to southern California. Public and private funding should be obtained to continue and increase the otter breeding program and rescue program to continue expansion of sea otters. Research organizations and the USFWS would closely monitor the progress of the natural otter repopulation and the subsequent restoration of the kelp forest ecosystem and conduct focused research studying sea otter health. Regarding the feasibility and cost, per email discussions with personnel from Monterey Bay Aquarium [7], the approach of repopulating the otters does seem to be feasible and the scientific knowledge currently exists.

It would be fantastic to see the return of the southern sea otter, reversing the damage done to this beautiful species over the past few centuries. Eventually, over generations, this keystone species will be reinserted into its rightful place in the lush kelp forests of southern California.

Works Cited

1. "Aquarium of the Pacific." *Aquarium of the Pacific*. N.p., n.d. Web. 26 May 2014.
<http://www.aquariumofpacific.org/exhibits/northern_pacific_gallery/otters/southern_sea_otter/>.
2. Cannon, John C. "The Legacy of the Fur Trade." *SEAOTTERS.COM*. N.p., 24 Mar. 2012. Web. 26 May 2014. <<http://seaotters.com/2012/03/24/the-legacy-of-the-fur-trade/>>.
3. Carswell, Lillian. "Southern Sea Otter Information." *Ventura Fish and Wildlife Office*. U.S. Fish and Wildlife Service, 22 Jan. 2014. Web. 26 May 2014.
<http://www.fws.gov/Ventura/species_information/so_sea_otter/index.html>.
4. "Enhydra Lutris." (*Sea Otter*). IUCN Red List, n.d. Web. 26 May 2014.
<<http://www.iucnredlist.org/details/7750/0>>.
5. "Endangered and Threatened Wildlife and Plants; Termination of the Southern Sea Otter Translocation Program; Final Rule." *US Fish and Wildlife Register*. Federal Register Volume 77, No 244 – 75265. 26 May 2014.
6. "Environmental Groups Welcome Decision to End Harmful "No-Otter" Zone." *Defenders of Wildlife*. N.p., n.d. Web. 26 May 2014. <<http://www.defenders.org/press-release/environmental-groups-welcome-decision-end-harmful-%25E2%2580%259Cno-otter%25E2%2580%259D-zone>>.
7. Johnson, Andrew. *Monterey Bay Aquarium*. E-mail interview. Jan-Feb 2013.
8. Joy, Robin. "How the Sea Otter Hunt Began." *Fort Ross State Historic Park Interpretation and Education*. Fort Ross State Park, n.d. Web. 24 May 2014.
<<http://www.fortrossstatepark.org/seaotter.htm>>.
9. "Otters Endangered Species Handbook." *Otters Endangered Species Handbook*. Animal Welfare Institute, n.d. Web. 26 May 2014. <http://www.endangeredspecieshandbook.org/trade_otters.php>.

10. "Saving Sea Otters." *Monterey Bay Aquarium*. N.p., n.d. Web. 23 May 2014.
<<http://www.montereybayaquarium.org/conservation/research/saving-sea-otters>>.
11. "Sea Otter Scoop." *Sea Otter Scoop*. The Otter Project, n.d. Web. 26 May 2014.
<<http://otterproject.wordpress.com/>>.
12. V., Photos By Robert, and Noaa. Schwemmer. "Southern California Giant Kelp Restoration Project." *Southern California Giant Kelp Restoration Project* (n.d.): n. pag. *California Coastkeeper Alliance*. Web. 25 May 2014. <<http://www.cacoastkeeper.org/document/final-kelp-project-report.pdf>>.
13. Weiss, Kenneth R. "U.S. Will Let Otters Roam along Southern California Coastline." *Los Angeles Times*. Los Angeles Times, 20 Dec. 2012. Web. 26 May 2014.
<<http://articles.latimes.com/2012/dec/20/local/la-me-otters-20121220>>.