



**UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES PROGRAM**

TELEPHONIC INTERVIEW Time (6:18)

SOUTHERN SEA OTTER (HOST – SARAH LEON WITH LILLIAN CARSWELL)

This transcript was produced from audio provided by FWS Endangered Species Program

P R O C E E D I N G S

(Music plays.)

MS. LEON: Hello there, this is Sarah Leon for the U.S. Fish and Wildlife Service and I'm on the phone today with our very own Southern Sea Otter expert, Lillian Carswell, whose formal title is Southern Sea Otter Recovery and Marine Conservation Program Coordinator. Hi, Lillian, how are you today?

MS. CARSWELL: Hi. Fine, thanks.

MS. LEON: Our listeners want to know Southern Sea Otter. What can you tell them?

MS. CARSWELL: Well, Sea Otters are members of weasel family, so they're essentially sea weasels. They're related to minks and also weasels which are terrestrial animals. But Sea Otters obviously return to the sea and is the smallest species of marine mammal that we have in North America.

They are only about the size of a Labrador retriever. And unlike other marine mammals they have no insulating fat layers. So, it's a real challenge for them to maintain warmth in a cold ocean. And so as a result they have an incredible fur coat. Fur is their primary organ for thermo-regulation and unfortunately that was the main factor that caused the near extinction of Sea Otters throughout the North Pacific was the fur trade.

But the fur is really quite incredible. It traps air and that air layer is what keeps the Sea Otter warm. They have extensive hair of any mammal up to 165,000 hairs per square centimeter and that's about 300 times the density of human hair.

In addition to this incredible fur they also have an extremely high metabolism and that also helps them stay warm. They burn calories at eight times the rate of a similarly sized species on land and about three times the rate of humans.

And so if you think about this, it's rather astonishing. They eat about a quarter of their body weight every day and for comparison if you had about 160 pounds human, that person would have to be eat 40 pounds of food per day.

MS. LEON: Okay. And this is a listed species. Can you tell us about some of the current threats or vulnerabilities of the Southern Sea Otter?

MS. CARSWELL: Sure. I'll start this answer by reiterating some of the past threats which are fairly different from the current threats.

Obviously, the main threat in the past was the fur trade of the 18th and 19th centuries which drove Sea Otters almost to extinction. There were only just a few left in the central coast of California and that's what became the source of our entire current population of Southern Sea Otters.

In the most recent past, steel nets were extremely lethal to Sea Otters, but have been banned throughout the current range of the Southern Sea Otter and through most of the areas that Sea Otters would ever go in California.

Another major threat for Sea Otters remains oil spills as we saw from the Exxon Valdez spill. Oil spills can kill large numbers of Sea Otters and there's really very little we can do about an oil spill once it has started to affect the population. Just the magnitude of the destruction that an oil spill can cause is really extreme.

And we see that they're dying from a number of causes. The causes we see there are trauma mostly due to shark bites but also mating trauma or boat strike trauma. And we see a really large percentage of infectious disease.

Our main question really is the extent to which disease is driving the patterns of mortality that are hindering recovery. And food limitation is almost certainly playing a role and exposure to contaminants is almost certainly playing a role. These factors are probably interacting synergistically with disease and we just need to disentangle all this causation and figure out which causes are approximate cause of death and which are the ultimate cause of death.

MS. LEON: All right. Lillian, so what actions are being taken now to protect these animals?

MS. CARSWELL: Sea Otters are protected under the Endangered Species Act and the Marine Animal Protection Act and they're also considered a fully protected mammal under state law. And so there's no direct take allowed. There's no hunting of Southern Sea Otters in California and any incidental take of Sea Otters requires special authorization.

Nevertheless, there are still factors that are killing Sea Otters and so a major action that is underway is research. And this is being spearheaded by USGS and it's in cooperation with California Department of Fish and Game, the Smithsonian Institution, the University of California at Santa Cruz and also Davis and the Monterey Bay Aquarium and several other partners. And the focus is to understand the relative importance of the factors associated with Sea Otter mortality and the pathways by which the most important of these factors are coming in contact with Sea Otters.

And so as I said, research is underway and we're hoping that by 2012 we'll have a clear sense of which mortality factors are the ones we need to address most strenuously to protect Southern Sea Otters.

MS. LEON: All right. And just going off of that, I've heard that Sea Otter growth rates have actually slowed in recent years. Can you explain why this is happening?

MS. CARSWELL: Well, you're absolutely right. The population growth has been very slow over the past several years and currently by code or even possible it's slightly negative.

We know that this population growth rate or lack of growth is due to high levels of mortality rather than a lack of reproduction because we're seeing normal rates of reproduction that are comparable to other Sea Otter populations that have much higher population growth rates. We don't have a clear explanation for why this is happening.

And as I mentioned earlier, there are many sources of mortality of Sea Otters. So, our main hope and purpose right now is to determine which of those factors are the important ones.

MS. LEON: All right. Well, thank you, Lillian. I appreciate the time you took to speak to us today about Southern Sea Otters. It was a real pleasure having you on.

MS. CARSWELL: It was a pleasure speaking. Thank you.

MS. LEON: This is Sarah Leon for the U.S. Fish and Wildlife Service. Thanks for listening.