

## A TALE OF TWO OTTERS

By Jodie Jackson

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**S**lide the river otter is still grieving the absence of his lifelong sidekick and best pal, Splash.

Columbia otter expert Glenn Chambers said Slide was “completely lost” after returning to his Columbia home from a veterinary appointment in St. Louis where his teeth were cleaned about three months ago. Splash never came home.

Splash had been treated for an abscessed tooth, but not before the infection attacked the 30-pound mammal’s heart.

“It was a traumatic experience at the vet, and his mouth was sore,” Chambers said, recalling Slide’s experience. “And he



Photo © Don Shrubshell

*Glenn Chambers feeds Slide, a captive otter, Friday in his backyard in Columbia. In years past, Chambers toured schools with Slide and littermate Splash. But Chambers said Slide has been grieving Splash’s death from an infection that spread from an abscessed tooth.*

got home and his buddy was gone. He was really traumatized.”

Splash and Slide were littermates, taken 10 years ago from the wild when they were just four days old. The creatures “imprinted” on Glenn and Jeannie Chambers. Glenn, an Emmy-award winning producer and wildlife cinematographer, is careful not to refer to his otters as pets, even though he slept with the otter pups for the first three months and Jeannie taught them to swim in the bathtub.

Since 1992, [Glenn and Jeannie] have traveled more than 800,000 miles and worn out five Chevy Suburbans to present “the otter conservation story” to a million school kids. For seven

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### INSIDE THIS ISSUE—THESE ARTICLES AND MORE....



Photo © David Tomecek

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Photo © Erin Drake, Peninsula College

## PRESIDENT'S MESSAGE

Welcome to the Spring-Summer 2009 issue of *The River Otter Journal*. Since the Fall-Winter issue went to press, much has transpired. Most importantly for the greater good of the health of the planet, a new administration has taken office and begun to reverse the policies of economic gain at the expense of the environment espoused by its predecessor.

Readers already know that climate change is one of my passions. Unfortunately, no matter how quickly the administration shifts federal environmental policy to reduce emissions of warming agents and mitigate the effects of climate change, enough damage is already done and tipping points already passed that we face a difficult row to hoe. As I write this at the end of April, the Wilkins Ice Shelf is probably within hours of disintegration—and by the time you read this it will be a fait accompli. Because it is ocean-based, that event, in and of itself, won't cause a sea level rise; however, the land-based glaciers sitting behind it will now be free to flow into the sea, inevitably resulting in higher sea levels. Just last week, the Alaskan coastal community of Newtok was abandoned by the Yup'ik Eskimos due to flooding from higher sea levels. (You may remember Paul Polechla's article on *Lessons of the Yup'ik Eskimo Mask* in the Fall 2003 issue ([www.otternet.com/ROA/Fall2003.pdf](http://www.otternet.com/ROA/Fall2003.pdf)). Yet, fiscal conservatives still resist using

economic recovery as an opportunity to implement environmentally sound practices in business; instead they want to use it as an excuse to bypass environmental oversight. Do they perhaps believe that climate change is just going to wait around for economic recovery to be complete? I don't think so.

Speaking of Paul Polechla, leading up to our annual Board meeting in December, Paul announced that he would be leaving the Board to pursue other personal interests. We regret Paul's departure and thank him for his years of service to the River Otter Alliance.

In this issue you will read a report by Kim Sager-Fradkin on the first phase of her research to determine the effect of removing a dam on the Elwha River on its population of river otters. This project was sponsored in part by a grant from the River Otter Alliance—your membership dollars at work. Thank you for your continued support.

Other articles you will read include *A Tale of Two Otters*, and Part II of both *Tracking Sea Otters off the California Coast* and the Toronto Zoo *Traveling with Otters* feature.

Thanks again to Diane for assembling and producing another fine issue of *The River Otter Journal*.

David

***The River Otter Journal*** is a semi-annual publication of The River Otter Alliance.  
Look for the next edition of ***The River Otter Journal*** in Fall-Winter 2009!

### River Otter Alliance Mission

The River Otter Alliance promotes the survival of the North American River Otter (*Lontra canadensis*) through education, research and habitat protection. We support current research and reintroduction programs, monitor abundance and distribution in the United States and educate the general public through our newsletter, *The River Otter Journal*, on the need to restore and sustain river otter populations.

Our goal is to be a center of communications among wildlife biologists, environmental organizations, fishermen and all interested parties on a national and international basis, in order to ensure the healthy future of the North American River Otter. The River Otter Alliance is a tax-exempt, non-profit organization. All efforts to our organization are on a voluntary basis by those who share a common concern for the river otter and its habitat. We welcome any interested persons to volunteer their time at any level of the organization.

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*The River Otter Journal* has been printed on recycled paper.

## A TALE OF TWO OTTERS (CONT'D)

(Continued from page 1)

of those years, Splash and Slide were the highlight of those weekly programs, and they were among a menagerie of 18 otters in the Chambers household over the years. At one point, the National Geographic website featured a live, 24-hour video link for viewing Chambers' otters.

Chambers produced a National Geographic special, "Otter Chaos", in 2000.

The otter experience started with Paddlefoot in 1992. It will end with Slide, who is retired and now is "just a household otter," Chambers said.

"They anchor you to the house," he said, detailing the amount of care and special accommodations otters in captivity need. "They're a high-energy animal."

Other critters that Chambers has "imprinted" include foxes, coyotes and giant Canada geese, all for the purpose of filming them for documentaries, including "Back to the Wild", which he produced for the Missouri Department of Conservation. That documentary chronicled the state's effort to restore white-tailed deer,

wild turkeys, Canada geese, paddlefish, sturgeon and river otters to Missouri. The critically acclaimed film won four Emmy awards.

Chambers once tried to imprint a badger, with limited success. "They're so nasty they don't even like themselves," he said.

Otters can be testy, too. Chambers has the scars to prove it. But he also knows the fiercely loyal, devoted aspect of an otter's heart. Slide's grief and depression seem to prove it.

"He's just now getting where I can pet him again," Chambers said, recalling how Slide didn't eat for a week after Splash's death. "They don't get over it soon."

As Chambers talks about how Slide could live another one to five years—or longer—it's apparent he is still grieving, too.

"It's devastating to me," Chambers said. "It's like losing the best pet or dog you ever had. It's really like losing a family member."

## Otter Updates By Diane Tomecek



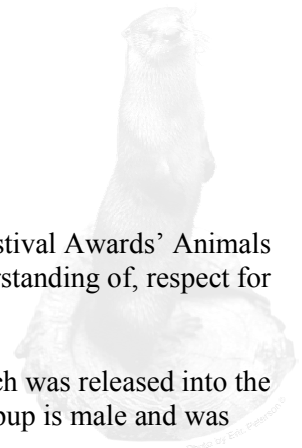
Judy Berg's, *The Otter Spirit*, was named Runner-Up in the 2009 Green Book Festival Awards' Animals Category. The Green Book Festival honors books that contribute to greater understanding of, respect for and positive action on the changing worldwide environment.



One of the stranded sea otters reared by a Monterey Bay Aquarium sea otter, which was released into the wild two years ago, has had a pup of her own, according to Aquarium staff. The pup is male and was born near Moss Landing back in July 2008.



A sea otter sighting was confirmed off the Oregon coast in February of this year. Morris Grover, coordinator of the *Whale Watching Spoken Here* program based out of Depoe Bay, was the lucky individual to view the sea otter, a marine mammal most times only spotted in central California and Alaska. Photographs of the otter were sent to Jim Estes, a sea otter expert, who confirmed that the mammal was in fact *Enhydra lutris*. Confirmed sightings of sea otters off the Oregon coast have not occurred in 103 years!



## ESTABLISHING BASELINE INFORMATION ON RIVER OTTER USE OF THE LOWER ELWHA RIVER, OLYMPIC PENINSULA, WASHINGTON

Report to The River Otter Alliance

By Kimberly Sager-Fradkin

### *Background and Purpose*

The Elwha River comprises the largest watershed on Washington's Olympic Peninsula, encompassing 803 km<sup>2</sup> and flowing northwest for over 83 kilometers from its headwaters in the Olympic Mountains to its mouth at the Strait of Juan De Fuca. The Elwha River historically supported all seven species of native anadromous salmonids found in Washington, including pink, chum, coho, sockeye and Chinook salmon, bull trout and steelhead. However, two dams have restricted anadromous fish to the lower eight kilometers of the river for over 90 years. In response to the Elwha River Fisheries Ecosystem and Restoration Act of 1992, these dams are slated for removal by 2012. This dam removal project will result in restoration of native fish stocks to the Elwha River, with the potential for cascading effects on piscivorous wildlife occurring in the watershed.

River otters have been documented to occur in the Elwha River, between and above both dams. However, very little is known about their distribution patterns, population size or status, or movement patterns. Specifically, it is not known whether otters move between above- and below-dam habitats to take advantage of spawning salmon below the dams, or whether otters in the lower river move into the Strait of Juan de Fuca during any time of the year. Anecdotal evidence suggests that otters prey on spawning salmonids in the lower river, but the extent of this use is unknown. We



**Photo © Erin Drake, Peninsula College**

### **Project Cooperators:**

- Kurt Jenkins, Research Wildlife Biologist, USGS-BRD, Olympic Field Station
- Patti Happe, Wildlife Biologist, Olympic National Park

hypothesize that dam removal and subsequent salmon restoration will cause a substantial increase in the number of fish using the Elwha, with potentially profound effects on river otter distribution, population size and movement patterns.

To begin documenting changes brought about by dam removal and salmon restoration, we gathered baseline data on otter use of the Elwha River. Previously, the Tribe collaborated with the Olympic Field Station of the U.S. Geological Survey (USGS) and Olympic National Park (ONP) to search for otter latrines and establish hair collection stations along the entirety of the Elwha River. Data from this preliminary work suggested that otters are most abundant within the lower eight kilometers of the river, particularly near the mouth of the river at the interface between freshwater and saltwater. Therefore, during 2008, we used funds provided by the River Otter

Alliance to purchase additional hair snares and scent lures; this equipment was used to bolster our efforts in the lower river. We continued our important collaboration with the USGS and ONP during 2008.

### *Objectives*

The objectives of our project were to find and monitor otter latrines along the Elwha River, to maintain hair collection stations at those latrines, and to collect hair and scat for genetic and stable isotope analysis.

*(Continued on page 5)*

Photo © Erin Drake, Peninsula College

(Continued from page 4)

Specifically, we looked at the distribution and seasonality of otter latrines, tested the efficacy of hair-grabbing devices at otter latrines and collected hair and scat in order to determine whether a genetics lab could successfully amplify DNA from otter hair and/or scat. Additionally, we were interested in learning whether we could conduct stable isotope analysis from otter hair and/or scat, thereby giving us information on the relative contribution of marine derived nutrients (MDN's), such as carbon and nitrogen, in otter diets.



### Methodology

To collect hair from individual otters, we employed a hair-snagging technique designed by DePue and Ben-David (2007). This technique used a loop of cable and a paper clip to collect hair from otters without causing them injury. We snipped microstrands of the cable wire and then pulled those strands perpendicular from the main cable, with the strands functioning to grab hair. We then used a paperclip to make a loop out of the cable. When an otter ran through the upright loop, the paperclip slid along the cable causing it to tighten around the otter's body. The microstrands of wire then functioned to grab hair and the paperclip opened to free the otter (Figure 1).

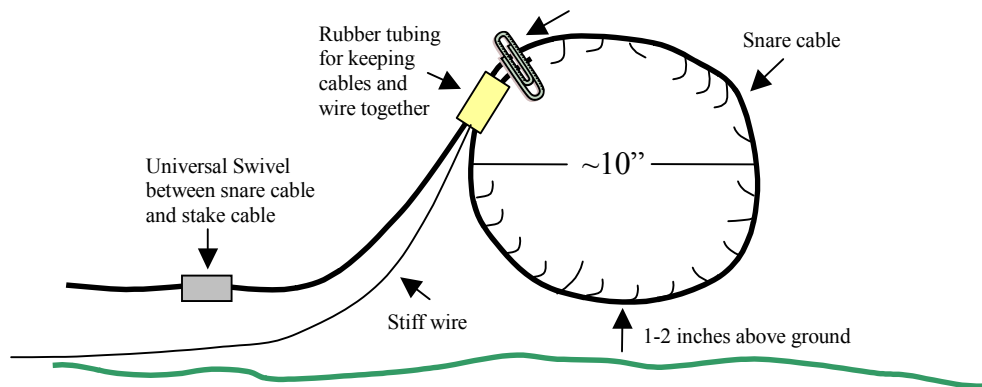


Figure 1. Schematic of an otter hair snare.

We searched the Elwha River (particularly the lower eight kilometers of the river) for otter latrines and established 2-6 hair-snags at each otter latrine, depending on latrine size. We checked snares at known latrine sites every week. During each site check, we collected hair and scat, re-set snares that had been triggered, and re-scented each snare with a commercial otter scent lure. Hair samples were stored in paper envelopes, each with a unique numeric identifier. Scat samples collected for DNA analysis were stored in glass vials containing ethanol while scat samples collected for stable isotope analysis were stored in clean glass vials.

### Results

Field crews from the USGS, ONP, and Lower Elwha Klallam Tribe monitored 63 latrines along the Elwha River during 2008, many of them on the Lower Elwha Klallam Tribe's reservation near the mouth of the Elwha River (Figure 2-see page 10).

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# TRAVELING

## Travelers discover “new species” in Minnesota

A completely non-scientific article by David Tomecek

Editor’s note: Have a bit of fun and put on your sense of humor cap for this article!



Photo © [www.roadsideamerica.com](http://www.roadsideamerica.com)

Fergus Falls, MN—For decades, the residents of this town of approximately 60,000 have been witness to a singularly spectacular otter species, but have kept the knowledge to themselves out of fears of extinction of this special creature. However, travelers to the area have told fantastical stories of the “big otter” of these parts, only to have their tales pushed off as too incredible to believe. Now, researchers have finally cracked the silence and protection of Fergus Falls to reveal the Big Otter, scientifically known as *Lontra canadensis humongloidius*.

A small study of the Big Otter conducted by the research team found that its range is limited to the areas surrounding Fergus Falls’ Adams Park. Its demeanor is typical of its North American River Otter cousins—playful, social and interactive. Researchers were unable to determine its diet, as the sole specimen observed chose to make itself available for photographs instead of searching for food. Other limited data was gathered by the team, but is still under review.

The research team found that the Big Otter was also a pervasive part of the town, which is the seat of Otter Tail County. The local high school uses the otter as its mascot, and many of shops use otter variants in their names. There’s even local cuisine named for the otter, including the infamous “otter dog”—a hot dog with chili and cheese inside the casing.

Researchers are asking for additional information from the public to augment their own observations. If you happen to be in western Minnesota, traveling along I-94 North, please stop into Fergus Falls and try to spot the Big Otter. To aid in visual confirmation that you are, in fact, observing *Lontra canadensis humongloidius*, the research team has provided photographs.



Photo © 2007 [www.fergusphotos.com](http://www.fergusphotos.com)

## THE TORONTO ZOO—PART II

The Toronto Zoo is home to North American River Otters or Canadian Otters, and African Spotted-necked Otters. Readers will remember that Part I in the Fall-Winter edition of *The Journal* we featured Canadian Otters; Part II in this edition highlights the Zoo's African Spotted-necked Otters.

Tim McCaskie introduces us to the African Spotted-necked otters, Fred and Ginger, at The Toronto Zoo.

**Q:** Can you share some details about Fred and Ginger?

**A:** Fred was obtained from the wild in Tanzania and is pretty dominant over Ginger, the female. Ginger is quite shy and secretive.

**Q:** The Canadian otters are fed smelt, herring and various fruits and vegetables. Do the diets of the African Spotted-necked otters differ tremendously?

**A:** They get a lot of the same foods—vegetables, apples and pears with some crab and other meats. They are fed as often as possible as they become more interactive during the feeding time.



Photo © David Tomecek

By Diane Tomecek



Photo © David Tomecek

**Q:** Ginger seems a bit timid—is there an issue during feeding time between the two?

**A:** Yes, Fred is actually moved into a target training area while Ginger is fed, as he can aggressively consume Ginger's food for himself. While Ginger is fed, Fred is given target training (see above photograph); he is then released back into the enclosure once Ginger has finished her meal.

### Special Points of Interest

- There is an older African spotted-necked otter, Matthew, not on display who came to the Zoo in 1991.
- The Toronto Zoo is a supporting member of the Bushmeat Crisis Task Force ([www.bushmeat.org](http://www.bushmeat.org)).
- The Toronto Zoo adheres to SSPs (Species Survival Plans) for many species including the Canadian otters featured in the last edition of the journal.

Editor's Note: the staff of The Toronto Zoo were most accommodating during the tour and The River Otter Alliance extends its sincere appreciation. Extra special thanks to our zoo escort, Corina Chevalier; and to Tim McCaskie, Maria Franke and Gabriela Mastromonaco for granting interviews and to Katie Gray for facilitating the tour.

# A DAY IN THE LIFE OF A MARINE BIOLOGIST: TRACKING SEA OTTERS OFF THE CALIFORNIA COAST

## PART II

By Tania M. Larson, The USGS Office of Communications

Editor's Note: You'll remember from the last issue, we are following researchers Michelle Staedler and Tim Tinker as they research a specific set of otters for information on how those otters eat and raise and train their young pups.

Sea otters are listed as threatened under the Endangered Species Act, and the goal of the science is recovery and conservation of the species.

Number 6-068 pops back to the surface with a cancer crab. Michelle notes the dive time, and begins counting the handling time for this particular fare.

There is, of course, a reason for this stopwatch obsession. Recording the times of the activities will help the scientists to align the data from their observations with data from an instrument that researchers implanted in the otter's abdomen at the beginning of the study.

This time-depth recorder provides a detailed look into the life of the otter: when she's eating, resting, diving, how deep she's diving and her internal body temperature. With these implanted devices, the researchers are able to follow an otter's every move for 1 to 2 years. A second device, the VHF transmitter, allows scientists to locate the animals by radio telemetry for 3 to 5 years.

From these recorders, the team will get data on thousands of foraging dives. And with all the observational and electronic data lined up according to Michelle's carefully noted times, in the future, scientists might be able to determine what the otters are eating simply by the electronic data on where, how long and how deep they are diving. By comparing this information with

survival notes, including necropsy and pathology data, the researchers hope to track not only food patterns, but also sources of contamination in their food supply.

Tim points out that the things we do near the coast impact the otters. "Pesticides, washing your car, fertilizing your lawn—these things affect the sea otter and the habitat directly," says Tim. The physical elements of the landscape that once filtered pathogens out of the water have largely disappeared, and sea otters are facing ever higher levels of contamination in their environment.

"We have changed the water-flow patterns with runoff, storm sewers, agriculture, loss of wetlands," says Tim, "nature's sewer treatment—we've changed that drastically. Now water flows over the ground directly to the ocean."

Sea otters are turning up with diseases normally found in cats and opossums. Researchers suspect the sea otters are picking up these pathogens not from each other, but by foraging in areas with agricultural or urban runoff. But scientists need more information.

This is a task that is beyond just marine biologists. To see the big picture of what the sea otters are facing, the team needs ecologists, pathologists, toxicologists, epidemiologists, and others. Tim says there are 30 scientific professions involved in the sea otter project. And one of the things he appreciates about the field is that it's not about competition, but collaboration. They have spent 10 years building an alliance, and Tim says they now have a loose, ever growing network of partners.

*(Continued on page 9)*



Photo © Tania Larson, USGS

### Interesting Note:

To help understand what behaviors and pup-rearing techniques are the most successful, Michelle Staedler, of the Monterey Bay Aquarium, carefully times and records sea otter behavior in her logbook. She notes how long the mother otters dive, how long they handle their food and how long they stay at the surface, as well as the types and sizes of the foods they eat.



*(Continued from page 8)*

“There is an atmosphere of trust,” Tim says. “We need to recognize how important that is and make sure to maintain it, to train new people that this is not a competitive endeavor. We share data and results.” Part of the reason for this trust and teamwork is the concern for the animal at the center of the project. The sea otter is a keystone species. Without sea otters, there is a dramatic shift in the ecosystem. Without sea otters, sea urchins thrive, and kelp forests wither.

But the sea otter is not only a keystone species; it is also a sentinel species. “It is the canary in the coal mine,” says Tim. That’s why there’s so much collaboration among so many specialists. “We’re trying to take more than a single species approach to our research,” he says. “The things that threaten otters threaten the whole ecosystem.”

“Human-induced impacts on kelp forests, fisheries, contaminants that come from the land—there are hundreds of substances being poured into the oceans,” says Tim. And it’s not just water-borne contaminants that pose a problem. “There are dozens of interrelated factors that threaten sea otters and other marine species,” says Tim.

The good news is that despite a higher rate of mortality in recent years, the overall trend in the number of California sea otters is a growing population. The goal is to keep it that way and to eventually be able to delist the species.

Just as the sun is beginning to break through the fog and the cloud cover, it is time for Michelle and Tim to head back, but the day holds one more outdoor adventure for me.

Back on land, I meet up with Alisha Kage, a USGS wildlife biologist and sea otter researcher, for a few hours of tracking the sea otters from shore. Alisha drives along the sunny California coastline, and periodically we hop out and hike along the edge of the cliffs to look out and locate tagged otters using a VHF receiver and a telescope. We scan the surface for sea otters, and then she zooms in on them with the telescope to identify their tags.

She’s happy that these days she doesn’t have to do it all by hand. She simply enters the data into a hand-held computer, and it records the GPS coordinates. Then she is able to download the information directly to her desktop computer. This information helps the research team keep track not only of the otters with working implanted transmitters, but those with transmitters that have stopped working and sea otters that have been tagged for other studies.

Like Michelle, Alisha often spends long days in the field. “With driving, I do 12-hour field days,” says Alisha, “but I just love being in the field so much it doesn’t bother me.”



**Photo © Tania Larson, USGS**

A sea otter holds part of its meal on its abdomen as it eats in Monterey Bay, California. Sea otters often use their abdomens as a sort of dinner tray, using them to hold a collection of food as they eat. Scientists are hoping that by studying the behavior and diets of individual otters, they will learn more about the threatened species and help them to better support efforts to help the species to continue to recover from near extinction.

Walking along the sunny California coast, I have to agree that it’s hard to complain. But Alisha adds that the perks don’t end here. Sometimes, they get to travel to study sea otters in other locations and compare notes with other scientists.

“When you’re in the field somewhere like Alaska, you just feel so lucky to do what you do,” she says.

And like Tim, Alisha comments on the network of other scientists from the USGS, the University of California at Santa Cruz and the Monterey Bay Aquarium who are all working together for the sake of the species. “I always wanted to work on endangered species,” she says, “to make a difference. And I feel like there is a whole team of people working to save this species. It’s so interesting, and I feel like I can make a difference.”

“Did that sound sappy?” she asks. “I feel like that sounded kind of sappy. I really meant it, though.”

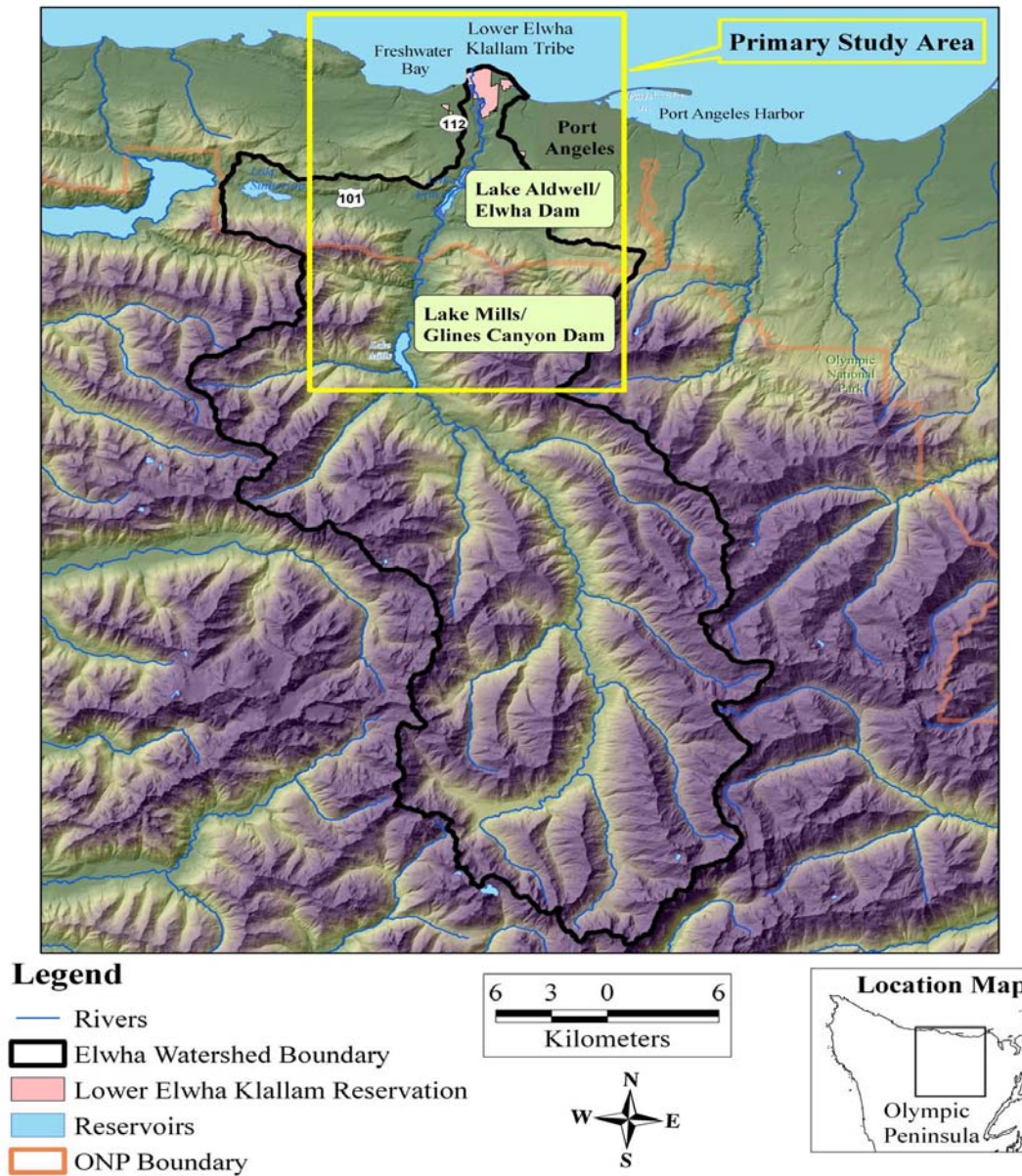
I’ve only been at it for one day, but I suspect that that is what draws most people to this field: the desire to not just say I can make a difference, but the opportunity to really mean it.

For more information on sea otter studies at the USGS, visit the Sea Otter Studies Web site at [www.werc.usgs.gov/otters](http://www.werc.usgs.gov/otters).

# RIVER OTTER USE OF THE LOWER ELWHA RIVER - CONTINUED

By Kimberly Sager-Fradkin

Figure 2. Study area along the Elwha River, Olympic Peninsula, Washington.



## RIVER OTTER USE OF THE LOWER ELWHA RIVER - CONTINUED

### By Kimberly Sager-Fradkin

*(Continued from page 5)*

We collected 86 hair samples and 243 scat samples (Table 1). We found that otters exhibited seasonal shifts in their use of otter latrines, probably due to dynamic water levels and changing behaviors related to breeding and foraging activities.

#### *Implications and future plans*

Data collected during this study contribute to our knowledge about river otters along the Elwha River in anticipation of dam removal and subsequent salmon restoration. At present, we are discussing the best tactic for sending a selection of hair and scat samples to genetic and stable isotopes labs for analysis.

Additionally, as with all good research projects, this project has provided just as many questions as answers (i.e. Do individual otters move between above- and below-dam habitats? Do individual otters spend time in the Strait of Juan de Fuca, and at what times of the year? How frequently are latrine sites used by the same otter?). Given these important questions, we have submitted a larger grant proposal which, if funded, would allow us to capture and radio-tag otters below and between the Elwha dams.

Purpose of sample	Number of scat samples collected during 2008
DNA analysis	154
Marine Deprived Nutrients (MDN) analysis	89

Table 1. Otter scat samples collected at 63 latrine sites along the Elwha River on Washington's Olympic Peninsula.

#### *Literature Cited*

- DePue, J.E. and M. Ben-David. 2007. Hair sampling techniques for river otters.
- Journal of Wildlife Management 71:671-674.

#### Special Note

Kim Sager-Fradkin's report and research was funded in part by The River Otter Alliance. To any interested individuals, The River Otter Alliance will fund grants up to \$1,000 each in the areas of otter-related research, education, reintroduction, rehabilitation, and habitat protection. Proposals should state the purpose of the project, objectives, tactics, scientific methodology, follow up, and how the results will be utilized to benefit otters. The grant is for a period of one year and will require a written report of the findings at the end of that period, with the possibility of publishing the report or a summary of the results in *The River Otter Journal*.

If interested and for additional information, please contact:

The River Otter Alliance  
6733 Locust Court  
Centennial, CO 80112  
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# The River Otter Alliance

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