

Wild at Heart

YEAR END NEWSLETTER 2019

Dear Friends,

It's been a busy year for ROEP, as we initiated a new research project to help us improve our otter abundance counts and inform toxic spill response and resource management decisions; disseminated CDFW's brand new California river otter range map (thank you, Otter Spotters!), and expanded our Hands On High School program to more than double our reach over last year. We have lots to be joyous about.

During this cheerful season, I want to relate a much more personal story, one that brought great satisfaction to me and the ROEP crew.

12-year-old Panama Landes wrote me saying she wanted to donate birthday money to support our work, but was torn about whether to send money or order one of our Adopt an Otter gift packages. Her concern was how much we might have to pay for the gifts, whether they were sustainably made, and how we could raise money by gift packages. I responded with a letter answering those questions and explaining that it's important for people to have fun when they support their favorite causes, and how small items can both remind us of our passions and help share them with friends. I finished up with a little about the realities of financing a nonprofit. Pretty soon, Panama responded:



An otter mom and her pup pause on a rocky shoreline. Photo by Talia Rose



Panama tossed a couple of minnows to the otters in their den. One came out and she snapped this photo of the otter snapping up the minnow!
Photo by Panama Landes

Thank you so much for this detailed answer! I will definitely be supporting your organization. I wish I could come and volunteer at your non-profit but I live in Tennessee :\
I was very surprised and happy that most of your gifts are either donated or at a low cost to you. I also think it is really cool that you hand painted the original cards. Your story about the little pika was so cool and now makes me want to help them too :)

I wanted to tell a cool experience that me and my dad recently had with two otters; a few weeks ago we were out in our kayak in a relatively small lake with a branching off river, when I thought I saw a little pair of eyes on the opposite shore. I told my dad I thought I saw otters, and with otters being his favorite/spirit animal he was very excited! I hurried him to paddle over as we reeled in our fishing lines. When we got close to the shore we saw two otters looking at us! We followed them around for about three minutes, knowing where they were under water because of their air bubbles. We frequently made eye contact as they would stop and study us, they were young otters, presumably siblings. They made their way into their den, which was a group of huge rocks making a dark but partially open shelter with a big crack where the otters could jump into the water. One otter was noticeable more shy and stayed in the dark corner as the other one cautiously poked his head out looking at us.

We threw them a couple of our live minnows and urged them to come out and say "Hi", which the brave one did =) Later as we left we saw one of them walking along the shore and waved goodbye. I think that me and my dad both made a connection with the otters! It was a really special moment I don't think I'll ever forget.

I included some pictures that I took!

Panama Landes

We were all very touched by Panama's writing, observations, and caring for nature, and her curiosity about how we support ourselves in this world of conservation nonprofits. It's hopeful to see young people from everywhere asking questions and becoming deeply involved in the most important issue of their future: the health of the planet. Observing the young forging ahead despite enormous barriers renews our sense of personal responsibility. We are dedicated to continuing and improving upon our conservation successes, and to bringing every bit of education, experience, wisdom and determination to bear and support young people like Panama.

Wishing you the very best for renewal of hope, strength, and continued conservation success in 2020.

Megan Isadore

Megan Isadore,
Co-founder and Executive Director



It was a very good year for... OUTREACH AND EDUCATION

Right: 8 sites, careful sampling for DNA analysis, 12 volunteers...with Brenden Collett-Grether (seated, top right) coordinating the interns and keeping us on track.

Below left: We loved joining the West Marin School for their annual Science Fair! Younger students colored masks and hats, and older students learned how we study otter scat (poop) to discover what they eat!



Our outreach and education programs, including presentations, environmental information events and school programs reached more than 19,000 people all over the Bay Area. We taught, we showed, we colored with the little ones, and we increased our friends and supporters.

We held 4 volunteer training courses for 15 people, including those who learned new field techniques for our new project, Pixels v. Nucleotides.

did you
KNOW

We were featured in **Scholastic MATH**, a national magazine that connects current events to the math that students are learning in grades 6 through 9.

VIDEO
Here's how we track otter sightings.

River Otter REBOUND

Scientists and volunteers keep watch as the animals return to U.S. waterways

Fifteen years ago, ecologist Megan Isadore was working in a creek just north of San Francisco. She noticed a family of sleek river otters paddling around and gobbling up crayfish. "It was exciting, because they're attractive animals," says Isadore. But there was a problem: According to maps published by state wildlife officials, these otters didn't exist.

River otters once thrived in waterways across North America. But fur trappers started hunting otters in huge numbers in the 1700s. Pollution in rivers and creeks also made it harder for the animals to survive. By the 1980s, river otters had nearly vanished from U.S. waterways.

But Isadore kept seeing otters in areas they'd previously disappeared from. Other scientists told her that they'd spotted the animals too. Isadore had a hunch that river otters were making a comeback, but there was no scientific evidence. In 2012, she co-founded the River Otter Ecology Project to change that.

Scientists with the organization set up cameras to monitor and count river otters. Volunteers "Otter Spotters" also report sightings of the animals. Otter Spotters use an online form to note where and when they see river otters. The animals have been spotted in a creek behind a middle school and on shore near the Golden Gate Bridge. Isadore thinks that pollution cleanup and hunting restrictions have allowed the otters to move back into the San Francisco Bay Area. "Our theory is that they returned slowly and are still recovering," she says.

Though the recovery is encouraging, it's unclear what the future holds for river otters. Scientists don't know, for example, how climate change might affect them. That's why it's important to keep paying attention, adds Isadore. "One of the fun things about studying river otters is that there's still a lot to find out," she says.

—Mara Grantham

RIVER OTTER
WEIGHT: 20-30 pounds
LENGTH: 36-42 inches
HABITAT: Rivers, lakes, streams, and estuaries

SEA OTTER
WEIGHT: 45-60 pounds
LENGTH: 36-54 inches
HABITAT: Ocean near the coast

14 MARCH 11, 2019

USING PERCENT CHANGE

Percent change is the percent by which a number increases or decreases from its original amount. Sometimes you will need to find the new amount when given the percent increase or decrease of a starting amount.

PERCENT INCREASE ↑

EXAMPLE: Megan Isadore's team counted 33 otters at one of the wetland sites they monitored with a camera in 2012. The next year, they counted 52% more otters. How many otters were there in 2013?

Step 1 Convert the percent into a decimal.
 $52\% = 0.52$

Step 2 Since the number is increasing, add the decimal to 1 whole (or 100%).
 $1 + 0.52 = 1.52$

Step 3 Multiply this decimal by the original amount. Round to the nearest whole (because you can't have a fraction of an otter!).
 $33 \times 1.52 = 50.16 \approx 50$

→ So there were 50 otters in 2013.

PERCENT DECREASE ↓

EXAMPLE: In 2013, 18 of the otters that the team spotted were pups or juveniles. The previous year, there had been 22% fewer young otters. How many pups and juveniles were there in 2012?

Step 1 Convert the percent into a decimal.
 $22\% = 0.22$

Step 2 Since the number is decreasing, subtract the decimal from 1 whole (or 100%).
 $1 - 0.22 = 0.78$

Step 3 Multiply this decimal by the original amount and round to the nearest whole.
 $18 \times 0.78 = 14.04 \approx 14$

→ So there were 14 young otters in 2012.

TOU-TURN Use percent change to learn more about river otter sightings reported by Otter Spotter volunteers. Round all answers to the nearest whole number.

1 Use the column titled "Percent Change From Previous Year" to calculate the missing numbers in the chart to the right.

2 What trend do you see in the number of Otter Spotter reports over time?

3 A. Which year in the chart had the greatest number of reported otter sightings?

3B. How did the number of reports that year compare with the number in 2012? Increased or decreased? Explain why or why not.

4 If the number of Otter Spotter reports in 2019 increases by 21% compared with the number in 2012, how many sightings will there be?

5 Could you use the chart to prove that the total population of river otters has

YEAR	OTTER SPOTTER REPORTS	PERCENT CHANGE FROM PREVIOUS YEAR
2012	173	n/a
2013	110	-31.2%
2014	110	+58.6%
2015	366	-0.2%
2016	366	+13.9%

SOURCE: River Otter Ecology Project

SCHOLASTIC.COM/MATH 15

It was a very good year for... **ACCOMPLISHMENTS**

We completed a prey study that provides a baseline for the river otters who inhabit the Point Reyes National Seashore and the Peyton Slough Wetlands Complex in Martinez. [Take a look](#) at what we found.

We analyzed monitoring data from 2012 through 2016, producing a population trends model to estimate population growth rates and monitor changes over time. Paper out next year!



Our Informatics Department, Terence Carroll on our first outing with the underwater drone granted to us by National Geographic's SEE Initiative.

You can see all our research results and technical reports [right here](#) on our website. Our most recent report on what river otters are eating and when is eye-opening!



A large group of seven otters, most likely a social group of males.
Photo by Fascination Wildlife

We monitored 225km shore, lake, bay and river in Marin County using noninvasive camera trapping and scat collection methods for the 8th consecutive year. Data is being used by agencies and resource managers to support best practices and plan for restorations, spills and wildlife management.

did you
know

Our Most Fun Photo of 2019: Otter Spotter Bill Barret captured a rare confrontation between a bald eagle and a river otter.



It was a very good year for... **RESEARCH PARTNERSHIPS**

We received initial results from our partnership with Wild Otter Acoustics. Marin coastal otters are more vocal and exhibit more kinds of vocalizations than do East Coast otters. More to come!

We Continued our partnership with The Marine Mammal Center for bacterial studies relating to both otter and human health. We continued to work with the California Department of Fish & Wildlife's lab to discover more about otter health issues from deceased otters found by our Otter Spotters.



Otter fur can look very gray, even black, when wet... but fluffy and brown when they're dry. Above left, photo by Peter Davis. Above right, photo by Carlos Porrata



Samples prepared for overnight mail to University of Wyoming, where the analysis process begins.

did you
know

You helped us reach a grand total of 3,332 Otter Spotter reports!

It was a very good year for... **GROWTH AND OPPORTUNITY**



A big part of otters' charm is their apparent joy in life. This otter gallops along the shoreline seeming delighted with everything. Photo by Karen James



Interns Dahlia Siegel-Zigmund and Erin Barto crossed and recrossed Marin all summer doing fieldwork for our project. We are delighted with our high school and college interns.



Lagunitas Brewing Company is always ready to support us in ways small and large. Our small and intimate fundraiser in their Brewers Loft was great fun!

We are looking for two or three motivated, detail-oriented and responsible interns to join us during June through October (some leeway may be acceptable for college interns). Intern work includes field surveys, camera trapping, sample collection, and outreach events. If interested, please [apply on our website](#).

did you
know

***Join us* by supporting our work to protect otters and our shared watersheds.**

The River Otter Ecology Project
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River Otter Ecology Project is a tiny nonprofit organization, with only one full time and one part-time paid employee. Everyone else is a highly-trained, dedicated and generous volunteer. We are indebted beyond reason to our volunteers, we value and appreciate them. And we celebrate them!

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