SCWIBLES

Santa Cruz-Watsonville Inquiry-Based Learning in Environmental Sciences

NSF GK-12

...PRESENTS: CHANDRA GOETSCH

WHS SCIENTIST IN RESIDENCE, 2014-2015

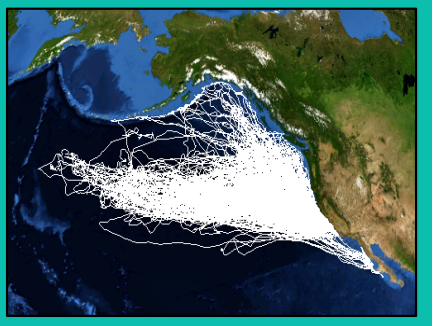
I work with northern elephant seals at Año Nuevo State Reserve for my graduate work. With the help of other grad students, I attach satellite tags and time-depth recorders to seals to monitor their behavior while they are at sea.

Some stuff about me:

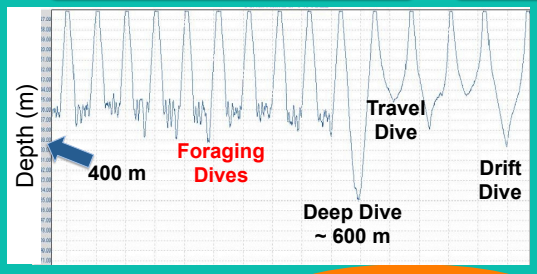
- **Age:** 35
- **Where I grew up:** Corpus Christi, Texas and Athens, Ohio
- **High School:** Alexander High School
- **Favorite subjects in high school:** English, German, Biology
- **College (undergraduate):** State University of New York at Buffalo and University of Pittsburgh
- **Some of my favorite things:** Reading, knitting, dancing, yoga, traveling
- **Something weird about me:** I really like learning about ancient cultures and languages. I have a minor in Ancient Mediterranean Archaeology and have studied ancient Greek, Roman, and Mayan cultures
- **What I think or do when I get frustrated:** I try to take a break and take some deep breaths. Often, I will drink a cup of herbal tea and make a list of ways I can solve the problem. Sometimes, I will talk to friends or family to get advice and support.

Northern elephant seal with a GPS satellite tag and time-depth recorder.

My advisor and I in the field collecting data and attaching tags to a seal.



Elephant seals travel extreme distances across the North Pacific Ocean!



Elephant seals are amazing divers!
They dive continuously while they are at sea. Females can dive over a mile deep in the ocean and can hold their breath for almost 2 hours!

What I study

How do marine predators respond to changes in their environment? How will climate change affect where and how marine predators forage?

As a behavioral ecologist, I am very interested in how an animal's behavior changes in response to changes in its environment. I am particularly interested in foraging behavior or how an animal obtains its food, since what an animal eats provides it energy for survival, growth, and reproduction. If an animal has to change what it eats or how it gets its food as the environment changes, then it may have to use more energy and work harder to survive. This can impact not only individuals, but entire populations.

In order to understand how foraging behavior changes, I track northern elephant seals using biologging technology. With these tags, we can see where an animal goes and what it does as it dives in the ocean! I also study the diet of these animals using biochemical techniques that let us see what an animal is eating by looking at the chemical make-up of its tissues.

Supported by NSF GK-12 DGE-0947

http://scwibles.ucsc.edu