

The Coastal Waters Consortium Presents:

Scientist Spotlight



Jennifer Pincin

What is your educational background?

I received my B.S. degree in Marine Biology from Auburn University in 2007, and then my M.S. degree in Fisheries Biology from the University of Maryland in 2011. I also spent a year in between at Marine Biological Laboratories in Woods Hole, MA where I learned the organic chemistry techniques I use for our project with the Coastal Waters Consortium.

What inspired you to become a scientist?

In high school I had some excellent science courses, including zoology, AP Biology, and AP Chemistry. All of these made me more and more excited about science. But what made me want to be a marine biologist was a Discovery Channel documentary about cephalopods. I thought the animals were amazing and thought it would be amazing to work with animals like that. So behavioral ecology first made me want to be a scientist, but as I continued my education I found that I really enjoyed fisheries research and chemistry. So my research now combines the two disciplines.

Can you describe what you enjoy the most about conducting scientific research?

I like seeing the process from beginning to end. We start with field work where I get to see the big picture of the ecosystem we are studying. Then we bring samples to lab, which is one of my favorite parts. I like both the standardization of the procedures and the problem solving when something goes wrong. Standardization ensures that I am treating every sample the same and delivering the most reliable data possible. But unexpected issues inevitably come up, and then I can use my knowledge of the samples, the project as a whole, and especially my knowledge of the chemical processes and equipment to solve the problem and salvage valuable samples and data. After I get the data I process it on the computer which involves an entirely different set of skills, and which ends satisfyingly in seeing the final result of all of the work. So I most enjoy the number of different hats I get to wear during the scientific process.

What is your role as a scientist for CWC?

Throughout the project we have collected tissue samples from as many parts of the Louisiana marsh food web as possible. I take those tissues and extract the lipids from them, and then analyze the fatty acids from each individual and compare them. Fatty acids are derived from an animal's diet, so comparing fatty acids across species should give us insight into food web connections within the marsh ecosystem.

Can you summarize your oil spill research and describe any surprising findings you have come across?

One of the most surprising results we have found is how little a difference there is in the fatty acid profiles of our samples between oiled sites and unoiled control sites within the same species. To me, this is encouraging. As damaging as the oil spill was, it is comforting to think that the long-term effects do not appear to have extended appreciably to food web connections in the marshes.

The Coastal Waters Consortium's mission is to assess the chemical evolution, biological degradation, and environmental stresses of petroleum and dispersant within Gulf of Mexico coastal and shelf ecosystems.