

Golden Gate Climate Update Transcript

Interview with Michael Reichmuth

Fisheries biologist, National Park Service, San Francisco Bay Area Inventory and
Monitoring Network

Interviewed on July 29, 2009

James Osborne interviewer

Part 1

Music begins and fades slightly

James - Hi, I'm Ranger James Osborne, and welcome to Golden Gate Climate Update..., your source for information on climate change and sustainability. Join us as we hear from people helping your National Parks understand and adapt to climate change.

Today we are talking with Michael Reichmuth who is a fisheries biologist with the National Park Service, San Francisco Bay Area Inventory and Monitoring Network. So, Mike, can you tell us a little about the research that you are doing on salmon in Marin County and what changes you are observing?

Michael - Yes, one of my duties is to manage the salmon and steelhead monitoring program here in west Marin county. What this entails is managing a field crew both for Golden Gate National Recreation Area and Point Reyes National Seashore. In particular what we are doing is monitoring a few of the primary streams, including Redwood Creek, Pine Gulch Creek and Olema Creek. And, in each one of these creeks we're monitoring both Coho and Steelhead trout, although we are emphasizing Coho salmon. The reason we're emphasizing Coho salmon is because these fish are presently endangered. And so, that means if we don't do something about them, shortly, they will become extinct, probably in the near future. Also, they're a good indicator of overall watershed health. This is because they use the entire watershed during their life cycle. So, by monitoring the salmon we're actually figuring out how healthy our watershed is.

James - So, when you say the Coho salmon are in danger of becoming extinct, does that mean they would be extinct everywhere worldwide or just in the local area.

Michael - No, they would become extinct only in the local area. In particular, we're looking at the Central California Coast as an Evolutionary Significant Unit.

James - So, Do you think that climate change is responsible for any of the changes you have observed in the runs of the salmon?

Michael - Well, it's hard to tease out whether or not climate change is effecting the populations we're monitoring in west Marin. One of the reasons for this is our monitoring is not fine scale enough to see whether or not climate change is effecting populations. One thing is you need to know we monitor these fish during key life stages. We monitor them in the winter time when they're coming back as adults but we also monitor them in the spring time when they're leaving the streams as smolts and then we also monitor them in the summer time when they're juveniles as well. And although this is a fairly extensive monitoring program, to get at fine questions in terms of climate change, whether a degree change is harming these fish, we're not that fine of a scale. What you have to do is actually take out each variable and then develop a study around that variable, in order to figure that out. Regardless of whether or not climate change is playing a big factor in the decline of the salmon, we will be able to see whether or not the salmon are declining or not, which is actually a pretty big question, because salmon do have a lot of variables working on their population dynamics. Also, the population tends to be high in some years and low in others and they have that as part of their natural variability in the population. So, it's going to be good with this program that we can see whether or not if they actually are overall in decline or if we, by doing restoration work, can increase the population so that they'll survive over time.

James - Before we move on to our next question, its time for the climate update challenge. Today's question is: If over fishing and pollution continue at current levels, scientists at the National Center for Ecological Synthesis and Analysis predict all seafood populations on the planet will collapse by what date? 2090? 2048? 2012? Hear the answer, and the second half of this interview in part two. This is James Osborne, thanks for listening.

Music fades in and then out

Male voice - Golden Gate Climate Update is produced by Will Elder and is a product of the Earth to Sky Program, an innovative partnership between the National Park Service, the U.S. Fish and Wildlife Service, and NASA. Music from *A Walk in the Desert* by Electronic Symphonic.