
Jennifer Stock: You're listening to Ocean Currents, a podcast brought to you by NOAA's Cordell Bank National Marine Sanctuary. This radio program was originally broadcast on KWMR in Point Reyes Station, California. Thanks for listening!

(Music)

Jennifer Stock: Hello, everybody. Welcome to Ocean Currents, October 4th, 2010. Ocean Currents is a monthly program that delves into the blue part of our planet and focuses on ocean science issues, conservation, expeditions and ways for us land-based folks to get involved. My name is Jennifer Stock. I bring this show to you the first Monday of every month from the Cordell Bank National Marine Sanctuary here locally in Point Reyes and this show is part of the West Marin Matters series. Every Monday at 1, you can tune in to hear a program that delves into our local environment and/or economy.

So, I've got a very full show for you today. We've got three guests coming in and we're going to be mixing it up on the half hour and then later on this afternoon we'll hear a little bit more of some things that are happening, some activities, some ways to get involved and learn a little bit more, but we're going to focus a bit on our local ocean conditions this summer on the first half hour. I've been out of town the last two months. I traveled to the south Pacific and I visited American Samoa and independent Samoa Islands, as well, which was all very exciting and quite a contrast from the California current ecosystem and while I was gone I heard about incredible, great reports of abundant whales and krill and seabirds and when I got back I heard even more.

So, I'm so thrilled to welcome Dr. Jaime Jahnke from PRBO Conservation Science today to talk about what the ocean was like in the central bay area region. So, here in the study I have Dr. Jaime Jahnke. He is the director of marine ecology at the PRBO Conservation Science area....center, which is in Petaluma. They do work all over the world and he has been studying the physical processes and how they influence biological activity in this region for many years and a couple of years ago, the PRBO Conservation Science Group and Cordell Bank and Gulf of the Farallones National Marine Sanctuary formed an alliance called ACCESS and, of course, we always have to define these acronyms, but ACCESS stands for the Applied California Current Ecosystems Studies and the sanctuaries work with PRBO to plot these productive waters throughout the year to get a better understanding of the year-to-

year dynamics and to ultimately best conserve the valuable ocean ecosystem that we have here.

So, welcome back to the studio, Jaime.

Jaime Jahnke: Hello, Jenny. Thank you for the invitation. I'm glad to be here.

Jennifer Stock: So, you've been...welcome back to land, I should say, because you've been out on the ocean a lot this spring and summer and we'll get to talking about that a little bit, but how...where do the ACCESS cruises attempt to cover? What is your full study area revolving around Point Reyes area?

Jaime Jahnke: ACCESS focuses mostly on the ocean off...Fort Ross to the north out to San Mateo coast. So, we study the ocean of Sonoma, Marin, San Francisco county, and San Mateo coast.

Jennifer Stock: And so you do some of your cruises out of Bodega Bay, some of them out of San Francisco, some out of Half Moon Bay Area?

Jaime Jahnke: Yes, that's correct.

Jennifer Stock: So, that covers pretty much the Cordell Bank, Gulf of the Farallones, and a little bit of Monterey Bay Sanctuary, right?

Jaime Jahnke: Yes.

Jennifer Stock: Very exciting. So, these guys are out there quite a bit, getting to know our waters by doing these studies. So, why don't you tell us, what are the main goals for this project? How long has it been going on and what are you hoping to get out of this collaboration?

Jaime Jahnke: The main goal for us is to support marine wildlife conservation and to be able to use our research to inform resource managers, policymakers, and research partners in these regions. We do this by conducting the research, but then we try to do a good job in communicating our findings to the public and the managers and to use our outlets to convey messages to teacher so they can bring our information and our experiences to their classrooms as well.

Jennifer Stock: That's great. What are some of the conservation issues that you think that the data that you're collecting can help inform?

Jaime Jahnke: We focus on five different aspects. We focus on the wildlife. We try to improve the conservation of seabirds and marine mammals

and their food webs in the region. We want to use our data to improve ocean zoning in this area and that means to guide human uses of the environment and this region. We want to also help document the effects of environmental change on the ecosystem and we receive that information we collect can help us do a better job as we move from single species management towards a more ecosystem-based management of resources that we have here.

Jennifer Stock: So, a nice wide array of things. That's great. How long have you been working on this project. It has a new name now, but you've been doing some of this research for a couple of years now.

Jaime Jahnke: Yes, so officially ACCESS has started this year and officially we started working on it since 2005. (Unintelligible) in 2009, we have now about 27, 28 cruises completed and we have a pretty nice data set that is being used by PRBO, the sanctuaries, and our partners at the universities.

Jennifer Stock: So, a couple cruises went out this year and you used the research vessel, Fulmar, that's the NOAA National Marine Sanctuary boat here on the west coast and what is a typical day like going out on one of these cruises? I know there's lots going on and many different roles for biologists to play.

Jaime Jahnke: We start the day probably about 5:30, 6am. Everybody gets ready. We touch base on what the plan for the day is going to be and we leave the dock pretty early in the morning. We cruise out to where our operation will start. Sometimes we start our operations within 30 minutes from the dock. Sometimes we have to transit about 2 hours from the dock to whatever our lines will start and then we conduct operations on the back deck, which are mostly oceanography and net operations to sample zooplankton, the wildlife, and then we have a group of observers that work from the flying, that is the..on top of the bridge and we do continuous observations from there, record the number and the species of birds and mammals that we see and we're a team in that we have at least six to seven people on board.

We work very closely with the staff from the national marine sanctuaries and we can have sometimes one or two guests with us who help also doing the science.

Jennifer Stock: Yeah, and this year you had a special teacher at sea with you, right? Where was she from?

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- Jaime Jahnke:* We had Deb Moraga. She came from Ohio and she was probably the most enthusiastic teacher at sea we have had so far.
- Jennifer Stock:* I'll just comment on this. We recruited Deb together since I'm kind of a silent collaborator in this, a little bit behind the scenes, but the NOAA Teacher at Sea program places teachers around the United States to get on vessels to work with scientists and learn firsthand and so Deb, she was this bustling amount of energy that wanted to come out and I'm glad she had a great experience and we've been in touch and she is having a blast communicating all of this with her students in Ohio. So, it's going far. It's pretty exciting.
- So, you've got this big team of folks. You're doing studies in the water, looking at the zooplankton, which is one of the main food sources for the whales and seabirds and fishes in this region and tied with the other data on top, what did this year look like? I heard so many reports of like thousands of whales at a time and it just seemed almost over the top, very anecdotally over-excited, but what were your perceptions of the year starting with the spring until now.
- Jaime Jahnke:* It was a very special year because there's been a lot of things going on out there. We started from...we were coming out from an El Nino during the winter and we expected there was going to be a delay in the timing of the breeding of the birds and of the activity in the wildlife here, but that didn't happen. Birds started breeding pretty early and we...they were pretty successful. We saw large flocks of birds; auklets, murrelets with chicks in large numbers. That didn't happen last year, for example.
- We saw a large flock of shearwaters. They were not really around last year and the numbers of whale was pretty fantastic. It was like in every cruise we had probably had 200 plus humpback whales...
- Jennifer Stock:* That's amazing.
- Jaime Jahnke:* ...twenty plus blue whales. It was pretty fantastic.
- Jennifer Stock:* So, we had an El Nino last year. So, the warmer sea surface conditions, we had less krill. So, the birds didn't do so great last year. So, the birds you're talking about are birds that breed locally on the Farallon Islands and the coastal headlands here in Point Reyes?

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- Jaime Jahnke:* Exactly. So, when we, PRBO Conservation Science, has been working on the Farallon Islands in partnership with US Fish and Wildlife Service for forty years now and we have monitored activity on the island, like, 24/7 year-round and this year common murre, for example, did pretty well compared to last year where they had almost no success. Cassin's auklets which are a small, krill-eating seabird did fantastic this year. They are actually on their second brood this year.
- Jennifer Stock:* That's amazing.
- Jaime Jahnke:* Seventy percent of the birds have had a second brood this year and that didn't happen last year.
- Jennifer Stock:* So, they started a little early so they could fit in a second brood of eggs. Do they usually do one egg or a couple eggs each group?
- Jaime Jahnke:* They usually....they lay only one egg and they usually, typically, seven out of ten birds are able to raise a chick. This year, so far, nine out of the birds were successful on their first brood and we're waiting to see what is happening with the second brood.
- Jennifer Stock:* That's fantastic. It's so exciting to hear positive news about reproduction this year because last year, I remember, was a disaster. Now, cormorants, I heard not so great. Or am I hearing that wrong?
- Jaime Jahnke:* No, you're correct there. For example, we only have about...in 2007, we had about 20,000 Brandt's cormorants breeding on the island. This year we had less than 5,000 birds and they're having really a hard time. They started their breeding pretty late and only about one in every ten birds has been able to raise a chick.
- Jennifer Stock:* And their diet must be different than krill. So, they don't eat krill.
- Jaime Jahnke:* Yes, Brandt's cormorants feed mostly on fish and over the last few years they were feeding mostly on anchovy and the anchovy has been missing from this area for now three years in a row.
- Jennifer Stock:* That's interesting. So, the krill have rebounded, but sardines haven't come back...or anchovy.
- Jaime Jahnke:* Yes, that's correct. So, krill has been very abundant over the last couple of years, but fish, mostly the smallest, little fish is basically absent.

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- Jennifer Stock:* Wow.
- Jaime Jahnke:* All the murre did well because they were not relying on the anchovies and the sardines. They were relying mostly on the juvenile rockfish, which are doing much better this year.
- Jennifer Stock:* Wonderful. For those just tuning in, my name is Jennifer Stock. You're listening to Ocean Currents and I have Jaime Jahnke from PRBO Conservation Science with us talking about the summer ocean conditions that we experienced here in the central bay area off the coast of Point Reyes all the way down south to Half Moon Bay and we've been talking about the ACCESS cruises. So, it seems like, well I have to say, I follow a lot of the day to day operations on your Facebook page because ACCESS has it's own Facebook page that anybody can join in on when they're out at sea and you get some great photos and near-real-live time reports of what's going on and I was so excited. One day I tuned in on Facebook and there was a leatherback turtle sighting. So, when was that and about where was that?
- Jaime Jahnke:* That happened during our first day of surveys during this last cruise in September. We were going along one of our near shore lines just off of Point Reyes. We were on an area where there were lots of moon jellies in the water and suddenly I see this big, dark shape come to the surface and see the head come up, get breath, and then it dove right back. The second time...see, we started this cruise the week that I had been able to see one.
- Jennifer Stock:* That's exciting. Did you see a lot of jellies this year and is that more seasonal when the jellies come to be more abundant?
- Jaime Jahnke:* I believe the jellies become more abundant towards the end of the year when the water is warm around more (unintelligible), when the upwelling stops, but I'm not 100 percent knowledgeable about jellies yet.
- Jennifer Stock:* Were there a lot of jellies around with the leatherback around?
- Jaime Jahnke:* Yes, a lot of moon jellies.
- Jennifer Stock:* Oh, exciting. I saw a video...I saw Scott Benson do a talk, Scott from NOAA Fisheries about leatherbacks and Scott's been a guest on this program before and they did...put a camera...have you seen this? Put a camera on the back of a leatherback, leatherback cam...

Jaime Jahnke: Critter cam.

Jennifer Stock: Critter cam to see what types of jellies they eat and it was so cool because you see this undulating head and all of a sudden it grabs a jelly and usually it's those orange chrisora, lion's mane jellies, but it was just so cool. You could almost put music with it and...so, to identify the certain types of jellies that they like. I wish they'd put that online because I only got to see it on that talk. It was really, really cool.

So, we got a leatherback turtle, which is always a good sign and I know that I just got an announcement from the sea turtle restoration network. They're really putting an alert out to boaters to watch out for these turtles because they're slow-moving and they're very vulnerable to ship traffic. What are some of other memorable encounters that you had this year?

Jaime Jahnke: The other most memorable encounter, I believe, was laysan albatross also towards the end of the year. Usually here we see...we can see up to three species of albatross, the black-foot, which are fairly common, short-tailed, which are pretty rare, and then laysans and laysans usually forage around the Aleutian Islands and this time we were able to see one of them. It was pretty cool.

Jennifer Stock: That's neat. They usually go up north for the summer.

Jaime Jahnke: Yes, toward the Aleutians.

Jennifer Stock: That's cool. Now, I remember also there was a sighting of a whale that had been...was floating. It was a carcass. Did that ever get resolved? Was that a ship strike or do we know?

Jaime Jahnke: We don't really know. I believe this happened towards the end of our cruise in July where biologists from the Farallon Islands were able to observe a floating, dead whale north of the island. So, they took some pictures that will...did show some lacerations probably from a propeller. Whether that was the cause of death, we don't really know, and I'm not sure there was a necropsy done on this animal. We don't know whether it was dead before or after this strike.

Jennifer Stock: Right, because if there's a whale floating, it could easily be hit as well. I know there was another whale that showed up too in San Francisco on the bow of a ship. It was a fin whale. It seems to be

becoming more of an encounter...or more of an issue than has been reported in the past and should be interesting. I know the coast guard this year is starting, or they've been working on, a port-access study with the...studying the lanes of approach into San Francisco Bay as well as leaving San Francisco Bay and I'm wondering if these reports will come into this process in terms of whales and shipping traffic. Do you know much about that?

Jaime Jahnke:

I hope they use the information we collect to inform their process. I believe that we have three shipping lanes that come to San Francisco, one from the north, one from the south, and one from the west. This year, because of all the recent...relate to...the ships need to change from a more polluting fuel to a less polluting fuel when they are about twenty miles from shore. So, that is forcing most of the traffic to come from the west right now. It will be great to have more information about how that has changed the patterns of traffic in this area and whether that will have more or less impact on the wildlife in the region.

Jennifer Stock:

Yeah, well keep us posted on that. Maybe that's something we can bring back next year when I come back with more shows in the new year. So, in terms of when you're done with your fieldwork for the summer, it's pretty intensive. There's a lot of planning to get on the ship. You've got a week coordinating all of these people and then you hope for good weather and you got a lot of ship time this year, which was great, only a little bit of weather our, probably at the beginning, but what is the rest of the year look like now for you and the team in terms of processing the data. What do they do to process the data and how do we get a summary of what was the year like?

Jaime Jahnke:

So, this year we were, as you said, pretty lucky. May and June we had very challenging weather, but we were able to complete the cruises successfully and July and September we had the most beautiful weather and with even glassy seas and that doesn't happen very often. Now, we have all that data and we're in the process of cleaning it up so we can make use of it. Most of the oceanography data is already ready and processed. We're right now cleaning and processing all of the bird/mammal data and we are actually looking at some of our zooplankton samples in the lab to know what type of critters we caught in the net.

Once everything is cleaned and ready, we try to bring it all together within a...top platform, for example, so we can understand how the ocean drives where we see the aggregations of food for the

whales and the birds and which places the birds and the whales actually using then and then we can overlay that with the human aspects of all this.

Jennifer Stock: Do you see that change year to year in terms of where those hot spots are or do there seem to be some regular areas that you know this could be a really good spot for a lot of productivity?

Jaime Jahnke: There are areas which, in general, are hot most of the time. Let's say, Cordell Bank, around the Farallon Islands, some of the banks that are in-between like Fanny Shoals, for example, but then there are other areas that are not always there. For example, in 2006 and 7, we used to...there was an area right off the Golden Gate with abundant patches of fish and we hadn't seen those last year and this year. Those patches were used by humpback whales in those years I mentioned, but the whales were not there this year.

Jennifer Stock: That's so interesting. So, yeah, both humpbacks and blues will feed on krill, but humpbacks can also feed on bait fish as well.

Jaime Jahnke: Yes, exactly.

Jennifer Stock: So, they're going to be in different spots this year because they're going to be following the food, basically.

Jaime Jahnke: Yeah. So, most of the humpbacks were kind of absent from the in-shore shelf waters of the Gulf of the Farallones and they were mostly foraging, feeding on krill towards the edge of the shelf where the bottom of the ocean suddenly becomes very deep as you head off of the island.

Jennifer Stock: It's that north..was is north...was it the north of Cordell Bank? There's, like, this deep spot there, is that...or northwest maybe?

Jaime Jahnke: There is a couple of very good spots around Cordell Bank, one towards the east of the bank we have like, some people call it Dell's Ditch.

Jennifer Stock: Yeah. That's Dale Roberts, a biologist in our office.

Jaime Jahnke: Yes, it's like a canyon there where krill tends to aggregate and then there is another area towards the south of the bank which is...generally has a lot of krill and is truly used by the whales.

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- Jennifer Stock:* So, let's talk a little bit about krill because they have a fascinating lifecycle and also daily cycle. So, during the day, they are down below, right, at depth and then they come up at night?
- Jaime Jahnke:* Yes. Krill tends to come to the surface at night-time to feed on the phytoplankton. Those would be like very small plant forms that live near the surface and as you come towards the daytime, those patches of krill will go down as deep as they can, 200 meters, 800 meters deep, if they can. However, this year, for the first time I was able to see surface patches of krill during the daytime and those are supposed to be mating swarms of krill. We were lucky enough to be able to net through one of them around just offshore from Patton Bay and it was pretty interesting. They were mostly adult-sized animals and they were from one of the species, the species that we see in this area later in the summer, which the scientists know as spinifera and it was in July most of the krill that we found were pretty large individuals and they were everywhere.
- Now, in September, most of our tows were...contained this molar-sized krill. So, we were thinking that most of the adults were already consumed by the large numbers of whales we have in the area and the only few individuals that we saw of large sizes were associated with these reproductive groups at the surface.
- Jennifer Stock:* Interesting. So, they'll reproduce at the surface. How quickly does it take them to hatch those eggs? Do we know that?
- Jaime Jahnke:* I'm not sure about that. I believe that they form the mating swarms, they lay the eggs, the eggs kind of sink towards the bottom, how long does it take for those eggs to develop into the nauplii, the first stages? I don't know.
- Jennifer Stock:* See, that's a whole phase I really know nothing about, but I think what's amazing is that these animals are only a couple of centimeters long and they migrate down 200 meters. For their body size, that's a lot of work.
- Jaime Jahnke:* That's correct.
- Jennifer Stock:* Unbelievably. I think I heard that it was one of the largest daily migrations for an animal of that body size to be going that far down and up to the surface. Krill are pretty amazing. That's awesome and you got to see the surface swarms too. So, what else would you like to share about ACCESS and where are we going with...are we going try to keep monitoring year to year so we can

compare and have some baseline? I know there's a lot of concern of climate change and this is such important data for scientists. So...

Jaime Jahnke: I believe the plan is to continue with these cruises for as long as we can. As you know, funding is always an issue so we're all working hard towards making this happen again and this is a partnership between PRBO and two sanctuaries, Cordell Bank and Gulf of the Farallones and everyone is very invested in this project. To any of the folks out there interested in learning more about this you can visit www.accessoceans.org and you will find detailed information about the project or you can become a fan of the project by visiting us on Facebook at Access Partnership.

Jennifer Stock: Then...I gotta give a shout out for that website because it has some beautiful photos. One of the things that's really neat about the team of biologists that go on these cruises is they usually have great cameras and, wow, you have some amazing photographers that are sharing their photos with this project and you get to see them on this website. So, I highly recommend going to check out accessoceans.org because the birds alone, you just see so much beauty when you really get a macro shot.

Jaime Jahnke: We're lucky to have, well, some of our observers probably the best observers in this area. We have Carol Keiper, which is our marine mammal officer and she has been working in this area for, like, 25 years. One of our...seabird officers is Sophie Webb, she has illustrated several seabird guides and bird guides for this area. She just completed writing a marine mammal guide for the north Pacific. So, they're great naturalists, great scientists, great observers, and fun to be with on a boat.

Jennifer Stock: That's important. Well, we should wrap it up here because I've got someone else coming on in a few minutes, but Jaime, I just want to say thanks so much for continuing to work with the sanctuaries and sharing all of this information. It's so vital for scientists to share what's going on. You know, the Facebook thing, getting the teacher out there, encouraging the media to let people know, it's really a wonderful thing. So, thank you very much.

Jaime Jahnke: Thank you very much. It's really fun working with you guys.

Jennifer Stock: Excellent. Thanks for tuning...For those of you that just tuned in, we've been talking with Jaime Jahnke from PRBO Conservation Science and we've been talking about a study that is shared

between the sanctuaries here and PRBO Conservation Science looking at the ocean conditions off the coast here and we heard a little bit about the krill, a fabulous year for whales and seabirds and I like to hang the hat of hope on that when you have a really good year like that, very good for wildlife and hopefully we'll be able to observe continued productivity throughout the ocean here.

We're going to take a short break and come back in a little bit. I have Dave McGuire from Sea Stewards that'll be joining us in just a little bit to talk a little bit about Sharktoberfest and I understand there's also a cruise going out to Cordell Bank this week and Dave will be a part of that too. So, we'll hear a little bit about that, but thanks for tuning in. You're listening to KWMR. Please stay with us.

(Music)

Jennifer Stock: Alright, I think we have Dave with us now. Dave, you are live on the air. Dave are you with us?

David McGuire: Hi, Jenny. Yes I am.

Jennifer Stock: Yay! Alright. Glad you made the connection. So, Dave McGuire is with Sea Stewards. He's a busy guy this week. He's promoting both his shark conservation outreach activities and getting ready for a research cruise, but let's start first with Sharktoberfest. What's happening?

David McGuire: Well, we've got a celebration of the shark all month long. It's to celebrate all sharks in the world, but specifically sharks at the...that are arriving at the Farallons. So, the surfer...local surfers call it Sharktober when our white sharks are returning after several thousand miles of migration out near Hawaii to the islands to come and feed and breed.

Jennifer Stock: So, tell me a little bit about some of the events that you're putting together to help promote some more education about sharks, both white sharks and local, coastal sharks, all the sharks.

David McGuire: Well, we've got a pretty exciting lineup, Jenny. We've got...we're going to do Shark Life at the California Academy of Sciences on the 14th. That's one of their Thursday night-life events for 21 and over, but we're going to have a lot of special events. We'll have a shark exhibit, a special shark long-lining exhibit. We're going to have a short film that I'm doing with Dr. John McCosker who is a

colleague and a co-researcher on our San Miguel and leopard shark and soupfin shark study here in San Francisco Bay. We're going to have some shark talks. We're going to have Jonathan Kathrein who is a shark survivor from Stinson Beach and advocate for sharks now.

We've got a lot of great stuff going on at the California Academy of Sciences on the 14th. Later on the 23rd, we're doing Sharktober kids fest with Jim Toomey, Sherman Lagoon Jim Toomey, the cartoonist and shark advocate. We're going to be drawing a big canvas on sharks and shark ecosystems. It's an interactive activity for youth at the Gulf of the Farallones National Sanctuary Education Center, Crissy Field. That goes from 10 to 3, all kinds of stuff. We're going to have shark sand-castles, shark face-painting, and shark education with the sanctuary and that evening we're going to have a shark cruise and shark awards party and benefit for shark champions with live music, sustainable seafood from fish, great wine, and great beer and we're going to party with the sharks out on the Angel Island Ferry all night from 6 to 10.

So, that's kind of our benefit to try to raise some awareness and raise some funds for our research program and our conservation program and then we've got Farallons Islands cruises that I'm leading as naturalist and with other specialist naturalists including Dr. Chris Pincetich of the Turtle Island Restoration Network with John Kathrein was on board last week. We saw twenty whales yesterday. We didn't see any sharks. We saw all kinds of animals, wonderful sea animals out in the sanctuary.

So, we've got a few of those going on all month long on Saturdays, as well. So, it's really a celebration of sharks and we're going to culminate it in a Halloween party.

Jennifer Stock:

Oh, that's great! Where is the Halloween party?

David McGuire:

The Halloween party is going to be on the Outer Limits. That's the vessel that we book our tours through out to the Farallons. So, we're going to go out to the Farallons on the 31st or if it's too rough, we're just going to stay on the Bay and talk about natural history and sharks of the Bay. We'll have some videos, we'll have some activities, and we're just going to learn more about sharks and try to raise awareness and have fun doing it.

Jennifer Stock:

That's cool. So, is there a costume contest for the best shark costume?

David McGuire: There is going to be a costume contest.

Jennifer Stock: Oh, that's great!

David McGuire: I bet you could be a great shark.

Jennifer Stock: Well, I guess I could be a whale shark with this big belly.

David McGuire: Well, by then you might have a little minnow, right?

Jennifer Stock: No, that's Thanksgiving.

David McGuire: Little early, okay.

Jennifer Stock: That's exciting. So, the kids stuff sounds great. That's down at Gulf of the Farallones on October 3rd...no.

David McGuire: 23rd.

Jennifer Stock: 23rd. Lots of kids activities from 10 to 3pm down at Crissy Field. It's really nice going down there on the weekend and there will be sandcastles, art stuff, hands on stuff, and in the PM, more of an adult event, 6 to 10, a cruise on the Bay and how can people get more of these details because we're going over them a little fast. What's the best way to learn more about each of these events?

David McGuire: Right. Well, the best way is to go to seastowards.org. There is an events page and there is also a lot of information about our shark conservation programs, the tagging efforts that we're undergoing on the Bay with our partners, and a lot of information about shark conservation, including some of the legislation that we're proposing for shark conservation.

Jennifer Stock: Wonderful. That's great, David. Well, we're going to wrap it up because we've got Scott Tye waiting here in the studio as well, but thank you so much for giving us a quick preview. Actually, I have one more question I want to ask you. What's happening this week? You're getting ready to get out to Cordell Bank this week. Can you give us a quick preview?

David McGuire: Yeah. This week, I'm really excited. I'll be going on board the Fulmar with the NOAA crew and sanctuary biologists. We're going to be doing a survey of the Cordell Bank, going down, diving, doing transects, looking at the health and the biota of the

system itself. I'll be going as a diver and I'm a documentary filmmaker. So, I'll be able to document this both on-board and underwater. So, it's going to be a great opportunity to get out there and actually experience the sanctuary and try to understand and explore and communicate this wonderful sanctuary that's just off our shore here.

Jennifer Stock: Yeah, well, the weather is looking better for later in the week. So, we'll be thinking about you...

David McGuire: Great.

Jennifer Stock: ..and I'll let everybody know they can follow along with that expedition right online at cordellbank.noaa.gov. We'll have a link to a live expedition page where there's some information about that, but Dave, I'm so jealous you get to go. I hope you have a great trip. Thanks again for joining us.

David McGuire: Thank you.

Jennifer Stock: Take care.

David McGuire: Bye.

Jennifer Stock: That was Dave McGuire from Sea Stewards talking about some exciting events happening this month for Sharktoberfest. The sharks are back and we need those sharks. They're a part of our ecosystem and we also want people to become more aware about them. So, hopefully you can tune in on seastewards.org, that's with an "s," sea stewards dot o-r-g. Find out about some of those events. The Halloween party sounds exciting and kids events, evening events, Cal Academy, all sorts of great stuff going on.

We will be back in just another minute or two with another local, Scott Tye, from Stinson Beach. He's going to talk a little bit about some stuff Surfrider Foundation is up to.

(Music)

Jennifer Stock: Scott Tye is with the Marin Chapter of the Surfrider Foundation and he has joined us in KWMR Studio for an update on some things that are going on. So, tell us a little bit, Scott, what's happening with the Marine chapter of the Surfrider Foundation?

Scott Tye: Well, you're last two guests have sort of punctuated, sort of, what the stewardship of the seas and the habitat is all about. Surfrider is currently involved, and has been involved since the beginning, in a series of beach, water-quality testing, a series of beach cleanups, and we just helped out in the last California coastal cleanup, which was September 25th and we are involved in the 10-10-10 project coming up as part of a nation-wide, world-wide, but specifically West-Marin action and we'll be doing a beach cleanup at 11 o'clock on October 10th down at Stinson Beach. Hopefully, also providing a forum for plastics and the whole role of plastics in our environment and hopefully some ukulele and a little barbecue.

Jennifer Stock: Ooh, who's going to be playing ukulele?

Scott Tye: Just volunteers coming to play their ukes.

Jennifer Stock: Oh, that's great

Scott Tye: Impromptu.

Jennifer Stock: Fun.

Scott Tye: And to get back to, sort of, one of our primary goals, you know, we've been involved with conservation activism, education, with Surfrider since it started over 25 years ago and one of the primary goals was to find why people were getting sick at the coast and because Surfrider took a proactive role in that, we were able to prove that coastal environments were being impacted by human activity, waste discharge, sewage discharge, and as a result, we were able to implement legislation first in California and then nationally to control and to monitor that. So, that's one of our primary missions and goals.

As a result of that, we work with the different high schools in Marin County. We establish a water testing lab, right now it's at Branson High School, looks like we'll also be putting some in at either Drake or Marin Catholic in the next year and we allow the students to practice and integrate their learning of how that comes about, how we bring in those samples. They culture them, they read the results, and they post them on the website. So, one of the things we do with that educational forum is to give the next generation an opportunity to see how the process works.

Jennifer Stock: That's great. I actually didn't know that students were involved with that. I want to learn more about that program. That might be a

nice collaboration with the sanctuaries too to do student monitoring...student water-quality monitoring. I know that Tomales Bay, the watershed council has been working on that too, getting students involved. So, that's cool.

Scott Tye: Yeah. One of the other things coming up in October is we're putting on sort of a celebration, end of summer, film show at the Lark Theater on the 23rd, same day that David has...

Jennifer Stock: Oh...competition.

Scott Tye: ...his activities and also some live music and the goal behind that is just kind of pull the Marin County surfing community together. It's an award winning film about Irish surfing...

Jennifer Stock: Oh, cool.

Scott Tye: ...and it's by Irish surfers and how their roots go back and kind of what they're doing now and how they're sort of breaking new ground in large-wave surfing. So, that's going to be at the Lark Theater on the 23rd.

Jennifer Stock: What time is that at?

Scott Tye: I believe the show is at 8 o'clock...

Jennifer Stock: Oh, okay. So, you could make the...

Scott Tye: ...8:30 and the music starts around 5:36.

Jennifer Stock: Oh, cool. So, people could go down to Gulf of the Farallones during the day...

Scott Tye: Exactly.

Jennifer Stock: ...come back up for the film. That sounds really fun. A movie about Irish surfing on October 23rd.

Scott Tye: Right.

Jennifer Stock: Very cool. That would be fascinating. I love learning about the different...how different cultures use the ocean and how they use surfing or anything. It should be a really neat film to see. Well, what are some other things going on? I forgot to ask, what time doe the cleanup start on the 10th?

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- Scott Tye:* Cleanup starts at 11 o'clock and we'll probably go for a couple hours and then come back together and see what people we have there to do any kind of a social event. We'll definitely do an educational about the plastics and the role of plastics in our oceans and then wrap that up around 2:30 or 3.
- Jennifer Stock:* Cool. 11 to 2:30 or 3. Hopefully, a beautiful day at Stinson Beach.
- Scott Tye:* Exactly.
- Jennifer Stock:* Even if you only pick up a little bit, it's still great to get out to the beach. Do you find that there's more plastic coming ashore in the winter time, in the summer time, from your experience?
- Scott Tye:* Most of the plastic comes in in the winter...the fall and the winter time.
- Jennifer Stock:* Big waves.
- Scott Tye:* Big waves, higher tides in the delta, and one of the things we have to remember is this is really from the summit of our mountains to our seashore is the watershed and so we get plastic shotgun wads from the delta after hunting season. They skewer the beach and so we'll see plastic from all over, particularly during the high tides and the high waves.
- Jennifer Stock:* Interesting. I'm sure you'll still see plenty in the summer, though
- Scott Tye:* We see it in the summer, but, you know, it's more controlled. There's more personnel to clean it up and hopefully less people, you know, discharging it.
- Jennifer Stock:* That's always the hope. I heard this year was one of...it was a banner year for coastal cleanup day, incredible turnout. So, I think it's a good thing in that more people are becoming more aware of this issue and hopefully changing their behaviors and encouraging more education about it. So, that's cool.
- Scott Tye:* One of the other things we do every year is we have a paddle race from Bolinas to Stinson and next year on June 18th, 2011 will be our 4th annual paddle race and it's basically a fundraiser. It develops kind of a camaraderie amongst all the paddling community and the surfing community and the two towns and we

generated, you know, anywhere from 40 to 80 participants last year...

Jennifer Stock: Oh, that's great.

Scott Tye: ...hopefully next year we'll have over 100 and the funding then goes to the junior lifeguard program at Stinson and the Surfrider water testing.

Jennifer Stock: Excellent. Very cool. Can people get involved with the water testing and other things that Surfrider is doing? Is there, like, a membership thing?

Scott Tye: There's a membership to Surfrider as a...you become a member of the national organization and you're affiliated with the chapter. So, you'd be affiliated with Marin County chapter and they can go to our website, which is surfrider.org/marin and all the information is on that to contact us, send us an email, call us, and then we'll forward them the membership information and in terms of getting involved with the water testing, we're always looking for volunteers. So, if we had people who are consistently in the water out at the beach and then go over to the east side of Marin, we could always use those people to make the collection and then we'll turn those over to the students for their resource data.

Jennifer Stock: Is there a time period from when the sample is collected to when...

Scott Tye: It's about 12 hours...

Jennifer Stock: So, it's pretty quick

Scott Tye: ...and we have to maintain it in a cool environment. We can't let it sit in the sunlight. So, we have some parameters, yeah.

Jennifer Stock: Interesting. How about this year. Were there some closures in terms of water quality at the beaches?

Scott Tye: Well, during the summer months the county of Marin and the national parks do the water testing. We were able to push them hard ten years ago and so they have been doing the testing from April 1st to October 1st, or 31st, actually and then after that there is no testing officially, but that's when Surfrider jumps in and does the testing. There were some anomalies this year. If you read the press, you know, Save the Bay says we've had some of the cleanest

years, but they're also during...they were during the driest summers, driest winters, and they don't test during the winter months.

We've found some very high readings during the winter months when there's high runoff.

Jennifer Stock: Right. Interesting. Well, fantastic. Water quality and beach cleanups.

Scott Tye: One last thing is that it looks like the county of Marin will not have the funding next year for the water testing because of cutbacks due to the budgetary problems and so we may have to step up and find other sources for that. So...

Jennifer Stock: Alright. So, that would be very important for people that are somewhat interested to follow-up on that for volunteering to keep this water quality monitoring going and actually, I'm going to follow-up with you too outside of this because I know the Monterey Bay National Marine Sanctuary has a big water quality monitoring program and who know? Maybe we can get some volunteer links going together.

Scott Tye: Exactly.

Jennifer Stock: That's great. Is there anything else you wanted to share before we wrap it up for today?

Scott Tye: Well, I just think you last two guests and myself, we've given everybody what to do in the fall for the next month and maybe beyond and it's all volunteer work. So, it's all rewarding and we're all looking forward to having more volunteers come out. So...

Jennifer Stock: Excellent. Thank you so much for joining me today...

Scott Tye: You're welcome.

Jennifer Stock: ...in the studio. We've just been talking with Scott Tye from Surfrider-Marin. Well, that was a really quick show. I had a lot of people come in and out of here and that's more than I typically do and I'm exhausted, but we've just got a couple of minutes left and there's just a couple of things I wanted to let you know about. As Scott mentioned, this is a great time to get involved. There's a lot of opportunities to volunteer with Surfrider here in Marin, the beach cleanup, you can always clean up wherever you are: on the

shores, on the beaches, on your own street, in the shopping market we all have that opportunity every day. So, get involved

There's that film coming up at Gulf of the Farallones on October 9th, 6-10. I'm sure you can get on the farallones.noaa.gov website to read more about that. It's a good time to let you know I'm going to be off the air for a couple months. I'm producing my own little marine mammal right now and will be taking some maternity leave coming up in November. So, I'm going to be taking a little break from the airwaves here. You will get to hear some old shows. We'll have them plugged into this spot until I can come back, but you can also catch up on past shows from the last five years on our website, cordellbank.noaa.gov. I have all of my Ocean Current radio programs up online there and you can subscribe to a podcast.

So, I'm very excited to be able to offer that, at least, while I'm out of town, or, I guess, while I'm out of the studio I should say and wish me luck on that. It's a great time, actually. I'd love to hear from you listeners to tell me what you think about the show. Do you like it? Do you want me to stay on the air? What are some things you'd like to hear more about with other guests. I would love to hear from you. You can email me at jennifer.stock, s-t-o-c-k @noaa.gov.

Get a little feedback so when I come back we can come back with a bigger...have a better show. That would be wonderful. I just would like to thank Jaime Jahnke from PRBO, Dave McGuire, and Scott Tye, some local ocean advocates and scientists doing great work for sharing their information with us today on Ocean Currents and I'd like to also, of course, thank you, listener for your continued support and, of course, our underwriters and all of those that have pledged during our pledge drive. This is such a great community resource and it's all because of all of our supporters. So, thank you so much for continuing to support KWMR.

This is Jennifer Stock and I'm going to wrap it up here. We had a great year of productivity in the ocean. I hope that you enjoy a little bit of time on the water before we roll into winter and I will be back sometime next year. Thanks for listening to KWMR.

(Music)

Jennifer Stock:

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