

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: Good afternoon everybody. This is Jennifer Stock and you're tuned to Ocean Currents on KWMR. This show delves into the blue part of our planet and highlights ocean-related topics. We talk with scientists, educators, explorers, policy folks, ocean enthusiasts, ocean adventurers, and more all trying to uncover and learn about this mysterious and vital part of our planet. My name is Jennifer Stock and I bring this show to you from Cordell Bank National Marine Sanctuary. Cordell Bank is one of four special areas in California waters that are part of the national marine sanctuary system. So, today we are talking with Wallace J. Nichols who goes by "J." And just some background on him, J. professionally is a scientist and ocean activist, pioneer, educator, and author, a speaker, and so much more. It's hard to pin J. into any one arena in terms of what he does, which is actually better in that he is spread across so many disciplines all for the ocean and for our planet.

His launch into the ocean arena started with a passion for sea turtles and doing field research and community organization to help the conservation of these animals and today he works with several universities, organizations, and communities nationally and internationally to advance ocean inspiration and conservation. So, I'd like to welcome J. Nichols. J. You're live on the air.

Wallace Nichols: Hey, it's great to be here. Thanks, Jenny.

Jennifer Stock: Are you in Santa Cruz right now?

Wallace Nichols: I am in Davenport, which is just a little bit up the coast from Santa Cruz.

Jennifer Stock: Beautiful. Well, I hope you're having a crisp, clean day like we're having up here in Point Reyes.

Wallace Nichols: It's lovely. It's actually a perfect fall day.

Jennifer Stock: Excellent. So, it's just so nice to have you on the air. I've been trying to get you on the air for a while and it's nice to have the time and because you have such a diversity of work, I just wanted to

start with really, how did you find your way to the ocean as a career and as a lifelong passion?

Wallace Nichols: Well, you know, like a lot of people end up working as a biologist, as a kid, I had a thing for nature. I loved turtles. I loved just to hang out and explore creeks and the woods and the coast...on the east coast, where I grew up. And one of my favorite things to do as a kid was to catch snapping turtles, big, gnarly animals that we used to catch as kids I painted numbers on their backs and then we'd let them go and if we saw them again, we'd kind of record a little bit of data and little did we know that we were doing marked recapture research and the simple algebra that we were using to figure out how big the population was...it was exactly what I'd be doing later on and some point along the way, somebody spilled the beans and said, "You can be a wildlife biologist, a marine biologist. That's a legit career."

And I didn't know anybody who was doing that so it sort of came sort of as a surprise and once I heard about it I said I'm signing up for that. What do I need to do? And I tell my daughter, Grace, I went to the 24th grade, which means I got a lot of education, several advanced degrees, and all kind of moving torrids of being involved with nature as a career and not just studying nature, but solving problems and bringing as many different disciplines together as we need to solve the most pressing problems that we're facing.

Jennifer Stock: That's great. You're very lucky in the sense of being able to follow your passion. Not many of us actually get to do that. So, it's pretty cool.

Wallace Nichols: I feel lucky and I love what I do.

Jennifer Stock: So, you got interested in turtles at a wee age. Those snapping turtles are pretty gnarly. So, I guess you were ready for those big loggerhead turtles in Mexico and that was your field study subject for a while, right? Loggerhead turtles?

Wallace Nichols: Yeah, we started early on looking at sea turtles off the coast of Baja, California and Mexico where very little research had been done, but a lot of problems were facing the turtles in terms of the turtles being hunted for their meat and they were getting caught in a wide variety of fishing nets and as a result, they're going away. They're going extinct.

So, we started studying them in the hopes of finding out some things that could help their recovery and I quickly learned that the genetics work that I was doing and the tracking work that I was doing, while really interesting to me as a scientist, wasn't as important as working closely with people in the communities and community organizing, working with fishing co-ops and just kind of really together finding solutions to the problem of by catch, of turtles being caught in their nets and the problem of overhunting, which just was rampant throughout the region.

Jennifer Stock: So, in Baja, were they actively trying to catch loggerhead turtles for meat? What was their opinion of loggerheads as far as conservation versus catch and whatnot?

Wallace Nichols: Well, you know, the favorite turtle to eat was the green turtle. Loggerheads were less popular as food for people, but the tradition, longstanding tradition was to eat sea turtle meat at any big event, any big celebration and the were ranging from a birthday to a Quinceañera to New Years or Easter, turtle meat was served at political rallies and you name it and it was the traditional meal. So, loggerheads really weren't the focus, the green turtles...the ones that were getting hammered Loggerheads were kind of a second choice to the green turtles as food, but it turned out that nobody wanted the turtles to disappear.

Not the biologists, not the turtle hunters, not the people who just ate the turtles. We all agreed that it would be bad if they were completely wiped out. So there was some common ground to start from and once we started learning that the loggerhead turtles that they were eating and catching were born in Japan on the other side of the planet and they made that long trip and they hung out in Baja until they went back home to Japan, 7,000 miles away, once we started learning that and sharing that information, things got a little more interesting and people looked at that turtle soup a little bit differently when they kind of brought that little sense of awe about the natural history of these animals to the table, literally.

And the conversation kind of grew from there.

Jennifer Stock: Would you say technology, then, with new technologies and studying these animals and showing new pictures and imagery helped change the conversation a little bit.

Wallace Nichols: Absolutely, yeah. It's high tech and low-tech and no-tech. So, conversation is the key word. Sharing the information and sometimes the information that you're sharing comes from a

satellite transmitter sending you data through email from the turtle to outer space, back to the ground, through the wires to your email and then you map it out and show people what these animals are doing and the amazing feats they're capable of and that the turtle swimming in their backyard was swimming back home to Japan and it's passing the Hawaiian Islands and at the base of that is communication and eyeball to eyeball conversations, ongoing, decade-long conversations about some of this stuff and some of them are still underway, conversations that are kind of mid-stream and that people are...we're all at different stages in figuring out our place on the planet and our relationship with the ocean and with nature and you need to recognize that and if you hop into somebody's life and they may be ready to talk about tracking a turtle to Japan, but not necessarily ready to give up turtle soup. So, that conversation that you jump in it at different points whether you're talking to your father-in-law about recycling or a fisherman in Baja about endangered turtles. It's a different....

Jennifer Stock: Everyone's at a different place.

Wallace Nichols: Everyone's at a different place. Yeah.

Jennifer Stock: So, can we go back a little bit to the loggerhead? I think the migration is fascinating because that is clearly just an amazing migration and immediately when you're telling that story I had this image in my mind of this turtle has no idea it's being watched by all these people and just the stories that turtle could tell. Is that a typical, normal migration? They're born in Japan and they come to Baja to feed and then...?

Wallace Nichols: Yeah. For loggerheads, you know, there's seven species of sea turtles in the world, loggerheads is one of them, and we've got loggerhead turtles in the Pacific Ocean and when we first started studying turtles in Baja as a grad student the paradigm of the basic idea about these turtles was that they nested in Japan and they probably stayed over there and that there was this odd population of loggerheads that hung out on our side of the Pacific along the coast of California, in Baja, California and nobody knew where they nested because it couldn't be Japan because that's just too far away and animals can't cross the ocean.

So, we were looking to a mysterious, missing nesting beach for these Baja loggerheads that must be hidden somewhere along the coast of Mexico and so, that was kind of the working hypothesis and then through the process of looking at their genetics, getting some insights from some little flipper tags and then finally, one

day, we got this transmitter donated and we were in Baja and put it on the back of a turtle and named the turtle Atalita after the daughter of the fisherman who was helping us to attach it out in this small, little Pacific town on the coast of Baja. We released her into the ocean and waved goodbye, a colleague filmed her swimming away, and we thought we would go back and see what she did over the next few days and she just started heading home and over the course of the next 368 days, she swam about 7,000 miles and it was the first animal ever tracked swimming across an entire ocean and this was back in 1996 and a colleague, another grad student in the computer sciences department, I remember saying, "Hey, you should share that data."

And I say, "I've been sharing it, I've been faxing it down to the guys in Baja and I show it to everybody." "No, no. You should build a website." And so, what's a website? Here's this new thing that you can build a website. So, we built a website and it turns out there are lots of people who already knew what websites were and they all found ours because it was the coolest thing going on in animal research on the internet. So, before the year was over we had millions of kids all over the world tracking, following Atalita every stroke of the way across the ocean. So, it's kind of a little bit of an insight early on for me on the power of the web and social media and building networks of like-minded people who care about maybe sea turtles, maybe something else, but in this case it was this one turtle, sort of the free willy of the turtle world.

Jennifer Stock: And now we're tracking so many other animals.

Wallace Nichols: And now it's gone completely wide open and you can go on the internet, you can go to websites like seaturtle.org and track just dozens, hundreds of different animals all over the world, birds and turtles and mammals and tuna and all kinds of animals just...it's amazing.

Jennifer Stock: Well, I'm glad you brought this up. It's been a huge hook I've really been working hard on as far as being able to bring this into classrooms and the way that teachers can bring it in because we have so many issues with schools being able to do certain things and not other things, but we've been really trying to get schools to be able to use this data in their classroom so the students can study these animals, but it's so great that it's available on the internet and that scientists are willing to share.

Wallace Nichols: Yeah. That's really important. From day one with our tracking efforts, we made all of the data available in real-time, immediately

and some people thought, "Aren't you afraid somebody's going to steal your data?" And my response, perhaps naive, was, "Steal it!" If you're going to steal my turtle data and use it to save sea turtles...right on. Go for it. They need our help, we need help, and what's somebody going to do with turtle data except maybe help turtles? From that point on we just share everything as widely as we possibly can

Jennifer Stock:

That's great. So, it sounds like when you came into this study of turtles, you started out with that science mind, but it sounds like conservation is more...the conservation that you're practicing is much more than science and data and when did this realization click for you and how have you brought others along to participate in this because I know you started consortiums down in Baja of bringing everybody together to help turn this tide and how have things progressed since things first started when you came down there and were witnessing all this by catch...or not so much by catch, but actual fishing for turtles? How long did it take for things to turn around to get that conservation going, which is still in movement?

Wallace Nichols:

Well, we're going on two decades of work with the communities in Baja and to answer your first question, I probably knew that it was about more than science and data...always knew that. I think we sort of know that the world is complex and it can't be reduced to some numbers and a little bit of science. There's way more than that, but then you go to school. You kind of get squeezed and you get put into boxes and departments and some departments don't talk to others and things kind of get narrowed down and then you get thrown out into the world to solve real problems and you kind of have to come back to that thing that you already knew, which is that it's all connected. I can publish 50 peer-reviewed scientific papers and the turtles may still go extinct and that's just the way it is and you've got to get beyond just the science and the data and put things into practice.

So, kind of immediately started realizing that the challenge was to get my PHD, jump through those hoops back at the university, and also feel like I was doing the work that I really wanted to do and that was really pressing in terms of working with the community. So, my PHD was in ecology and evolutionary biology, not community organizing. So, the more time I spent on working with communities and kids and fishermen, the less I was spending on "hard science" and my advisors weren't really digging it. So, it was kind of moonlighting as a community organizer as a grad student and as time went on I realized how important it really was. So, we

started something called, Grupo Tortuguero, which means Turtle Group, and basically, it was all the fishermen and their families and kids from our various field sites and we invited them to get together for a weekend and talk about the future of sea turtles and nobody had ever invited them out to participate in conservation before. So, it was unusual and they had an awful lot to offer and then at the end of that first meeting, we decided that we would meet again.

We came up with a name. We needed a name, Turtle Group. So, that was easy. We voted unanimously on both things and the group has been meeting for 12 years since that first meeting. So, and now it's a full blown Mexican nonprofit organization that's very community-based and has taken, really, they say a bottom-up approach although, these guys are kind of on top of things in terms of their being directly...interacting with sea turtles daily and it's really, it's working, and the good news is there's a force on the ground in Baja working for the sea turtles, working to bring them back and they're coming back and it's the big news and...

Jennifer Stock: That's exciting.

Wallace Nichols: Yeah. It's very exciting and the better the news gets, the more excited people get, and the harder they want to work and they're realizing that we took a group of animals that was literally ecologically extinct...they were few and far between, and that used to be abundant, and we're bringing them back and it's working and it wasn't somebody telling us what to do. It was a group of people working together, figuring it out and turning things around and it's become kind of a model for that type of work, not just for the sea turtles, but with other endangered species around the world and the leaders, the grassroots leaders in Mexico are now spokespeople for that and they travel and speak to other communities and are kind of in demand.

Jennifer Stock: That's great.

Wallace Nichols: Yeah. It's very exciting.

Jennifer Stock: For those folks just tuning in, we're talking with J. Nichols and right now we're talking about loggerhead turtles and the conservation work that J. has spearheaded in Mexico. Now, you said that things are...turtles are coming back, they're coming back in population. How have things changed on the ground for fishermen in Baja? What practices have changed as the result of this community work?

Wallace Nichols: Well, you know, it's the first...to the sea turtles that we started dealing with was that people were just eating a lot of turtles, eating a lot of adult turtles and big immature turtles by the thousands, literally tens of thousands and once that started to slow down, it kind of gave the turtle population some breathing room and they could kind of recover a bit. So, that was kind of a big deal, the younger generation...this has been going on for twelve years. The kids that were eight that we started are now twenty and they are making decisions of their own about what to eat and they're choosing not to eat sea turtle and that's a shift away from eating an endangered species into extinction to protecting them.

One of the things that's happening is that people are, tourism is big for Mexico and a lot of people have been to Mexico as tourists, whether its fishing or surfing or just going for the sun and having the chance to go see a turtle, go out for a kayak and see a turtle swimming or go to the beach at night and see a turtle laying eggs before realizing that that's a better way to use turtles sustainably as part of a smart, sustainable eco-tourism effort.

So, that's changed. That's a whole new idea, whale watching and turtle watching can kind of go together. So, that's happening and then there's more attention on by catch. So, where once turtles would get caught in nets and then thrown over and wash up on the beach and nobody would pay any attention or even count them, now there are lots of people around who pay attention. They record that data and then if they find by catch hotspots, places where the problem is really bad, they put together projects and work with fishermen to reduce the by catch. So, that wasn't going on ten years ago. So, all these things taken together, a general awareness and a general kind of celebration of the sea turtle, not just by eating it, but celebrating it alive is kind of transforming it as a symbol and then the result is they're coming back, but in other parts of the world, sea turtles aren't doing as well. The leatherback sea turtle in the Pacific is one of the most endangered populations of any animal in our oceans and still is right on the brink and so, we've got a lot of work to do to rescue the leatherback turtle.

So, and there's a great group based in Marin that I'd love to give a shout out too, Sea Turtle Restoration Project. Todd Stiner and his team, great friends and colleagues. They've really been on the front line of sea turtle conservation on the national and international stage for, I think, they're coming up on twenty years. Their 20th anniversary is coming up and their website is seaturtles.org and if you love turtles and you live "s", it's plural...seaturtles.org and if you love turtles and you live

in Marin, you definitely want to check out Sea Turtle Restoration project and sign up for their big anniversary.

Jennifer Stock: They have a great website really giving a lot of background information on turtles and I've had them on the show before too. They talked about leatherbacks and they've been very participatory in our advisory council and just actually, a few weeks ago with Todd's leadership bringing it to the sanctuary advisory council, we passed a resolution to not recommend this experimental permit that's being asked in northern California waters here for leatherbacks sake. It's been exciting to have them aboard and really participating with other projects going on. So, thanks for mentioning them.

Wallace Nichols: Sure.

Jennifer Stock: So, as far as your work, there's been a lot of work in Baja, but you've also worked internationally, beyond Mexico, I think with other turtle groups and you're working on some international group that is also looking at helping other turtle restoration projects. What's some of the international work happening beyond Mexico?

Wallace Nichols: Yeah, well, one of the projects that kind of grew out of our experience in Mexico is something we call See, "S-E-E" turtles, a little play on words, and the idea is that a lot of people, like I was when I was a kid, who wanted to have an experience. They want to go to a place and have an authentic well-run interaction with a sea turtle. They want to see a sea turtle and I can't explain why, there are lots of people that just love these animals, so we thought it would be good if there were best practices, if there were some guidelines for how to do that in the best possible way and have to have the smallest impact, or no impact on the animals, but to bring a big benefit to helping protect them.

So, we took the experience of Baja and looked around the world to see if there were places that had a combination of need and simple infrastructure so that people could show up and have a place to sleep and something to eat and a guide that could help them and we've piloted this project in Mexico and Baja and Costa Rica and in Trinidad and Tobago and after two years, it's been a great success and we're starting to expand to some other sites and our role is to just sort of matchmaker in a way between, say, people who are hanging out in Cincinnati, Ohio dreaming about turtles and the people working on the beaches in Central America who would love that person to come and spend a week and help out and see their turtles and inject a little bit of cash into their project and

so, that's our role is just helping people see turtles and it's been really fun and there's a lot of interest from both sides from projects that need that little extra bit of support so they can expand their conservation work and a lot of interest from people who just want to go and take a look at a wild sea turtle.

Jennifer Stock: Speaking of best practices, are there any issues as far as how many people can be in the water? I've snorkeled around turtles. I've always wondered, they just seem so aware...they're aware and they kind of do their thing, but is there a concern about too many people approaching a turtle or surrounding a turtle like there are with marine mammals?

Wallace Nichols: Yeah. It's very parallel to the concerns around whale watching and chasing marine mammals. The one thing that you realize is when you're in the water with a turtle, if the turtle doesn't want to be near you, then if you blink, it's gone. They're very fast and graceful in the water. That said, we don't want to stress them out and chase them around the ocean. So, if you have a group of people, you don't want to surround them. You always want to give them an easy way to let you know that they want to go away. Slowly following them is...if they seem like they're going about their business and nibbling on the coral or sea grass and you're watching them, that's the best scenario. In places like Hawaii, I've been in the water and the turtles come right up to you and even bonked me on the head, right on the mask out of curiosity, I guess. They just want to check you out.

So, maybe they've got their own sea people project and they're coming to see us, but there are other places where there's a little more sensitivity about the turtles because they're still being hunted. They're a bit more stressed out. So, we have guidelines for the guides and for the dive shops and for the people who take tours out on the beach at night, emitting the amount of light they use and not disturbing the turtles while they're in the critical nesting stages and certain times when you should release the hatchlings, you don't release the hatchlings in the right sun, midday when the predators can just scoop them up, things like that and it's fairly straightforward and a lot of projects can easily better their practices by following these guidelines. The carrot is we offer...put them on the website if they're conducting their tourism activities appropriately and that's a carrot for doing things right.

Jennifer Stock: That's cool. I know up here, we don't have a lot of turtles although we want them to come back, the leatherbacks, but one of the big concerns is during the season that they are potentially here is just

the boating and turtles are not able to get out of the way of these big ships as quickly and boats that are going really fast to get out and about really could do some damage. So, I'm sure you have some best practices with boats in the water as well.

Wallace Nichols: Yeah. If you're in an area that's known to be particularly a foraging area or near a nesting beach, you definitely want to throttle down and be aware of sea turtles at the surface because we do find a lot of turtles that get hit by boats and their shells can be broken by the hull of a boat and there's no real good reason to do that. So, slowing down if you know you're in a sea turtle area is a good idea and in the fall in the Bay Area, we get reports all the time of boaters, certain years more than others, but boaters who are seeing leatherbacks out there floating at the surface and it's quite a neat thing.

Jennifer Stock: Yeah.

Wallace Nichols: Pretty Excited.

Jennifer Stock: Well, J., we're just about at a half hour here and I need to take a short break. So, I hope you'll just stay with us for a few minutes.

Wallace Nichols: Sure will.

Jennifer Stock: You mentioned about sea turtles being stressed if there's too much around and it kind of segueways into the second half of the show and I wanted to talk more about it. It's about our ocean planet being stressed and what we're doing and you've been doing some great work that I really want to share. So, I hope listeners will stick around. We're talking with J. Nichols, who is an ocean revolutionary. He's actually a co-founder of Ocean Revolution, an organization really working to get people, young people, really involved with ocean conservation and education.

So, we'll talk a little bit more about that on the second half, but just stay with us for a little bit and J. can stay right on the line and for those of you just tuning in, you're listening to Ocean Currents. We're going to take a short break and I have a song here from a colleague, actually, Bob Steelquist and his wife Jenny Steelquist, the elderberries up in the Olympic Coast area in Washington. Stay with us.

(Music)

Jennifer Stock: I have J. Nichols on the phone with me and we have been talking about turtles and loggerhead turtle conservation that J. has been really been involved in, but I want to shift a little bit now because J.'s world has also opened up to bringing more and more people into this world about ocean protection and ocean awareness and J., just a few years ago, you founded Ocean Revolution which I love saying because it just brings out this powerful word to me, but tell us a little bit more about the theory behind this group and what you're doing with these youth.

Wallace Nichols: Yeah. The idea, initially, for Ocean Revolution kind of came out of the realization, noticing that there's an awful lot of really good ocean science going on for young people and great ocean camps and weekend experiences and some fun things going into teaching just the basics of science and the ocean and as a scientist, I love that, but also recognizing that there's so much more to it, to taking care of the ocean. There's all the advocacy part and the policy part and the art and music, filmmaking, and that really wasn't getting much attention and so, we started Ocean Revolution kind of with that in mind to be certainly strong on the science and not in any way downplaying the importance of it, but also trying to bring in students, young people, who love the ocean who were really aligned with maybe making their careers or their lives dedicated to protecting the ocean, but who were unlikely to become scientists and marine biologists and we found that there's just a lot of kids out there, a lot of youth, who are concerned about the ocean.

They're turned on and excited about it and they want to help and they want to plug in, but not just in a scientific kind of way. So, it just kind of started out as that idea and it's grown into this evolving, open network of young people all over the world who connect with each other, share their experiences, fire up each other's leadership and creativity and are doing great things and so, we basically help where we can. Say, there's a guy in Mozambique who dreams of being a dive master, we can help make some connections and help make that happen and that was the case with Carlos, who is the first Mozambiquan dive master and that was his dream and we helped facilitate that. Now, he's got his own growing network of young people that he teaches about the ocean and it's people like him, some of the people we work with in the U.S. and Mexico have similar stories of just feeling empowered. A lot of them live in little coastal communities where they may be the only person who's kind of thinking this way and they don't have access to a mentor.

So, sometimes it's just about connecting them to someone to be their mentor and people like you, Jenny, who are available to give people advice and say, "Hey, have you thought about this? Have you thought about this kind of career and maybe working in policy or law or ocean-friendly business," and it kind of goes back to...maybe you remember...when I was a kid there weren't that many people around saying, "Hey, you can be a marine biologist." There was Jacques Cousteau and he was a role model, but he seemed to have that job kind of well taken care of and there was really nobody around, at least in my world, who was saying the world needs marine biologists and if that's what you want to do, we can help you.

I just got lucky in that I figured that out and read it somewhere, but there aren't that many people out there letting young people know that the world needs them and their advocacy skills are important and that they can develop them and find a niche and find a career. So, that's kind of what Ocean Revolution is about, but it does a lot more than that because young people bring all kinds of interesting ideas and edgy and creative ideas to get peoples' attention on the ocean.

Jennifer Stock: So, this wouldn't have been possible 15, 20 years ago before the internet.

Wallace Nichols: The internet absolutely made it possible.

Jennifer Stock: It's amazing.

Wallace Nichols: Yeah. It's interesting. One of the things we started off thinking, "Well, we'll give all of the young Ocean Revolutionaries email addresses and that's how we'll keep in touch," and we quickly realized that they weren't using the email addresses that we gave them. They were using text messaging and Facebook and other ways of communicating and these email boxes that we were setting up were just sitting empty and so, there's the technology, but it's also sort of understanding that the technology is going to change and once you maybe invest in something that you think is going to be the big solution to connect people, people have already moved on to the next thing.

Jennifer Stock: That's amazing.

Wallace Nichols: Yeah.

- Jennifer Stock: It may be the thing that propels us forward towards change in the future is having this linking body in between these invisible links to bring everybody together.
- Wallace Nichols: And it's certainly getting harder for people whose interest is not the ocean's health to hide and it's harder to get away with destructive activities in the world that we're in. So, having young Ocean Revolutionaries care about the ocean, are well-connected, and know how to use a video camera is very powerful and it helps them tell their stories and build movement around sustainability and restoring healthy oceans and that's a good thing. That's a good thing for the economy. It's a good thing for communities. It's a good thing for our health and it's something we need to do. There's no choice in this.
- Jennifer Stock: Well, it's nice it's a nice and structured piece here. I want to bring up a public survey. I don't know if...you're probably aware of it. The Ocean Project did a survey ten years ago in 1999 that really looked at the public's perception about the ocean and the condition of it and it was fairly low and it was redone, actually, with a much bigger survey group of people. It was like, 50,000 people and that was completed this spring in 2009 and it was really sad in that it showed that in the ten years since the last public surgery, there's been very little progress in terms of the public's awareness or concern for the health of the ocean as an environmental problem and I think, I mean, it's hard to say because I know that in my little community I would say, "No, that's not true," but globally....or this is United States-wide this is still such a big issue and, you know, it seems like some of the recommendations that came out were that youth were more motivated to get out and get involved and youth have an impact on their parents, but what do you think needs to happen to change this perception of bigger audiences?
- Wallace Nichols: Yeah, you know, I think we need to...I was just having a conversation earlier today with my brother about this who is an artist and what we were talking about is I think we need to take the conversation about the environment and jump the walls and get it into everything and unapologetically.... you don't switch to the green channel when you want to think about the environment. It needs to be a conversation that's happening everywhere and it's not just about making being into nature and the environment cool. It's not just about the cool factor. That's certainly a part of it. We just need to be very direct that this is something we all need to do and it needs to be a part of all of our conversations because whether we're talking about healthcare, whether we're talking about our communities, whether we're talking about energy policy, it

really...it's all connected to the environment and if we're near the coast or we're near a river, it connects to the ocean and that's just reality and we've gone a long way to kind of advance, compartmentalized discussions about making...."Ok, today we're going to talk about the ocean at this conference."

And you kind of go off to the conference and talk about the ocean and come back and carry on with the rest of your life, but it needs to really kind of break out of that rut and get pushed into places where it's less expected and that's part of, I think, what we've tried to do with Ocean Revolution is....the logos that we use don't look familiar. They don't look like your typical nonprofit ocean organization logos. There's a lot of red color and bright stars and bold sort of patriotic kind of stuff and it's a revolutionary sort of symbology and it gets peoples' attention and it's unexpected and it kind of breaks the conversation out of the place where it always seems to go, which is in the newer environmental studies class and it's on that one channel that you can switch to or switch away from and I think that's...we need to break that out and have it just kind of mixed in everywhere and that's something we can do actively as long as we don't fall into that rut of feeling like we're making good progress because there's a Green Channel because people can easily ignore the Green Channel if it's one of 500 channels and they can easily ignore our website, very easily, because there are billions of websites and it's more about treating the entire internet as your website and pushing your message out everywhere on to other people's website and having it incorporated into things and not being sort of stuck into a little box.

Jennifer Stock:

We have just about five minutes left here. One of the things I also found on your website that I was really intrigued by, I was wondering if you could talk a little bit about the proposal that you're thinking about in terms of neurobiology and behavioral science related to marine conservation and exploring that relationship between how the human mind works and the ocean. I was wondering, could you talk about that a little bit?

Wallace Nichols:

Yeah, we've got this project we call the Mind and Ocean Initiative that we'll be digging into in the coming few years and, you know, again it kind of goes back to the early days of working on ocean conservation issues and as a grad student I wanted to go to the other side of campus and take courses in the social sciences and anthropology and sociology and incorporate those things into my degree and my studies and into problem solving, but that wasn't really being done. So, I was sort of steered away from that and over that time I've been developing some ideas, something I call

neuroconservation, which is learning from cutting-edge modern neuroscience how our minds and our brains work and then applying that to the activities in the field of conservation and I've had this proposal that I've been really trying hard to give it away to a young grad student and say, "Hey, take this and if I can be of any help, let me know," and nobody has taken it. So, finally I decided to kind of do it and get this thing going.

So, it's really...the idea is to think deeply about what it is about the ocean that makes us feel the way we feel and act the way we act and whether you're a fisherman or a biologist or a beachcomber or a surfer, we can all kind of agree that being out on and near or in the ocean makes us feel different than when we're standing in our garage or sitting in front of a computer and I'm really curious about why and really, I mean, as a scientist I find that question just one of the sort of ultimate questions. I want to know what happens to our brains, literally, and physically. What happens to our minds and you know, I know, everybody listening knows that something happens and sometimes it's a little combination of things and maybe a little fear and a little bit of longing and a little, maybe a little meditative, depending on the circumstances, but people are willing to empty their pockets of all their money in order to live or vacation near the ocean. Why is that?

It's very interesting.

Jennifer Stock: That's a really neat side-topic. I'm really just fascinated too because it comes down to what you love, you'll protect and how do we get people to connect to that.

Wallace Nichols: Yeah. I mean, the sound, the smell, the taste, what the ocean looks like, all of that combined does something very appealing to us and for us and it's...I want to know more about it and then use that knowledge, share it...this isn't about any sort of knowledge and controlling anything. I want to learn about that and I want to let everybody know what's going on inside of us and respond to the biggest feature of our blue planet, which is the ocean.

Jennifer Stock: That's great. Well, J. we're coming up towards the end of the show here. We've gone from turtles to ocean revolutions to neurobiology. I love it and I know you're coming up here to San Francisco in a couple of weeks. I got an email here from David McGuire from Sea Stewards about Sharktoberfest.

- Wallace Nichols:* Yes. That's going to be great.
- Jennifer Stock:* And...a celebration of the shark this month and it's a great time because there's a lot of sharks around right now, swimming around off the Point Reyes Peninsula I've heard and can you tell us just a little bit about the events and you're going to be up there. You're going to be talking and stuff about stuff.
- Wallace Nichols:* Yeah, my good friend, David, is helping put together Sharktoberfest, a celebration of sharks, that's up at the aquarium. If you do a Google search for Sharktoberfest you'll come up with all of the information on where to get tickets and where to be and when to be there and we're just going to get a group of people together and we'll see some films, we'll talk about sharks, have some snacks, and have a really good time and David's asked me to kind of make some of the opening remarks about kind of talk on where the wild things have gone and so, we'll talk about sharks and other big things and kick off Sharktoberfest.
- Jennifer Stock:* I'm loving this because I see a prize for best shark and shark prey costume contest. I'm loving that.
- Wallace Nichols:* If you love sharks, that's the place to be in October if you're in the Bay area.
- Jennifer Stock:* And Jim Toome, the creator of Sherman's Lagoon is going to be there. That should be pretty fun.
- Wallace Nichols:* Yeah, we're giving Jim, this great artist, Jim Toome is getting an award for his work on behalf of sharks through his cartoon strip.
- Jennifer Stock:* Excellent. Well, we are just about towards the end here. So, folks interested in that can check out Sharktoberfest by just putting that Google search or go to seastewards.org to learn more about that, but J. I can't believe it's like, 2 o'clock almost here and I've got a couple more things to announce. So, I just want to say thanks so much for sharing your passion with us today and with the world.
- Wallace Nichols:* Yeah. Thanks for letting me call in. It's really always fun to talk with you about the ocean.
- Jennifer Stock:* You too! Take care.
- Wallace Nichols:* So long.

Jennifer Stock:

We've just been talking with J. Nichols, who is a man of many different disciplines, both science and education inspiration, working with sea turtles and now with youth and inspiring other people to become ocean conservation-minded folks to help protect this blue planet. So, Sharktoberfest coming up October 16th and 17th and you can check that out on the web for more information. It sounds like a whole diversity of different shark-related things. So, those of you interested in sharks, you want to get down there. It's in San Francisco at Aquarium of the Bay. I thought I'd also just mention a couple other things.

The Cordell Bank National Marine Sanctuary, we have a field seminar to go out to Cordell Bank and we certainly did not make it out this Sunday because of some pretty bad sea conditions with some pretty big winds and swells, but we have a second boat trip scheduled to reschedule that and there's a lot of space available if you've been thinking about getting out to Cordell. It's October 18th and it's a Sunday and it's a full day trip on the water. Hopefully, our sea conditions will cooperate this time, but we'll see what we get and you can call Cappy at Point Reyes Field Seminars at [415-663-1200](tel:415-663-1200) extension 373 if you're interested in coming on that boat trip. It's a full day excursion and there are fees and registration involved with that and that is October 18th and I've heard there are a lot of whales offshore. So, I'm really looking forward to getting on the water soon to see them and also, at the end of the month we are celebrating the 20th anniversary of the Cordell Bank National Marine Sanctuary with the original explorers of Cordell Bank, the Cordell Expeditions Dive Team.

I had Bob Schmieder on earlier this year on the radio program talking about his early expeditions and the rest of the dive team is going to be joining him, coming in from all around California to share with everybody some of their experiences and harrowing tales of descending into nothingness and what they saw was quite amazing. So, October 24th is a Saturday at the Dance Palace Community Center in Point Reyes Station. We hope you can join us for that. It's a free event from 7 to 9pm and if you have any questions about that, you can give me a call at [415-663-1397](tel:415-663-1397), but that is pretty much a wrap for today's show.

I'm coming quite close to the end here and Ocean Currents is the first Monday of every month and we talk about all different sorts of ocean topics. Next month, I have Tessa Hill from Bodega Marine Lab talking about deep sea corals, something that's a rather new area of research as far as people finding deep sea corals. Now that we're finally getting to the bottom of the ocean, we're starting

to get to see these new habitats. So, she'll be talking a little bit about her research on climate change associated with these deep sea corals. If you want to come back to hear past shows of ocean currents, you can come right on to the Cordell Bank website, cordellbank.noaa.gov, you can subscribe for a podcast or download past shows and I'd love to hear from you if you have ideas, thoughts, or things you'd like to share, please go ahead. Email me at jennifer.stock@noaa, that's NOAA dot G-O-V. I'd like to thank our underwriters and supporters who keep this amazing station on the air and thank you for tuning in. We will be back next month with a live show with Tessa Hill from Bodega Marine Lab. Thanks for tuning in.

(Music)

Jennifer Stock:

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