

Ocean Gazing: Episode 9

The ocean as classroom

<begin music>

Ari: Hello! Welcome to Ocean Gazing, the podcast where we hold our breath and go underwater to explore the world's oceans. A few weeks ago, I caught up with two of the folks I'm always thanking during the podcast credits: Janice McDonnell and Jim Yoder. We met up down south.

Yoder: Where are we now? We're in Hilton Head, South Carolina next to a swimming pool. <laughter> Should I have said that?

Ari: We'll be chatting about the connections between marine science and educational outreach. The sonic stumper answer will be unveiled as well. So stay tuned!

<fade music up; music ends>

Ari: Jim Yoder is the vice president of Academic Programs at the Woods Hole Oceanographic Institution. He's an ocean scientist, and he believes in educating the public.

Yoder: We're all funded by taxpayer money and so it's very helpful to have a population of citizens that understands the value of scientific research, understands what we're trying to do, and we hope would be supportive of the efforts and understand the benefits to them. I think that's sort of the big picture story. Also, to engage kids at a young age is important in terms of our recruitment efforts. And I know I got into ocean science because I read a book in 6th grade that made it sound very interesting and exciting and I pursued it because of that.

Ari: And what was that book you read in the 6th grade?

Yoder: It was the classic one that everyone read in the 6th grade about the ocean: *The Silent World* by Jacques Cousteau, which I bought for my father as a birthday present, and he never read it but I did.

Ari: Janice McDonnell is the Science, Engineering and Technology 4-H Agent at Rutgers University. Coincidentally, her interest in ocean science is also related to both Jacques Cousteau and her dad.

McDonnell: My father never graduated high school but he always encouraged me to be a scientist and always thought that would be a great career for me. We watched Jacques Cousteau religiously on TV together every Sunday so that was our dream

together. To be in this exciting world that Jacques Cousteau seemed to lead every week on his TV show.

Ari: I mean, what's interesting is that Jacques Cousteau I feel marries exactly these two areas: I mean, he was a scientist and an educator.

Yoder: Yeah, and it shows the power. If you have people that can speak articulately and demonstrate to the general public and to schoolchildren the exciting things that happen in the ocean, what it can do. You know, he had a tremendous impact. Not just in terms of recruiting people into the field but of getting people interested in the ocean and feeling that it was an important area of the planet to study.

McDonnell: The important thing to know about Jacques Cousteau, though, is if you ask an average 7-year-old who Jacques Cousteau is today, they don't know who he is. So we need a new Jacques Cousteau, and I think if we really do want to fill the pipelines with people who want to be scientists, we gotta inspire the kids we work with to be ocean scientists.

Yoder: Or if not ocean scientists, to at least appreciate the ocean and understand why it's important to know more about it.

Ari: One way that McDonnell and Yoder are doing this is through COSEE, or the Centers for Ocean Sciences Education Excellence. If you've listened to the credits of this podcast before, you've probably heard me mention COSEE.

<fade up, then down Ari saying COSEE during the credits>

Ari: And maybe you've asked yourself...

Sam: What exactly *is* COSEE?

McDonnell: It's really all about trying to get ocean scientists in particular to work with educators, whether they be in informal learning institutions like science centers, zoo or aquarium or even an educator who's in the classroom on the ground in the K-12 formal environment. Getting them to work with scientists in ways in which they can take the science that the scientist is doing and translate it in a way that's usable for public audiences. For the overall goal of improving their ocean literacy, which means understanding your impact on the ocean and its impact on you.

Ari: And why is this an important mission?

McDonnell: Well, we're in a time where we have a very changing planet. And I think it's more important than ever that people understand and become part of the environment. And the fact that the ocean influences our weather and our climate and food production, just about everything you can think of, I think it's really key

and important for schools to think about that and integrate that into their content standards. I think it's important for scientists in terms of feeding the pipeline of students who can become future scientists. I think it's important for the general public as they make decisions in their local, county government, state, national. At all three levels, it's really important to know something about the ocean that covers our planet.

Ari: And COSEE's pursuing its mission in a variety of ways. Through this Ocean Gazing podcast, for example.

McDonnell: For Ocean Gazing so far, we've really tapped into some of the most interesting and cutting edge scientists that are involved in ocean observing systems. So you've heard from a variety of folks who've been at ground zero in the development of ocean observing systems. And having from their perspective, from their own voice tell you why they're doing what they do so interesting and why ocean observing systems are so interesting and important to them as a new tool in ocean sciences.

Yoder: So far I'm very pleased that we've hit all these, hit different fields and we've hit different parts of the country, and I think we'll try to continue with that approach.

Ari: And remember those underwater robot gliders that Oscar Schofield and Scott Glenn were talking about a couple podcasts ago? Well, there's one on its way right now from new Jersey to Spain. It's being piloted by Rutgers undergrads. Besides all the ocean sensors, it's got some important cargo.

McDonnell: We've asked kids to write letters to be put inside that glider as it makes its voyage across. And we've had over 200 letters submitted from kids around the country and they've had a lot to say about what it means to them. They love the discovery part of it or the idea that they can be along for the ride, reading the blogs and being part of that mission vicariously through the web and through the online tools that we've developed for them.

Ari: Here are a few of those students reading their letters.

<montage of schoolchildren reading their letters>

Ari: And it's not just the kids that are getting excited.

McDonnell: Teachers love it because they don't have a lot of access to scientists and being able to chat with them online and being able to see that data come across their screen in real-time connects them. So it's a way of connecting people intellectually with what's going on in the ocean and not having to worry about physically being out on the boat. Of course, nothing replaces that. Everybody wants to feel the salt spray on their skin and be out there in the real ocean but this is a way to connect

people virtually in a way that has some meaning and some context that they can feel part of the scientific mission. That's what we're hearing from kids and teachers alike.

Ari: Now we'd like to hear from *you*. COSEE's about connecting ocean scientists and ocean data to the public. And we want to hear how you feel connected to the ocean. We're gathering stories about your memories of the ocean. We'll be creating something of an audio scrapbook for an upcoming episode. Go to our website, www.coseenow.net, and click on the Ocean Gazing podcast link, for the information on how to phone in your stories. Of course, it'll also tell you how to submit a guess for the sonic stumper. Remember last week's?

<fade up "Save Our Planet">

Ari: I asked Glen Ewers, a friend of mine and a writer and editor for the Earth Negotiations Bulletin, to fill us in.

Ewers: It's a song composed by the president of Indonesia, Susilo Bambang Yudhoyono.

Ari: It was performed at a UN meeting in Manado, Indonesia called the World Ocean Conference.

Ewers: World Oceans Conference is a number of meetings relating to certain issues related to the marine environment and climate change.

Ari: Ewers attended the conference and heard the song performed live.

Ewers: And then we all stood for the president to enter. From there, he listened to the music he'd composed himself sung by the wonderful Indonesian choir.

Ari: And those concluding lyrics?

Ewers: We want to save our planet. We are all united for a better life, for a better world, for you and me.

<cross-fade "Save Our Planet" and the new sonic stumper>

Ari: And here's our new sonic stumper.

<cross-fade sonic stumper and outro music>

Ari: Thanks for listening! Go to our website, www.coseenow.net, to hear Janice McDonnell and Jim Yoder talk about ocean literacy and ocean observing systems.

Onto the thank yous!

Yoder: I thank Janice McDonnell.

McDonnell: And I thank Jim Yoder.

Ari: I'll thank Sage Lichtenwalner and Sam Broun. Ocean Gazing is funded by the National Science Foundation and it's a product of the Centers for Ocean Sciences Education Excellence. Now you should know what that is.

Until next time.

<fade up outro music>