

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!

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Jennifer Stock: Welcome to another edition of Ocean Currents, I'm your host Jennifer Stock. On this show I talk with scientists, educators, explorers, policy makers, ocean enthusiasts, adventurers, artists, and more, all uncovering and learning about the mysterious and vital part of our planet, the blue ocean. I bring this show to you monthly on KWMR from NOAA's Cordell Bank National Marine Sanctuary, one of four national marine sanctuaries in California, all working to protect unique and biologically diverse ecosystems. Cordell Bank is located just off shore of the KWMR listening radius off the Marin Sonoma Coast and is thriving with ocean life above and below the surface.

Well if you are a regular listener to Ocean Currents, you probably know that I'm a big proponent of combining disciplines to engage all in the understanding and appreciation of the ocean, science, education, technology, policy, community participation, management, and probably my favorite, the arts. Today's show is about the exhibit that just opened at the Bolinas Museum, out here in West Marin. Ocean Wonders and Ocean Wellness brings together three well known artists in the galleries and offers a variety of lectures, experiences, and challenges for us all. I caught up with Jennifer Gately, the executive director of the museum, last Thursday, and I'll start today's show with an interview with her, with an overview of the show at the gallery and then we'll have two of the three artists calling us today in the show, in the studio, Chris Jordan and Isabella Kirkland. So stay tuned for a great show.

(Music Plays)

Jennifer Stock: I am here at the Bolinas Museum with the executive director, Jennifer Gately, and Jennifer thank you for agreeing to chat for a few minutes about this recent exhibition that just opened. Tell us...

Jennifer Gately: My pleasure.

Jennifer Stock: Tell us about the exhibition, the name of it and what's it all about.

Jennifer Gately: Well it's more than an exhibition, actually. Not long ago I began to consider our programs here at the museum in a more holistic way and this particular program is called Ocean Wonders and Wellness and it brings together three exhibitions and a series of talks, a workshop, a tour, and a pop-up shop around the theme of ocean wonders and wellness.

Jennifer Stock: Briefly, they're three distinct areas. Can you just tell us each of the artists and the range of their work that's here in the galleries?

Jennifer Gately: I'm happy to do that. We're talking to your ocean loving fans, and those who are becoming more ocean loving and I can tell you a little more about the inspiration behind all of this before we talk about the unique exhibitions if you'd like. If you live here or you visit there's a good chance you love the ocean, but really how much do you know about the ocean? I had to ask myself that question when I realized, I really know very little about the creatures that inhabit it or the health of the ocean. I know climate change is a big problem and of course one of the primary themes of this exhibition is marine debris and specifically plastic, but I thought it might be fun to bring together artists to talk about that.

And my inspiration really was the artist, Isabella Kirkland, who is just over the hill in Sausalito and is a highly regarded painter. Mostly well known for her work with species that have been compromised by man in some way shape or form. And when I approached her about doing a show at the museum, I had another body of work in mind, but she was very excited to share with me the fact that she had been thinking about something new and that was rather than focusing on the dire stories of species that are being lost. She wanted to focus her lens on an area that she hadn't worked with before and that was species from the ocean and specifically those that might not be well known or known at all by people. In order to instill a sense of curiosity and wonder in hopes that they might then become champions of the ocean and the species that live there and make changes to how they approach their daily lives recognizing that those changes, those actions then have repercussions that are unseen on creatures yet to be discovered. And so, one of the creatures that she brought up was this creature the nudibranch and we started talking and she was telling me all about them. I had no idea that they were sea slugs and butterflies of the sea and some of the most colorful creatures on the earth, and that there are up to 2,000 species known and considering that we've only explored 10% of the world's oceans, who knows how many are unknown.

So, I thought that was fascinating and I knew that she was a brilliant artist and I said let's do it. And then with that, I thought well you know it's one thing to talk about the wonders found beneath the sea, but we really should talk about the health of the world's oceans in conjunction with that. It's a big topic and obviously we could do a year's worth of programs around it, but we decided to focus our attention on marine debris and plastic, in particular.

And so, I brought together two additional artists to speak to that. One Chris Jordan, who I believe will be on the show today, he's a really remarkable man and he has been inspired to take photographs of the poor albatross chicks that have been feed plastic instead of krill or fish from the sea by their parents, and then have ingested so much that they have died as a result of that. Apparently, 98% of the albatross at Midway Island and the surrounding islands have ingested plastic and he'll probably share more figures with you. It's quite, quite astounding. So those photographs are in the photography gallery and they're heartbreaking, but I think important for people to see.

On the flip side, in that same building is the coastal Marin artists gallery and I invited Judith Sembulang, a very well-known and well-loved artist here in Marin, who has been combing Keyho Beach in Point Reyes National Seashore with her husband for a number of years and collecting beach debris there, bringing it back to her studio, categorizing it, sorting it, cleaning it, and the two of them together have been making art with that debris to speak about human consumer habits. But she also independently has been making these incredible pieces of jewelry, wearable art with brightly colored bits of flotsam and jetsam found on Keyho Beach, and we brought them together in a very precious way to talk about scarcity and value as it relates to the environment and to the objects that we assume are disposable in our daily lives. So it's a, it's a humorous view of a very serious subject.

Jennifer Stock: Now one of the nice things that I love about this exhibit is that it's more than an exhibit that you've planned a series of events and lectures and talks and ways to get out into the community to discuss the topics presented in the gallery and without going every single event because people can go to the website for that, tell us about some of the people coming together and some of the events that are coordinated with the exhibit.

Jennifer Gately: Right, well the first is an upcoming talk with Isabella Kirkland, the painter in the main gallery who did these incredible nudibranch

paintings, and she will be joined by Rebecca Johnson from the California Academy of Sciences, who's a marine zoologist and the two of them will discuss their inspirations and various quirky, wonderful creatures that are found within the ocean that we may not know about and that is going to be moderated by you my dear.

Jennifer Stock: It's kind of funny wearing two hats at the same time.

Jennifer Gatley: That's scheduled for October 18th and I think it will be a wonderful way to engage in a topic that may not be if you're not science minded. Maybe you're art minded, you might come because you want to hear an artist speak about her work, but if you are not artistically minded and you're more inclined to be interested in biology, you might come and be inspired by an artist. So, I love bridging the two disciplines and I have been trying to do that in recent programs. We'll be doing that again in another great minds talk on November 8th with a very special guest, Steve Wilson, who is the associate director of Five Gyres, a very important nonprofit, whose mission is to rid the world's oceans of plastic. And he has been to all of the world's five gyres and I'm sure Chris Jordan will talk to you more about the gyre situation, which is dire. But Steve will also be talking about his experience and possibly present some solutions for that great tragedy. And he will be joined Judith Sembulan and Richard Lang, as well as Kate Bimrose from the Gulf of the Farallones National Marine Sanctuary, who has been doing some research on her own on plastic debris in our local beaches, which will be very important to hear. So, that will be stimulating and phenomenal, so that's a great minds we'll talk about the ocean wellness subject.

And then we'll have a workshop with Janis Yarrington and Tess Felix, who will be bringing in some marine debris that, we can, plastic debris we can make into works of art of our own. And we'll also have a tour of the Duxbury Reef with Boost Bowser. So, those both are reservation only and so it's important to get to get in quick if you'd like to be a participant in those, they're limited numbers and very popular. We've got some great programs. We also have a unique thing. We haven't done this before. We brought together with this group, Retail Expert, to develop a pop-up shop called the Four R's, refuse, reduce, reuse, recycle, to educate us about how we might begin to stop using single use plastics. And so we have a number of items in the galleries that are on display that will help you to make some better choices at the checkout stand, we hope.

Jennifer Stock: And it's almost the holidays, so what perfect timing.

Jennifer Gatley: True, yes it's true. It is a, it's perfectly timed.

Jennifer Stock: Well, thank you for that nice overview. I have one last question for you. What's your favorite thing about the ocean?

Jennifer Gatley: Oh, the waves.

Jennifer Stock: Easy.

Jennifer Gatley: Easy, says the surfer.

Jennifer Stock: Awesome. Well Jennifer thanks again for chatting with us. It's a beautiful show and I look forward to talking later today with Chris Jordan and Isabella Kirkland, here on Ocean Currents. And I will add one thing that there are three photographs from Cordell Bank National Marine Sanctuary in here.

Jennifer Gatley: Yeah, they're very important for those of you who don't know the Cordell Bank is a remarkable place and it's rare that we get to see the beauty that lives there and so we do have three photographs. Thank you very much for the loan.

Jennifer Stock: Yeah, you're welcome.

Jennifer Gatley: That help us to better understand the environment in which these creatures might live.

Jennifer Stock: It's a beautiful environment that we have off the coast here in Bolinas and West Marin, so this is a wonderful place to celebrate it. Thanks.

Jennifer Gatley: Thank you for having me. It's my pleasure. Any time.

(Music plays)

Jennifer Stock: And for those just tuning in, you're listening to Ocean Currents. And today's show we're talking about the exhibit down at the Bolinas Museum, Ocean Wonders and Ocean Wellness. And you just heard an overview of what the exhibition is all about and the different artists and the galleries and I'm pleased to start talking with some of the artists themselves that are part of this. On the line, I have Chris Jordan with us. Chris is an internationally acclaimed artist and cultural activist. His images explore

contemporary mass culture from a variety of photographic and conceptual perspectives. Connecting the view to the enormity and power of humanity's collective unconscious. His work walks the line between art and activism and brings audiences to look inward, while examining the landscape of our collective choices. His most recent work focuses on Midway, an island in the Northern Pacific and the albatross and the environmental, cultural tragedy around plastic in the ocean. And I'm truly honored to welcome Chris. Chris you are live on the air.

Chris Jordan: Hello, Jennifer. How's it going? And thanks for having me on.

Jennifer Stock: Wonderful, thank you. Thanks for joining me. This is such an honor to speak with you because your work is truly, very passionate and a big part of my work as an ocean educator so it's just truly an honor to have you. Thank you for joining me!

Chris Jordan: No, thank you!

Jennifer Stock: So your works leading up to Midway focus on illustrating the enormous problems, environmental problems, social problems, health problems, conceptualizing individual data points and making it in a visually understandable way that people can grasp the concept a lot more. How did you cross over from that type of work to the actual physical place of Midway Island and visiting and documenting the story of the albatross?

Chris Jordan: Well, I've been a photographer for, I don't know, maybe 30 years or something like that and the series that I did that I'm actually still, doing called Running the Numbers that was sort of my deviation from straight photography. And I sort of ran into a road block awhile back because I was trying to face the enormous issues around our mass consumption. But there's nowhere you can go and take a photograph of all of the cell phones we throw out or all of the cars we discard or all of the computer monitors we throw out because those way streams are spread out into thousands or millions of different places and so we have these giant statistics we're always bombarded with every day, you know things like we use 200 billion plastic bottles in the United States every year, but there's nowhere to take a photograph of that. And so for quite a few years I've been making these large scale digital constructions, these sort of collages or whatever you call them that show at least attempt to illustrate the enormity of our mass consumption. But it was something about that work that never really got me there because to me the missing piece of the puzzle in our culture is is feeling something. I think for a whole bunch of different reasons

we have become disconnected from what we feel and there's just something about a photograph of a real thing in the real world that helps us to connect with that thing and to feel something and so when I heard that there was this astonishingly symbolic tragedy happening on this incredibly remote island in the middle of the Pacific, it it just really rang the temple bell in my mind and I had to go there.

Jennifer Stock: How did you get there? It's a hard place to get to.

Chris Jordan: Yeah, well it's hard to physically, it's not too difficult because there's a runway. So you know it's not one of those islands to have to sail to and camp out and use solar panels to charge your batteries and things like that. It's an island with quite a bit of infrastructure and there's a flight that goes once a week back and forth. It's just a small government plane, so I was able to hitchhike on that, but the real the real challenge of getting to Midway is to get a permit because it's a marine sanctuary and they're very strict about letting people there and if whatever it is you want to do on the island, if it's possible to do that on any other place in the world, then they won't let you onto Midway and so I had to convince them that there is nowhere else that I could go to do this particular body of work, which is true because most of the world's albatross populations live right there on that one island.

Jennifer Stock: So for listeners, Chris's work is a collection of photos from his visits to Midway that captures images of albatrosses that have died and have decomposed and what's left behind is a very visual collection of plastic, and Chris I'm curious, I'm sure you did a body of research before you got to the island and you were there, but tell us what your first, your first impressions were when you got off the airplane and there you finally are surrounded by this blue vision of water and the birds. What was it like?

Chris Jordan: Well, it's just an astonishing place. I've been there eight times now and every time it's the same thing. It's like Midway is this kind of microcosm of our world. It's this very, very intense place, where the you know the number of birds on the ground is just astonishing and overwhelming. There are more than three million birds that live on this island. That and the whole size of the island is basically the length of the runway. That's how, that's pretty much the whole island and three million birds, it's I mean it's just a cacophony of noise and hundreds of thousands of birds just sitting around right on the ground and they have no fear of humans because they've never had a predator and so you can walk right into these huge flocks of birds and stay and sit down and you know be within

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arm's length of these magnificent creatures, and so in that way it's like being in paradise and at the same time all around are the dead birds whose bodies are filled with plastic and also this sort of strangely haunting remains of the military infrastructure from when it was a military base. So there are these huge rusting fuel tanks and this giant old rusting water tank and old bunkers and things like that that just are sort of always like the echoes of war.

Jennifer Stock: When you arrived did the story that you were hoping to capture evolve for you at all?

Chris Jordan: Yes, it sure did. I was only planning originally on going there once and the intention behind the project was simply to make a series of still photographs of the dead birds filled with plastic. And I brought a film crew with me the first time I went there just to make a documentary of the process of photographing them just to prove to people that we didn't fake the pictures.

Jennifer Stock: Wow!

Chris Jordan: Because I knew there was going to be, you know, a lot of questions and people thinking that I put the plastic inside those birds. And so you know we had a film crew that was gonna document and then make a little film about that. And what happened when I got home from that first trip with this body of work of about 100 photographs of the birds filled with plastics, I posted on the internet and it, I was really surprised that it went viral. It reached a huge audience around the world, those photographs and a lot of the response that I got back was not people who felt more hopeful or inspired to do something. It was a kind of trauma response. You know people say that these pictures make me feel more hopeless than ever and so I began to realize that my work had had the exact opposite effect than I wished. And so it was then that I consulted with a few people who I think of as sort of being my elders. One of them is the writer Terri Tempest Williams and then my friend Joanna Macey, the Buddhist teacher. And they both gave me I thought a really profound piece of advice which was to go back to the island. They said the story's not complete yet you haven't told the entire story and neither of them knew what the rest of the story was, but they both just had this strong sense that I needed to go back, that there was more than just the dead birds filled with plastic, and so when we went back that's when we met the live albatrosses for the first time. And we're just mesmerized by their grace and their beauty and the fact that you can get up so close to them and and the project began to kind of morph from this horrible look at this tragedy into a story that contains the tragedy, but is

also kind of wrapped into an envelope of exquisite grace and beauty.

Jennifer Stock: That's amazing and I really appreciate that you went back to tell the whole story because I'm wondering yeah the feeling of arriving on an island and seeing all these dead birds and maybe not as many of the live ones is extraordinarily the opposite. I've never been there, but the photos and videos that I have are make me want to go there with all the birds everywhere. So you've been working on this film and it's going to captivate more of the whole picture the whole natural history of the bird, I am assuming from the birth of an egg of a chick to an adult and fledglings and showing that enormous growth and as well as weaving in the story of the human influence.

Chris Jordan: Yeah, well that's kind of exactly it. You know a story of the lifecycle of the birds and the astonishing epic adventure that their lives are and really, you know, the deeper message is not going to be this horrible message that humans are bad for polluting the world. It is more about remember what we in the first world have forgotten, which is just how wondrous and amazing and beautiful the world is, and you know any creature that we look at up really close, you know, if we could go spend months with dolphins and see what they actually do and what their communication is and how they have their babies and like or any creature. Then, we would discover that all creatures have this incredible epic story, and so I just took a really close look at the albatross and they let us up really, really close because they've never had a predator in all the millions of years they've been living there on that island and so you can literally get up so close to them so that the camera lens is touching their face, and so we had to bring these special lens that would focus like one inch in front of the lens, and so they really let us into their lives and you know we have this this beautiful footage of the babies hatching from their eggs and you know the lovers snuggling in a nest, and so in that way it's kind of hopefully will come across to the viewer as a sad and beautiful love story.

Jennifer Stock: That's an amazing version as an artist to take. I'm just thinking back to your original impressions from the prints or the first photos you took and posted and getting the opposite effect that you intended and taking that on and managing that and realizing what an important role you have as a communicator to help people understand our human role in the ecosystem. How, what's the timeline for the film? I've seen the trailer and it's wonderful and

it's definitely peaked my curiosity. I've used it to educators showing them as we teach about the albatross a lot here in California, and tell us a little bit about the timeline for it coming out and where it will be shown.

Chris Jordan: Well, I'm still working away on it. The most challenging part is the writing of a narration and it's just so important to say the right thing and it's been a real struggle to find my own voice. I know that sounds kind of strange, but I know it's something that happens to a lot of artist in various mediums is to really find the courage to really speak the truth and I'm still in that process, but I'm hoping that the film will be ready for release sometime early next year. And so our initial thought is for now is to show it at some film festivals, see how it does and just go from there.

Jennifer Stock: That's fantastic. I appreciate you taking the time on that. It's one of the hardest challenges we have as communicators about environmental challenges, such as plastic or even ocean acidification or climate change, is not getting the message wrong so I think it's wonderful that you're taking that extra time to really get the right voice because it's gonna have a huge impact on people's perception about our impact as humans on others' lives in the oceans, so I'm really looking forward to it early next year and we'll definitely keep our ears posted for it around here. What are some other concepts you're thinking about as an artist in terms of weaving in these values you have in terms of awakening humans to our daily choices and to the larger impacts?

Chris Jordan: I know that I'm going to continue making my Running the Numbers pieces for quite a while. That's the name of the series where I make these these big digital collages because there's so many issues that are invisible to us and yet they're profoundly important for us to comprehend and understand and feel something about, you know, like the number of birds that are dying from pesticides, factory farming, you know I could do a whole series on factory farming and you know forms of violence. I mean I have a list of probably 50 issues that I wish I could have a whole little crew of people helping me make pieces to illustrate those things and making the film has been really difficult, much much more difficult than I ever imagined, but now that I'm getting near the end of Midway I'm starting to think about potentially another film so that's exciting and scary to think about.

Jennifer Stock: Wow. Wonderful. How about websites? Where can people track your work and see some of your other work, besides of course coming to Bolinas Gallery here in West Marin to see a small

section of your work related to Midway, a message from the gyre. But what are websites that you would like to visit to see more of your work?

Chris Jordan: Well, there's my website is just my name Chrisjordan.com and then the Midway film trailer is up on Midwayfilm.com

Jennifer Stock: Well, Chris, thank you. I have one last question for you and that is what is your favorite thing about the ocean.

Chris Jordan: Oh, wow. You know what it is, I think, it's I have only seen it a few times when I have seen it a few times in Hawai'i and then on Midway, when you get to look into the deep Pacific water on a clear day it is just this unbelievably gorgeous deep radiating sapphire blue color and whenever I saw it, I just couldn't take my eyes off. It's like looking right at a spiritual battery charger. I wish there was a way to duplicate that. There's no way, I've tried. When you photograph it, it doesn't look like that. There's something about being able to see down into the water as the water's moving.

Jennifer Stock: Oh, neat.

Chris Jordan: It's incredibly gorgeous sapphire cobalt blue effect, that I'm in love with.

Jennifer Stock: Thank you for sharing that. Sounds like a nice memory that needs to live on in your mind. Well thank you so much Chris. This is really wonderful to talk with you and I really appreciate how you're working as an artist and an activist to really touch on some huge issues in a very mindful way and we'll be definitely tracking your progress as the film comes around in the new year, and thanks for joining us today on Ocean Currents.

Chris Jordan: No, thanks for having me on Jennifer, it was a delight.

Jennifer Stock: Alright, take care have a great afternoon.

Chris Jordan: You too. Cheers.

Jennifer Stock: You're listening to KWMR 90.5 Point Reyes Station, 89.9 Bolinas, and 92.3 the San Geronimo Valley, and live on the web at www.kwmr.org. We're going to take a quick short musical break before we come back with another interview. You're listening to Ocean Currents and we're talking with artists that are involved with the installation at the Bolinas Museum, Ocean Wonders and Ocean Wellness. Up next will be Isabella Kirkland, a painter.

(Music plays)

Jennifer Stock: And welcome back to Ocean Currents, we're talking with artists today from the recent installation at the Bolinas Museum Ocean Wonders and Ocean Wellness. Isabella Kirkland has dedicated her artistic career to calling our attention to the delicate wonders of the natural world bridging art and science. Ms. Kirkland meticulously researches her subjects before carefully rendering them to scale and oil paint, bridging art and science Ms. Kirkland meticulously researches her subjects before carefully rendering them for her collections. She is a painter, both watercolor and oil, and is a research associate with the department of aquatic biology at the California Academy of Sciences and a science advisor with The Long Now Foundation. Her most recent addition joins the Bolinas Museum exhibition, Ocean Wonder and Wellness and focuses on nudibranchs. So welcome Isabella Kirkland. You are live on the air.

Isabella Kirkland: Thank you Jennifer. Thank you for having me on.

Jennifer Stock: You're one of those interviews that it's important for people to log onto the internet, I think, to see your work because that's the tough thing about interviews with art or artists is you want to see the work that we're talking about, but thank you for joining me today. So your work is truly the result of incredible skill for art, but also having an incredible conceptual theme that requires extensive biological and ecological knowledge and history to interpret and I'm curious for you which came first for you and your career, was it the art or the biology?

Isabella Kirkland: Well, truly art came first I never wanted to be anything else. It's all I ever wanted to do and then I began as a sculptor really not as a painter, so I began from a conceptual basis so even though I made a lot of handmade objects, I tried very much to have them have you know an intellectual reason for being and so it was kind of an easy shift for me to go to this very applied art that had a, you know, a strong content. And my love of the natural worlds just been part of the way I grew up and part of the fortunate was I was able to grow up.

Jennifer Stock: So your earlier works were themed on a concept of species already gone, nearly gone, saved, collected for possession or trade. You had these themes, these paintings. How did you come around to feature one taxonomic group, the nudibranchs?

Isabella Kirkland: The nudibranchs are my sort of opening salvo into trying to bring and shine some light onto these things that are underwater, so we don't get to see them you know. We, we haven't been able to visit the underwater world for very long and because of that there's a lot down there that we don't even know exists, and with the change that we see on the surface, we're also affecting to huge extents what's underneath the surface of the water. So as we change it, we're bound to have impact on these species and so once again I'm trying to document (34) and the mess we make. They're just too many of us.

Jennifer Stock: So there's thousands of creatures underwater to look at to feature. What drew you personally to the nudibranch, the mollusk?

Isabella Kirkland: Well a number of things. I happen to live on a houseboat in Sausalito. My studio's a houseboat and even though and everybody always says you know your boat rocks how can you keep still the paint, but you know my chair and everything moving at the same rate. But I actually found a couple of nudibranchs on the hull of my house boat, a good 10 years ago and started trying to find them in the bay whenever I had the time and have found nine species now, right in Richardson Bay and I also happen to live with a surfer so we been to a lot of warm places close to the equator, where where nudibranch hunting is a great deal of fun.

Jennifer Stock: So they just captured your imagination, I imagine as a subject to paint.

Isabella Kirkland: Indeed, they're so bright and they're so varied you know there there's just a million variations on the theme of slug if you take the bodies, you know the slug silhouette, as a base for just there's a million different variations on that basic shape, so they captured my imagination and wanted I just want to share them and they're really really fun to paint.

Jennifer Stock: I bet. I bet. For those that are unfamiliar with nudibranch, can you describe them a little bit more in terms of what type of animal they are and their unique qualities.

Isabella Kirkland: Sure. You know we're all familiar with our great banana slugs. Well these are in the same group, they're mollusks and they just happen to live in saltwater. They're in every single of bit of saltwater everywhere in the mudflats down all the way to a species in a thermal vent and you know so very deep and from the arctic clear to the equator. So they're very well adapted to their particular

little niche and they have the same body plan as slug, you know the garden slug. But they have, a lot of them have tentacles like a garden slug has which they can retract. But a lot of these they have to have some sort of structure to breathe with underwater so their gills structure's very are very interesting. That's part of what their huge variety is about the breathing structure. And their, they come in every color of the rainbow, and they vary from about 2 millimeters to about 500 millimeters is the largest anyone's found yet.

Jennifer Stock: Wonderful. How is it sounds like you do an extensive amount of research before actually painting anything. Tell us a little bit about the breath of research you do about each species before you start painting it.

Isabella Kirkland: Usually I go to a natural history museum and if I interested in looking at an extinct birds, you know I'll request permission to go into that cabinet and actually look at the preserved remains. Well when you pickle a nudibranch, which is what you do to preserve it, it loses all its color and it shrinks a good bit. So you you can't see it really nearly as well as you can from photographs of live things. So unusually for me this has become a very much a project of having to look through underwater photographers photographs so in order to become really familiar with each of these species and learn what make its unique and what properties it does have. I've found on the internet and in about 15 different guide books about 100 to 150 photographs of each individual species, so I could look across a whole range of their sizes and their ages and different points of view of them. So that I can become familiarly enough to paint it as accurately scientifically accurately as I possibly can. Does that answer your question?

Jennifer Stock: Yeah. I actually, another part of it too is in terms of learning about all these species you're learning a little bit more about their range, their diet, and their different adaptations. How much does that information influence your painting of the physical aspect?

Isabella Kirkland: Well, one of the things I usually provide a lot of ancillary material with any painting I do so that a viewer can be as sort of involved in the science if they want, and then normally I would try to give you a story with the species because some of them, for example, one particular species has a relationship with juvenile lionfish. For some reason, these lionfish are attracted to this particular nudibranch and they juveniles will hang out in the fringe of the nudibranch and get protection from the nudibranch. Probably chemical protection of some sort. I just try to give as much depth

to anyone of the paintings as I can by providing that kind of information to people. So it adds interest to just looking at the peculiar characteristics of this animal visually.

Jennifer Stock: You also covered a couple adaptation besides just the actually physical beautiful paintings which are just amazing. I had a chance to see them on Thursday. But you also show the different types of egg cases and different types of predation or their gills and how did get the research on these? Were there pictures available on those egg cases? It's just incredible, extraordinary detail that you bring to light in a painting that is just phenomenal.

Isabella Kirkland: Well, I I appreciate that. You know I've been saying that nudibranchs look like they were invented by Dr. Seuss and then made by Dale Chihuly. You know I, I just get carried away with it honestly and I'm so awed by the wonder of these animals I just want to share that awe. Figuring that leads to a desire to protect so you know there's an amazing, the internet's an amazing place. Nudibranch enthusiasts want to share their information with each other and there are some fabulous websites that are maintained with a high level of scientific rigor really. Even though there are lots of amateur photographers who are very involved and want to know what they're shooting and learn about them, but so there are a great many resources online including the World Register of Marine Species (WoRMS). Which is sort of the final go to organization that determines nomenclature, so all of my species are checked against that so I have the correct name applied to the correct species. Hopefully.

Jennifer Stock: Yeah. Well and also you work with the California Academy of Sciences. I know they have extensive staff that focus on invertebrates and nudibranch specifically, did you work closely with them as well in your research?

Isabella Kirkland: I did. I had Dr. Terry Gosliner helped me make sure that my drawings were accurate and I ran my species list by him and he gave some suggestions, and I included quite a few that he named out of the original descriptions of and therefore had the naming rights to it, and it was a great help as always and Rebecca Johnson helped a good bit too.

Jennifer Stock: Now is this the first in a series about the ocean aqua? Am I saying that right? It says it's the first my new series aqua and I'm curious if you're looking at some other taxonomic groups of the ocean that you might be painting in the future.

Isabella Kirkland: I am, I never took Latin but I believe it's aque. It's supposed to be the plural for water, I mean waters, meaning the many oceans and water world on our planet. I do have quite a number of other things I'm considering. There are you know when we think of the word shrimp we think of something curled and pink on a plate and there are some truly astounding shrimp in the world. One of the problems I run into is scales. If I paint it life size a lot of these shrimp are really small so I have some issues I need to resolve before I address that, but I actually found a shrimp that the eyeballs look plaid, they're just dumbfounding again in color and array and diversity. So I am considering those. There are a group of animals called squat lobsters that most people have never heard of.

Jennifer Stock: Oh, we have those out at Cordell Bank.

Isabella Kirkland: Right. Oh yes there are, yes there are because they too are everywhere. They're in all the oceans everywhere and they're huge. They're horrible affected with bycatch because they're plentiful and they're everywhere and nobody eats them so they just get caught in nets and are thrown out by the ton. So it would be fun to document those and there is just a wealth of wonderful things to talk about. You know diadema urchins and blanket octopus and not to mention the other forms of life that we don't think of as animals that are proto animals.

Jennifer Stock: Oh yeah and very interesting we should get you on gelatinous zooplankton.

Isabella Kirkland: Indeed I mean the tunicates, the sea cucumbers you know. I've discovered a cucumber in, when I was in Tahiti, that looked to me like a 4 foot long piece of brown ribbon that was crinkled, and when I touched it of course it shrunk to about 6 inches and it took me a long time to figure out what exact cucumber that was.

Jennifer Stock: That's exciting. That is the beautiful thing about the ocean is that there are so many things to discover, and I really like that artists can help bring it to light because most people wouldn't see these things so thank you for helping us with this building of ocean awareness and the importance of it.

Isabella Kirkland: Well, I think this is our age of needing to think about the ocean. We have been talking about Silent Spring for how many years, fifty almost, and we have to come up with another acronym for the ocean that has we are profoundly affecting it even though it is vast.

- Jennifer Stock:* Yes. Well, one last question for you, what is your favorite thing about the ocean?
- Isabella Kirkland:* Oh gosh, I think my favorite thing about the ocean is that that salinity is the same as our tears and the same as our blood and that's where we come from, so it's a world we don't understand very well and we don't very well and kind of the last great frontier on Earth, so it is just a wide open book of wonder that we need to explore.
- Jennifer Stock:* Thank you. And how about a website for you that people can follow and see the rest of your work.
- Isabella Kirkland:* Thank you, Jennifer. It's just www.isabellakirkland.com. Very simple.
- Jennifer Stock:* Great! Wonderful!
- Isabella Kirkland:* It's on the first page of Google finally.
- Jennifer Stock:* Ok! Well and I'll be announcing some of the events that you are a part of and we will be sharing that with the exhibit and I look forward to meeting you in a couple of weeks.
- Isabella Kirkland:* Great! Same here, I look forward to meeting with you as well. Thank you for having me on.
- Jennifer Stock:* Thank you Isabella. Have a great afternoon.
- Isabella Kirkland:* You too. Bye bye.
- Jennifer Stock:* We were just talking with Isabella Kirkland, a painter, who has beautiful paintings of these under-appreciated species that are just really incredibly colorful and diverse and have amazing adaptations. And I hope you'll all have a chance to come down to the Bolinas Museum between now and early January to see this exhibit, Ocean Wonders and Ocean Wellness. I'm not going to have a ton of time to go over all the events that the museum is hosting, but they are doing a series of events in addition to the exhibition being open on the weekends. But there are lectures and outings where people can learn a little bit more and get involved with some of the concepts behind the works that are featured. The best way to learn about all of these is going to bolinasmuseum.org. Everything is right there on the homepage. You can learn all about the events, see some pieces from the exhibits so you can get down there, and that pretty much wraps up our show today.

This is Ocean Currents and Ocean Currents is the first Monday of every month, KWMR, 1 to 2pm part of the West Marin matters series. And I also save each show as a podcast and you can get those either at the Cordell Bank website, cordellbank.noaa.gov, or look in iTunes for Ocean Currents. And all the shows are archived there for you. Hope you have a great afternoon. Thanks for tuning into Ocean Currents here on KWMR.

(Music Plays)

Jennifer Stock: Thank you for listening to Ocean Currents. This show is brought to you by NOAA's Cordell Bank National Marine Sanctuary, on West Marin Community Radio, KWMR. Views expressed by guests of this program may or may not be that of the National Oceanic and Atmospheric Administration, and are meant to be educational in nature. To learn more about Cordell Bank National Marine Sanctuary, go to cordellbank.noaa.gov.