

Transcript of interview with Marlo Garnsworthy, author of Iceberg of Antarctica. 2.27.2021

1. Antarctica is a huge place. There are many ways you could have focused this book. Why did you choose an iceberg?

Well, the simple answer is that I was with scientists in Antarctica, and we were studying icebergs. Um, and it was my job to create something that was educational, and because I am a children's book author and illustrator, I wanted to make a book. And so, as I did my job as Outreach Officer with the public, explaining what we were doing there, and why, I realized that a lot of people did not know really what an iceberg was and how it formed. And so I realized that for people to understand why we were studying icebergs, they needed to understand how icebergs formed and how they end up floating in the ocean.

2. How long did it take you to write and illustrate the Iceberg of Antarctica book?

Well, truthfully, I'd been thinking about the idea for a few years, because I'd wanted to do something about icebergs, but the idea hadn't really come to me. But when I was out at sea on the Joides Resolution for two months, I really started to write the book, that's when I realized that people really did not understand what an iceberg was, so I thought, yes, this is the perfect time to write this book. So I am just going to show you a little something here- (on screen Icebergs Alive, 1979-2019, Pixie Movers and Makers, @MarloWordyBird, @Kevin Pluck) This animation that I made with my collaborator, Kevin Pluck shows how icebergs move around Antarctica. You can see where different icebergs from different parts of Antarctica break up. So this area, up here, where my cursor is moving, this is exactly where we were, and you can probably guess why, you can see how many icebergs end up melting in this area. That's where we were drilling.

I want to show you just how big Antarctica is (on screen image). People don't realize that this is how big the United States is, compared with how big Antarctica is. Really huge, right? So, the next question you asked me was about writing the book. While I was writing the actual words, I got those pretty much complete while I was on the ship. At the same time, I was starting to do these very messy sketches. So when I start to do illustrations for a book, I don't make beautiful artwork the very first time. I spend a lot of time making very messy sketches, thinking about the ideas and thinking about how every element, icebergs and animals and how they will all look on the page. I think about the shape of the page. So, that's what happens, and this is the most fun part of illustrating a book. This very messy sketch stage, where I just get to relax and enjoy myself. So I would encourage anyone who is interested in doing art to really have fun exploring sketches. Don't think your artwork has to be perfect at any point.

3. You used a lot of blue and grey on every page in your book. Why did you choose blue as the primary color in your book?

Well, that is because Antarctica is a very blue and white and grey place. I put some pictures here for you to see, some parts of Antarctica that I've seen. I've actually been there twice. (images on screen) And, the first time was actually on Antarctica, at McMurdo Station, the American Base

there. This is sea ice. On the ice you can see the beautiful shades of blue and purple and grey - incredible blue sky. When you get far out at sea the water itself is very, very, very deep blue when you get far from land- especially in the cold months. That's because the phytoplankton, the tiny little plants that live in the water, there aren't that many out there in the deep, deep version especially in the cold months. Because the phytoplankton are green, they tend to make the water green along the coast. But out the water is very deep and an amazing blue. And the ice itself can also look very, very blue. Especially if you look at the iceberg down here, on the lower right, that I'm pointing to. Blue ice is very, very old ice - it's because over thousands and thousands and thousands of years the ice gets very heavy, and it squashes and all the bubbles in the snow and ice that make it look white get squeezed out. And you end up with an iceberg that looks like this (image on screen). This is the prettiest iceberg that I have ever seen, and I've seen a lot of icebergs. Can you see a little penguin standing on there? Little Adele Penguins ... So that's why I chose those colors. Plus I just really like those colors.

4. Every page has one main picture. Why did you choose to focus your illustrations in this way?

Well, Antarctica is a very neat place, and when you are on a ship out on the ocean all you can see, all around you is sea, and sky and the occasional iceberg, whales and a lot of penguins. But, it's a very, very wide scene when you are standing there looking at it. And so, as an illustrator, it makes a lot of sense to me to try and make you feel like you are there by showing you a very wide scene with one single image.

5. Did you choose your words first or your picture first? Why?

Well, it's kind of a mix of both. Like I showed you before, I was thinking about the words and making some sketches. For me, when I am writing and illustrating a book though, the words really do tend to come first. I can't really get too far into the illustration process until I have a complete manuscript- a text, story written down. That doesn't mean I don't change the story, later on, just a little bit here and there, but usually I complete the words the best I can before I start illustrating.

6. When did you write your first book and how old were you?

I love this question. I was eleven, I started to write a fantasy novel called "The Serpent's Egg" and I had just been given a typewriter for Christmas from my parents, who obviously saw that that was going to be something that I liked, and I got about five pages in, and then I realized that I didn't know what was going to happen in the story. So I stopped.

But then when I was fifteen, I wrote and illustrated (shows pages) a love story between a fish and a butterfly. So that was the first book that I finished illustrating and writing - at fifteen.

7. What are your favorite colors?

Well, they are definitely the colors of Antarctica. You can't see the color of my shirt, but it is the color of a cresting ocean wave, a beautiful equine teal color, my jewelry is the same colors, and

you can see in the photograph behind me those colors are the most beautiful. Antarctica is the most beautiful place on earth, so I like to dress that way as often as possible. You can't see my office, but my office walls are the same color as the ocean waves too!

8. What is your favorite microfossil? Why?

I can show you some of my favorite microfossils. These are some of the microfossils that we found on our cruise. Now, my very first microfossil ever, that was diatoms. Now if you don't know what diatoms are, they are a kind of phytoplankton. Remember I mentioned phytoplankton are tiny, tiny one celled plants that live in the ocean, and make it look a little bit green. Diatoms are one of the most important groups of phytoplankton. Millions of different species, well, maybe not millions, but there's a lot. They are really responsible for making a lot of the oxygen we breathe. In fact, if you take a deep breath in now, and breathe out and breathe in and breathe out again, you are probably breathing oxygen that was made inside a diatom during photosynthesis. So that's very exciting. So, we're all connected to diatoms – all the time. They live in the ocean, they live in lakes and rivers.

(Author displays an image.) So, up in the upper left here, you can see some beautiful diatoms. There's another one down here on the bottom. They are really special because their skeletons are made of glass- it's beautiful! So, when I was on the cruise, on the Joides Resolution I actually fell in love with some other kinds of microfossils which I really didn't know much about. This big, weird looking eyeball, that is a radiolarian. A tiny, tiny little protozoan that lives in the ocean and eats phytoplankton. And over here on the right, is my favorite radiolarian of all. Look how beautiful it is! It is also made of glass- you can see through it. So, when it was alive, it would have had more things inside of its body, and it would have been looking around for little plants to eat. But, if you look through a microscope at all this stuff, it's cool! Amazing and beautiful....

9. What is your favorite drawing in Iceberg of Antarctica? Why?

Hmmm. I had to think about this one a bit. I really decided that this is my favorite one, (image) and the reason it is my favorite one, if you look at this photograph down here in the lower right, I took that the first time I went to Antarctica. We were flying over a part of Antarctica with an amazing, incredible glacier and you can see the ocean in the distance. And it was such a special moment for me because I had wanted to go to Antarctica for so,so long. And here I was, I was looking down at this incredible landscape, where there's hardly any people, and all this ice and beautiful mountains. And I just really fell in love with Antarctica in that moment. So, you can see here on the lower left, this is another one of those messy sketches I did to try and capture what I wanted to put in the book, and this is the final watercolor that I did. That was the inspiration for it. My first site of Antarctica.

10. When cores are brought onto the Joides Resolution from the ocean floor, they need to be opened. How do the scientists open the cores? Do they see any symmetry after the cores are opened?

That is a really, really great question. A core is like a big, long cylinder, probably 10 meters in length. I'm not sure what that is in feet. (32.81 feet) Fairly long, it's in a plastic case. I use one as

a pen holder. What they have to do first, is wait for the cores to come up to room temperature, and they put them in a big rack. Because, if you tried to cut open a really cold core, they come from the bottom of the ocean down, down deep in the earth, it's probably not going to turn out too well. So, what they do, is they let them sit there for a few hours, and they take them to a special room where they have a long machine, that looks something like a cheese slicer. I don't know if you have seen one of those cheese slicers with a wire, and they just run it through the cheese. That's basically what they do. So the cheese cutter wire goes all the way through the length of the core. Scientists don't actually do that. Technicians, who are also scientists cut the cores. It is their role to take care of those dangerous and technical things.

So they split it open, you can imagine if you have a long cylinder... I'll show you a picture. (image) You have a long cylinder and you cut it 1/2 lengthwise, you are going to have two symmetrical halves. I'll find you a picture. Let's look at the end of the book. So, here's one that I painted. You can see the curve here, and the cylinder... I don't know if you can see these little things sticking in the side here... those are the rocks, those are the dropstones.

So, I do have a picture (image). So you can see the half cylinders of mud. You can see it is grey. Sometimes it changes, very dramatically. You can see the half cylinders of mud Some is smooth mud, and some is drier, more grainy mud. Scientists look at the different ways that mud looks, the different changes in color. And then they study the microfossils inside.

But the other thing, the main thing we were looking for is these dropstones. You can see these ones have been cut in half. If you have the two halves of the cylinder, you can imagine, if you cut it down in half, It's still going to be symmetrical, right, because you have part of the rock on one side, and the other part on the other side. Sometimes not though. Sometimes when they cut it, there's a rock just on one side. You can see that in this image here. So mostly the cores, when you cut them in half, are symmetrical, but there are some little differences with the dropstones.

Thank you so much for your time and explaining how art and science connect in your book.