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The Art of Space, an interview with Ron Miller - Part 1

Maggie: Welcome to Blueshift, brought to you from NASA's Goddard Space Flight Center. I'm Maggie Masetti. Sara and I were privileged recently, to interview space artist Ron Miller. Not only does he create gorgeous illustrations, but he's an author, consultant, and former art director for the National Air & Space Museum's Albert Einstein planetarium. He's written and illustrated many books, but I know I remember clearly his book from the 80s, "Out of the Cradle," which was really popular and a big inspiration when I was growing up.

We recently came across his art illustrating a news article about an unusual exoplanet system a college friend of mine discovered that might actually have rings, much like Saturn's. We'll be sharing an interview with my friend about this system, but we were also intrigued by the art illustrating it, and how it came about.

This led us to Ron and resulted in this two part podcast all about his extraordinary work. Please do visit our blog at universe.nasa.gov/blueshift, as we've posted the art that we discuss with him during the interview. Without further ado, here's part 1.

Maggie: Thanks again for joining us. We're really fascinated by the art of yours that we saw online. Can you tell us a little bit about your background as an artist?

Ron: Well, I started off in traditional media largely because that's all that was available when I was in school and starting work. I went to an art college and studied to be an illustrator, and that's what I did for 10 years or so, you know, doing advertising work, commercial illustration for various advertising art studios in Columbus, Ohio. I've done newspaper ads, shoes, annual reports, all that kind of thing, but I've always loved astronomy.

And so I was doing some space paintings at home on my own just because it was, you know, I like that stuff. When I learned that the Air & Space Museum was going to have a planetarium in the new museum, I wrote to them and asked, "Say, you don't need an artist, do you?" They said, "Hadn't really thought about it."

I campaigned, talked them into creating the position and went there to work for four or five years, and went freelance after that, and have been a freelance illustrator ever since.

Maggie: You started out traditional media. At some point, did you transition to digital?

Ron: About 12 years ago, I got a contract to write and illustrate a series. I think it was 10 or 12 books for young adults, all on the solar system. And I started the first three or four paintings and realized there was no way I was going to make the deadline so I had to write and illustrate, I think it was… it came out to average like two books every three months, something like that. And I thought, this is ridiculous.

My friends, you know my artist friends, tried to get me to start working digitally for years, and I resisted it because I was really afraid stuff was going generic, rubber stamped, run

of the mill digital art. So I swallowed hard, did a few things to set it off… my friend said, "hey, these look just like Ron Miller paintings," which is all I needed to hear. I think I maybe have done two traditionally painted space paintings since then, partly because I get bored at doing a painting after a little while and if it takes longer than say, two days. to do a painting, I'll just put it down and say it's done.

In the same amount of time, I can do a digital painting that looked like I took a week and a half painting in traditional media because I eliminated all the stuff I didn't like about painting. You know, mixing paint, cleaning airbrushes, having to take five minutes just to make one little dot of one color because I had to mix the paint first, then make the dot, then clean the brush, make the next color… All that was removed, so I was able to focus all this sort of non-painting, non-creative time on being creative.

It was much more efficient. The results were much better. Since every time I do a picture, there's something new to learn, I haven't really had the incentive to go back and paint a space painting doing traditional media again.

Maggie: What inspires you as an artist about space and science?

Ron: Oh, what wouldn't? Well, I wrote my history of space art twenty years ago, or whatever it was. I pointed out that there's a real parallel between space artists and the Hudson River School of mid to late nineteenth century. You know people like Thomas Moran and Albert Bierstadt. These people went out west to Yellowstone and Yosemite and saw, you know, the Grand Canyon and Yosemite Valley and all this for the first time, and brought back all these grand and grandiose paintings of these places.

It was really the only way most people could even visit these places, let alone see them, was through these paintings. And I think space art, at least the kind of space art I do, which some of my colleagues refer to… we're "rock and bars." We're really just trying to visit places that are as wonderful as Yellowstone and Yosemite through the only media by which we can really do it.

And even with NASA probes and spacecraft, most of them, with the exception of Mars Rover, for instance, most of them, they're still flybys. They're still aerial views. You know, you're seeing all these places from space. And as touring Mars through, say, a Mars orbiter, or Saturn's moons through Cassini… it's kind of like touring the United States from 30,000 feet in an airliner.

Space art, we could put you on the surface. Instead of seeing the Grand Canyon from 30,000 feet from an airliner, you know, I could put you on the North Rim looking out across it. So that's part of the fun of doing this is taking the information that we know is there…. See I know Mariner Valley is on Mars. I know all the geologies about it. And knowing all that, I can put myself in it.

Maggie: Along those lines, how much research does go into an individual image? Like, how do you balance data and art to make the art this concept that's beautiful but also so accurate to what you're trying to present?

Ron: Sometimes it takes more research than it takes time to do the painting.

Maggie: Yeah, I believe that.

Ron: Yeah, and it depends what's available. I mean sometimes all… if I'm doing say an extrasolar planet, maybe all I know is that it's so big and so far from its star, and that's about it. It leaves a lot more leeway for invention even though the invention still has to be informed invention.

I'm doing something, like say an ice skies or Enceladus, I'm much more constrained, but no more constrained than I would be if I was actually there painting it. Doing the research and looking up all the details and data, it's really just in lieu of being on the spot.

I enjoy doing the research. It's fun. It's neat being able to say, "You know, see that rock? That's really there." Or it could really be there. Because if I wanted to make up the whole cloth, I could. But then I couldn't say it's a painting of that place. You know, I could do a picture of George Washington and make it look like anything. I could make it look like Ernest Borgnine or something. Which I'm pretty free to do, but by the same token then I couldn't say it's a portrait of George Washington.

So if I say this is a picture of Saturn seen from Titan, then it kind of behooves me to at least make some effort.

Maggie: To make Saturn look like Saturn?

Ron: Exactly. I enjoy doing that. That's the fun part of it.

Maggie: Which do you like better? Trying to make your version of Saturn or something that gives you complete free reign to make up something completely new?

Ron: I like some of the constraints because you have to be creative within them. Making up the whole cloth can be fun but having no constraints at all is a kind of constraint in itself because you could do anything. But coming up with something that's just equally beautiful but within, you know, certain bounds kind of forces you to think harder and you still have to make a pretty picture.

Space art, bottom line, it's a landscape painting. And it has to succeed as a landscape painting before anything else. So I have to do that first, you know, with the facts being right. It just adds a challenge to it that thinking about a whole cloth wouldn't have.

Maggie: Do you ever collaborate with scientists and they give you feedback like, "No, that's not quite right" or, "This should be represented differently."?

Ron: Yeah, there are some scientists like Bill Hartmann, who I've collaborated with a zillion times. But he's an artist as well, so he kind of knows what the kind of information an artist needs because he paints these things himself and he's really easy to work with. But other scientists, they're too close to the subject. They're not objective enough to understand that sometimes you have to fiddle with the detail or you have to change a detail to make a detail right. There's some things they don't quite understand.

But when I'm doing something for a publication like Scientific American, then, you know, the author has a lot of say, rightly so, because it has to be correct in that case. It kind of

depends on who and what you're doing the picture for. By the same token, it kind of depends on which scientist you're talking to. Some understand what you need to know, and some haven't got a clue.

Years ago I was going to do a picture… I wanted to do a picture of the Milky Way Galaxy seen from some planet outside the galaxy. I thought, "Well, I wonder just how bright the Milky Way would be?" You know, if you could see the whole thing at once? So I talked to Bart Bok, who is like Mr. Milky Way and wrote all the books about it and did all the fundamental research. I called him up and I said, "Say, if you were far enough away from the Milky Way to see it in the night sky like a big pinwheel, how bright would it look?" And he said, "Huh. I never thought about that."

A lot of scientists and astronomers, they don't think visually. They'll think in terms of really a column of numbers or a graph. Really to think how that translates into something visual…

Maggie: Yeah, I think translation is a big thing. It's kind of what we do here also. We do a lot of education and outreach, which is really translating what the scientists say so the public or educators can use it. So it's tricky also, like doing space art in that, you know, it has to be something that's understandable or pleasing to the person who's listening to you but it also has to be correct and balancing those things and working with scientists to try to get that correct, yet still appealing, can be challenging.

Maggie: Be sure to check out our website at universe.nasa.gov/blueshift to see Ron's art and to check out our other blogs and podcasts. You can follow us on Twitter or Facebook, where we're NASAblueshift, all one word. Feel free to send us your questions about astrophysics, and let us know what you want to hear more about! I'm Maggie Masetti, bringing the Universe closer to you with Blueshift.