

2013 AAAS SCIENCE AND ENGINEERING MASS MEDIA FELLOW

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Research Focus: I study cognition and communication in bottlenose dolphins (*Tursiops truncatus*).

Translation: Bottlenose dolphins are just one of many species of dolphins, but they're the one that people tend to think of when they think "dolphin." They're also the most-studied species of dolphin, and what we've learned from them is that dolphins and whales are ridiculously intelligent—in many ways, on the level of chimpanzees or above, even though their brains are very different from primate brains. We say sometimes that it's like studying alien intelligence. They understand and can work with basic human linguistic concepts, they have really complicated social structures, they transmit information and strategies culturally, and the scientist I work with, Dr. Diana Reiss, discovered that they can recognize themselves in mirrors. Very few animals, that we know of, can do that. In my lab, we study these cognitive capacities—what dolphins can do with their brains—and dolphin communication, which involves sitting in front of computers for many hours with graphs of their whistles and clicks, and looking for patterns, repetitions, or anything interesting.

What are your goals for the summer?

This will be my first foray into science journalism, and I want to see if I enjoy it as much as I think I will! I hope to learn skills that help me communicate science stories accurately and compellingly, because they will be useful skills no matter what I do. I want to get better at helping people to love science.



What are you most excited about?

I've always had a thing for radio. Ira Glass commented on the uniqueness of radio as a medium once, saying that there's something about radio that makes it easily personal and emotionally compelling, like someone is speaking right in your ear. People have interesting responses to sound, whether it's their favorite music, or the dolphin whistles I study, or a compelling radio piece. I'll be stationed at Voice of America, and I'll have opportunities to produce my own radio stories there. It's not a medium I've ever worked with before, and I can't wait to get started.

Why are you passionate about science communication?

One of the reasons I love studying science is that it always makes a great story: the story of scientific progress is the story of human beings figuring out basic truths about the universe we were born into. What could be better? It's a quest for truth and knowledge! And yet there is still so much science skepticism in the world. Understandably so: science must by its nature be so reductionist in its process that it can seem totally nonsensical to the rest of humanity. People think in whole stories, in big pictures, but science breaks things down into little parts, and that leads to gaps in communication between scientists and the rest of the world. I want to bridge the gap between scientists and our quest for small truths,

and the public and the importance of the bigger picture. Both sides make great stories, and both sides need each other. I genuinely think that the higher the level of scientific

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literacy in the general public, the better a place the world will be.

Who is your favorite science communicator?

I'm in the field of animal intelligence, but I have a real crush on cosmology and astronomy—partially because findings in those fields are so grandiose, so colossal, and so literally universal that space science popularists have little trouble inspiring awe. My favorite science

communicator of all time is Carl Sagan. "Somewhere, something incredible is waiting to be known," he said. He saw great beauty in the universe, reality, and the scientific seeking for truth about the universe and reality. My favorite living science communicator is Neil deGrasse Tyson. What a guy!

Describe your dream job.

Something that involves living on a boat in the middle of a remote ocean, with one ear on a hydrophone at all times, listening for whales, and writing about it. As long as I'm dreaming, trips in a deep-sea submersible to watch sperm whales and giant squid doing battle would be nice too.

Tell us about something you do outside of the lab.

I scuba dive, ride horses, play guitar, spend time thinking about *Mad Men* and Radiohead, and I really do write a lot.

Anything else you'd like to share?

My mother's cooking is my favorite anything ever.