

T O M M U S T I L L



H O W

T O

S P E A K

W H A L E

A VOYAGE INTO THE  
FUTURE OF ANIMAL  
COMMUNICATION

BOOK CLUB KIT

# DISCUSSION QUESTIONS

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1. Antonie Van Leeuwenhoek is widely acknowledged to be the father of microbiology, whose discoveries were the result of a mind “curious enough to look where others assumed nothing would be found.” Why do you think Tom Mustill opened *How to Speak Whale* with a discussion of van Leeuwenhoek’s legacy? After reading the book, do you believe we are, once again, at the dawn of a great age of discovery?
2. Mustill notes that as governments and tech entrepreneurs find new ways to record and analyze human data, we should be wary of bad actors with manipulative intentions. He proposes that pattern recognition technology be turned away from humans and toward other creatures instead, to better understand their behavior. Is this technological repurposing the redemption this technology needs? Or do you feel that this technology, while promising, could have unforeseen consequences? Do you believe the natural world is meant to be understood?
3. Mustill’s journey, about learning to speak whale, began in 2015 when a thirty-ton humpback whale leapt out of the sea and landed on top of his kayak. The incident changed the course of his life. Have you ever experienced something similar—a single moment that altered the trajectory of your own life? What happened?
4. When you first started reading about the technologies being used to better understand animal behavior and communication, what did you think Mustill would discover? Were your expectations confirmed at the end of the book, or were you surprised by *How to Speak Whale*’s conclusion?
5. On the first page of Chapter 2, Mustill opens with this quotation from Barbara Kingsolver: “Only if you love something will you inconvenience yourself to work on its behalf.” Do you believe this is true? What curiosity or passion in your own life would you choose to cultivate, if you had the skills and the time?
6. In Chapter 2, Dr. Roger Payne, an iconic whale scientist, tells Mustill about an experience involving a dolphin that affected his life. He lamented the fact that humans had mutilated the creature when it had washed up on shore, and realized that cruelty could only be perpetuated onto another living creature if a human viewed it as something “very different from a human, as something unknown, as no more than a thing.” Do you see animals as being very similar to humans or very different? Did your opinion change after reading about “Jack the Signalmann” or the goatherd baboons of Namibia? How does this connect to Chapter 11, “Anthropodenial,” and the quote Mustill cites from contemporary philosopher Melanie Challenger: “The world is now dominated by an animal that doesn’t think it is an animal”?
7. Humpback whales have “percussive and tonal sounds in their music in about the same ratio [as human] musical traditions.” Whales even rhyme. How did the discovery of this similarity make you feel? Do you agree that showing people how to empathize with whales is a critical bridge essential not only for animal conservation, but for our own survival? Why or why not?

**8.** In just a few thousand years, humans have “caused the loss of 83 percent of wild mammals and half of plants.” We have “replaced the diversity of life with the fewer species that can live in a humanized world.” Of the mammals left on the planet, “by weight, 96 percent are human and domestic animals, such as cows, sheep, goats, dogs, and cats. As for the seas, we’re told that by 2050 there will be more plastic in them than fish.” How did these statistics make you feel as you read them? Did it make you think differently about the landscape we live in—and even the future of the planet?

**9.** In 1971, the first of two Voyager Space Probes was launched, carrying a twelve-inch gold-plated copper disk onto which photographs, diagrams, and audio recordings were encoded. Among these recordings is a four-minute clip of the calls of whales. If you had been invited to contribute to the capsule, what would you have included?

**10.** When scientists describe how whales understand the world, they say they “see in sound.” Their ears are wired for more complex ways of hearing than human ears, and a significant portion of their body is used for the production and reception of sound. Mustill notes that you can learn a lot about an animal’s priorities based on the design of its body. As you think about this, what can you intuit about other animals’ physical structures, or even humans? What do you believe are our bodies’ greatest priorities?

**11.** In Chapter 8, the author mentions a number of new tools that are helping scientists overcome previous experimental limitations, like AudioMoths, whose recording sensitivities extend far beyond human ears, and Wave Gliders, solar-powered, wave-propelled robots that can listen for whales in remote locations. Which machine or tool did you find the most promising or impressive in the book? Why?

**12.** The more Mustill learned about the whale that breached onto his kayak in 2015, CRC-12564, the more connected he felt to it, emotionally. Do you believe people’s nonobjective traits, like empathy, can actually improve exploration and the scientific process? Why?

**13.** At the end of the book, Dr. Payne explains why he’s previously held back from trying to speak with animals. He likens his concern—human supremacy—to white supremacy, saying it is right to be afraid of what we might discover, as giving up the privileges that you have enjoyed over others is a frightening thought. To communicate with another species would force a reckoning in how we have treated so many of them. How did this confession make you feel? Did you agree or disagree with Dr. Payne’s statement? Explain.

## Follow the author



# A CONVERSATION WITH TOM MUSTILL

**Before diving deeply into the world of whales, what project were you most excited to work on as a wildlife filmmaker?**

It's hard to choose, because you often fall slightly in love with whatever species or place you're filming. I have spent months sitting in the outback with snoozing kangaroos, with young joeys nibbling my shirtsleeves; filming giraffes by starlight in Namibia, listening to the sound of them chewing acacia; and sitting sixty meters up a jungle tree in Borneo, filming an orangutan mother swing with her infant and gorge herself on figs. I have thought each time: "It doesn't get better than this."

But the film I come back to most in my memory is "The Bat Man of Mexico" (BBC/Nat Geo), which follows Dr. Rodrigo Medellin, a brilliant conservationist and tequila connoisseur. It was my first big film, so it was thrilling to have the time and budget to throw myself into it, and it was about an animal that many people hate, so it was a wonderful creative challenge. The bats turned out to be very personable and lovely to film. What was not nice was where we filmed them. Deep underground in 95 percent humidity and forty degrees Celsius (104 degrees Fahrenheit), with feces and urine raining on us constantly, carrying heavy gear that bashed into our shins while we crawled through rivers of guano alive with cockroaches, snakes, and other intimidating beasts. I loved it.

**What inspired you to dedicate your life to documenting nature? How did it feel writing a book about animals, rather than filming a documentary? What did you find refreshing and challenging about the change in medium?**

I used to work as a conservationist, but I got terribly lonely sitting in a forest all day, and my girlfriend dumped me because I was sitting in a forest all day, and I wondered if perhaps I could still help nature and have adventures but in a way that allowed for more human connection. That led me to connecting other humans to the natural world using film.

Writing a book has been wonderful compared to making a film because you don't have to have the camera rolling and in focus and in the right place to capture a moment to share it. You just need to pay attention and think about what others might connect to in what you've experienced.

**What's the funniest or most surprising thing that's ever happened in the course of your research?**

The funniest was a story I was told by an underwater photographer about a particularly amorous dolphin she encountered that I'm afraid I can't repeat here.

**How did it feel, seeing your near-death experience with CRC-12564 online, and then talking about it on *Good Morning America*?**

A: At first, I was excited! Someone had filmed the moment, so people would actually believe this absurd story I'd been telling them! But then, as it blew up, I felt very embarrassed and exposed. I have worked on whale-watching boats making sure people don't disturb whales by getting too close, and a lot of people assumed we were encroaching on the whales and had behaved recklessly. Others thought it looked like a good idea and I was concerned people might want to get into similar situations.

But despite this, it was good to talk about it publicly, as it gave me a chance to try to use the experience to draw people's attention to the whales and their plight and conservation.

**Did you think you would ever encounter CRC-12564 again? Do you still "follow" CRC-12564?**

I still follow "him" on Happywhale (I think it is a him. Researchers have told me he has scratches like the ones males get in battles with another male) and get really excited every time he shows up on the website—when a tourist takes a photo of him

somewhere on the Pacific Coast of North America. But he hasn't been seen for a couple of years now, which isn't unusual, though I do feel sometimes concerned about him. Every time a new whale is entangled or ship-struck and killed, I hope it isn't him. I would love to encounter him again, and I saw hundreds of whales while in Monterey, always wondering. But I think it is unlikely our paths will cross again...

**What do you hope readers will take away from *How to Speak Whale*?**

A feeling of connection to worlds they hadn't felt part of before. A curiosity about the minds of other animals. In these dark times, a reminder that there are good people working on beautiful things, and that if they wanted to, they perhaps could help. Most simply, I hope they smile and that learning the things I have learned enriches their lives.

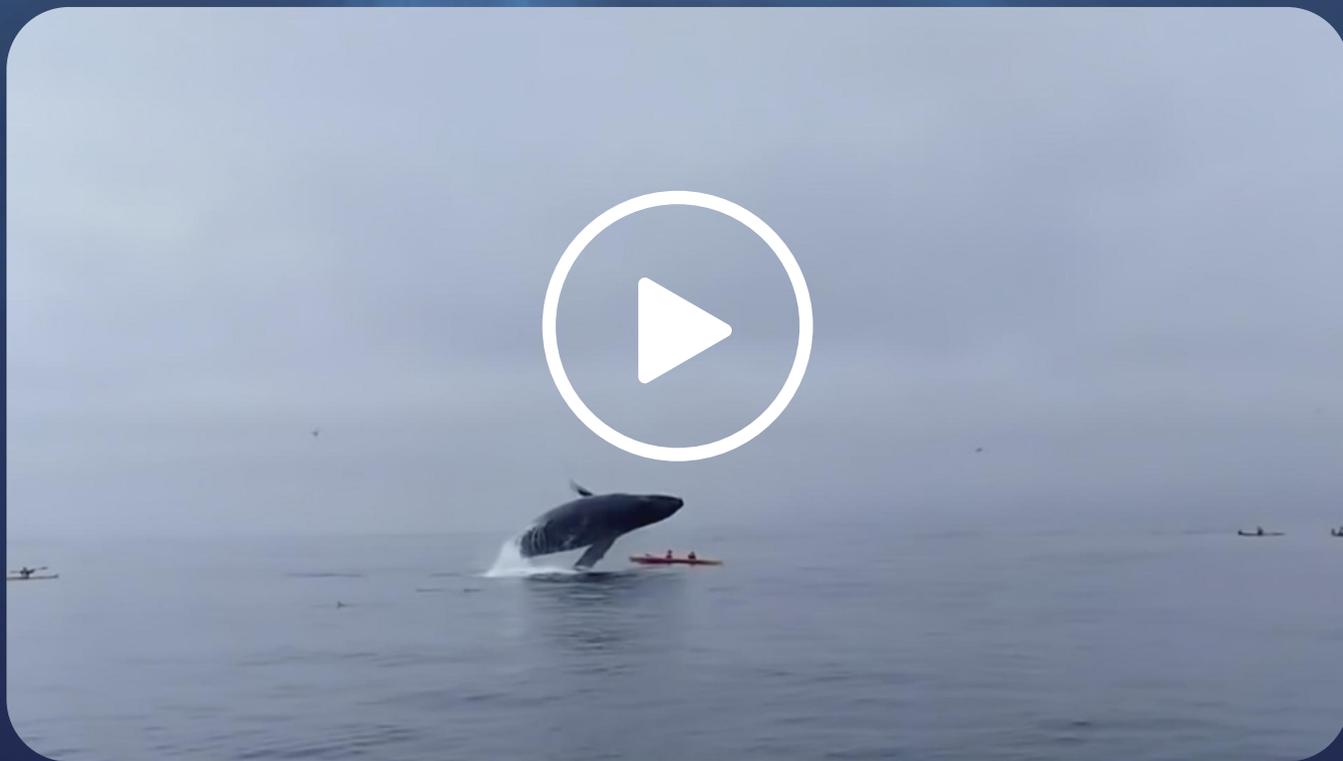
**What will you be working on next?**

I've kept a diary of my young daughter's first year of life, and I've realized it is a bit peculiar and that old habits die hard. My sleep-deprived jottings are more like a biologist's field notes: what her scratch marks look like, how you'd track her in sand or mud, how her dentition and locomotion compares to the teeth of a shark or the mode of movement of a kangaroo, and how that has changed and so on. I think it could be a nice/weird book for other bewildered dads looking at their offspring, or parents expecting a new animal in their life.



Photo: © Sam Mansfield

# MORE RESOURCES FOR YOUR BOOK CLUB



Watch the 2015 viral video of a humpback whale breaching author Tom Mustill's kayak, starting his journey towards writing *How To Speak Whale*.



Listen to Tom Mustill  
talk whales, writing,  
and more with NPR

# FIVE ABSOLUTELY TRUE WHALE & DOLPHIN FACTS YOU DIDN'T KNOW

#1

Whales can hold their breath for longer than a James Cameron Movie

#2

Humpback songs are the Earth's most distributed cultural product: they are even in space thanks to the Voyager probes

#3

Dolphins have clitorises, suggesting, like other mammals, they experience sexual pleasure.

#4

Whales have whiskers. As mammals, whales have hair, too, which helps them sense movement in the water. (They don't shave though)

#5

Killer whales, a.k.a. Orcas, are not whales at all, but the largest species of dolphin!