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## Great White Shark Podcast and “Meet the Scientist”

*Carcharodon carcharias*

Students from Martha's Vineyard Regional High School in Massachusetts and La Salle Academy in Rhode Island question shark researcher Greg Skomal about this charismatic predator at the top of the ocean food chain. Learn some surprising facts and the answers to such questions as what preys on the Great White and do they mate for life?

### Transcript

**Ari:** I’m Ari Daniel Shapiro, and this is the One Species at a Time, the story of Earth’s biodiversity, one organism at a time. This time, we’re gonna talk about one of the most charismatic and well known predators out there: great white sharks. And for that, we’re going to Greg Skomal. He’s one of the foremost shark experts in the world, and he works as a biologist just around the corner from me, with the Massachusetts Division of Marine Fisheries.

Instead of me doing the interviewing, we’re gonna hear questions from students at two schools. Elliott Bennett’s Island Natural History class at Martha’s Vineyard Regional High School in Massachusetts. And Jeff Danielian’s middle school biology classes at LaSalle Academy in Providence, Rhode Island. Alright, lemme turn this over to the students.

**Margaret:** I was wondering how many great white sharks are in the wild today.

**Skomal:** The problem with white sharks is we really don’t have good population assessment information. And therefore, it’s a very difficult question for us to answer, because the white shark, at least in the Atlantic, is so elusive that it’s hard for us to count them.

**Ashley:** Hi, I was just wondering what great white sharks usually eat.

**Skomal:** It depends on the age of the shark: what we found is that young white sharks feed primarily on fish and their teeth are very well adapted for grabbing fish. They have sharply pointed long teeth, not the typical teeth we think about with white sharks. But when they get to be about 8, 9, 10 feet long, their teeth change in structure, and move from those sharply pointed long teeth to broader, serrated cutting teeth. And at this point in the shark’s life, it

goes over to these larger prey items, which include marine mammals, whale carcasses, seals, sea lions.

**Jacob:** I was wondering what eats them or what kills them?

**Skomal:** Ah, what preys on great white sharks? What kills the apex predator? What kills the killer, if you will. Most likely, in the case of white sharks, it's a bigger shark. So small white sharks are probably going to be attacked and killed by larger white sharks or larger sharks in general. We do also know that very large white sharks have been attacked by killer whales.

**Seneca:** Do great white sharks mate for life?

**Skomal:** There's no evidence whatsoever that any shark species mates for life. White sharks, like most if not all species of sharks, mate with multiple individuals and there's absolutely no fidelity to each other, and no parental care as well. Yeah, the white shark is a nomadic animal that tends to travel alone and when it encounters a member of the opposite sex, and if it's the right time of year, it will mate and then move on.

**Katie:** Is there anything that swimming people should do or not do to avoid being attacked by a shark?

**Skomal:** The probability of a shark attack is extremely low. But indeed there are steps people can take if you are concerned about shark attack. It really boils down to common sense. We know that attacks occur primarily at dawn and dusk. So one of the steps you can take is don't swim during those transitional periods from daylight to nighttime when the lighting is very dim. Don't swim alone. Don't go far offshore alone. I mean, these are steps you want to take anyway. 'Cause the most dangerous thing in the water is not necessarily going to be the shark: it's going to be tides and currents. And you want to make sure that you're in a place where you are either with multiple people or at least being watched by somebody in case you run into some kind of dangerous situation.

**Kyle:** What's the biggest great white shark ever found?

**Skomal:** The largest great white shark. I mean, you get estimates of 25, 30 feet long. And of course, in the movie Jaws, it was a 30-foot great white shark, which is completely an exaggeration. The largest reliably measured great white shark was 21 feet long weighing several thousand pounds. I saw a photo of it, an old black and white photo. It was landed in Cuba, of all places. And there is about 30 people standing on the shark and around the shark. The people are sitting on this beast that looks like they're sitting on a table or on the hood of a car. I say only 21-feet long, but that's a big shark. So, you know a 21-foot long fish armed with teeth is a pretty formidable beast.

**Ari:** That was shark researcher Greg Skomal. And the students asking those questions were Margaret Mahoney, Ashley Cimeno, Jacob Kusiak, Seneca Craig, Katie Mayhew and Kyle Mercer.

## Meet the Scientist

Meet Dr. Greg Skomal, the scientist featured in the Great White Shark podcast:



***Where do you work?***

Massachusetts Division of Marine Fisheries.

***What do you study?***

I study the life history, ecology, and physiology of sharks.

***What are three titles you would give yourself?***

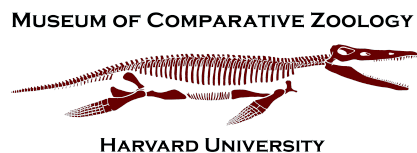
Biologist, diver, photographer.

***What do you like to do when you are not working?***

My work involves both field and laboratory efforts. By far, the latter, which includes time both on and under the water is the most fun. When I am not working, I spend time with my family

***What do you like most about science?***

Making sense out of nature. That is, collecting data about sharks, then putting all the pieces of a puzzle together to assemble a discovery. The whole process involves physical and mental exertion as well as a bunch of creativity.



The One Species at a Time podcast series is supported by the Harvard Museum of Comparative Zoology.