

Brains On (APM) | Brains On! Curio: Vampire of the Great Lakes 1QDE6EMPVQZTB2217QT0XENARC

ANNOUNCER 1: This is a Curio from *BrainsOn*, where we're serious about being curious.

ANNOUNCER 2: *Brains On* is supported in part by a grant from the National Science Foundation.

MOLLY BLOOM: You're listening to *Brains On* from American Public Media. I'm Molly Bloom. Today we're going to get a little spooky.

[EERIE MUSIC PLAYING]

It's almost Halloween, so we thought we'd bring you a true-life monster story. It's the tale of a snake-like water creature that sucks the life out of its victims. And just like any good zombie tale, this creature is on the move and invading new territory.

[LOUD, DRAMATIC TONE]

Sometimes unexpected things can scare us the most. And animals are always doing the unexpected. When a bug crawls from behind a dresser or a lion roars, we get startled. What do you think is the scariest animal?

[JAZZ PERCUSSION MUSIC PLAYING]

SUBJECT 1: I personally think rats are my scariest animal because rats carry disease, and their bites will hurt.

SUBJECT 2: Um, a piranha because they eat all your flesh until all your flesh is gone.

SUBJECT 3: A Lion because my dad's been scratched by one on his chest.

SUBJECT 4: For me it's bears, especially baby bears because usually when there's baby bear's, a mama bear's around, so they won't act as friendly to you.

MOLLY BLOOM: Special thanks to the kids at Marcy Open Elementary for facing their scary animal fears.

[EERIE MUSIC PLAYING]

And now for the animal that didn't get mentioned in this list of scary animals, in the Wilds of Duluth, Minnesota, on the shores of Lake Superior lives one of the most scary creatures of all.

[EERIE ORGAN MUSIC PLAYING]

We sent reporter Dan Crocker to hunt for this killer. Strangely, he brought along twin sisters Chloe and Isabella. All three met up at the Duluth Aquarium. Their mission, to find out more about the vampire of the Great Lakes.

[WATER SPLASHING]

SUBJECT 5: Splashy.

DAN CROCKER: How would you describe them for people who can't see them here?

SUBJECT 6: Probably orange, orange head-- like a snake except with a very thin tail.

DAN CROCKER: They look like little snakes or eels. They're about a foot and a half long, maybe an inch around, kind of a dark rusty color. Darin Reinke is an aquarist-- yes, that's a word-- at the aquarium. And he put a couple of these creepy-looking creatures into a cooler for us.

DARIN REINKE: You can handle one. What do they feel like?

SUBJECT 5: They're so slimy.

SUBJECT 6: You gotta get them out of the water right away.

DAN CROCKER: Darin tries to grab one, but it's super slippery.

DARIN REINKE: As you can tell, they're extremely hard to handle.

DAN CROCKER: But eventually he gets one out of the water. What do you think of that?

SUBJECTS: Eww.

DARIN REINKE: What does its mouth look like?

SUBJECT 5: Like a two, like a circle with lots of teeth, and then red.

DAN CROCKER: To me what's crazy is how you have these circles and circles and circles of these sharp teeth. I've never seen anything else quite like that.

DARIN REINKE: So those teeth there are used to attach to the lake trout and walleyes out in Lake Superior. And so they use those-- you can even touch those if you want. They're actually teeth. So they use that--

SUBJECT 5: They don't really feel like teeth.

DARIN REINKE: --to suction cup onto the fish. And then you can see its rasping tongue there that it uses to rasp a little hole into the scales of the fish to get to the blood and the juices of that fish.

[EERIE MUSIC PLAYING]

DAN CROCKER: OK, so no more suspense. This creature is called a sea lamprey, and there's thousands and thousands of them swimming around in Lake Superior and the other Great Lakes. And what they do is they look for big lake trout and other fish. And then they use these circular rows of teeth to suction onto the side of them. And then they have this razor sharp tongue in the middle of those teeth that drills a hole in the side of the fish to literally suck the life out of it.

DARIN REINKE: So these guys, on average, out of seven fish only one of the fish will survive.

DAN CROCKER: You mean out of seven fishes it attaches to?

DARIN REINKE: Mhm. Only one will survive because these guys are native to out in the ocean, and they're used to going after larger fish that can handle this. But our native fish cannot withstand these guys.

DAN CROCKER: So here's the thing about sea lamprey. They're not even supposed to be in Lake Superior or any of the other Great Lakes. They're what's called an invasive species. Lampreys are native to the Atlantic Ocean. For a long time they couldn't swim into the Great Lakes because of Niagara Falls. It acted like a big natural dam. Sea lamprey couldn't swim over it into the Great Lakes.

But when we dug a canal around Niagara Falls and then made it deeper and wider in the early 1900s, the lamprey were able to swim into Lake Erie. I talked to Doug Jensen about what happened next. He's an invasive species expert with Minnesota Sea Grant.

DOUG JENSEN: And it only took about 12 to 15 years for the sea lamprey to begin having impacts on the Lake Erie fishery. And then by 1938, they'd spread to all the Great Lakes, including Lake Superior.

DAN CROCKER: Doug told me that just one sea lamprey can eat 40 pounds of fish in its lifetime.

[OMINOUS MUSIC TONE]

DOUG JENSEN: It's caused tremendous damage. It's called the vampire of the Great Lakes for good reason. It made the lake trout go extinct in all the Great Lakes except for Lake Superior.

DAN CROCKER: That's because the fish in the Great Lakes didn't evolve with the sea lamprey like fish in the ocean, so they weren't used to them. And most of them couldn't survive this new invader that was sticking to them and sucking out their blood and body fluids. But what about people? Will a lamprey stick to us? Chloe and Isabella didn't want to try at first, so I volunteered. [LAUGHS]

SUBJECT 6: It squeaks.

DAN CROCKER: It squeaked.

DARIN REINKE: It wants to back in the water.

DAN CROCKER: The lamprey wasn't too happy when Darin grabbed it. But after a couple of seconds, it latched onto my arm and dangled there. Oh, that's so wild. Oh, wow. There it is. You can really feel how strong it is, how it just sections on.

It's really interesting. You can-- I mean, you feel it kind of-- I don't know-- kind of rooting around a little bit. And then all of a sudden it goes whhhht! And it suctions on.

DARIN REINKE: They're powerful. I mean, they have to be powerful if they suck on. They have to catch up to a fish, grab on to the fish, and as a fish tries to get away it has to hold on. So it's-- they are vampires.

DAN CROCKER: Luckily, lamprey aren't too interested in us warm-blooded humans. But Darin says he gets a good scare out of people when he attaches them to their arms.

DARIN REINKE: There's been some good screams. There's been some "take it off right now." There's been some-- because I mean, when they attach to you, like you guys saw, they're like a giant leech with teeth. And most people do not like leeches. So to have an 18-inch leech attached to you with teeth, not too many people are too fond of that.

DAN CROCKER: But here's what I think is one of the weirdest parts of the sea lamprey story. There are people in the world who actually eat them.

[SPANISH GUITAR PLAYING]

In Spain and Portugal, sea lamprey is considered a delicacy. So about 20 years ago, Doug Jensen and some other people in Minnesota said, why don't we try to catch sea lamprey and send them over to Europe for people to eat?

DOUG JENSEN: So we began to work with authorities over in Portugal and Spain to begin to ship them over there. We have taste tests here in Duluth. They have taste tests over in Portugal and Spain. Those folks really like them. I tasted sea lamprey stew over angel hair pasta. On a scale of 5, I ranked at a 4.2.

DAN CROCKER: Really? You liked it?

DOUG JENSEN: I liked it. Yes. It was a very coarse-textured meat. It reminded me of canned king salmon with lots of garlic.

[SPANISH GUITAR PLAYING]

DAN CROCKER: But in the end, they couldn't eat the lamprey because the lamprey had too much of a pollutant called mercury in them, which is dangerous to people if we eat too much of it. But there is a pretty happy ending to this scary Halloween invasive species story. Doug Jensen says that scientists have figured out a way to get the lamprey under control in the Great Lakes. And it doesn't involve eating them.

DOUG JENSEN: There was a researcher by the name of Applegate that was in Michigan. And he began to study the different types of chemicals that are out there that potentially could control the sea lamprey. And fortunate for all of us, he was able to find a chemical called TFM. And that's really the mainstay for the control program and management of the sea lamprey across the Great Lakes region.

DAN CROCKER: Now scientists put this chemical in about 175 rivers that flow into the Great Lakes, rivers where lamprey go to spawn. And that's helped reduce the sea lamprey population in the Great Lakes by 90%. And because of that, lake trout have made a really amazing comeback in the Great Lakes. And people are able to fish for them again.

So what do you think? Are sea lampreys scary?

SUBJECT 5: I think the teeth will probably be the biggest thing that would probably freak people out because their teeth are very, I guess, creepy. They just look gross.

DAN CROCKER: But to lake trout, they're definitely scary. Even with the control program, there are still 800,000 sea lamprey in the Great Lakes. And every year they kill more lake trout than all the people around the lakes who fish for them.

[MUSIC PLAYING]

MOLLY BLOOM: If you want to give yourself a good scare, you can head over to brainson.org and check out pictures of Chloe and Isabella holding a lamprey, and a closeup of a sea lamprey's mouth with all those rows and rows of teeth. That's it for this *Brains On Curio*. Special thanks to principal Donna Andrews, Julia Marano, and Emily Allen for help with this episode.

Brains On is funded in part by a grant from the National Science Foundation, and *Brains On* is fueled by our curious listeners. If you have a question or want to send in a mystery sound, email them to hello@brainson.org. You can catch up with us on Twitter and Instagram at [Brains_On](https://twitter.com/Brains_On), and find us on Facebook too. We'll be back next week with more answers to your questions. Thanks for listening.