

Fossil of 72-million-year-old sturgeon discovered in Edmonton

January 11 2024, by Geoff McMaster



Credit: University of Alberta

A 72-million-year-old sturgeon fossil has been discovered in Edmonton's North Saskatchewan River Valley, the first fish material of any kind found from that time period and in that geographical area.

A couple of hikers came across a [sturgeon](#) skull near Capilano Park last February, believing it might be a fragment of dinosaur skin. They took it

to the University of Alberta's star paleontologist, Phil Currie, who confirmed it was indeed part of an ancient fish.

Currie passed the fossil on to fish paleontologist Alison Murray, who identified it as a sturgeon—a North American temperate freshwater fish still in existence, a species of which lives in the North Saskatchewan River—estimated to be about two meters long when it was alive. Murray and her team named the new species *Boreiosturion labyrinthicus*.

Capilano Park lies on a [geological structure](#) known as the freshwater Horseshoe Canyon Formation, which took shape during the Campanian stage, roughly 84 to 72 million years ago during the Cretaceous Period.

According to a study [published](#) by Murray and co-authors Luke Nelson and Donald Brinkman in the *Journal of Vertebrate Paleontology*, the fossil fills a temporal gap in what is known about the distribution of sturgeons during the end of the Cretaceous, just before the mass extinction event (likely a meteor) that wiped out the dinosaurs.

It also fills a geographic gap between sturgeons found in the southern localities of southern Alberta, Montana and North Dakota, and the northern localities of Alaska and Peace River, Alta.

"It's the first fish description from within Edmonton's limits, so that's kind of exciting," says Luke Nelson, second author on the paper.

The study is also the first publication for Nelson. Now working on his master's degree, he was an [undergraduate student](#) working in Murray's lab when the sturgeon skull was found, and she invited him to participate in classifying the specimen.

In love with sturgeons ever since gazing at specimens in various aquariums as a child, Nelson just might be the world's biggest fish fossil

fanboy.

"If you asked me as a 10-year-old what my dream job would be, I would have said working with fossil fish—I just loved fish," he says. "I was teetering between marine biology and paleontology, but this is the best of both worlds."

"It's been an incredible journey spending time in that museum growing up, and now working with some of those researchers," he adds, pointing out that Brinkman, third author on the paper, served as the Royal Tyrrell Museum's curator until a couple of years ago.

What struck Nelson most about the new sturgeon fossil were the distinct patterns on the back of its skull.

"There are three unique patterns, different from anything previously described from the time period," he says. "This is from a part of the Cretaceous Period from which we didn't have any North American sturgeon before."

For his part, however, the aspiring paleontologist is on a mission to let the world know how great sturgeons are.

"They're some of the largest bony fish we have today and have been around since dinosaurs were walking around on land. They almost look like dinosaurs, because they've got these massive sizes and enormous scales running down their back that make them look kind of wicked."

Now that it's classified, named and catalogued, the sturgeon skull will enter the U of A's Laboratory for Vertebrate Paleontology in the Department of Earth and Atmospheric Sciences, which contains more than 50,000 fossil vertebrates.

As for the sturgeons still swimming in the North Saskatchewan River today, having survived at least 72 million years of evolution?

"It's really important that we conserve them and treat them with respect," says Nelson, noting that Alberta's species is protected.

"They are just a really cool group of animals."

More information: Alison M. Murray et al, A new sturgeon from the Upper Cretaceous Horseshoe Canyon Formation in central Alberta, Canada, *Journal of Vertebrate Paleontology* (2023). [DOI: 10.1080/02724634.2023.2232846](https://doi.org/10.1080/02724634.2023.2232846)

Provided by University of Alberta

Citation: Fossil of 72-million-year-old sturgeon discovered in Edmonton (2024, January 11) retrieved 27 April 2024 from <https://phys.org/news/2024-01-fossil-million-year-sturgeon-edmonton.html>

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