

## Major Connecticut Fossil Collection Gifted to the Bruce Museum



Fossil fish, *Redfieldius* sp., North Guilford, CT.  
Bruce Museum Collection 20178.11.561  
Photo by Paul Mutino.



Connecticut fossil authority Nicholas G. McDonald  
Photo by Brendan Hanrahan.

**GREENWICH, CT, March 15, 2018** – The Bruce Museum has received a major paleontological collection. Nicholas G. McDonald, a research authority on the fossil record of the Connecticut Valley, has donated a large collection of fossil and geological specimens assembled over the course of five decades.

McDonald, recently retired geology instructor and Chairman Emeritus of the Science Department at Westminster School in Simsbury, CT, has published many scholarly articles and two books focusing on the Triassic and Jurassic Periods, the dawn of the “Age of Dinosaurs.”

“Collecting fossils has been a passion since I was 12 years old, when a friend and his dad took me to a local stream cut and I found my first fossil fish,” says McDonald, a native of Mystic. “Since then, I’ve walked almost every stream bed in the Connecticut Valley, and discovered thousands of well-preserved fossil fishes. Central Connecticut has some of the most productive localities for Jurassic fishes and dinosaur tracks east of the Mississippi.”

“Over the years, I’ve donated specimens to the American Museum of Natural History in New York, the Museum of the Earth in Ithaca, N.Y., Yale’s Peabody Museum, and Connecticut’s Dinosaur State Park. The quality of the collection going to the Bruce is exceptional,” says McDonald. “The fossils are an archive of immense scientific value, and many are unstudied.”

The fossil collection includes dinosaur footprints and teeth, fishes, plants, invertebrates, rock samples, and even coprolites (the preserved droppings of ancient creatures). “There are so many interesting specimens in this collection,” says Dr. Daniel Ksepka, Bruce Museum Curator of Science. “Everything from the skull of a giant coelacanth fish to ancient logs infused with copper.”

The fossils document a critical series of events that took place 200 million years ago. As the Triassic Period ended and the Jurassic Period began, massive volcanic eruptions caused widespread extinctions, clearing the way for dinosaurs to rise to dominance.

“At that time, the land mass that is now New England was located in the subtropics, just a few degrees from the equator,” McDonald explains. “Most of the continents were together, and the Atlantic Ocean was just forming. Central Connecticut was a rift valley, with very large lakes and a monsoonal climate, with a rainy season and a dry season, rather like parts of Africa today.”

The fossils help to clarify our picture of Jurassic ecosystems. During arid times, carnivorous dinosaurs preyed on fishes trapped in shallow water, leaving their tracks to be immortalized in shoreline sandstones. When fishes died in deeper parts of the lakes, they sank to the muddy bottom where there was little oxygen, to be preserved over the eons in black shale.

Over time, the hardened “layer cake” of river and lake sediments and lava flows from the Jurassic Period experienced intervals of uplift and fracturing, followed by millions of years of erosion, creating the ridges and valleys of the modern Connecticut landscape. The fossil-laden sedimentary rock, no longer deeply buried, is now exposed in stream channels, along road cuts, or in quarries.

“Fossils are abundant in central Connecticut,” McDonald contends. “The process of finding and collecting them is a challenge, but it’s also an aesthetic experience. It’s the thrill of discovery,” he adds. “When I split a rock and find a fossil, to know that that’s the first time sunlight has hit that fish in 200 million years is just amazing.”

“This donation will transform the Bruce Museum fossil collection, making it an important resource for researchers studying the prehistory of our region,” says Ksepka. “One of the exciting things about the collection is that some of the fossils are still hidden beneath a thin layer of rock. We’re going to get to work preparing these fish right away -- we may even find new species lurking in some of these blocks.”

A small sample of the collection was on view during the *Last Days of Pangea* exhibition, which

ran at the Bruce Museum from November 2016 through July 2017. Many specimens from McDonald's donation will be incorporated into the permanent Science Gallery, which will soon be undergoing a complete renovation.

"Through conversations with Daniel Ksepka and the Museum staff, I became convinced that the Bruce was a very good place to display these Connecticut fossils," says McDonald. "The fact that the Bruce has plans to expand its science galleries, and will have space for these fossils to be put on exhibit, was the clincher. I want the fossils to stay in Connecticut, to serve as a repository for research, and so the public can learn about Jurassic life. After all, what kid doesn't like dinosaurs? I'd like to inspire folks with this collection, and that's what the Bruce is good at."

McDonald will be recognized on April 13 at a private reception highlighting the donation and celebrating the Bruce Museum's latest science exhibition, *Wild Bees*. Exhibition supporters and friends will get to see many of the specimens up close. McDonald, a guest of honor, will be pleased to sign copies of his recent book, *Window into the Jurassic World*.

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#### **About the Bruce Museum**

The Bruce Museum is located in a park setting just off I-95, exit 3, at 1 Museum Drive in Greenwich, Connecticut. The Museum is also a 5-minute walk from the Metro-North Greenwich Station. The Museum is open Tuesday through Sunday from 10 am to 5 pm; closed Mondays and major holidays. Admission is \$10 for adults, \$8 for seniors and students with ID, and free for members and children less than five years. Individual admission is free on Tuesday. Free on-site parking is available and the Museum is accessible to individuals with disabilities. For additional information, call the Bruce Museum at 203-869-0376 or visit [brucemuseum.org](http://brucemuseum.org).

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