



## NEWS RELEASE

For immediate release

DATE: JULY 07, 2020

CONTACT: Garret Romaine [garret@ricenorthwestmuseum.org](mailto:garret@ricenorthwestmuseum.org) /971.506.3059

# **"Bernie" the Ancient Sea-going Reptile from Central Oregon Ready to Greet Visitors as Rice Museum Reopens**

## *New exhibits await visitors*

Using an online reservation system the Rice Museum will reopen its doors to the public on Friday, July 10, offering a respite for visitors of all ages after a four-month closing. Rice Museum members will have the opportunity to visit the museum on Thursday, July 9 ahead of the public opening day. The opening will be the first opportunity for visitors to experience several updates, including the newly installed thalattosaur (tha – LATT – o – sawr).



*Figure 1. 3D Replica of "Bernie" the sea-going reptile discovered in eastern Oregon.*

The Rice Northwest Museum of Rocks and Minerals exists to engage, inspire, and educate generations on the splendor and complexity of our Earth.



In addition, just in time for the reopening, local collector Bruce Carter has filled two cases in the Master Gallery with his unique, worldwide collection of mineral specimens. Entitled *The Mineral Adventures of Bruce Carter*, the exhibit features rare and fascinating examples of high-end material that was most recently on display at the Tucson Gem and Mineral Show. (More on that below.)

Though Oregon's fossil record is largely devoid of dinosaur remains, Bernie is proof there is evidence of sea-going reptiles found in Oregon rocks. Found near Suplee, Oregon, the skeleton has been excavated, prepped, and 3D imaged by a local collector, and the life-size replica now hangs from the rafters of the Rice Museum of Rocks and Minerals. This unique display is a significant educational feature for all ages.

Museum director Garret Romaine is excited for visitors to return. "We have been working throughout the COVID-19 closure to make multiple improvements to the museum, and we can't wait to show them off," he said. "This 230-million year old thalattosaur replica is a perfect example of how we've taken advantage of our time."

The museum will use guidelines established by the American Alliance of Museums, Oregon Museum Association, Washington County Health Department, and other governing bodies. The health and safety of museum visitors and staff is a top priority. Policies are in place for cleaning, social distancing, traffic flow, parking, the museum store, and more. A new [online reservation system](https://ricenorthwestmuseum.org/visit-during-social-distancing/) will allow visitors to schedule time for visits in groups of up to five. Advance reservations can be made by visiting: <https://ricenorthwestmuseum.org/visit-during-social-distancing/>.

Visitors are encouraged to take advantage of all that the museum has to offer. Romaine continues, "We are more than just a building; our grounds have gardens and trails that are waiting to be explored. When conditions open up further, visitors can bring a picnic lunch and make a day of it at the Rice." In this initial reopening stage, visitors are required to wear masks indoors, visit duration will be by reservation only, and operating hours will be limited.

**MORE ABOUT THE CARTER COLLECTION** In addition to the newly installed thalattosaur, visitors will get a chance to see a new exhibition, *The Mineral Adventures of Bruce Carter*. Bruce has been a life-long mineral collector; growing up in New Jersey and Connecticut, he often scoured the local pegmatites and garnet-rich

The Rice Northwest Museum of Rocks and Minerals exists to engage, inspire, and educate generations on the splendor and complexity of our Earth.



metamorphic rocks for interesting crystals. He received a BS in geology from Earlham College and then earned his Master's degree in volcanology from the University of Montana, where he mapped Eocene age extrusive rocks in the northern Rockies.



Figure 2. Mini-poster of the Carter Collection flyer.

After graduating, Carter worked for years in minerals exploration in the western US, Mexico, and Canada, as well as mapping coal reserves in the Illinois Basin. His final three years of exploration were in helicopter-supported remote camps in the Alaska Range. Sadly, plummeting metals prices and the advent of remote

The Rice Northwest Museum of Rocks and Minerals exists to engage, inspire, and educate generations on the splendor and complexity of our Earth.



satellite reconnaissance finally brought an end to Bruce's professional mineral adventures.

Shortly thereafter, fate brought Bruce to Los Angeles, where he was accepted into the apprentice program at the Directors Guild of America. Since graduating from the program he's worked on many film & TV shows, both in the United States and abroad. He is currently a television and film producer here in Portland; however, he maintains an avid interest in rocks, minerals, and all things geologic. Earlier this year his collection was exhibited at the world-renowned Tucson Gem & Mineral Show. Bruce is proud to be a member of the Board of Directors of the Rice Museum of Rocks and Minerals.

**MORE ABOUT THE THALATTOSAUR:** Local amateur paleontologist Greg Carr and his daughter Gloria discovered the ancient reptile, nicknamed "Bernie", in 2011 in a roadcut in central Oregon. The thalattosaur is named after Gene and Marian Bernard, who owned the roadcut it was found on. "We found a few bone fragments at the base of the hill and worked out way up," Carr recalls. "When we found the source area, we were amazed."

Curator Angela Piller worked with Carr to find a home for Bernie in the museum; the reptilian showpiece now hangs from the rafters of the NW Gallery. "This is a fantastic addition to the museum experience," she says. "I'm thrilled for visitors to have the opportunity to see a life-size thalattosaur skeleton in person."

The Rice Northwest Museum of Rocks and Minerals exists to engage, inspire, and educate generations on the splendor and complexity of our Earth.



*Figure 3. Greg Carr at the fossil outcrop where he excavated "Bernie."*

The installation of a fossil reptile replica is an important addition to the museum's educational programming, Romaine pointed out. "We have such great stories to tell using our specimens as teaching aids," he said. "Any student considering a career in paleontology will learn quite a bit about digging, prepping, and displaying fossils thanks to Greg's work."

Like Romaine, Carr and his daughter are members of the North American Research Group (NARG), a club of amateur paleontologists who scour sedimentary rocks across the western U.S. for fossil remains. The club's regular meetings are held at the Rice Museum, and NARG members have routinely loaned and donated specimens to the museum for exhibit. The two organizations found it a natural coordination to house Bernie in the museum's NW Gallery.

The fossil remains were a complex jumble to sort out. They were encased in a sedimentary deposit known as a conglomerate—often formed in an active stream

The Rice Northwest Museum of Rocks and Minerals exists to engage, inspire, and educate generations on the splendor and complexity of our Earth.





environment--containing rounded river rock cemented together with a lime-rich mortar. The conglomerate boulder may have become detached from its original setting and moved downhill, to be redeposited in a more tranquil sandstone and safely preserved until erosion revealed it in a roadcut.

Carr worked on the boulder carefully over several years, painstakingly removing one bone at a time with the help of tiny picks, a hand-held air scribe that works like a miniscule jackhammer, and other specialized tools. In time, he and coordinating paleontologists identified enough remains to conclude that perhaps seven different thalattosaur skeletons were represented to varying degrees, along with additional bones, teeth, seashells, and other material. The geological term for such a mélange of fossil material is a "thanatocoenosis" (tha - na - tow - SEN - sus) (from the Greek thanatos – or death, and koinos – or common) also referred to as a "death assemblage."

"It was a true labor of love," Carr said. "I probably spent over 4,000 hours preparing about 200 different specimens and 300 fragments." Carr spent a considerable amount of time preparing the specimens at the Oregon Museum of Science and Industry (OMSI), and he credits the institution's patience for allowing him to complete his work. "It could take as long as five hours to extract and prepare a single bone," Carr noted.

Carr went a step further and created a 3D model of a partially complete skeleton. The skull was intact, if you can call a collection of 15 different bones intact; however there was no lower jaw and multiple other pieces of the puzzle were missing. To complete the picture, he collaborated with paleontologists at the University of Alaska-Fairbanks and the University of Oregon to build out a complete skeleton of over 200 bones.

Using a 3D scanner allowed Carr to share electronic files with other researchers, rather than shipping the original specimen. "This technique enables researchers to study fossils they could never see in real life," Carr said. "In some cases, fossils can be 'dissected' by CAT scan without even removing it from the surrounding rock."

Thalattosaurs were among several reptile families that adapted to marine life in the Mesozoic. They inhabited low-latitude, nearshore environments, reaching from 3-15 feet in length, and survived on land as well as in the ocean. Although they were well

The Rice Northwest Museum of Rocks and Minerals exists to engage, inspire, and educate generations on the splendor and complexity of our Earth.



distributed during their ~40 million-year existence, thalattosaurs never attained great diversity or adaptation and did not persist into the Jurassic. In other words, they did not survive the great Triassic extinction, also called the Triassic-Jurassic extinction event. This calamity occurred at the end of the Triassic Period and resulted in the demise of some 76 percent of all marine and terrestrial species.

Oregon's "Bernie" specimen is related to a recent thalattosaur discovery from Alaska that had an extremely pointed nose. The Alaska specimen was recently written up in an official classification paper by Patrick S. Druckenmiller, Neil P. Kelley, Eric T. Metz and James Baichtal and is available at [Nature](#) magazine. A second paper highlighting the scientific importance of Bernie is expected next; Carr believes it is a new species. Eventually the bones will move from Alaska to the University of Oregon, preserved as "holotype" and "paratype" specimens.

Thalattosaurs existed from 240 million to 220 million years ago, and are not related to dinosaurs, Carr points out. Dinosaurs roamed the earth starting 220 million years ago, becoming extinct at the end of the Cretaceous, about 65 million years ago.

Greg Carr's blog: <http://bernietheichthyosaur.blogspot.com/>

**ABOUT THE MUSEUM:** The Rice Northwest Museum of Rocks and Minerals, an affiliate of the Smithsonian Institution, houses a world-class collection of rocks and minerals recognized as the finest in the Pacific Northwest and one of the best in the nation. The Museum is in Hillsboro, Oregon just west of Portland (exit 61 off Highway 26). Its educational programs include organized school field trips as well as ongoing educational outreach throughout the community at large. A variety of public and private events are hosted throughout the year as well. The Museum is listed on the National Registry for Historic Places for its unique architectural style and its use of natural stone and extraordinary native Oregon woodwork throughout the building.

For more information about the Rice Northwest Museum of Rocks and Minerals, call (503) 647-2418 or visit [www.ricenorthwestmuseum.org](http://www.ricenorthwestmuseum.org) or [www.facebook.com/RiceNWMuseum](https://www.facebook.com/RiceNWMuseum).

The Rice Northwest Museum of Rocks and Minerals exists to engage, inspire, and educate generations on the splendor and complexity of our Earth.