

# Zygorhiza and the Evolution of the Whale

Thursday, February 26, 2015, at 7:00 p.m.

Museum of Arts and Sciences

Speaker: Dr. Mark Uhen, Assistant Professor in Atmospheric, Oceanic and Earth Sciences, George Mason University. Leading paleontologist Dr. Mark Uhen has focused much of his research on the origin and evolution of cetaceans -- whales, dolphins and porpoises. In 2013 he published specific work on *Zygorhiza kochii* and the closely related *Durodon serratus*. He brings the new insights gained in his research to bear on the Museum's own Zygorhiza fossil. Admission: \$5 general public; FREE to all students.

## Leading paleontologist to review Museum's whale fossil Ziggy

The Museum of Arts and Sciences has invited a leading vertebrate paleontologist to shed new light on "Ziggy," its 40-million-year-old *Zygorhiza* whale fossil and one of Georgia's most valuable treasures. A public lecture is planned for February 26, 2015, at 7PM. Currently, the Museum classifies its Ziggy as genus *zygorhiza*, a subfamily of the *dorudontinae* species of ancient whales. A great deal of new scientific research has been uncovered in recent years about the *dorudontinae* species of ancient whales, which may impact the Museum's educational programming. In February, the Museum will bring Dr. Mark Uhen, one of the nation's leading vertebrate paleontologists, to Macon to review the fossil and consider the need for a reclassification of Ziggy from *Zygorhiza* to *Dorudon serratus*.

Uhen has focused much of his research on the origin and evolution of cetaceans -- whales, dolphins and porpoises. Uhen earned a Ph. D. in geology from the University of Michigan and currently teaches geology, environmental geology, and vertebrate paleontology at George Mason University. He has also served as Curator of Paleontology at the Alabama Museum of Natural History and Cranbrook Institute of Science, Michigan's Museum of Natural History. In 2013 he published specific work on *Zygorhiza kochii* and the closely related *Durodon serratus*. He brings the new insights gained in his research to bear on the Museum's own Zygorhiza fossil.

Dr. Uhen will have the opportunity to review source materials held at the Museum pertaining to the fossil and physically inspect the fossil. He also will present information about his research during an evening lecture on February 26, 2015, at 7PM in the Museum's Auditorium. Cost to attend is \$5 per adult; free for all students.

"Stewarding and sharing this artifact is a privilege that the Museum embraces fully. We are thrilled that Ziggy is at the center of scholarly debate and continues to attract the attention of so many across the country," said Executive Director Susan Welsh. "A re-classification would be quite exciting in the field of paleontology."

In 1973, Museum Volunteer William Christy, and his son William Christy Jr., discovered the whale fossil in the Huber Kaolin Mines located in Twiggs County, Georgia. Later that year, Dr. Michael Voorhies, then Vertebrate Paleontologist at the University of Georgia, performed the excavation, studied mud cracks intermingled with skeletal material, and identified the whale as being of the *Archaeocetian* species, genus *Zygorhiza*. Based upon the examination of the materials excavated from the site, it was theorized that the small, mature whale was beached approximately 40 million years ago.

More than sixty percent of the actual fossil material from the excavation site was intact. The remainder was recreated by paleopreparator Robert Allen, who performed the reconstruction and articulation. Allen cast portions of missing elements from the bones of a *Zygorhiza* owned by the Smithsonian Institution. Other missing elements were modeled when casting was not appropriate. The reconstruction of the whale took approximately two years. In 1981, the reconstructed whale was unveiled as a permanent exhibit in the Museum of Arts and Sciences. At that time, it was the only one of its kind assembled and on exhibit in the world.

In the years since, Ziggy has become firmly rooted in the imaginations of the nearly 4 million children who have visited the Museum, learned the story, and embellished facts with countless fanciful assumptions about the whale's appearance, last meal, death, and more.

"We may never know how Ziggy came to lie in the beach area of the ancient coastline of Central Georgia or how Ziggy met its death," said Welsh. "But, such mysteries ignite curiosity and wonder, fueling not only imaginations but also new

research. The evolution of scientific knowledge itself is perhaps the most important lesson we can teach if we are to cultivate a new generation of scholars, scientists, artists, historians, collectors, and wonder junkies.”

Last year, the Museum enhanced its “Ziggy Dig” exhibit in the Discovery House. Now, new exhibits offer valuable information about Georgia’s changing coastline, the Fall Line, and kaolin deposits across the state. A new workstation allows young archaeologists to test rocks and minerals or sift for small fossils. Above the workstation, a new documentary about the Museum’s valuable *Zygorhiza* fossil plays on a wall-mounted monitor. A new twenty-five-foot mural installed above the Ziggy Dig helps young visitors imagine what *Zygorhiza* may have looked like swimming in the ancient sea.