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We are currently open noon to 4pm Saturdays & 2pm to 4pm Sundays | Open holidays & other times by appointment
Raven Hill Discovery Center, incorporated in 1991, is a 501(c)(3) tax-exempt corporation.

Mission: Raven Hill provides a place that enhances hands-on and lifelong learning for all ages by connecting science, history & the arts.

To: Raven Hill Friends
From: Cheri
Date: January 28, 2023
Re: Favorite fossils

If you are a hunter of fossils, you should take time to visit Raven Hill Discovery Center. An outdoor exhibit called "Exploring Beyond Jurassic Park" is a 350-foot walkway featuring Earth's geologic history from the time the solar system formed through modern man. The display includes real trees, rocks and fossils, plus sculptures of extinct species. The different geologic time periods include maps showing when Michigan was under a shallow sea.

Inside the Center, there are a plethora of fossils in collections and exhibits. If you look at the fossils closely, you'll find everything from local Petoskey corals to Madagascar trilobites. Of courses, you'll also find fossil connections to science, history and the arts.



Raven Hill's outdoor Jurassic Park exhibit has a Devonian-era ammonite as one of its sculptures. In the summer, it can be found near the coral reef. During the winter, look for it & other small Jurassic Park sculptures inside!



Clay is a great medium for making your own fossil-like art. This artistic interpretation of an ammonite, an early relative of the modern nautilus, was created by artist June Otis.

Judging by the numbers, ammonites are a favorite fossil at Raven Hill. Ammonites are extinct cephalopod mollusks. They are related to the extinct nautiloids and still living squid, octopus, cuttlefish and nautilus. Cephalopods appeared in the Cambrian Period--570 million years ago. Nautiloids originated in the Ordovician Period--485 million years ago and ammonites lived about 240 million years ago.

In medieval Europe, fossilized ammonites were thought to be petrified-coiled snakes, and were called "snakestones". In medieval England, they were known as "serpentstones".



Ammonite fossils have been found in a range of sizes from less than an inch to over six feet! If you want to visit Ammonite Canyon in Nevada, you can see fossil ammonites, brachiopods, corals and snails there. Or you can try the quarries in Rogers City or Leland right here in Michigan!

Ammonites are excellent **index or indicator fossils**. Index fossils are easily recognizable; found in many places and lived during specific geologic time periods. When many fossils of one kind are found in a certain sedimentary rock layer, it helps clarify our understanding of Earth's geologic history.



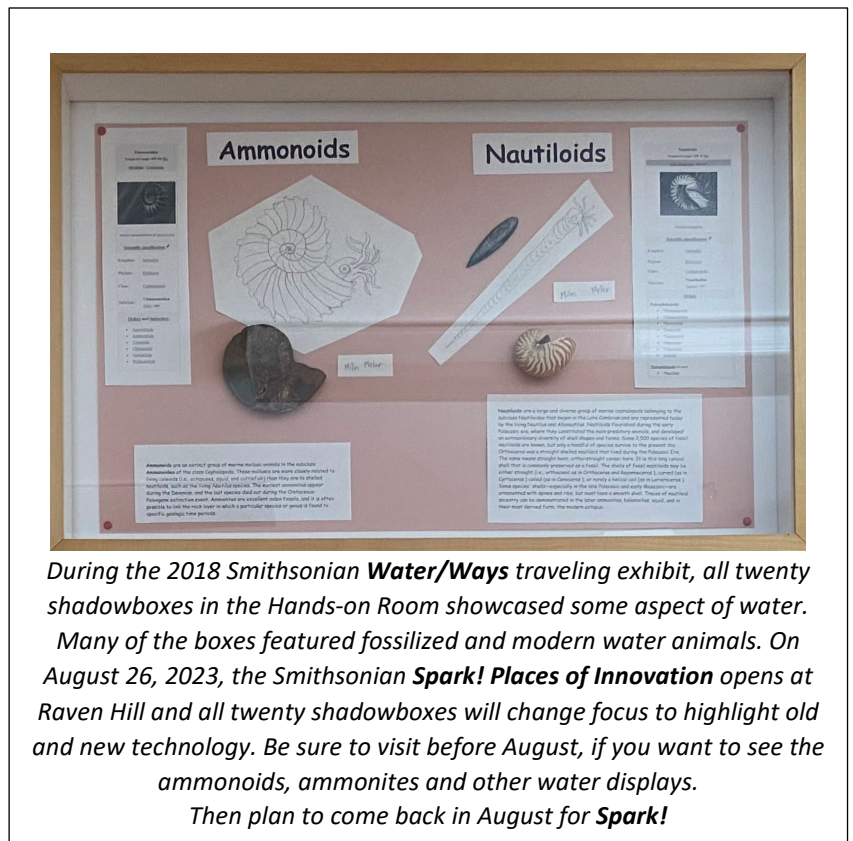
The golden ratio is beautifully displayed in this stained glass piece with a slice of nautilus shell as the focal point.
--Artist unknown

Another fascinating thing about ammonites is that they are an example of the golden mean or golden ratio, which is a mathematical concept that describes the relationship between numbers in a series. Known as the Fibonacci series, each number is the sum of the two preceding ones. In nature, the golden mean describes the spiral pattern in ammonite fossils, other organisms and natural systems. Some drawings on rocks and caves may be evidence of the use of golden ratio over 4,000 years ago!

Every week I promise myself that I will keep the update short, but I find that hard to do! With all the ammonite science, history and art here at Raven Hill, plus ammonite “cousins”, both living and fossilized, I probably could have ended up with three pages OR maybe there will be multiple “ammonite” updates. If you are curious about what didn’t “make the cut”, come visit and take an “Ammonite Scavenger Hunt”. See how many ammonites and/or related species you can find at Raven Hill.

Regular winter hours are noon to 4pm on Saturdays and 2pm to 4pm on Sundays. We are open holidays and other times by calling 231.536.3369 to make reservations for your visit. Bring family and friends out for an “Ammonite Scavenger Hunt” or just to enjoy a fun afternoon of discovery and exploration! Either way, we promise you a great time indoors and even outside, if you come dressed for the weather!

Have a good week, Cheri



During the 2018 Smithsonian **Water/Ways** traveling exhibit, all twenty shadowboxes in the Hands-on Room showcased some aspect of water. Many of the boxes featured fossilized and modern water animals. On August 26, 2023, the Smithsonian **Spark! Places of Innovation** opens at Raven Hill and all twenty shadowboxes will change focus to highlight old and new technology. Be sure to visit before August, if you want to see the ammonoids, ammonites and other water displays.
Then plan to come back in August for **Spark!**

Smithsonian **SPARK!** PLACES of INNOVATION **MI**Humanities

Raven Hill Discovery Center | August 26 to October 7, 2023

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