A New York State of Mind

Do you remember your state’s tree or maybe the state bird? What about the state fossil? This issue of *Fossil Stuff* will explore New York’s state gem and state fossil as well as its unofficial state dinosaur!

New York’s State Gem – The Garnet

In 1969, the garnet was adopted as the New York State Gem. Garnet is a dark-red mineral commonly used in jewelry and as an industrial abrasive. The Adirondack Mountains are home to these beautiful garnets. The Adirondack Mountains are young, only beginning to rise a few million years ago, but the metamorphic rocks that make up these mountains are over 1 billion years old. The beautiful garnet crystals are a result of millions of years of *metamorphism* – a process that changes the original rocks and minerals into new rocks and minerals through high temperatures and pressures. Barton Mines in North River, NY, which you can tour, is one of the foremost garnet mines in the world!
New York State Fossil – Eurypterid

_Eurypterus remipes_ became the official state fossil of New York in 1984. Eurypterids (pronounced _yoo-rip-tuh-ridz_) or “sea scorpions” lived in New York when it was under the ocean during the Silurian Period, 420 million years ago. They are called sea scorpions because each has a long spike at the end of its tail like a scorpion, but they are really more closely related to horseshoe crabs. Eurypterids are arthropods – invertebrates with an exoskeleton, segmented body, and jointed legs. Some eurypterids grew to over 6 feet (1.8 meters) in length – as big as a crocodile! – making them the largest arthropods that ever lived!

During the Silurian Period, much of New York was covered by an ancient sea. Eurypterids roamed the muddy sea floor hunting for their favorite prey such as trilobites and ammonites. They had large claws or pincers for grasping food.

The first eurypterid was discovered in New York in 1818. Some of the best eurypterid fossils in the world are found in the Bertie Dolostone that runs through central and western New York.

Museum of the Earth has some excellent eurypterids on display including one of the largest and most complete eurypterids found in New York. This slab with a specimen of _Pterygotus macrophthalmus_ (seen in this photograph with Director Warren Allmon) was collected in 1965 in Herkimer County.
Coelophysis – New York’s Unofficial Dinosaur

New York is full of many excellent fossils but unfortunately not many of them are dinosaur fossils. The only New York dinosaur fossils that have been so far discovered were found in 1972 by two paleontologists, Paul Olsen and Robert Salvia. Camouflaged in the red mudstones and sandstones of Nyack, NY, were dinosaur footprints! Paleontologists dated the rocks to be Late Triassic in age (about 200 million years old) and the tracks were identified as those of the dinosaur Coelophysis.

Coelophysis is a Late Triassic dinosaur first discovered by the famous American paleontologist Edward Drinker Cope in 1887. The name Coelophysis means “hollow bones” and much is known about this dinosaur because many complete skeletons were discovered at Ghost Ranch, New Mexico, in 1947.

There are several clues that led paleontologists to identify the New York tracks as Coelophysis. First the tracks have three clawed toes, indicating that they are the tracks of theropod or meat-eating dinosaurs. Also the tracks were dated to be from the Late Triassic Period and are approximately 15 centimeters in length. Coelophysis is a Late Triassic theropod dinosaur with feet that are approximately 15 centimeters long!

When you next visit the Museum of the Earth, make sure that you take your picture with the Coelophysis sculpture in front of the Museum. And stop by Dino Lab in the Museum to see one of the actual Coelophysis tracks discovered in Nyack, NY. The footprint tracing on this page is the actual size and shape of a Coelophysis footprint.
New York Fossils Fill-in-the-Blank

Use the information in this issue of *Fossil Stuff* to fill in the blanks in the sentences below.

1. The state fossil of New York is _______________________________.

2. Dinosaur footprints were first discovered in _____________________, NY.

3. The ______________________ is the New York state gem.

4. Eurypterids lived in New York during the _________________ Period.

5. Garnets are mined in the _____________________ Mountains of New York.

6. ______________________ is the dinosaur that left its footprints in New York.

7. The first eurypterid specimen was discovered in New York in the year ________.

8. The Adirondack Mountains are composed of ____________ rocks that are over one billion years old.

9. New York’s dinosaur fossils are from the Late _______________ Period.

10. The name *Coelophysis* means “__________________.”

BONUS: The name of Museum of the Earth’s *Coelophysis* dinosaur mascot is ____________.


Fossils !!