

Mercyhurst College Presents

The Ice Ages! At TREC, October 5th through November 20th.

Free to the public

How many times did ice cover the Erie area?

Many times! There was not just one Ice Age. Early in the Earth's history, the planet Froze nearly pole to pole at least twice (Snowball Earth Events). Later, many Ice Ages covered our area. The most recent Ice Ages saw glaciers pass slowly over our region and melt back about 17 – 21 times. The advances of ice happened about every 40,000 to 100,000 years. The most recent melt was about 10,000 to 13,000 years ago. Thousands of years in the future the ice will return.

What causes the ice ages?

Probably the Earth's orbital path and changes in the movement of the solar system through the galaxy.

How do glaciers move?

Pressure (weight) of accumulating snow and ice causes lower layers to sluggishly flow. Pressing a chip of ice between your back teeth will deform the ice causing it to make a squeaking noise as it moves. This may also damage your teeth. This is similar to how glaciers move. The last glaciers in our area were about a mile thick! Glaciers move about as fast as your fingernails grow. As glaciers move, they pick up rocks from northern areas and round them as they travel in the ice. These rounded rocks are then dropped as the glacier melts. The rocks are called "erratics" and are found all over this area. Most of them were from Canada! Look for them in gardens and along driveways.

What animals lived here during the ice ages?

During the glacial maximums, nothing could live here. During times between the advances of the ice; interglacials, many animals and plants thrived here. The animals were often large so scientists call them "megafauna" meaning large beasts. Here in Erie County, we have found bones and teeth of: mammoth and mastodon in Fairview, Lake City, Lake Pleasant, Presque Isle, Conneaut Lake and other areas, horses at Frontier Park, Millcreek and along the lake, bison at Frontier Park and Presque Isle and Elk along Presque Isle.

There were other animals here but their bones are confused with domestic animals and are lost because people don't bring them in for identification. In other parts of the state we have saber cats, musk oxen, giant ground sloths and beavers that weighed 500 lbs.

During the warmest interglacial times we find the remains of animals that live in South and Central America today like jaguars, peccaries and prehensile tailed

porcupines called Cendous. Ice age fossils are sometimes found in bogs, swamps, rivers and construction sites.

How did the megafauna become extinct?

We do not yet know for sure. There are several theories:

1. Humans hunted them to extinction. There is some evidence for this but no consensus.
2. Climate change killed them. There is evidence for this too but remember that the climate had been changing for a long time before the extinction.
3. Disease. This is hard to prove, but again there is a bit of evidence here too.
4. The newest theory is that comets hit the ice sheet causing the extinction. The evidence is too new to be evaluated but comets can be dangerous... just ask the dinosaurs.

Probably climate with some losses from hunting will be the best answer.

When did humans arrive in North America?

A lot earlier than anyone thought. Excavations at Meadowcroft Rock Shelter near Pittsburgh have demonstrated that humans lived there 14,000 to 16,000 years ago! Other finds support this and other early dates. Dr. James Adovasio of Mercyhurst College is the lead archaeologist and scientist at this ground breaking site.

About this show...

Most of these specimens were donated to Mercyhurst College by Michael and Barbara Sincak, Pennsylvania residents who have traveled the world to gather these displays. Some of the fossils are casts made from the original specimens. We have also included real fossils of many animals in this exhibit; some have never been seen by the public previously. Mercyhurst College has one of the highest rated archaeology programs in the world. Our Geology department and Forensic department will identify fossils or bones found in the area free of charge.

