

Expedition

Ice Age



Traveling Exhibit Proposal

The Palm Beach Museum of Natural History

Minimum Requirements

900 sq ft of display area

8 ft ceiling clearance

Available for 6-8 week (or longer) periods

Expedition Ice Age takes 2 days to set up and take down

Assistance by venue staff may be required to unload, set up and break down the exhibit

Venue provides all set up/break down equipment, including pallet jacks, etc.

Structure of Exhibit

Full size skeleton of Saber-toothed Cat (*Smilodon fatalis*) vs Paleo-hunter – (replicas)

Seven 6' long display cases:

American Lion and Giant Sloth – Skulls and claw (replicas)

Ancient Bison – (Skull cap and horns, 3' span, Jaw, vertebra (original fossils)

Paleo-Indian Hunting Atlatl – Throwing spear 6' and atlatl (replicas)

Giant Beaver and Tapir – Skulls (replicas) and a assemblage of smaller original fossils including un-mounted horse leg, approx. 18" , jaws and teeth of other animals

Ancient Bison and Palaeolama - Mounted lower legs approx. 18" (original fossils) includes assemblage of smaller fossils e.g. teeth

Mammoth and Mastodons - Mounted replica tusks, fragment of baby mastodon jaw with teeth approx. 14", baby and adult Mammoth teeth, additional tooth, tusk, and bone fragments (original fossils)

Giant Tortoise and Fossils Shells - An assemblage of Florida's fossil shells and fragments of giant tortoise bone and shell

Children's Exploration and Activity Center - Art, puzzles, games

Barrier system for the central Saber-toothed Cat vs Paleo-hunter diorama provides area for display of information panels and security for the skeletons.

This basic version of Expedition Ice Age can be adjusted via the modification of the number of displays and specimens to service venues from 500 to 1,000 sq. ft.

We welcome your questions regarding "Expedition Ice Age"
For additional information or to book reservations please contact

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Expedition Ice Age

Expedition Ice Age provides the public with a broad view into the time of Florida's Ice Age, a period of time spanning some two million years and only ending about 10,000 years ago. During this time, known geologically as the Pleistocene, Florida, which remained ice free, became a refuge for many animals seeking survival in a warmer climate. Among these animals were the now extinct megafauna, including giant sloths, Mammoths, and Mastodons. And following these creatures were the predators that hunted them, the famous Saber-toothed cats and, finally, humankind.

These people, known as Paleo-Indians, were the first humans to enter Florida, and their arrival and highly efficient hunting methods may have hastened the mass extinctions that followed the end of the Ice Age. Visitors to Expedition Ice Age will be able to explore this prehistoric time via number of sub-displays featuring both original fossils, the majority of which were actually excavated in Florida, and a number of replicas including a life-size skeleton of a Saber-toothed cat and the skulls of an American lion, giant sloth, giant beaver, and tapir. Included is a full-scale replica of an Atlatl, a form of ancient spear throwing device used by the Paleo-Indians.

Turning to Florida's ancient coral reefs and lagoons, their importance in the formation of southern Florida is presented including how they were formed and the life that they supported. An assemblage of fossil shells along with bone fragments of giant tortoises, shark's teeth, and other remains are offered as evidence of their existence.

The exhibit is supplemented throughout by the use of information panels, diagrams, and maps which highlight some of the fascinating characteristics of these creatures from the past and both illustrate and explain the climatic and geological changes that occurred during the *Pleistocene* ice age, with a particular focus on those changes that shaped Florida then and as we know it today.

Standing at the center of the exhibit is a scene taken from a single dramatic moment in the struggle of Ice Age life and death. A Paleo-Indian hunter, having killed a small prey animal, is challenged for his prize by a leaping Saber-toothed cat. It is a dynamic battle between raised spear and six-inch long fangs and slashing claws sure to awe visitors.

This central diorama is surrounded by a barrier system that provides both security for the display without limiting the visitor's view and a location for many of the exhibits information panels. The system is sectional and can be configured to the needs of any particular venue. Glass display cases may be included for the sub-displays.

The sponsor of Expedition Ice Age, The Palm Beach Museum of Natural History, is a 501(c)3 non-profit Florida corporation. They have more than ten years experience in the excavation of both archaeological and paleontological sites from Florida to the Dakotas. Their findings have appeared in some of the most prestigious scientific publications, such as the Journal of Paleontological Sciences, and been featured on the National Geographic Channel.

Expedition Ice Age – Central Diorama



Grassy Waters Preserve and Nature Center, West Palm Beach Florida 2016

The central diorama of “Expedition Ice Age” features a mounted life-size
Saber-toothed Cat (replica skeleton)

An optional mounting pairs this top predator with another top predator, man,
the Paleo-hunter (replica human skeleton)



Parkland, Florida 2015-16

Expedition Ice Age – Lion, Bison, and Sloth



American Lion and Giant Sloth



American Lion skull (replica):

American lions were about fifty percent larger than today's African lions. For exhibition the skull is mounted on a wooden base.

Giant Sloth Skull (replica): Giant ground sloths were as tall as 17'. This exhibits skull is mounted on a wooden base.



Giant Sloth Claw (replica): The claws of a Giant Ground Sloth could be 12' in length. Mounted on wooden base.

Giant Beaver and Tapir



Giant Beaver Skull

(replica): Giant Beavers could be up to 8' long and weigh as much as 500 lbs.

Tapir Skull (replica): Tapirs were tusked, pig-like animals that lived in Florida during the Ice Age. They still inhabit areas of the Amazon jungle.



Ancient Bisons and Camels



Bison antiquus was an ancestor of modern bison and could be half again as large as what are commonly called "buffalo". Bone forms only the interior core of the animals horns which were covered by a hard outer sheaf similar to a cat's claws or human finger nails.



This specimen, although of the same species as lived in Florida, was found in Alaska. The horn span is 36" in width.

Bison Leg

Paleollama leg

These Camelids, which included the ancestors of modern llamas and camels, originated in Florida. They radiated from there to the rest of the world before going extinct in their native land.



Expedition Ice Age – Mammoth and Mastodon



Adult Mammoth Tooth



Replica Mammoth Tusks

Mammoths and Mastodons

Baby Mastodon

Jaw: This lower right mandible of a baby Mastodon contains two teeth, one of which is fractured permitting a cross-sectional view.



Baby Mammoth Tooth: Mammoths had four teeth at any one time consisting of two upper and two lower molars.

Elephant Tusk: This tusk section, along with other fragments was found near South Bay, Florida in 2011. It could have belonged to either a Mammoth or a Mastodon.



Expedition Ice Age - The Shore of the Fossil Sea



During the Ice Age, what is today the region of the Everglades went through a cycle of four sub-seas that alternated with prairie-like grasslands. These sub-seas were surrounded by a series of coral reefs, the remains of which form the limestone of Florida's bedrock.



Giant tortoises similar those found today on the Galapagos Islands lived in Florida during the Ice Age. Their remains are rarely found intact. The exhibit offers an assemblage of bone and shell fragments.

The Atlatl: Weapon of the Paleo-Indians



In order to hunt the megafauna of the Ice Age, Paleo-Indians needed to be able to throw their spears with sufficient power to kill these large prey animals. They did this by making use of a special throwing device called an Atlatl which effectively increased the size of their arms. The spears could be tipped with bone, shell, or stone points.



Teeth, Claws, Jaws, and Bones



Fossil Deer Jaw



Fossil Bison Jaw



Fossil Horse Leg Bones



Capybara Tooth



Giant Beaver Tooth



Bison Tooth

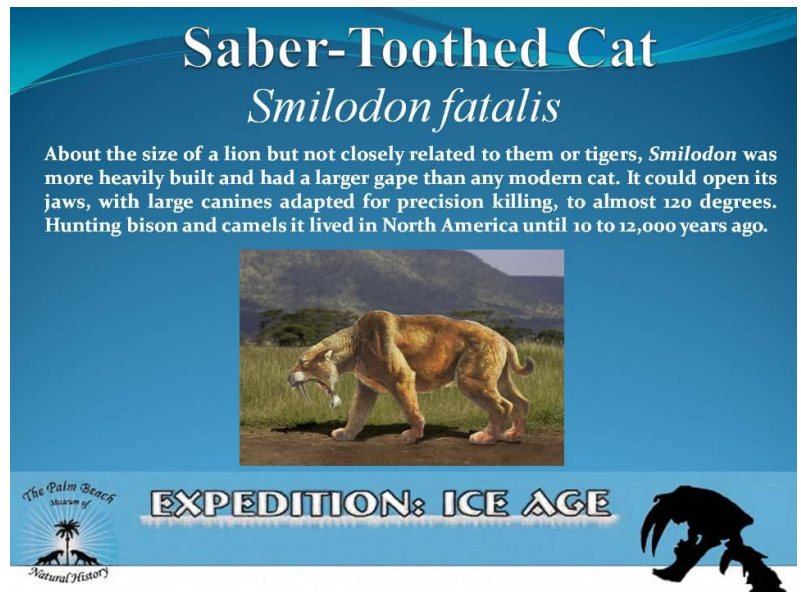


Giant Sloth Tooth

Information Panels and Graphics

In addition to individual specimen labels, Each section of the exhibit is accompanied by large information panels that provide the visitor with interesting details and scientific facts. (example at right is 16" x 20")

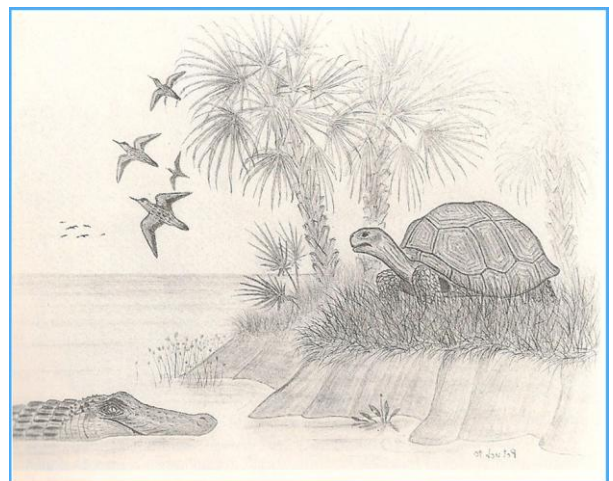
Enlarged wall maps, color illustrations, charts and graphics may also accompany the exhibit if space allows.



Computer image view of Caloosahatchee Subsea

One of a series of twelve images that simulate the changing geography of Florida during the Ice Ages as seen from space. Selected images can be enlarged for presentation as wall mounts.

Original life illustrations and maps by Dr. Edward J. Petuch



Children's Exploration and Activity Center



The Children's Exploration and Activity Center enhances the experience of younger visitors through a number of hands-on options.

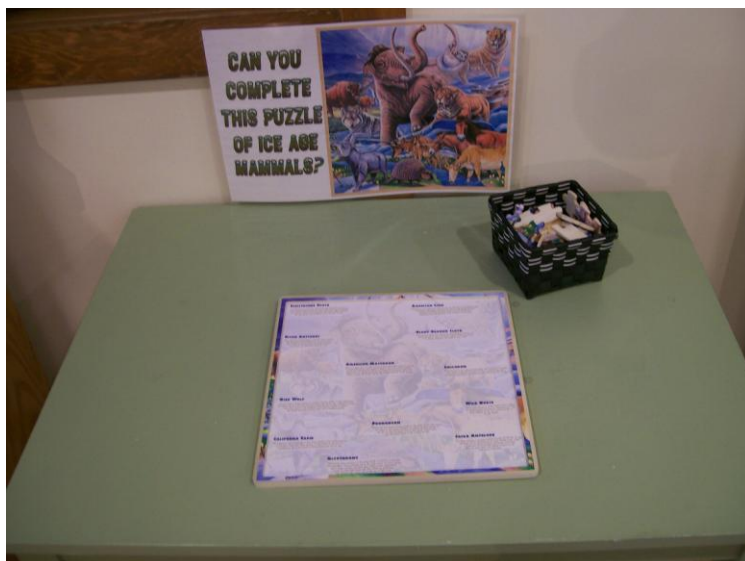
The Center includes children's books, posters, art, and graphics appropriate for younger children. Each exploration box contains a selection of either small plastic model or stuffed Ice Age animals. Small postcards and hands-on items are included.





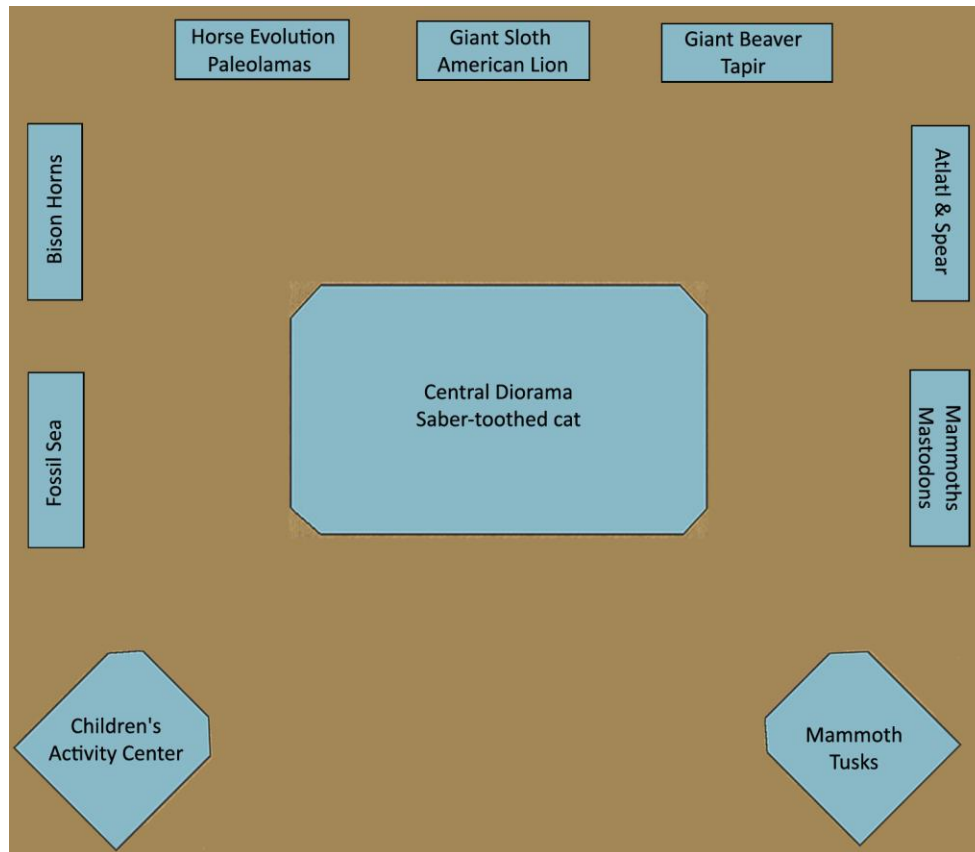
Sheets and postcards with uncolored images of Ice Age animals are provided for children's coloring activity. Placemats are provided as a guide for their imagination. Crayons colored pencils are included for their use.

Several small puzzles are provided challenge children's problem solving skills. At right is a 3-D, wooden mammoth skeleton puzzle and below a standard jigsaw puzzle featuring Ice Age animals.



Generalized Expedition Ice Age Lay-out and Floor Plan

The following hypothetical floor plan arrangement allows for 6' minimum width walkways to permit easy traffic flow and to include the accommodation of visitors in wheelchairs. This plan can be modified and adapted to fit a variety of locations or room configurations.



Suggested Floor Plan

30' x 30'

900 sq. ft.

Central diorama features full-size mounted Saber-tooth Cat replica approximately 6.5' in length and raised on a 30" high central pedestal for viewing. A barrier system, which includes information panels as well as providing security, surrounds the diorama. This wooden barrier system is approximately 2' wide all-around (an additional one foot wide buffer space between the barriers and the diorama platform has also been allowed) and is 30" high at the back, sloped down to 22" at the front. The exhibit information panels are mounted on this sloped surface for easy viewing. The barrier is sectional and can be arranged in several different configurations. These include the option to place the diorama against a wall by deleting one of the sides. When the Paleo-hunter is added to the central diorama an additional minimum 4' length must be planned for. Seven to ten 6' long, 18" deep, glass display cases may be arranged around the perimeter of the exhibit or in other configurations as desired and practicable.

Basic Exhibit Inventory

Full Skeletons

1. Saber-toothed Cat (replica)

Skulls

1. American Lion (mounted replica)
2. Giant Sloth (mounted replica)
3. Giant Beaver (mounted replica)
4. Tapir (mounted replica)
5. Saber-toothed cat (mounted replica)

Partial Skeletal Material

1. Baby mastodon jaw (fossil, 16")
2. Elephant Tusk (fossil, 8")
3. Elephant Tusk (fossil, crushed, 8")
4. Elephant Tusk (fossil, 12" x 7")
5. Bison (fossil horns w/skull cap, 36")
6. Bison (fossil jaw with teeth, 16")
7. Bison (fossil vertebrae, two, mounted)
8. Bison leg (fossil, mounted, 16")
9. Paleolama Leg (fossil, mounted, 17")
10. Deer (fossil jaw with teeth, 6")
11. Deer (fossil antler fragments, 4-5")
12. Horse (fossil leg bone fragments, 3-8")
13. Horse (fossil vertebra)
14. Giant Tortoise (assorted shell and bone fragments, approx 12 pieces)

Teeth

1. Mammoth (fossil, adult tooth)
2. Mammoth (fossil, juvenile tooth)
3. Bison (fossil tooth)
4. Capybara (fossil tooth)
5. Giant Beaver (fossil tooth)
6. Giant Sloth (fossil tooth)
7. Horse (fossil tooth)

Miscellaneous

1. Atlatl & Throwing Spear (6' replica)
2. Giant Sloth Claw (mounted replica)
3. Glyptodon Scutes (4-5 assembled fossils)
4. Fossil Shells & coral (fossil assemblage, 50-75 pieces)
5. Mammoth Tusk Pair (mounted replicas, 7.5')

Images and Graphics

1. Print, "The Hunters" by D. Quigley (Framed)
2. Mounted information panels (poster board, 18 -20, assorted sizes, approximately 12" x 18" each)
3. Mounted images - Simulated Space Shuttle views of Ice Age Florida (poster board, five 12" x 8")
4. Posters - Glyptodon, Mammoth, Giant Beaver, Tapir (four 27" x 42", plastic framed)



Exhibit Highlights

- Full-size Saber-toothed Cat Replica
- Collection of replica skulls of Ice Age fauna
- Presentation of actual Ice Age fossil specimens
- Paired Replica Mammoth Tusks
- Replica Atlatl and throwing spear
- Florida fossil shell collection
- Information panels, charts, maps, and illustrations

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