

Mission Statement

The mission of the Falls of the Ohio State Park is to provide opportunities for education and recreation while protecting the resources.

Mission Statement for the Interpretive Services of the Indiana Department of Natural Resources, Division of State Parks and Reservoirs:

The mission of the Interpretive Services is to provide information and offer interpretive experiences with Indiana's natural and cultural resources to visitors, staff and a diverse public.

Mission Statement for the Interpretive Services at the Falls of the Ohio State Park:

The Falls of the Ohio State Park interpretive services will focus on geology / paleontology, the Ohio River environment, archaeology and the history of Clarksville.

Vision Statement for the Falls of the Ohio State Park Interpretive Services:

We will strive to be leaders in providing innovative, effective interpretation at the Falls of the Ohio. We will instill an awareness and appreciation of the rich natural resources and cultural heritage in as many individuals as possible. All activities will be conducted in compliance with the regulations of the Department of Natural Resources and the National Wildlife Conservation Area.



Aerial view of the Falls of the Ohio (U. S. Army Corps of Engineers Photo)

Introduction

Thank you for your interest in the Falls of the Ohio State Park. This handbook was designed as a guide to help you and your students have a safe, positive learning experience during your visit to the Falls of the Ohio - a place that can serve as your *ultimate* outdoor classroom!

The Interpretive Center offers a variety of programs and mediums through which persons may experience the Falls on many levels. We can guide you through your first visit or provide an up-to-the-minute river condition report for your 1000th!

The pre-visit, on-site visit and the post-visit activities in this Handbook are designed to encourage each person to “experience” the Falls with all of their senses. You may use any activities you choose - or create your own. We are always seeking *new* educational activities to share! If you have an activity, tell us about it.

We hope that each person leaves the Falls with a better understanding of both the natural and cultural history which makes the Falls of the Ohio so unique. Ideally, we hope that each person leaves with a desire to learn even more.

For additional information or to schedule an indoor, outdoor, or teacher training program call (812) 280-9970 or write to:

Falls of the Ohio State Park
201 W. Riverside Drive, Clarksville, IN 47129-3148



A class explores the fossil beds. We offer an outdoor fossil lab May – Nov. 15.

Interpretive Center

The Falls of the Ohio Interpretive Center is a 16,000 square foot facility. It contains –

- 2,000 square foot exhibits gallery (described below)
- An award-winning 14 minute movie about the 400-million year history of the Falls area
- A new movie about the Kentuckiana connection to the Lewis and Clark expedition (shown at 1:00pm and 3:00pm and other times by request)
- Kids Corner - an activity area for preschool to first grade children
- Coral reef and Ohio River fish aquariums
- Classroom-library used for student labs, teacher in-service programs and public programs
- Gift shop that features educational items related to the Falls area
- Restrooms
- River and wildlife observation rooms
- Temporary exhibit gallery, changing three times per year. Themes alternate between geology, life science-nature and history-prehistory. (The schedule is made two to three years in advance and is in printed in our annual program brochure printed every January.)

Exhibit themes include:

- Geology & paleontology
- Modern and ancient coral reefs
- Flora and fauna at the Falls
- Archaeology
- History at the Falls, including local industry and commerce from the 17th century to today
- Human changes at the Falls
- Surveying and mapping
- Process that led to the establishment of the Falls of the Ohio National Wildlife Conservation Area and Indiana State Park



The Interpretive Center at the Falls of the Ohio State Park

Important information for Educators

While there is no fee to enter the State Park, there is an entrance fee to the Interpretive Center: \$4 for adults and \$1 for children 2 to 18. *Prices are subject to change.* Teachers and chaperons are admitted free of charge at a 1:5 ratio for grades 3 and below; 1:10 ratio for grades 4 and above. We can provide an “Educator’s Guide” with additional important information. Please call or e-mail us.

We suggest that groups allow a minimum of one hour to tour the building. This would include time for the orientation theater and other video presentations in the exhibit gallery. Grade-specific activity sheets are provided to all groups. We have a general activity sheet (our most popular) and thematic (i.e. geology). Students are expected to use ours, or sheets created by the teacher, to promote an educational focus. Activity sheets reduce student horseplay significantly! We discourage last-minute decisions to visit the park because we are often heavily booked. Feel free to tell us how your visit fits into the curriculum – we can tweak our programming to cover topics your students are investigating.

The Virtual Park: www.falloftheohio.org

The Falls of the Ohio State Park has been on the worldwide web since 1998. We are proud of the content of our “virtual park,” which contains:

- information about the park & museum
- virtual field trip on the fossil beds
- photo gallery
- links to other fossil sites on the worldwide web
- many of our park brochures are on-line
- activities from the Field Paleontology Institute
- Falls Fossil Festival, with a list of guest speakers, teacher workshops and activities (the current year's schedule is posted by the spring)
- E-mail addresses to contact park interpretive naturalists
- Link to the Falls of the Ohio Lewis & Clark Bicentennial Committee web site
- list of fossil collecting sites in the area

You are welcome to inquire about a reservation by e-mail, but we will contact you by telephone to make final arrangements. Please put your phone number in your e-mail text!

Programs and Services

Please refer to the “Educator’s Guide” for the most up-to-date information about classroom programs, hikes, in-service, and other programs and services offered by the interpretive naturalists at the Falls of the Ohio. If you do not have a copy, please call (812) 280-9970, and we will send you one. We recommend all teachers bringing a group for the first time, to visit the Interpretive Center for a free hour-long orientation *before* bringing their group. We have found that an orientation will reduce the risk of problems from confusion or miscommunication. If you live more than a hour away, we can send you an agreement form, in place of attending the orientation. Orientations are scheduled by reservation on Thursdays from 4 to 5 PM or anytime on Saturday. We welcome inquiries about special needs and are always looking for ways to help your class.

We do ask that educators please read the “Educator’s Guide” carefully before bringing groups to the Park. Following the guidelines and suggestions will make the visit a pleasant and memorable learning experience. **All group visits must be reserved in advance!** Interpretive naturalist-led programs are not available to groups without advance reservations. These programs are free with museum admission. If you intend to bring your group to the fossil beds without visiting the Interpretive Center, *a reservation is required*. This allows us to coordinate groups so one will not interfere with another.

Weekend programs are designed to meet the needs of our visitors and educational groups. Special cultural arts programs and other events are scheduled throughout the year. Call to find out what is happening or check the park web site: www.fallsoftheohio.org.

Museum-to-Go and other kits for loan

Fossils Museum-to-Go trunk

Contains two boxes (5 trays) of fossils of every major phyla found at the Falls of the Ohio. Includes a binder with suggested activities.

Zebra Mussel / Invasive Species Trunk

Uses zebra mussels to illustrate some problems created as a result of human activity in aquatic ecosystems. Includes labs, demonstrations, games, research, etc.

River Ecology Trunk

Developed by the U. S. Department of Fish and Wildlife, it contains activities and resources to enhance life science education in the classroom.

Computer-based Learning Lab

Through a Toyota TAPESTRY grant Marilyn Bowman created a comprehensive activity trunk that uses technology for water quality testing, transpiration rates in plants as well as an orienteering activity for the “willow woods” at the Falls of the Ohio State Park.

Summer Institutes and Educator Workshops

Park interpretive naturalists provide teacher training in the areas of geology, paleontology, biology, archaeology, and environmental sciences. These programs are usually offered each summer:

Field Paleontology Institute (3 days)

Advanced Field Paleontology Institute (1 day)

Project Archaeology (2 days)

Probing the Falls (1 day)

Project Wild or **Project Aquatic** (1 day)

Hoosier Riverwatch (2 levels, 1 day each) – Sponsored by INDR

Evolution: Investigating the Evidence (1 day)

Call for more information or check the park web site in mid January.



Project Archaeology – Summer Educator Workshop

The Clarksville Riverfront Foundation offers several week-long summer school programs which are coordinated by individual schools. If you would like to get your school involved, contact the Foundation at (812) 283-4999. A stipend is provided to instructors.



Field Paleontology Institute participants look for fossils at Liter's Quarry.

Kids Corner

Constructed in 2001, Kids Corner is an area designed for children pre-K through grade one. Due to the small size of this area, groups are scheduled approximately 15 children at a time. As with other programs, use of the Kids Corner by groups is reserved in advance. Activities are tied to these themes: fossils, the river, different ways to travel and nature. Children can work with puzzles, make rubbings of fossils, build a bridge over the Ohio River, pilot a “steamboat,” play with toy animals, listen to stories, have a puppet tell a story and more.



Children build a bridge in the Kids Corner

Resource Library

One of the best kept secrets at the Interpretive Center is our resource library. Opened during regular Center hours, it contains a modest collection of books relating to the park themes (fossils & geology, birds & nature, coral reefs, regional history, river history, interpretation, etc.) As a general rule, materials cannot be “checked out” - they must be used in-house. In addition to books and magazines, we maintain files covering a lot of topics. We have a brochure on our resource library that we can send upon request.

Introduction to the Falls of the Ohio

Natural History

The history of the Falls of the Ohio reaches back millions of years, leaving us with a wealth of natural wonders and resources to explore. They include 400 million year old Devonian fossil beds, a variety of flora and fauna including over 265 species of birds and 125 species of fish, habitats and interesting geological formations such as sculpted limestone, natural arches and small waterfalls.

The formation of the Falls fossil beds dates back to the middle of the Devonian Period (in the Paleozoic Era) between 408 - 360 million years ago. At that time a shallow sea cut diagonally across the eastern half of the North American continent from New York through Kentucky south and west over Texas. The Appalachians and the Great Plains were dry land.

The continental sea was teeming with a variety of marine life including fish, echinoderms, trilobites, brachiopods, bryozoans, sponges and corals. The skeletal remains (mostly calcium carbonate) settled on the sea floor, steadily burying older layers of sediment. Over time the sedimentary rock limestone was formed, which preserved the fossils.

During the remainder of the Paleozoic Era, this area was alternately under a sea, swamps or intermittently exposed as dry land. During the Mesozoic Era (the “Age of Dinosaurs”), the area was dry land (with dinosaurs everywhere). The evidence of dinosaurs was not preserved, because there were no rocks formed in the area during the Mesozoic. Land was eroding away, as it is today.

Millions of years later during the Pleistocene epoch, glaciers advanced from the north. Over a period of two million years, they helped form the present day Ohio Valley. The last glacial advance (the Wisconsin glaciation) ended about 10,000 years ago. The last glaciers pushed south stopping short of the Falls before melting. This melt water, coupled with millions of tons of loose rock filled the river valley and shaped the river we call the Ohio. Since the end of the glaciation, an estimated 100 feet of glacial outwash and 20 feet of limestone have been removed.

The Devonian limestone extends to the north beyond Indianapolis, Indiana, and southeast to the Cumberland plateau. It may be found in northern and central Ohio and swings into Canada and over to western New York. During the Devonian, the North American and African continental plates were not far apart. Fossils similar to those at the Falls can also be found in Morocco, in northwest Africa.

These fossil beds are considered to be among the largest naturally occurring laterally exposed Devonian coral beds in the world. Over 300 species of fossils have been identified at the Falls, many of which are type specimens, being discovered and described from the Falls for the first time.

The fossil beds are only one natural resource at the Park. There are over 270 species of birds recorded, including shore birds, wading birds, and song birds. There are several endangered species which visit the Falls - the American Bald Eagle, the Osprey, two species of Night-Herons and the Peregrine Falcon. Cormorants, herons, gulls, geese, ducks, egrets, loons and kingfishers may be seen.

The Falls have been used as a fishing area for thousands of years. Some 125 species of fish have been reported. Some of the largest are catfish, weighing over 100 pounds. Three of the oddest fish, the long-nose gar, the paddlefish (spoonbill "catfish") and the shovel-nose sturgeon resemble prehistoric fish.

Other fauna which may be seen at the Falls include mammals like the fox, white tail deer, beaver, eastern cottontail, gray and fox squirrels, muskrat, opossum, and raccoon. Reptiles including turtles, lizards and non-poisonous snakes may be rarely seen. Invertebrates including river mussels, snails, and a variety of aquatic and airborne insects can be observed.

Flora at the Falls include both native and non-native species. Evening primrose, prairie mimosa, monkey flower, wood sage, bittersweet nightshade and tickseed sunflower may be seen blooming at various times. Trees include the eastern cottonwood, sycamore, black willow, honey locust, silver maple and Osage orange. Other plants include star cucumber vine, sumac, trumpet creeper and bind weed.

The flora and fauna flourish at the Falls in a variety of habitats including river, stream, wetland, mudflat, sandbar, marsh, prairie, rock, and woodland. These diverse habitats co-exist in a concentrated area that has been altered both by man and nature.

The diversity of the natural resources at the Falls provides an unlimited opportunity for study and simple enjoyment of a "natural" area rich in bio-diversity.

Cultural History

The cultural history of the Falls is both rich and varied. The first human habitation of the Falls reaches back about 12,000 years ago when the Paleo-Indian lived in the area. These early peoples were nomadic, following animal migrations and seeking raw materials such as high quality flint. They probably hunted mammoths, mastodons and other ice age mammals that are now extinct.

The Archaic people lived between 10,000 - 3,000 years ago. They were semi-nomadic tribes who moved seasonally to gather wild plants, to fish, and to hunt and trap animals. They produced tools such as adzes, axes, the compound spear (atl-atl), and baskets. The native figure in the lobby exhibit represents this group.

The Woodland Culture developed in the region 2,000 - 1,000 years ago. They cultivated crops, established small villages with regional variations, buried their dead ceremoniously, used bows and arrows, and developed pottery techniques. Extensive trade networks were established. Large mound and earthwork complexes were built during this period.

Late Prehistoric Cultures flourished between 1,000 and 300 years ago. They developed maize agriculture, as part of adapting to a floodplain environment. These cultures developed into "chiefdoms" with complex political and social systems. Large "towns" were developed by building large platform mounds around a central plaza. These "towns" were often surrounded by a stockade.

Evidence of permanent settlements at the Falls of the Ohio by prehistoric peoples is considerable. Development of the cities around the Falls has destroyed many of these prehistoric sites. Construction of the levee following the 1937 flood heavily altered or destroyed sites near the Falls. Numerous prehistoric sites in the Louisville area have been destroyed by filling swamps and lakes. More recent development has destroyed more. Still, there is an abundance of evidence that people lived in the Falls area.

The first documented European occupation of the Falls occurred in 1778 when George Rogers Clark, with a group of militia and their families, established a settlement on Corn Island near present day Louisville. It was from here, he launched his successful military campaign in the Northwest Territories. Some have suggested, though not confirmed, that Robert LaSalle visited the Falls in the late 1600's. Daniel Boone may have passed through in 1771.

After George Rogers Clark completed his military career and settled near the Falls, the area began to develop rapidly. Clark and his men were granted land in the area and Clark surveyed the town of Clarksville, Indiana. A representation of a cabin was assembled at his home site in 2001. In 1803, George Rogers Clark's younger brother, William Clark, with his partner, Meriwether Lewis and the Corps of Discovery, began their famous exploration of the Louisiana Purchase near Mill Creek below the Falls. Look for a variety of events and exhibits between 2003 and 2006 for the bicentennial commemoration.



An interpreter talks to visitors at the cabin reconstructed at the George Rogers Clark home site at the Falls of the Ohio State Park

Several famous people visited and lived near the Falls. In the early 1800's, Henry Clay and Humphrey Marshall fought a duel at Silver Creek. John James Audubon lived in the Falls area from 1807-1810, where he completed many bird paintings.

Other famous dignitaries who visited the Falls include Presidents James Monroe, William Henry Harrison, Abraham Lincoln, and Herbert Hoover (also a geologist). Visiting literary figures include Charles Dickens, Mark Twain, and Walt Whitman. Mike Fink, the legendary "riverman," visited. Big Jim Porter, the "Kentucky Giant," ran a tavern on Shippingport Island (at that time a thriving community).

As navigation and commerce expanded on the Ohio River, the need for controlling the depth and flow of the river increased. To circumvent the dangerous rapids at the Falls of the Ohio, the Portland canal with locks was dug over several years and completed in 1830. Over the years, it was enlarged to handle bigger steamboats. The first dam on the Ohio River was constructed beginning in 1868. Due to frequent interruptions by high water and runaway barges, the dam was not completed until 1881.

The Ohio River Canalization Project was created to improve river navigation. A series of dams were constructed to control the river flow. The wickets consisted of 58 dams made of wood and metal which had to be raised and lowered individually by manual labor. The dam at the falls was number 41. Wicket construction began in 1885 and was completed in 1929. A decision was made to replace the

wickets with a series of mechanized locks and dams. Currently, 20 locks and dams help maintain water levels throughout the entire Ohio River system. Two wicket dams, dams #52 and #53, are slated to be replaced by a new dam near the mouth of the Ohio. The McAlpine Dam at the Falls of the Ohio was completed in 1964, replacing the aging wooden wickets. The locks and dams on the Ohio are operated and maintained by the Army Corps of Engineers, who are responsible for controlling the water level in the river.

In 1982, after immense effort by groups and individuals, 1404 acres of the Falls were designated a National Wildlife Conservation Area administered by the Army Corps of Engineers. In 1990, a section of the area became the Falls of the Ohio State Park, administered by the Indiana Department of Natural Resources, Division of State Parks. The state park designation gave impetus to the construction of the Falls of the Ohio Interpretive Center, a 16,000 square feet, 5.1 million dollar visitor exhibit complex. Between 2000 and 2003 another 76 acres of wetlands were added to the Falls of the Ohio State Park near the George Rogers Clark home site. Its primary use is a nature preserve, since it floods frequently.



*Falls of the Ohio in the year 1600
Giant mural in the lobby of the Interpretive Center*