

FOSSIL HUNT PASSPORT

Old National Road Welcome Center
5701 National Road East
Richmond, IN 47374
(800) 828-8414
(765) 935-8687

VisitRichmond.org

Summer Hours (May 1 - Oct 31)
Mon - Fri 8:30 - 5; Sat 9 - 5; Sun 10 - 4

Winter Hours (Nov 1 - April 30)
Mon - Fri 8:30 - 5; Sat 10 - 4; Closed Sunday

**Richmond**
Wayne County, Indiana



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Wayne County, Indiana

How to complete your Fossil Hunt Passport

- 1) Explore the Whitewater Valley and collect at least 5 fossils. Try to find different types of fossils.
- 2) Bring your fossils & passport to one of the following locations to receive your completion stamp and prize!

Old National Road Welcome Center



5701 National Road East
Richmond, IN 47374
VisitRichmond.org
(765) 935-8687 or (800) 828-8414
Hours: Mon - Fri 8:30 - 5, Sat 9 - 5, Sun 10 - 4 (May-Oct)
Mon - Fri 8:30 - 5, Sat 10 - 4:00 (Nov-Apr)

Joseph Moore Museum



Earlham College
801 National Road West
Richmond, IN 47374
Earlham.edu/joseph-moore-museum
(765) 983-1303
Hours: Sun, Mon, Wed, Fri, Sat 1 - 5:00

COMPLETION CERTIFICATE

Name

has successfully completed the

WHITewater VALLEY FOSSIL HUNT



To learn more about the fossils in this area,
visit: sites.google.com/site/whitewatervalleyfossilhunt

Fossil Finds



Find 5 different types of fossils.

List the name of the fossils you found below each box.

1.

Fossil type

2.

Fossil type

3.

Fossil type

4.

Fossil type

5.

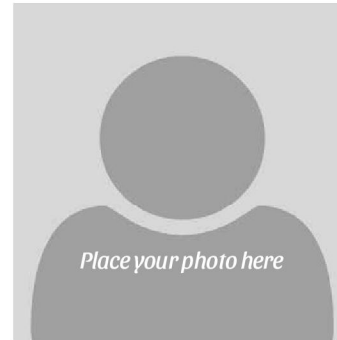
Fossil type



Great job!

Visit the Joseph Moore Museum or go online to: sites.google.com/site/whitewatervalleyfossilhunt for help identifying your fossils!

Whitewater Valley Fossil Hunt Passport



Paleontologist



Richmond
Wayne County, Indiana

Name: _____

Age: _____

Hometown (City): _____ (State): _____

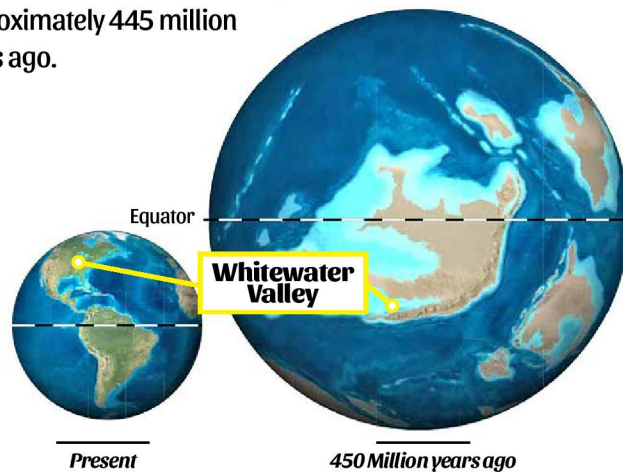
Travel back in time 445 million years.



Welcome to tropical Indiana!

■ Long before woolly mammoths roamed the frozen plains, long before dinosaurs existed, Indiana looked a lot like the Bahamas do today.

During the late **Ordovician**, much of North America was covered by a shallow sea teeming with life. Indiana was located south of the equator. The fossils found in the Whitewater Valley give us some idea of what life was like in Indiana during what is known as the “Richmondian age” approximately 445 million years ago.



CORALS |kor-əl, kār-| Both horn-shaped and encrusting, colonial corals are found in the area. Colonial corals have star-shaped pores which are much larger than those of bryozoa. Like modern corals, these animals did not move, but captured food from seawater.



Encrusting coral on a brachiopod

CRINOIDS |krī-noid| Related to modern starfish and sea urchins, crinoids are sometimes referred to as ‘sea lilies’ since they look like flowers that were attached to the sea floor by a flexible stalk. Crinoids fed by filtering food from the sea water with their feather like arms. They were fairly delicate and tended to break apart when the organism die, so typically only individual stem segments are found.



GASTROPODS |ga-strə-pād| Like bivalves, most snails shells were not preserved, so the fossils found are mostly shell fillings or impressions. Fossil snails, like their modern cousins, crawled around the bottom scraping algae and other small food particles from rocks and plants.



TRILOBITES |trī-lə-bīt| Trilobites are extinct, bug-like scavengers that found food in the sea floor muds. Like modern insects and crabs, trilobites shed many jointed skins as they grew. These fragile skeletons were easily broken apart by waves, so usually only pieces are found.



Whitewater Gorge Fossils



BIVALVES |bī-valv| Bivalves like clams, scallops, and oysters had shells that dissolved soon after burial. Fossil bivalves are typically impressions of the shells in mud or casts created when mud filled an empty shell.



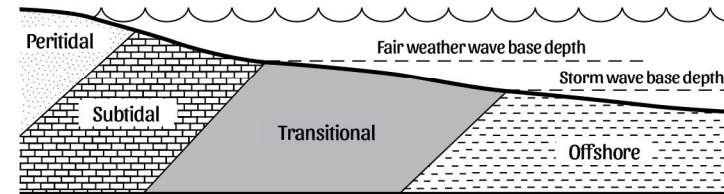
BRACHIOPODS |brā-kē-ə-pād| Many kinds of brachio-pods are found in the Whitewater Valley. The fossils have two ridged, hinged shells with a small hole in the shell near the hinge. A stalk protruded through this hole and fastened the animal to the sea floor. Brachiopods ate by filtering food from the water.



BRYOZOA |brī-ə-zō-ə| These twig- or net-like fossils were home to thousands of tiny animals. It is common to find fossils covered in a thin mesh of bryozoa. Bryozoans fed on microscopic organisms and plants by projecting tentacles with tiny moving filaments into the water through the holes in their external skeletons.



CEPHALOPODS |se-fə-lə-pād| Squid-like animals that lived in chambered cone-shaped shells. Nautilus reach up to 15 ft in length and feed on smaller creatures they caught in their tentacles.



Whitewater
Mostly Limestone

Liberty
Mix of Shale and Limestone

Waynesville Formation
Mostly Shale

The 3 **Richmondian** rock formations found in the Whitewater Valley are at the top of an alternating sequence of shale and limestone found throughout the area around Cincinnati.

The **Waynesville Formation** is the oldest. It is mostly shale from a muddy, offshore environment. The fossils found there are delicate & unbroken.

The **Liberty Formation** is a mix of shale and limestone. It was deposited in a transitional environment reached by storm waves, but untouched between storms.

The **Whitewater Formation** is mostly limestone, indicating it was deposited in relatively clear, shallow water. It contains lots of fossils that show evidence of being battered and broken by wave action.

Where to Begin Your Hunt



■ Fossils can be found just about anywhere in the Whitewater Valley. Look for fossils along stream banks or the Cardinal Greenway where nature and time have eroded them from the surrounding rock. You can also find great specimens in piles of dirt & rubble near construction sites. Outcrops are constantly being created or destroyed though construction activities.

Here are two known fossil locations to get you started on your hunt:



Richmond Fossil Park

(On Bridge Avenue, west of Sim Hodgin Parkway in Richmond)

Collect fossils from the rubble pile and on the near shore of the creek. A nice outcrop of the Whitewater Formation is visible on the far side of the creek.



Whitewater River Valley Gorge Trail

(Between Test Road and Waterfall Road, in Richmond)

Collect loose fossils along the trail or in the stream bank at the base of Thistlethwaite Falls.

Safety First!



■ Fossil collecting can be dangerous. Please be careful and follow these few simple guidelines to ensure that you have a safe and fun collecting experience.

1) Choose a safe collecting site

Areas where fossils are found like creek banks or road cuts can be unstable and treacherous. Avoid areas with no road shoulder, fast moving traffic, and where non-emergency stops are not permitted. Make sure you have permission from the land owner or the applicable permit to collect.

2) Beware of dangers

Slippery slopes, falling rocks, poison ivy, traffic, and “creepy crawlies” are common hazards for fossil collectors. Always be aware of your surroundings. Collect from rubble piles ONLY. Never try to break fossils out of intact rock in the hillside.

3) Dress for safety

Wear clothing to protect yourself from weather and insects as well as appropriate footwear to prevent falls and twisted ankles.

4) Be prepared

Pack plenty of water to avoid dehydration. Bring a first aid kit for unexpected injuries. Always tell someone where you will be collecting and when you plan to be back.