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# THE INDIANA JUNIOR HISTORIAN

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## Focus— Archaeology: Uncovering Indiana's Past

*Workers excavating the Temple Mound at Angel Mounds during the 1930s.  
From: Indiana State Conservation Department, Indiana Picture Collection, Indiana State Library.*



# Focus

Angel Mounds is a site in Indiana occupied within the period of time characterized as the Mississippian Tradition. Angel Mounds was a large settlement with 1000 or more people. It was an important trade center. The Indians had a complex social structure and an organized religion. They made pottery of clay and crushed mussel shell.

An obvious characteristic of this Native American culture was the earthen mounds that the people built. The mounds were mainly used for elevating important buildings.

They lived in houses rectangular in shape, built from logs, cut down with stone tools called celts. The roof was thatched. Sleeping benches were built along the walls.

They were farmers. Using handmade tools of stone, bone, shell, and wood they cultivated their main crop, corn. They hunted animals with spears and bows and arrows. The Ohio River was another great source of food.

These prehistoric Indians had no written language and were gone before the Europeans arrived in what is now Indiana. So how do we know so much about them? The information was provided by the science of archaeology and related sciences.

Listen to *The Nineteenth State* tape, episode 6-16, entitled, "The Mystery of Angel Mounds," to learn more about this early Indiana culture.

Sources: Black. Angel Site; Kellar, James H. "Angel Site: Life in Indiana 6 Centuries Ago." *Outdoor Indiana*, Vol. 37 No. 9, Nov. 1972.

NOTE: All drawings in this issue were made by Paula A. Bongen. Artifacts drawn are after Black, listed above.



This drawing represents an effigy found in the temple mound at the Angel site.

## Neat Words You Should Know!

- **Anthropology**- the scientific study of the origin, physical, social and cultural development, and behavior of humans.
- **Archaeology**- the scientific study of past human cultures.
- **Artifact**- any object made or shaped by humans. Examples: tools, clothing.
- **Ecofact**- remnant of plant or animal originally used for food. Examples: bone, teeth, shells.
- **Mississippian Tradition**- the late prehistoric culture of peoples who lived in the eastern United States from A.D. 900 to A.D. 1600.
- **Mound**- an earthen structure made by humans.
- **Palisade**- a high, wooden and mud fence used for protection.
- **Prehistory**- the period in human existence before introduction of writing systems. Prehistory ends at different times in different areas. In North America, prehistory ended with European contact.
- **Projectile point**- a stone chipped by hand. Example: spear point or arrowhead.
- **Sherd**- a fragment of pottery.
- **Surface collecting**- collecting artifacts that are lying on the surface of the ground. There is no digging involved.

## Indiana Who?

Archaeology holds a fascination for many people. We picture the intrepid archaeologist, glistening with sweat, hacking through the dense jungle in search of golden objects and mummified remains. There, up ahead he sees a . . .

"No way!" laughs Cameron Quimbach, director of Archaeological Communications and himself an archaeologist. "That's the Indiana Jones image of archaeology, and it's all wrong."

**• All right, let's begin again and define what archaeology really is.**

Simply put, archaeology is the scientific study of past human cultures. We analyze clues that have been left behind and reconstruct past lifeways. Contrary to popular belief, we do not dig for dinosaur bones.

**• But you do dig for other things, right?**

Dig really isn't a good word. Construction workers dig. An archaeologist systematically excavates for clues, layer by layer. As a matter of fact, we now have ways of obtaining information without excavating. We now consider excavation as a last resort.

**• Why a last resort?**

Because no matter how carefully you excavate, you are still destroying that site. The archaeologist of today has a strong, ongoing awareness of preservation.

**• What exactly is a site?**

A site is any place where there is evidence of former

human habitation. If you found one projectile point, just one, that area would then be considered a site.

**• Well, if you don't excavate how do you get the information?**

Many clues are on the surface of a site. It takes the trained eye of an archaeologist to recognize clues of human habitation.



**• Are there other ways of knowing where sites are besides someone finding something?**

Sure, but most sites are discovered completely by accident! Besides projectile points, there might be soil stains, fire-cracked stones, small flakes of flint, all indicating humans lived there. Habitation can alter the soil, allowing certain plants to grow that would not normally be found there. More obvious are mounds and the remains of old buildings. Did you know that a row of trees can indicate where

a fence used to be? There are other ways too. Written documents such as diaries, land deeds, land surveys, and history books are excellent sources for locating sites. Aerial photography and even satellites are used. Don't forget sonar. That's how archaeologists located the *Titanic*!

**• After a site is found, what happens?**

Well, let's say you found a point. You should note the location of where you found it and then call the state archaeologist. Yes, every state has one! Just call the Department of Natural Resources. They'll help you. But whatever you do, don't start digging around, looking for more! You could destroy lots of important information and in some cases, risk prosecution.

**• You mean there are laws that protect sites?**

Yes, there are both state and federal laws.

**• I would want to do the right thing. Let's say I called the state archaeologist. What would he do?**

He might order a surface site survey of the area. That is where archaeologists literally walk the area in a systematic way, looking for the surface clues we previously mentioned. A form called a site survey record would be filled out and placed in the state database. The decision would eventually be made whether to excavate or

*continued on p.4*

not. Remember, most of the time there would be no excavation, but at least there is a record of the site for future reference.

**• If you wouldn't excavate, why is a record of the site so important?**

I can give you a good example. Here in Indiana, there is a possibility of a highway being built connecting Indianapolis with Evansville. There are hundreds of archaeological sites between the two cities; many could be right in the path of the new highway. The state archaeologist may decide to excavate important sites that would be in danger of being destroyed.

**• How would the state archaeologist know where the highway was to be built?**

Good question. Before any state or federally funded projects are begun, such as construction of highways or bridges, an environmental impact study must be done on the areas to be affected. Part of the study includes an archaeological survey, which is given to the state archaeologist.

**• What about sites not in danger? How long does it take to decide if they are to be excavated and how long does the excavation itself take?**

Keep in mind that it may never be excavated. If an excavation is called for, a research plan goes into action, and it could take months or even years before the actual excavation

begins. An excavation is a slow, systematic search done by a variety of trained scientists who record, sort, and catalog the material found. The analysis of the material can take years as well. The final step is a detailed site report. It is the written accumulation of knowledge about the site and the people who lived there.

**• Do you get to keep what you find?**

Oh no! Materials would be organized and housed by the organization that conducted the excavation, usually a university or a museum. There are also private research institutions, such as the Center for American Archaeology located in Kampsville, Illinois.

**• What do you see in the future for archaeology?**

The equipment being used is getting more and more sophisticated. It could be that in 20 years archaeologists will sit at computers, and satellites will send information and photographs directly to them.

Maybe there will come a time when excavation is obsolete.

**• Any final words?**

Our cultural heritage belongs to everyone, but it's the professional archaeologist who has been trained to recover and record information about our past. I feel that as an archaeologist, I should help educate and inform the public and students of all ages about archaeology. That is why I created my outreach program, Archaeological Communications. I want to promote an appreciation of and respect for sites and the science of archaeology. I am confident that with archaeologists and the public working together, we can preserve the past for the future.

*Source: Interview by Paula Bongen with Cameron Quimbach, Director of Archaeological Communications, January 22, 1992.*

*Note: See An Apple for Everyone, page 11, for information concerning the state Office of Historic Preservation and Archaeology.*



*The drawing at the left represents an urn burial uncovered at Angel Mounds. After Black.*

# The Mounds

The prehistoric Indians of Mississippian Tradition lived roughly 400 to 700 years ago at Angel Mounds. They had a highly developed culture on the north shore of the Ohio River. They lived there for several hundred years and then left. We don't know why. They left no written records, but they did leave large, earthen mounds that have fascinated people for centuries.

Angel Mounds, in Vanderburgh County, located in southwest Indiana, covers over 100 acres and has 11 earthen platform mounds. The primary purpose of the mounds was to elevate or raise certain buildings.

It was an enormous undertaking to build these mounds made by individuals carrying baskets of dirt which were dumped at the site of the mound and then compacted. The process was repeated over and over again.

The largest mound is a three-terraced, flat-topped platform mound located in the center of the settlement. It is 44 feet high, and measures 650 feet by 300 feet! Who might have had his house on this mound?

If you said the chief, you agree with Glenn Black, the lead archaeologist for the study of the site. Archaeologists believe that the remains of many homes are buried one on top of the other. Mississippian Indians burned the house of the chief when he died. A fresh layer of dirt was laid, and then another house was built on the same spot. Scientists know this from the study of many sites and extensive evidence.

On the same terrace as the chief's house stood a tall cone shaped projection also made of

earth. Black proposed that it was somehow used in a daily sun ceremony based on documented traditions of later Indians.

Archaeologists have identified one mound as a temple mound because of its location in the settlement and the discovery of many burials. The figurines, or effigies, found there help support the temple theory.

Between these mounds is a large open space that archaeologists believe was a plaza used for public meetings, games and competitions, and public religious ceremonies for large numbers of people. Conclusions again are based on evidence from similar sites in the southeast United States.

The Angel Mounds State Historic Site is open from Tuesday through Sunday. Visitors are encouraged to come to the Interpretation Center where exhibits and artifacts show the lifestyle of the people who once lived there.

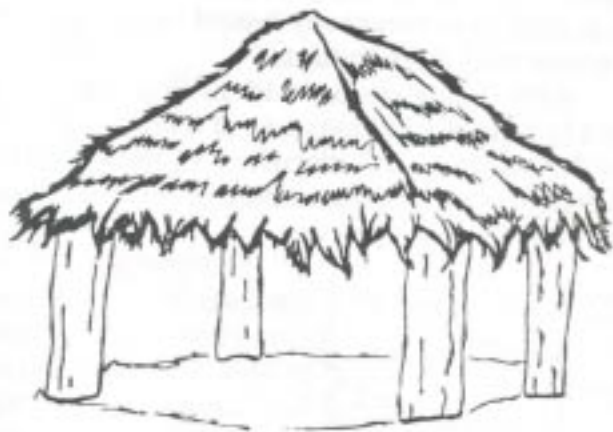
Sources: Black, Angel Site.



## Activities

- Pretend that your classroom has been suddenly covered by a mud slide and archaeologists uncover it 500 years later. What items might be preserved, and what things might rot or disintegrate? What personal items in your desk might give an archaeologist clues about you?
- Make a clay model of the Angel Mounds site. Use the map on pages 6 and 7 and Black's *Angel Site* as references.
- Using the map on pages 6 and 7 as a reference, draw a scene or write an essay about what you think everyday life would have been like at Angel Mounds.
- Locate other prehistoric sites in Indiana and compare them to Angel Mounds.

# Life at Angel Mounds: The Archaeological Clues



This is a Mississippian summer house. The roof is made of grass thatching. Their winter houses had 4 walls made of logs, sticks, mud and grass. They had fire pits in the middle of the floor with a hole in the roof to let the smoke out.

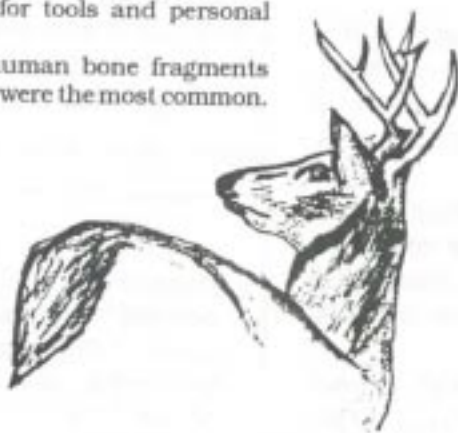
**Clues:** Houses— post holes, trenches where the walls once stood, pieces of mud with grass imprints and pieces of thatching. Fire pits— burned clay, layers of charcoal, fire cracked stones, animal bones.

A palisade surrounded the village on three sides. It was a high, solid wall made of logs, sticks, grass, and mud. It was built for protection.

**Clues:** Post holes, trenches where walls stood, pieces of mud wall.

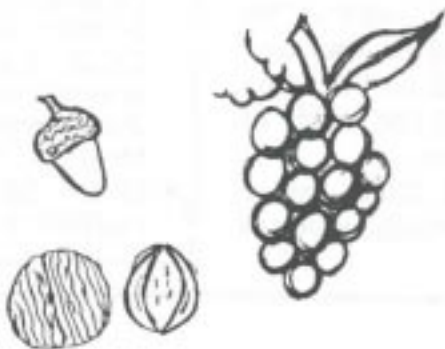
Lots of different animals lived in the surrounding forests. The meat was eaten and the skins used in a variety of ways. The bones and teeth were used for tools and personal adornments.

**Clues:** More than 500,000 non-human bone fragments were found. Deer and turkey bones were the most common.



Berries, wild grapes, nuts, and plants were gathered from the forest. Hickory, Ash, Walnut, Elm, Oak, and Poplar were some of the trees growing at Angel Mounds.

**Clues:** Seeds, nutshells, charred plant remains, and pollen.



The Ohio River provided much in the way of fish, and mussels were taken from the river. They made up a small percentage of the total human bones. Mussels were especially important. There were 22 different types of mussels eaten. Some were then used as bowls, scrapers, hoes, and other tools and adornments.

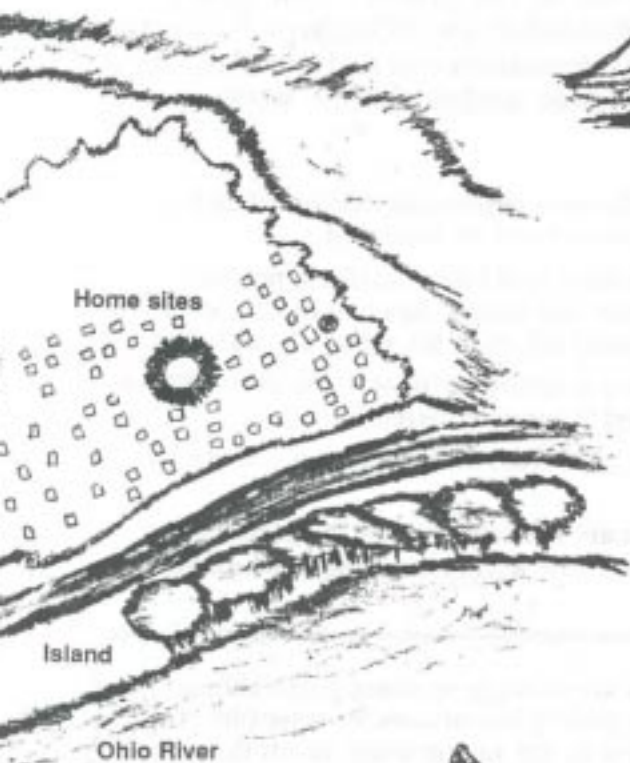
**Clues:** Bones, turtle shells, and mussel shells. Some of the tools that were made from each.

# Talking Bones

The main purpose of the mounds was to elevate important structures.

Mound A was used to elevate the home of the chief. Mound F was called the Temple Mound. It was used as a burial mound.

**Clues:** The mounds are still visible.

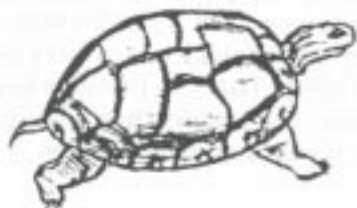


Pottery was made by mixing crushed mussel shells with clay.

**Clues:** More than 1.8 million pottery sherds were found.

The Mississippian Indians made tools and weapons from stone, bone, shell and wood.

**Clues:** The actual tools and weapons.



...y of food. Turtles,  
...e river daily. Fish  
...al number of non-  
...ly favored. There  
...n. The shells were  
...and even personal  
...shells and artifacts



The Mississippian Indians were farmers. Corn was their most important crop. They also grew pumpkins, squash, and beans.

**Clues:** Corn kernels and cobs, seeds.

# Talking Bones

Black, in his excavation of burial sites at Angel Mounds, uncovered the remains of over 300 individuals. The Mississippian Indians buried their dead in a variety of ways. Human remains were found in mounds, pits, and in different positions. They were buried in pits and urns, and were covered with dirt, huge slabs of stone, or even trash! Some bodies had been burned. The reason is unclear.

Plant and animal material, pottery, points, tools, and personal adornments were found in the graves. Out of the 300 individuals, 255 were identified as follows: 165 infants, 37 females and 53 males. The following information was gathered from these physical remains by a physical anthropologist working with Black:



**Skull:** The back of males' skulls were deliberately flattened as infants, for reasons unknown. Females were not so deformed.

**Teeth:** These Mississippian Indians had lots of cavities, perhaps because of a diet high in squash and beans. Age can be determined by teeth. Males lived to be around 50, even 60, women a little less.

**Lumbar:** Revealed the presence of arthritis; in fact 70% of the Mississippian Indians buried at Angel Mounds suffered from it.

**Pelvis:** Indicates the sex of an individual and whether a woman has had children.

**Long bones:** These bones indicate the size and age of individuals. Apparently, men were muscular; the women had slighter builds.

**COMMENT:** Native Americans are strongly opposed to the remains of ancestors being removed from their burial sites for scientific study. What the archaeologist sees as an opportunity to study a past culture, the Native American sees as a desecration of sacred ground. It is their hope that all Native American remains will eventually be returned from museums and universities for reburial. More and more archaeologists and other professionals are becoming sensitive to this issue and are treating human remains with respect and dignity.

Although, it is perfectly all right to surface collect artifacts, never, under any circumstances, should you disturb human remains! This includes tombstones! Any discovery of human remains should be reported within 48 hours to the state archaeologist, Department of Natural Resources at (317) 232-1650.

The Human Burial and Archaeological Artifacts law was signed by Governor Evan Bayh in 1989. This law protects both burial and archaeological sites in Indiana. In addition, there is federal legislation regarding human remains. If you disregard the law, you could face prosecution!



# Tools from Angel Mounds

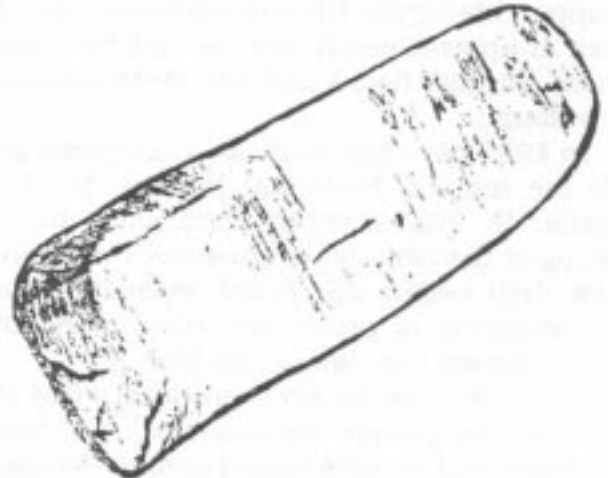
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Indians used natural materials to make their tools. Flint is a rock that if hit correctly can be shaped into tools. The mound builders probably gathered chert, a flint-like quartz often found in limestone, from quarries in south central Indiana and Kentucky. Bones from animals, wood, and shells also were used to make tools. Illustrated below are tools that were found at Angel Mounds.



**Projectile points** were made of **chert**.

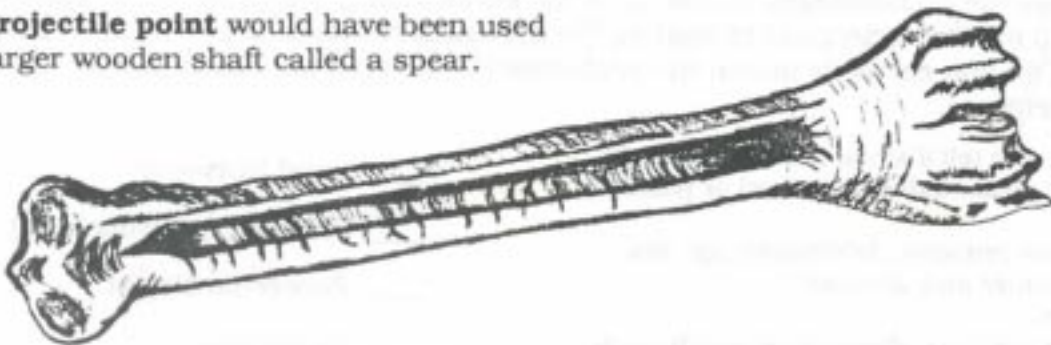
- This **projectile point** would have been used on a small wooden shaft called an arrow.



**Celts** were made of **chert**. They were used like an axe.



- This **projectile point** would have been used on a larger wooden shaft called a spear.



**Beamers** were made from the **leg bone** of a deer. They were used to plow the ground.



This is an **awl**. It was made of **bone**. It was used to punch holes into animal skins.



This is a **fish hook**. It was made of **bone**.

## Profile

# Glenn A. Black

Glenn A. Black was born August 15, 1900, in Indianapolis, Indiana. He graduated from Arsenal Technical High School and then worked to support his family. His interest in archaeology began at approximately age 26, and he taught himself through books and site visits throughout Indiana.

In 1931 he began work as an archaeologist with the Indiana Historical Bureau, State of Indiana. In 1931-1932 he had some formal training at the Ohio State Museum, Columbus. Black then began significant excavation and documentation of prehistoric sites in Indiana that continued throughout his life.

In 1939—now as Archaeological Field Director for the private Indiana Historical Society—Black and his wife moved to Angel Mounds near Evansville. The property had been purchased for the Indiana Historical Society by Eli Lilly. Excavation was carried out over the next

26 years. The meticulous work was documented in Black's *Angel Site: An Archaeological, Historical, and Ethnological Study* hailed as a model for other researchers.

Black became a lecturer at Indiana University in 1944—in Zoology until a Department of Anthropology was established in 1947. He was a skilled teacher, and several of his students went on to distinguished careers in archaeology. Black also had a national reputation and was significantly involved in professional organizations and activities.

Black died in Evansville in 1964. On April 21, 1971, Indiana University dedicated the Glenn A. Black Laboratory of Archaeology in recognition of his enormous contribution to archaeology and Indiana.

Source: [Dedication Program], *Glenn A. Black Laboratory of Archaeology, Indiana University, [1971]*.

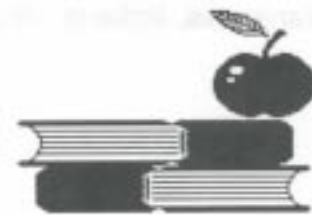
### Site Specialists

Glenn Black was the archaeologist in charge of the excavation of Angel Mounds. However, he needed the help of other scientists to analyze the materials retrieved from the site. They are listed below. Can you correctly match the professionals with the job descriptions? Use a dictionary to help you.

1. Studies rock, can tell if stone has been brought in from other areas, indicating travel or possible trade.
2. Studies human remains, determines age, sex, physical structure and diseases.
3. Maps the site.
4. Studies stone artifacts, determines use through wear patterns.
5. Studies prehistoric plant remains, usually found in charred condition.
6. Studies soil, what is natural, what has been altered by human habitation.
7. Studies the remains of animals, usually bones and teeth.
8. Studies the land, its shape in relationship with the site.
9. Studies pollen, determines prehistoric plant life.

- \_\_\_\_\_ Land Surveyor
- \_\_\_\_\_ Physical Anthropologist
- \_\_\_\_\_ Zooarchaeologist
- \_\_\_\_\_ Pedologist
- \_\_\_\_\_ Geomorphologist
- \_\_\_\_\_ Palynologist
- \_\_\_\_\_ Paleobotanist
- \_\_\_\_\_ Lithic Technologist
- \_\_\_\_\_ Geologist

# An Apple for Everyone



## Selected Sources

- Black, Glenn A. *"A" is for Axe—A "First Reader" about some Indian Artifacts*. Indiana Historical Bureau, 1958.

This excellent pamphlet can be purchased from the Historical Bureau.

- Black, Glenn A. *Angel Site: An Archaeological, Historical, and Ethnological Study*. 2 vols. Indianapolis: Indiana Historical Society, 1967.

This is the classic work on Angel Mounds. Reading is technical and recommended for adults.

- Gholson, Nancy, and Ruehrwein, Richard. *Angel Mounds State Memorial Activity Book*. Cincinnati: Creative Company, 1981.

This coloring book is available directly from Angel Mounds or the Indiana State Museum Gift Shop.

- Hackwell, W. John. *Digging To The Past: Excavations in Ancient Lands*. New York: Charles Scribner's Sons, 1986.

An excellent source with illustrations for interested students, intermediate level.

- Kellar, James H. *An Introduction to the Prehistory of Indiana*. Indianapolis: Indiana Historical Society, 1983.

This book is very useful for secondary level and adults. Highly recommended.

- Lilly, Eli. *Prehistoric Antiquities of Indiana*. Indianapolis: Indiana Historical Society, 1937.

The Lilly book is a classic on the subject. Adult reading.

- Macaulay, David. *Motel of the*

*Mysteries*. Boston: Houghton Mifflin Company, 1979.

Macaulay presents a delightfully funny and sarcastic treatment of archaeology. This is a good source to use with a secondary school class.

- McIntosh, Jane. *The Practical Archaeologist: How We Know What We Know About the Past*. New York: Facts On File Publications, 1986.

The question and answer format makes this adult book easier for students.

- Morrison, Velma Ford. *Going On A Dig*. New York: Dodd, Mead and Company, 1981.

Another good source for students interested in learning more about archaeology. Intermediate level.

- Porell, Bruce. *Digging The Past*. Reading, MA: Addison-Wesley Publishing Company, Inc., 1979.

Highly recommended source dealing with basic archaeology. Students of all ages

- Taurel, Alison, trans. *Archaeology*. Milwaukee: Raintree Publishers, 1988.

Question and answer format with excellent illustrations and photos. Highly recommended.

## More Resources

- Angel Mounds Historic Site is located seven miles east of Evansville and is open Tuesday through Sunday. Admission is free. Call 812/853-3956.

- Rick Jones, Senior Archaeologist, State of Indiana, 402 W. Wash-

ington Street, Room 274, Indianapolis, Indiana 46204.

Mr. Jones recommends the following sources:

- Deetz, James F. *Irritation to Archaeology*. Garden City, N.J.: Natural History Press, 1967.

- Deetz, James F. *In Small Things Forgotten*. New York: Doubleday, 1977.

- Fagan, Brian M. *Archaeology: A Brief Introduction*. 2nd Edition. Boston: Little, Brown and Company, 1983.

- Justice, Noel D. *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States*. Bloomington: Indiana University Press, 1987.

- Streuver, Stuart and Felicia A. Holton. *Koster: Americans in Search of Their Prehistoric Past*. New York: Signet/New American Library, Inc., 1979.

- Tanner, Helen H., ed. *Atlas of Great Lakes Indian History*. The University of Oklahoma Press, 1987.

- Shirley Anderson, Northwest Indiana Archaeological Association, 164 East 550 S, Kouts, Indiana 46347.

- Mike Anslinger, Wabash Valley Archaeological Society, 1521 S. Center St., Terre Haute, Indiana 47802.

- Tom Ciskowski, Indianapolis Amateur Archaeological Association, Inc., R.R. 2, Box 344, Worthington, Indiana 47471.

- Bill Deilkes, Upper White River Archaeological Society, 2004 S. Pershing, Muncie, Indiana 47302.

- Kris Ritchie, Little Turtle Archaeological Research Society, 336 N. Chauncey, Columbia City, Indiana 46725.

- Cameron Quimbach, Archaeological Communications, 5267 Guilford Ave., Indianapolis, Indiana 46220.

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INDIANA HISTORICAL BUREAU  
STATE OF INDIANA

**The Indiana Historical Bureau** was created in 1915 to celebrate the centennial of statehood. It is the duty of the Historical Bureau to edit and publish documentary and other material relating to the history of the state of Indiana, to promote the study of Indiana history, and to work with others engaged in such pursuits. The Historical Bureau provides books, educational resources, and programs for students and teachers. Several are listed below. The Bureau also directs the Historical Marker Program and the care of the Governors' Portraits Collection.

• **BROADSIDES** produces supplemental educational materials based on primary sources for teaching Indiana history. Student packets encourage active participation and skills development with possible integration in various grades and subjects. An extensive teacher guide provides ready information and teaching resources.

• **Indiana Close Up** is a high school local government program affiliated with the national Close Up Foundation. This participatory annual event encourages study and discussion through the Jefferson Meeting on the Indiana Constitution.

• **Indiana History Day** encourages students grades 4 - 12 to research and prepare papers, exhibits, performances and media presentations on an annual historical theme. An emphasis on original research and interpretation allows students to experience the excitement of discovering or developing skills and interests that enrich their education and their lives. It is part of the National History Day network.

• **REACH**—Resources Educating in the Arts, Culture, and History— is a dynamic program that utilizes art and objects to stimulate dialogue and provide hands-on experiences, exploring not only the arts but also the culture and history of Indiana. Its arts-in-education basis encourages on-going planning for involving community resources in the school.

**The Indiana Junior Historical Society** is a network of history clubs for students in grades 4 - 12. Locally sponsored clubs initiate and participate in activities which encourage the study of Indiana history, often outside the classroom. The Indiana Junior Historical Society program is administered by the Indiana Historical Society, 315 West Ohio Street, Indianapolis, IN 46202; 317-232-1882.

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