



Studying animals for clues about the health of our environment



Vertebrate zoology is the study of animals with backbones. The Department of Vertebrate Zoology at Cleveland Museum of Natural History has four primary areas of study: ichthyology (fishes), herpetology (amphibians and reptiles), mammalogy (mammals) and astacology (crayfishes). It also maintains a colony of Dermestidae—so-called skin or carpet beetles—for laboratory use.

Department field study includes population surveys at designated [natural areas](#), other specific sites and through entire stream drainage systems in northeastern Ohio. This supports various studies about amphibian distribution and amphibian declines in the region. Some of these studies, such as mudpuppy population dynamics, are long-term. Others are conducted in concert with herpetological ecologists around the globe, addressing issues of amphibian sustainability while subject to stressors of new diseases and continued anthropogenic habitat modifications.

Much of the field work takes place in wetlands or streams, and consequently the department is involved with Museum initiatives for wetland restoration and new wetland construction.

Collections include specimens and data from all of the department's areas of study. These are updated through ongoing collection of specimens of vertebrate fauna in northeast Ohio and, in some cases, through photography to document the occurrence of species at a certain time and place.

The Vertebrate Zoology Department has opportunities for volunteers and students. More information about volunteering is available [here](#).



Unlocking the mysteries of human ancestors



Physical anthropology is a branch of biological sciences dealing with the study of human beings and their living and fossil relatives. Under the direction of Dr. Yohannes Haile-Selassie, Curator, the Department of Physical Anthropology at the Cleveland Museum of Natural History is devoted primarily to the study of human origins and evolution. It also curates the Hamann-Todd Human Skeletal Collection, one of the world's largest documented collections of modern human skeletal remains.

Department scientists conduct cutting-edge paleoanthropological field and laboratory research in Africa, the United States and other parts of the world. The department's collections are enormous sources of data, and it facilitates research conducted by students and various professionals in the fields of primate variation, growth and development, pathology, prosthetic prototyping and orthopedics.

Undergraduate students interested in a paid summer internship are encouraged to investigate the [Kirtlandia Research Internship Program](#).

HOMEWORK



Cleveland Museum of Natural History December 8, 2018

*****This homework is due at the next session, January 26, 2019**

www.clevelandwater.com/ClevelandSTEP

Name _____ **Grade** _____ **Date** _____

Welcome to The Cleveland Museum of Natural History! The questions below will help you understand the research taking place in the Museum's labs and in the field. Use the following links on The Cleveland Museum of Natural History's website for assistance with some of the answers to the questions.

<https://www.cmnh.org/research-collections/physical-anthropology> and
<https://www.cmnh.org/research-collections/vertebrate-zoology>

After answering the questions we hope your Museum visit, and meeting and speaking with the curators, will make you more knowledgeable about The Cleveland Museum of Natural History and the relevance of the Museum to our world and our lives.

Physical Anthropology

1. What is the name of the Curator of Physical Anthropology?
2. What is the study of Physical Anthropology?
3. The Hamann-Todd Osteological Collection as well as the Pathological Collection are housed in the Physical Anthropology area of the Museum. What are these collections and how are these collections used?
4. What careers might utilize the Hamann-Todd collections in some of their training?

Vertebrate Zoology

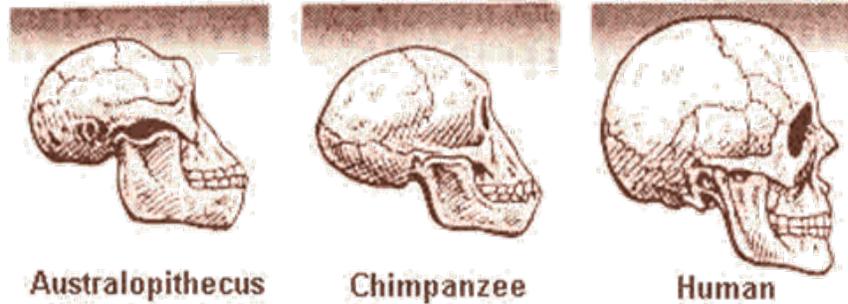
1. What are the four primary areas of study in Vertebrate Zoology at The Cleveland Museum of Natural History?
2. We will meet and have the chance to ask questions of the Assistant Curator in Vertebrate Zoology. What is her name?
3. List 4 areas of field work and research happening in Vertebrate Zoology.
4. Why might studying some of these things be important and relevant to us as humans?

Museum Highlights Tour

1. What is the purpose of The Cleveland Museum of Natural History?
2. Are the specimens on display at the Museum real?
3. Using the wetland exhibit in the Ohio galleries, make the longest food chain possible.
4. 358 Million years ago Cleveland was covered in a shallow ocean. What is the name of the armored fish that ruled the seas as the top predator?

5. Who is “Lucy”, also known as *Australopithecus afarensis*, (Aw-stral-oh-pith-i-kus af-ahr-en-sis) and why was the fossil find significant?

6. When looking at the skulls of a modern human, a chimpanzee and “Lucy”, draw an arrow where the foramen magnum (the large opening in the skull where the spinal cord goes into the brain) is located on the pictures to the left. This is evidence that two of these animals were walking upright



Museum Exhibit

Use your skills to draw or write about something you liked or found interesting at the Museum.