

James Hall and Paleontology



Image: **Mastodon Giganteus**, 1866, Photographic albumen print mounted on card, Eugene S. M. Haines, photographer, Albany, New York, courtesy of New York State Museum



Objects: **James Hall's Desk**, unknown maker, c. 1875, walnut, courtesy of New York State Museum, H-1975.29.3  
**James Hall's Briefcase**, unknown maker, nineteenth century, leather, paper, cloth, courtesy of New York State Museum, H-1975.29.57





# The Capital Region in 50 Objects

## James Hall and Paleontology

Many people call James Hall “the father of modern geology.” In the nineteenth century, he was New York’s best known geologist and paleontologist. He was highly respected for his early work in stratigraphy, the study of geologic layers of rock called strata. When fossils are found in strata, geologists can identify the age of the fossil by the age of the strata. Hall studied natural sciences at Rensselaer Polytechnic Institute, and after graduation was hired as assistant professor of chemistry and natural sciences. In 1836, Hall became a full professor of geology. In 1870, the New York State Museum of Natural History was created, and Hall was appointed its first director.

Hall did much of his early field work in the Helderberg Mountains in Albany County, where the exposed cliffs are rich in fossils. He also surveyed New York’s strata in the Adirondack Mountains and set a model for naming strata after its location. Hall became New York’s State Paleontologist and built his own laboratory in Albany, where he trained many prominent scientists. In 1886, during the construction of Harmony Mill Number 3 near Cohoes Falls on the Mohawk River, the remains of a mastodon were found deeply buried in two potholes which had been worn into the bedrock by the swirling action of water and stones at the end of the last Ice Age. Hall was responsible for bringing the Cohoes Mastodon to the New York State Museum. The Cohoes Mastodon became its most popular and iconic specimen and has been on display for more than 150 years.

Hall’s desk is a standing desk with 34 drawers and two locking compartments where he stored and organized fossils and other specimens. He stored papers and drawings in his briefcase.

## Vocabulary

**Geology, Geologist** – a science (scientist) that studies rocks, layers of soil, etc., in order to learn about the history of the Earth and its life; the rocks, land, processes of land formation, etc., of a particular area

**Paleontology, Paleontologist** – a science (scientist) that deals with the fossils of animals and plants that lived very long ago especially in the time of dinosaurs

**Strata** – a layer of sedimentary rock or earth in which archaeological material (artifacts, skeletons, and dwelling remains) is found on excavation

**Specimen** – an animal or plant collected as an example of a particular kind of thing; a notable example of something

**Mastodon** – an extinct mammal of the elephant family existing from the Miocene through the Pleistocene time periods distinguished by their cone-shaped teeth

**Iconic** – something that is widely known and acknowledged, especially for its distinctive excellence

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Name \_\_\_\_\_ Date \_\_\_\_\_

### Directions

Use the depiction of the object, image, and corresponding text to answer the following questions.

1. Name of the object: \_\_\_\_\_

2. When was the object made? \_\_\_\_\_

3. What is the object made of? \_\_\_\_\_

4. Who used the object? \_\_\_\_\_

5. How was it used? \_\_\_\_\_

6. What is the name of the extinct mammal Hall helped to excavate?

7. When was the image made? \_\_\_\_\_

8. How was the image made? \_\_\_\_\_

9. Identify two ways in which the object relates/connects to the image:

a. \_\_\_\_\_

b. \_\_\_\_\_

10. Name two mountainous areas in New York State that James Hall studied:

a. \_\_\_\_\_ b. \_\_\_\_\_

11. Where did James Hall build his laboratory? \_\_\_\_\_