GEOL 434/534: Vertebrate Paleontology **Term Project**

**Learning objectives:**

1. To understand how we study vertebrate fossils
2. To gain some hands-on experience with paleontological research
3. To learn how skeletal morphology is described, and to understand how it varies between different mammals

**Topic:** Each student will describe a fossil specimen or group of specimens. You will first identify it to species, describe it morphologically, and then describe what the specimen(s) you have before you can tell you about the ecology or individual characteristics of the specimen.

**Data collection:** Students will work individually. Each student will be assigned a specimen or specimens to identify. Specimens will be assigned during the second lab period, Friday Oct. 5th. You’ll have to collect data on your own time, and you can work only in my lab. You’ll need to schedule access with someone who can let you into the lab, as the specimens cannot be removed from the lab. All of them are extremely valuable (not monetarily, but intellectually), and could not be replaced.

**Analysis:** Use the methods we discuss in class and in lab to analyze the age, diet, habitat, or other aspects of natural history of your specimen. Remember, morphology can tell you a LOT about the animal when it was alive.

**Assignment:**  When your analysis is complete, you’ll be writing up your results in the form of a scientific paper for the Journal of Vertebrate Paleontology. Describe your specimen, including its scientific name and your basis for assigning it to that taxon. Describe the morphology and what it can tell you about the natural history of the animal. We’ll explain more and post a few example papers (published ones, not term papers) for you on Blackboard so you can see the format, the approach to explanation, and the organization expected from such a paper. The format of the paper can be found in the author instructions for the Journal of Vertebrate Paleontology at <http://vertpaleo.org/Publications/Journal-of-Vertebrate-Paleontology/Information-for-Authors.aspx>.

**Due:** Monday, Dec. 3rd, 5pm, a paper copy in person, to either the instructor or the GTF.