

## **Eunice Lalunio – Kirmser Undergraduate Research Award – Reflective Essay**

I started out my research on the Dmanisi fossils because of my ANTH 688 class last Spring 2017. My classmates and I were assigned the rather heavy topic of determining whether these specimens represented single or multiple species using academic resources assigned to us by our professor. Needless to say, it was (and is) an incredibly interesting topic for me. It has been about a year since I finished this course, but I am still doing research on these fossils— in fact, to an even greater extent. That is, I am going beyond just the five skulls that make up this group and more into its implications in paleoanthropology and human variability, which is the general focus of my research in my ANTH 659 course last Fall 2017.

The reason that I started taking on this larger topic was also in large part due to my use of K-State Libraries' resources. Following the advice of my professor, I searched for articles that, while not explicitly discussing the Dmanisi specimens, provided information on how paleoanthropologists discuss variation in other fossil sites. Just typing in the last names of authors that I knew and keywords and fossil sites like "human variation" and "Koobi Fora" in the main search bar of the Library's page immediately provided me with a wealth of articles that I could peruse. All of them were peer-reviewed, as I have specified on the search settings, which made sure that I actually got relevant and credible sources. One such article, "Variation among early Homo crania from Olduvai Gorge and the Koobi Fora region" by G. Philip Rightmire (published by the American Journal of Physical Anthropology in 1993), caught my eye. I read the description provided by the library, and immediately knew that it would give valuable insight with my research, despite the fact that it did not include Dmanisi in its

discussion. A problem arose when I realized that the article was not available online, and a physical copy was not available at Hale at the time. Fortunately, the Interlibrary Loan system helped me in this regard. It was my first time using this service, and I found it incredibly easy to learn to use; simply type the article's information in the article request form, and wait for the document.

Reading this article eventually gave me the idea of looking at human variability in terms of the fossils themselves, contrary to traditional paleoanthropological approaches which compare the variability of fossil humans with closely related extant apes to determine whether a fossil sample is part of a single species. This provided the basis of my research last semester. Armed with this particular idea, I set out to see if I could "make a case" for its application to the Dmanisi specimens.

I began with using the Library's Databases, which I knew would help narrow down the articles to more specialized publications, to find more background information on human variation. After searching for a database with "physical anthropology" included, I found the "Anthropology Plus" database. I found article upon article that had to do with my interests, keeping track of the abstracts in a Word document and a bibliography that was cited in the style of the American Journal of Physical Anthropology. Some of the articles I eventually perused were actually cited in the documents I found through the Anthropology Plus database, and I used the basic Library search function to find online and physical copies of the cited articles. All of the articles that I found at this stage provided excellent insight on human variation (in terms of fossils) in general. Of course, I took many detailed notes on the articles that I read.

The next step was to find more information about the Dmanisi fossils themselves. Using the same research strategy as I used earlier (including using the Anthropology Plus database and keeping track of the articles that I had) supplemented by Google Scholar and my professor's collection of reference books and publications, I went straight to work. I got familiar with many authors, including Zollikofer and Lordkipanidze, both of whom participated in Dmanisi excavations and published articles that were cited by other reputable authors who were established in the paleoanthropological field, which to me suggested that their work was extremely relevant, a sentiment backed up by my professor. I also looked at both recent and not-so-recent work, especially the articles that described the fossil finds themselves, dating between the 1990s all the way up to articles published last year (2017), to see how the discussion about Dmanisi has evolved as scientists have found more and more materials from the site to study.

This all culminated in my paper, "Dmanisi: A Study of Species Hypotheses and Hominid Variability". I hope to one day include the findings in this paper in an original scientific work, but for now it has been approved by my professor as a sufficient result of my research for last semester.