Cameron Essex, University of Wisconsin-Milwaukee, WI, for their project *Paleoenvironmental Reconstructions of the Pleistocene Ice Sheet Informed by Glacio-Volcanic Deposits in Northeast Iceland.*

Cameron Essex is a second year M.S. student at the University of Wisconsin-Milwaukee and advised by Dr. Barry Cameron. Their M.S. research will focus on four famous tuyas and their glacio-volcanic deposits in northeast Iceland: Gæsafjöll, Búfell, Bláfjall, and Herðubreið. Tuyas are common glacio-volcanic edifices in Iceland, and one of the main products of their formation is volcanic glass. Volcanic glass contains dissolved volatiles such as CO$_2$, H$_2$O, and SO$_3$, and the pressure-dependence of volatile solubility in magmas allows estimation of the ice thickness at the time of eruption by measuring the volatile content. The objective of this study is to analyze the geochemical characteristics of glass extracted from the four tuyas in order to determine if the glass is a viable tool for determining ice thickness change over time that existing field observations suggest.

With the support of the Lipman Student Research Grant, Cameron will be able to support an extended field season for their research project in Summer 2023. Afterwards, they will return to analyze the volatiles in volcanic glass using Fourier Transform Infrared (FT-IR) spectroscopy and isotopic step-heats. Plus, they will use Ar-Ar and paleomagnetic dating of the sub-aerial lavas that cap the four tuyas in order to constrain the environmental conditions in northeast Iceland during the last ice age.

Cameron grew up in Hoffman Estates, Illinois, and always had a curiosity about the Earth and how other planets operate. They graduated with their bachelor's degree from Illinois State University in Geology in 2022, and during that time became intellectually stimulated with the subject because of the combination of field and lab work. Cameron looks forward to being an active member of the geoscience community by organizing diversity, equity, inclusion, and accessibility spaces for LGBTQ+ people, and expanding their knowledge in the area of overlap between climate change, volcanoes, water resources, and geochemistry. In their spare time, Cameron enjoys cooking and baking, experimental dance, running through the wilderness, and a social night out.

Cameron is thankful for the support and consideration of the Lipman Student Research Grant and Geological Society of America's Mineralogy, Geochemistry, Petrology, and Volcanology Division has provided and is excited to continue working on their research project.