

119 - T112. Halo-Dash: The Deep and Shallow History of Aquatic Life's Passages between Marine and Freshwater Habitats

Monday, 10 October 2022

1:30 PM - 5:30 PM

119-10: PALEONTOLOGICAL AND SEDIMENTOLOGICAL RECORDS OF PALEOENVIRONMENTAL CHANGE IN A PLIOCENE PALEOLAKE RECORD FROM THE CENTRAL JORDAN VALLEY HALL,

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Abstract

The shifting warm climatic conditions of the Pliocene make it a common analogue for future climate scenarios. Many records of these changing conditions come from marine environments, but changes in lacustrine records are not as well documented. The 'Erk-el-Ahmar Formation (3.15-4.5 Ma) in the Central Jordan Valley represents an opportunity to investigate changing environmental conditions in a non-marine setting in the Levantine Corridor, where changes in this paleoenvironment would have had important implications for the diverse fauna living in the area. The 'Erk-el-Ahmar Formation is composed of ~200 m of sediments deposited in fluvio-lacustrine environments and is known to be fossiliferous. This study aims to evaluate paleoenvironmental changes recorded in the 'Erk-el-Ahmar Formation using sedimentological and paleontological methods on samples taken from a ~23 m core. We found several different fossils in this core, including ostracodes, gastropods, fish teeth, foraminifera, plants, and one insect. *Cyprideis* is the most common ostracode genus found in these sediments, but other genera are also present in different abundances throughout the core. Preliminary results indicate changes in both sedimentological features and in relative abundances of ostracode taxa with different physiological environmental preferences, which may indicate changes lake level and salinity through time.

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