# Using ostracodes to reconstruct paleoenvironmental changes in a Pliocene lake record from the Central Jordan Valley

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## Background

-This work aims to investigate Pliocene lake records from the Levantine Corridor to help reconstruct paleoenvironmental conditions and the diverse fauna present at that time.
-This record is from one of four drill cores taken of the 'Erk-el-Ahmar Formation in the Central Jordan Valley.
-We are using a combined sedimentological and paleontological approach to understand the environmental changes at this site.

## Study Area
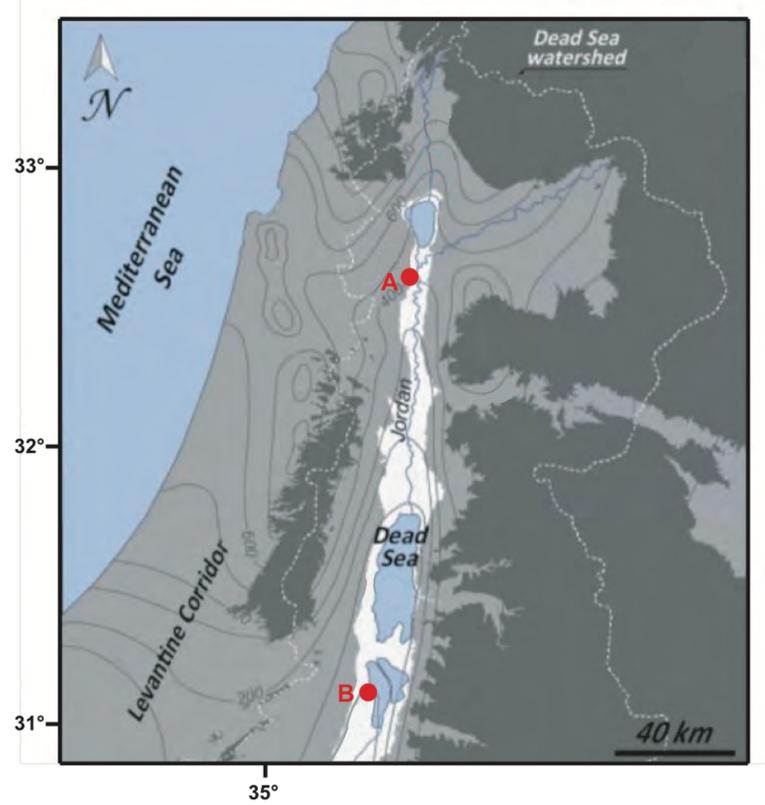


The 'Erk-el-Ahmar field site is located on the border of Jordan and Israel at location (A). At location (B) is Bnot Lot, a site with similar-aged deposits, which will be the target of future work investigating the range of Pliocene lake conditions throughout the Central Jordan Valley.
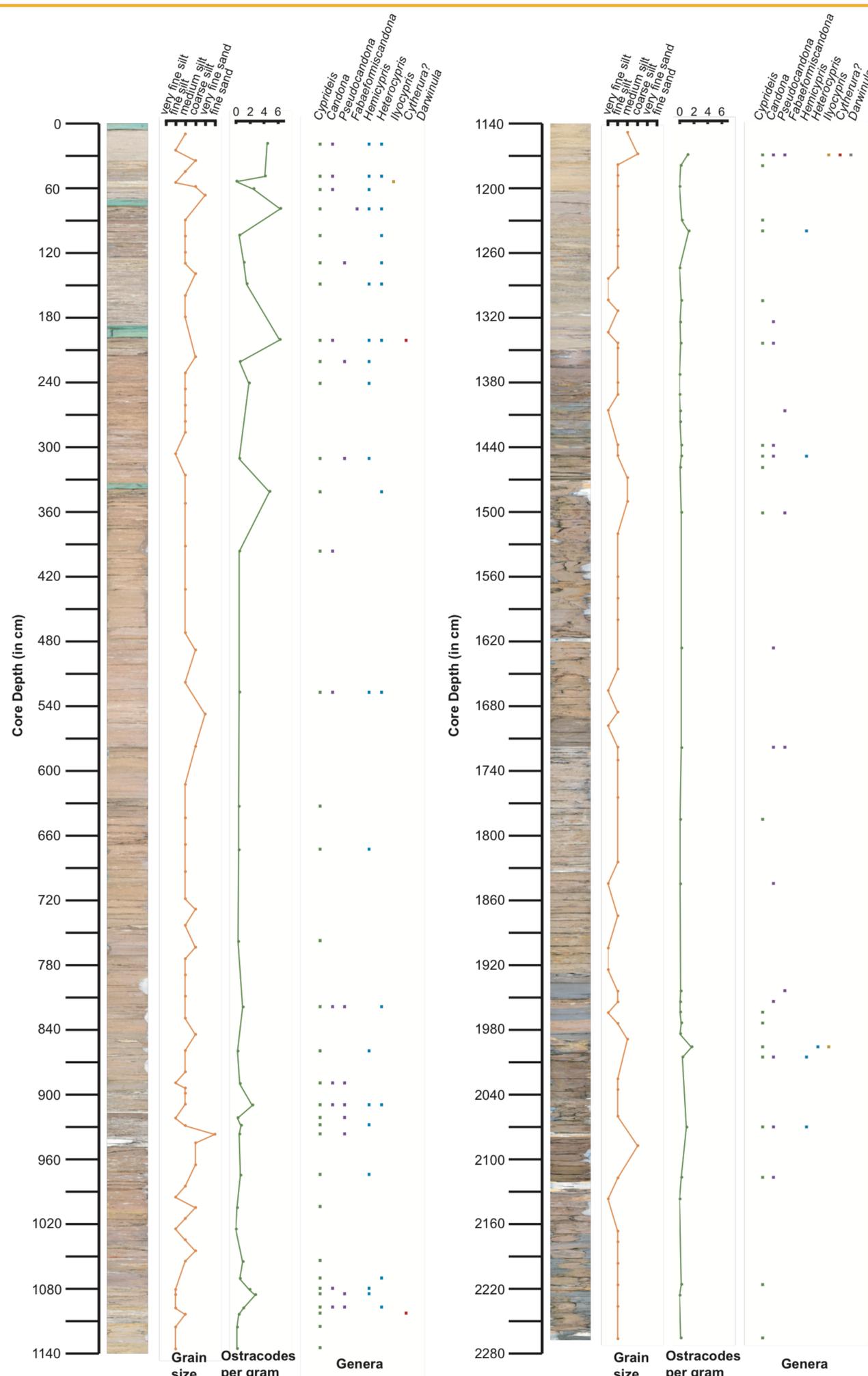


## Summary and Future Work

-Ostracode abundance varies throughout the core, with generally higher abundances in the top half of the core.
-Grain size also varies, but is generally larger in the top half of the core and smaller in the bottom half.
-*Cyprideis* is the most abundant genus, and represents most of the ostracode abundance found in these sediments.
-While *Cyprideis* is usually the dominant taxon in any given sample, some samples in the bottom half of the core are dominated by Candonids, possibly indicating an environmental shift.
-Gastropods, fish teeth, foraminifera, rare plants, and one insect fossil are also found throughout the core. Gastropods are found in many samples near the top of the core, but are less common in deeper samples. Fish teeth are found in samples throughout the core.
-Future work will include XRF and total organic and inorganic carbon analyses on samples. Results from this core will be compared to three other 'Erk-el-Ahmar cores and outcrop samples, as well as to outcrop samples from the Bnot Lot field site.

## Acknowledgements