

Paleoenvironmental reconstructions in East Africa at a critical period of hominin dispersion out-of-Africa (150 - 100 kya)

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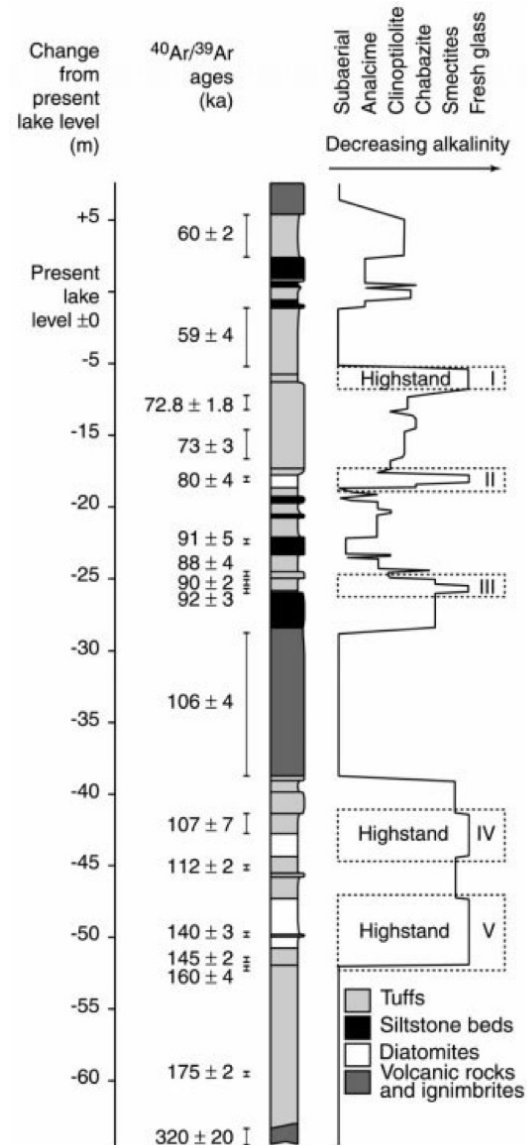
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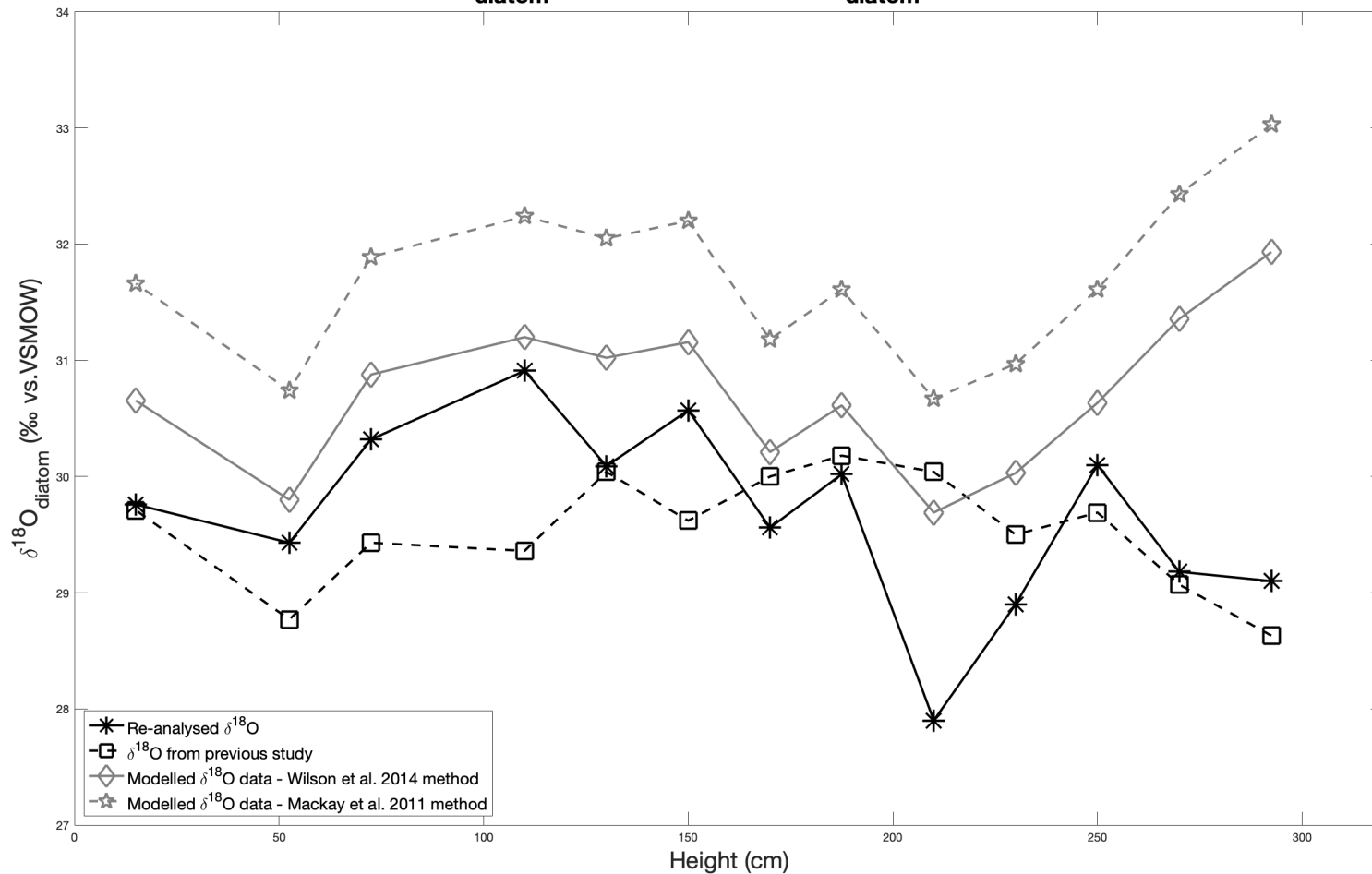
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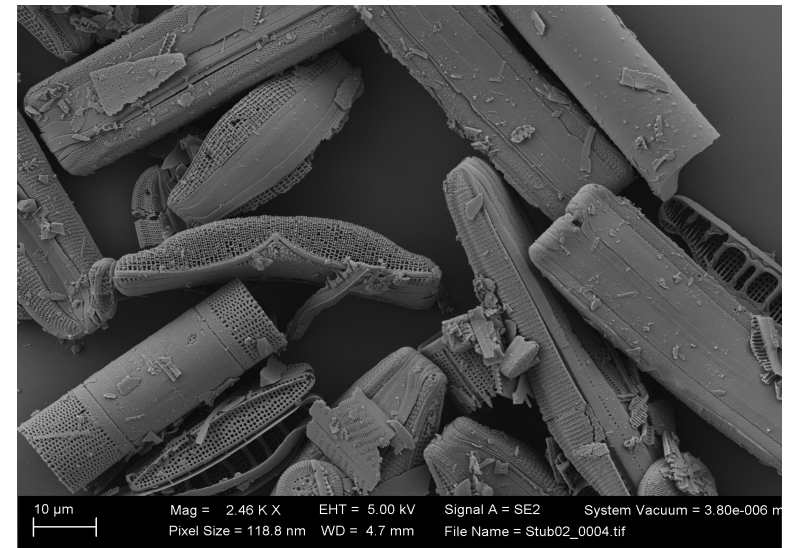
How did the absence or presence of large water bodies impacted hominin dispersion out of Africa ?

- Multi-proxy approach for paleoenvironmental reconstructions at a site located on suggested migration routes out-of-Africa
- Highstand V contains ~ 30 ka of climatic history at an annual to decadal timescale

Re-analysis of $\delta^{18}\text{O}_{\text{diatom}}$ - Comparison of $\delta^{18}\text{O}_{\text{diatom}}$ modelled and raw data



- $\delta^{18}\text{O}_{\text{diatom}}$ proxy for evaporation to precipitation ratio
- Selection of 14 samples for a re-analysis of unpublished $\delta^{18}\text{O}_{\text{diatom}}$ record
- Application of 2 different mass-balance model to correct for remaining contamination in the cleaned samples





Conclusion and future work

- Preliminary data from 2 of the climatic proxies show interesting hydrological changes happening in the area.
- Apply diatom based transfer functions from the East African Diatom Database.
- Correct $\delta^{18}\text{O}_{\text{diatom}}$ signal for all the samples.
- Data analysis of the bulk XRF and scanning XRF.
- Age model development.
- Compare the paleoclimate reconstructions with archaeological sites in the area and other paleoenvironmental records.

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