

## CORE-OUTCROP CORRELATION

Correlating cores to cores and to outcrops is a challenge: to find age tie points, and also to translate the core record to a spatial perspective related to hominin evolutionary events.

Several pressing issues:

- 1) Need for core age models. Urgency is clear.
- 2) Core to core correlation and comparison.  
What can we learn from comparing holes from same site, eg spatial variability. Later sites: ideal for interbasinal core comparison, for older sites this is not possible.
- 3) Iterative process: going back from core to field to increase understanding. Means that more outcrop fieldwork is needed. How to fund this?  
Funding may be obtained from NSF, both small and large grants. Recommended for young scientists to go and talk to NSF people. Leakey Fn, Wenner Gren Fn for small grants.
- 4) Outcrop and core records yield precessional cycles, but are these transferable to hominin evolution? Smaller cycles may be more relevant, can we get them from the cores?  
Important to try and resolve the smaller scale fluctuations as well, eg with high res phytolith and/or pollen data.
- 5) How to relate evolutionary events (e.g. species turnover) observed in fossil record from outcrop to core events? It is important:
  - to keep the original hypotheses and basic questions in mind!
  - to understand basic data from the core,
  - to share core data so that everyone can learn from it and formulate hypotheses. For example the S data can be very relevant for interpretation of paleomag in West Turkana.
  - to actively look for ways to translate core records into parameters relevant for hominin evolution. For instance: vegetation data can be interpreted as resources for fauna (grazing, browsing) and for hominins (eg sedges); hypsodonty can be indication for grass abundance and/or competition for grass resources; how do changes in muzzle breath in Equus relate to the phytolith record?
- 6) How to resolve potential lags between environmental event (eg extreme ashfall) and vegetation/faunal response?
- 7) Do we see similar trends (eg faunal endemism) in all basins at certain time periods?
- 8) How important is it locate the basin depotcentre?  
Important to estimate lake size and depth, and consequences for eg water freshness and resource availability.