Abstract Details

ID:	2848
Title:	Holocene environmental change in the Eastern Sahara - preliminary results from a 16 m long core from Lake Yoa, Northeastern Chad
Content:	Lake Yoa (19.03° N, 20.31° E, 380 m a.s.l.) is a groundwater-fed lake in the central Sahara halfway between the Tibesti Mountains and the Ennedi plateau. Kröpelin et al. (2008) revealed that the bottom sediments contain a unique archive of climatic and environmental change in the earth´s major desert. The 7.5m sediment record of OUNIK03/04 from Lake Yoa was extended to a maximum drill depth of 15.7m during a coring campaign in early 2010 within the framework of the Collaborative Research Center (CRC) 806 "Our Way to Europe - Culture-Environment Interaction and Human Mobility in the Late Quaternary". The recently drilled core (Co1240) contains the first complete terrestrial record of climate variations from the onset of the early Holocene humid period to the present. Here we present the very preliminary results of primary non-destructive geophysical (Color Spectroscopy, Magnetic Susceptibility, P-Wave Velocity, Gammy Ray) elemental and radiographic (XRF) measurements, which will be supplemented by ongoing geochemical (TOC, TIC, TC, TN, TS) and sedimentological analyses. The recovered lacustrine sediment column which consists of organical, carbonatic and clastic material can be subdivided into different types of sediment sequences based on the visual characteristics and color of split core halves, qualitative grain size descriptions, interpretation of radiographs, and microanalysis of thin sections prepared from representative sections of the core. Further analyses will include biological proxies (pollen, diatoms, chironomids, etc.) to better understand the lake evolution and open up new perspectives to reconstruct climate change in Northern Africa. Reference Kröpelin et al. (2008). Climate-Driven Ecosystem Succession in the Sahara: The Past 6000 Years. Science 320: 765-768. doi: 10.1126/science.1154913
Session:	61 Spatial and temporal complexity in Quaternary desert datasets: implications for interpreting past dryland dynamics and understanding potential future changes
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