



Molecular genetic analyses of sediment cores from East African Rift Lakes

L. S. Epp (1,3), M. H. Trauth (2) and R. Tiedemann (1)

(1) Institute of Biochemistry and Biology, University of Potsdam, (2) Institute of Geosciences, University of Potsdam, (3) DFG Graduate School 1364 "Shaping Earth's Surface in a Variable Environment" (lauepp@uni-potsdam.de / Phone +49-331-977-5250)

The eastern branch of the East African Rift System displays a series of shallow lakes in close proximity, yet with strikingly different hydrological and geological features. Present day lakes range in alkalinity from pH 11 (Lake Elmenteita) to pH 8 (Lake Naivasha) and in depth from less than a meter to 15 meters. Historically they have undergone a number of drastic changes in lake level (and size) and water chemistry, leading to differences in organismic assemblages and possibly to differences in connectivity between populations. Within this setting we are characterizing present-day and historical planktonic communities obtained from sediment cores in Kenyan Rift Lakes with the use of molecular genetic methods. Our focus is on diatom assemblages and the rotifer *Brachionus plicatilis*. Apart from presenting tools to assess the presence and dominance of taxa meaningful for ecological reconstruction, we are also attempting to trace the population structure and history of a single species in the course of severe environmental change.