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Climate and Cultural Dynamics in the Great Lakes Region of Western Uganda during the Last ca. 1000 Yr. BP

Julius Bunny Lejju
Mbarara University of Science and Technology, Faculty of Science, Biology, Uganda (jlejju@must.ac.ug)

A multi-proxy analysis of microfossils from sedimentary records, together with evidence from historical and archaeological data, provide evidence of climatic and cultural changes in great lakes region of western Uganda for the last ca. 1000 years. Microfossil pollen, fungal spores, phytoliths and charcoal extracted from sediment cores obtained from a papyrus swamp at Munsa archaeological site indicate a period of relatively wet and moist conditions characterized by forested environment in western Uganda prior to ca. 1000 yr. BP (cal 977-1159 AD). This period was followed by a subsequent decline in forest vegetation cover coupled with increased charcoal records from ca. 920 yr. BP (cal 1027-1207 AD). The occurrence of deforestation period correlate with a wet phase registered in the River Nile water level records, suggesting a human induced deforestation in western Uganda rather than reduced precipitation. Increased numbers of herbivores, presumably domesticated cattle post-deforestation is evidenced by presence of dung fungal spores and broadly accord with the archaeological evidence for initial occupation of the site at Munsa and the establishment of a mixed economy based on crops, cattle and iron working between ca. 1000 and 1200 AD. This period as records from the Nile River levels indicate a phase of enhanced precipitation from cal 800 to 900 AD and from cal 1100 to 1200 AD. The last 200 years cal 1647-1952 AD, indicate a period of forest recovery at Munsa and appears to reflect abandonment of the archaeological site, as suggested by evidence from archaeological records. Climate data indicates a period of prolonged drought and famine in the later part of 1500s to 1600s AD and in the early part of 1800s AD and 1920s. These extreme conditions are also recounted in the oral rich traditions of western Uganda and also reflected by low River Nile water levels.
Key words: Climate and cultural changes, multi-proxy, western Uganda, great lakes region