

Climate and vegetation dynamics in the great lakes region of western Uganda during the last two millennia

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A sediment core (7.5m long) obtained from the marginal sites of Lake Rwankenzi within an archaeological site in the vicinity provides evidence of vegetation dynamics in the crater Lake region of western Uganda during the last two millennia. The last ca. 4,000 - 3000 years BP is characterized by a phase of forest vegetation cover, indicating a period of wet and moist environmental conditions in the region mainly dominated by high Palmae taxa which characterize swamp forests. Diatom records also support a period of moist conditions with evidence of anthropogenic activities reflected by presence of charcoal records. This phase was followed by a decline in forested habitat ca. 3,000 - 2500 years BP at the expense of grass (Poaceae) morphotypes, contributed the less moist C4 grasses at the expense of C3 taxa, suggesting a period of reduced forest environment at the expense of grass cover (Poaceae morphotypes). This period is also characterized by higher proportions of charcoal records, suggesting an increase in anthropogenic fires. Diatom records declined to significantly low levels possibly reflecting a reduction in moist environment conditions. This period characterize an increase in human activities suggested by higher charcoal records and reduced forested taxa and increased grass. The last ca. 2,000 years BP is characterized by episodes of forest and fire fluctuations indicating evidence of anthropogenic activities in the region. Generally, this period is characterized by variable anthropogenic activities reported in archaeological records with an increased charcoal record ca. 1000 yr. BP. The last ca. 200 years is characterized by an increase in Poaceace morphotypes mainly the short C4 Poaceae morphotypes that indicate less moist environmental condition at the expense of the forest taxa. Charcoal records are relatively high during this period, indicating episodes of fire regimes. Generally, this period indicates a phase of variable anthropogenic activities in the region.