Abstract
The main goal of this study was to investigate how climate and human activities may have influenced ecotonal areas of disjoint savannas within Brazilian Amazonia. The fossil pollen and charcoal records of Lake Márcio (Amapá) were used to provide a Holocene palaeoecological history of this region. Detrended correspondence analysis (DCA) was used to enhance the patterns of sample distribution along the sediment core. A marked vegetation change from closed forests with swamp elements to open flooded savanna at c. 5000 yrs BP was evident from the pollen record. Charcoal analysis revealed a pattern of increased accumulation of particles coincident with the establishment of savannas, suggesting higher fire frequency and human impacts near the lake. A 550-year sedimentary hiatus suggests that the lake depended heavily on floodwaters from the Amazon River, and that it became suddenly isolated from it. When sedimentation restarted in the lake, the environment had changed. A combination of factors, such as reduced river flooding, palaeofires and human occupation may have had a tremendous impact on the environment. As there are no other major changes in vegetation, after 4700 yrs BP, it is plausible to assume that the modern mosaic vegetation formed at that time.

Keywords
Pollen record, palaeofires, Amazonia, savannas, climate change, palaeoecology.