ABSTRACT

The Lower Morass of Black River is located in a down-faulted coastal basin in St. Elizabeth, Jamaica. Peat deposits which are not known to exceed ten meters in thickness, occur on a basement of clay resting on karstified limestone. The swamp conditions are constantly maintained by spring-fed rivers and also rivers that originate outside the basin.

The present vegetation reflects the swamp water-quality and has been divided into three major formations. The southern mangrove complex which is a mixed mangrove/sedge mosaic is confined to the saline to brackish southern segment of the morass. The freshwater swamp forests flank the upper reaches of the main eutrophic rivers. The herbaceous swamp is dominated by aquatic graminoids and occupies most of the freshwater swamp area.

Macroscopic and peat microtome analyses were carried out on fifteen peat cores. Thirteen main peat types were identified based on their phyteral content which allowed for detailed determinations of the peat stratigraphy in the cores.

A pollen and spore flora of common swamp plants was completed which facilitated the identification of these palynomorphs in peat samples and the construction of pollen diagrams for eight of the cores.

Diatoms have only been found within the top half meter of peat in the deposit. Dissolution is the most probable reason for their virtual absence at depth. Additions to the diatom flora of Black River are presented.

A tentative Late Holocene geological history of the Lower Morass is discussed, although the lack of precise climatic, sea-level

and tectonic data for the area precludes more positive conclusions from being made. This history involves a sequence of three transgressive/regressive cycles occurring from around 6,500 B.P. to the present apparently caused by changes in sea-level and the onset of two dry climatic phases within the morass area.