

Paleoecology of Buried Peats from the Atlantic Continental Shelf

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Sediment cores from the continental shelf south of Long Island reveal submerged peat layers buried under several meters of sand, silt and clay. We present new analyses from these peat layers, including loss on ignition, pollen and macrofossil analysis, and radiocarbon dates. It is evident that the peat layers were deposited in a terrestrial environment due to their high organic content (80-90%). Macrofossil specimens are also consistent with a terrestrial environment, and include abundant violet (*Viola*) seeds, sedge achenes (*Carex trigonus*, *Carex lenticular*), moss capsule opercula and insect elytra. We also find abundant *Cenococcum* sclerotia; these are hardened mycelia used to store food for the fungus, and are frequently found in drier pine and oak forests soils today. AMS radiocarbon measurements on macrofossils range from 10,000 years BP to 40,000 BP. Dominant pollen types include pine (*Pinus*) and spruce (*Picea*) and are consistent with radiocarbon dates and contemporaneous terrestrial pollen records. This ongoing research is useful for constraining ice sheet and sea level histories, Holocene landscape evolution and paleoenvironmental change.