

AN EXTINCT DIATOM SPECIES AND GENUS FROM THE LAKE MALAWI DRILLCORE?

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A fossil diatom observed from the Lake Malawi drillcore record likely represents a new species and monotypic new genus. Specimens were observed in a sample estimated to be approximately 22,000 years old. Specimens occurred very rarely - less than 0.3% relative abundance of the assemblage. Here I present images of the 'new species' as characterized using light and electron microscopic observations. The specimens observed have a bilateral (naviculoid) morphology, superficially similar to *Anuemastus* in light microscopy, but with a single central stigmoid and an undulate raphe that terminates in heteromorphic ends that hook in opposite directions. In SEM, a series of marginal wavy longitudinal ribs cross the exterior of the frustule in outside of the sternum, highlighting its unique ultrastructure. The species likely is a benthic diatom, fortuitously preserved in a very deep water lake environment as a result of downslope sediment focusing from hyperpycnal flows into the basin. No specimens of the species have been observed in any of the other sediment core samples collected from Lake Malawi and no extant specimens have been observed from the lake, suggesting that it likely represents an extinct species (and genus) with a very short geological range.