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FURTHER STUDIES ON THE ORGANIC GEOCHEMISTRY OF THE MUTHURAJAWELA PEAT DEPOSIT

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As a part of our continuing studies on the Muthurajawela peat deposit, we have investigated the organic constituents present in this deposit, and herein we report the variation of β-sitosterol and an unidentified sterol with depth.

Extraction of peat samples collected from 3 locations at different depths with organic solvents yielded a mixture of organic compounds of β-sitosterol and another sterol were found to be the major constituents, and hence these were selected to study the process of diagenesis.

These two compounds showed an anomalous increase in concentration at the middle horizon of the depth profile indicating a different origin for the middle horizon. Considering the stratigraphy and the sterol concentration data it can be concluded that the middle horizon is a result of a sudden terrestrial input, which could have been due to a pleistocene or Quaternary environmental change.

The variation in concentration of these two compounds will be discussed in terms of diagenesis.

Reference:

1. Dissanayake, C. B., Jayawardena U. de S. and Gunatilaka, A. A. L., A Preliminary Organic Geochemical Study of the Muthurajawela Peat Deposit. *Proc. Sri Lanka, Assn. Adv. Sci.*, (1978,) **34**, 76.