

Paleoclimatic study in the lake sediments of Antarctica

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Antarctica drives the world's climate, and has a central role in regulating the earth's environmental processes, including the world's atmospheric and oceanic systems, global tides and sea levels. Therefore, any changes in the climate of this region will have a significant influence on the other parts of the globe. In order to understand the future climatic trend, the record of fluctuations in past climate can be interpreted with the help of multi proxy approach from the lake sediments of Antarctica.

Objectives:

1. Study of the spatial and temporal distribution of micro floral and micro faunal analysis of the lake sediments from different lakes of Antarctica also the chemical analysis of the rests of selected group of micro fauna will help to understand the climatic history of the past.
2. Study of the grain size, grain morphology and mineralogical analysis of lake sediments will help to understand the provenance, transportation and climate variability of past.
3. Study of the geochemistry and stable isotope analysis of C and N in the organic matter of lake sediments will help to understand the ecology and nutrient uptake that are finally controlled by the climate change.

Collaboration

The proposed work will be carried out in collaborations with the leading laboratories such as, Geological Survey of India (GSI- Antarctic Division) Faridabad and Birbal Sahni Institute of Paleobotany (BSIP), Lucknow

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