

Carbon isotopic study from Khajjiar Lake sediments, Himachal Pradesh, India.

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A sediment core of 765 cm in length was recovered by the livingstone corer from the Khajjiar Lake, NW Himalaya. The saucer shaped Khajjiar Lake (32°32'N and 76°03'E) is located about 1920 m above sea level in the western part of Chamba district of Himachal Pradesh. The sediments of the lake show the dominance of silt component followed by sand and clay. Based on the sedimentological parameters sandy silt, silt and mud facies have been identified. The sediments from the lake have been analyzed in order to depict the isotopic and organic compositions. Stable isotopes in lake basins are sensitive to changes in effective precipitation. The results obtained shows that the $\delta^{13}\text{C}$ values ranging from -32.9 to -20.2‰ with the average of -27.9‰, which suggest the dominance of C3 plant species. The values of TOC ranges from 0.9 to 31.2 % (average of 11.5%) suggest the decrease in the detrital input in the lake sediments and flourishing vegetation in the catchment area.