

(3) It was shocking to read that 'Goting basin is located close to Mukteswar'. In fact the basin is only 16 km south of the Indo-Tibetan water divide and may be not very far from the Dunde ice cap² across the international border in Tibet. Mukteswar is situated in district Nainital. The question is not of distances but of the validity of application of data from a meteorological station located in a climatic zone to interpret the isotopic results from a site situated in different climatic zone. It has been long realized that the Central Himalaya, creating one of the most impressive rain shadows on Earth³, has strong effect on regional climate. In case of Goting, the barrier of Nandadevi massif in the south creates a semi-arid to arid zone very close to the climate of south central Tibet in the north, that is guided by a different system.

(4) The thin section studies on oriented varve blocks were carried out in close collaboration with reputed carbonate sedimentologists. Results of the study were reviewed twice by the Project Monitoring Committee of the Department of Science and Technology that consist of eminent geologists in the country and a project completion report thereof was submitted.

However, the problem seems to lie in understanding the sedimentation processes involved in a proglacial lake envi-

ronment. In such an environment, the lakes are thermally stratified during the summer with warm water in the upper part (epilimnion) and colder water in the lower part (hypolimnion). During summer, cold glacial melt water with suspended sediment gives rise to heavy density current and deposition takes place at the lake bottom as underflow. These layers are light coloured and relatively coarse grained mostly representing surrounding lithology. In the present case it is the Tethyan lithology. During winters, melt water and the allochthonous sediment supply decreases, thermal stratification disappears and the lake becomes well mixed. Sedimentation of the fine suspended particles including the autochthonous and allochthonous organic debris then takes place. With the freezing of the surface water during winter any exchange between lake water and the atmosphere gets cut off. Consequently, available dissolved oxygen is gradually depleted at the expense of CO₂ thereby enhancing the preservation of organic content as dark, very fine-grained laminae. Another peculiarity of proglacial sedimentation is the sporadic occurrence of ice rafted debris that range in size from a couple of centimeters to few millimeters. Under the circumstances it is difficult to believe that no detrital material is incorporated

in the laminae. The photomicrograph supplied by us bears testimony to this. In addition to calcite grains the thin sections also show quartz, feldspar, mica flakes and some opaque minerals representing the surrounding lithology. It would have been better for G.B. to have provided thin section photographs for comparison. The isotopic data of G.B. becomes unreliable for palaeoclimatic interpretations considering the sedimentation processes involved and presence of detrital calcite.

(5) As regards figure 2, it was the responsibility of G.B. to check whether the photograph represents Goting varves or not before it was submitted for publication and that should have been duly acknowledged. In case of figure 1, G.B. should have mentioned in the text that it is modified after Pant *et al.* as is customary in scientific writing.

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1. Ghosh, P. and Bhattacharya, S. K., 2004, **86**, this issue.
 2. Thompson, L. G. *et al.*, *Science*, 1989, **246**, 474-476.
 3. Hodges, K. V., *GSA Bull.*, 2000, **112**, 324-350.
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R. K. PANT

NEWS

Relevance of GM technology

A two-day national symposium on 'Relevance of GM Technology to Indian Agriculture and Food Security' was organized by Gene Campaign on 26 and 27 November 2003 in Delhi, to celebrate its 10th anniversary.

The multistakeholder symposium brought together speakers and participants with varied range of views on GM crops. Speakers ranged from strong supporters of GM technology to those equally strongly opposed to it, and those with meas-

ured views. One thing that all speakers pointed out was the appalling state of the Regulatory Framework in India and the urgent need to revamp it. Members of the Genetic Engineering Approval Committee (GEAC), India's apex regulatory body, explained the process of regulation and, in the face of vociferous demand, agreed to put more data on the GEAC website. A series of recommendations emerged from the two-day consultations.

For highlights of the presentations made during the symposium, Gene Campaign's website: www.genecampaign.org may be visited. Queries may be sent by e-mail to genecamp@vsnl.com.

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