

A Science Service Feature

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? WHY THE WEATHER ?

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VARVES

An interesting record of long-ago weather is found in certain banks of clay forming the beds of ancient lakes that were fed by the melting of the glaciers of the last Ice Age during their gradual retreat to high latitudes. The water flowing into these lakes carried sediment, which was laid down in layers consisting of a coarser portion, deposited in summer, when flow was rapid, and a finer portion, deposited in winter when there was little streamflow. The different colors of these seasonal layers makes it possible to distinguish the successive annual deposits, which are called "varves."

Since there was more melting in hot summers than in cool summers, the relative thickness of the varves is supposed to furnish an indication of the relative warmth of the years when the deposits were formed. Hence many series of varves have been measured for the purpose of tracing the fluctuations of ancient climates; the process being analogous to that of measuring the successive annual rings of old trees for a similar purpose.

The varve records go back many thousands of years farther than the records furnished by living or recently dead trees, but the process of counting tree rings has lately been extended to fossil trees much older than the varves.

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