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? WHY THE WEATHER ? Mailed November 3, 1932

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RECORDS OF VARYING CLIMATES

Evidence of climatic fluctuations is sought in long records of the dates, year by year, when crops were sown and harvested in many parts of Europe and elsewhere, including statistics of wine harvests in some districts as far back as the year 1400. It is sought in records of the freezing of harbors and rivers, of the advance and retreat of glaciers, and of water levels in lakes and inland seas. Much information has come to light through measurements of the annual rings of growth seen in the cross sections of old trees. The thickness of each ring is supposed to depend upon prevailing atmospheric conditions, especially rainfall, in the year when it was formed, and in the case of the California sequoias some of these arboreal weather records extend back three thousand years. Still other evidence is furnished by the remains of plants found in different depths in peat bogs, pointing to alternations between wet-land and dry-land conditions. Lastly, for recent decades we have an enormous fund of actual weather measurements, made with accurate instruments, in nearly all parts of the world.

The history of climates for the past few thousand years derived from all these sources is one of prevailing variability, though not of permanent change. It is now clear that there have been many oscillations back and forth between coolness and warmth, raininess and aridity, and in some cases the swings in one direction or the other seem to have been extensive and persistent enough to play an important part in the economic affairs of mankind and to help shape the course of human history.

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