

NEXT GREAT DELUGE FORECAST BY SCIENCE

Melting Polar Ice Caps to Raise the Level of Seas and Flood the Continents

WE still speak of "the Ice Age" as if it belonged to the remote geological past. Geologists have reached the conclusion that there were several ice ages. What is more, the last Ice Age, known as the Quaternary, is only about half over, despite our blistering Summers. "Eternal ice" or "eternal snow" are figments of the poetic imagination. Very slowly the great ice sheets in the Arctic and Antarctic regions are melting and pouring their torrents into the oceans. The earth must inevitably change its aspect and its climate.

How the change is slowly taking place and what the result will be has been considered by such able geologists, physicists and meteorologists as Professor Sir Edgeworth David of the University of Sydney, Australia, Professor Wilhelm Meinardus of Göttingen and a score of others. The latest is Dr. William J. Humphreys of the United States Weather Bureau, who recently addressed the American Meteorological Society on the subject, summarizing old views and modifying them in the light of the information gathered in the Antarctic regions by the Byrd expedition and in Greenland by the ill-fated Professor Alfred Wegener and his companions.

Glacial Sheets Reduced by Half.

The glacial sheets that now cover the North and South Poles were once 12,000,000 square miles in extent—more than one-fifth the present total land area of the globe. In the course of about 700,000 years they have melted down to their present area of about 6,000,000 square miles. The ice on Greenland alone is ten times vaster than the area of the State of New York. Wegener's echo soundings showed that it is over 9,000 feet thick near the centre of the island and about 4,000 feet thick near the edges of the bowl over which it spills. Here, then, we have enough ice to provide a layer of water one mile thick over 700,000 of Greenland's 827,275 square miles of surface. To this we must add another layer of mile-deep water which would be spread over 3,300,000 square miles of Antarctica's 5,400,000 square miles.

The earth is steadily growing warmer. As all the ice at the two poles melts a stupendous volume of water will be released. Professor David conservatively estimates that

the sea level will rise fifty feet. Professor Meinardus doubles that estimate. Dr. Humphreys, with the studies of Byrd and Wegener before him, believes that the rise will be 151 feet. Such floods are nothing new, as we see by the marine fossils found on the tops of the Rockies, Andes and other mountain ranges.

The Deluge of the Future.

So, within 30,000 or 40,000 years there will be another deluge. Salt water will sweep over the continents, leaving only the higher land dry. Holland will be inundated. Fish will swim in Buckingham Palace and Westminster Abbey, for most of England will lie beneath the waves. The Desert of Sahara will be a great inland sea. What is now New York will be marked by the upper stories and towers of the taller skyscrapers as they jut out of the water.

In an inundation which would thus change geography and which would be accompanied by a rise in temperature, the climate would return to what it was when dinosaurs roamed the earth and dense jungles of dank, gigantic ferns grew in what are now Pennsylvania and Canada. Palms and alligators would flourish at the poles as they did millions of years ago.

What will become of man if climatic conditions are thus changed? Ice sheets in high latitudes produce strong contrasts in temperatures between the polar and equatorial regions. Winds, storms, weather that changes from day to day are the result. Man flourishes under such conditions. If the torrid zone were to become even more torrid than it is, and if what are now frozen tracts around the North and South Poles are to bear sub-tropical life, man's food supply will not be what it is now.

Professor G. S. Simpson of the British Meteorological Office has advanced the theory that Chellean, Mousterian and other races of men that once flourished in Southern Europe were wiped out because the climate changed and that inedible vermin took the place of the animals that were hunted. No one can tell what may happen if a new carboniferous era should follow the warming of the earth. Man is about as old as the present Ice Age. It is a question if he will survive it.