

## The Glacial Cause of Changing Climates

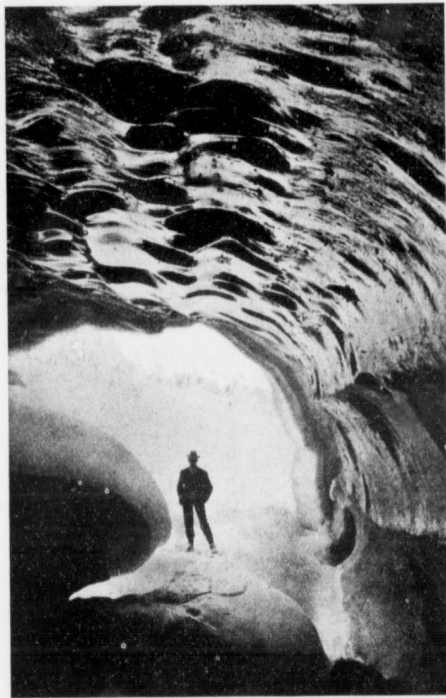


Plate IX. The ice cave on the Illicillewaet Glacier, visited by Mr. Cotsworth in the winter of 1908-09. The flutings on the right resulted from the intense pressure of the ice as it was forced over the grooved bed-rock.

stant, according to their respective angles at which the sun's rays reaches the respective latitudes of the earth, its whole crust under those zones is being tilted around by the ice drifting from Northwest America to Greenland, thereby changing the relative climates of every country very slowly. Few persons realize the far-reaching influences that world-wide change is exerting upon the vitality of nations and all mankind.

### GEOLOGICAL PERIODS DEVELOPED BY THE CONTINUOUS GLACIAL PERIOD

26. Those stages of Polar Progression are indicated on Plate III by the bold dot-and-dash line showing the course apparently

taken by the North Pole from the Behring Sea, where it was seemingly located throughout that geological period during which the European coal strata were laid, when Europe was in the latitude now held by Equatorial Africa, where the sudswamps and tropical growth are depositing like formations in their initial stages.

As the North Polar area became deflected eastwards by the gravitational flow of the 6,000-to-9,000-foot-thick glacial ice-cap from the Rocky Mountain area over the present prairie area (that then was a very shallow Polar sea of immense ice-lagoons) towards the south of Greenland and Iceland regions, the northwest of Europe was gradually drifted through the present Sahara zone where the British new red lias sandstone was probably laid, and thence through the Mediterranean area where the shales and limestones of the Jurassic strata were apparently laid.

27. Later, as the Polar Progression turned through the Hudson's Bay area, the British Isles appear to have been deflected into the warm zone where the mid-Atlantic is now depositing animalculæ-formed beds, like the British Oolitic and Coralline strata. When, later, the Polar Progression rounded Labrador dipping southeasterly, the British Isles would be deflected through the great chalk-forming zone where the Atlantic foraminifera in teeming billions are now depositing vast beds of chalk-ooze between Africa and Central America, just as the British chalk-beds of the Cretaceous period were laid.

28. The natural explanation does not necessarily imply that the whole of the British strata between the old red sandstone and the present boulder-clay and alluvial deposits of soil were laid during one unvarying transit of the polar locations from Behring Sea to the present location of the polar axis, neither does it imply