

Can the World be Spared a Second Ice Age?

That's What Captain Donald B. MacMillan Wants to Know as He Heads an Expedition Into the Arctic Regions to Observe the Ice Pack That Slowly But Surely Is Hurling Itself on Modern Civilization

A SECOND Ice Age threatens the world!

Or so, at any rate, Captain Donald B. MacMillan, noted Arctic explorer, believes, backing up the sincerity of his belief by organizing another expedition to the polar regions in order to make a record of how far encroaching glaciers have advanced since observations were last made.

A little band of determined men, under MacMillan's command, set sail in June from Wiscasset, Me., for the Arctic in quest of data concerning what appears to be a possible end of the world. It is to be brought about, says science, by the slow, relentless, southward march of the great polar ice cap, that with resistless might is moving downward toward civilization at a speed often as great as ninety feet in a single day.

"There has been tremendous glacial activity all along the coast since 1850," he says. "The land is fairly buried in ice, which is flowing over and around the headlands and filling all the fiords. On my expedition last year I obtained good sight for longitude, latitude and azimuth at all salient points."

THE advance of the polar ice cap is apparently invincible, according to MacMillan's previous observations. While great masses of ice break off and disappear into the warmer seas, still the main body of the ice pack moves majestically southward undisturbed by such trivial losses.

"There is a sheet of ice covering an area of 500,000 square miles, rising to a height of 9000 feet above sea level in some places and moving southward at the rate of from one inch to ninety feet a day," says the captain.

"Entire valleys have been filled and mountains engulfed by the ice," Captain MacMillan points out, "while groups of islands once known to explorers have been absorbed into the pack. Actual comparison of observations has shown that where in 1850 there was a valley, today there is a glacier twenty-five miles wide.

"In many places in the Arctic, where previously there was no ice, today one finds huge glaciers frequently ten miles in width. And all are moving steadily southward, and each year sees the ice cap advanced."

The polar glacier is an enormous cap, or cupola, rising above the surrounding

lands; it is the dominant feature far and wide. Whether or not it has been augmented or diminished in area has concerned physical geographers for more than twenty-five years. No definite information with regard to this question has yet been obtained, though general conclusions have been reached.

For instance, there is good evidence to show that in the Arctic regions in the eighteenth century and in part of the nineteenth an important extension of glaciers occurred. In Spitzbergen, harbors which whalers had often visited in the seventeenth and early in the eighteenth centuries were filled later with glaciers, so that they could no longer be used by shipping. The advance of glaciers in Iceland is said to have covered places that had formerly been the sites of farms and churches.

It is a little hard to realize that at present glaciers cover about 4,485,000 square miles, or more than one and one-half times the area of the United States.

ACCORDING to scientists, man at present has no adequate means of coping with such a return of the ice, should it occur.

What would we do if the invincible mass continues its formidable advance?

In the glacial period the climate had grown to be essentially arctic. Within the continental areas enormous ice sheets formed, which moved southward,

filling river and lake basins, covering mountains and burying lowlands beneath a vast sea of ice.

One field of ice extended over Canada and the northeastern part of the United States. Its northern limits have not yet been defined, but on the east it reached the Atlantic Ocean, and southward it advanced well into New Jersey, Pennsylvania and the States between the Ohio and Missouri Rivers. New England, New York, and the region of the Great Lakes were completely covered by the ice sheet. In the White Mountains the rocks bear evidence of having been striated and polished almost to the summits of the highest elevations, and the same phenomena have been recorded for the Adirondacks and Catskills, showing that the ice in places was several thousand feet thick.

(c) Scherner



In the Ice Age of long ago primitive man's problem was to get food, and he was compelled to cope with the half-starved animal life that had as hard a time as man himself eking out an existence on the barren icy wastes. Above is shown Captain MacMillan in his arctic dress

Entire valleys are being filled and mountains engulfed by ice, says Captain MacMillan, while islands are being absorbed into the pack

The mountains of Western North America were also the scenes of great glacial activity, of which the snow fields of the present day are but wasted relics.

The Old World seems to have been hit as hard as the New in that first Age of Ice. An ice sheet covered the whole of Northern Europe; it filled up the basin of the Baltic on its way from Scandinavia to the plains of North Germany, and it crossed the North Sea to the Scottish highlands, whence it moved northward and westward into the Atlan-

tic. The whole of England north of the Thames, as well as Scotland and Ireland, was buried beneath the ice, which attained a thickness in some localities of 5000 feet.

On the Continent the sheet spread over Scandinavia, Denmark, Holland and parts of Germany, Belgium and Russia, and comprised an area of about 800,000 square miles.

South of the limits of this ice cap were smaller snow fields and glaciers. The present Alpine glaciers are

IS the world again to be encrusted under a ponderous mass of ice as it was in the prehistoric days many thousands of years ago? Science says a second Ice Age is inevitable, unless some means can be devised to thwart this crushing climatic catastrophe. More than fifty thousand square miles of the earth's surface already is covered by the huge ice pack of the north. In some places it towers to a height of 9000 feet above sea level. It is moving southward at the rate of 90 feet every day.

In the glacial period ice extended over Canada and the northeastern part of the United States. The mountains of the West still speak of its ravages. The old world was equally hard hit. All of England was buried, in some places with ice 5000 feet thick, while 800,000 square miles of northern Europe were buried under millions of tons of ice.

The first Ice Age lasted approximately 500,000 years.

Is a second Ice Age impending? That's what MacMillan is attempting to find out this summer.

shrunken remnants of the field that covered Switzerland during this period.

In the Southern Hemisphere the glaciers of Patagonia were once enlarged so as to extend across the peninsula to the Atlantic shores, and New Zealand was overrun by the ice.

THIS generation, therefore, need have no immediate concern about the second Age of Ice that may be advancing slowly and steadily, but unless some one interests himself in the matter, there is at least a chance that our great-grandchildren may find themselves facing a peril that cannot be overcome.

So thinks the dark-eyed captain of the gallant Bowdoin, now out upon his adventure for humanity.

Man cannot live upon the polar ice cap, "Mac" insists, as he stresses the importance of the expedition—even the Eskimos are not found in those snowy wastes.

"You must remember," he says, leaning against the newly polished brass rail of his tiny ship, "that the soil up there is but seven inches in depth. Below that is nothing but rock. There is no oil, no coal, nothing of any commercial value. The summers are very short, and the winters long and intensely cold."

And yet the lure of the North has laid its magic hand upon this adventurer. No matter how often he suffers frozen feet in that cruelly cold country, no matter if the bitter winds cut through his furs and turn his face black with frost—though he has been lost in desolate waste places, and wanted for food and fire many a time—MacMillan loves it.

"It is fascinating, living in frozen fields," he says. "Every day is interesting, and there is no monotony even in the long winter months."

