

The greater part of the Arctic Ocean is covered by a mass of floating ice, of which only the fringes break up in summer. The temperature of the air above this ice is very low—near the north pole it is about 30 degrees Fahrenheit below zero in January—but calculations show that this temperature is almost entirely produced by the ice. If the latter could be swept away, the mean temperature even in midwinter would be about 27 degrees above zero. If the ocean were free of ice and the temperature as determined by conditions other than the presence of ice—which Brooks calls the “akryogenous” (iceless) temperature—were only five degrees higher than it is now, the Arctic Ocean would not freeze.

When an ice cap has once formed, its mere presence suffices to lower the actual temperature by some 50 degrees, and this makes it very stable, so that it is able to survive minor changes of climate, just as it survives the seasonal change from winter to summer. Hence to sweep it away the “akryogenous” temperature must be well above 28 degrees—the freezing point of sea water—for many years.

Brooks thinks that, possibly because of changes in the amount of heat received from the sun, this has actually happened at times within the past few thousand years; that the ice cover of the Arctic Ocean has been melted away; and that some striking changes have resulted in the climates of neighboring lands.—*C. F. Talman* in “Why the Weather?” SS.

### ICE AGE CLIMATES

One of the startling revelations of modern science is that the climates of the ice age include the climates of today. We are living in the Quarternary Ice Age; which began some six or seven hundred thousand years ago and will undoubtedly continue for many thousand years more. An ice age is distinguished from other periods in the earth's history by the presence of great permanent sheets of glacier ice on the surface of the globe. About six million square miles of such ice now lies upon our planet—five million in the Antarctic, and a million elsewhere. It is entirely possible that the ice sheets will grow bigger before they finally melt away. Nobody knows.—*C. F. Talman* in “Why the Weather?” SS.

### CLIMATE NOT CHANGING NOTICEABLY

In modern times we encounter rather frequently the hypothesis on the part of weather laymen that the climate of America is changing toward warmer winters and cooler summers. Weather experts have repeatedly denied this fact, but the best way to disprove it in the popular mind is to show how the oldest weather discussions play with the same idea. Among the references collected by Mr. Weeks is one to an address of Dr. Hugh Williamson, delivered before a scientific society on August 17, 1770, entitled “An attempt to account for the change of climate which has been observed in the Middle Colonies in North America.”

Dr. Williamson begins his address by saying, “It is generally remarked by people who have resided long in Pennsylvania and the neighboring colonies that within the last forty or fifty years there has been a very observable change of climate—that our winters are not so intensely cold, nor our summers so disagreeably warm as they have been.”

The doctor was not aware of the fact that Governor Winthrop in the seventeenth century had also advanced the same hypothesis of change of American climate. In view of the fact that people have been positing a change of climate for the past three centuries, it is obvious that in each generation the amateur meteorologists have spoken without reference to the objective data of the generations before them.

As we see from all the old citations, the weather keeps up century after century at just the same tricks.—*Baltimore Sun*.