

THE COMING OF A NEW ICE AGE

BY GERALD E. MARSH

CHICAGO — Contrary to the conventional wisdom of the day, the real danger facing humanity is not global warming, but more likely the coming of a new Ice Age.

What we live in now is known as an interglacial, a relatively brief period between long ice ages. Unfortunately for us, most interglacial periods last only about ten thousand years, and that is how long it has been since the last Ice Age ended.

How much longer do we have before the ice begins to spread across the Earth's surface? Less than a hundred years or several hundred? We simply don't know.

Even if all the temperature increase over the last century is attributable to human activities, the rise has been relatively modest one of a little over one degree Fahrenheit — an increase well within natural variations over the last few thousand years.

While an enduring temperature rise of the same size over the next century would cause humanity to make some changes, it would undoubtedly be within our ability to adapt.

Entering a new ice age, however, would be catastrophic for the continuation of modern civilization.

One has only to look at maps showing the extent of the great ice sheets during the last Ice Age to understand what a return to ice age conditions would mean. Much of Europe and North-America were covered by thick ice, thousands of feet thick in many areas and the world as a whole was much colder.

The last "little" Ice Age started as early as the 14th century when the Baltic Sea froze over followed by unseasonable cold, storms, and a rise in the level of the Caspian Sea. That was followed by the extinction of the Norse settlements in Greenland and the loss of grain cultivation in Iceland. Harvests were even severely reduced in

Scandinavia And this was a mere foreshadowing of the miseries to come.

By the mid-17th century, glaciers in the Swiss Alps advanced, wiping out farms and entire villages. In England, the River Thames froze during the winter, and in 1780, New York Harbor froze. Had this continued, history would have been very different. Luckily, the decrease in solar activity that caused the Little Ice Age ended and the result was the continued flowering of modern civilization.

There were very few Ice Ages until about 2.75 million years ago when Earth's climate entered an unusual period of instability. The one that started about a million years ago lasted about 100,000 years — separated by a relatively short interglacial periods like the one we are now living in. Before the onset of the Ice Ages, and for most of the Earth's history, it was far warmer than it is today.

Indeed, the Sun has been getting brighter over the whole history of the Earth and large land plants have flourished. Both of these had the effect of dropping carbon dioxide concentrations in the atmosphere to the lowest level in Earth's long history.

Five hundred million years ago, carbon dioxide concentrations were over 13 times current levels; and not until about 20 million years ago did carbon dioxide levels dropped to a little less than twice what they are today.

It is possible that moderately increased carbon dioxide concentrations could extend the current interglacial period. But we have not reached the level required yet, nor do we know the optimum level to reach.

So, rather than call for arbitrary limits on carbon dioxide emissions, perhaps the best thing the UN's Intergovernmental Panel on Climate Change and the climatology community in general could do is spend their efforts on determining the optimal range of carbon dioxide needed to extend the current interglacial period indefinitely.

NASA has predicted that the solar cycle peaking in 2022 could be one of the weakest in centuries and should cause a very significant

cooling of Earth's climate. Will this be the trigger that initiates a new Ice Age?

We ought to carefully consider this possibility before we wipe out our current prosperity by spending trillions of dollars to combat a perceived global warming threat that may well prove to be only a will-o-the-wisp.