

"Old-Fashioned Winter" Real

Meteorology

When people talk of the "old-fashioned winter" with weather much more cold and snowy than we have in these degenerated days, they are harking back to a series of severe winters that were experienced in England nearly two centuries ago, when the belief commenced. This is the conclusion announced by a famous British meteorologist, Dr. C. E. Brooks, in the current issue of *Nature*.

In expressing this opinion, Dr. Brooks disagrees with most meteorologists, who say that ideas of winters having been more severe in one's childhood is merely imaginary. One cause, they say, is that a snow-drift that would be waist high to a child would only be knee-high to a grown-up, and that when we recall the snowstorms of our childhood we

fail to allow for this difference in scale.

Such considerations may have been responsible for perpetuating the belief, says Dr. Brooks, but he has found evidence that English winters of about two centuries ago really were "old-fashioned."

"There seems to have been a real change of climate about 1750," he says. "Before that date there was a prolonged period, approaching a century, of abnormally dry weather in England. At the same time, weather in Norway was stormy and snowy; this and other facts suggest that our droughts were of the 'anti-cyclonic' type, which would be accompanied by generally cold weather in winter. This was the time of the great 'frost fairs' on the Thames, notably 1683-4, 1715-6, and 1739-40,

events which were likely to impress the memory of Londoners in a way which mere weather could not do, and which were kept in mind by the numerous 'relics,' such as engravings and ballads from printing presses set up on the frozen river. If the 'old-fashioned winter' ever had a real existence, no series of years is more likely to have given birth to the tradition.

"I would suggest, therefore, that the belief in the 'old-fashioned Christmas' may have originated in a series of severe winters in the late seventeenth and early eighteenth centuries, but that since then its vitality has been purely subjective, so that it now refers not to any definite period of time, but to the childhood of the speaker."

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Fossilized Brains Found

Paleontology

"The poor fish's brains were fossilized."

That is not a part of a slang conversation; it is a statement of sober scientific fact, and a record of a really remarkable geological discovery.

Since water and fat make up the greater part of the brains of fishes, it would seem impossible for such things to be preserved in stone, yet in two periods of ancient time, such things have been preserved: in the Kentucky Mississippian, the period just before the great coal beds were formed, and in the Kansas coal measures themselves.

These beautiful little specimens of fossil brains are found in small, rounded nodules, often about an inch in diameter, which weather out from soft shale and break open by frost action. The break shows the head of a small hard-scaled fish containing, besides the brain, traces of nerves, blood-vessels, the eye, soft parts of the skull, and impressions of the bones. Wherever found, these nodules contain only the head, never any part of the body, of the same kind of a fish, known to scientists as *Rhadinichthys*.

Recently Prof. A. O. Thomas, University of Iowa geologist, has extended the knowledge of the distribution of these brain-containing nodules by the discovery of specimens in Iowa. The brain is there exposed from the lower surface, enabling students of fish brains to record the nature of this unknown part.

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Ultraviolet Light Affects Comets

Astronomy

Ultraviolet light from the sun, which causes sunburn and cures rickets, a disease of the bones of children, is also responsible for such different things as magnetic storms on the earth and the frequently erratic behavior of comets in the sky.

This was the belief expressed by Dr. E. O. Hulburt, of the Naval Research Laboratory in Washington.

Magnetic storms, which have no connection with the more familiar electrical storms, sometimes occur when the sun is especially active. They make themselves known by misbehavior of sensitive instruments in the magnetic observatories, and also by their effect on telegraph lines. Sometimes telegraphic communication between two places is completely impossible during such a magnetic storm, while at other times it may be possible to communicate for large distances without the aid of artificial batteries. Though it has been known that something happens on the sun which starts the storms on the earth, just what it was that came from sun to earth at the time has been a puzzle.

Dr. Hulburt answered this puzzle.

"It appears to be a flash of ultraviolet light, coming from a hot spot—a little 'volcano'—on the sun, that causes the observed magnetic storms on the earth," he stated.

His researches clearly showed that such an ultraviolet flash could cause

this disturbance, by its effect on the magnetic condition of the earth, but he looked around for further proof.

This he found in the behavior of comets.

Comets do queer things sometimes, he pointed out. They may suddenly, within a few hours, grow a large tail, break up into smaller pieces, or even lose their tails altogether.

Perhaps these effects are also due to ultraviolet light from the sun, he thought. So he looked up the records of misbehaving comets, and, sure enough, he found that wherever a large comet had been on the same side of the sun as the earth, and had shown some erratic behavior of this kind, there was a magnetic storm recorded on the earth at very nearly the same time, so that now his theory seems to be rather close to the truth.

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The electric pumps installed for draining Lake Nemi have been set to work and it is believed that the sunken galleys of the Emperor Tiberius will be revealed in about four months.

The average farm woman works eleven and one-half hours a day in winter and thirteen and one-half hours in summer, according to a home management demonstrator at the University of New Hampshire.