

April 9

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
tells how:

VOLCANIC ERUPTIONS PRODUCE COLD

After a tremendous volcanic explosion occurs, throwing fine ash to a height of nine or ten miles, the earth may experience a season or more of unusual cold. The minute particles of ash in the upper atmosphere may be carried all over the world. Those above the general level reached by convection will not be brought down by rain or descending air currents. Friction will serve to keep them from settling or falling, save very slowly.

A veil of volcanic dust in the upper air reflects, absorbs, and radiates into space some of the heat from the sun which would otherwise reach the earth's surface. The tremendous eruption of Tomboro in the East Indies in 1816 was followed by an extraordinarily cool summer, indeed 1816 became known afterwards as the "year without a summer". Snow fell in June, July, and August, in various parts of New England. Similarly, in 1883, after the severe explosion of Krakatoa, another East Indian volcano, the world experienced unusual cold. Moreover, the coolness in the last half of 1912 was evidently intensified by dust from Katmai volcano, Alaska.

Another result of the volcanic ash aloft is the production of remarkably brilliant red sunsets and sunrises. As the sun's rays pass obliquely through the very dusty upper air, the shorter wave lengths of light are interfered with more than usual, leaving a preponderance of reds in the light which reaches the surface. In 1912, the eruption of Katmai produced a series of magnificent sunsets, similar to those noted after the explosion of Krakatoa. Dr. W. J. Humphreys of the U.S. Weather Bureau has stated that the 1923 eruption of Mt. Etna was not sufficiently explosive to carry volcanic dust far enough aloft to affect our weather materially.

(Tomorrow: How The Cumulus Cloud Stays Up)

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