

Released on receipt
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October 5, 1928

A Science Service Feature

? WHY THE WEATHER ? Mailed September 28, 1928

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VOLCANIC DUST IN THE AIR

An occasional cause of widespread atmospheric dustiness is the eruption of volcanoes, especially those of an explosive character, which carry fine dust to heights at which it cannot be washed out of the atmosphere by rain. The remarkable dry fog of 1783 -- the most famous in history -- which covered the greater part of Europe and North America for three or four months -- was undoubtedly due to the violent eruptions of that year in Iceland and Japan. Its connection with the Iceland eruption was suggested even by contemporary writers, including Benjamin Franklin.

The outbreak of Krakatoa, in the East Indies, in 1883, spread a veil of dust over the greater part of the globe. For two or three years the dustiness of the air was the cause of striking optical phenomena, including gorgeous sunset glows. The story is told of an American fire brigade which, deceived by one of these brilliant sunsets, set out to extinguish what was mistaken for a fire in a neighboring village.

A large luminous circle about the sun -- a species of corona, known as "Bishop's ring" because first observed by the Rev. Sereno Bishop, in Honolulu -- appeared shortly after the Krakatoa eruption and reached its maximum intensity the following year. This ring was due to the diffraction of light by the exceedingly fine dust from the volcano. The same phenomenon has been observed after some other great volcanic outbreaks.

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