

The Year Without a Summer Was a Bizarre Weather Disaster in 1816

A Volcanic Eruption Led to Crop Failures on Two Continents

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The Year Without a Summer, a peculiar 19th century disaster, played out during 1816 when weather in Europe and North America took a bizarre turn that resulted in widespread crop failures and even famine.

The weather in 1816 was unprecedented. Spring arrived but then everything seemed to turn backward, as cold temperatures returned. The sky seemed permanently overcast. The lack of sunlight became so severe that farmers lost their crops and food shortages were reported in Ireland, France, England, and the United States.

In Virginia, Thomas Jefferson, retired from the presidency and farming at Monticello, sustained crop failures that sent him further into debt. In Europe, the gloomy weather helped inspire the writing of a classic horror tale, *Frankenstein*.

It would be more than a century before anyone understood the reason for the peculiar weather disaster: the eruption of an enormous volcano on a remote island in the Indian Ocean a year earlier had thrown enormous amounts of volcanic ash into the upper atmosphere.

The dust from Mount Tambora, which had erupted in early April 1815, had shrouded the globe. And with sunlight blocked, 1816 did not have a normal summer.

Reports of Weather Problems Appeared in Newspapers

Mentions of odd weather began appearing in American newspapers in early June, such as the following dispatch from Trenton, New Jersey which appeared in the *Boston Independent Chronicle* on June 17, 1816:

On the night of 6th instant, after a cold day, Jack Frost paid another visit to this region of the country, and nipped the beans, cucumbers, and other tender plants. This surely is cold weather for summer.

On the 5th we had quite warm weather, and in the afternoon copious showers attended with lightning and thunder -- then followed high cold winds from the northwest, and back back again the above mentioned unwelcome visitor. On the 6th, 7th, and 8th June, fires were quite agreeable company in our habitations.

As the summer went on and the cold persisted, crops failed. What's important to note is that while 1816 wasn't the coldest year on record, the prolonged cold coincided with

the growing season. And that led to food shortages in Europe and in some communities in the United States.

Historians have noted that the westward migration in America accelerated following the very cold summer of 1816. It is believed that some farmers in New England, having struggled through a horrible growing season, made up their minds to venture to western territories.

The Bad Weather Inspired a Classic Story of Horror

In Ireland the summer of 1816 was much rainier than normal, and the potato crop failed. In other European countries wheat crops were dismal, leading to bread shortages.

In Switzerland, the damp and dismal summer of 1816 led to the creation of a significant literary work. A group of writers, including Lord Byron, Percy Bysshe Shelley, and his future wife Mary Wollstonecraft Godwin, challenged each other to write dark tales inspired by the gloomy and chilly weather.

During the miserable weather Mary Shelley wrote her classic novel *Frankenstein*.

Reports Looked Back at the Bizarre Weather of 1816

By the end of summer, it was apparent that something very strange had occurred. The *Albany Advertiser*, a newspaper in New York State, published a story on October 6, 1816 which related the peculiar season:

The weather during the past summer has been generally considered as very uncommon, not only in this country, but, as it would seem from newspaper accounts, in Europe also. Here it has been dry, and cold. We do not recollect the time when the drought has been so extensive, and general, not when there has been so cold a summer. There have been hard frosts in every summer month, a fact that we have never known before. It has also been cold and dry in some parts of Europe, and very wet in other places in that quarter of the world.

The *Albany Advertiser* went on to propose some theories about why the weather was so bizarre. The mention of sunspots is interesting, as sunspots had been seen by astronomers, and some people, to this day, wonder about what, if any effect, that may have had on the weird weather.

What's also fascinating is that the newspaper article from 1816 proposes that such events be studied so people can learn what is going on:

Many persons suppose that the seasons have not thoroughly recovered from the shock they experienced at the time of the total eclipse of the sun. Others seem disposed to charge the peculiarities of the season, the present year, upon the spots on the sun. If

the dryness of the season has in any measure depended on the latter cause, it has not operated uniformly in different places -- the spots have been visible in Europe, as well as here, and yet in some parts of Europe, as we have already remarked, they have been drenched with rain.

Without undertaking to discuss, much less to decide, such a learned subject as this, we should be glad if proper pains were taken to ascertain, by regular journals of the weather from year to year, the state of the seasons in this country and Europe, as well as the general state of health in both quarters of the globe. We think the facts might be collected, and the comparison made, without much difficulty; and when once made, that it would be of great advantage to medical men, and medical science.

The Year Without a Summer would be long remembered. Newspapers in Connecticut decades later reported that old farmers in the state referred to 1816 as "eighteen hundred and starve to death."

As it happens, the Year Without a Summer would be studied well into the 20th century, and a fairly clear understanding would emerge.

The Eruption of Mount Tambora

When the volcano at Mount Tambora erupted it was a massive and terrifying event which killed tens of thousands of people. It was actually a larger volcanic eruption than the eruption at Krakatoa decades later.

The Krakatoa disaster has always overshadowed Mount Tambora for a simple reason: the news of Krakatoa traveled quickly by telegraph, and appeared in newspapers quickly. By comparison, people in Europe and North America only heard about Mount Tambora months later. And the event did not hold much meaning for them.

It was not until well into the 20th century that scientists began to link the two events, the eruption of Mount Tambora and the Year Without a Summer. There have been scientists who dispute or discount the relationship between the volcano and the crop failures on the other side of the world the following year, but most scientific thought finds the link credible.

Name _____

Directions: After reading the article answer the following questions in full and complete sentences.

1. What year did the year without summer take place?
2. What locations were most affected by the year without summer?
3. Describe atmosphere and light conditions during the year without summer.
4. What is to blame for the year without summer? How did it cause the bizarre event?
5. What famous literary work was inspired by the year without summer?
6. The year without summer wasn't truly understood until over a century later, why do you think this was?
7. Describe how farmers were affected by the year without summer.
8. Which volcanic event overshadowed Mount Tambora, why?