The Volcano That

Two hundred years ago, an unknown volcano caused death and destruction around the world. 

By Lauren Tarshis
John Hoisington, 10, stared out the window of his family’s Vermont farmhouse. It was June 8, 1816. Summer was just two weeks away. Yet outside, a snowstorm raged.

Nearly a foot of snow covered the fields the family had planted just weeks before. The vegetable garden was buried. The new buds on the apple and pear trees were coated with ice.
Like most people back then, the Hoisingtons grew almost all the food they ate. Nearly every bite came from the farm. They grew the corn for their morning porridge and raised the chickens for their supper-time stew. John saw fear in his father’s eyes as they watched the snow. This storm would kill all of their crops. There would be little food for them or their animals.

How would they survive?

During that strange summer of 1816, there were similar weather disasters throughout New England and the world. Snow destroyed thousands of East Coast farms, from Virginia up to Maine. Snowstorms and floods struck France, England, Ireland, and Switzerland. There were droughts and floods in India. Killing frosts hit northern China.

At the time, people did not know why the weather had changed so wildly. Were witches to blame?

Now, nearly 200 years later, scientists have solved the mystery. John and his family would likely have been shocked to learn the truth. The cause of their suffering was an event that took place a year earlier and 10,000 miles away from their farm.

It all started with a volcano called Mount Tambora.

A Ruined Land

Mount Tambora sits on the island of Sumbawa, which today is part of the nation of Indonesia. In 1815, perhaps 50,000 people lived on Sumbawa. The island had swift streams, gentle hills, and thick jungles. On its northern side was Mount Tambora. This mountain was dotted with villages and rice

Above: Many European painters unknowingly captured Tambora’s effects. This painting, by J. M. W. Turner, is of Mount Vesuvius. But experts believe that the color of the sky was inspired by what Turner must have seen over England in the years after Tambora’s eruption.

The book Frankenstein was partly inspired by Tambora. Author Mary Shelley (above) wrote the novel in stormy Switzerland during the endless gloom of the summer of 1816.
farms. No one ever thought that it was a volcano, that its soft green slopes hid tunnels filled with lava. Like many volcanoes, it looked like a normal mountain. It had been dormant—quiet—for hundreds of years. But on April 5, 1815, it woke up.

The first eruption shook the island. It sent up plumes of fire and ash. But that was nothing compared with what would come five days later, on April 10.

Kaboom!
The volcano exploded with great force. It spewed out towers of fire. A huge cloud of gas and ash shot into the sky. The day turned black. But the mountain glowed red as lava gushed down the slopes. For more than three days, there was a deadly storm of fire, gas, ash, and rock. At the end, a wave of flames and gases swept down the mountain at 400 miles per hour.

This pyroclastic surge destroyed everything in its path.

Ignored and Forgotten
The eruption instantly killed at least 12,000 people who lived on and near the mountain. Ash and lava ruined the island’s soil. Rivers and streams were poisoned. Rice paddies were destroyed. No food would grow. There were no fish to catch. Almost every animal had been killed. Trapped with no food on their ruined lands, more than 90,000 people on Sumbawa and the nearby island of Lombok starved to death.

The eruption of Tambora in 1815 was the most deadly volcanic eruption in human history. Its explosive energy was 10 times stronger than that of Krakatoa. (Krakatoa is history’s most famous volcano. It erupted in 1883, also in what is now Indonesia.)
Yet few people outside the blast zone learned of this disaster. The people of Sumbawa and nearby islands led simple lives. Few of them had connections to Europe or the Americas. Some British sailors saw the eruption. But news traveled slowly back then. The only way to get a letter (or a person) across oceans was on a sailing ship. The trip from Sumbawa to New York or London could have taken four months. After a while, reports of the eruption did reach England. But few people took note. Somehow, the deadliest volcano in history was ignored by most of the world. Soon it was forgotten.

A year later, in 1816, people did notice the strange weather. Snow swirled in the summer. Floods turned wheat fields into lakes. Frosts blackened millions of acres of farmland. Farmers up and down the East Coast lost their crops. Farms in Europe failed. In Paris, mobs of people broke into buildings where grain was stored, risking their lives to steal sacks of flour. In China, families could not feed their children. Floods in India triggered an outbreak of a disease called cholera. The disease killed millions of people.

**Solving a Mystery**

At that time, scientists did not know that these weather problems were related. No one knew that they had all been caused by a volcano few had heard of. Little was known about climate or volcanoes. But today, experts know that volcanoes can affect weather worldwide. They’ve learned by studying recent eruptions. One was Mount Pinatubo in the Philippines.

Pinatubo erupted in June 1991. Scientists closely watched the eruption. It was not as powerful as Tambora. Still, it was one of the most powerful since Krakatoa.

Scientists tracked the eruption cloud as it rose into the sky. They used satellites and computers. Most volcanic clouds quickly dissipate—break apart and fade away. But in a very powerful eruption, the cloud rises extra high. It mixes with water and other gases in the stratosphere. It turns into a foam and stays high in the sky. Experts watched Pinatubo’s cloud as it spread. Like a layer of sunscreen smeared across the sky, the cloud blocked out some of the sun’s heat and light.
Temperatures dropped. Storms raged. It took three years for the foamy haze to clear.

Tambora’s cloud would have been larger, its effects worse. Indeed, like an unseen beast, Tambora’s cloud hung in the sky for about three years. By the time the climate went back to normal, as many as 30 million people had died. And many more lives—like the Hoisingtons’—had changed.

John and his family survived the loss of their crops. But they gave up their farm. In June 1817, they moved west to Ohio. They traveled in an oxcart piled with their things.

John’s family was not alone. Tens of thousands of other New England farmers went west too. After the hardships of 1816, they were ready to leave. It was one of the biggest migrations in U.S. history. Most migrants went to Ohio, Indiana, and Illinois.

The Hoisingtons traveled 1,000 miles. It took them three months. John’s sister Sabrina wrote about the trip. She described the family’s meeting with American Indians, long days of travel, and good times with friends they met along the way. They reached Ohio in August. Soon they had a new farm.

Meanwhile, far away, the volcano that had changed their lives went back to sleep, sitting in silence to this day—until it wakes again.

Write to Win
Imagine you could send a letter through time, explaining to the Hoisingtons what caused the strange weather of 1816. In your letter, tell them how Tambora affected people around the world. Send it to “Tambora Contest” by October 15. Ten winners will each receive a copy of Eruption! by Elizabeth Rusch. See page 2 for details.