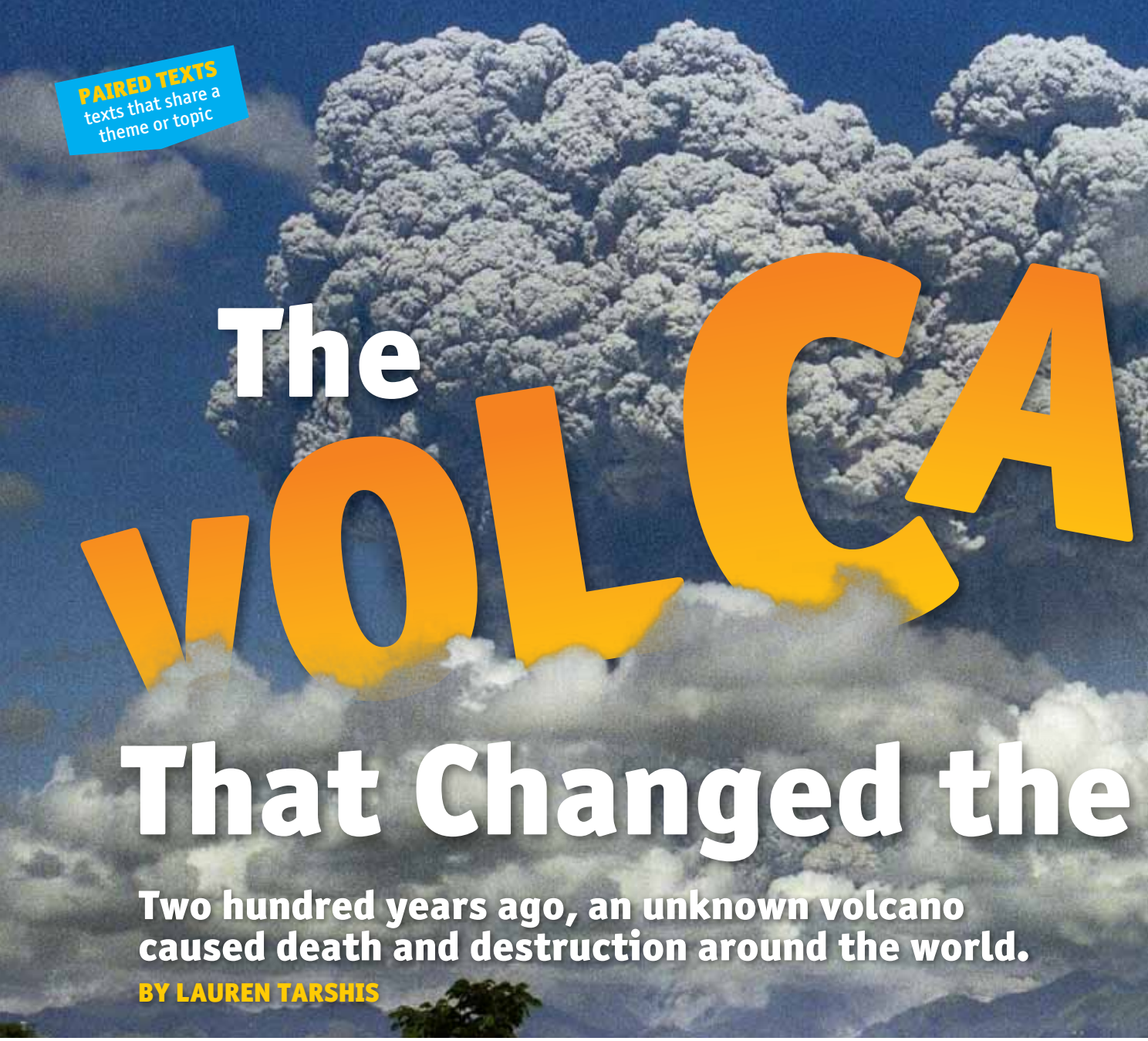


PAIRED TEXTS
texts that share a theme or topic

The VOLCANO That Changed the World

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

BY LAUREN TARSHIS

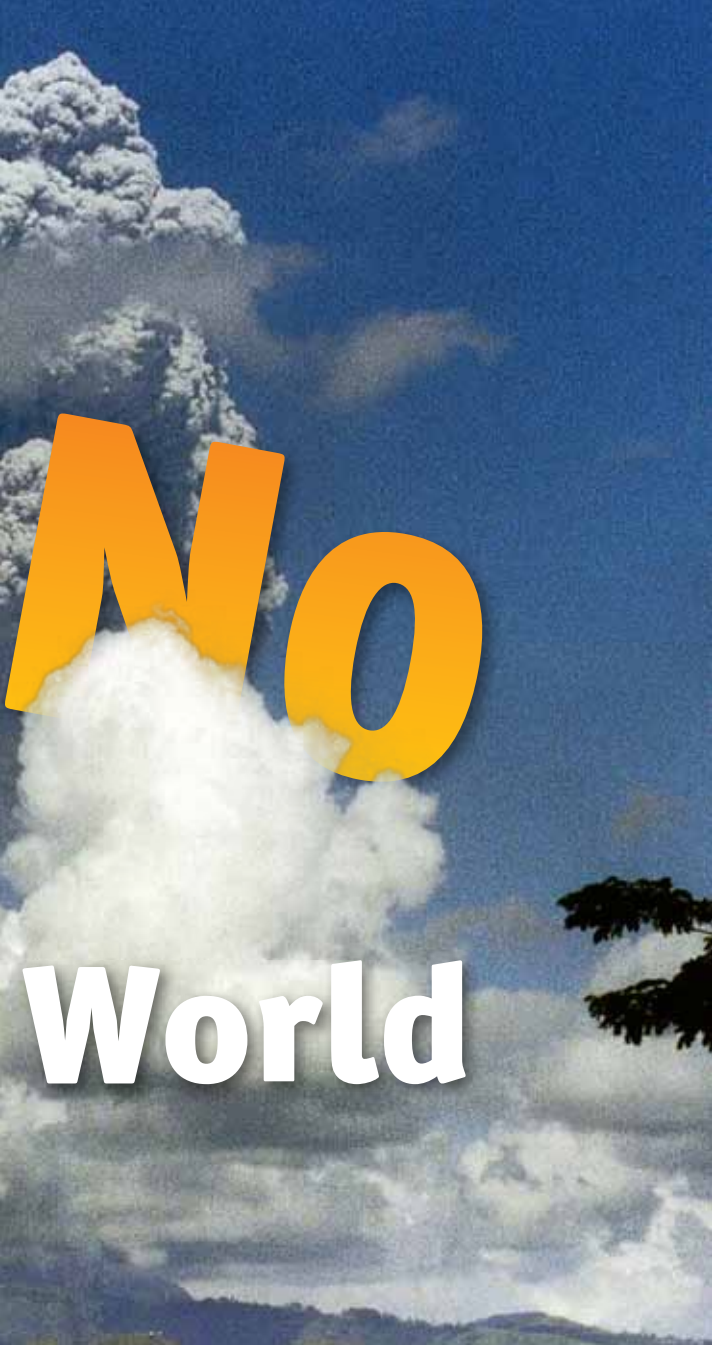
Ten-year-old John Hoisington stared out the window of his family's Vermont farmhouse in shock. It was June 8, 1816. Summer was just two weeks away. Yet outside, a wild snowstorm was raging.

Nearly a foot of snow covered the fields the family had planted only weeks before. The vegetable garden was buried. The apple and pear trees shivered in the freezing wind, their delicate buds coated with ice.

Like most people in 1816, the Hoisingtons grew almost everything they ate, from the corn in their morning porridge to the chicken and potatoes in their supper-time stew. John saw the look of fear in his father's eyes as they watched the snow swirling outside. This storm would kill all the crops. There would be little food for the family or their animals.

How would they survive?

John and his family didn't know it, but during that strange summer of 1816, similar weather disasters would unfold throughout New England—and the world. Snow destroyed thousands of other East Coast farms, from Virginia to Maine. Snowstorms and floods struck



No World

ARLAN NAEG/AFP/GETTY IMAGES/NEWSCOM

Europe. There were droughts and floods in India and killing frosts across northern China.

At the time, people struggled to understand what had caused the weather to change so wildly. Were witches to blame?

It is only now, nearly 200 years later, that scientists have finally solved the mystery. John Hoisington and his family surely would have been astonished to learn the truth: The cause of their family's suffering was an event that took place a year earlier and 10,000 miles away.

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, a beautiful land of rushing streams, gentle hills, and thick jungles. Looming over the northern side of the island was Mount Tambora, a quiet mountain dotted with villages and rice farms. Nobody had any reason to suspect that the peaceful mountain was in fact a volcano, that underneath its velvety green slopes were snaking tunnels filled with lava and explosive gases. Like many volcanoes, Tambora looked like an ordinary mountain, having been dormant for centuries.

But on April 5, 1815, Tambora woke up.

The first eruption sent up great plumes of fire and ash. That was nothing compared with what would come five days later, on April 10.

Kaboom!

The volcano exploded with terrible fury, spewing out towers of fire. A tremendous cloud of gas and ash shot into the air. The sky turned black as the mountain glowed red with rivers of lava gushing down its slopes. The eruption went on for more than three days, a deadly storm of fire, gas, ash, and rock, until a wave of flames and gases swept down the mountain at speeds of 400 miles per hour. This pyroclastic surge devastated everything in its path.

Ignored and Forgotten

The eruption instantly killed at least 12,000 people living on and around Mount Tambora. Ash and lava ruined the island's soil and poisoned its rivers and streams. Rice paddies were destroyed. No fruits or vegetables would grow. There were no fish to catch; almost every animal had been killed. Trapped without 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 and powerful volcanic eruption in human history. Its explosive energy was 10 times

Above: Around 1817, British artist J. M. W. Turner created this painting of the volcano Mount Vesuvius. Experts believe that the color of the sky was inspired by what Turner must have seen over England in the years after Tambora erupted.

stronger than that of Krakatoa, history's most famous volcano, which erupted in 1883, also in what is now Indonesia.

Yet, incredibly, few people outside the blast zone learned about this terrible disaster. The people of Sumbawa and the surrounding islands led simple lives. Few of them had any connections to far-off lands like Europe or the Americas. Some British sailors witnessed the eruption, but news traveled slowly in 1815. The only way to get a letter (or a person) across an ocean was on a sailing ship. The voyage from Sumbawa to New York or London would have taken perhaps four months. Eventually, reports of the eruption did make it back to England, but few paid attention.

We can thank Tambora for *Frankenstein*. Mary Shelley (right) wrote the novel in stormy Switzerland during the endless gloom of the summer of 1816.

Somehow, the deadliest volcano in history was ignored by most of the world—and then forgotten.

What people *were* paying attention to a year later, in 1816, was the terrible weather—snowstorms in the summer, floods that turned wheat fields into lakes, frosts that blackened millions of acres of farmland around the world. Farmers up and down the East Coast of the U.S. lost their crops. Across Europe, farmers grew desperate. In Paris, mobs of people broke into warehouses where grain was stored, risking their lives to steal sacks of flour. In China, starving families could no longer feed their children. Floods in India triggered an outbreak of a disease called cholera, which killed millions.

Solving a Mystery

In 1816, not even the most brilliant scientists would have believed that these weather events were connected. Little was known about climate or volcanoes.

Today, scientists know that volcanoes can have a major impact on weather worldwide. They've learned much by studying recent volcanic eruptions, like Mount Pinatubo in the Philippines.

Scientists monitored every phase of Pinatubo's eruption in June 1991. It was not as powerful as Tambora, but it was monstrous. Most volcanic clouds quickly dissipate, but Pinatubo's eruption cloud rose so high that it mixed with water and gases in the stratosphere. It turned into foam and remained in the sky.

Using satellites and computers, scientists tracked Pinatubo's cloud as it spread across the world. Like a layer of sunscreen slathered across the sky, the cloud blocked out some of the sun's heat and light. Temperatures dropped; storms became more violent. It took three years for the foamy haze to clear.

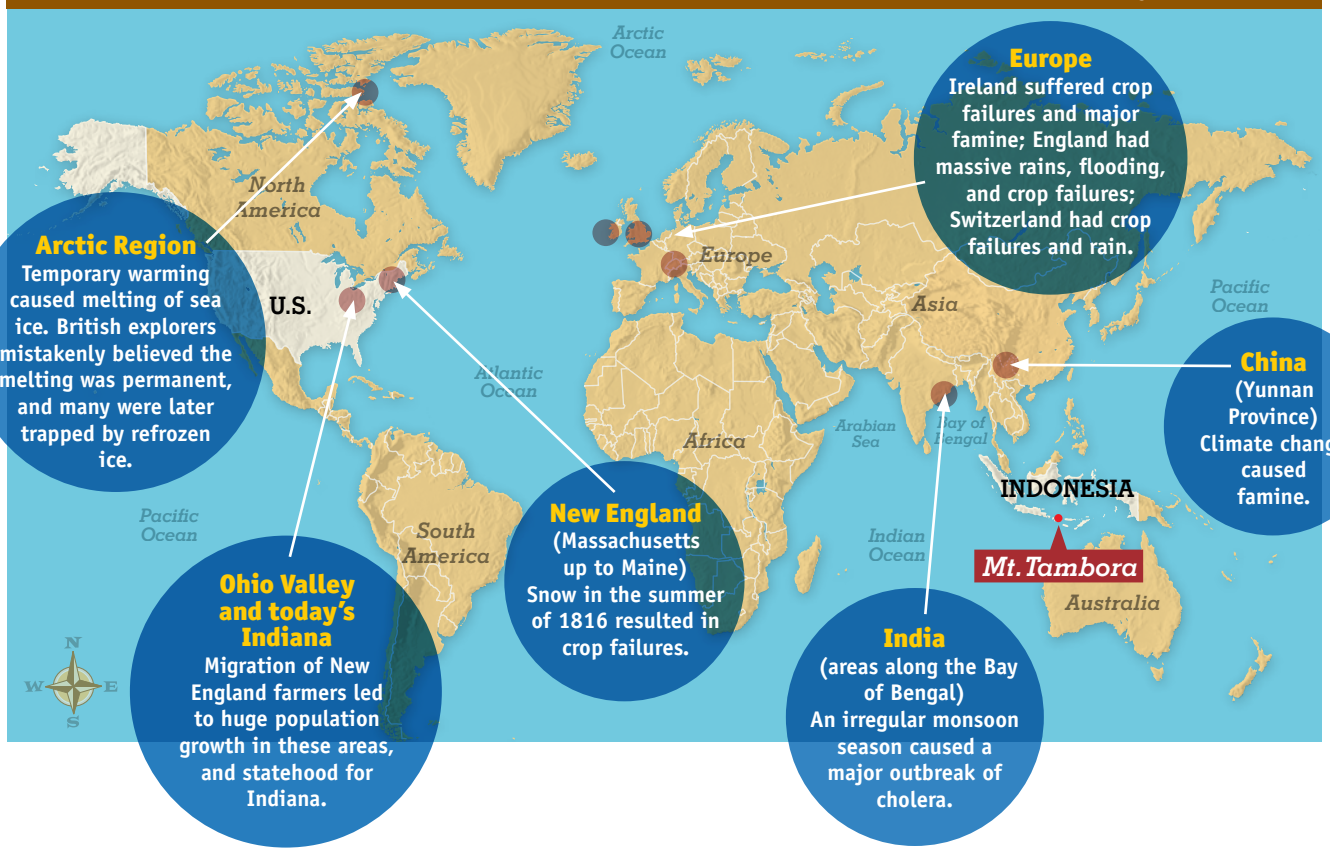
Tambora's cloud would have been even bigger, its effects more devastating. Indeed, by the time the climate returned to normal three years later, as many as 30 million people had died from Tambora's effects. And many more lives—like the Hoisingtons'—had been forever changed.

JOSEPH MALLORD WILLIAM TURNER (1775-1851). MOUNT VESUVIUS IN ERUPTION, 1817. W/C ON PAPER. YALE CENTER FOR BRITISH ART, PAUL MELLON COLLECTION, USA/THE BRIDGEMAN ART LIBRARY (PAINTING); UNIVERSAL/THE KOBAL COLLECTION (FRANKENSTEIN); DEA PICTURE LIBRARY/GETTY IMAGES (SHELLEY)

INFOGRAPHIC

The Eruption Felt Around the World

From China to the Arctic, Tambora's volcanic cloud caused misery



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

Tens of thousands of other New England farmers made similar journeys, all driven west by the hardships of 1816. It was one of the biggest migrations in U.S. history. Most people went to Ohio, Indiana, and Illinois.

The Hoisingtons' 1,000-mile journey took three months. John's older sister Sabrina recorded the trip in her diary. She described the family's meeting with Native Americans, long days slogging through mud, and some enjoyable visits with friends they met along the way. They arrived in Ohio in August and were soon settled on their new farm.

Meanwhile, 10,000 miles away, the volcano that had nearly destroyed their lives went back to sleep, sitting in silence to this day—until it wakes again. ●

MAP: JIM McMAHON/MAPMAN™

WRITING CONTEST

Screenwriter Ted Perry once wrote, "All things are connected. Whatever befalls the earth befalls the sons of the earth." What does he mean? How did the eruption of Mount Tambora demonstrate that "all things are connected"? Answer both questions in a short essay. Use text evidence from the article and infographic to support your ideas. Send your essay to VOLCANO CONTEST. Five winners will receive *Eruption!* by Elizabeth Rusch.

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