

Excavation reveals a village buried by 1815 volcanic blast

Eruption dwarfed Mount St. Helens



Haraldur Sigurdsson, University of Rhode Island handout

On the island of Sumbawa, Indonesia: Sulfurous gases rise from the crater of Mount Tambora, site of the largest eruption in recorded history.

By Dan Vergano
USA TODAY

The remains of a village and its inhabitants, destroyed by a volcano nearly 200 years ago, have been uncovered under 10 feet of volcanic ash on the Indonesian island of Sumbawa.

The eruption of Mount Tambora in 1815 was the largest in recorded history, spewing enough dust into the

atmosphere to cause "The Year without a Summer" across the world the next year as temperatures fell and crops died. The eruption buried perhaps 10,000 people, preserving their homes and remains, much like what happened to Italy's Pompeii, says volcanologist Haraldur Sigurdsson of the University of Rhode Island in Narragansett. Pompeii was destroyed by Mount Vesuvius in A.D. 79.

Sailors hundreds of miles away saw

ash fall on their ships and felt the eruption, which was about 200 times more powerful than the 1980 Mount St. Helens eruption. Once nearly 14,000 feet tall, Mount Tambora now stands at about 9,200 feet in elevation.

Sigurdsson and colleagues from Indonesia's Directorate of Volcanology and the University of North Carolina announced Monday the results of a six-week investigation,

conducted in 2004 at a site 16 miles west of the volcano. The team excavated a hut on stilts, with two bodies preserved inside. Everything at the site had been turned into charcoal by the heat, preserving wood, people and other materials. "We saw a time capsule," he says.

Victims of the volcano probably died where they stood as superheated ash and sulfurous gas clouds raced ahead of the eruption. Eventually 117,000 people in the region died, most of them from disease, according to the Danish scholar Bernice de Jong Boers.

"Certainly this was the kind of eruption that would bury very extensive areas," says volcanologist John Pallister of the U.S. Geologic Survey. "One question is how much it preserved."

Radar images from below the surface at the site indicate that an entire village, including a central palace, is



Source: ESRI By Adrienne Lewis, USA TODAY

there. "Not a lot is known about this corner of the world from that time," Siggurdson says. His team originally came to Sumbawa to explore the central caldera of the volcano. (A caldera is a large depression at the top of a volcano, caused by such an eruption.)

But reports by a local guide of the existence of a "museum" gully that was shedding bits of pottery led them to the dig site.

Surprisingly, pottery and bronze pots from the dig site indicate the local people were of Southeast Asian descent, not the more typical Indonesian peoples. Their village was 3 miles inland to protect them from pirates, Sigurdsson says, but its location left them vulnerable to the eruption. He speculates that an entire kingdom of people was buried there.

It may be "a bit of hyperbole to speak of a kingdom, but what they've excavated is probably just the first of more villages to come," University of Washington volcanologist Chris Newhall says by e-mail.

Next year, the discovery team hopes to continue its exploration of the village. Steps to preserve the site must be taken immediately, Siggurdson says. "You don't find something like this very often."

Extension questions and activity: "Excavation reveals a village"

DISCUSSION

What effect did the eruption of Mount Tambora have on Sumbawa? Although the article doesn't say, how do you think the eruption caused "The Year Without a Summer"? Why are the remains of a hut on stilts well-preserved? What have researchers discovered about the people who inhabited the island in 1815? How do volcanologists contribute to society?

ACTIVITY

In small groups, identify a natural feature (e.g., river, ocean, volcano, mountain, desert, etc.) that has had an impact on your city or town. Then, through research, explain how the feature has influenced your community's physical, economic and cultural growth. Create a photo essay that uses images, headlines and captions to report the results of your study.

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✓ **Preview:** With a partner, read the article's headline, sub-head and photo caption. Study the map on the second page.

✓ **Make decisions:** Write the headline at the top of a sheet of paper. With your partner, discuss and list everything you know about volcanoes, Indonesia and Mount Tambora. Then, write out any specific questions (no more than three) that you have about each topic.

✓ **Read to find answers:** As you read the article with your partner, pause when you discover an answer to one of your questions. Discuss the answer with your partner, and record it in your own words. If the article does not answer one of your questions, list the sources you could consult for further information.

✓ **Reflect:** Discuss how the excavation of the village might develop in the next year. Based on your discussions, create a catchy headline that could appear in the paper a year from now.

✓ **Extend:** Finally, in the space below, write an opening paragraph for your headline. Use facts and create details to explain how the issue has developed. Be sure to include all pertinent information — who, what, when, where, why and how.

Headline: _____

By: _____
