

0. ANNIHILATION - Story Preface

1. POMPEII IN 79 A.D.

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4. VESUVIUS ERUPTS

5. RAIN OF TERROR

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7. THE PEOPLE OF POMPEII

As the pyroclastic flows pour out of Mt. Vesuvius, during its 79 AD eruption, the towns of Herculaneum and Pompeii are annihilated. Depiction by Dr. Steven Dutch, Professor of Natural and Applied Sciences, University of Wisconsin at Green Bay.

About 12 hours after Vesuvius awoke, Pompeii's final fear and trembling began. The Pelean phase of the 79 A.D. disaster (named for Martinique's Mt. Pelee) would cause fast-moving avalanches of gas and debris to bury the city. (Be sure to click on "next" at the bottom of this link to view all six photos of Pelee erupting in 1902.)

People who lived in Pompeii were used to earthquakes. It's reasonable to believe today that no one then thought the mountain would explode.

Even after most people fled, following the initial eruption, there is evidence people came back. They would have been shocked by what came next: A non-survivable pyroclastic flow similar to the one at Mt. Pelee.

Darkness had descended on Pompeii even as the sun shone brightly above the rain of terror. Pliny describes it as:

*...not like a moonless night, but the darkness of a sealed room.*

The deadly change from Plinian to Pelean eruptions occurred as the volcano began to lose energy. During its Pelean phase, Vesuvius pushed out vast quantities of rock and magma. Instead of spiraling high into the sky, where debris would have fallen over a wider area, the mountain's dissipating energy caused the rocks to fall back on the upper slopes of Vesuvius.

The material didn't stay on the mountain, however. Surging down the sides of Vesuvius as a kind of glowing, roaring avalanche, pyroclastic flows were about to deliver what Pompeii could not survive.

The first flow struck the town of Herculaneum around 1 a.m. on August 25th. Located about 4 miles (7 kilometers) from the mountain, the town had already sustained a fatal blow.

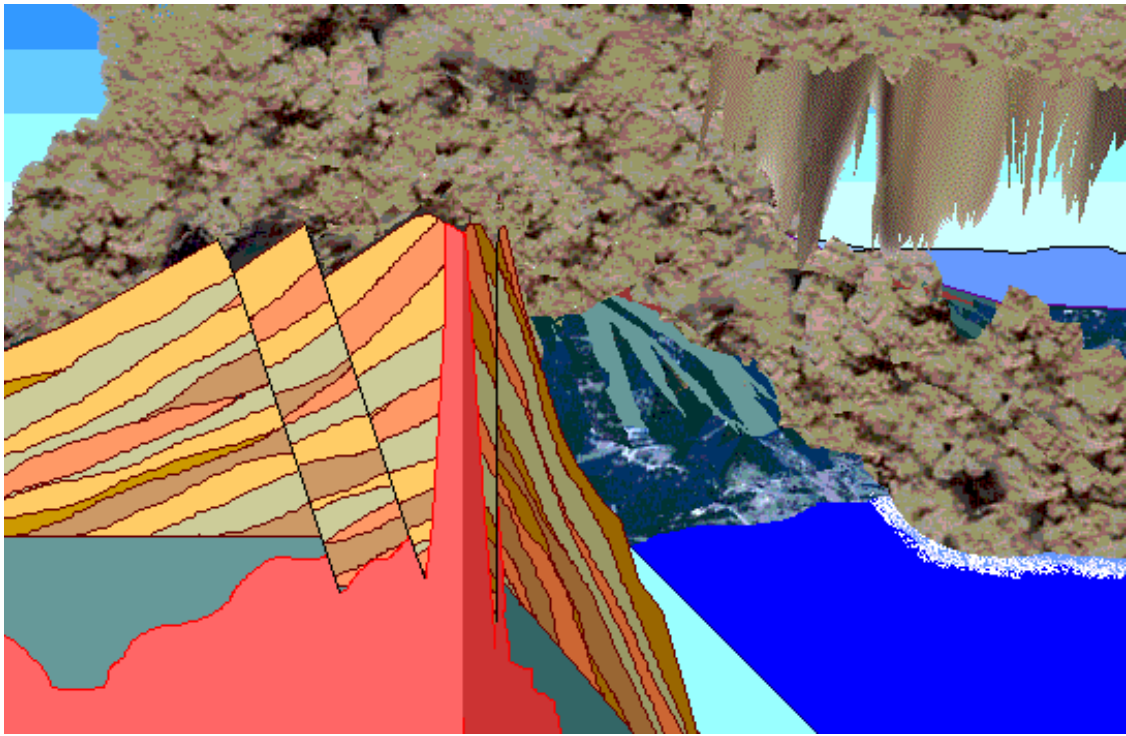
Steaming mud, racing down the side of the volcano, buried the town. Traveling at the speed of about 1 mile per minute, the mud took approximately 4 minutes to reach Herculaneum.

Thinking they would be safer near the water, hundreds of people fled Herculaneum before the mudslide struck. They planned to spend the night at the beach, in their boat houses.

Now another, equally deadly flow, not of mud but of hot ash and gasses, surged toward the beach. People, trapped in their houses, were killed instantly from intense heat and suffocation.

By 6:30 a.m. another pyroclastic flow had nearly reached Pompeii. It stopped short of town.

An hour later, about 2,000 people (undoubtedly in despair over losing their homes) were walking on top of the pumice deposit. They had no chance to survive the mountain's next onslaught.



This time another pyroclastic flow, traveling at 62 miles (100 km) per hour - or more - reached Pompeii. It killed all remaining inhabitants and buried the town.

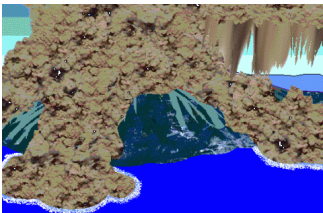
See Alignments to State and Common Core standards for this story online at:  
<http://www.awesomestories.com/asset/AcademicAlignment/ANNIHILATION-Pompeii>

See Learning Tasks for this story online at:  
<http://www.awesomestories.com/asset/AcademicActivities/ANNIHILATION-Pompeii>

## Media Stream

### Annihilation of Pompeii and Herculaneum

As the pyroclastic flows pour out of Mt. Vesuvius, during its 79 AD eruption, the towns of Herculaneum (on the left side of the image) and Pompeii (on the right) are annihilated.



This depiction, of how those events may have appeared at the time, is by Dr. Steven Dutch, Professor of Natural and Applied Sciences, University of Wisconsin at Green Bay.

It is possible that people who fled the towns, particularly Pompeii, were caught by the pyroclastic flows as they tried to make their escape. Professor Dutch tells us more:

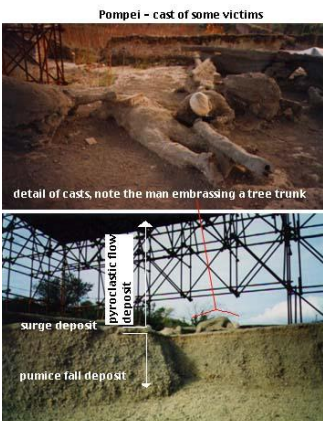
*By the time the pyroclastic flows hit Pompeii, most residents, except for those already buried in ash, had fled. Many could lie buried in the countryside if they were overtaken in flight by the flows.*

*Click on the image for a better view.*

*Image, by Professor Steven Dutch, as it appears via his online article "Vesuvius, 79 AD."*

*View this asset at:*

<http://www.awesomestories.com/asset/view/Annihilation-of-Pompeii-and-Herculaneum>

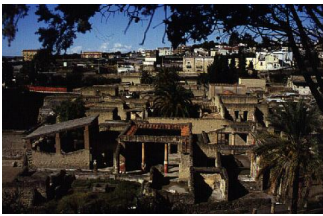


### Pompeii Excavations - Pumice Fall Deposits

Image online via "Explore Italian Volcanoes."

View this asset at:

<http://www.awesomestories.com/asset/view/Pompeii-Excavations-Pumice-Fall-Deposits>



## Herculaneum

Image online via Wikimedia Commons.

View this asset at: <http://www.awesomestories.com/asset/view/Herculaneum>



## Bodies at the Boat Houses

Image online via Wikimedia Commons.

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## Collapsing Vesuvius Summit and Powerful Pyroclastic Flows

The cutaway, in this graphic depiction, shows the inside of Vesuvius as a stratovolcano, a layer cake of lava flows, mudflows and ash layers.

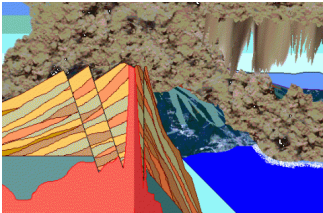
After several hours of erupting, the gas pressure propelling Vesuvius' eruption plume, in 79 AD, begins to falter. The eruption cloud itself begins to collapse and starts to pour down the slope of the mountain as pyroclastic flows.

In this graphic, by Dr. Steven Dutch, we see the pyroclastic flows becoming even more powerful as they race toward Pompeii:

*During the collapse, hidden in the ash clouds, the faltering pressure in the magma chamber allows the summit [of Vesuvius] to collapse. The collapse allows still more magma to escape. As it does, escaping gas turns the magma into pumice and the pyroclastic flows become even more powerful.*

*How could it be that the summit of the volcano just ... collapsed?!*

*Between the weakening of gas pressure, plus the large amount of material blown out by the eruption, the magma chamber was no longer capable of supporting the weight of Mount Vesuvius and it began to collapse.*



*The summit of the volcano sank into the magma chamber, creating a circular depression called a caldera ... in reality nobody could have seen this phase of the eruption because ash clouds and pyroclastic flows completely covered the area and hid everything from view.*

*In fact, ash clouds spread so far that Pliny the Younger, his mother, and all the household had to flee from their home in Misenum on the far side of the bay.*

*In the diagram, blocks of rock are shown sinking into the magma. Solid rock is denser than magma and it is quite possible that some blocks sank into the magma during the collapse.*

*In intrusive rocks we frequently find blocks of other rock trapped in the solidified magma. Such blocks are called xenoliths and they can range anywhere from a few centimeters to kilometers in size. (See "Mount Vesuvius and Pompeii: Caldera Collapse," by Steven Dutch, at University of Wisconsin, Green Bay.)*

*Click on the image for a better view.*

*Image, by Professor Steven Dutch, as it appears via his online article "Vesuvius, 79 AD." University of Wisconsin, at Green Bay.*

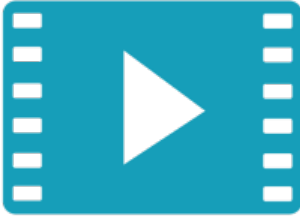
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## People of Pompeii

Clip from "[Pompeii: The Last Day](#)," a docudrama [produced by the BBC](#) (in association with TLC/NDR) and co-produced in association with France 2. Original air date, on BBC One, was October 20, 2003. Copyright BBC, all rights reserved. Clip provided here as fair use for educational purposes and to acquaint new viewers with the program.

The film is based, in part, on Pliny the Younger's letters about the Vesuvius eruption. It uses computer-generated images to recreate what the eruption must have been like for the residents of Pompeii. Online, via BBC's Channel at YouTube.



**Written by:**

Edward Canfor-Dumas

**Director:**

Peter Nicholson

**Narrator:**

Alisdair Simpson

**Starring:**

Tim Pigott-Smith (Pliny the Elder)

Alex Fergusson (Pliny the Younger)

Katherine Whitburn (Julia)

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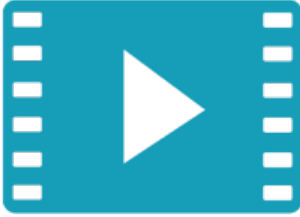
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## The Last Day of Pompeii

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## Pompeii - While Vesuvius Erupts

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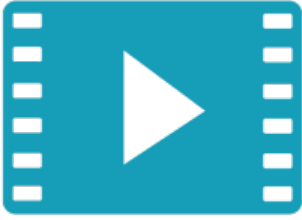
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## Final Moments of Pompeii

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## Death of People in Pompeii

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