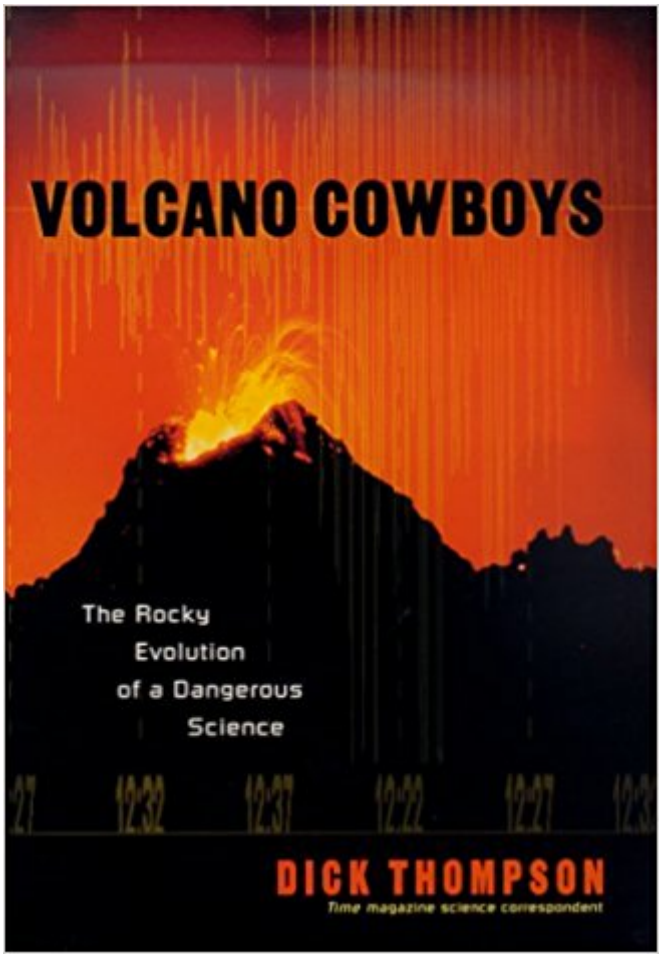
Volcano Cowboys: The Rocky Evolution Of A Dangerous Science



Synopsis

Twenty years ago, Mt. St. Helens, in Washington State, "blew." It was the volcano's first eruption in recorded time, although as early as 1978 a team of scientists from the US Geological Survey had labeled it "the most dangerous volcano in the Cascade Range." In June 1991, Mt. Pinatubo in the Philippines spewed forth its own mix of ash, gases, mud, lava, and all the other debris that had been building within the mountain for centuries. Between those two events, USGS scientists had been working at warp speed to learn more about predicting violent eruptions. Data from the nation's only Volcano Center was not helpful. Work there centered on volcanoes that responded to interior pressure by quietly releasing a slow-moving flow of lava, rather than spewing its entrails out in a blast. Survey members were presented with a rare opportunity when Mt. St. Helens showed signs of activity. Camped on the mountains flanks, daring the crater itself, they dug out rocks, tended recorders, began to learn how to use newly developed instruments. Here was an active volcano, believed to be on the verge of eruption by some, if not all, experts. Along with new instruments they had computer programs that saved them days and weeks of work. They learned techniques that revealed the dates of previous major eruptions and provided patterns for future predictions. After the eruption, studying Mt. St. Helens and other volcanoes, they learned more and more. By the time a newly-active Pinatubo threatened tens of thousands of villagers and the U.S. military's Clark Air Force Base, the men of the USGS were far better able to feel secure in urging local authorities and the Air Force brass to evacuate. It was still a gamble, but the odds were far better. And the work goes on.Thompson, a veteran science reporter for Time Magazine, spent many hours with the relative handful of scientists whom he calls "volcano cowboys." (Considering their lifestyle and their rugged "laboratories" - the volcanoes themselves -- the sobriquet is earned.) They have loaned him their field notes, and one geologist gave him his as yet unpublished autobiography. The vivid material and Thompson's skill in bringing a good story to life has resulted in a book that celebrates these "cowboys" their tough and hazardous lives and the often harrowing decisions they must make.

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Customer Reviews

Vulcanology is not the sexiest of sciences, despite Hollywood movies in which clenched-jawed heroes tame ferocious floods of lava that are busily swallowing up some crowded metropolis or another, racing against the clock to save humankind from the elements. It turns out that those movies aren't really so far-fetched, though, and in the pages of Volcano Cowboys the world's small corps of magma hunters acquire well-deserved ÃƒÂ©lan. The study of volcanoes, Time magazine writer Dick Thompson notes, is largely an observational and not theoretical science; where the vital memory of a molecular biologist "generally drops off after a decade," a vulcanologist will carry reams of data about the behavior of the earth gleaned from reports stretching back to the time of Plato and Pliny the Elder, those amateur volcano-watchers of antiquity. They've had plenty more to do in recent years, though, than to quote the ancients. Thompson's vigorous narrative begins with the eruption of Mount St. Helens on May 18, 1980, an event that U.S. Geological Survey scientists had been able to predict with some accuracy. They lacked, however, a coordinated means to effect an evacuation of the area, and 57 people died. Battling institutional inertia and struggling for funding, teams of these scientists, the "volcano cowboys" of Thompson's title, set about trying to develop methods to predict more accurately dangerous volcanic events and to trim the body count when such events took place. His story recounts their eventual victory when, in 1991, the Philippine volcano Pinatubo exploded--but, thanks to the work of these dedicated field scientists, "less than one quarter of one percent of those at risk had died during the eruption." Tens of millions of people around the world live within the reach of volcanoes. Thompson's narrative reveals that the "volcano cowboys" have made their lives safer--and it's much better than the movies. --Gregory McNamee

The day before Mt. St. Helens erupted in 1980, releasing "the largest landslide in human history," U.S. Geological Survey scientists had no inkling that the volcano was close to blowing outAeven though a network of high-tech instruments girdled the mountain, monitoring its vital signs. The

heated debate among survey scientists over what the volcano would do next after the first rumblings was kept hidden from the public, as Time staff writer Thompson reveals. Fifty-seven people were killed, and the cataclysm devastated a 230-square-mile area. Unlike other volcano books, this engrossing field report offers an unusually candid look at the learning curve men and women travel as they practice the messy, ego-driven, error-riddled pursuit called science. Happily, reports Thompson, volcanology made significant strides between the Mt. St. Helens disaster and the 1991 explosion of Mt. Pinatubo in the Philippines. Although Pinatubo killed more than 200 people (mostly from roof collapses), 80,000 lives were saved thanks to an evacuation. Volcanology is a tricky science because volcanoes blow their stacks infrequently, and one volcano may erupt in a style completely different from a neighboring volcano. Figuring out these molten dynamicsAin cataclysms from Indonesia to ColombiaAare daredevil scientists whom Thompson dubs "volcano cowboys." They perch their outdoor labs on smoldering peaks, often risking their lives to get gas samples from fuming vents. Among the cowboys are Harry Glicken, an eccentric itinerant volcano-landslide expert killed in a Japanese eruption in 1991, and seismologist/ex-Vietnam marine Dave Harlow, the "Indiana Jones of volcanology." Decked out with remarkable photographs, this solid report captures the human drama of a dangerous science. Agent, Kris Dahl. (Aug.)

Being an on-off volcano geek since my childhood, parts of this book quite honestly read like a (thrilling and excellent) film script. The scientific, personal and political details are all explored, day by day in the case of St. Helens and Pinatubo. With the frustrations and tragedies of St. Helens' (mostly) unexpected lateral blast, the Mammoth Lakes false alarm and most notoriously, the devastating tragedy of Ruiz, the book very much reaches its climax as USGS volcanologists (by now individually familiar characters) begin buttoning down the hatches at America's largest overseas airbase for what eventually turns out to be the second-largest eruption of the 20th Century. The Pinatubo section in particular is thrilling reading- it's almost impossible to put down once the first ash eruptions begin. These major volcanic crises are interspersed by interesting accounts from Mt Redoubt in 1989, and finally, a (volcanic) thawing of Cold-War tensions in Kamchatka as Soviet and American volcanologists together reflect on this planet's amazing natural forces.

Amazing book. Explains the human side behind a dangerous, rapidly evolving science and provides a fascinating window into how crucial understanding out planet really is.

Who knew volcanos could be so interesting and exciting? This traces the development of vulcanology in the US from the 1980 erruption of Mt. St. Helens through the eruption of Mt. Pinatubo in the Phillipines in 1990s. Fast paced, suspenseful, technical but accessable. Now you can discuss pyroclastic flows with confidence. My only complaint is that the photos were insufficient (too few, quality not great). Still, you can go to USGS websites and download thousands. I rented Dante's Peak while reading the St. Helens section and was surprised to find a lot of the book in the movie. It made a wannabe vulcanologist out of me.

Everything you want to know about valcanoes, but we're afraid to ask.

The book is a nice non-fiction mix of geology, suspense, USGS bureaucratic nonsense, and adventure. I wanted to read it for the details of the Mt St Helens eruption. It has that and a lot more. I enjoyed it and found it difficult to put down.dpanko

Great story of the volcanologists that learned much during the big explosions and the extreme danger they face gathering data to understand eruptions better. Great reading!

Beware when u buy ex library books - the pages were falling out and I ended up having it repaired to make it on time as a birthday gift

This is an interesting narrative of the lives and work of geologists and other scientists who have the dangerous job of studying active volcanoes. About half of the book is about reawakening and eruption of Mt. St. Helens in 1980, and the rest of it is about the 1991 eruption of Mt. Pinatubo in the Phillipines. The book takes the reader there as these two dormant volcanoes stirred themselves awake. The author gives us an account of the flurry of activity of scientists trying to get there, set up instruments where they could and to try to figure out the extent of danger to the public, before the eruptions. Then we see the terrible danger that they were in as they try to get out of the range of these eruptions. Some didn't make it. The book introduces us to many of these interesting people, and gives a good picture of what it is like to be in the danger zone of a volcano.

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