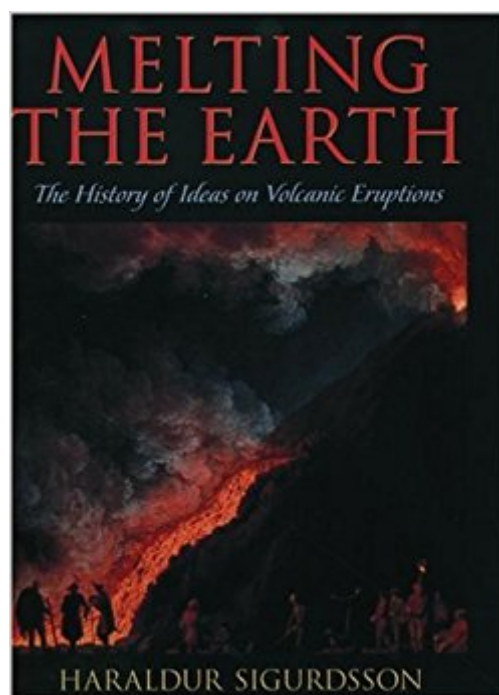


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# Melting The Earth: The History Of Ideas On Volcanic Eruptions



## Synopsis

From prehistoric times to the fiery destruction of Pompeii in 79 A.D. and the more recent pyrotechnics of Mt. St. Helens, volcanic eruptions have aroused fear, inspired myths and religious worship, and prompted heated philosophical and scientific debate. *Melting the Earth* chronicles humankind's attempt to understand this terrifying phenomenon and provides a fascinating look at how our conception of volcanoes has changed as knowledge of the earth's internal processes has deepened over the centuries. A practicing volcanologist and native of Iceland, where volcanoes are frequently active, Haraldur Sigurdsson considers how philosophers and scientists have attempted to answer the question: Why do volcanoes erupt? He takes us through the ideas of the ancient Greeks--who proposed that volcanoes resulted from the venting of subterranean winds--and the internal combustion theories of Roman times, and notes how thinking about volcanoes took a backward, symbolic turn with the rise of Christian conceptions of Hell, a direction that would not be reversed until the Renaissance. He chronicles the 18th-century conflict between the Neptunists, who believed that volcanic rocks originated from oceanic accretions, and the Plutonists, who argued for the existence of a molten planetary core, and traces how volcanology moved from "divine science" and "armchair geology" to empirical field study with the rise of 19th-century naturalism. Finally, Sigurdsson describes how 19th and 20th-century research in thermodynamics, petrology, geochemistry and plate tectonics contribute to the current understanding of volcanic activity. Drawing liberally from classical sources and firsthand accounts, this chronicle is not only a colorful history of volcanology, but an engrossing chapter in the development of scientific thought.

## Book Information

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## Customer Reviews

"Melting the Earth" The history of ideas on volcanic eruptions By Haraldur Sigurdsson First Draft By Matt Lindsey Geo 103 The book I chose to read was "Melting the Earth" by Haraldur Sigurdsson. This book covers two of my most favorite subjects History and geology, which made this book even more interesting to read. Early Sigurdsson writes on subjects from, the Polynesian people and there fire myth Maui, who lives in the far depths of the earth, and when he turns while dreaming. He causes earthquakes on the earth above to the discovery of radiology. If you want to read a captivating and educational book about the history of volcanoes containing a wide variety of historical an mythical facts, I truly recommend this book. In the beginning of this book, Sigurdsson explains early source of fire, some possible ways it was first introduced and used throughout the years to come. An excellent example was 600,000 year old ovens in china to burnt clay found in Africa that dated a staggering 1.5 million years old. Once the early homo-erectus learned of fire there culture changed forever, now they were able to heat and shape rocks more efficiently. But the earliest know form of tools made by homo-erectus was 2.5 million years ago in eastern Africa, made of obsidian (volcanic black glass). Later in this book, Sigurdsson touches on such people as, Kelvin, Zeus other Greek gods, Homer, Socrates, Plato. Then he moves on to discuss the bible, and many more verities of philosophers and legends in several different cultures from around the world. World tragedies and accounts of mass destruction are accounted throughout this book, from risky sulfur mining in very active volcanoes to earthquakes that kill 800,000 people, with one major eruption.

Two of my favorite subjects are history and geology, so this was a double treat for me, since it's sort of a history of geology! Sigurdsson has created a marvelous compendium of sources on the subject of volcanism from mythologies among people native to areas of techtonic activity through Roman authors on the natural sciences to European and American scientists and philosophers into the early 20th Century. Probably one of the most significant things I discovered in reading the book was the underlying cause for the distain of the average person for the "rational" approach of the scientist. In laying before me the various theories for the cause of volcanism and earthquakes, Sigurdsson indirectly makes it clear that the "logical" assumptions of men of science can prove to be wrong, and the best research--for the technology of the time--can still lead to erroneous evaluations shaped by preconceived notions of the world, whether those concepts are biblico/religious ideology or a strongly held school of scientific thinking. Only by reading the entire book does one realize, also indirectly, that the scientific method of enquirey is the only way of gaining ground on the principles underlying natural processes. While the various authors of different theories may be in part or even

entirely wrong, it is only through the testing and retesting of theories against the sterling measure of reality, that a clearer, working model of how nature works will arise. What is truly amazing is that so many early thinkers came to have at least a partial understanding of volcanism and of planetary and solar formation in modern terms. Also impressive were the novel approaches to experimental geology that were achieved. Many of the early investigators were truly creative people.

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