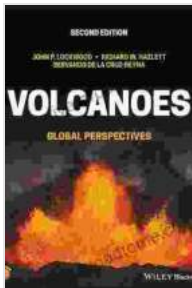


# Volcanoes: A Global Perspective by John Lockwood

Volcanoes are one of the most fascinating and powerful forces of nature. They can be both destructive and creative, and they have played a major role in shaping the history of our planet. In this book, John Lockwood takes us on a journey to some of the most iconic volcanoes around the world, from Mount Everest to Mount Vesuvius. Along the way, we learn about the science behind volcanoes, the dangers they pose, and the ways in which they have shaped human history.



## Volcanoes: Global Perspectives by John P. Lockwood

★★★★☆ 4.5 out of 5

Language : English  
File size : 34224 KB  
Text-to-Speech : Enabled  
Screen Reader : Supported  
Enhanced typesetting : Enabled  
Print length : 979 pages



## The Science of Volcanoes

Volcanoes are formed when magma, or molten rock, rises from deep within the Earth's crust and erupts onto the surface. Magma is created when rocks melt due to high temperatures and pressures. The composition of magma varies depending on the type of rock that melts, and this composition can affect the type of volcano that forms.

There are two main types of volcanoes: stratovolcanoes and shield volcanoes. Stratovolcanoes are tall, cone-shaped volcanoes that are made up of layers of lava and ash. Shield volcanoes are broad, gently sloping volcanoes that are made up of layers of lava. The shape of a volcano is determined by the viscosity of the magma. Viscous magma flows slowly and builds up a steep cone, while fluid magma flows more easily and builds up a broad, gently sloping volcano.

## **The Dangers of Volcanoes**

Volcanoes can be very dangerous. They can erupt with little warning, and their eruptions can cause a variety of hazards, including:

- **Lava flows:** Lava flows are streams of molten rock that can destroy everything in their path. Lava flows can be very fast-moving, and they can travel for long distances.
- **Ash clouds:** Ash clouds are clouds of fine ash that can be carried by the wind for hundreds of miles. Ash clouds can block out the sun, causing darkness and respiratory problems. Ash clouds can also cause electrical problems, and they can damage crops and infrastructure.
- **Lahars:** Lahars are mudflows that are made up of volcanic ash and water. Lahars can be very destructive, and they can travel for long distances. Lahars can destroy buildings, infrastructure, and crops.
- **Pyroclastic flows:** Pyroclastic flows are fast-moving clouds of hot gas and ash that can reach temperatures of up to 1,000 degrees Fahrenheit. Pyroclastic flows can travel for long distances, and they can destroy everything in their path.

## **The Benefits of Volcanoes**

Despite the dangers they pose, volcanoes can also be beneficial. Volcanic eruptions can release nutrients into the soil, which can help to improve crop yields. Volcanic eruptions can also create new land, and they can provide a habitat for plants and animals.

## **Volcanoes in History**

Volcanoes have played a major role in human history. Volcanic eruptions have destroyed cities and civilizations, but they have also created new land and provided a source of fertile soil for agriculture. Volcanoes have also been a source of inspiration for artists and writers throughout history.

Volcanoes are one of the most fascinating and powerful forces of nature. They can be both destructive and creative, and they have played a major role in shaping the history of our planet. In this book, John Lockwood takes us on a journey to some of the most iconic volcanoes around the world, from Mount Everest to Mount Vesuvius. Along the way, we learn about the science behind volcanoes, the dangers they pose, and the ways in which they have shaped human history. *Volcanoes: A Global Perspective* is a must-read for anyone who is interested in geology, natural disasters, or the history of our planet.

**Free Download your copy of *Volcanoes: A Global Perspective* today!**

**John P. Lockwood, Richard W. Hazlett:  
Volcanoes—Global Perspectives**

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Károly Simóth

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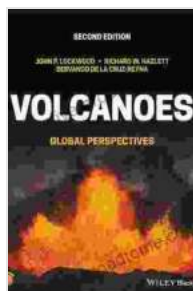
The book *Pyroclastic Rocks* (R. V. Fisher and H.-U. Schmincke, 1984, *Pyroclastic rocks*, Springer-Verlag, Berlin, New York, p. 472, ISBN 3-540-12756-9) was the first modern comprehensive monograph on volcanic pyroclastic processes. Shortly after the publication of *Pyroclastic Rocks*, the book *Volcanic Processes* was published (B. Cox, J. Wright, 1987, *Volcanic Processes: Mechanisms and Analysis, A Geological Approach to Processes, Products and Successions* (Paperback), Chapman and Hall, London, p. 544, ISBN 0-412-44840-1). This book was intended to fill the gap between volcanology and volcanology, providing a very detailed account of the highly relevant primary and secondary volcanic processes. Combining these two landmark books, in 1999, a simple, and therefore easier to understand for non-specialists, volcanology book was published, *Volcanoes* (P. Hainley, 1999, *Volcanoes: A Planetary Perspective* (Paperback), Oxford University Press, USA, p. 494, ISBN-13: 978-0195548333) was a huge success, due to its easy to follow style that captured both a general readership, and graduate teaching program coordinators. This book has been revised and a new edition appeared in 2003 (P. Francis, C. Oppenheimer, 2003, *2nd Edition, Volcanoes* (Paperback), Oxford University Press, USA, p. 554, ISBN-13: 978-0195254698). Other excellent books that also targeted this general audience include the *Encyclopedia of Volcanoes* (H. Houghton, H. Tazawa, S. McSwain, H. Sigurdsson, 1999, *Encyclopedia*

*Encyclopedia of Volcanoes* (Houghton), Academic Press, p. 1417, ISBN-13: 978-0764334401) and *Volcanoes* (P. H. Schmincke, 2004, *Volcanoes* (Hardcover), Springer, p. 401, ISBN-13: 978-3-540-44660-4). These books, although excellent, have not been systematically designed with higher education courses in volcanism in mind. Books that do are rare, with the few examples including *Volcanoes* (J. J. McPhie, M. D. Drake, R. Allen, 1993, *Volcanoes: A guide to the interpretation of features of volcanic rocks* (Paperback), Centre for the Geological and Volcanic Studies, University of Toronto, p. 464, ISBN 978-0886183252) and *Practical Volcanology* (P. M. M. K. Science, 2005, *Practical Volcanology: A guide to understanding volcanic rocks and related hazard*, Springer, p. 225, ISBN 978-1-4020-0011-4). There was an open niche for a volcanology book that could be used both for teaching purposes, and also by members of the general public who just want a better understanding of volcanic processes.

John P. Lockwood and Richard W. Hazlett tried to fill this niche by producing a new book in 2010, *Volcanoes—Global Perspectives*, which has been designed both as a stand-alone textbook for under- and post-graduate studies in volcanology, and as a systematically-structured knowledge-based work for professionals and interested amateurs. The book covers eleven major subject areas: 1) global aspects of volcanism from a plate-tectonic and geochemical point of view; 2) the major active volcanoes; 3) the evolution of the atmosphere and the surface biosphere; 4) volcanic and human societies, with special emphasis on the increasing hazard that volcanism poses to growing human populations. These three layers of the book authority guide the reader to understand the complex approaches needed to study volcanism, and also define its place in the natural world, while recognizing interactions with human activities.

**Editorial responsibility**

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