

## The Volcano Adventure Guide

*Have you ever wondered what it would be like to stare down into the bubbling crater of an active volcano?*

If so, this book is for you! It contains vital information for anyone wishing to visit, explore, and photograph active volcanoes safely and enjoyably. The book begins by introducing readers to the eruption styles of different types of volcanoes and explains the physical settings on Earth where they are typically found. It describes how to prepare for a volcano trip, and how to avoid the dangers associated with being on or near active volcanoes. The author draws on her own experience of working on active volcanoes to explain what is safe and what is foolish, when to watch an eruption and when to stay away. She believes that volcanoes can be visited and enjoyed by all, and includes several examples of volcanoes that can be easily explored by people of all ages, and all levels of fitness and expertise.

The second part of the book provides a comprehensive travel guide to 20 volcanoes around the world that are among nature's most spectacular examples. It also gives short guides to 22 additional volcanoes located in the same regions, that could be visited during the same trips. This section is packed full of practical information including tour itineraries, maps, transportation details, and warnings of possible non-volcanic dangers such as unfriendly wildlife. The two appendices at the end of the book direct the reader to a wealth of further volcano resources. These include websites with up-to-date listings of volcanic activity across the globe, and a list of learned societies and commercial holiday companies offering volcano tours. There is also an extensive bibliography that refers readers to more detailed geological and practical information.

*The Volcano Adventure Guide* is the first book of its type. Aimed at non-specialist readers who wish to explore volcanoes without being foolhardy, it will fascinate amateur enthusiasts and professional volcanologists alike. The stunning color photographs throughout the book will delight armchair travelers as well as inspire the adventurous to get out and explore volcanoes for themselves.

ROSALY LOPES is an expert in planetary volcanism at NASA's Jet Propulsion Laboratory in Pasadena, California, where she studies volcanism on Earth, as well as other planets and moons. Using data returned by the Galileo spacecraft, Dr. Lopes was responsible for the discovery of 71 previously unknown volcanoes on Io, one of Jupiter's moons. She currently works on the Cassini mission, which is making observations of Saturn and its moons.

Rosaly's field work on Earth has taken her to many active volcanoes, starting with Mount Etna in Sicily (as a member of the UK's Volcanic Eruption Surveillance Team). She has made many trips to active volcanoes around the world and has given lectures to the public in many countries. During these lectures she was often asked "How can I visit an active volcano?" and this inspired her to write this book on volcano adventures. She has also written many scientific papers, encyclopedia articles, and book chapters, and has been featured on two Discovery channel television documentaries. She has won several awards from JPL and NASA, and was chosen by GEMS Television, Miami, as the GEMS Woman of the Year in Science and Technology, 1997.

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ROSALY LOPES



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## Preface

The purpose of this book is to introduce its readers to the wonderful world of volcanoes and to help them visit, explore, photograph, and, above all, appreciate volcanoes both in eruption and in repose. Volcanoes have shaped the Earth's surface and are nature's most awesome manifestation of the power within our planet. One of the surprising facts about volcanoes is that they are among the most scenic places on Earth yet only a few of them attract a significant number of visitors. Volcanic eruptions are undoubtedly one of nature's most spectacular events, but relatively few people can claim to have witnessed one first-hand, and most of them did not do so by choice. The increase in adventure travel over the past two decades has not yet reached most of the world's volcanoes. Travel companies are quite willing to take tourists all over the globe to meet gorillas, canoe in piranha-infested waters, or dive with sharks, but not, it seems, to watch a volcano erupt.

What should people do if they want to visit a volcano, particularly an active one? They can choose a volcano within a well-run national park and rely on information and advice given there. But, if the volcano they want to go to is more isolated, or in a country with fewer resources, travelers will be very much on their own. In practice, this may mean not venturing up the slopes at all or, even worse, ending up in places where experienced volcanologists would fear to tread. In order to explore a volcano in the most sensible and enjoyable way, visitors need to know the dangers they might encounter, as well as the wonders they might see. *The Volcano Adventure Guide* strives to give readers this knowledge.

The idea for this book grew out of the questions that potential volcano visitors often asked me whenever I gave a popular-level talk about volcanoes or revealed in conversation what type of work I do. Some of these questions were: "How can I see an eruption?" "Are all eruptions dangerous?" "Can I go somewhere other than Hawaii to see red lava?" "How do people photograph eruptions?" Less often I'd hear "How can I be sure to visit a volcano when it is not erupting?" I realized that there were no books that could answer these questions in a straightforward way.

Most books about volcanoes assume that readers want to learn what volcanoes are and what makes them erupt, but from the comfort of their armchairs. The *Volcano Adventure Guide* is directed at the people who want to learn about volcanoes by visiting them first-hand. I have tried to provide all the necessary information on how to choose a volcano to go to and, once there, how to make the trip a fulfilling and enjoyable learning experience. These are the themes behind the book's introductory chapters that are followed by field guides. The first five chapters prepare the reader to visit volcanoes in general, while the field guides provide detailed guidance on what to do and see on specific volcanoes.

The introductory chapters discuss how volcanoes work and address the practical

aspects of planning one's own volcano field trip. A whole chapter is devoted to the most serious concern that travelers have about volcanoes, particularly active ones: safety. The potential visitor has to consider questions such as: "How dangerous is an erupting volcano?" "What precautions can I take?" "What happens if the volcano blows up unexpectedly?" "Are there ways to view or photograph an eruption safely?" Stories of how the curious came to grief are part of the lore surrounding volcanoes and one should certainly be concerned about potential dangers. Even dormant volcanoes can be treacherous and should always be approached with caution.

Obtaining information on volcano safety has been, up to now, rather difficult for the non-professional. Popular books about volcanoes do not discuss how to avoid dangerous situations because most of their readers would not need to know this. Even at the specialist level, very little has been written about safety on volcanoes. In general, budding volcanologists learn about avoiding danger from their more experienced mentors. One of the reasons why few people have attempted to write about volcano safety is that it is rather difficult to stipulate rules. Individual volcanoes often have their own quirks and, besides, people tend to have different comfort levels as far as danger is concerned. I cannot decide for others what level of risk is acceptable to them but I can – and do – attempt to explain fully the dangers a visitor might encounter on a volcano. I have also shared my own safety guidelines and what several colleagues and I have learnt from personal experience. The key message about volcano safety is to learn as much as possible about the dangers of the specific volcano one is planning to go to. Once that is done, all visitors – from the cautious to the daring, the unfit to the athletic – can choose from a wide variety of ways how to make their trip safe, enjoyable, and rewarding.

Apart from the safety issues, the potential visitor to a volcano should know a host of practical details such as when it is best to go to there, where the most interesting locales are, and how to get to them. However, such information about specific volcanoes tends to be hard to come by. With few exceptions, travel books do not devote much space to the local volcanoes. Geologic field trip guides can be invaluable but are generally too technical and available only on a limited basis. The field guides in this book attempt to bridge the gap between specialized geological guidebooks and standard travel guides by providing detailed, informal visiting guides to 20 of the world's most famous volcanoes.

Choosing as few as 20 volcanoes to focus on was not an easy task and I have no doubt that some people will be disappointed that their particular favorite was not selected. However, it was necessary to limit quantity in order to provide enough detail on each volcano to optimize readers' visits, while keeping the book sufficiently short (and light) to be taken along on the trip. Short descriptions of an additional 22 volcanoes and geothermal areas were included when they happened to be easily accessible from one of the volcanoes in the field guides.

I arrived at my "short list" of 20 by using my own personal experience of visiting and working on volcanoes, plus three criteria. The first was that the volcano be classified as active, though some of them have not seen an eruption in several hundred years. Even then, paring down to 20 from the world's approximately 600 active volcanoes was a problem. My second criterion was that the volcano should be easily accessible. For example, I expect that many readers would choose to visit Kilauea in Hawaii, but that most would not be willing (or able) to go to Mount Erebus in Antarctica, even though both volcanoes deserve to be seen. The ease of access, however, varies among the 20: some of the volcanoes are located within national parks where there are excellent roads and facilities, while others are off the beaten path. The summits of some can be reached by road or by an easy hike, while others are for the physically fit only. I

have left out volcanoes where technical climbing expertise is called for. My aim was to write about accessible volcanoes that would suit the different tastes and expectations of a wide range of potential visitors.

The final criterion in narrowing down choices was variety: volcanoes come in several different types and their eruptions come in a variety of danger levels. The volcanoes selected range from mildly explosive types such as Kilauea in Hawaii to potentially very violent volcanoes such as Vesuvius in Italy. This requirement for variety also takes into account how often a volcano erupts, as eruption frequency is a factor of major importance to many visitors. There are those whose main reason to go to a volcano is to see some activity, while probably just as many would rather not go if an eruption is likely to happen. The volcanoes selected range from those that have been persistently active over the last few years to those that are not likely to erupt again in the near future.

I am hopeful that all readers will find at least one volcano in this book that they will feel inspired to go and see for themselves. I strongly believe that volcanoes should be visited and enjoyed by everyone – be they young or old, frail or fit, cautious or bold. The only requirements for a volcano traveler are curiosity about nature and a sense of adventure. The way – how to choose a volcano and how best to explore it – is what this book is all about.



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