Wolfgang Behringer
*Tambora and the Year without a Summer – How a Volcano Plunged the World into Crisis*
Medford MA: Policy Press, 2019

Large volcanic eruptions are rare events. As measured by the Volcanic Explosively Index (VEI), the latest and most recent events with a VEI of 8 occurred at Toba (Northern Sumatra, Indonesia) and Taupo (North Island New Zealand), respectively, around 75,000 and 26,500 years ago. Although VEI 7 events are more frequent and features of the historical record, only four eruptions of this size are known to have occurred since the beginning of the Common Era: Taupo, 180 CE; Tianchi (China/North Korea) 946 CE; Samalas (Lombok, Indonesia), 1257 CE and Tambora (Lesser Sundra Straits, Indonesia) in 1815.

Simulated by interest in global climate change, the first comprehensive studies of the Tambora eruption and its global impact date from the 1980s and the seminal work of Henry and Barbara Stommel (1983). Since then there has been a plethora of publications some maintaining a very high academic standard – most notably publications by Clive Oppenheimer (2003) and Gillan d'Arcy Wood (2014), but others have fallen into the trap of linking all manner of human impacts to the eruption in an uncritical environmentally deterministic manner.

The present work, which is an English translation of a volume first published in German, maintains a very high standard of scholarship and largely avoids the deterministic trap. As the author notes ‘the task of the present volume is to construct a new synthesis, based on the rich contemporary sources ... The aim is to re-define the Tambora Crisis as part of world history, an event with a rightful place not just in natural history, but also in cultural and social history’ (p. 6). The scope of the monograph is wide-ranging and the author’s knowledge of sources, many of which are both obscure and written in many languages, is highly impressive. Beginning with
a discussion of 1815, *The Year of the Explosions*, the book proceeds with a detailed study of 1816, a chapter the author terms *The Year without a Summer*. Amongst the topics discussed are weather changes and their variation across the globe, and the effects of meteorological perturbations on agriculture, economic activity, social cohesion and unrest. Chapter 4, *The Year of Famine: 1817*, is in the reviewer's opinion, the strongest and includes an analysis of a smorgasbord of themes which include, *inter alia*: sections on experiments with ersatz foods; poor relief; work creation schemes; the internationalisation of social concern and reform, and impacts of flooding. One very welcome feature of Chapter 4 is an original discussion of the long-range effects of the Tambora eruption on food supply in China and on the outbreak of epidemic diseases more generally. These included typhus, pellagra and cholera, amongst populations already weakened by hunger and material deprivation.

*Study of The Turbulent Years that Followed: 1818–20* (Chapter 5) and *The Long-Range Effects of the Tambora Crisis* (Chapter 6) and are more speculative in character and the linkage between environmental cause and socio/cultural effects are more tenuous. In some cases the events discussed could be equally convincingly explained by a number of socio/political causes that are largely independent of environmental forcing. The author posits strong arguments in support of his thesis and provides conclusions for others to dispute on the basis of equally detailed scholarship. Themes include: drawing environmental links between the eruption and population flows; a plethora of political events; fears of revolution, and even anti-Semitic pogroms. More certain are arguments which view the eruption as one of several factors influencing the growth of the natural sciences, particularly geology and meteorology, and the development of public health policies and transportation in the nineteenth century. An *Epilogue: From Meaningless to Meaningful Crisis* (Chapter 7) argues that the crisis induced by the Tambora eruption gave meaning and historical
coherence, not only to the period of unrest that disfigured post-Napoleonic Europe, but also to global history more generally.

This book is a considerable achievement on the part of its author. It is well written, meticulously researched, closely referenced allowing follow up work to proceed with ease, and it is a joy to read. Illustrations are of variable quality, some maps are too small to read clearly, some places discussed in the text are not present on location maps and a few illustrations remain illegible without magnification. These are nevertheless minor blemishes in a work that is highly recommended not only for library purchase, but also for personal use by those interested in volcanology, the atmospheric sciences and environmental history.

DAVID CHESTER
Liverpool Hope University

References

