

A flame-filled history

EXHIBITION

Volcanoes ignite the imagination in a way that few other natural phenomena do. The emergence of highly dynamic and dangerous lavas or violent eruptions from volcanic edifices provides a stark contrast to the permanence of hills and mountains. Explosive eruptions have always been

of great interest to scientists, but have also entered the cultural sphere; for example, as reference points for literature, myth and religion. An exhibition at the Bodleian Library in Oxford this month (<http://go.nature.com/2o9s2fO>) explores the way in which volcanoes have blurred the lines between science, exploration and mysticism, through a range of rare and beautifully preserved texts.

The exhibition aims to convey human stories that are often forgotten by scientific research. “There’s something primal about standing on the edge of a volcano”, says David Pyle, who curated the exhibition alongside the Bodleian staff, and notes that descriptions of the visual impact of eruptions have not changed much between the sixteenth and the twentieth century. He was particularly taken in by poetry from survivors of volcanic eruptions in Montserrat between 1995 and 1999, which are presented as audio recordings to convey the experience of those living through such events.

We get an insight into the global consequences of giant eruptions from the blood-red shades in William Ashcroft’s watercolours of sunsets in London in the aftermath of the Krakatoa eruption in 1883, to excerpts from Mary Shelley’s diaries describing ‘the year without a summer’ due to the atmospheric cooling as a result of Tambora’s eruption in 1815. Her cold, wet summer spent at Lake Geneva was when she conceived the Gothic classic *Frankenstein*.

Accounts from pirates and adventurers of mountains rising out of the ocean must have astonished audiences back home in the seventeenth and eighteenth centuries. Maybe more eye-catching today is how rapidly the accuracy of these descriptions progressed, from the buccaneering explorers of the enlightenment to the more scientific observations of the Victorian era. In the exhibition we see stylized sketches and watercolours of sulfurous Pacific islands that represented *terra incognita* for



BODLEIAN LIBRARIES, UNIVERSITY OF OXFORD

An illustration of the 1783 eruption of Mount Asama in Japan found in the book *Illustrations of Japan* published in London in 1822. The book was authored by Isaac Titsingh, a Dutch surgeon, scholar, merchant-trader and ambassador.

seventeenth and eighteenth century sailors like Captain Cook set alongside cartographic figures meticulously put together by Alexander von Humboldt when he climbed Chimborazo in June 1802.

Before the explorers documented volcanoes, the language and stories that people living nearby used to describe these fire-filled mountains was more deeply rooted in myth and religious imagery. Beautiful renaissance illustrations by German scholar and polymath Athanasius Kircher’s 1665 *Mundus Subterraneus* show the connection of the surface volcanism to the subterranean fire below. Nearby we can examine a medieval copy of Dante’s *Inferno*, in which the fires of the underworld are so important. Perhaps we should not be surprised that the immense power of volcanic eruptions became so intrinsically associated with the divine, given their effect on local people, but we certainly find clear hints of the enduring influence on sacred imagery among these tomes.

The oldest of the exhibits conveys an even starker reminder of the hazard posed by volcanoes: Roman papyrus scrolls from the

town of Herculaneum, blackened and charred when they were buried in AD 79 by the eruption of Vesuvius. These are a wonderful centrepiece for the exhibition as they chronicle the impact of this pyroclastic flow on the civilization nearby. Behind the scrolls is a display of the equipment modern scientists use to investigate volcanoes; children staring at the giant foil suit reminded me that such fieldwork should not be taken lightly. In many ways, volcanologists today are still exploring the ‘Wild West’ of the Earth sciences — only last month, a BBC crew filming Etna was caught in a phreatic explosion where lava hit snow (<http://go.nature.com/2oNhBNp>). The pieces collected in the exhibition help us to imagine the terror the residents of Pompeii must have felt in AD 79, or the bewilderment of seventeenth century sailors seeing far-flung islands belching smoke. □

REVIEWED BY ROBERT EMBERSON

■ *Volcanoes* is open to the public at the Bodleian library, University of Oxford, until 21 May, 2017.