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Nota di contenuto	Fire and Brimstone: How Volcanoes Work. Origins of volcanoes: the mantle ; Magma ; Eruption parameters -- Eruption Styles, Hazards, and Ecosystem Impacts. Eruption clouds ; Tephra falls ; Pyroclastic currents & caldera formation ; Lava flows and domes ; Rock avalanches and mudflows ; Tsunami ; Earthquakes ; Volcanic gas emissions ; Recovery of ecosystems ; Volcanic disasters -- Volcanoes and Global Climate Change. Pinatubo's global cloud ; Atmospheric and climatic change ; Recipe for a climate-forcing eruption -- Forensic Volcanology. Reading the rocks ; Ice cores ; Tree rings -- Relics, Myths, and Chronicles. Archaeological perspectives ; Oral traditions ; Crepuscular lights,

cannonades, and chronicles ; Volcano forensics: a case study -- Killer Plumes. Mass extinctions ; More about LIPs ; LIP origins ; LIPs, bolides, and extinctions: the coincidences ; Kill mechanisms ; Hot LIPs and cold SLIPs -- Human Origins. The East African Rift Valley ; The first humans ; The Middle Stone Age and modern humans -- The Ash-Giant/Sulphur-Dwarf. The eruption ; Sulphur yield of the eruption ; Climate change ; The human story ; Focus on India -- European Volcanism in Prehistory. The Campanian eruption and the human revolution in Palaeolithic Europe ; 'Cultural devolution' and the Laacher See eruption ; Eruption of Santorini and the decline of the Minoan civilisation -- The Rise of Teotihuacan. Popocatepetl ; The Ilopango eruption -- Dark Ages: Dark Nature? The mystery cloud of 536 CE ; Veils and whips -- The Haze Famine. The eruption ; Gas emissions and aerosol veil ; Weather and climate ; The haze famine ; Long reach of the eruption -- The Last Great Subsistence Crisis in the Western World. Sumbawa before the disaster ; The eruption ; Atmospheric and climate impacts ; Human tragedy ; Global reach of the eruption -- Volcanic Catastrophe Risk. Three catastrophe scenarios ; Risk control ; Global warming: fake volcanoes and real eruptions ; Shaken but not stirred -- Large Eruptions. The twenty-five largest documented Holocene eruptions.

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### Sommario/riassunto

What does it take for a volcanic eruption to really shake the world? Did volcanic eruptions extinguish the dinosaurs, or help humans to evolve, only to decimate their populations with a super-eruption 73,000 years ago? Did they contribute to the ebb and flow of ancient empires, the French Revolution and the rise of fascism in Europe in the 19th century? These are some of the claims made for volcanic cataclysm. Volcanologist Clive Oppenheimer explores rich geological, historical, archaeological and palaeoenvironmental records (such as ice cores and tree rings) to tell the stories behind some of the greatest volcanic events of the past quarter of a billion years. He shows how a forensic approach to volcanology reveals the richness and complexity behind cause and effect, and argues that important lessons for future catastrophe risk management can be drawn from understanding events that took place even at the dawn of human origins.

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