# The Year Without Summer 1816 And Volcano That Darkened World Changed History William K Klingaman

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A Year Without a Winter HarperCollins

Almost 200 years ago the Northeast endured a dramatic, devastating series of cold spells, destroying crops, forcing thousand to migrate west, and causing many to wonder if their assumptions about a world governed by a beneficial Providence were valid. The so-called "year without a summer" also exposed weaknesses in political and theological authorities, spurring a trend toward scientific inquiry and greater democracy. An endangered New England agriculture gave impetus to that region's manufacturing sector. The alarming threat to existence in that part of the country (as well as most of Western Europe) thus helped usher in the modern era. This book is written with the parallels between 1816 and our current "climate change" in mind: it introduces informed nonspecialists to the myriad of social, psychological, political, demographic, and economic consequences which can be brought about by abrupt change. A major meteorological event profoundly affected our nation's development in 1816. This book shows how this weather phenomenon acted as an accelerator of trends which were just emerging in the early 19th-century toward greater democracy and the spread of information; settlement of the Western frontier; use of the scientific method to investigate and understand natural phenomena; questioning of long-held religious beliefs as a result of increased knowledge; and industrialization as the means to expand the scope and wealth of the United States. Like all my books, America's First Climate Crisis is written in an accessible, engaging style, using anecdotes and thumbnail sketches to evoke the mood and important personalities of the day. While thoroughly researched, the book avoids the pitfall of academic writing by appealing to the curiosity of intelligent readers who may be put off by uninspired or technical language. The book is organized around various consequences of the disastrous harvests of 1816: after outlining the nature and scope of this calamity, I describe how it brought about a massive exodus to the Ohio Valley and shift in political and economic might to that region; how it undermined the once-unquestioned authority of New England's Federalist establishment; how it gave greater credence to scientific explanations for weather events and disasters; how it compelled New England merchants to abandon their opposition to manufacturing; and how it helped create a modern awareness of humanity's place in the universe.

Volcanic Eruptions and Their Repose, Unrest, Precursors, and Timing Scholastic Inc.

In 1816, twelve-year-old Mem's new home in the wilderness of western New York is disrupted History and Climate Springer Science & Business Media when the birth of another baby sends her mother into "spells" that disconnect her from reality. **Frozen Summer** Two Roads

Babble / Swoosh / Roar and WHOOSH! The roar of a waterfall, the chirp of insects, the thump of a heartbeat—sound is all around us! Rhyming text and atmospheric illustrations present four children in different parts of the world who encounter all sorts of sounds. The Palgrave Handbook of Climate History Harper Collins In 1815, a supervolcanic eruption led to the extraordinary 'Year Without Summer' in 1816: a massive climate disruption causing famine, poverty and riots. Snow fell in August. Lives, both ordinary and privileged, changed forever. Mary Shelley wrote Frankenstein. The artist, John Constable, sought refuge in Suffolk. As crops failed, the dispossessed rose up in rebellion, threatening to burn the old order to the ground 1815, Sumbawa Island, IndonesiaMount Tambora explodes in a cataclysmic eruption, killing thousands. Sent to investigate, ship surgeon Henry Hogg can barely believe his eyes. Once a paradise, the island is now solid ash, the surrounding sea turned to stone. But worse is yet to come as the ash cloud rises and covers the sun, the seasons will fail. 1816. In Switzerland, Mary Shelley finds dark inspiration. Confined inside by the unseasonable weather, thousands of famine refugees stream past her door. In Vermont, preacher Charles Whitlock begs his followers to keep faith as drought dries their wells and their livestock starve. In Britain, the ambitious and lovesick painter John Constable struggles to reconcile the idyllic England he paints with the misery that surrounds him. In the Fens, farm labourer Sarah Hobbs has had enough of going hungry while the farmers flaunt their wealth. And Hope Peter, returned from the Napoleonic wars, finds his family home demolished group of revolutionaries who speak of a better life, whatever the cost. As desperation sets in, Britain becomes racked with riots - rebellion is in the air. For fans of David Mitchell and Andrew Miller, THE YEAR WITHOUT SUMMER tells the story of a fateful year when temperatures fell and the summer failed to arrive. It is a story of the books written, the art made; of the journeys taken, of the love longed for and the lives lost. Six separate lives, connected only by an event many thousands of miles away. Few had heard of Tambora - but none could escape its effects. Byron in Geneva Basic Books

As climate has warmed over recent years, a new pattern of more frequent and more intense weather events has unfolded across the globe. Climate models simulate such changes in extreme events, and some of the reasons for the changes are well understood. Warming increases the likelihood of extremely hot days and nights, favors increased atmospheric moisture that may result in more frequent heavy rainfall and snowfall, and leads to evaporation that can exacerbate droughts. Even with evidence of these broad trends, scientists cautioned in the past that individual weather events couldn't be attributed to climate change. Now, with advances in understanding the climate science behind extreme events and the science of extreme event attribution, such blanket statements may not be accurate. The relatively young science of extreme event attribution seeks to The Year Without Summer St. Martin's Press of variability like El Niño, as contributors to individual extreme events. Event attribution can answer questions about how much climate change influenced the probability or intensity of a specific type of weather event. As event attribution capabilities improve, they could help inform choices about assessing and managing risk, and in guiding climate adaptation strategies. This report examines the current state of science of extreme weather attribution, and identifies ways to move the science forward to improve attribution capabilities.

Flight of the Puffin Little, Brown Books for Young Readers

Examines the influence of the eruption of the Indonesian volcano, Mount Tambora, on the weather conditions in Europe and New England.

"Makes the case for 1816 as an important year in the development of the American nation. Wellwritten and -researched . . . recommended."—Library Journal The year 1816 found America on the cusp of political, social, cultural, and economic modernity. Celebrating its fortieth year of independence, the country's sense of self was maturing. Americans, who had emerged from the War of 1812 with their political systems intact, embraced new opportunities. For the first time, citizens viewed themselves not as members of a loose coalition of states but as part of a larger union. This optimism was colored, however, by bizarre weather. Periods of extreme cold and severe drought swept the northern states and the upper south throughout 1816, which was sometimes referred to as "The Year Without a Summer." In 1816, historian C. Edward Skeen illuminates this unique year of national transition. Politically, the "era of good feelings" allowed Congress to devise programs that fostered prosperity. Social reform movements flourished. This election year found the Federalist party in its death throes, seeking cooperation with the nationalistic forces of the Republican party. Movement west, maturation of political parties, and increasingly contentious debates over slavery characterized this pivotal year. 1816 marked a watershed in American history. This provocative book vividly highlights the stresses that threatened to pull the nation apart and the bonds that ultimately held it together. "Reveals a sense of the fragility of the American experiment." —Boston Globe "Skeen narrates the major events of [the era's] opening 12 months with great skill . . . with clarity and verve." —Publisher's Weekly "A very impressive exposition of political culture in the early republic." —Andrew Burstein, author of Jefferson's Secrets

### France in the World Macmillan

Like Winchester's Krakatoa, The Year Without Summer reveals a year of dramatic global change long forgotten by history In the tradition of Krakatoa, The World Without Us, and Guns, Germs and Steel comes a sweeping history of the year that became known as 18-hundred-and-froze-to-death. 1816 was a remarkable year—mostly for the fact that there was no summer. As a result of a volcanic eruption in Indonesia, weather patterns were disrupted worldwide for months, allowing for excessive rain, frost, and snowfall through much of the Northeastern U.S. and Europe in the summer of 1816. In the U.S., the extraordinary weather produced food shortages, religious revivals, and extensive migration and a fence gone up in its place. He flees to London, where he falls in with a from New England to the Midwest. In Europe, the cold and wet summer led to famine, food riots, the transformation of stable communities into wandering beggars, and one of the worst typhus epidemics in history. 1816 was the year Frankenstein was written. It was also the year Turner painted his fiery sunsets. All of these things are linked to global climate change—something we are quite aware of now, but that was utterly mysterious to people in the nineteenth century, who concocted all sorts of reasons for such an ungenial season. Making use of a wealth of source material and employing a compelling narrative approach featuring peasants and royalty, politicians, writers, and scientists, The Year Without Summer by William K. Klingaman and Nicholas P. Klingaman examines not only the climate change engendered by this event, but also its effects on politics, the economy, the arts, and social structures.

### Without a Summer Soho Press

This book brings together science fiction, history, visual art, and exploration to reframe the relationship among climate, crisis, and creation. A Year Without a Winter presents stories by four renowned science fiction authors alongside critical essays, extracts from Mary Shelley's Frankenstein, and dispatches from extreme geographies.

tease out the influence of human-cause climate change from other factors, such as natural sources One terrifying summer can stay with you forever. It's the summer before high school and Jacob and his friends are determined to make it a memorable one. This may be the last couple of months they have together; once school starts, they'll be going their separate ways. Ichiro's family is moving to Japan. And while Jacob and the twins, Hayden and Hannah, are staying behind in Valeton, they'll be going to different high schools. When they discover an old abandoned home on a remote island of their Muskoka community, things suddenly take an unexpected turn. The kids find themselves inexplicably drawn to the house that had once been a sanatorium for children with tuberculosis and learn that it has some haunting secrets

### to hide.

### **Volcano Weather** Createspace Independent Publishing Platform

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 supereruption 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.

### The Vampyre Other Press, LLC

Volcanic eruptions are common, with more than 50 volcanic eruptions in the United States alone in the past 31 years. These eruptions can have devastating economic and social consequences, even at great distances from the volcano. Fortunately many eruptions are preceded by unrest that can be detected using ground, airborne, and spaceborne instruments. Data from these instruments, combined with basic understanding of how volcanoes work, form the basis for forecasting eruptionsâ€"where, when, how big, how long, and the consequences. Accurate forecasts of the likelihood and magnitude of an eruption in a specified timeframe are rooted in a scientific understanding of the processes that govern the storage, ascent, and eruption of magma. Yet our understanding of volcanic systems is incomplete and biased by the limited number of volcanoes and eruption styles observed with advanced instrumentation. Volcanic Eruptions and Their Repose, and climate and their role in human societies. Bringing together dozens of Unrest, Precursors, and Timing identifies key science questions, research and observation priorities, and approaches for building a volcano science community capable of tackling them. This report presents goals for making major advances in volcano science.

# Rumble and Roar Two Roads A NEW YORK TIMES BESTSELLER. A sweeping history of the Spanish Civil War, told through a dozen characters, including Hemingway and George Orwell: A tale of idealism, heartbreaking suffering, and a noble cause that failed. For three crucial years in the 1930s, the Spanish Civil War dominated headlines in America and around the world, as volunteers flooded to Spain to help its democratic government fight off a fascist uprising led by Francisco Franco and aided by Hitler and Mussolini. Today we're accustomed to remembering the war through Hemingway's For Whom the Bell Tolls and Robert Capa's photographs. But Adam Hochschild has discovered some less familiar yet far more compelling characters who reveal the full tragedy and importance of the war: a fiery nineteen-year-old Kentucky woman who went to wartime Spain on her honeymoon, a Swarthmore College senior who was the first American casualty in the battle for Madrid, a pair of fiercely partisan, rivalrous New York Times reporters who covered the war from opposites sides, and a swashbuckling Texas oilman with Nazi sympathies who sold Franco almost all his oil — at reduced prices, and on credit. It was in many ways the opening battle of World War II, and we still have much to learn from it. Spain in Our Hearts is Adam Hochschild at his very best. "With all due respect to Orwell, Spain in Our Hearts should supplant Homage to Catalonia as the best introduction to the conflict written in English. A humane and moving book."—New Republic "Excellent and involving. What makes [Hochschild's] book so intimate and moving is its human scale." —

### Dwight Garner, New York Times When Humans Nearly Vanished Harper Collins

In 1820, a young farm boy in search of truth has a vision of God the Father and Jesus Christ. Three years later, an angel guides him to an ancient record buried in a hill near his home. With God's help, he translates the record and organizes the Savior's church in the latter days. Soon others join him, accepting the invitation to become Saints through the Atonement of Jesus Christ. But opposition and violence follow those who defy old traditions to embrace restored truths. The women and men who join the church must choose whether or not they will stay true to their covenants, establish Zion, and proclaim the gospel to a troubled world. The Standard of Truth is the first book in Saints, a new, four-volume narrative history of The Church of Jesus Christ of Latterday Saints. Fast-paced, meticulously researched, Saints recounts true stories of Latter-day Saints across the globe and answers the Lord's call to write history "for the good of the church, and for the rising generations" (Doctrine and Covenants 69:8).

# **Summer's End** Springer

This book begins with a general section on solar influences on the trend of climate before the eruption of Tambora, the nature of the eruption, its aerosol effects, its course through the atmosphere, and a comparison of the effects of the 1783 eruption of Laki in Iceland on climate and a consideration of the effects of major volcanic eruptions following Krakatau (1883) on Canadian temperatures. Coverage is then geographic, dealing first with the northern hemisphere, including North America, Europe including Iceland and Asia, and then the southern hemisphere. A summary and discussion of results from the workshop on world climate in 1816 concludes the book.

## Monstrous Progeny National Academies Press

Only in the last decade have climatologists developed an accurate picture of yearly climate conditions in historical times. This development confirmed a long-standing suspicion: that the world endured a 500-year cold snap -- The Little Ice Age -- that lasted roughly from A.D. 1300 until 1850. The Little Ice Age tells the story of the turbulent, unpredictable and often very cold years of modern European history, how climate altered historical events, and what they mean in the context of today's global warming. With its basis in cutting-edge science, The Little Ice Age offers a new perspective on familiar events. Renowned archaeologist Brian Fagan shows how the increasing cold affected Norse exploration; how changing sea temperatures caused English and Basque fishermen to follow vast shoals of cod all the way to the New World; how a generations-long subsistence crisis in France contributed to social disintegration and ultimately revolution; and how English efforts to improve farm productivity in the face of a deteriorating climate helped pave the way for the Industrial Revolution and hence for global warming. This is a fascinating, original book for anyone interested in history, climate, or the new subject of how they interact.

### Jane and the Year Without a Summer Smithsonian Institution

This handbook offers the first comprehensive, state-of-the-field guide to past weather international specialists from the sciences and humanities, this volume describes the methods, sources, and major findings of historical climate reconstruction and impact research. Its chapters take the reader through each key source of past climate and weather information and each technique of analysis; through each historical period and region of the world; through the major topics of climate and history and core case studies; and finally through the history of climate ideas and science. Using clear, non-technical language, The Palgrave Handbook of Climate History serves as a textbook for students, a reference guide for specialists and an introduction to climate history for scholars and interested readers.

### <u>Claymates</u> National Academies Press

Now a Disney Channel Original Movie, Megan Shull's smart and funny twist on Freaky Friday is perfect for fans of Wendy Mass, Jerry Spinelli, and Jon Scieszka! This middle grade novel is an excellent choice for tween readers in grades 5 to 6, especially during homeschooling. It's a fun way to keep your child entertained and engaged while not in the classroom. With one random wish, Jack and Ellie are living life in each other's shoes. He's her. And she's him. ELLIE assumed popular guys didn't worry about body image, being perfect, or talking to girls, but acting like you're cool with everything is tougher than it looks. JACK thought girls had it easy—no fights with bullies, no demanding dads, no power plays—but facing mean girls at sleepovers and getting grilled about your period is way harder than taking a hit to the face at sports practice. Now they're dealing with each other's middle school dramas—locker room teasing, cliques, video game battles, bra shopping, and a slew of hilariously awkward moments—until they hopefully switch back! Told in both Jack's and Ellie's voices, The Swap offers a fresh and honest take on tween friendship, all while exploring more serious themes of family, loss, empathy, and what it really means to be yourself. And as Jon Scieszka says, it's "seriously, truly, fearlessly funny!"

### A Single Pebble Rutgers University Press

"Lebowitz highlights the parables, fables and myths we humans created in order to weave meaning into our lives and to which we return for comfort." —Atlantic Books Today On April 10th, 1815, Indonesia's Mount Tambora erupted. The resulting build-up of ash in the stratosphere altered weather patterns and led, in 1816, to a year without summer. Instead, there were June snowstorms, food shortages, epidemics, inventions, and the proliferation of new cults and religious revivals. Hauntingly meaningful in today's climate crisis, Lebowitz's lyric essay charts the events and effects of that apocalyptic year. Weaving together history, mythology, and memoir, The Year of No Summer ruminates on weather, war, and our search for God and meaning in times of disaster.

Saints: The Story of the Church of Jesus Christ in the Latter Days Cambridge University

In the tradition of "Krakatoa" and "Guns, Germs, and Steel" comes a sweeping history of the year 1816, when there was no summer. As a result of a volcanic eruption in Indonesia, weather patterns were disrupted worldwide for months and in the U.S., the extraordinary weather produced food shortages, religious revivals, and extensive migration.