

Alfred Wegener S Theory Of Continental Drift Became Modern

The author's theories on earth science. Includes polar shift, ice ages, ancient climates, extinctions and more.

A historical account of the triumph of the global theory of plate tectonics and its implications for the "modern revolution in geology" of the 1960s and 1970s after fifty years of controversy and competition.

Fifty years ago, no one could explain mountains. Arguments about their origin were spirited, to say the least. Progressive scientists were ridiculed for their ideas. Most geologists thought the Earth was shrinking.

Contracting like a hot ball of iron, shrinking and exposing ridges that became mountains. Others were quite sure the planet was expanding. Growth widened sea basins and raised mountains. There was yet another idea, the theory that the world's crust was broken into big plates that jostled around, drifting until they collided and jarred mountains into existence. That idea was invariably dismissed as pseudo-science. Or "utter damned rot" as one prominent scientist said. But the doubtful theory of plate tectonics prevailed. Mountains, earthquakes, ancient ice ages, even veins of gold and fields of oil are now seen as the offspring of moving tectonic plates.

Just half a century ago, most geologists sternly rejected the idea of drifting continents. But a few intrepid champions of plate tectonics dared to differ. The Mountain Mystery tells their story.

Created through a "student-tested, faculty-approved" review process from nearly 70 students and faculty, EARTH is an engaging and accessible solution to accommodate the diverse lifestyles of today's learners. EARTH presents a rich overview of all Earth-related disciplines--from geology, hydrology, and oceanography to meteorology and astronomy. EARTH explores the physical attributes of planet Earth and its environment, emphasizing the human choices we have made, and exploring the physical consequences of those choices in the context of Earth systems.

The Evolution of Continents, Oceans, and Life

Science, Exploration, and the Theory of Continental Drift

A Chronicle of Deep Carbon Science

A Brief History of Geology

What is the Theory of Plate Tectonics?

The North Atlantic

In 1915 Alfred Wegener's seminal work describing the continental drift was first published in German. Wegener explained various phenomena of historical geology, geomorphology, paleontology, paleoclimatology, and similar areas in terms of continental drift. This edition includes new data to support his theories, helping to refute the opponents of his controversial views. 64 illustrations.

Glorious panoramic photography by the author, a specialist in interpretive landscape, reveals the physical legacy of the Earth's distant past. This exceptional book celebrates the inevitability of global change and highlights our need as human beings to recognize and adjust to it. Color and b&w illustrations.

In this appealing biography, children will read about the fascinating life, theories, and discoveries of Alfred Wegener. From his time in Greenland studying meteorology with hot balloons to his theory of Pangea, readers will be eager to learn more about Wegener's contributions to science and the strides he took towards developing the study of plate tectonics. The easy-to-read text, accessible glossary, helpful index, and intriguing facts work in conjunction with the lively images and captivating lab activity to engage readers from beginning to end!

Why did American geologists reject the notion of continental drift, first posed in 1915? And why did British scientists view the theory as a pleasing confirmation? This text, based on archival resources, provides answers to these questions.

Theory of Continental Drift; a Symposium on the Origin and Movement of Land Masses, Both Inter-continental and Intra-continental, as Proposed by Alfred Wegener

The Behavior of the Earth

Continental and Seafloor Mobility

The Rejection of Continental Drift

Our Wandering Continents; an Hypothesis of Continental Drifting

Uncovering Plate Tectonics

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A fascinating historical account of the emergence and development of the new interdisciplinary field of deep carbon science.

A biography of the man who created the theory of continental drift.

Discusses plate tectonics, the theory that the surface of the earth is always moving, and the connection of this phenomenon to earthquakes and volcanoes.

Physics of the Earth's Crust

Theory and Method in American Earth Science

A Key to Some Basic Problems of Earth Science

Earth's Shifting Crust

The Quest for Knowledge Visualization

The Floors of the Oceans, V1

"The author of the theory of continental drift - the direct ancestor of the modern theory of plate tectonics and one of the key scientific concepts of the past century - Wegener also made major contributions to geology, geophysics, astronomy, geodesy, atmospheric physics, meteorology, and glaciology. Remarkably, he completed this pathbreaking work while grappling variously with financial difficulty, war, economic depression, scientific isolation, illness, and injury. He ultimately died of overexertion on a journey to probe the Greenland icecap and calculate its rate of drift. Greene places Wegener's upbringing and theoretical advances in earth science in the context of his brilliantly eclectic career, bringing Wegener to life by analyzing his published scientific work, delving into all of his surviving letters and journals, and tracing both his passionate commitment to science and his thrilling experiences as a polar explorer, a military officer during World War I, and a world-record-setting balloonist."--From publisher description.

Approximately 200 years of the history of the development of the study of geology.

This is an examination of the history and the state of the art of the quest for visualizing scientific knowledge and the dynamics of its development. Through an interdisciplinary perspective this book presents profound visions, pivotal advances, and insightful contributions made by generations of researchers and professionals, which portrays a holistic view of the underlying principles and mechanisms of the development of science. This updated and extended second edition: highlights the latest advances in mapping scientific frontiers examines the foundations of strategies, principles, and design patterns provides an integrated and holistic account of major developments across disciplinary boundaries "Anyone who tries to follow the exponential growth of the literature on citation analysis and scientometrics knows how difficult it is to keep pace. Chaomei Chen has identified the significant methods and applications in visual graphics and made them clear to the uninitiated. Derek Price would have loved this book which not only pays homage to him but also to the key players in information science and a wide variety of others in the sociology and history of science." - Eugene Garfield "This is a wide ranging book on information visualization, with a specific focus on science mapping. Science mapping is still in its infancy and many intellectual challenges remain to be investigated and many of which are outlined in the final chapter. In this new edition Chaomei Chen has provided an essential text, useful both as a primer for new entrants and as a comprehensive overview of recent developments for the seasoned practitioner." - Henry Small Chaomei Chen is a Professor in the College of Information Science and Technology at Drexel University, Philadelphia, USA, and a ChangJiang Scholar at Dalian University of Technology, Dalian, China. He is the Editor-in-Chief of Information Visualization and the author of *Turning Points: The Nature of Creativity* (Springer, 2012) and *Information Visualization: Beyond the Horizon* (Springer, 2004, 2006).

"Resolution of the sixty year debate over continental drift, culminating in the triumph of plate tectonics, changed the very fabric of Earth Science. This three-volume treatise on the continental drift controversy is the first complete history of the origin, debate and gradual acceptance of this revolutionary theory. Based on extensive interviews, archival papers and original works, Frankel weaves together the lives and work of the scientists involved, producing an accessible narrative for scientists and non-scientists alike. This first volume covers the period in the early 1900s when Wegener first pointed out that the Earth's major landmasses could be fitted together like a jigsaw and went on to propose that the continents had once been joined together in a single landmass, which he named Pangaea. It describes the reception of Wegener's theory as it splintered into sub-controversies and geoscientists became divided between the 'fixists' and 'mobilists'"--

A Revolution in the Earth Sciences

Plate Tectonics

Scientists Who Changed History

The Origin of Continents and Oceans

Perspectives on the Geoscience Revolution

World Map of Volcanoes, Earthquakes, Impact Craters, and Plate Tectonics

Text To Accompany The Physiographic Diagram Of The North Atlantic. The Geological Society Of America Special Paper, No. 65.

This book provides an overview of the history of plate tectonics, including in-context definitions of the key terms. It explains how the forerunners of the theory and how scientists working at the key academic institutions competed and collaborated until the theory coalesced.

Plate tectonics is a revolutionary theory on a par with modern genetics. Yet, apart from the frequent use of clichés such as 'tectonic shift' by economists, journalists, and politicians, the science itself is rarely mentioned and poorly understood. This book explains modern plate tectonics in a non-technical manner, showing not only how it accounts for phenomena such as great earthquakes, tsunamis, and volcanic eruptions, but also how it controls conditions at the Earth's surface, including global geography and climate. The book presents the advances that have been made since the establishment of plate tectonics in the 1960s, highlighting, on the 50th anniversary of the theory, the contributions of a small number of scientists who have never been widely recognized for their discoveries. Beginning with the publication of a short article in Nature by Vine and Matthews, the book traces the development of plate tectonics through two generations of the theory. First generation plate tectonics covers the exciting scientific revolution of the 1960s and 1970s, its heroes and its villains. The second generation includes the rapid expansions in sonar, satellite, and seismic technologies during the 1980s and 1990s that provided a truly global view of the plates and their motions, and an appreciation of the role of the plates within the Earth 'system'. The final chapter bring us to the cutting edge of the science, and the latest results from studies using technologies such as seismic tomography and high-pressure mineral physics to probe the deep interior. Ultimately, the book leads to the startling conclusion that, without plate tectonics, the Earth would be as lifeless as Venus.

Explore the lives and achievements of more than 85 of the world's most inspirational and influential scientists with this innovative and boldly graphic biography-led book. The second title in DK's new illustrated biography series, Scientists Who Changed History profiles trailblazing individuals from Greek mathematicians, such as Archimedes and Hipparchus, through physicists of the early 20th-century, such as Marie Curie and Albert Einstein, to modern greats such as Stephen Hawking and Tim Berners-Lee. Each featured individual has made a major contribution to one or more scientific fields, from astronomy, biology, and psychology, to computer science and geology. Combining elements of biography, history, and analysis, Scientists Who Changed History explains the groundbreaking contributions made by these revolutionary men and women in a clear and informative way.

The Face of the Earth

Earth

Physical Geology

Alfred Wegener, the Father of Continental Drift

The Tectonic Plates are Moving!

The Age of the Earth

Discusses the theory of continental drift, describes its importance to modern geology, and looks at mountain building and the structure of the earth's crust

"Physical Geology is a comprehensive introductory text on the physical aspects of geology, including rocks and minerals, plate tectonics, earthquakes, volcanoes, glaciation, groundwater, streams, coasts, mass wasting, climate change, planetary geology and much more. It has a strong emphasis on examples from western Canada, especially British Columbia, and also includes a chapter devoted to the geological history of western Canada. The book is a collaboration of faculty from Earth Science departments at Universities and Colleges across British Columbia and elsewhere"--BCcampus website.

V. 1. The movements in the outer crust of the earth. The mountain ranges of the earth -- v. 2. The sea -- v. 3-4. The face of the earth -- v. 5. Indexes and maps.

A collection of essays and articles provides a study of how the planet works, discussing Earth's structure, geographical features, geologic history, and evolution.

The Mountain Mystery

Mapping Scientific Frontiers

Ending in Ice

Creator of the Continental Drift Theory

This Dynamic Earth

Drifting Continents & Colliding Paradigms

The book should be of interest not only to earth scientists, students of polar travel and exploration, and historians but to all readers who are fascinated by the great minds of science.

The third edition of this widely acclaimed textbook provides a comprehensive introduction to all aspects of global tectonics, and includes major revisions to reflect the most significant recent advances in the field. A fully revised third edition of this highly acclaimed text written by eminent authors including one of the pioneers of plate tectonic theory. Major revisions to this new edition reflect the most significant recent advances in the field, including new and expanded chapters on Precambrian tectonics and the supercontinent cycle and the implications of plate tectonics for environmental change. Combines a historical approach with process science to provide a careful balance between geological and geophysical material in both continental and oceanic regimes. Dedicated website available at

<http://www.blackwellpublishing.com/kearey/>

An old truism holds that a scientific discovery has three stages: first, people deny it is true; then they deny it is important; finally, they credit the wrong person. Alfred Wegener's "discovery" of continental drift went through each stage with unusual drama. In 1915, when he published his theory that the world's continents had once come together in a single landmass before splitting apart and drifting to their current positions, the world's geologists denied and scorned it. The scientific establishment's rejection of continental drift and plate tectonic theory is a story told often and well. Yet, there is an untold side to Wegener's life: he and his famous

father-in-law, Wladimir Köppen (a climatologist whose classification of climates is still in use), became fascinated with climates of the geologic past. In the early 20th century Wegener made four expeditions to the then-uncharted Greenland icecap to gather data about climate variations (Greenland ice-core sampling continues to this day). Ending in Ice is about Wegener's explorations of Greenland, blending the science of ice ages and Wegener's continental drift measurements with the story of Wegener's fatal expedition trying to bring desperately needed food and fuel to workers at the central Greenland ice station of Eismitte in 1930. Arctic exploration books with tragic endings have become all too common, but this book combines Wegener's fatal adventures in Greenland with the relevant science--now more important than ever as global climate change becomes movie-worthy ("The Day After Tomorrow").

In the early 1960s, the emergence of the theory of plate tectonics started a revolution in the earth sciences. Since then, scientists have verified and refined this theory, and now have a much better understanding of how our planet has been shaped by plate-tectonic processes. We now know that, directly or indirectly, plate tectonics influences nearly all geologic processes, past and present. Indeed, the notion that the entire Earth's surface is continually shifting has profoundly changed the way we view our world.

A Prince of the Captivity

The Revolutionary Idea and Tragic Expedition of Alfred Wegener

Drifting Continents and Shifting Theories

Global Tectonics

Inside and Out

Principles of Physical Geology

A classic John Buchan story of daring-do and espionage during World War I. This classic works, originally published in 1933, is here being republished together with a new introductory biography of the author.

"The book provides an excellent historical summary of the debates over continental drift theory in this century." –Contemporary Sociology

"This is a useful discussion of the way that science works. The book will be of value to philosophers of science... " –Choice "... will find an important place in university and department libraries, and will interest aficionados of the factual and intellectual history of the earth sciences." –Terra Nova "... an excellent core analysis... " –The Times Higher Education Supplement "... an ambitious and important

contribution to the new sociology of science." –American Journal of Sociology "... Stewart's book is a noble effort, an interesting and readable discussion, and another higher notch on the scoreboard of critical scholarship that deserves wide examination and close attention."

–Geophysics This fascinating book describes the rise and fall and rebirth of continental drift theory in this century. It uses the recent revolution in geoscientists' beliefs about the earth to examine questions such as, How does scientific knowledge develop and change? The book also explores how well different perspectives help us to understand revolutionary change in science.

Explores the life and achievements of the meteorologist whose theory of continental displacement revolutionized the observations about the Earth's development.

(Das Antlitz Der Erde)

Origins

From Continental Drift to Plate Tectonics

The Continental Drift Controversy

An Insider's History Of The Modern Theory Of The Earth

Alfred Wegener