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The Ocean Book Derek Harvey 2020-09 Dive into the unexplored depths of the deep blue sea and discover its secrets with this trusty and beautifully-illustrated guide by Lonely Planet Kids. Meet the amazing animals, birds and plants that live in our oceans, the habitats in which they live, then learn about the harmful effects climate change, oil spills and plastic waste can have on them - plus, what you can do to help future generations! From the odd-shaped head of the great hammerhead shark to the hairy strips of baleen in a baleen whale’s mouth, meet some of the ocean’s oddest creatures and discover how they have evolved to live and thrive under the sea. Journey from the colourful coral reefs of the Indian Ocean to the wild waves of freezing Antarctica, covering everywhere from sandy beaches, deserted open seas and mile-deep trenches in-between. Learn all about the history of how the oceans came to be, as well as the sunken cities that were claimed by them, then understand just how powerful the force of water can be as you explore tides, waves, tsunamis and currents. After dropping anchor like the pirate Jack Sparrow on tropical, palm-fringed islands, end with a lesson on how humans have been using and abusing our oceans throughout the years, and what we can do to help protect them for the future. About Lonely Planet Kids: Lonely Planet Kids - an imprint of the world’s leading travel authority Lonely Planet - published its first book in 2011. Over the past 45 years, Lonely Planet has grown a dedicated global community of travellers, many of whom are now sharing a passion for exploration with their children. Lonely Planet Kids educates and encourages young readers at home and in school to learn about the world with engaging books on culture, sociology, geography, nature, history, space and more. We want to inspire the next generation of global citizens and help kids and their parents to approach life in a way that makes every day an adventure. Come explore!
Discovering the Deep
Jeffrey A. Karson 2015-04-23
A beautifully illustrated reference providing fascinating insights into the hidden world of the seafloor using the latest deep-sea imaging.

The Brilliant Abyss
Helen Scales 2021-03-18
The deep sea is the last, vast wilderness on the planet. For centuries, myth-makers and storytellers have concocted imaginary monsters of the deep, and now scientists are looking there to find bizarre, unknown species, chemicals to make new medicines, and to gain a greater understanding of how this world of ours works. With an average depth of 12,000 feet and chasms that plunge much deeper, it forms a frontier for new discoveries. The Brilliant Abyss tells the story of our relationship with the deep sea – how we imagine, explore and exploit it. It captures the golden age of discovery we are currently in and looks back at the history of how we got here, while also looking forward to the unfolding new environmental disasters that are taking place miles beneath the waves, far beyond the public gaze. Throughout history, there have been two distinct groups of deep-sea explorers. Both have sought knowledge but with different and often conflicting ambitions in mind. Some people want to quench their curiosity; many more have been lured by the possibilities of commerce and profit. The tension between these two opposing sides is the theme that runs throughout the book, while readers are taken on a chronological journey through humanity’s developing relationship with the deep sea. The Brilliant Abyss ends by looking forwards to humanity’s advancing impacts on the deep, including mining and pollution and what we can do about them.

Into the Deep
Robert D. Ballard 2021-05-11
The legendary explorer of Titanic and Lusitania looks back on his life behind his famous exploits and unveils a major new discovery on the occasion of the 35th anniversary of the Titanic find. Best known for finding the wreck of the Titanic, celebrated adventurer Robert Ballard has a lifetime of stories about exploring the ocean depths. From discovering new extremophile life-forms thriving at 750°F hydrothermal vents in 1977 to finding famous shipwrecks including the Bismarck and PT 109, Ballard has made history. Now the captain of E/V Nautilus, a state-of-the-art scientific exploration vessel rigged for research in oceanography, geology, biology, and archaeology, leads young scientists as they map the ocean floor, collect artifacts from ancient shipwrecks, and relay live-time adventures
from remote-controlled submersibles to reveal amazing sea life. For the first time, Robert Ballard gets personal, telling the inside stories of his adventures and challenges as a midwestern kid with dyslexia who became an internationally renowned ocean explorer. Here is the definitive story of the danger and discovery, conflict and triumph that make up his remarkable life.

The Geography of the Ocean Anne-Flore Laloë 2016-04-14 Despite the fact that the vast majority of the earth’s surface is made up of oceans, there has been surprisingly little work by geographers which critically examines the ocean-space and our knowledge and perceptions of it. This book employs a broad conceptual and methodological framework to analyse specific events that have contributed to the production of geographical knowledge about the ocean. These include, but are not limited to, Christopher Columbus’ first transatlantic journey, the mapping of nonexistent islands, the establishment of transoceanic trade routes, the discovery of largescale water movements, the HMS Challenger expedition, the search for the elusive Terra Australis Incognita, the formulation of the theory of continental drift and the mapping of the seabed. Using a combination of original, empirical (archival, material and cartographic), and theoretical sources, this book uniquely brings together fascinating narratives throughout history to produce a representation and mapping of geographical oceanic knowledge. It questions how we know what we know about the oceans and how this knowledge is represented and mapped. The book then uses this representation and mapping as a way to coherently trace the evolution of oceanic spatial awareness. In recent years, particularly in historical geography, discovering and knowing the ocean-space has been a completely separate enterprise from discovering and colonising the lands beyond it. There has been such focus on studying colonised lands, yet the oceans between them have been neglected. This book gives the geographical ocean a voice to be acknowledged as a space where history, geography and indeed historical geography took place.


Understanding Marine Debris National Marine Fisheries Service (U.S.) 2009-10-06 Contains an assortment of puzzles, brain-teasers and coloring activities help children understand the problem of marine debris while having fun at the same time. Suitable for all ages.

To Sleep in a Sea of Stars Christopher Paolini 2020-09-15 Now a New York Times and USA Today bestseller! Winner of Best Science Fiction in the 2020 Goodreads Choice Awards! To Sleep in a Sea of Stars is a brand new epic novel from #1 New York Times bestselling author of Eragon, Christopher Paolini. Kira Navárez dreamed of life on new worlds. Now she’s awakened a nightmare. During a routine survey mission on an uncolonized planet, Kira finds an alien relic. At first she’s delighted, but elation turns to terror when the ancient dust around her begins to move. As war erupts among the stars, Kira is launched into a galaxy-spanning odyssey of discovery and transformation. First contact isn’t at all what she imagined, and events push her to the very limits of what it means to be human. While Kira faces her own horrors, Earth and its colonies stand upon the brink of annihilation. Now, Kira might be humanity’s greatest and final hope . . . At the Publisher’s request, this title is being sold without Digital Rights Management Software (DRM) applied.

The Physical History of the Earth 1864

The Sea Around Us Rachel Carson 2019-09-10 The Sea Around Us reveals the science and poetry of the sea while ranging from its primeval beginnings to the latest scientific probings. Often described as poetic, it is Carson’s second published book and the one that launched her into the public eye and a second career as a writer and conservationist. The book was awarded both the 1952 National Book
Field Trip to the Ocean Deep

John Hare 2020-09-08

Come join the fun as students take a submarine bus on a field trip to explore the ocean deep, in this wordless picture book from the creator of Field Trip to the Moon! Students dressed in deep sea helmets travel to the ocean deep in a yellow school-bus submarine. When they get there, they frolic with fish, chase luminescent squid, and discover an old shipwreck. But when it’s time to return to the submarine bus, one student lingers to take a photo of a treasure chest and falls into a deep ravine. Luckily, the child makes an unexpected friend—a maybe-not-so-extinct sea creature called a Pleiosaur—that’s happy to entertain the young explorer until the teacher returns. In his follow-up to Field Trip to the Moon, John Hare’s rich, atmospheric art in this wordless picture book invites all children to imagine themselves in the story—a tale full of mysteries, surprises, and adorable aquatic friends. Named a LITA Golden Duck Picture Book A Junior Library Guild Selection.

Measuring the Oceans from Space

Ian S. Robinson 2004-06-30

This book covers the fundamental principles of measuring oceans from space, and also contains state-of-the-art developments in data analysis and interpretation and in sensors. Completely new will be material covering advances in oceanography that have grown out of remote sensing, including some of the global applications of the data. The variety of applications of remotely sensed data to ocean science has grown significantly and new areas of science are emerging to exploit the global datasets being recovered by satellites, particularly in relation to climate and climate change, basin-scale, air-sea interaction processes (e.g. El Nino) and the modelling, forecasting and prediction of the ocean.

Oceans For Dummies

Ashlan Cousteau 2021-01-26

Dive deep to explore the ocean. From how most of our oxygen is created by phytoplankton, to how currents control our climate, to the marine food chain and the importance of coral, this is the holy grail of ocean books that’s easy for everyone to digest. It features fun facts about some of the most incredible, bizarre, and fascinating creatures in the ocean, from mantis shrimp that can strike things with the speed of a .22 caliber bullet to fish with clear heads that can see out of the top of their skulls. The ocean is full of wonders and there is still so much left to explore and understand. How our oceans work? What creatures live in the ocean? Find out how the ocean regulates our climate and weather patterns. How growing pollution threatens our ocean and its inhabitants? Oceans For Dummies is perfect for anyone with an interest in the ocean, including kids, adults, students, ocean lovers, surfers, fishermen, conservationists, sailors, and everyone in between.

Ocean Monsters

Natalie Lunis 2008-08-01

Describes the physical characteristics, behavior, and habitat of eight giant sea reptiles.

Life on an Ocean Planet

Teacher digital resource package includes 2 CD-ROMs and 1 user guide. Includes Teacher curriculum guide, PowerPoint chapter presentations, an image gallery of photographs, illustrations, customizable presentations and student materials, Exam Assessment Suite, PuzzleView for creating word puzzles, and LessonView for dynamic lesson planning. Laboratory and activity disc includes the manual in both student and teacher editions and a lab materials list.

Biological Extinction

Partha Dasgupta 2019-09-05

Questions why species are becoming extinct, and how we can protect the natural world on which we all depend.

Atlas of Ocean Adventures

Emily Hawkins 2019-11-05

Meet some of nature’s most fantastic underwater creatures in this beautifully illustrated exploration of the sea. Get ready for a deep dive into THE WORLD’S GREAT OCEANS, and discover the DIVERSITY OF LIFE that exists in the DEEP BLUE SEA. Whether you’re traveling long-haul with LEATHERBACK TURTLES across the...
Pacific, snoozing with SEA OTTERS, or ice-bathing with a WALRUS, this book brings together EPIC OCEAN ADVENTURES from the high seas to the ocean floor. With over 30 scenes to explore, young nature adventurers will find hundreds of things to spot, with facts to learn on every page.

**Recent Advances and Issues in Oceanography** C. Reid Nichols 2003 This volume describes and evaluates the major current research developments in the ocean sciences. Topics include advances in measuring ocean phenomena from space, *in situ*R instruments, and the development of fully integrated observing systems that allow investigators to take environmental snapshots of areas that must be monitored in order to protect property and save lives. The authors emphasize that today’s successful oceanographic programs rely on multidisciplinary, integrated, and task-organized teams of varying professionals, marine technicians, and oceanographers. Also discussed are the World Wide Web, distributed databases, and computer models that allow research and operational oceanographers to share information to build useful products and make new discoveries.

**Bold Endeavors** Jack Stuster 2011-10-15 This classic reference is considered the best single source of information on how to facilitate human adjustment and performance in long-term isolation. It is filled with exciting stories of survival—the exploits of explorers, military personnel, scientists and astronauts—along with expert analyses of failed expeditions and lessons learned. Jack Stuster identifies the principles of habitability and presents more than 200 specific recommendations to help individuals in confinement. The book’s recommendations and habitability principles are relevant to a variety of space and earthbound conditions, including polar, underwater, and underground, exploration and habitation. In fact, nearly all human relationships that involve small groups of people living and working together in isolated areas can benefit from this study. Stuster’s goal is to help others avoid behavioral problems that affect performance, often with tragic consequences.

**Astronaut-Aquanaut** Jennifer Swanson 2018 The differences and similarities between the deep ocean and outer space.

**Vast Expanses** Helen M. Rozwadowski 2018-10-15 Much of human experience can be distilled to saltwater: tears, sweat, and an enduring connection to the sea. In Vast Expanses, Helen M. Rozwadowski weaves a cultural, environmental, and geopolitical history of that relationship, a journey of tides and titanic forces reaching around the globe and across geological and evolutionary time. Our ancient connections with the sea have developed and multiplied through industrialization and globalization, a trajectory that runs counter to Western depictions of the ocean as a place remote from and immune to human influence. Rozwadowski argues that knowledge about the oceans—created through work and play, scientific investigation, and also through human ambitions for profiting from the sea—has played a central role in defining our relationship with this vast, trackless, and opaque place. It has helped us to exploit marine resources, control ocean space, extend imperial or national power, and attempt to refashion the sea into a more tractable arena for human activity. But while deepening knowledge of the ocean has animated and strengthened connections between people and the world’s seas, to understand this history we must address questions of how, by whom, and why knowledge of the ocean was created and used—and how we create and use this knowledge today. Only then can we can forge a healthier relationship with our future sea.

**The Future of Ocean Governance and Capacity Development** International Ocean Institute - Canada 2018-09-27 The International Ocean Institute - Canada has compiled more than 80 insightful essays on the future of ocean governance and capacity development, based largely on themes of its Training Program at Dalhousie University in Canada, to honor the work of Elisabeth Mann Borgese (1918-2002).
Dream Big! Abigail Harrison 2021-01-19 From Astronaut Abby, the dynamic founder of The Mars Generation, comes a book about dreaming big, reaching for the stars, and making a plan for success! From the age of four, Abigail Harrison knew she wanted to go to space. At age eleven, she sat down and wrote out a plan—not just for how to become an astronaut, but how to be the first astronaut to set foot on Mars. With a degree in biology, internships at NASA, and a national organization founded to help kids reach for the stars themselves, Astronaut Abby is well on her way to achieving her dreams—and she wants to help others do the same! In this book, readers will find helpful advice and practical tips that can help set them on the path toward finding, reaching for, and achieving their goals. With examples from Abby’s own life, interactive activities to get readers going, and plenty of fun illustrations along the way, this is the perfect guide for anyone--of any age--with big dreams and plenty of determination. It’s time to reach for the stars!

Praise for Dream Big!: "With friendly encouragement . . . the content and approach are general enough to appeal both to STEM-oriented fans of the author as well as those whose interests lie in other areas . . . Fun and helpful." --Kirkus Reviews "Any young person who wants to achieve their dreams will find this comprehensive book helpful." --Booklist "The conversational style is easy to understand. . . . There are eye-catching fonts, icons, think bubbles, and callouts. . . . A recommended purchase for middle school and high school libraries. Counselors assisting high schoolers with college preparation and educators teaching leadership classes will find many of the journaling activities very useful." --School Library Journal

Discovering the Ocean from Space Ian S. Robinson 2010-08-12 This book offers a survey of the contribution of satellite data to the study of the ocean, focusing on the special insights that only satellite data can bring to oceanography. Topics range from ocean waves to ocean biology, spanning scales from basins to estuaries. Some chapters cover applications to pure research while others show how satellite data can be used operationally for tasks such as pollution monitoring or oil-spill detection.

The Youth Guide to the Ocean Food and Agriculture Organization of the United Nations 2018-06-06 This Ocean Guide was jointly developed by FAO and PML, with contributions from many other institutions. It is designed as an educational resource for schools, youth groups and other curious young learners. This fact-filled Guide explores the ocean from the coastal zones to the frozen poles, the deep sea to the open ocean. It takes a close look at the physical features and natural processes that shape the incredible plant and animal life to be found underwater as well as life-forms exposed by the tides. It also demonstrates the many benefits the ocean provides us, discusses the negatives impacts we unfortunately have on the ocean and explains how good management can help protect and conserve the ocean and ocean life. At the end of the Guide, inspiring examples of youth-led initiatives are provided, and an easy-to-follow action plan aims to help YOU develop your own ocean conservation activities and projects.

How the Ocean Works Mark Denny 2012-01-02 The world’s oceans account for roughly 71 percent of the planet’s surface and 99 percent of its livable volume. Any study of this huge habitat requires a solid foundation in the principles that underlie marine biology and physical and chemical oceanography, yet until now undergraduate textbooks have largely presented compilations of facts rather than explanations of principles. How the Ocean Works fills this gap, providing a concise and accessible college-level introduction to marine science that is also ideal for general readers. How are winds and currents driven? What is the dilemma of the two-layered ocean? Mark Denny explains key concepts like these in rich and fascinating detail. He explores early scientific knowledge of oceans, photosynthesis, trophic interactions and energy flow, and the impacts of human activities on marine and atmospheric
systems. Focusing each chapter on a major topic and carefully explaining the principles and theory involved, Denny gives readers the conceptual building blocks needed to develop a coherent picture of the living ocean. How the Ocean Works is an indispensable resource that teaches readers how to think about the ocean--its biology, mechanics, and conservation. Provides a concise, up-to-date introduction to marine science Develops the conceptual basis needed to understand how the ocean works Explains fundamental principles and theory Includes color illustrations and informative diagrams Serves as a college textbook and a reference for general readers Some images inside the book are unavailable due to digital copyright restrictions.

**Soundings**

Hali Felt 2013-07-02

Her maps of the ocean floor have been called "one of the most remarkable achievements in modern cartography", yet no one knows her name. Soundings is the story of the enigmatic, unknown woman behind one of the greatest achievements of the 20th century. Before Marie Tharp, geologist and gifted draftsperson, the whole world, including most of the scientific community, thought the ocean floor was a vast expanse of nothingness. In 1948, at age 28, Marie walked into the newly formed geophysical lab at Columbia University and practically demanded a job. The scientists at the lab were all male; the women who worked there were relegated to secretary or assistant. Through sheer willpower and obstinacy, Marie was given the job of interpreting the soundings (records of sonar pings measuring the ocean's depths) brought back from the ocean-going expeditions of her male colleagues. The marriage of artistry and science behind her analysis of this dry data gave birth to a major work: the first comprehensive map of the ocean floor, which laid the groundwork for proving the then-controversial theory of continental drift. When combined, Marie's scientific knowledge, her eye for detail and her skill as an artist revealed not a vast empty plane, but an entire world of mountains and volcanoes, ridges and rifts, and a gateway to the past that allowed scientists the means to imagine how the continents and the oceans had been created over time. Just as Marie dedicated more than twenty years of her professional life to what became the Lamont Geological Observatory, engaged in the task of mapping every ocean on Earth, she dedicated her personal life to her great friendship with her co-worker, Bruce Heezen. Partners in work and in many ways, partners in life, Marie and Bruce were devoted to one another as they rose to greater and greater prominence in the scientific community, only to be envied and finally dismissed by their beloved institute. They went on together, refining and perfecting their work and contributing not only to humanity's vision of the ocean floor, but to the way subsequent generations would view the Earth as a whole. With an imagination as intuitive as Marie’s, brilliant young writer Hali Felt brings to vivid life the story of the pioneering scientist whose work became the basis for the work of others scientists for generations to come.

**Citizens of the Sea**

Nancy Knowlton 2010

"The incredible variety of marine life--in numbers, body form, behavior, and more--is at the heart of Citizens of the Sea, an irresistible plunge into the surprising world beneath the waves."-from inside cover.

**The Eternal Darkness**

Robert D. Ballard 2002

The man who discovered the wreck of the Titanic looks back on a career spent mostly underwater looking for sunken ships and exploring volcanic cracks in the ocean floor to confirm the theory of plate tectonics.

**Rare Earth**

Peter D. Ward 2007-05-08

What determines whether complex life will arise on a planet, or even any life at all? Questions such as these are investigated in this groundbreaking book. In doing so, the authors synthesize information from astronomy, biology, and paleontology, and apply it to what we know about the rise of life on Earth and to what could possibly happen elsewhere in the universe. Everyone who has been thrilled by the recent discoveries of extrasolar planets and the
indications of life on Mars and the Jovian moon Europa will be fascinated by Rare Earth, and its implications for those who look to the heavens for companionship.

Ocean Literacy: Understanding the Ocean Kostis C. Koutsopoulos 2021-06-28 This book provides an original review of Ocean Literacy as a component of public policy in Europe and beyond. The impact of the ocean on human activities is one of the most significant environmental issues facing humanity. By offering valuable insights into the interrelationships between geography, environment, marine science and education, the book explores key issues relating to the future of our planet and the way people respond to them. This volume discusses concepts concerning citizenship education and co-creation and the role of public policy and different international initiatives in raising awareness and mitigating the effects of over-use and misuse of valuable resources. A range of innovative projects are presented and evaluated from the local to national and global levels. This book advances knowledge and provides a picture of these advances, presents the issues and challenges, including the important role that geography education and geographical awareness could play in advancing the case for Ocean Literacy. This crossdisciplinary book appeals to students and scientists as well as professionals and practitioners in geography, environmental and marine sciences, international policy and many related fields.

Satellites, Oceanography and Society D. Halpern 2000-06-06 The book shows how the new observations from satellites required advances in theory and influenced societal decision-making. Chapters have a review with an extensive reference list, making the book an excellent source of information for biological and physical oceanographers and atmospheric scientists. A large range of state-of-the-art applications of satellite data (altimeter, color, infrared radiometer, scatterometer, synthetic aperture radar) visible in regional-to-global scale ocean studies integrating satellite and in-situ measurements with circulation models are covered in the book. Subjects include forecasting of surface waves, both swell and windsea, and surface wind; El Niño/La Niña; exchange of water masses between ocean basins, Rossby waves; eddies and filaments; fisheries; coastal ocean dynamics; phytoplankton dynamics; and ideas to measure sea surface salinity.

50 Years of Ocean Discovery National Research Council 2000-01-03 This book describes the development of ocean sciences over the past 50 years, highlighting the contributions of the National Science Foundation (NSF) to the field’s progress. Many of the individuals who participated in the exciting discoveries in biological oceanography, chemical oceanography, physical oceanography, and marine geology and geophysics describe in the book how the discoveries were made possible by combinations of insightful individuals, new technology, and in some cases, serendipity. In addition to describing the advance of ocean science, the book examines the institutional structures and technology that made the advances possible and presents visions of the field’s future. This book is the first-ever documentation of the history of NSF’s Division of Ocean Sciences, how the structure of the division evolved to its present form, and the individuals who have been responsible for ocean sciences at NSF as Careerotors and career staff over the past 50 years.

Exploring the Ocean Worlds of Our Solar System Bernard Henin 2018-08-03 In the last 25 years, planetary science experienced a revolution, as vast oceans of liquid water have been discovered within the heart of the icy moons of our Solar System. These subsurface oceans lie hidden under thick layers of ice. We call them ocean worlds. Some of these icy moons, such as Ganymede, may hold two to three times more liquid water than all the water present on Earth, while others, such as Enceladus and Europa, are thought by astrobiologists to be our best hope of finding extraterrestrial life. In this book, we will explore and compare a variety of
Solar System ocean worlds, meeting in the process 22 of the most intriguing objects, from the giant asteroid Ceres to the enigmatic, distant Sedna. In doing so, we will also encounter the multiple spacecraft that brought back most of what we know of these worlds (Pioneers, Voyagers, Cassini-Huygens, etc.), as well as the latest scientific research on this new topic. We will also entertain the possibility of life on each of these ocean worlds by assessing their habitability, as ultimately, these ocean worlds might hold the key to answering the fundamental questions in life: How did life appear? Where do we come from? Is there life out there? With the contributions of leading planetary scientists from NASA, ESA, and other institutions, this book aims to be the go-to reference for anyone wanting to know more about this fascinating topic.

Hello, World! Kids' Guides: Exploring the Solar System

Jill McDonald 2022-08-02

The best-selling Hello, World! board book series expands into picture books, for Hello, World! kids who are ready for the next step. Kids who enjoy looking up at space and dreaming of exploring the solar system will love this lively, fact-filled, illustrated tour of our galaxy, with engaging information on every page:

- Fascinating details about each of the planets, including up-to-date information such as NASA’s Perseverance rover and Ingenuity helicopter—accompanied by bright illustrations.
- Statistics about each planet, with information about the planet’s size, distance from the sun, length of days and years, and more.
- A helpful chart that shows each planet’s place in the solar system.
- A question that asks the reader to think about the planets in relation to themselves, such as “Would you like to live on a planet with a long winter or a short winter?” and “What would you bring on your Mars rover?”
- Hello, World! readers who have moved up to picture books and any kids who love science and space will find many captivating hours of learning and inspiration in the launch of this exciting new series.

Waters of the World

Sarah Dry 2019-11-01

From the glaciers of the Alps to the towering cumulonimbus clouds of the Caribbean and the unexpectedly chaotic flows of the North Atlantic, Waters of the World is a tour through 150 years of the history of a significant but underappreciated idea: that the Earth has a global climate system made up of interconnected parts, constantly changing on all scales of both time and space. A prerequisite for the discovery of global warming and climate change, this idea was forged by scientists studying water in its myriad forms. This is their story. Linking the history of the planet with the lives of those who studied it, Sarah Dry follows the remarkable scientists who summited volcanic peaks to peer through an atmosphere’s worth of water vapor, cored mile-thick ice sheets to uncover the Earth’s ancient climate history, and flew inside storm clouds to understand how small changes in energy can produce both massive storms and the general circulation of the Earth’s atmosphere. Each toiled on his or her own corner of the planetary puzzle. Gradually, their cumulative discoveries coalesced into a unified working theory of our planet’s climate. We now call this field climate science, and in recent years it has provoked great passions, anxieties, and warnings. But no less than the object of its study, the science of water and climate is—and always has been—evolving. By revealing the complexity of this history, Waters of the World delivers a better understanding of our planet’s climate at a time when we need it the most.

Mapping the Deep: The Extraordinary Story of Ocean Science

Robert Kunzig 2000-10-17

A vivid, up-to-date tour of the Earth’s last frontier, a remote and mysterious realm that nonetheless lies close to the heart of even the most land-locked reader. The sea covers seven-tenths of the Earth, but we have mapped only a small percentage of it. The sea contains millions of species of animals and plants, but we have identified only a few thousand of them. The sea controls our planet’s climate, but we do not really understand how. The sea is still the frontier,
and yet it seems so familiar that we sometimes forget how little we know about it. Just as we are poised on the verge of exploiting the sea on an unprecedented scale—mining it, fertilizing it, fishing it out—this book reminds us of how much we have yet to learn. More than that, it chronicles the knowledge explosion that has transformed our view of the sea in just the past few decades, and made it a far more interesting and accessible place. From the Big Bang to that far-off future time, two billion years from now, when our planet will be a waterless rock; from the lush crowds of life at seafloor hot springs to the invisible, jewel-like plants that float at the sea surface; from the restless shifting of the tectonic plates to the majestic sweep of the ocean currents, Kunzig’s clear and lyrical prose transports us to the ends of the Earth.

Originally published in hardcover as The Restless Sea. "Robert Kunzig is a creator of what oceanographer Harry Hess once referred to as 'geopoetry.' He covers vast tracts of time and space and makes his subjects electrifying."—Richard Ellis, The Times [London] "The Restless Sea immediately surfaces at the top of the list of journalistic treatments of oceanography. . . . The book opened my eyes to numerous wonders."—Richard Strickland, American Scientist "When you head for the coast this summer, leave that trashy beach novel at home. Instead, pack Robert Kunzig’s book. Because just beyond your rental cottage lies the restless sea, where three-mile-tall mountain ranges criss-cross the ocean floor, and deep trenches harbor mysterious creatures. . . . The book is easy to read, and will bring you up to date on the startling discoveries oceanographers have made during the past few decades."—Phillip Manning, The News and Observer [Raleigh, North Carolina] "Anyone who loves the sea should read this book."—Sebastian Junger

**Life at Vents and Seeps** Jens Kallmeyer 2017-11-07

Vents and seeps are the epitome of life in extreme environments, but there is much more to these systems than just black smokers or hydrocarbon seeps. Many other ecosystems are characterized by moving fluids and this book provides an overview of the different habitats, their specific conditions as well as the technical challenges that have to be met when studying them. The book provides the current state of the art and will be a valuable resource for everybody that has an interest in such environments.