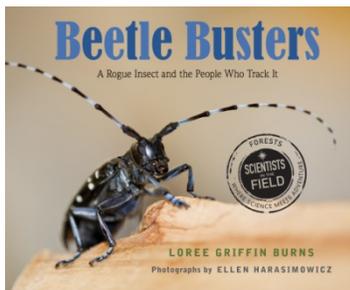


# Nonfiction for Summer Reading

## BOOKS FOR CHILDREN

*Beatrice's Goat*, by Page McBrier. (Illus. by Lori Lohstoeter.) Aladdin, 2004.

This true story about a girl in a small Ugandan village recounts how one child, given the right tools, can lift her family out of poverty. Beatrice is the girl and a goat called Mugisa is the right tool. Mugisa makes enough milk not only for Beatrice's family but also to sell for a profit and the family soon has enough money to send Beatrice to school. McBrier's tale and Lohstoeter's sunny acrylic paintings capture the spirit of Beatrice and the Ugandan landscape.



*Beetle Busters: A Rogue Insect and the People Who Track It*, by Loree Griffin Burns. (Illus. by Ellen Harasimowicz; from Scientists in the Field Series.) HMH Books for Young Readers, 2014.

Part of the Scientists in the Field series, *Beetle Busters* showcases the work of researchers who are trying to stop the Asian longhorned beetle from

wreaking havoc on and possibly even destroying America's hardwood forests. Loree Griffin Burns knows how to engage a young reader from the very first page.

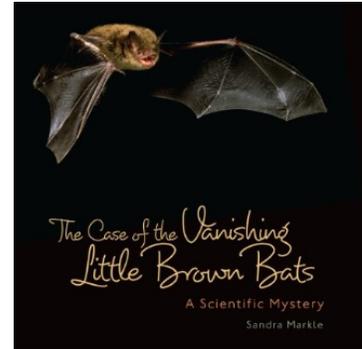
*Behold the Beautiful Dung Beetle*, by Cheryl Bardoe. (Illus. by Alan Marks.) Charlesbridge, 2014.

Beetles have colonized most all of the Earth's environments and with so enormous diversity it's no wonder that perhaps 7000 of those species utilize dung for a habitat and energy source. To the dung beetle, another animal's waste is a precious pile of food and drink. This book is sure to make young readers appreciate this fascinating species.

*The Case of the Vanishing Little Brown Bats: A Scientific Mystery*, by Sandra Markle. Millbrook Press, 2014.

White fungal disease has killed millions of insect-eating little brown bats in 25 states and five Canadian provinces causing a major population collapse and bringing the little brown bat to the edge of extinction. This book describes how biologists go about searching for clues: descending into caves where bats hibernate to measure habitat characteristics; culturing the white nose fungus

*Pseudogymnoascus destructans* to determine how it harms bats, with no obvious treatment to seek ways to combat it.



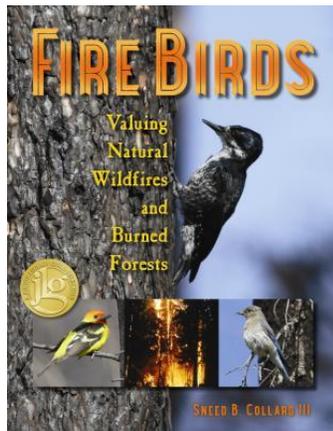
*Earth Heroes: Champions of the Wilderness*, by Carol Malnor. (Illus. by Anisa Bazan; from the Earth Heroes Series.) DAWN Publications, 2012.

One of three books in the Earth Heroes Series, this book focuses on introducing influential people involved in the preservation of wild places to upper elementary and middle school children. The people featured include scientists as well as activists who shared their scientific knowledge with the world. Included in this book are: Henry David Thoreau, John Muir, Theodore Roosevelt, Aldo Leopold, Richard St. Barbe Baker, Mardy Murie, David Suzuki, and Wangari Maathai.

*Electrical Wizard: How Nikola Tesla Lit Up the World*, by Elizabeth Rusch. (Illus. by Oliver Dominguez.) Candlewick, 2013.

Using creatively incorporated, full color illustrations by O. Dominguez, Nikola Tesla's life dedicated to innovative alternating electrical current

promotion is explained with sparse, large print text. Special pages detail Tesla's revolutionary ideas and rivalry with Thomas Edison's direct electrical current monopoly. Scientific notes warn about hazards in working with electricity and give effective, illustrated explanations for concepts referred to in the main text. The incredible feats performed by the "brilliant and quirky inventor" are validated in detailed source notes, bibliography, and acknowledgments.



*Fire Birds: Valuing Natural Wildfires and Burned Forests*, by Sneed B. Collard III. Bucking Horse Books, 2014. After reading this book, the reaction of many may be, "Who knew?" Several generations of Americans have been raised under the influence of Smokey Bear, who admonished, "Only you can prevent forest fires!" As a result, many people believe that all forest fires are bad. But, as one scientist has indicated, "There are two kinds of fires ...The ones that burn down your house or kill your neighbor are

bad, bad, bad. The other ones can be the greatest things in the world." This fascinating book encourages readers to ask questions and challenge assumptions to develop a keener appreciation of our environment

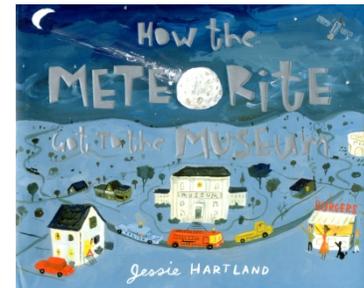
*Face Bug*, by J. Patrick Lewis. (Illus. by Kelly Murphy, Photographs by Fred Siskind.) WordSong, 2013.

*Face Bug* is a great resource and a fun read for elementary school students. It is a compilation of poems that pay homage to insects that have some of the most out-of-this-world faces. They are presented in a quirky and entertaining manner—as if bugs were going to a "Face Bug Museum." Featured insects include the Eastern carpenter bee, dog day harvest fly cicada, American horse fly, and Daddy longlegs, among others.

*Going Home: The Mystery of Animal Migration*, by Marianne Berkes. (Illus. by Jennifer DiRubbio.) Dawn Publications, 2012.

In this poetic look at animal migration patterns, Marianne Berkes teams up with illustrator Jennifer DiRubbio to produce a book that will be useful to teachers as they introduce their students to migration. In addition to the poems and illustrations, teachers can find extensive back matter, including additional information about each of the animals, a map showing migratory paths, suggested books and websites, information about migration itself, and extended activities. Children, too, can enjoy the

poetry and illustrations on their own.



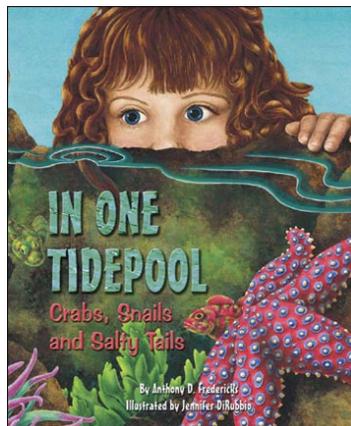
*How the Meteorite Got to the Museum*, by Jessie Hartland. Blue Apple Books, 2013.

This story traces how the Peekskill Meteorite broke from its billion-year orbit in space, crashed into a teenager's car in Peekskill, New York, and eventually ended up in the American Museum of Natural History. The colorful illustrations and narrative text will engage children and help them learn more about meteorites and the scientists who study them.

*I Wonder Who Will Plant a Tree*, by Jerry Pallotta. (Illus. by Tom Leonard.) Sleeping Bear Press, 2010.

With the use of engaging illustrations and simple, rhythmic language, this book helps to answer the question of who plants trees. With each two-page spread, the author demonstrates how animals go about planting trees just by engaging in their everyday activities, from a squirrel burying an acorn to an owl eating a mouse. The author also makes sure to include a group of schoolchildren planting trees on a field trip. This book could be

an excellent accompaniment to science lessons on the interdependence of life.



*In One Tidepool: Crabs, Snails and Salty Tails*, by Anthony Fredericks. (Illus. by Jennifer DiRubbio.) Dawn Publications, 2012.

For those who can't take a real field trip to a tidepool, you can go on one between the covers of this delightful book. Combining good science, rhyming, and colorful illustrations, *In One Tidepool* introduces young children to some of the creatures who live in that ecosystem.

*Island: A Story of the Galapagos*, by Jason Chin. Roaring Book Press, 2012. In this book, Jason Chin traces the history of the Galapagos Island, from its beginnings as a volcanic mountain rising above sea level, through its time as home to many and varied plant and animal species, to eventually sinking below the blue waves forever. Through the years, new islands emerge and the endemic plant and animal descendants of the island now exist on these other islands.

*The Kid's Guide to Exploring Nature*, by Brooklyn Botanic Garden Educators. Brooklyn Botanic Garden, 2014.

This gorgeously illustrated guide calls on children to look closely at the world around them through 24 "adventures" that invite readers to explore the complex ecosystems of plants and animals in the woods, at the beach, and in a city park.

*Mission: Mars*, by Pascal Lee. (Illus. by Ryan Hobson.) Scholastic, 2013.

What if we started to train the astronauts of 2035 today? Pascal Lee does just that in his kid-friendly training guide for would-be Mars explorers. Lee, a planetary scientist with the Mars Institute and the SETI Institute, explains what it will take to send humans to Mars—from spacesuits and exploration rovers to surviving subzero temperatures and raging dust storms.

*Nocturne: Creatures of the Night*, by Traer Scott. Princeton Architectural Press, 2014. Celebrated animal photographer Traer Scott captures the beauty and mystery of nocturnal animals in this collection of portraits. The animal subjects are set against black backgrounds, which help highlight the animals' individual features. The photographs are accompanied by informed descriptions of each animal's habits and habitats.

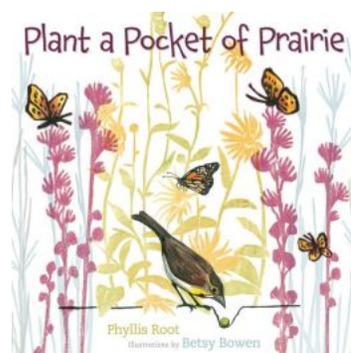
*Parrots over Puerto Rico*, by Cindy Trumbore. (Illus. by

Susan L. Roth.) Lee & Low Books, 2013.

Puerto Rican parrots lived on the island for millions of years, and then they nearly vanished from the Earth forever. In this compelling (and visually stunning) book, Roth and Trumbore recount the efforts of the scientists of the Puerto Rican Parrot Recovery Program to save the parrots and ensure their future.

*Plant a Pocket of Prairie*, by Phyllis Root. (Illus. by Betsy Bowen.) University of Minnesota Press, 2014.

This inspiring and exquisite children's book introduces children to the endangered prairie ecosystem and how we can help restore it. Phyllis Root and Betsy Bowen take young readers on a trip to one of Minnesota's important ecosystems—the prairie—teaching children how changes in one part of the system affect every other part.



*Plastic Ahoy! Investigating the Great Pacific Garbage Patch*, by Patricia Newman. (Photographs by Annie Crawley.) Millbrook Press Trade, 2014.

A team of researchers went on a scientific expedition to the Great Pacific Garbage Patch to find out where millions of pieces of plastic have collected. For nearly three weeks at sea, researchers gathered bits of plastic and ocean organisms. These samples helped them learn more about the effects of plastic in the ocean. Follow along on the expedition to find out how scientists studied the Garbage Patch—and what alarming discoveries they made.

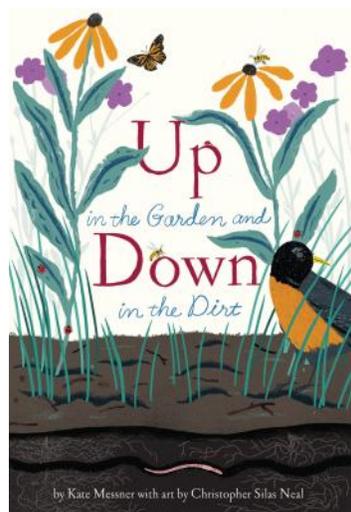


*Tiny Creatures: The World of Microbes*, by Nicola Davies. (Illus. by Emily Sutton.) Candlewick, 2014.

In *Tiny Creatures*, zoologist and award-winning science writer Nicola Davies tackles what is undoubtedly an uncommon topic for a children's picture book. Microbes are central to almost every aspect of biology, but talking to very young children about microscopic life is difficult. In *Tiny Creatures*, Davies demonstrates how a conceptually difficult topic can be effectively introduced to the very young by tapping into prior knowledge of the world they can see and experience through their senses.

*Up in the Garden and Down in the Dirt*, by Kate Messner.

(Illus. by Christopher Silas Neal.) Chronicle Books, 2015. *Up in the Garden and Down in the Dirt* is a lyrical story of the magical world of nature both above and below the ground. The story takes the reader on a journey through nature's changing seasons. The reader joins a child and their Nana as they plan, prepare, and plant their garden through the first sprouts and blossoms, the harvest of both early and late season plants, as well as the frost and snow.

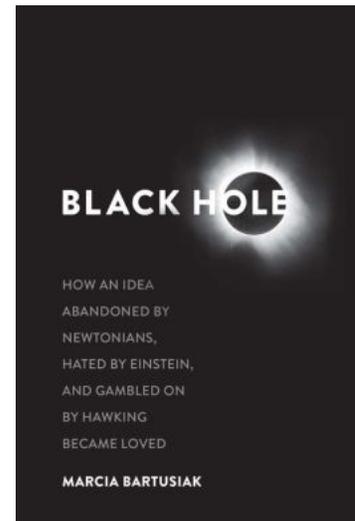


## BOOKS FOR PRETEENS/TEENS

*Black Hole: How an Idea Abandoned by Newtonians, Hated by Einstein, and Gambled On by Hawking Became Loved*, by Marcia Bartusiak. Yale University Press, 2015.

In part, this work is a simple chronological history of astronomy and physics as they relate to the concept of black

holes. However, this book more importantly examines in detail a centuries-old evolution of an idea that eventually culminated in one of the most fascinating and well-known aspects of modern cosmology.

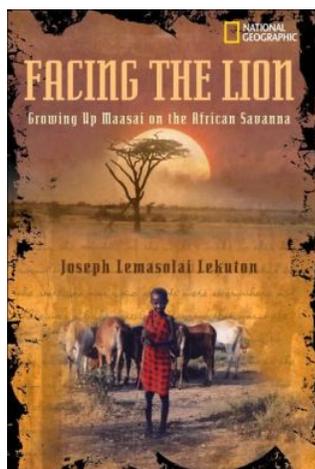


*Einstein's Dice and Schrödinger's Cat*, by Paul Halpern. Basic Books, 2015. In *Einstein's Dice and Schrödinger's Cat*, physicist Paul Halpern tells the little-known story of how Einstein and Schrödinger searched, first as collaborators and then as competitors, for a theory that transcended quantum weirdness. This story of their quest—which ultimately failed—provides readers with new insights into the history of physics and the lives and work of two scientists whose obsessions drove its progress.

*Extreme Medicine: How Exploration Transformed Medicine in the Twentieth*

*Century*, by Kevin Fong. The Penguin Press, 2014.

In *Extreme Medicine*, Fong's strong narrative voice and his likening of medical discovery to extreme geographical exploration immerse the reader fully into a discussion of science, medical practice, and innovation. He offers compelling stories of doctors and patients that include just enough detail to contextualize and educate without overwhelming, making this book a perfect choice for teen and young adult readers.



*Facing the Lion: Growing Up Maasai on the African Savanna*, by Joseph Lemasolai-Lekuton. National Geographic Children's Books, 2003.

In this memoir of growing up a poor, nomadic boy in Kenya, Joseph Lemasolai-Lekuton gives kids from industrialized countries a look at a life far different from their own. Lemasolai-Lekuton recounts his time herding cows and playing in trees before he gets accepted at a fancy Nairobi high school and from there attends college in

the United States. His story combines his experience of growing up in a nomadic community with the universal experience of being a boy.

*How to Build a Universe*, by Ben Gilliland. (Illus.) Sterling, 2015.

This book presents a wide and up-to-date variety of topics in astronomy. The chapters cover such topics as the big bang theory of the formation of the universe, the nature of the atom, the fundamental forces of nature, the birth of stars, the life of stars, the death of stars including black holes, the nature of galaxies, the formation of the solar system, and the ultimate fate of the universe.

*The Human Age: The World Shaped by Us*, by Diane Ackerman. W.W. Norton & Co., 2014.

Diane Ackerman, in her latest book *The Human Age: The World Shaped by Us*, doesn't hold back when she describes the recent drastic impact that humans have had on Earth. Ackerman eloquently takes the reader through each chapter, exposing in detail the stark ramifications of climate change, mass extinctions, and invasive speciation. Such harsh realities are then counterbalanced by the ingenuity of modern science, as Ackerman interviews leading experts in the fields of genetic engineering, robotics, and architecture.

*Magnificent Minds: 16 Pioneering Women in Science and Medicine*, by Pendred

Noyce. Tumblehome Learning, Inc., 2015.

This beautifully designed and engagingly written book belongs in every high school and public library. It isn't just that it provides biographies of women who made historic contributions to science, although it does do that. What makes it exceptional is the way that the author respects and nourishes the young minds that comprise her target audience. Context is extremely important when you tell the story of women in science. The women profiled in the book faced many challenges and obstacles. Noyce does an excellent job of describing these challenges while telling the stories of the contributions that these remarkable women made to our understanding of science.



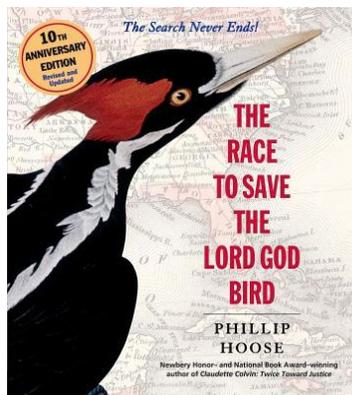
*Melting Away: A Ten-Year Journey through Our Endangered Polar Regions*, by Camille Seaman. Princeton Architectural Press, 2014.

*Melting Away* is a stunningly beautiful and powerful book of photographs and essays. The vast majority of its 80 plus photographs are images of ice—glaciers and icebergs—in the Arctic and Antarctic. The photos were taken between 2003 and 2011, primarily from the vantage point of ships, though sometimes from smaller vessels

and sometimes from land. Scientific concepts are woven throughout.

*The Omnivore's Dilemma for Kids*, by Michael Pollan. Dial Books, 2009.

Michael Pollan takes his approach to food to kids with this adaptation of his famous food chain exploration for young readers. Kids can go behind the scenes of fast food, big organic, small farms, and old fashioned hunting and gathering to explore the global and personal health implications of their food choices.



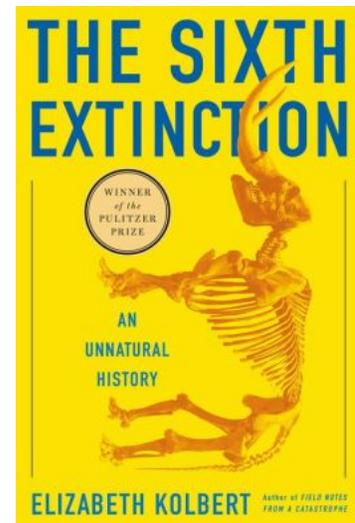
*The Race to Save the Lord God Bird*, by Phillip Hoose. Farrar, Straus and Giroux, 2014. The Ivory-billed Woodpecker, or Lord God Bird, was the first modern-day endangered species. It once was found in the southeastern United States, from Texas to the Carolinas and as far north as Indiana. By 1937, it could be found on only one tract of land in northeastern Louisiana. This book chronicles the efforts to try to save it in what became one of the first great conservation showdowns in U.S. history.

*Searching for Sarah Rector: The Richest Black Girl in America*, by Tonya Bolden. Harry N. Abrams, 2014.

This biography of the richest black girl in America tells the story of Sarah Rector, a Creek freedman (black citizen of the Creek Indian nation). Sarah and other Creeks received a land allotment in compensation for being forced to resettle west of the Mississippi in the 1800s. Sarah's contained rich oil deposits, making her enormously wealthy. When she disappeared, there was a lot of inaccurate speculation about what happened to her. In writing this biography, Tonya Bolden set out to try to get the story straight and she describes some of the challenges she encountered in trying to conduct accurate historical research.

*Shocked: Adventures in Bringing Back the Recently Dead*, by David Casarett, M.D. Current, 2014.

Casarett recounts his exploration of the science of resuscitation and shows how far the science has come. His coverage of the history of resuscitation goes back to the 18<sup>th</sup> century, when early attempts at resuscitation involved public displays of barrel rolling, a form of horseback riding, and blowing tobacco smoke into the patient's various orifices. The colorful history of resuscitation is a topic that is sure to be a fascinating one for young adult readers.



*The Sixth Extinction: An Unnatural History*, by Elizabeth Kolbert. Henry Holt & Co., 2014.

Award-winning journalist and author Kolbert blends field reporting with natural and intellectual history to reveal the mass extinction that is already taking place on our planet. She introduces us to a dozen species, some already gone and others facing extinction, including the Panamanian golden frog, staghorn coral, the great auk, and the Sumatran rhino. Through these stories, Kolbert provides a moving account of the disappearances occurring all around us and traces the evolution of extinction as concept.

*UpClose Rachel Carson*, by Ellen S. Levine. Viking Juvenile, 2007.

Rachel Carson became a leader in the environmental movement with her publication of *Silent Spring* in 1962. This up close look at her life is a great introduction to Rachel Carson, from her childhood in

Pennsylvania to her decision to become a biologist to her work as an environmental pioneer. This book also offers a look at the prevailing attitudes toward women's roles and how Carson was able to overcome those limiting expectations.

*The Tale of the Dueling Neurosurgeons: The History of the Human Brain as Revealed by True Stories of Trauma, Madness, and Recovery*, by Sam Kean. Little, Brown and Company, 2014.

Beginning in the 16<sup>th</sup> century with Henri II in France, and concluding with the 19<sup>th</sup>-century life of Phineas Gage, Kean traces the history of neurosurgery through a series of biographical sketches covering individuals who have advanced our knowledge of the brain and how it works. Kean ties each to a development in neuroscience that leads to modern theories about the workings of the brain.

*What If?: Serious Scientific Answers to Absurd Hypothetical Questions*, by Randall Munroe. Houghton Mifflin Harcourt, 2014.

The success of the What If? blog led to the creation of this book, which contains both new material as well as some of Munroe's most popular blog posts. The iconic stick-figures made famous in XKCD escort readers through Munroe's well-researched, extremely detailed, and humorously written responses. While some of his answers can get pretty scientific, the majority of the book covers very broad topics that most of us

think about from time to time (lasers, lightning, printing money, and trying to reverse the spin of the Earth).

*What is Relativity?: An Intuitive Introduction to Einstein's Ideas, and Why They Matter*, by Jeffrey Bennett. Columbia University Press, 2014.

The author, a professor of astronomy, has written an admirable little gem of a physics book. It is a delightful, well-written introduction to Einstein's theory of special and general relativity without any intimidating mathematics (although one does meet the occasional square root sign and the famous mass energy equivalence equation). Just as Einstein made much use of thought experiments, so does the text. Several thought experiments, illustrated by black-and-white cartoons, explore the unfamiliar regions of relativistic mechanics and the nature of space-time.

*A Window on Eternity: A Biologist's Walk through Gorongosa National Park*, by E. O. Wilson. (Photographs by Piotr Naskrecki.) Simon & Schuster, 2014.

The reader walks together with Edward O. Wilson, via high-resolution, incredibly beautiful photography by Piotr Naskrecki, through a delightful, but largely unknown world of the multitudes of life that inhabit the Gorongosa National Park in Mozambique. This book reinforces the idea that as humans we all have a fiduciary role to protect the planet and its

life forms from human-derived ecological and environmental disasters.

