

Celebrate Summer with Reading



*NSTA Recommends
reviewers share reading
suggestions for teachers*

Juliana Texley

School is out and the summer is full of both official and unofficial holidays that prompt us to enjoy science and the profession of sharing it. As in past years, the reviewers and editors of *NSTA Recommends*—ready and willing to share their enthusiasm for reading with you—have been gathering suggestions for the summer. So along with your beach chairs, flags, and fireworks schedules, collect some reading material for a summer of personal enrichment.

Birthday celebrations

Carl Linnaeus just turned a venerable 300! Most students know only about his penchant for creating Latin

names for some 7,700 plants and 4,400 animals. However, his contribution to science goes beyond that. Stephen Jay Gould's famous essay, *Linnaeus's Luck?* (2000), suggested that Linnaeus had a far greater understanding of evolution than he admitted to his peers, almost 100 years before Lamarck and Darwin offered their models. *Linnaeus* (Blunt and Stearn 2002) is a fascinating and rounded portrait of Linnaeus, charting his rise from a poor student at Lund University to Professor of Medicine at Uppsala and a founder of the Royal Academy of Sciences. *Linnaeus* is a beautiful book from a talented biological illustrator, which provides many details of both life and biology.

The year 2009 will mark Charles Darwin's 200th birthday and the 150th anniversary of the publication of *The Origin of Species* (1859). You could prepare by watching the finches in your backyard, or further, grab a good book about Darwin. Reviewer Debbie Chesin suggests that everyone should reread *The Voyage of the Beagle* (Darwin 1909). In a proposed trilogy on Darwin's life, *Charles Darwin: The Power of Place* (2002), author Janet Browne begins in 1858, providing details of Darwin's far-ranging interests and the politics surrounding the publication of his works. Reviewer Cary Seidman says: "Reviewing the lively, intellectual discussion of Darwin's revolutionary ideas, which occurred over 100 years ago will encourage responsible and caring science teachers to continue framing their teaching around one of history's most powerful and far-reaching ideas." Eloise Farmer recommends author Jonathan Weiner, who has not only written *The Beak of the Finch* (1995), but also *Time, Love, Memory: A Great Biologist and His Quest for the Origins of Behavior* (1999) about Seymour Benzer, an unsung pioneer of molecular biology.

For a content update, reviewer Charles Jervis recommends *The Plausibility of Life: Resolving Darwin's Dilemma* by Marc W. Kirschner and John C. Gerhart (2005) for those who want more details and an integration of modern biological techniques. Jervis says: "Bringing together ideas as diverse as the origins of deer antlers, shifts in hemoglobin oxygen affinity, neural crest fate in embryological development, the Cambrian Explosion, and operon gene regulation, the authors paint a convincing picture." If you want to spend your vacation preparing to help students celebrate evolutionary science, reviewer David Brock suggests you grab *Evolution 101* by Randy Moore and Janice Moore (2006). "Seldom is a book so well written and well researched that it ought to be required reading for every thinking person," Brock says.

Weather forecast

When the sun is beating on the beach sand, it may be hard to keep in mind that you should also be preparing to celebrate The International Polar Year—a large scientific program focused on the Arctic and the Antarctic from March 2007 to March 2009 (www.ipy.org). Luckily, there are some great books that will allow you to explore Earth's polar regions without leaving the warmth of summer. One of this year's CBC/NSTA

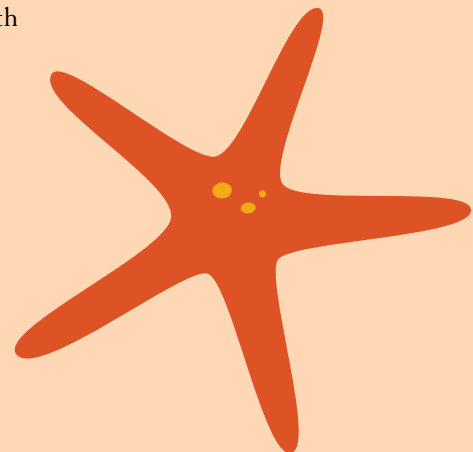
Outstanding Science Trade Books is *Onward: A Photobiography of Afro-American Polar Explorer Matthew Henson* by Dolores Johnson (2006), which describes polar exploration and offers an insight into the life of a little-known contributor to our current body of knowledge. Conversely, you can go to the opposite end of the Earth with *Ernest Shackleton: Grippled by the Antarctic* by Rebecca L. Johnson (2003). Both of these books can be shared with students.

Even if you've seen the movie, every teacher should review the facts offered by Vice President Al Gore in *An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do About It* (2006). With more data and graphics than the movie, this summary not only supports understanding but can answer the questions that students are bound to ask about shrinking poles and rising sea levels. Reviewer Thomas Brown suggests you follow up by reading *The Consumer's Guide to Effective Environmental Choices* by Michael Brower and Warren Leon (2006), which contains practical suggestions for reducing your "carbon footprint."

For a historical perspective to climate change, author Eugene Linden has provided a masterful review in *The Winds of Change: Climate, Weather, and the Destruction of Civilizations* (2006). When students challenge you with the question, "Hasn't the climate changed in the past?" you'll have a rich source of examples from the Toltecs to the Dust Bowl. Linden also analyzes how public opinion often ignores the impact of climate change on societies. Reviewer Claudia Fetters describes the book as "unique in its approach to explaining how climate change has affected the world and human civilization in the past and how it is likely to affect us in the future."

Lesser-known holidays

Even the lesser-known celebrations of summer are worth exploring. July 6th is National Chocolate Day. July 8th is the start of the Tour de France. July 10th is Shark Awareness Day. July 22th, Rat Catcher's Day, may seem like a strange concept to celebrate, but Albert Marrin's book *Oh Rats! The Story of Rats and People* (2006)



may be just the reading selection for a spooky campfire during the full moon. This CBC/NSTA Outstanding Science Trade Book "...introduces us to the fascinating world of rats. Necessary to medical breakthroughs, helpful in wartime, carrier of diseases, and a tasty delicacy—all of these describe this marvel of nature and true survivor."

All of June is dedicated to National Safety Month (www.nsc.org/nsm). You might want to reread one of NSTA's safety guides, such as *Inquiring Safely: A Guide for Middle School Science Teachers* (Kwan and Texley 2003) or *Investigating Safely: A Guide for High School Science Teachers* (Kwan, Texley, and Summers 2004). Safety guides are available for teachers from elementary through college levels.

Of course, you don't need an act of Congress to find a holiday. Wherever you go and plant your beach chair, you can celebrate yourself and your profession. NSTA Press has a great selection of books on the latest advances in teaching, including a second volume of innovative assessments: *Uncovering Student Ideas in Science, Volume 2* (Keeley, Eberly, and Tugel 2007). The ultimate self-help book for those whose profession keeps them on stage all the time is *The Art of Mingling: Proven Techniques for Mastering Any Room*, by Jeanne Martinet (2006).

No matter how much you've studied the history of science, you'll enjoy Joy Hakim's second edition to *The Story of Science—Newton at the Center* (2005). This book traces the work of astronomers, physicists, and chemists during the Renaissance. Hakim's writing style is light

yet perceptive; this book intended for secondary students can provide great reading for all ages. Reviewer Terri Cosentino says it's "full of facts and trivia, which both ignite the creative mind and fill in the gaps of my own knowledge about the history of science. It's enlightening and contains many 'ah-ha, that's why' moments." Also pick up the third addition to the Hakim book series, *Einstein Adds a New Dimension* (2007). The book provides a readable description of Einstein's work, interwoven with the discoveries of the "giants" upon whose shoulders he stood.

Beyond books

Ever wonder what would happen if you were to venture too close to a black hole? Neil deGrasse Tyson offers answers to this and other cosmic questions in his wide-ranging collection of essays, *Death by Black Hole: And Other Cosmic Quandaries* (2007). A high-profile astrophysicist and director of the world-famous Hayden Planetarium, Tyson is also a natural teacher who can blend content with humor. He communicates his infectious excitement about our universe in essays like "The Search for Life in the Universe," a



journey from the Earth's hot springs to the universe's farthest reaches, and "Hollywood Nights," a critique of movie directors' most spectacular scientific goofs. Tyson gives interesting and witty views about things you thought you knew (e.g., "Is the Sun yellow?"). After reading this entertaining collection, you will be able to stump everyone with the question, "Where on Earth can you stand closest to the stars?" If you thought the top of Everest, think again; and find the answer in this collection.

Summer can be a great time to catch up on periodical articles you might have missed during the school year. Tell the truth now, did you read all the articles in *The Science Teacher (TST)* you meant to? If not, pull out your back issues of *TST*; remember that all *TST* articles back to 1996 are available in fully searchable and printer-friendly form at www.nsta.org/highschool.

Speaking of periodicals, if you don't have the time to search for interesting articles, two collections do all the heavy lifting for you by selecting the best short science writing of the year. In *The Best American Science and Nature Writing 2006* (Greene and Folger 2006), editor Brian Greene has selected 25 important stories you might have missed, penned by some of the best science writers in America. For a competing collection, in *The Best American Science Writing 2006* (Gawande 2006) editor Atul Gawande uses a slightly different selection criterion: if a piece is "cool," it gets in. The 21 essays in this collection possess various aspects of coolness, including always-cool maverick scientists, way-cool weird science, and totally-cool oddball topics like the science of yawning and the cloning of pets. Definitely cool reading for a warm day at the beach.

So declare your own holiday and plan your own celebration. You can share your suggestions for good summer reading on the appropriate discussion board on the NSTA website (www.nsta.org). Bring your own book and we'll see you there! ■

Juliana Texley (j.texley@att.net) is a lead reviewer for NSTA Recommends.

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