



The Summer Books Issue 2014

Book Reviews by...

Jonathan Adams, Tim Boucher, Bud Cook, Susanna Danner, Bob Lalasz, Craig Leisher, Matt Miller, Peter Kareiva, Sheila Reddy, Charlotte Reemts, and John Sall

Garden at Sainte-Adresse, Claude Monet.
Courtesy of the Metropolitan Museum of
Art (www.metmuseum.org), OASC.

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Conservation

Our Most Enduring Legacy

***The Sixth Extinction: An Unnatural History.* By Elizabeth Kolbert. 2014. Henry Holt and Co. 319 pages.**

Reviewed by [Craig Leisher](#), senior social scientist, The Nature Conservancy

Who are the best environment writers working today? David Quammen? E. O. Wilson? New Yorker staff writer Elizabeth Kolbert is definitely on the short list.

Kolbert's new book makes the case for how the sixth wave of mass extinctions on earth is fundamentally different from the previous five. One species has succeeded so spectacularly that that it has changed the world forever: Us.

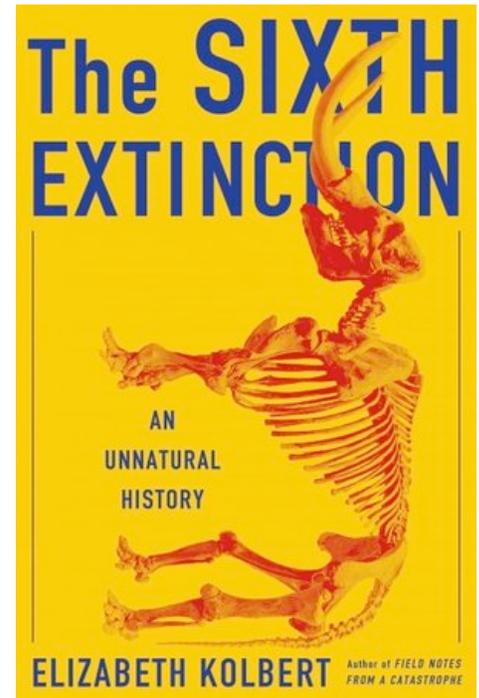
"Right now, in the amazing moment that to us counts as the present, we are deciding, without quite meaning to, which evolutionary pathways will remain open and which will be forever closed. No other creature has ever managed this, and it will, unfortunately, be our most enduring legacy."

The book covers a number of pending and actual extinctions such as the Sumatran rhino (related to the woolly rhinos of old) and Great auks (a penguin-like bird killed off in Iceland in 1821), but the best chapter is on *Homo neanderthalensis*.

This species appears to have evolved in Europe and is one of the proto humans that *Homo sapiens* drove to extinction. But its genes live on.

"Modern humans arrived in Europe around 40,000 years ago, and again and again, the archaeological record shows, as soon as they made their way to a region where Neanderthals were living, the Neanderthals in that region disappeared. Perhaps the Neanderthals were actively pursued, or perhaps they were just outcompeted. Either way their decline fits the familiar pattern, with one important (and unsettling) difference. Before humans finally did in the Neanderthals, they had sex with them. As a result of this interaction, most people alive today are slightly — up to four percent — Neanderthal."

How we know about this four percent is one of the best stories in a well-written and well-researched book. **SC**



Conservation

A Blueprint for Coexistence

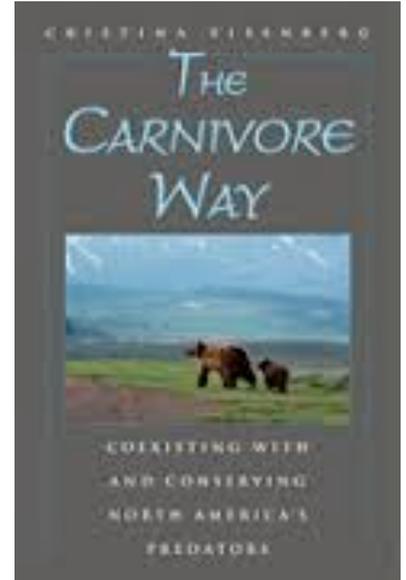
The Carnivore Way: Coexisting with and Conserving North America's Predators. By Cristina Eisenberg. Island Press, 2014. 308 pages.

Reviewed by [Matt Miller](#), deputy director of science communications, The Nature Conservancy

With a growing population, do we still have room for large and potentially dangerous carnivores? Can we coexist?

Biologist Cristina Eisenberg — who has contributed important research on wolves and trophic cascades — lays out a blueprint for coexistence in *The Carnivore Way*. She maintains that North America's imperiled carnivores — wolves, grizzlies, lynx, wolverine, mountain lion and jaguar — are as essential as fire for landscape health, and vital to our own values of wildness and wonder.

Eisenberg looks at the science to explore the effects of these predators on ecosystems, how people and predators can coexist, and how best to conserve these animals. A path of national parks and other public lands stretching from Mexico to Canada via the Rocky Mountains — what she calls the “carnivore way” — offers an incredible opportunity to preserve connectivity for these animals. She sketches a vision for linking these protected areas, and how conservationists could make them more resilient in the face of new development pressures and climate change. Along the way, she tells her own story — how a chance encounter with wolves in her backyard led to an accomplished academic career. Her direct field experience coupled with a complete review of the literature makes this an essential read for anyone who believes that country isn't truly wild, isn't whole, without large, toothy beasts. **SC**



Conservation Gambling Men

***The Bet: Paul Ehrlich, Julian Simon, and Our Gamble over Earth's Future.* By Paul Sabin. Yale University Press, 2013. 272 pages.**

Reviewed by [Marty Downs](#), associate director, science communications, The Nature Conservancy

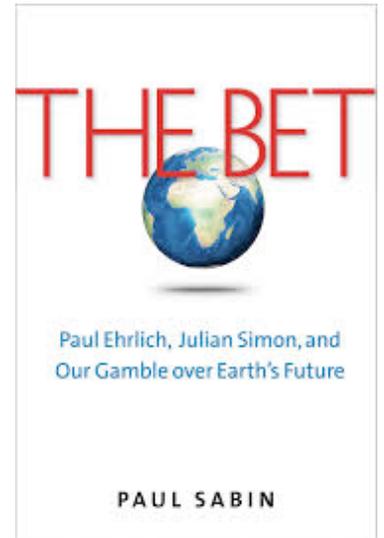
Through the lens of the famous 1980 wager between ecologist Paul Ehrlich and economist Julian Simon, Paul Sabin projects the successes and the foibles of the 20th century environmental movement onto the screen of the larger overwrought doomsaying; naïve faith in technological progress tempered with uncommon empathy for the disadvantaged.

If you're looking for a careful analysis of the bet itself, you'll have to be patient. It doesn't appear until the last quarter of the book. The \$1000 wager between Ehrlich (of *The Population Bomb* fame) and Simon, a professor of business administration and economics — on the price of five commodity metals over the decade from 1980-1990 — was intended to resolve a smoldering debate about the importance of physical resource limits for human well-being. If prices went up, it was evidence of scarcity at work. If they went down, it would represent the power of technological ingenuity and markets to find substitutes. As it turned out, prices went down, but the outcome proved little. Most other starting points they could have chosen would have yielded a different outcome.

The bet, it's clear, is merely a device to focus Sabin's exhaustive research on the personalities and issues involved. Stubbornness, ego, and unwavering commitment take center stage as Sabin recounts many incidents in which political theater and personal obstinacy buried any opportunity to reconcile the two views. Whether the reader is more sympathetic to the views of Ehrlich or Simon, it is hard to read the book without mourning the decades of potential progress lost to what comes across as rigid posturing.

Sabin sets up this kind of rivalry as a symptom — if not the cause — of our deeply polarized political culture. There's truth in that linkage, of course, but it also pays to remember how far we've come from the days of burning rivers, sulfurous smog, and unquestioning acceptance of DDT. Outrage and political theater are not, themselves, solutions. But we can see that far better in hindsight than in the 60s and 70s, when we seemed to be racing heedlessly toward annihilation.

The book left me looking backwards with a sense of embarrassment mixed with affection — as when recalling some cocky young version of myself. And it gave me far greater sympathy for the view that climate predictions are just the latest in a series of dire environmental warnings. The frequency of such warnings doesn't make them less true or valid — but it's easier to see how it could feel that way. **SC**



Conservation

A River Runs Through It

***Damming the Delaware: The Rise and Fall of Tocks Island Dam.* By Richard C. Albert. 2nd Edition, with new front and back matter. Pennsylvania State University Press. 2005. 224 pages**

Reviewed by [Bud Cook](#), Director, Northeastern Pennsylvania, The Nature Conservancy

In 1962, after a half-century of litigation among New York, Pennsylvania, New Jersey, and Delaware, Congress authorized the Tocks Island Dam and a National Recreation Area on the Delaware River, one of the major free-flowing rivers in the U.S. The four states had settled on Tocks as the lynchpin for future water resources management in the Delaware Basin, which provides water to 17 million people. As engineering studies progressed, the Corps of Engineers began acquiring parcels for the dam and a 37-mile long reservoir. It was a classic case of how not to manage an eminent domain project.

By 1970 the project area had become a war zone: the Corps condemned land, evicted farmers, but didn't demolish structures. Squatters from the "back to the land" movement occupied many of the houses. With essentially no police presence, there were many clashes between local people and squatters.

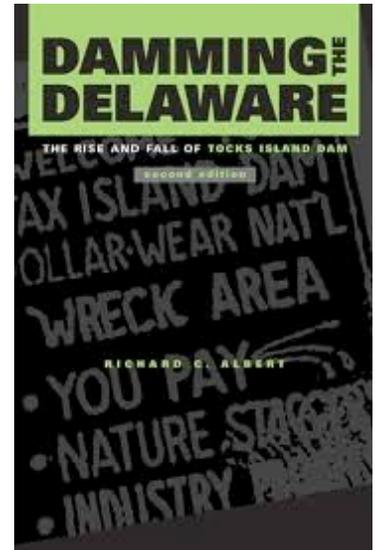
How did a group of subsistence farmers from a then-remote Appalachian region manage to beat back a project pushed by the Corps, four state governments, the Interior Department, Congress, seven power companies, and many chambers of commerce? This well researched, even-handed book tells the story.

Richard Albert, a hydrologist on the Delaware River Basin Commission staff from 1975 to 2000, also summarizes the ongoing technical debates and studies during the 25-year Tocks controversy. He later became staff scientist for the Delaware River Keeper Network and an advocate for a free-flowing Delaware River.

Tocks was always a dam in search of a purpose: flood control, recreation, hydro-power, water supply. David eventually wounded Goliath, winning many quasi-de-authorizations and deferrals beginning in 1972. DRBC found incremental solutions to the Basin's alternating problems of drought and flooding. But Goliath is not dead. The attitude that a free-flowing river is a wasted resource lives on.

I recommend this gem of a book to anyone involved in dam design, re-design, management or removal; or to anyone who wants to learn about a major, but largely forgotten, chapter in the history of the U.S. environmental movement.

Today the 70,000-acre Delaware Water Gap National Recreation Area is the most visited unit in the National Park system. A river runs through it, undammed. **SC**



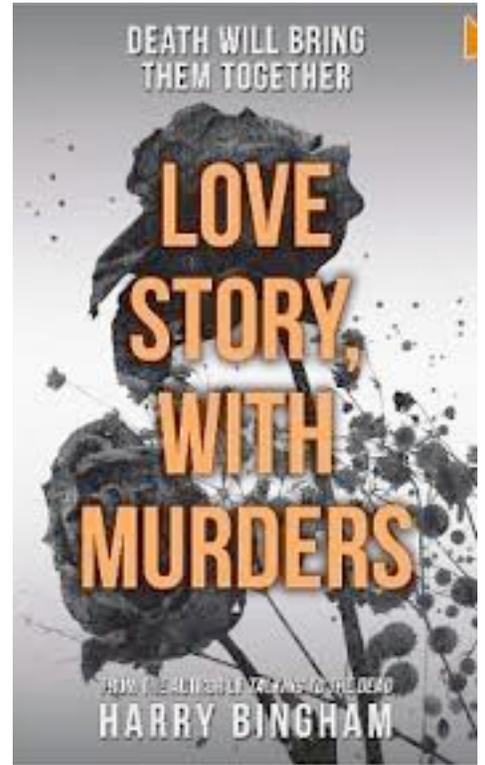
Fiction

We're Not on Baker Street Anymore

Love Story ,with Murders: A Novel. By Harry Bingham Delacorte Press, 2013. 400 pp.

Reviewed by [Bob Lalasz](#), director of science communications, The Nature Conservancy

The most interesting detective in crime fiction today (yes, she even beats out Benedict Cumberbatch's you-know-who) doesn't get that title because she grows her own pot, has no career ambition, insults grieving witnesses, can break your femur and jaw before you can blink, or has a notorious gangster for a father (if he is really her father). Nor is it because DC Fiona Griffiths of the Cardiff City police force thinks she can talk to the dead — I mean, who doesn't these days? No, Fiona is fascinating because she feels she actually is dead some of the time — a nasty and often fatal condition called Cotard's Syndrome which makes people delusional that they are putrefying, without a body or in fact, no longer alive. And her Cotard's, which is a lot better than it used to be, gives Fiona creepy, uncanny, almost necrophilic insights into the murders she's investigating.



In *Love Story*, the sequel to the debut Fiona novel *Talking with the Dead*, two murders have consumed the attention of Cardiff's finest — the body of a young woman found scattered about in garages, iceboxes and toolsheds throughout a quiet neighborhood, followed quickly by another diced body flung about the countryside. (Fiona finds the head of one, memorably, in a vat of motor oil.) Arms dealing conspiracies, duels between professional hit men, and a how-to on avoiding freezing to death while wearing nothing more than a T-shirt and a Peugeot are par for the course. But the best part is watching Fiona keep circling normality and then have the good sense to keep backing away. She likes putting things together too much — bodies, cases, uncomfortable truths — to ever really get there. **SC**

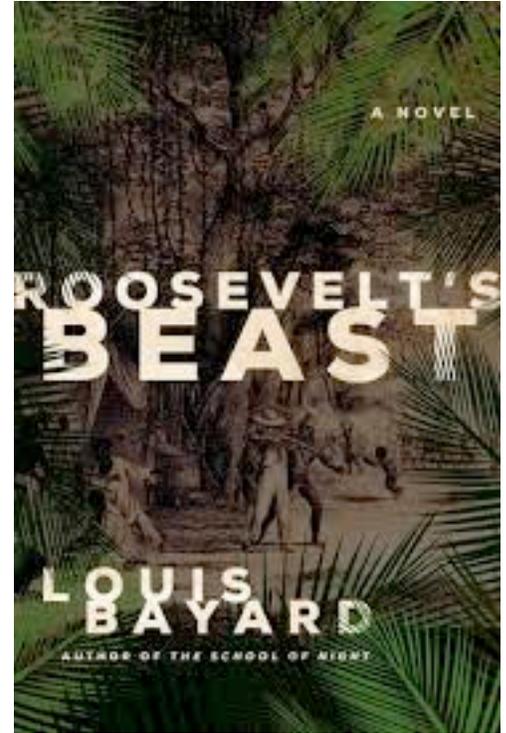
Fiction

Journey into Doubt

Roosevelt's Beast. By Louis Bayard. Henry Holt, 2014. 299 pages.

Reviewed by [Jonathan Adams](#)

In January, 1914, Theodore Roosevelt, his son, Kermit, a renowned Brazilian explorer named Cândido Rondon, and their crew set off from the tiny, jumbled settlement of Tapirapoan to map the course of the Rio da Dúvida, the River of Doubt. It was an act both perfectly fitting the former President's endless energy and yet also perfectly mad. He was, after all, 55 years old, two years past a failed run to recapture the White House, and casting about for something to do. Kermit was an even less likely candidate for the trip. Though he was a fine soldier as well as a hunter and a skilled engineer, he preferred French poetry to adventure and was engaged to be married shortly. The expedition seemed at times miserably ill-prepared, yet off they went into the Amazon.



To this point the novel hews closely to the actual events, as admirably recorded by Candace Millard in her book [The River of Doubt](#). But Bayard, author most recently of [The School of Night](#) and [Pale Blue Eye](#), does not wait long before veering from history to something far darker. The question that historians cannot answer is how the expedition, which travelled through the territory of the Cinta Larga, a tribe not known to welcome strangers, managed to emerge on the other side. *Roosevelt's Beast* provides the story, and a compellingly readable one it is. *Pale Blue Eye* centered on Edgar Allan Poe, and here Bayard draws from the master's skill with the fantastic and the macabre, with nods to Joseph Conrad and *Heart of Darkness* along the way.

Roosevelt's Beast is neither history nor natural history, despite Bayard's evident love of the archive and his long-ago stint as a writer for WWF. But he takes elements of both and twists them with linguistic and narrative gifts of a high order. Perhaps the most important twist of all: the emotional heart of the novel is not the Colonel, as the former President liked to be called, but his son, fragile yet resilient, with a good bit of TR's legendary backbone but a host of demons as well. As the expeditions leaves civilization behind, and Bayard leaved the historical record behind as well, it is clear we are in the hands of a master story teller. So enjoy the ride. **SC**

Fiction

Too Close to Home

Science in the Capitol Trilogy. By Kim Stanley Robinson
Forty Signs of Rain 2004. Bantam Books, 393 pages
Fifty Degrees Below. 2005. Bantam Books, 603 pages
Sixty Days and Counting. 2007. Bantam Books 543 pages

Reviewed by [Sarah Gottlieb](#), conservation planner, Georgia Chapter, The Nature Conservancy

Can you correctly identify the actual event vs. the fictional one?

A) Washington, DC floods, including flooding of the Metro system and complete washout of Rock Creek Park as a result of record-breaking rainfall coupled with a massive storm surge.

B) A massive storm causes New York City and the New Jersey coast to flood, including flooding of the NYC subway system and damaging or destroying 100,000 homes on Long Island.

A) Snow and ice, coupled with freezing temperatures, paralyze the Atlanta metro area, while temperatures dipped to -50°F in the midwest due to a Polar Vortex.

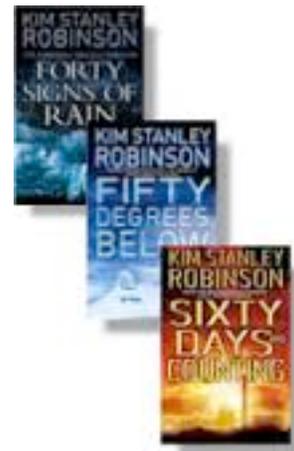
B) Freshwater flowing from the melting Greenland ice sheet causes the “Atlantic conveyor belt” to halt, plunging temperatures in the Mid-Atlantic to -50°F for months.

A) Due to historic drought, the snowpack in the Sierra Mountains is at 20% of historic average in early spring.

B) With global temperatures higher, winter precipitation in the Sierras falls as rain instead of snow, running off immediately, leaving minimal snowpack.

As a fan of speculative fiction, I’m always impressed when the events predicted by an author play out in reality WHILE I’m reading their books. In his verbose but highly readable trilogy, Kim Stanley Robinson weaves extreme weather events eerily similar to ones the U.S. has experienced recently (but after the books were written) into the backdrop of the daily and professional lives of a suite of characters involved in the science and politics of climate change in the early 21st century. He manages to throw in concise descriptions of scientific speculation about how earth’s systems will respond to massively increased carbon dioxide concentrations in the atmosphere, possible geo-engineering solutions to mitigate these impacts, as well as political and economic means to force national-scale conversion from our fossil-fueled lifestyle. As if that’s not enough, Robinson weaves in a spiritual thread through the plight of a nation of Nepalese exiles who become central to the lives of several of the main characters.

In all, this series is a level-headed presentation of the present and near future under the level of climate change we are already committed to, regardless of whether nations across the globe deliver only a [A2 SRES scenario or are able to pull off a B2](#). As the recently released 3rd National Climate Assessment makes clear, all of us will feel these changes, with varying degrees of disruptions to our lives depending on our personal choices, but sometimes at random. **SC**



Fiction

The Butterfly Effect

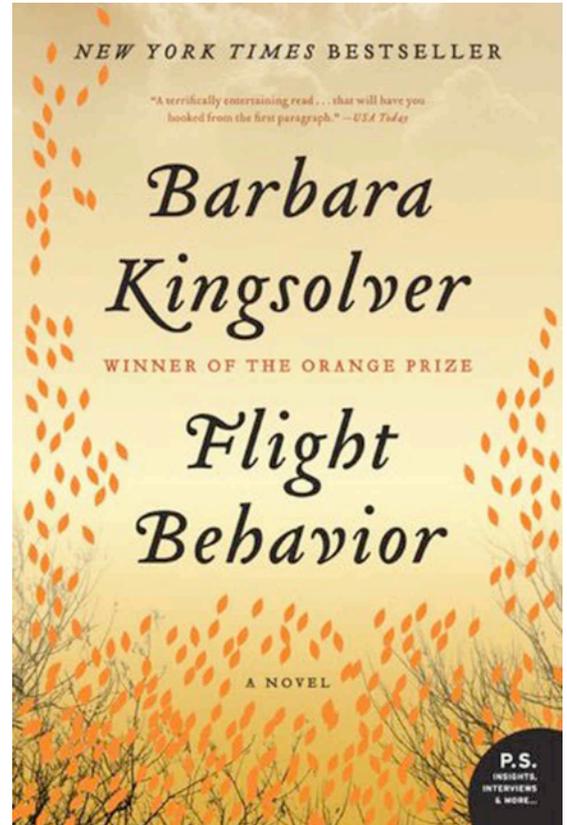
Flight Behavior: A Novel. By Barbara Kingsolver. Harper Perennial, 2013. 464 pages.

Reviewed by [Charlotte Reemts](#), research and monitoring ecologist, The Nature Conservancy.

What if climate change and logging destroyed the monarch butterfly's wintering habitat in Mexico, making the species' extinction imminent? What if a rogue group of monarchs started wintering on an old Christmas tree farm in the Appalachians instead? What if the owners of that farm faced bankruptcy due to the recession and needed to log the farm to pay back equipment loans?

This is the premise of *Flight Behavior*. Much of the novel focuses on the stay-at-home mom who discovers the butterflies and the monarch expert who comes to study them. The novel explains the impacts of climate change on global and local landscapes (while the monarch idea is fictional, all the other impacts are real or predicted). The book also explores the difficulty scientists face in explaining climate change to the media and society at large, how climate change will effect different levels of society, and even how science is practiced.

Although the novel includes potentially stereotypical characters, ranging from red-neck farmers to knitting hippies, Kingsolver manages to make them all seem like real people. As might be expected, the book includes a lot of science (some of the details of the monarch's life cycle and the study of butterflies were new to me), but everything is explained unobtrusively in the context of the story. I particularly liked the audiobook version, narrated by Kingsolver herself: listening to the contrast in accents between the Appalachian-born mom and the Caribbean-born scientist was a treat. **SC**



Fiction

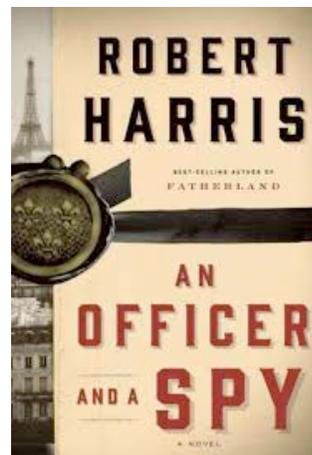
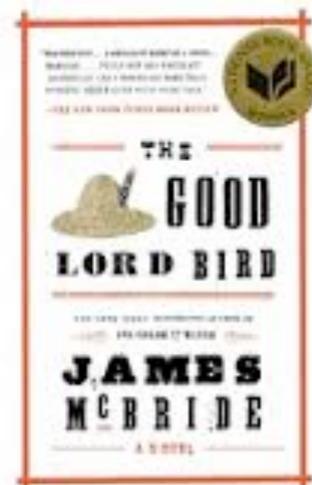
Twice-Told Tales

The Good Lord Bird. By James McBride. Knopf, 2013. 352 pages
An Officer and a Spy. By Robert Harris.

Reviewed by [Jonathan Adams](#)

These books have almost nothing in common. But I happened to read them back-to-back, and one thing struck me: both take well-known stories and make them compelling even though the outcomes are not in question, and they do so in entirely different ways. *The Good Lord Bird* (not to be confused with *The Race to Save the Lord God Bird*, which is about the Ivory Bill Woodpecker and is by TNC's own Phil Hoose) takes John Brown's assault on Harper's Ferry as its text and uses it as the basis for an exuberant, funny, troubling, and wise book. McBride's astonishing ability to capture the language of his narrator, an illiterate 10 year-old boy who spends most of the book pretending to be a girl, is worth the price of admission all by itself. I have no idea whether people born in Kansas Territory in 1850 actually spoke the way McBride writes, but after reading this book you would never convince me otherwise; McBride completely inhabits these characters, particularly the way they speak, and their voices resonate long after their story has been told.

Robert Harris takes a more conventional approach, but he also succeeds in crafting a story that manages to be suspenseful even though the outcome is never in doubt. While McBride gives John Brown quite a bit of time onstage, even though he is not in truth the main character, the main figure in *An Officer and a Spy*, Alfred Dreyfus, looms in the wings, making a fleeting early appearance and then disappearing to Devil's Island, to be heard from only in a few ghostly letters until the very end. The main figure is Major George Picquart, a loyal officer who only slowly begins to doubt the case against Dreyfus, and it is his transformation that gives the book its shape, and the narrative drive that keeps you turning the pages. With cameos from Emile Zola and other Dreyfusards, and effective portraits of Paris and North Africa, Harris makes the old story worth hearing again. **SC**



Science Fiction/Fantasy

A Dry Dystopia

Sand. By Hugh Howey. Baen Books, First published 2000.

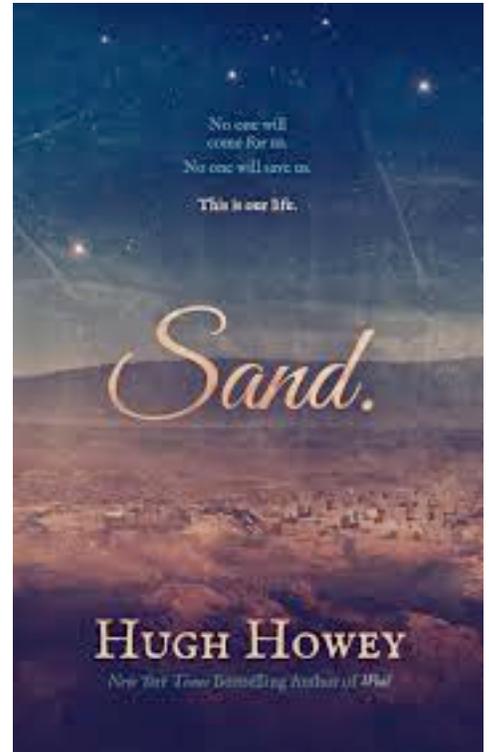
Reviewed by [Tim Boucher](#), The Nature Conservancy.

If science fiction is a reflection of how society (or at least an author) views the future, then Hugh Howey must have a pretty grim view of what is in store for us. Most sci-fi has humanity soaring into the heavens, overcoming physics, breaking through the light-speed barrier, exploring worlds far away, meeting other strange life-forms (and sometimes fighting them heroically), planet forming, and so forth. All inspiring stuff, giving us hope that one day we will leave our planet and conquer the universe.

Howey writes about a far more bleak future. His first blockbuster success was the Silo series (*Wool*, *Shift*, and *Dust*), a story of how humanity had destroyed the world and was forced underground, literally, to live in enormous silos, prisoners of their ancestors' crimes against the planet.

Howey continues on this dystopian theme with his newest novel, *Sand*. While not set underground, it's still dark – the old world is buried, shifting dunes and howling winds create a constant struggle against the environment (our old cities are buried deep in the sand), with unseen enemies looming over the horizon. This world of the future is a mix of new and old technology, and is a dry, desperate place. People live on the edge (of both the desert and life), struggling in the harsh world just for survival.

While this might sound a bit depressing, Howey's character development makes the story come alive, providing hints about their past, dreams for the future, everyday thoughts and struggles that make them seem real. Time will tell whether this series (hopefully!) is as good as Silo, but regardless, Howey certainly has set the publishing world on end by being a successful independent publisher. **SC**



Science Fiction/Fantasy

Robot Nobility

Saga. By Brian K. Vaughan, illustrated by Fiona Staples. Image Comics 2012. 160 pages.

Reviewed by [Sus Danner](#), director of protection, Idaho Chapter, The Nature Conservancy

A world of robot nobility, a disemboweled ghost babysitter, a giant green lie-detector cat, bounty hunters and a Montagues-and-Capulets story in outer space. That's what you are missing if you're not reading my current favorite comic series, "Saga."

The series is written by Brian K. Vaughan, who is well-known for his (also amazing) series, *Y: The Last Man*, which details how society changes when a disease wipes out all male mammals, including humans, on earth. *Saga* is illustrated by Fiona Staples, whose imaginative and nuanced artwork looks like no-one else's. She has captured the look and feel of an utterly alien world that nonetheless seems real enough to smell and touch. In the war-ravaged universe of *Saga*, our hero and heroine – new parents of a mixed-race baby girl whose existence threatens to expose the fallacy of the reasons for war – are in flight from bounty hunters (including a spider-legged armless woman in a black crêpe dress), an epauletted robot prince with PTSD, and the hero's warrior parents.

Saga won three Eisner Awards, the highest accolade in comics, in 2013. Three trades collecting the first 18 issues have been released. They are some of the only comics I own, and, along with *A Game of Thrones* they are in heavy rotation in my lending library. **SC**



Business

On Profit and Conservation

***A Better World, Inc.: How Companies Profit By Solving Global Problems...Where Governments Cannot.* By Alice Korngold. Penguin Books, 2011. 336 pages.**

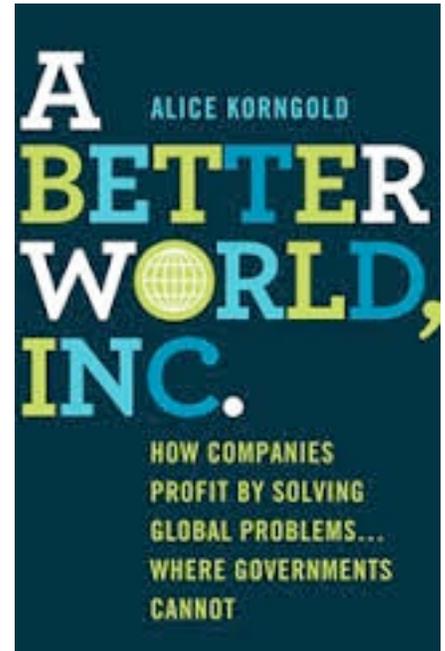
Reviewed by [Sheila Reddy](#), senior scientist, The Nature Conservancy

It's widely assumed that the role of business is to efficiently provide goods to consumers and profits to shareholders, while the role of government is to provide public goods to society. However, the complexity and scope of global challenges are causing many to question this assumption, most recently Alice Korngold.

Korngold argues that corporations are better equipped to address global challenges than governments because they have global reach, high organizational capacity, large human and financial capital, a need to respond to stakeholders, and profit incentives that are often aligned with the public good. Yet, the real strength of Korngold's book lies in the large number of well researched but bite-sized case studies of businesses addressing problems of economic development, climate change and energy, ecosystems, education, healthcare, and human rights. This collection of rough-cut, real world experiences is a refreshing contribution to a space that has its fair share of polished conceptual frameworks.

Take Korngold's story of Johnson Controls. The company's founder invented the thermostat and now it has a business making buildings more energy efficient. Through its Institute for Building Efficiency and high-profile demonstrations such as the retrofit of the Empire State Building with the Clinton Global Initiative, Johnson Controls provides a blueprint for other businesses and governments to advance energy efficient building. As result, the company is growing a market for its products and making an impact on climate change and energy use.

Korngold's collection of stories of profit-motivation resulting in win-wins for business and society or the environment, including the TNC-Dow Collaboration, lend support to orthodox theories of Corporate Social Responsibility (CSR). New political economic theories of CSR, however, suggest that these stories may be part of a transition into a new model of global governance where corporations take on responsibilities for



regulation and the provision of public goods. Although Korngold does not address these theories directly, her statement that “companies are the likeliest institutions to build a better world” suggests some support.

This proposed new role for business is exciting in its promise for a better world, but skeptics argue that it further enhances the power of corporations and diminishes the power of civil society or government. Yet, one need only read beyond the cover of Korngold’s book to see that she believes that civil society organizations (e.g., NGOs and nonprofits) and government are critical and powerful partners for corporations. These partners, like The Nature Conservancy, not only provide expertise, stakeholder representation, and mission, they also create a sort of system of checks and balances.

Bottom-line: Korngold’s book is an important read for any one interested in learning more about how corporate partnerships could help conservation organizations address global conservation challenges. **SC**

Business/Public Policy

Taming the Leviathan

The Fourth Revolution: The Global Race to Reinvent the State. By John Micklethwait and Adrian Wooldridge. Penguin Press, 2014. 320 pages.

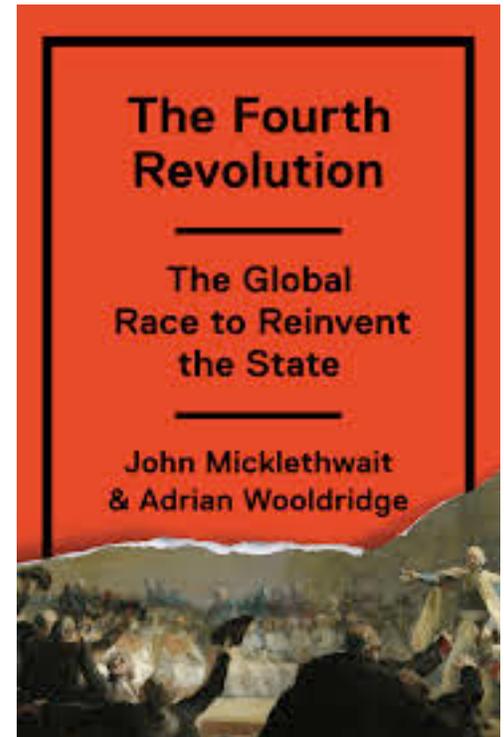
Reviewed by [Peter Kareiva](#), chief scientist, The Nature Conservancy

Everyone who does conservation knows that government matters. What we do not realize is that ALL existing government models are in some deep and major ways abject failures. This book makes that clear. The US Federal Government has a lower approval rating now (17%) than King George III had at the start of the American Revolution.

When I think about government, I often fall into cynicism and conclude things will never change. Micklethwait and Wooldridge have convinced me to abandon that despair and look forward to a revolution in government — driven by some trends that simply cannot continue. What cannot continue is the bloat of government. That bloat is both regulatory and fiscal. In the last one hundred years government spending in the world's richest economies has gone from on average 10% of the GDP to 47% of the GDP. And as for regulatory bloat, the authors note that American hospitals must adhere to "140,000 codes for the ailments they treat, including one for being hit by a turtle." Sweden, China, Singapore, USA, and UK are featured, as well as some of the great thinkers of the past (Thomas Hobbes, John Stuart Mill, John Maynard Keynes, etc.) who posed the question: what is the function of government? The key observation is that the leviathan model of government, must be tamed — how that might actually happen is the central question taken up in this book.

While taming "big government" might seem like a right wing view, this book makes clear it is both the left and the right that have supported big government, and it is both the left and the right that now see some serious problems with the leviathan.

And lastly, little in conservation happens without some involvement of government, whether it is regulations, tax incentives, subsidies, or decree. We should all be thinking about the role of government, not in our usual "policy-by-policy" way, but more fundamentally. I often read really good books twice. This one I read three times. **SC**



Science

Our Wonderful, Irrational Brains

The Unpersuadables: Adventures with the Enemies of Science. By Will Storr. Overlook, 2014. 416 pages.

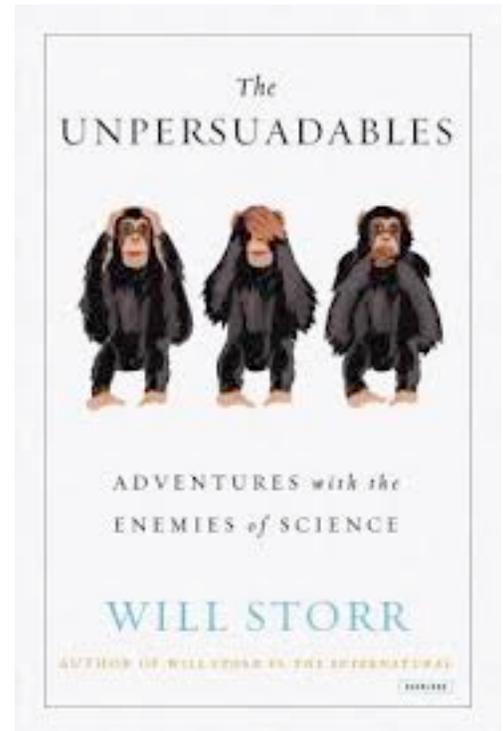
Reviewed by [Matt Miller](#), deputy director of science communications, The Nature Conservancy

Do you have that uncle with a Ph.D. in physics who believes climate change is a big hoax? And who remains unmoved by your reasonable and evidence-based arguments? Why is that?

Journalist Will Storr dives deep into this very topic in this thoughtful and thought-provoking book, spending quality time with people who hold unscientific, strange and even repugnant beliefs. He talks to climate skeptics, digs fossils with a man who believes humans frolicked with dinosaurs, interviews psychologists who are convinced of vast baby-eating cult conspiracy. He even tours World War II sites with a band of Holocaust deniers.

Along the way, Storr shares insights on how our brain works and why people believe such strange things. Unlike Richard Dawkins or Sam Harris, he doesn't mock people who would, admittedly, be easy to mock. Instead, he treats them with kindness and generosity.

And here's why: when Storr delves into the science, he finds that none of us are strictly rational beings. We all write stories in our head, and we all can be prone to finding the evidence that best fits our worldviews. That includes the author, and me, and you. That knowledge should rightly cause us to be skeptical, but it should also make us a little more generous towards those who believe differently. If you care about science communications, read this book. It's a compelling account of some truly unusual characters. It's also a great think piece on our wonderful, irrational brains. **SC**



Science

Charismatic Microfauna

***The Amoeba in the Room: Lives of the Microbes.* By Nicholas P. Money, Oxford University Press, 2014. 240 pages.**

Reviewed by [John Sall](#), TNC trustee and former TNC board member

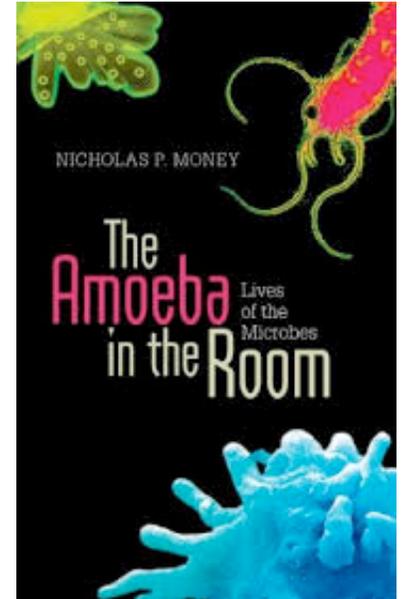
With this book, the little guys get some due attention. We see biology written all the time with plants and animals. We see biology written large with ecosystems. We see biology written very, very small with molecular biology. Now we need to pay more attention to the small, the microbes, the protists, like the Amoeba. Did you know that the *Amoeba proteus* genome is a hundred times bigger than ours? The *Polychaos dubium* is even twice that size (I had to look up that name to make sure it wasn't a joke!).

The point is that the microbiome is not just important, it is most of life of earth. Life started here, and will end here.

Even in ourselves there are ten times as many “alien” cells as human cells, as you have heard recently from the the [Human Microbiome Project](#). The health of our microbes is important for our health and will become an important part of medical therapy.

The Amoeba in the Room book begins with a tour of microbial variations. We meet the chimeric Russian doll of a microbe, the Cryptomonas, with its multiple nesting of nuclear membranes with four separate genomes. We meet the Haptoglossa that sports a microbial gun cell that shoots darts into nematodes.

After a chapter on the history of microbiology from Robert Hooke's era, we come to the chapter on the marine microbiome. The cyanobacteria Prochlorococcus and its marine neighbors are “responsible for half of the biological uptake of carbon dioxide on earth” and for much of the oxygen freed into the atmosphere. Ocean chemistry becomes an important issue. The marine chapter is followed by a chapter on dirt and water — each gram of rich forest soil contains around 100 million bacteria. In the next chapter we learn about aerobiology, the microbes in the air. Then the human microbiome is covered, the topic of much recent news.



A chapter on extremophile microbiome covers some useful discoveries. For example, the PCR that enabled shotgun genome sequencing uses enzymes from the “Taq” archaea discovered in Yellowstone hot springs. Radiation-tolerant microbes like *Deinococcus*, which can be found living inside nuclear reactor vessels, are leading to new ideas about DNA repair. Fans of extremophiles should also read the book *Weird Life* by David Toomey.

The last chapter “New Jerusalem” is the heart of the book in both senses, an essay on changing the culture of biology to emphasize the micro over the macro. “Ecology cannot be taught any more without considering the importance of microorganisms.”

The book quotes Tom Curtis: “If the last blue whale choked to death on the last panda, it would be disastrous but not the end of the world. But if we accidentally poisoned the last two species of ammonia-oxidizers, it would be another matter. It could be happening now and we wouldn’t even know.”

The microbiome is most of life on earth. Through the ages it has been an unknown, much like in physics where dark matter and dark energy make up most of the universe. Now its secrets are being discovered. Let’s become more aware of its importance. **SC**

Science Thin Slicers

***Blink: The Power of Thinking Without Thinking.* By Malcolm Gladwell. Back Bay Books. 2007. 296 pages.**

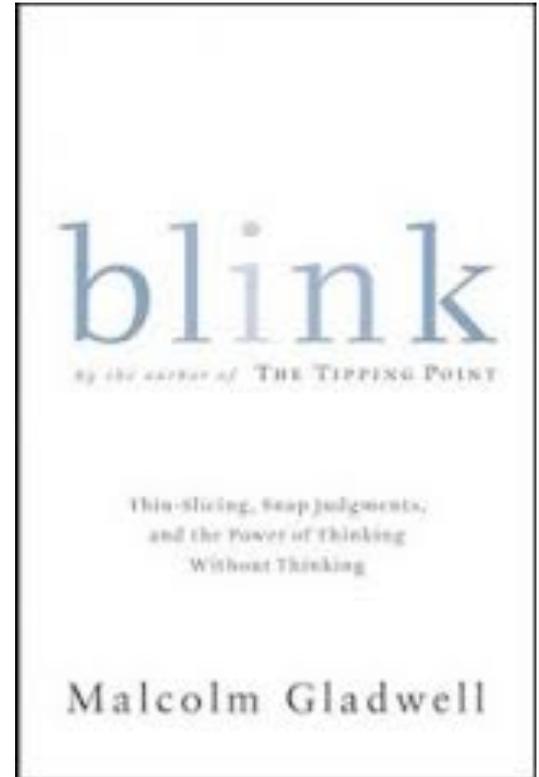
Reviewed by [Michael Pressman](#), director of habitat protection, The Nature Conservancy in Minnesota, North Dakota, and South Dakota.

Gladwell is a masterful story teller – combining psychological research, seemingly disparate stories, and a unique ability to weave them all together. In *Blink*, Gladwell carefully documents the science behind trusting your gut. He points out how talented decision makers “thin slice” — instantly sorting through myriad information to focus on data most critical to the decision at hand.

Gladwell shows how hard-to-access parts of our brains work to make the right choices in hidden ways that are sometimes hard to explain to ourselves, let alone others. He warns us against data analysis paralysis, effectively using case studies and psychological research to show how too much information leads to worse decisions — diverting our focus from the most important variables.

Gladwell also admonishes us to be cautious. Effective thin-slicers are experts in their field such as “the tennis coach who knows when a player will double-fault before the racket even makes contact with the ball.” Gladwell also warns that scientific evidence notwithstanding, trusting your gut can sometimes be dangerous, such as when NYC police officers missed key signals right before shooting Amadou Diallo. And he illustrates how prejudices we all carry lead to unfair decisions, such as those that kept women out of key orchestral roles for generations until blind auditions were introduced.

Approaching the conclusion of *Blink*, I was eager to see how he tied it all together. But alas, my love affair with this book remains unrequited. It’s a fun read with great insights, delivered by a brilliant storyteller. But I found myself wanting a more analytical, classic business management book style conclusion that tells me five key steps to trust my gut, while watching out for confirmation bias and avoiding the pitfalls of exhaustively-researched mistakes like New Coke. But that would be the overly analytical approach I was hoping this book would cure. **SC**



Memoir

An Unflinching Exploration

It Runs in the Family. By Richard Manning. St. Martin's Press, 2013. 307 pages.

Reviewed by [Matt Miller](#), deputy director of science communications, The Nature Conservancy

I have never quite understood why more conservationists don't know Richard Manning. To my mind, he's our best environmental reporter. His book *Grasslands* is a beautiful page turner on a lost habitat – and how we might regain it. *Against the Grain* and *Food's Frontier* are important critiques of industrial-scale agriculture.

It Runs in the Family is a bit of a departure for Manning — his memoir of growing up in a fundamentalist Christian family and how journalism became a refuge. It is a sledge hammer of a book, an unflinching exploration of religious and political extremism, abuse, environmental devastation and redemption. It is at times perhaps too ambitious, covering so many big topics in one book. But that is forgivable in this case, because Manning is a hell of a writer. His sentences roar. If you love the language, love great writing, you'll savor this memoir, even when it's full of dismay and rage. We need more writers this tough and uncompromising. Read this, and then read everything Manning has written. You won't be disappointed. **SC**

