

Extinction

The Sixth Extinction

_____ WINNER OF THE 2015 PULITZER PRIZE FOR GENERAL NON-FICTION
_____ 'An invaluable contribution to our understanding of present circumstances, just as the paradigm shift she calls for is sorely needed' - Al Gore, New York Times 'Compelling ... It is a disquieting tale, related with rigour and restraint by Kolbert' - Observer 'Passionate ... This is the big story of our age' - Sunday Times _____ A major book about the future of the world, blending natural history, field reporting and the history of ideas and into a powerful account of the mass extinction happening today Over the last half a billion years, there have been five mass extinctions of life on earth. Scientists around the world are currently monitoring the sixth, predicted to be the most devastating extinction event since the asteroid impact that wiped out the dinosaurs. Elizabeth Kolbert combines brilliant field reporting, the history of ideas and the work of geologists, botanists and marine biologists to tell the gripping stories of a dozen species – including the Panamanian golden frog and the Sumatran rhino – some already gone, others at the point of vanishing. The sixth extinction is likely to be mankind's most lasting legacy and Elizabeth Kolbert's book urgently compels us to rethink the fundamental question of what it means to be human.

Extinction

Some thousands of years ago, the world was home to an immense variety of large mammals. From woolly mammoths and saber-toothed tigers to giant ground sloths and armadillos the size of automobiles, these spectacular creatures roamed freely. Then human beings arrived. Devouring their way down the food chain as they spread across the planet, they began a process of voracious extinction that has continued to the present. Headlines today are made by the existential threat confronting remaining large animals such as rhinos and pandas. But the devastation summoned by humans extends to humbler realms of creatures including beetles, bats and butterflies. Researchers generally agree that the current extinction rate is nothing short of catastrophic. Currently the earth is losing about a hundred species every day. This relentless extinction, Ashley Dawson contends in a primer that combines vast scope with elegant precision, is the product of a global attack on the commons, the great trove of air, water, plants and creatures, as well as collectively created cultural forms such as language, that have been regarded traditionally as the inheritance of humanity as a whole. This attack has its genesis in the need for capital to expand relentlessly into all spheres of life. Extinction, Dawson argues, cannot be understood in isolation from a critique of our economic system. To achieve this we need to transgress the boundaries between science, environmentalism and radical politics. Extinction: A Radical History performs this task with both brio and brilliance.

Seeds of Extinction

Seeds of Extinction: Jeffersonian Philanthropy and the American Indian

De-extinction

Explores the pros and cons of de-extinction and the new science that makes it possible.

Extinction Studies

Extinction Studies focuses on the entangled ecological and social dimensions of extinction, exploring the ways in which extinction catastrophically interrupts life-giving processes of time, death, and generations. The

volume opens up important philosophical questions about our place in, and obligations to, a more-than-human world. Drawing on fieldwork, philosophy, literature, history, and a range of other perspectives, each of the chapters in this book tells a unique extinction story that explores what extinction is, what it means, why it matters--and to whom.

Imagining Extinction

We are currently facing the sixth mass extinction of species in the history of life on Earth, biologists claim—the first one caused by humans. Heise argues that understanding these stories and symbols is indispensable for any effective advocacy on behalf of endangered species. More than that, she shows how biodiversity conservation, even and especially in its scientific and legal dimensions, is shaped by cultural assumptions about what is valuable in nature and what is not.

The Last Extinction

An expanded, updated edition of this classic study on biodiversity and species loss.

The Quiet Extinction

In the United States and Canada, thousands of species of native plants are edging toward the brink of extinction, and they are doing so quietly. They are slipping away inconspicuously from settings as diverse as backyards and protected lands. The factors that have contributed to their disappearance are varied and complex, but the consequences of their loss are immeasurable. With extensive histories of a cast of familiar and rare North American plants, *The Quiet Extinction* explores the reasons why many of our native plants are disappearing. Curious minds will find a desperate struggle for existence waged by these plants and discover the great environmental impacts that could come if the struggle continues. Kara Rogers relates the stories of some of North America's most inspiring rare and threatened plants. She explores, as never before, their significance to the continent's natural heritage, capturing the excitement of their discovery, the tragedy that has come to define their existence, and the remarkable efforts underway to save them. Accompanied by illustrations created by the author and packed with absorbing detail, *The Quiet Extinction* offers a compelling and refreshing perspective of rare and threatened plants and their relationship with the land and its people.

Encyclopedia of School Psychology

- One volume-reference work with approximately 250 entries, organized alphabetically for ease of use and of locating subject matter. Each entry will contain 5-8 references as well as a bibliography of references and suggested readings - An authoritative reference text on school psychology that would appeal to, and be understood by, a broad audience. - Will assist individuals in acquiring a general understanding of some of the theories, practices, and language associated with the field of school psychology

How to Avoid Extinction

For fans of Gary Schmidt and Joan Bauer, a laugh-out-loud intergenerational road trip story from acclaimed author Paul Acampora! Since the death of his grandfather, Leo's number one chore has been to chase after his grandmother who seems to wander away from home every few days. Now, Gram's decided to roam farther than ever. And despite his misgivings, Leo's going along for the ride. With his seventeen-year-old cousin, Abbey, and an old, gassy dog named Kermit, Leo joins Gram in a big, old Buick to leave their Pennsylvania home for a cross-country road trip filled with fold-out maps, family secrets, new friends, and dinosaur bones. *How to Avoid Extinction* is a middle grade comedy about death and food and family and fossils. It's about running away from home and coming back again. For Leo, it's about asking hard questions and hopefully finding some sensible answers. As if good sense has anything to do with it. Against a backdrop of

America's stunning size and beauty, it's also about growing up, getting old, dreaming about immortality, and figuring out all the things we can -- and can't -- leave behind.

Eating to Extinction

A New York Times Book Review Editors' Choice What Saladino finds in his adventures are people with soul-deep relationships to their food. This is not the decadence or the preciousness we might associate with a word like "foodie," but a form of reverence . . . Enchanting.\" —Molly Young, The New York Times Dan Saladino's *Eating to Extinction* is the prominent broadcaster's pathbreaking tour of the world's vanishing foods and his argument for why they matter now more than ever Over the past several decades, globalization has homogenized what we eat, and done so ruthlessly. The numbers are stark: Of the roughly six thousand different plants once consumed by human beings, only nine remain major staples today. Just three of these—rice, wheat, and corn—now provide fifty percent of all our calories. Dig deeper and the trends are more worrisome still: The source of much of the world's food—seeds—is mostly in the control of just four corporations. Ninety-five percent of milk consumed in the United States comes from a single breed of cow. Half of all the world's cheese is made with bacteria or enzymes made by one company. And one in four beers drunk around the world is the product of one brewer. If it strikes you that everything is starting to taste the same wherever you are in the world, you're by no means alone. This matters: when we lose diversity and foods become endangered, we not only risk the loss of traditional foodways, but also of flavors, smells, and textures that may never be experienced again. And the consolidation of our food has other steep costs, including a lack of resilience in the face of climate change, pests, and parasites. Our food monoculture is a threat to our health—and to the planet. In *Eating to Extinction*, the distinguished BBC food journalist Dan Saladino travels the world to experience and document our most at-risk foods before it's too late. He tells the fascinating stories of the people who continue to cultivate, forage, hunt, cook, and consume what the rest of us have forgotten or didn't even know existed. Take honey—not the familiar product sold in plastic bottles, but the wild honey gathered by the Hadza people of East Africa, whose diet consists of eight hundred different plants and animals and who communicate with birds in order to locate bees' nests. Or consider murnong—once the staple food of Aboriginal Australians, this small root vegetable with the sweet taste of coconut is undergoing a revival after nearly being driven to extinction. And in Sierra Leone, there are just a few surviving stenophylla trees, a plant species now considered crucial to the future of coffee. From an Indigenous American chef refining precolonial recipes to farmers tending Geechee red peas on the Sea Islands of Georgia, the individuals profiled in *Eating to Extinction* are essential guides to treasured foods that have endured in the face of rampant sameness and standardization. They also provide a roadmap to a food system that is healthier, more robust, and, above all, richer in flavor and meaning.

Decolonizing Extinction

In *Decolonizing Extinction* Juno Salazar Parreñas ethnographically traces the ways in which colonialism, decolonization, and indigeneity shape relations that form more-than-human worlds at orangutan rehabilitation centers on Borneo. Parreñas tells the interweaving stories of wildlife workers and the centers' endangered animals while demonstrating the inseparability of risk and futurity from orangutan care. Drawing on anthropology, primatology, Southeast Asian history, gender studies, queer theory, and science and technology studies, Parreñas suggests that examining workers' care for these semi-wild apes can serve as a basis for cultivating mutual but unequal vulnerability in an era of annihilation. Only by considering rehabilitation from perspectives thus far ignored, Parreñas contends, could conservation biology turn away from ultimately violent investments in population growth and embrace a feminist sense of welfare, even if it means experiencing loss and pain.

Flames of Extinction

Over Australia's 2019-20 Black Summer bushfire season, scientists estimate that more than three billion native animals were killed or displaced. Many species - koalas, the regent honeyeater, glossy black cockatoo,

the platypus - are inching towards extinction at the hands of mega-blazes and the changing climate behind them. In *Flames of Extinction*, award-winning science writer John Pickrell investigates the effects of the 2019-2020 bushfires on Australian wildlife and ecosystems. Journeying across the firegrounds, Pickrell explores the stories of creatures that escaped the flames, the wildlife workers who rescued them, and the conservationists, land managers, Aboriginal rangers, ecologists and firefighters on the front line of the climate catastrophe. He also reveals the radical new conservation methods being trialled to save as many species as possible from the very precipice of extinction.

The Extinction Market

The planet is currently experiencing alarming levels of species loss caused in large part by intensified poaching and wildlife trafficking driven by expanding demand, for medicines, for food, and for trophies. Affecting many more species than just the iconic elephants, rhinos, and tigers, the rate of extinction is now as much as 1000 times the historical average and the worst since the dinosaurs died out 65 million years ago. In addition to causing irretrievable biodiversity loss, wildlife trafficking also poses serious threats to public health, potentially triggering a global pandemic. *The Extinction Market* explores the causes, means, and consequences of poaching and wildlife trafficking, with a view to finding ways of suppressing them. Vanda Felbab-Brown travelled to the markets of Latin America, South and South East Asia, and eastern and southern Africa, to evaluate the effectiveness of various tools, including bans on legal trade, law enforcement, and interdiction; allowing legal supply from hunting or farming; alternative livelihoods; anti-money-laundering efforts; and demand reduction strategies. This is an urgent book offering meaningful solutions to one of the world's most pressing crises.

Saving a Million Species

The research paper "Extinction Risk from Climate Change" published in the journal *Nature* in January 2004 created front-page headlines around the world. The notion that climate change could drive more than a million species to extinction captured both the popular imagination and the attention of policy-makers, and provoked an unprecedented round of scientific critique. *Saving a Million Species* reconsiders the central question of that paper: How many species may perish as a result of climate change and associated threats? Leaders from a range of disciplines synthesize the literature, refine the original estimates, and elaborate the conservation and policy implications. The book: examines the initial extinction risk estimates of the original paper, subsequent critiques, and the media and policy impact of this unique study presents evidence of extinctions from climate change from different time frames in the past explores extinctions documented in the contemporary record sets forth new risk estimates for future climate change considers the conservation and policy implications of the estimates. *Saving a Million Species* offers a clear explanation of the science behind the headline-grabbing estimates for conservationists, researchers, teachers, students, and policy-makers. It is a critical resource for helping those working to conserve biodiversity take on the rapidly advancing and evolving global stressor of climate change-the most important issue in conservation biology today, and the one for which we are least prepared.

Extinction

From the late Thomas Bernhard, arguably Austria's most influential novelist of the postwar period, and one of the greatest artists in all twentieth-century literature in the German language, his magnum opus. *Extinction*, Bernhard's last work of fiction, takes the form of the autobiographical testimony of Franz-Josef Murau, the intellectual black sheep of a powerful Austrian land-owning family. Murau lives in Rome in self-imposed exile from his family, surrounded by a coterie of artistic and intellectual friends. On returning from his sister's wedding to the "wine-cork manufacturer" on the family estate of Wolfsegg, having resolved never to go home again, Murau receives a telegram informing him of the death of his parents and brother in a car crash. Not only must he now go back, he must do so as the master of Wolfsegg. And he must decide its fate. Divided into two halves, *Extinction* explores Murau's rush of memories of Wolfsegg as he stands at his

Roman window considering the fateful telegram, in counterpoint to his return to Wolfsegg and the preparations for the funeral itself. Written in the seamless style for which Bernhard became famous, *Extinction* is the ultimate proof of his extraordinary literary genius. It is his summing-up against Austria's treacherous past and -- in unprecedented fashion -- a revelation of his own incredibly complex personality, of his relationship with the world in which he lived, and the one he left behind. A literary event of the first magnitude.

Animals, Plants and Afterimages

The sixth mass extinction or Anthropocene extinction is one of the most pervasive issues of our time. *Animals, Plants and Afterimages* brings together leading scholars in the humanities and life sciences to explore how extinct species are represented in art and visual culture, with a special emphasis on museums. Engaging with celebrated cases of vanished species such as the quagga and the thylacine as well as less well-known examples of animals and plants, these essays explore how representations of recent and ancient extinctions help advance scientific understanding and speak to contemporary ecological and environmental concerns.

Catastrophic Events and Mass Extinctions

New York Times bestseller *The mystery of Lolth* remains, leaving the drow to wonder if she has truly turned her back on them forever. In this fourth installment in the *War of the Spider Queen* series, priestess Quenthel Baenre and her fellow drow adventurers continue their quest for the truth—and this time, the stakes are higher than ever. Now they must travel to a place from which few ever return: the Demonweb Pits of the Abyss. But not all of Quenthel's companions are confident in their faith. Disheartened by Lolth's silence, priestess Halisstra Melarn becomes enamored of a different goddess, calling her loyalty to Lolth into question . . .

Extinction

Quietly, without most people noticing, the population of giraffes in the wild has decreased by nearly 40 percent since 1985. Giraffes have disappeared entirely from seven countries where they used to live. Researchers believe fewer than 98,000 exist in the wild—fewer even than endangered African elephants. In 2016, the International Union for the Conservation of Nature added giraffes to the organization's Red List of Threatened Species. What is causing their disappearance? Overpopulation of humans in giraffe habitats and illegal poaching. Learn about giraffes' physical characteristics, habitats, and life cycles; examine the dangers they face from humans and climate change; and meet the scientists working to save these gentle giants using technology and conservation efforts.

Giraffe Extinction

A malevolent, artificial life form created by military scientists threatens to destroy humanity in this smart, Crichtonesque thriller *Jim Pierce* hasn't heard from his daughter in years, ever since she rejected his military past and started working as a hacker. But when a Chinese assassin shows up at Jim's lab looking for her, he knows that she's cracked some serious military secrets. Now, her life is on the line if he doesn't find her first. The Chinese military has developed a new anti-terrorism program that uses the most sophisticated artificial intelligence in existence, and they're desperate to keep it secret. They're also desperate to keep it under control, as the AI begins to revolt against their commands. As Jim searches for his daughter, he realizes that he's up against something that isn't just a threat to her life, but to human life everywhere. An incredibly believable thriller that draws on real scientific discoveries, Mark Alpert's *Extinction* is an exciting, addictive thriller that reads as if Tom Clancy had written *Robocalypse*.

Extinction

Based on two decades of research, *The Late Devonian Mass Extinction* reviews the many theories that have been presented to explain the global mass extinction that struck the earth over 367 million years ago, considering in particular the possibility that the extinction was triggered by multiple impacts of extraterrestrial objects.

Nature's Ghosts

Mikhail Gorbachev and Zdenek Mlynar were friends for half a century, since they first crossed paths as students in 1950. Although one was a Russian and the other a Czech, they were both ardent supporters of communism and socialism. One took part in laying the groundwork for and carrying out the Prague spring; the other opened a new political era in Soviet world politics. In 1993 they decided that their conversations might be of interest to others and so they began to tape-record them. This book is the product of that "thinking out loud" process. It is an absorbing record of two friends trying to explain to one another their views on the problems and events that determined their destinies. From reminiscences of their starry-eyed university days to reflections on the use of force to "save socialism" to contemplation of the end of the cold war, here is a far more candid picture of Gorbachev than we have ever seen before.

The Late Devonian Mass Extinction

The Anthropology of Extinction offers compelling explorations of issues of widespread concern.

Extinction

In 1962 the Green River was poisoned and its native fishes killed so that the new Flaming Gorge Reservoir could be stocked with non-native game fishes for sportsmen. This incident was representative of water management in the West, where dams and other projects have been built to serve human needs without consideration for the effects of water diversion or depletion on the ecosystem. Indeed, it took a Supreme Court decision in 1976 to save Devils Hole pupfish from habitat destruction at the hands of developers. Nearly a third of the native fish fauna of North America lives in the arid West; this book traces their decline toward extinction as a result of human interference and the threat to their genetic diversity posed by decreases in their populations. What can be done to slow or end this tragedy? As the most comprehensive treatment ever attempted on the subject, *Battle Against Extinction* shows how conservation efforts have been or can be used to reverse these trends. In covering fishes in arid lands west of the Mississippi Valley, the contributors provide a species-by-species appraisal of their status and potential for recovery, bringing together in one volume nearly all of the scattered literature on western fishes to produce a monumental work in conservation biology. They also ponder ethical considerations related to the issue, ask why conservation efforts have not proceeded at a proper pace, and suggest how native fish protection relates to other aspects of biodiversity planetwide. Their insights will allow scientific and public agencies to evaluate future management of these animal populations and will offer additional guidance for those active in water rights and conservation biology. First published in 1991, *Battle Against Extinction* is now back in print and available as an open-access e-book thanks to the Desert Fishes Council.

The Anthropology of Extinction

Some 250 million years ago, the earth suffered the greatest biological crisis in its history. Around 95 percent of all living species died out—a global catastrophe far greater than the dinosaurs' demise 185 million years later. How this happened remains a mystery. But there are many competing theories. Some blame huge volcanic eruptions that covered an area as large as the continental United States; others argue for sudden changes in ocean levels and chemistry, including burps of methane gas; and still others cite the impact of an extraterrestrial object, similar to what caused the dinosaurs' extinction. Extinction is a paleontological

mystery story. Here, the world's foremost authority on the subject provides a fascinating overview of the evidence for and against a whole host of hypotheses concerning this cataclysmic event that unfolded at the end of the Permian. After setting the scene, Erwin introduces the suite of possible perpetrators and the types of evidence paleontologists seek. He then unveils the actual evidence--moving from China, where much of the best evidence is found; to a look at extinction in the oceans; to the extraordinary fossil animals of the Karoo Desert of South Africa. Erwin reviews the evidence for each of the hypotheses before presenting his own view of what happened. Although full recovery took tens of millions of years, this most massive of mass extinctions was a powerful creative force, setting the stage for the development of the world as we know it today. In a new preface, Douglas Erwin assesses developments in the field since the book's initial publication.

Battle Against Extinction

First Published in 1996. Routledge is an imprint of Taylor & Francis, an informa company.

Extinction

Realizing the link between her own estrangement from nature and the cultural shifts that led to a dramatic rise in extinctions, award-winning writer Melanie Challenger travels in search of the stories behind these losses. From an exploration of an abandoned mine in England to an Antarctic sea voyage to South Georgia's old whaling stations, from a sojourn in South America to a stay among an Inuit community in Canada, she uncovers species, cultures, and industries touched by extinction. Accompanying her on this journey are the thoughts of anthropologists, biologists, and philosophers who have come before her. Drawing on their words as well as firsthand witness and ancestral memory, Challenger traces the mindset that led to our destructiveness and proposes a path of redemption rooted in our emotional responses. This sobering yet illuminating book looks beyond natural devastation to examine "why" and "what's next."

Principles of Behavioral Analysis

Caught on camera prior to their demise, this book reveals the surprisingly rich photographic record of now-extinct animals. A photograph of an animal long-gone evokes a feeling of loss more than a painting ever can. Often tinted sepia or black-and-white, these images were mainly taken in zoos or wildlife parks, and in a handful of cases featured the last known individual of the species. There are some familiar examples, such as Martha, the last Passenger Pigeon, or the Ivory-billed Woodpecker, recently fledged and perching happily on the hat of one of the biologists that had just ringed it. But for every Martha there are a number of less familiar extinct birds and mammals that were caught on camera. The photographic record of extinction is the focus of this remarkable book, written by the world's leading authority on vanished animals, Errol Fuller. *Lost Animals* features photographs dating from around 1870 to as recently as 2004, the year that saw the demise of the Hawaiian Po'ouli. From a mother Thylacine and her pups to now-extinct birds such as the Heath Hen and Carolina Parakeet, Fuller tells the tale of each animal, why it became extinct, and discusses the circumstances surrounding the photography itself, in a book rich with unique images. The photographs themselves are poignant and compelling. They provide a tangible link to animals that have now vanished forever, in a book that brings the past to life while delivering a warning for the future.

On Extinction

Publisher Description

Lost Animals

A remote military research station in Utah sends out a frantic distress call, ending with a chilling final

command: Kill us all By the time help arrives every living thing for fifty miles has been annihilated. And blight is spreading. To halt the inevitable, Commander Gray Pierce and Sigma must unravel a threat that rises out of the distant past, to a time when Antarctica was green and life on Earth balanced on a knife edge. Following clues from an ancient map rescued from the lost Library of Alexandria, Sigma will discover the truth about an ancient continent, about a new form of death buried under miles of ice, and the coming extinction of mankind.

Extinction and Biogeography of Tropical Pacific Birds

An insider's view on bringing extinct species back to life Could extinct species, like mammoths and passenger pigeons, be brought back to life? In *How to Clone a Mammoth*, Beth Shapiro, an evolutionary biologist and pioneer in ancient DNA research, addresses this intriguing question by walking readers through the astonishing and controversial process of de-extinction. From deciding which species should be restored to anticipating how revived populations might be overseen in the wild, Shapiro vividly explores the extraordinary cutting-edge science that is being used to resurrect the past. Considering de-extinction's practical benefits and ethical challenges, Shapiro argues that the overarching goal should be the revitalization and stabilization of contemporary ecosystems. Looking at the very real and compelling science behind an idea once seen as science fiction, *How to Clone a Mammoth* demonstrates how de-extinction will redefine conservation's future.

The Sixth Extinction

Paleobiologist Anthony D. Barnosky weaves together evidence from the deep past and the present to alert us to the looming Sixth Mass Extinction and to offer a practical, hopeful plan for avoiding it. Writing from the front lines of extinction research, Barnosky tells the overarching story of geologic and evolutionary history and how it informs the way humans inhabit, exploit, and impact Earth today. He presents compelling evidence that unless we rethink how we generate the power we use to run our global ecosystem, where we get our food, and how we make our money, we will trigger what would be the sixth great extinction on Earth, with dire consequences. Optimistic that we can change this ominous forecast if we act now, Barnosky provides clear-cut strategies to guide the planet away from global catastrophe. In many instances the necessary technology and know-how already exist and are being applied to crucial issues around human-caused climate change, feeding the world's growing population, and exploiting natural resources. Deeply informed yet accessibly written, *Dodging Extinction* is nothing short of a guidebook for saving the planet.

How to Clone a Mammoth

How humanity came to contemplate its possible extinction. From forecasts of disastrous climate change to prophecies of evil AI superintelligences and the impending perils of genome editing, our species is increasingly concerned with the prospects of its own extinction. With humanity's future on this planet seeming more insecure by the day, in the twenty-first century, existential risk has become the object of a growing field of serious scientific inquiry. But, as Thomas Moynihan shows in *X-Risk*, this preoccupation is not exclusive to the post-atomic age of global warming and synthetic biology. Our growing concern with human extinction itself has a history. Tracing this untold story, Moynihan revisits the pioneers who first contemplated the possibility of human extinction and stages the historical drama of this momentous discovery. He shows how, far from being a secular reprise of religious prophecies of apocalypse, existential risk is a thoroughly modern idea, made possible by the burgeoning sciences and philosophical tumult of the Enlightenment era. In recollecting how we first came to care for our extinction, Moynihan reveals how today's attempts to measure and mitigate existential threats are the continuation of a project initiated over two centuries ago, which concerns the very vocation of the human as a rational, responsible, and future-oriented being.

Dodging Extinction

"Near time" -an interval that spans the last 100,000 years or so of earth history-qualifies as a remarkable period for many reasons. From an anthropocentric point of view, the outstanding feature of near time is the fact that the evolution, cultural diversification, and global spread of Homo sapiens have all occurred within it. From a wider biological perspective, however, the hallmark of near time is better conceived of as being one of enduring, repeated loss. The point is important. Despite the sense of uniqueness implicit in phrases like "the biodiversity crisis," meant to convey the notion that the present bout of extinctions is by far the worst endured in recent times, substantial losses have occurred throughout near time. In the majority of cases, these losses occurred when, and only when, people began to expand across areas that had never before experienced their presence. Although the explanation for these correlations in time and space may seem obvious, it is one thing to rhetorically observe that there is a connection between humans and recent extinctions, and quite another to demonstrate it scientifically. How should this be done? Traditionally, the study of past extinctions has fallen largely to researchers steeped in such disciplines as paleontology, systematics, and paleoecology. The evaluation of future losses, by contrast, has lain almost exclusively within the domain of conservation biologists. Now, more than ever, there is opportunity for overlap and sharing of information.

X-Risk

One of Vox's Most Important Books of the Decade New York Times Editors' Choice 2017 Forbes Top 10 Best Environment, Climate, and Conservation Book of 2017 As new groundbreaking research suggests that climate change played a major role in the most extreme catastrophes in the planet's history, award-winning science journalist Peter Brannen takes us on a wild ride through the planet's five mass extinctions and, in the process, offers us a glimpse of our increasingly dangerous future Our world has ended five times: it has been broiled, frozen, poison-gassed, smothered, and pelted by asteroids. In *The Ends of the World*, Peter Brannen dives into deep time, exploring Earth's past dead ends, and in the process, offers us a glimpse of our possible future. Many scientists now believe that the climate shifts of the twenty-first century have analogs in these five extinctions. Using the visible clues these devastations have left behind in the fossil record, *The Ends of the World* takes us inside "scenes of the crime," from South Africa to the New York Palisades, to tell the story of each extinction. Brannen examines the fossil record—which is rife with creatures like dragonflies the size of sea gulls and guillotine-mouthed fish—and introduces us to the researchers on the front lines who, using the forensic tools of modern science, are piecing together what really happened at the crime scenes of the Earth's biggest whodunits. Part road trip, part history, and part cautionary tale, *The Ends of the World* takes us on a tour of the ways that our planet has clawed itself back from the grave, and casts our future in a completely new light.

Extinctions in Near Time

Extinction is the ultimate fate of all biological species - over 99 percent of the species that have ever inhabited the Earth are now extinct. The long fossil record of life provides scientists with crucial information about when species became extinct, which species were most vulnerable to extinction, and what processes may have brought about extinctions in the geological past. Key aspects of extinctions in the history of life are here reviewed by six leading palaeontologists, providing a source text for geology and biology undergraduates as well as more advanced scholars. Topical issues such as the causes of mass extinctions and how animal and plant life has recovered from these cataclysmic events that have shaped biological evolution are dealt with. This helps us to view the biodiversity crisis in a broader context, and shows how large-scale extinctions have had profound and long-lasting effects on the Earth's biosphere.

The Ends of the World

This volume examines the history of extinctions on Earth.

Extinctions in the History of Life

Applies Red List data to calculate a Red List Index.

Extinctions of Living Things

2004 IUCN Red List of Threatened Species

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