
Noteworthy Books

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Florida Explored: The Philadelphia Connection in Bartram's Tracks. Thomas Peter Bennett. 2019. Mercer University Press, Macon, GA. 400 pp. \$40.00, hardcover. ISBN 9780881466935. This unique natural history exploration of Florida by members and correspondents of America's first research natural history museum, Philadelphia's Academy of Natural Sciences, reveals the science of discovery and collection of unknown plants, animals, fossils, and artifacts of ancient peoples. The early naturalists, Thomas Say, Titian Peale, Thomas Nuttall, John James Audubon, John LeConte, John Torrey, Hardy Croom, Alvan Chapman, Asa Gray, Clarence Moore, Henry Fowler, Henry Pilsbry, Francis Harper, and others were inspired to explore Florida in the tracks of William Bartram, the colonial explorer of British East and West Florida and author in 1791 of *Travels*. The godfather of the Academy, Bartram was elected to membership shortly after its founding in 1812 by his students. The discoveries and collections—new plants and animals, fossils, and artifacts of ancient people—made by Bartram and those who followed him created databases for researching and understanding Florida's natural heritage, current, and future ecosystems. Written in the narrative style, notes provide annotations and details for novices and academic references for students and scholars interested in specific areas such as botany, ornithology, and Florida natural history.

Plants Go to War: A Botanical History of World War II. Judith Sumner. 2019. McFarland and Company, Inc., Jefferson, NC. 349 pp. \$49.95, softcover. ISBN 9781476676128. As the first botanical history of World War II, *Plants Go to War* examines military history from the perspective of plant science. From victory gardens to drugs, timber, rubber, and fibers, plants supplied materials with key roles in victory. Vegetables provided the wartime diet both in North America and Europe. Chicle and cacao provided the chewing gum and chocolate bars in military rations. In England and Germany, herbs replaced pharmaceutical drugs. Rubber was needed for gas masks and barrage balloons, while cotton and hemp provided clothing, canvas, and rope. Timber was used to manufacture Mosquito bombers, and wood gasification and coal replaced petroleum in European vehicles. As the Germans moved eastward; troops weaponized conifers with shell bursts that caused splintering. Ironically, the

Nazis condemned non-native plants, but adopted useful Asian soybeans and Mediterranean herbs. Jungle warfare and camouflage required botanical knowledge, and survival manuals detailed edible plants on Pacific islands. Botanical gardens relocated valuable specimens to safe areas, and while remote locations provided opportunities for field botany, trees surviving in Hiroshima and Nagasaki live as a symbol of rebirth after vast destruction.

Tracing Darwin's Path in Cape Horn. Riccardo Rozzi, Kurt Heindinger, and Francisca Massardo. 2019. University of North Texas Press, Denton, TX. 256 pp. \$50.00, Hardcover. ISBN 9781574416961. Charles Darwin spent the majority of his 1831–1836 voyage around the world in southern South America, and his early experiences in the Cape Horn region seem to have triggered his first ideas on human evolution. Darwin was not only a field naturalist, but also a scholar of the observations of the European explorers who preceded him. This book illuminates the foundations of Cape Horn's natural history that oriented Darwin's own explorations and his ideas on evolution, which acquire the highest relevance for planetary sustainability and environmental ethics. Richly illustrated with maps and color photographs, this book offers a guide to the sites visited by Darwin, and a compass for present-day visitors who can follow Darwin's path over the sea and land that today are protected by the UNESCO Cape Horn Biosphere Reserve.

Rise of the Reptiles: 320 Million Years of Evolution. Hans-Dieter Sues. 2019 Johns Hopkins University Press, Baltimore, MD. 400 pp. \$84.95, hardcover. ISBN 9781421428673. Over 300 million years ago, an early land vertebrate developed an egg that contained the embryo in an amnion, allowing it to be deposited on land. This moment marked the first step in the fascinating and complex evolutionary journey of the reptiles. Reflecting the tremendous advances in the study of reptilian diversity and phylogeny over recent decades, this book is the first detailed, contemporary synthesis of the evolutionary history of these remarkable animals. Reptiles have always confused taxonomists, who have endlessly debated and rewritten their classifications. In this book, Sues adopts an explicitly phylogenetic framework to sift through the evidence and discuss the origin and diversification of Reptilia in a way no

one has before. With this single meticulously researched volume, Sues paints a complete portrait of reptilian evolution. The extensive bibliography provides an invaluable guide for readers who are interested in exploring individual topics more deeply. Accurate, synthetic, and sweeping, *The Rise of Reptiles* is the definitive work on the subject.

Rainforest: Dispatches from Earth's Most Vital Frontlines. Tony Juniper. 2019. Island Press, Washington, DC. 456 pp. \$22.00, softcover. ISBN 9781642830729. Rainforests have long been recognized as hotspots of biodiversity, but they are crucial for our planet in other surprising ways. Not only do these fascinating ecosystems thrive in rainy regions, they create rain themselves, and this moisture is spread around the globe. Rainforests across the world have a powerful and concrete impact, reaching as far as America's Great Plains and central Europe. Tony Juniper draws upon decades of work in rainforest conservation. He brings readers along on his journeys, from the thriving forests of Costa Rica to Indonesia, where palm oil plantations have supplanted much of the former rainforest. Despite many ominous trends, Juniper sees hope for rainforests and those who rely upon them, thanks to developments like new international agreements, corporate deforestation policies, and movements from local and Indigenous communities. Throughout this evocative book, Juniper argues that in saving rainforests, we save ourselves, too.

Fires of Life: Endothermy in Birds and Mammals. Barry Gordon Lovegrove. 2019. Yale University Press, New Haven, CT. 384 pp. \$40.00, hardcover. ISBN 9780300227161. Barry Gordon's pioneering work investigates why endothermy, or "warm-bloodedness," evolved in birds and mammals, despite its enormous energetic costs. Arguing that single-cause hypotheses to explain the origins of endothermy have stalled research since the 1970s, Barry Gordon Lovegrove advances a novel conceptual framework that considers multiple potential causes and integrates data from the southern as well as the northern hemisphere. Drawing on paleontological data; research on extant species in places like the Karoo, Namaqualand, Madagascar, and Borneo; and novel physiological models, Lovegrove builds a compelling new explanation for the evolution of endothermy. Vividly narrated and illustrated, this book stages a groundbreaking argument that

should prove provocative and fascinating for specialists and lay readers alike.

Nature's Giants: The Biology and Evolution of the World's Largest Lifeforms. Graeme d. Ruxton. 2019. Yale University Press, New Haven, CT. 224 pp. \$35.00, hardcover. ISBN 9780300239881. The colossal plants and animals of our world—dinosaurs, whales, and even trees—are a source of unending fascination, and their sheer scale can be truly impressive. Size is integral to the way that organisms experience the world: a puddle that a human being would step over without thinking is an entire world to thousands of microscopic rotifers. But why are creatures the size that they are? Why aren't bugs the size of elephants, or whales the size of goldfish? In this lavishly illustrated new book, biologist Graeme Ruxton explains how and why nature's giants came to be so big—for example, how decreased oxygen levels limited the size of insects and how island isolation allowed small-bodied animals to evolve larger body sizes. Through a diverse array of examples, from huge butterflies to giant squid, Ruxton explores the physics, biology, and evolutionary drivers behind organism size, showing what it's like to live large.

A Rich and Tantalizing Brew: A History of How Coffee Connected the World Jeanette M. Fregulia. 2019. The University of Arkansas Press, Fayetteville, AK. 194 pp. \$20.96, softcover. ISBN 9781682260876. The history of coffee is much more than the tale of one luxury good—it is a lens through which to consider various strands of world history, from food and foodways to religion and economics and socio-cultural dynamics. The book traces the history of coffee from its cultivation and brewing first as a private pleasure in the highlands of Ethiopia and Yemen through its emergence as a sought-after public commodity served in coffeehouses in the Muslim world, and then traveling across the Mediterranean to Italy, to other parts of Europe, and finally to India and the Americas. At each of these stops the brew gathered ardent aficionados and vocal critics, all the while reshaping patterns of socialization. Taking its conversational tone from the chats often held over a steaming cup, *A Rich and Tantalizing Brew* offers a critical and entertaining look at how this bitter beverage, with a little help from the tastes that traveled with it—chocolate, tea, and sugar—has connected people to each other both within and outside of

their typical circles, inspiring a new context for sharing news, conducting business affairs, and even plotting revolution.

Assembling the Dinosaur: Fossil Hunters, Tycoons, and the Making of a Spectacle. Lukas Rieppel. 2019. Harvard University Press, Cambridge, MA. 336 pp. \$29.95, hardcover. ISBN 97806747357. *Assembling the Dinosaur* follows dinosaur fossils from the field to the museum and into the commercial culture of North America's Gilded Age. Business tycoons like Andrew Carnegie and J. P. Morgan made common cause with vertebrate paleontologists to capitalize on the widespread appeal of dinosaurs, using them to project American exceptionalism back into prehistory. Learning from the show-stopping techniques of P. T. Barnum, museums exhibited dinosaurs to attract, entertain, and educate the public. By assembling the skeletons of dinosaurs into eye-catching displays, wealthy industrialists sought to cement their own reputations as generous benefactors of science, showing that modern capitalism could produce public good in addition to profits. Tracing the entwined relationship of dinosaurs, capitalism, and culture during the Gilded Age, Rieppel reveals the outsized role these giant reptiles played during one of the most consequential periods in American history.

Good Enough: The Tolerance for Mediocrity in Nature and Society. Daniel S. Milo. 2019. Harvard University Press, Cambridge, MA. 320 pp. \$29.98, hardcover. ISBN 9780674504622. Why is the genome of a salamander forty times larger than that of a human? Why does the avocado tree produce a million flowers and only a hundred fruits? Why, in short, is there so much waste in nature? Darwinism excels in accounting for the evolution of traits, but it does not explain their excess in size and number. Many traits far exceed the optimal configuration to do the job, and yet the maintenance of this extra baggage does not prevent species from thriving for millions of years. Milo aims to give the messy side of nature its due—to stand up for the wasteful and inefficient organisms that nevertheless survive and multiply. But he does not stop at the

border between evolutionary theory and its social consequences. He argues provocatively that the theory of evolution through natural selection has acquired the trappings of an ethical system. Optimization, competitiveness, and innovation have become the watchwords of Western societies, yet their role in human lives—as in the rest of nature—is dangerously overrated. Imperfection is not just good enough: it may at times be essential to survival.

The *Southeastern Naturalist* welcomes submissions of review copies of books that publishers or authors would like to recommend to the journal's readership and are relevant to the journal's mission of publishing information about the natural history of the southeastern US. Accompanying short, descriptive summaries of the text are also welcome.