# **Snakes The Evolution Of Mystery In Nature**

In 2005 Kate Jackson ventured into the remote swamp forests of the northern Congo to collect reptiles and amphibians. Her camping equipment was rudimentary, her knowledge of Congolese customs even more so. She knew how to string a net and set a pitfall trap, but she never imagined the physical and cultural difficulties that awaited her. Culled from the mud-spattered pages of her journals, Mean and Lowly Things reads like a fast-paced adventure story. It is Jackson's unvarnished account of her research on the front lines of the global biodiversity crisis—coping with interminable delays in obtaining permits, learning to outrun advancing army ants, subsisting on a diet of Spam and manioc, and ultimately falling in love with the strangely beautiful flooded forest. The reptile fauna of the Republic of Congo was all but undescribed, and Jackson's mission was to carry out the most basic study of the amphibians and reptiles of the swamp forest: to create a simple list of the species that exist there—a crucial first step toward efforts to protect them. When the snakes evaded her carefully set traps, Jackson enlisted people from the villages to bring her specimens. She trained her guide to tag frogs and skinks and to fix them in formalin. As her expensive

camera rusted and her Western soap melted,
Jackson learned what it took to swim with the
snakes—and that there's a right way and a wrong
way to get a baby cobra out of a bottle.
Snakes of Central and Western Africa illuminates a
previously little-known part of the natural world,
provides vital information that could save many lives,
and will make an excellent addition to any
herpetology library.

125 million years ago on the floodplains of North America, a burrowing lizard started down the long evolutionary path of shedding its limbs. The 60-plus species of snakes found in Sean P. Graham's American Snakes have this ancestral journey to thank for their ubiquity, diversity, and beauty. Although many people fear them, snakes are as much a part of America's rich natural heritage as redwoods, bald eagles, and grizzly bears. Neither a typical field guide nor an exhaustive reference, American Snakes is instead a fascinating study of the suborder Serpentes. Brimming with intriguing and unusual stories- of hognose snakes that roll over and play dead, blindsnakes with tiny vestigial lungs, rainbow-hued dipsadines, and wave-surfing seasnakes- the text is interspersed with scores of gorgeous full-color images of snakes, from the scary to the sublime.

As any herpetologist will tell you, the fer-de-lance is among the most dreaded snakes known to man.

When someone makes a present of one to Nero Wolfe, Archie Goodwin knows he's getting dreadully close to solving the devilishly clever murders of an immigrant and a college president. As for Wolfe, he's playing snake charmer in a case with more twists than an anaconda -- whistling a seductive tune he hopes will catch a killer who's still got poison in his heart.

Frogs are worshipped for bringing nourishing rains, but blamed for devastating floods. Turtles are admired for their wisdom and longevity, but ridiculed for their sluggish and cowardly behavior. Snakes are respected for their ability to heal and restore life, but despised as symbols of evil. Lizards are revered as beneficent guardian spirits, but feared as the Devil himself. In this ode to toads and snakes, newts and tuatara, crocodiles and tortoises, herpetologist and science writer Marty Crump explores folklore across the world and throughout time. From creation myths to trickster tales: from associations with fertility and rebirth to fire and rain; and from the use of herps in folk medicines and magic, as food, pets, and gods, to their roles in literature, visual art, music, and dance, Crump reveals both our love and hatred of amphibians and reptiles—and their perceived power. In a world where we keep home terrariums at the same time that we battle invasive cane toads, and where public attitudes often dictate that the cute and cuddly receive conservation priority over the slimy Page 3/17

and venomous, she shows how our complex and conflicting perceptions threaten the conservation of these ecologically vital animals. Sumptuously illustrated, Eye of Newt and Toe of Frog, Adder's Fork and Lizard's Leg is a beautiful and enthralling brew of natural history and folklore, sobering science and humor, that leaves us with one irrefutable lesson: love herps. Warts, scales, and all. How did the zebra really get its stripes, and the giraffe its long neck? What is the science behind camel humps, leopard spots, and other animal oddities? Such questions have fascinated us for centuries, but the expanding field of evo-devo (evolutionary developmental biology) is now providing, for the first time, a wealth of insights and answers. Taking inspiration from Kipling's 'Just So Stories', this book weaves emerging insights from evo-devo into a narrative that provides startling explanations for the origin and evolution of traits across the animal kingdom. Held's unique and engaging style makes this narrative both enlightening and entertaining, guiding students and researchers through even complex concepts and encouraging a fuller understanding of the latest developments in the field. The first five chapters cover the first bilaterally symmetric animals, flies, butterflies, snakes, and cheetahs. A final chapter surveys recent results about a menagerie of other animals.

The eminent zoologist "extends his pioneering work in evolutionary biology" to examine "our preferences, predilections, fears, hopes, and aspirations" (Stephen R. Kellert, author of Birthright). Why do we jump in fear at the sight of a snake and marvel at the beauty of a sunrise? These impulsive reactions are no accident; in fact, many of our human responses to nature are steeped in our evolutionary past—we fear snakes because of the danger of venom, and we welcome the assurances of sun as the predatory dangers of night disappear. According to evolutionary biologist Gordon Orians, many of our aesthetic preferences—from the kinds of gardens we build to the foods we enjoy and the entertainment we seek—are the lingering result of natural selection. In Snakes, Sunrises, and Shakespeare, Orians explores the role of evolution in human responses to the environment, applying biological perspectives ranging from Darwin to current neuroscience. Orians reveals how our emotional lives today are shaped by decisions our ancestors made centuries ago on African savannas as they selected places to live, sought food and safety, and socialized in small hunter-gatherer groups. During this time our likes and dislikes became wired in our brains, as the appropriate responses to the environment meant the difference between survival or death. His rich analysis explains why we mimic the tropical savannas of our ancestors

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in our parks and gardens, why we are simultaneously attracted to and repelled by danger, and how paying close attention to nature's sounds has made us an unusually musical species.

A pictorial tour of the exhibits and displays at the Arizona-Sonora Desert Museum.

Just a few years ago, people spoke of the US as a hyperpower-a titan stalking the world stage with more relative power than any empire in history. Yet as early as 1993, newlyappointed CIA director James Woolsey pointed out that although Western powers had "slain a large dragon" by defeating the Soviet Union in the Cold War, they now faced a "bewildering variety of poisonous snakes." In The Dragons and the Snakes, the eminent soldier-scholar David Kilcullen asks how, and what, opponents of the West have learned during the last quarter-century of conflict. Applying a combination of evolutionary theory and detailed field observation, he explains what happened to the "snakes"-nonstate threats including terrorists and guerrillas-and the "dragons"-state-based competitors such as Russia and China. He explores how enemies learn under conditions of conflict, and examines how Western dominance over a very particular, narrowly-defined form of warfare since the Cold War has created a fitness landscape that forces adversaries to adapt in ways that present serious new challenges to America and its allies. Within the world's contemporary conflict zones, Kilcullen argues, state and non-state threats have increasingly come to resemble each other, with states adopting non-state techniques and non-state actors now able to access levels of precision and lethal weapon systems once only available to governments. A counterintuitive look at this new, vastly more complex environment, The Dragons and the Snakes will not only reshape our understanding of the West's Page 6/17

enemies' capabilities, but will also show how we can respond given the increasing limits on US power.

This book is a printed edition of the Special Issue "Snake" Venom Metalloproteinases" that was published in Toxins Anaconda tells the unexpected story of the world's largest snake. Written by Jess Rivas, the undisputed expert on the biology of anacondas, this is the first authoritative book on the biology of the green anaconda. In this book, Rivas describes his experiences over a quarter of a century, exploring the secret life of these fantastic snakes, including: their diet, movement patterns, life and tribulations, survival, behavior. and fascinating reproductive life. More than just presenting facts about anacondas. Rivas tells his story about studying them in the field. Anaconda presents a comprehensive treatment of the natural history of the elusive green anacondas. Drawing on twenty-five years of research on this reptile in the wild and in captivity. Rivas delves into the biology, behavior, demography, reproductive habits, and diet of the anaconda, as well as issues relating to its conservation. Rivas uses an ecological and evolutionary framework to present his research and supplements hard data with descriptions of his research methods, including how he tracked down the anaconda for observation and study in wild. The resulting book is a complete and engaging examination of the world's largest snake. The rich photographs provided, paired with Rivas' storytelling, makes this the perfect book for anyone looking to learn (or even learn more!) about this mysterious snake.

The worldwide prominence of snakes in religion, myth, and folklore underscores our deep connection to the serpent - but why, when so few of us have firsthand experience? The surprising answer, this book suggests, lies in the singular impact of snakes on primate evolution. Predation pressure from snakes, Lynne Isbell tells us, is ultimately responsible for Page 7/17

the superior vision and large brains of primates - and for a critical aspect of human evolution.

Ambition will fuel him. Competition will drive him. But power has its price. It is the morning of the reaping that will kick off the tenth annual Hunger Games. In the Capitol, eighteen-yearold Coriolanus Snow is preparing for his one shot at glory as a mentor in the Games. The once-mighty house of Snow has fallen on hard times, its fate hanging on the slender chance that Coriolanus will be able to outcharm, outwit, and outmaneuver his fellow students to mentor the winning tribute. The odds are against him. He's been given the humiliating assignment of mentoring the female tribute from District 12, the lowest of the low. Their fates are now completely intertwined - every choice Coriolanus makes could lead to favor or failure, triumph or ruin. Inside the arena, it will be a fight to the death. Outside the arena, Coriolanus starts to feel for his doomed tribute . . . and must weigh his need to follow the rules against his desire to survive no matter what it takes.

Revealing the secrets of reptilian social relationships through original quantitative research, field studies, laboratory experiments, and careful analysis of the literature, The Secret Social Lives of Reptiles elevates these fascinating animals to key players in the science of behavioral ecology.

This proud celebration of a diverse American wildlife group will make every reader, no matter how skeptical, into a genuine snake lover.

This book provides an overview of the diversity of lizards and their major adaptive features. The authors discuss the latest research findings and provide new hypotheses about lizard diversity.

Anyone can look at a snake and see a creature unique unto itself, a reptile with a set of zoological and biological traits that are entirely its own. Just looking at this distinct animal raises

many scientific questions. With regard to evolution, how did such an animal come to be? How does a snake move, and how do its sense organs differ from that of other reptiles? How does it eat, and how does it reproduce? Essentially, how does a snake "work"? In How Snakes Work: The Structure. Function and Behavior of the World's Snakes, leading zoologist Harvey B. Lillywhite has written the definitive scientific guide to the functional biology of snakes. Written for both herpetologists and a more general audience with an interest in the field, How Snakes Work features nearly two hundred color images of various species of snakes, used to provide visual examples of biological features explained in the text. Chapter topics include the evolutionary history of the snake, feeding, locomotion, the structure and function of skin, circulation and respiration, sense organs, sound production, temperature and thermoregulation, and reproduction. Containing all the latest research and advances in our biological knowledge of the snake, How Snakes Work is an indispensable asset to professional zoologists and enthusiasts alike.

Treats primarily with the anaconda (Eunectes murinus); the Indian (Python molurus); Reticulated (Python reticulata); and African (Python sebae) pythons.

"Horned 'toads' have long inspired curious humans, from ancient Indian rock artists and the earliest Spanish explorers to modern scientists. These lizards specialize on ants for food, employ distinctive defensive tactics for different enemies, arch their bodies to collect rainwater, and exhibit numerous other adaptations to arid environments. Wade Sherbrooke's wonderful book, packed with facts and personal insights, will give everyone from lay naturalists to seasoned field biologists a new appreciation for these magically bizarre animals."—Harry W. Greene, author of Snakes: The Evolution of Mystery in Nature "Written in language understandable by Page 9/17"

anyone, Sherbrooke's newly revised little book on horned lizards is an exceedingly useful reference that covers most of what is known about these interesting and unusual lizards."—Eric R. Pianka, author of The Lizard Man Speaks "Wade Sherbrooke has provided in this very readable book a concise introduction to the evolution and natural history of the horned lizards, their impact on human art, and their future in an increasingly human-dominated planet. No one has more first-hand knowledge of the life history of horned lizards than Dr. Sherbrooke, so this book represents more than a summary; Sherbrooke provides insight into the life and times of horned lizards as no one else could. Amateur and professional alike will find much to enjoy about this book."—Darrel Frost, American Museum of Natural History Praise for the first edition: "[This is] the horned lizard bible deluxe."—Coevolution

A heavily illustrated and complete account of the functional biology of snakes, written for an audience of both scientists and a general readership.

This new edition of Snakes in Question has been completely updated to take into account the most recent research available, offering useful scientific information about snakes while dispelling many widely-circulated myths and common fears. Accompanied by 100 stunning color photographs and written in the popular question-and-answer format of Smithsonian's "In Question" series, the book tells how snakes breathe, hear, smell, and much more. It covers not only the life cycle of snakes but also explores such phenomena as the rattlesnake's rattle, the viper's hiss, and the snake charmer's secrets. It addresses common folktales about snakes (do snakes milk cows?) and describes giant snakes, both real and imaginary. The authors also give expert advice on such subjects as distinguishing venomous species from harmless look-alikes and keeping snakes as pets.

In the first book on snakes written with a focus on conservation, editors Stephen J. Mullin and Richard A. Seigel bring together leading herpetologists to review and synthesize the ecology, conservation, and management of snakes worldwide.

This book provides students and researchers with reviews of biological questions related to the evolution of feeding by vertebrates in aquatic and terrestrial environments. Based on recent technical developments and novel conceptual approaches, the book covers functional questions on trophic behavior in nearly all vertebrate groups including jawless fishes. The book describes mechanisms and theories for understanding the relationships between feeding structure and feeding behavior. Finally, the book demonstrates the importance of adopting an integrative approach to the trophic system in order to understand evolutionary mechanisms across the biodiversity of vertebrates.

COME FACE-TO-FACE WITH MYSTERIOUS SNAKES! Set off into the wild with the Junior Scientists series Take an amazing journey into the wonderful world of snakes--fangs, rattles, scales, and all. Snakes for Kids is filled with fascinating facts and wild photographs that will take you close up to serpents from around the globe! Dive into their habitats and life cycles and see how their relationships with other animals create balance in the food web and help keep ecosystems healthy. Start by learning more about some of your favorite snakes--from the King Cobra to the massive Anaconda. Discover how they move, what they eat, why they shed their skin, and plenty of other cool details. You'll also meet a few lesser-known snakes, like the strange family of blind snakes that tunnel underground. Learn everything there is to know about these mysterious reptiles and become an expert on our slithering friends. Snakes for Kids includes: So many snakes!--Check out all the interesting information on 45

different species. Age-appropriate--The reading level is perfect for kids ages 5 to 9. Colorful photos--Detailed pictures allow you to see what the snakes look like in the wild. If you've been searching for a great kids book about snakes, look no further--this one has it all.

Tracks and Shadows is both an absorbing autobiography of a celebrated field biologist and a celebration of beauty in nature. Harry W. Greene, award-winning author of Snakes, delves into the poetry of field biology, showing how nature eases our existential quandaries. More than a memoir, the book is about the wonder of snakes, the beauty of studying and understanding natural history, and the importance of sharing the love of nature with humanity. Illustrations. In clear, engaging prose, "Snakes" provides an up-to-date summary of every facet of the natural history of snakes--their diversity, evolution, and conservation--and, at the same time, makes a personal statement about why these animals are so compelling. 215 color photos. 3 tables.

This is a guide to more than 2700 snakes from around the world featuring their behaviour, breeding patterns, habitat, venomous and constructive attack methods, camouflage and feeding. It is organised into 17 snake families, focuses on close-up detail and draws attention to endangered species. "The irresistible enthusiasm of Great Adaptations couldn't come at a better time."—David P. Barash, Wall Street Journal "Be very amazed."—Carl Safina, author of Beyond Words and Becoming Wild How one scientist unlocked the secrets behind some of nature's most astounding animals From starnosed moles that have super-sensing snouts to electric eels that paralyze their prey, animals possess unique and extraordinary abilities. In Great Adaptations, Kenneth Catania presents an entertaining and engaging look at some of nature's most remarkable creatures. Telling the story of his biological detective work, Catania sheds light on the

mysteries behind the behaviors of tentacled snakes, tiny shrews, zombie-making wasps, and more. He shows not only how studying these animals can provide deep insights into how life evolved, but also how scientific discovery can be filled with adventure and fun. Beginning with the star-nosed mole. Catania reveals what the creature's nasal star is actually for, and what this tells us about how brains work. He explores how the deceptive hunting strategy of tentacled snakes leads prey straight to their mouths, how eels use electricity to control other animals, and why emerald jewel wasps make zombies out of cockroaches. He also solves the enigma of worm grunting—a traditional technique in which earthworms are enticed out of the ground—by teaming up with professional worm grunters. Catania demonstrates the merits of approaching science with an open mind, considers the role played by citizen scientists, and illustrates that most animals have incredible, hidden abilities that defy our imagination. Examining some strange and spectacular creatures, Great Adaptations offers a wondrous journey into nature's grand designs.

Drawing on years of experience and an impressive grasp of the literature, Richard Shine covers the day-to-day lives of snakes, discussing their anatomy, evolution, and habitat, and describing their behavior, sex habits, life history, and diet. Intellectually rich, intensely personal, and beautifully written, Tracks and Shadows is both an absorbing autobiography of a celebrated field biologist and a celebration of beauty in nature. Harry W. Greene, award-winning author of Snakes: The Evolution of Mystery in Nature, delves into the poetry of field biology, showing how nature eases our existential quandaries. More than a memoir, the book is about the wonder of snakes, the beauty of studying and understanding natural history, and the importance of sharing the love of nature with humanity. Greene begins with his youthful

curiosity about the natural world and moves to his stints as a mortician's assistant, ambulance driver, and army medic. In detailing his academic career, he describes how his work led him to believe that nature's most profound lessons lurk in hard-won details. He discusses the nuts and bolts of field research and teaching, contrasts the emotional impact of hot dry habitats with hot wet ones, imparts the basics of snake biology, and introduces the great explorers Charles Darwin and Alfred Russel Wallace. He reflects on friendship and happiness, tackles notions like anthropomorphism and wilderness, and argues that organisms remain the core of biology, science plays key roles in conservation, and natural history offers an enlightened form of contentment. For millennia, humans have regarded snakes with an exceptional combination of fascination and revulsion. Some people recoil in fear at the very suggestion of these creatures, while others happily keep them as pets. Snakes can convey both beauty and menace in a single tongue flick and so these creatures have held a special place in our cultures. Yet, for as many meanings that we attribute to snakes—from fertility and birth to sin and death—the real-life species represent an even wider array of wonders. The Book of Snakes presents 600 species of snakes from around the world, covering nearly one in six of all snake species. It will bring greater understanding of a group of reptiles that have existed for more than 160 million years, and that now inhabit every continent except Antarctica, as well as two of the great oceans. This volume pairs spectacular photos with easy-to-digest text. It is the first book on these creatures that combines a broad, worldwide sample with full-color, life-size accounts. Entries include closeups of the snake's head and a section of the snake at actual size. The detailed images allow readers to examine the intricate scale patterns and rainbow of colors as well as special features like a cobra's hood or a rattlesnake's rattle.

The text is written for laypeople and includes a glossary of frequently used terms. Herpetologists and herpetoculturists alike will delight in this collection, and even those with a more cautious stance on snakes will find themselves drawn in by the wild diversity of the suborder Serpentes.

This monographic treatment offers all the basic knowledge about New World venomous coral snakes. It gives full description and keys for identification of all the species and subspecies, with maps of distribution and variation, including morphology, anatomy and colour patterns, as well as folklore. Natural history includes ecology, food and feeding, reproduction, enemies and defense, biogeography and evolution, with special reference to mimicry and cannibalism. Chapters on venoms and snakebite survey characteristics and effects of venom, snakebite accidents, first aid and remedies.

The well-known astronomer and astrobiologist surveys current knowledge of the development of intelligence on Earth in various forms of life and explains his persuasion that intelligence must have developed along similar lines throughout the universe

In 1856, Paul Du Chaillu ventured into the African jungle in search of a mythic beast, the gorilla. After wild encounters with vicious cannibals, deadly snakes, and tribal kings, Du Chaillu emerged with 20 preserved gorilla skins—two of which were stuffed and brought on tour—and walked smack dab into the biggest scientific debate of the time: Darwin's theory of evolution. Quickly, Du Chaillu's trophies went from objects of wonder to key pieces in an all-out intellectual war. With a wide range of characters, including Abraham Lincoln, Arthur Conan Doyle, P.T Barnum, Thackeray, and of course, Charles Darwin, this is a one of a kind book about a singular moment in history.

Offering coverage of a wide range of topics on snake

reproduction and phylogeny, this comprehensive book discusses everything from primordial germ migration in developing embryos to semelparity (death after reproduction) in the aspic viper. Beginning with a review of the history of snake reproductive studies, it presents new findings on development, placentation, spermatogenesis, male and female reproductive anatomy, hormonal control of reproduction, reproductive cycles, sex pheromones, and parental care. An indispensible reference, this book offers comparative chapters on snake phylognetics examining morphological characteristics alongside strictly molecular concerns. It is rife with illustrations and color plates. Not only is one of the most famous pieces of ancient Greek art-the celebrated gold and ivory statuette of the Snake Goddess-almost certainly modern, but Minoan civilization as it has been popularly imagined is largely an invention of the early twentieth century. This is Kenneth Lapatin's startling conclusion in Mysteries of the Snake Goddess-a brilliant investigation into the true origins of the celebrated Bronze Age artifact, and into the fascinating world of archaeologists, adventurers, and artisans that converged in Crete at the turn of the twentieth century. Including characters from Sir Arthur Evans, legendary excavator of the Palace of Minos at Knossos, who was driven to discover a sophisticated early European civilization to rival that of the Orient, to his principal restorer Swiss painter Emil Gillieron, who out of handfuls of fragments fashioned a picture of Minoan life that conformed to contemporary taste, this is a riveting tale of archeological discovery.

The definitive book on the natural history of snakes includes over 500 huge full-colour photographs displaying hundreds of breeds, including many rare and endangered species, all in their natural habitat. Thirteen experts combine their knowledge to explain the lifestyles, behaviour, biology and Page 16/17

appearance of each species, from their nervous systems and sensory organs to reproduction and locomotion. Object Lessons is a series of short, beautifully designed books about the hidden lives of ordinary things. Feared and worshiped in equal measure, snakes have captured the imagination of poets, painters, and philosophers for centuries. From Ice Age cave drawings to Snakes on a Plane, this creature continues to enthrall the public. But what harm has been caused by our mythologizing? While considering the dangers of stigma, Erica Wright moves from art and pop culture to religion, fetish, and ecologic disaster. This book considers how the snake has become more symbol than animal, a metaphor for how we treat whatever scares us the most, whether or not our panic is justified. Object Lessons is published in partnership with an essay series in the The Atlantic.

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