

anatomy of a monkey

anatomy of a monkey is a fascinating subject that reveals the incredible diversity and adaptability of these primates. Monkeys are known for their agile bodies, expressive faces, and complex social behaviors, all of which are closely linked to their unique anatomical features. In this comprehensive guide, we will explore the skeletal structure, muscular system, sensory organs, internal organs, and distinctive physical traits that set monkeys apart from other animals. By understanding the anatomy of a monkey, readers will gain insights into how these creatures move, communicate, and thrive in a variety of environments. This article also covers the differences between Old World and New World monkeys, as well as evolutionary adaptations that have shaped their bodies over millions of years. Whether you are a student, researcher, or simply curious about primate biology, this in-depth overview will provide valuable information about the anatomy of a monkey and its significance in the animal kingdom.

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Overview of Monkey Anatomy

The anatomy of a monkey is a remarkable example of evolutionary adaptation, allowing these primates to thrive in diverse environments ranging from dense rainforests to open savannahs. Monkeys belong to the order Primates and are divided into two main groups: Old World monkeys (Cercopithecidae) and New World monkeys (Platyrrhini). Their anatomical features reflect their arboreal or terrestrial lifestyles, dietary preferences, and complex social structures. Monkeys exhibit a high degree of manual dexterity, expressive facial muscles, and advanced sensory capabilities, all rooted in their unique anatomical design. This section provides a general overview of the basic anatomy of a monkey, setting the foundation for a deeper exploration of their skeletal, muscular, and organ systems.

Skeletal System of Monkeys

Skull and Facial Structure

The skull of a monkey is designed to support a relatively large brain, keen eyesight, and intricate facial expressions. Monkeys have forward-facing eyes, which allow for excellent depth perception, a crucial adaptation for life in the trees. Their facial bones are structured to enable a wide range of movements, supporting complex social communication through facial gestures.

Spinal Column and Posture

Monkeys typically possess a flexible spinal column that supports agile movements such as leaping and swinging. The vertebral column is segmented into cervical, thoracic, lumbar, sacral, and caudal regions, with the tail (when present) serving as a balancing tool during locomotion. Unlike apes, most monkeys have a tail, which can be prehensile in some species, providing additional support for arboreal navigation.

Limbs and Hands

The anatomy of a monkey's limbs is tailored for climbing, grasping, and tool use. Their arms and legs are often of similar length, enhancing balance and mobility. Monkeys have highly flexible hands and feet with opposable thumbs or big toes, allowing for precise gripping and manipulation of objects.

- Strong, flexible shoulder joints for swinging and climbing
- Curved fingers and toes for gripping branches
- Prehensile tails (in some New World species) for additional support

Muscular System and Locomotion

Major Muscle Groups

Monkeys have well-developed muscular systems that support their active lifestyles. The shoulder and limb muscles are particularly robust, enabling powerful leaps and swift movements. Their core muscles provide stability, while facial muscles are adapted for expressive communication.

Types of Locomotion

Different species of monkeys exhibit various locomotion styles, influenced by their anatomy and habitat. Arboreal monkeys rely on brachiation (arm-swinging), leaping, and climbing, while terrestrial species are more adapted to quadrupedal walking or running.

1. Brachiation: Swinging from branch to branch using the arms
2. Leaping: Powerful jumps between trees or platforms
3. Quadrupedalism: Walking on all fours, common in ground-dwelling species

Sensory Organs and Perception

Vision

The anatomy of a monkey's eyes is optimized for color vision and depth perception. Most monkeys have trichromatic vision, enabling them to distinguish between different colors. Their forward-facing eyes provide binocular vision, essential for judging distances in complex forest environments.

Hearing

Monkeys possess acute hearing, with external ear structures that can detect a wide range of frequencies. Their auditory system is vital for communication, predator detection, and environmental awareness.

Olfaction and Taste

While not as developed as in some mammals, the olfactory system of monkeys still plays a role in social interactions and food selection. Taste buds on the tongue help monkeys detect a variety of flavors, influencing their dietary choices.

Internal Organs and Physiological Functions

Digestive System

Monkeys have a digestive system designed to process a varied diet, including fruits, leaves, insects,

and sometimes small animals. Their teeth are adapted for grinding and tearing, while the stomach and intestines efficiently extract nutrients from plant and animal matter.

Respiratory and Circulatory Systems

The respiratory system consists of well-developed lungs and airways, supporting high activity levels. The heart and blood vessels are structured to deliver oxygen efficiently to muscles and organs, sustaining prolonged periods of movement.

Reproductive System

The reproductive anatomy of monkeys includes distinct organs for males and females, adapted for internal fertilization and live birth. Social and mating behaviors are closely linked to hormonal and anatomical factors.

Distinctive Physical Features

Tail Structure

Tails are a hallmark of most monkeys, with significant variation between species. Some New World monkeys have prehensile tails capable of grasping objects, while Old World monkeys typically have non-prehensile tails or, in some cases, very short tails.

Facial Features and Expressions

Monkeys are known for their expressive faces, enabled by a complex network of facial muscles. These expressions are crucial for communication within social groups, signaling emotions like aggression, submission, or friendliness.

Skin, Fur, and Coloration

The skin and fur of monkeys vary widely, offering protection from the elements and aiding in camouflage. Coloration patterns can also play a role in social signaling and mate selection.

Old World Monkeys vs. New World Monkeys

Geographical Distribution

Old World monkeys are native to Africa and Asia, while New World monkeys inhabit Central and South America. This geographical separation has led to significant anatomical differences between the two groups.

Key Anatomical Differences

- Old World monkeys often have narrower, downward-facing nostrils, while New World monkeys have wider, outward-facing nostrils.
- Prehensile tails are almost exclusive to New World monkeys.
- Dental formulas, skeletal structure, and thumb mobility also vary between the groups.

Behavioral and Ecological Implications

Anatomical differences influence the behavior and ecology of both monkey groups. For example, prehensile tails allow New World monkeys to exploit certain arboreal niches, while Old World monkeys are often more terrestrial and adapted to open habitats.

Evolutionary Adaptations in Monkey Anatomy

Adaptations for Arboreal Life

Many anatomical features of monkeys, such as flexible limbs, grasping hands, and keen vision, are adaptations for living in trees. These traits enhance their ability to find food, avoid predators, and navigate complex environments.

Adaptations for Social Living

Monkeys exhibit anatomical traits that support complex social structures, including advanced vocalization organs, expressive faces, and specialized brain regions for social cognition.

Dietary Adaptations

Dental and digestive modifications allow monkeys to exploit a wide range of foods, from tough leaves

to soft fruits and protein-rich insects.

Summary of Key Anatomical Traits

- Flexible skeletal and muscular systems for movement
- Highly developed sensory organs
- Distinctive features like tails and expressive faces
- Specialized digestive and reproductive systems

Q: What are the main bones in the skeleton of a monkey?

A: The main bones in a monkey's skeleton include the skull, vertebral column, ribs, pelvis, and limb bones such as the humerus, radius, ulna, femur, tibia, and fibula. Most monkeys also have a tail composed of caudal vertebrae.

Q: How do monkeys use their tails?

A: Monkeys use their tails for balance, communication, and, in some species, grasping objects. Prehensile tails, found in many New World monkeys, act as a fifth limb for climbing and holding onto branches.

Q: What sensory organ is most developed in monkeys?

A: Vision is the most developed sensory organ in monkeys. Their forward-facing eyes provide excellent depth perception and, in many species, trichromatic color vision.

Q: How do the hands of monkeys differ from those of apes?

A: Monkeys generally have narrower thumbs and less flexible hands compared to apes. While both have opposable digits, apes have a greater range of thumb mobility and no tails.

Q: What are the differences between Old World and New World monkeys?

A: Old World monkeys are native to Africa and Asia, have downward-facing nostrils, and rarely have prehensile tails. New World monkeys are found in the Americas, have outward-facing nostrils, and many possess prehensile tails.

Q: Why do some monkeys have brightly colored faces or fur?

A: Bright coloration in monkeys often serves as a form of social signaling or mate attraction. It can also play a role in species recognition and camouflage within their environment.

Q: How do monkeys communicate using their anatomy?

A: Monkeys communicate through facial expressions, vocalizations, postures, and gestures, all supported by their specialized facial muscles, vocal organs, and limb flexibility.

Q: What adaptations help monkeys live in trees?

A: Arboreal adaptations in monkeys include flexible shoulder joints, curved fingers and toes, prehensile tails (in some species), and strong vision for navigating complex environments.

Q: How does the digestive system of a monkey differ from other mammals?

A: The digestive system of monkeys is adapted to process a varied diet, with specialized teeth for grinding and tearing, and a gut that efficiently digests plant and animal materials.

Q: What role does anatomy play in the social behavior of monkeys?

A: Anatomy supports social behavior in monkeys by enabling expressive communication, complex vocalizations, and physical interactions such as grooming and play within social groups.

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Anatomy of a Monkey: A Primate's Physical Marvel

Introduction:

Ever wondered what makes a monkey a monkey? Beyond their playful antics and expressive faces,

these fascinating primates possess a complex and highly evolved anatomy perfectly adapted to their arboreal lifestyles and diverse environments. This comprehensive guide delves into the intricate details of monkey anatomy, exploring their skeletal structure, muscular systems, digestive processes, and sensory capabilities. Prepare to be amazed by the ingenious design of these remarkable creatures. We'll cover everything from their nimble hands and feet to their sharp vision and sophisticated brains, providing a detailed and engaging look at the anatomy of a monkey.

Skeletal System: Built for the Trees

The skeletal system of a monkey is a masterpiece of evolutionary engineering, optimized for agility and climbing. Their limb structure is particularly noteworthy. Monkeys possess long, slender limbs with highly flexible joints, allowing for remarkable dexterity and range of motion in their arms and legs.

Hands and Feet:

Perhaps the most striking features are their hands and feet. Unlike humans, monkeys possess five fingers and five toes, each equipped with opposable thumbs and big toes. This opposable arrangement allows for a powerful grip, essential for navigating branches and manipulating objects. The fingernails (rather than claws) further aid in gripping. The specific shape and size of these digits vary significantly across different monkey species, reflecting their unique ecological niches.

Spine and Posture:

The spinal column is also highly adaptable, providing flexibility needed for swinging through trees. Most monkeys exhibit a more upright posture than many other primates, contributing to their agility and balance. The rib cage is relatively broad, aiding in efficient respiration during periods of high activity.

Muscular System: Power and Precision

A monkey's muscular system is closely intertwined with its skeletal structure, enabling powerful movements and precise control. They possess strong forelimb muscles, crucial for swinging and climbing. Their leg muscles provide the power for leaping and climbing, while their shoulder and back muscles are highly developed for stability and balance during arboreal locomotion. The hand and finger muscles show exceptional finesse, enabling tasks from foraging to grooming. Different monkey species exhibit varying muscle mass distributions based on their specific locomotion and

dietary needs.

Digestive System: A Varied Diet

The digestive system of monkeys varies widely depending on their diet. Some are primarily frugivores, consuming mainly fruits, while others are folivores, relying on leaves. Still others are omnivores, incorporating insects, small animals, and other plant material into their diet. These dietary differences are reflected in the length and structure of their digestive tracts. For instance, folivores typically have longer intestines to facilitate the digestion of tough plant matter. Specialized enzymes aid in the breakdown of different food components, ensuring efficient nutrient absorption.

Sensory Systems: A World Perceived

Monkeys rely on a range of sensory inputs to navigate their environment and interact with their social groups. Their vision is exceptional, with many species possessing trichromatic color vision (allowing them to see a wider range of colors than humans). This is crucial for detecting ripe fruit and navigating the complex canopy. Their sense of smell plays a vital role in communication and social interactions, particularly in identifying mates and detecting predators. Their hearing is also well-developed, allowing them to communicate through vocalizations and detect sounds in their surroundings. Touch is highly sensitive, especially in their hands and feet, aiding in their intricate manipulation of objects and their arboreal locomotion.

Brain and Intelligence:

Monkeys possess relatively large brains compared to their body size, reflecting their complex social structures and behavioral repertoire. The cerebral cortex, responsible for higher cognitive functions, is particularly well-developed, contributing to their problem-solving skills, social intelligence, and capacity for learning. Different areas of the brain are specialized for various tasks, including visual processing, motor control, and social cognition. The study of primate brains provides valuable insights into human brain evolution and cognitive development.

Conclusion:

The anatomy of a monkey is a testament to the power of natural selection. Their highly specialized

skeletal, muscular, digestive, and sensory systems work in concert, allowing them to thrive in diverse environments. Understanding their anatomy provides not only a deeper appreciation for these remarkable creatures but also offers valuable insights into the principles of evolutionary biology and primate evolution. Further research continues to unravel the intricacies of monkey anatomy and its role in their ecological success.

FAQs:

1. What is the biggest difference between monkey and ape anatomy? A key difference lies in the presence of a tail in most monkeys, which apes lack. Monkeys also generally have smaller brain sizes relative to body size compared to apes.
2. How do monkey skeletons differ from human skeletons? Monkey skeletons are more adapted for arboreal locomotion, with longer limbs, more flexible joints, and opposable thumbs and big toes. Humans have a more upright posture and a differently structured pelvis.
3. Do all monkeys have the same digestive system? No. The digestive system varies based on diet; frugivores have different digestive tracts than folivores or omnivores.
4. How does a monkey's vision compare to human vision? Many monkey species have trichromatic color vision, similar to humans, but their visual acuity and depth perception may differ based on their arboreal lifestyle.
5. What role does grooming play in monkey social structure? Grooming is crucial for social bonding, hygiene, and parasite removal within monkey troops. It reinforces social hierarchies and strengthens relationships.

anatomy of a monkey: Primate Anatomy Friderun Ankel-Simons, 2010-07-27 Primate Anatomy is unlike any other work on primates: it systematically reviews the biology of all living primates, including humans. It describes their bio-geographical information and provides crucial data pertaining to their body size, fur coloration external distinguishing features, habitat and basic life strategies. Now in its third edition, Primate Anatomy discusses species that are new to science since the last edition with details concerning anatomical features among primates that were re-discovered. New research in molecular primatology is also included due to recent relevant findings in molecular biology in accordance with new technology. The basics of biological taxonomy are introduced, along with photographs of all major groups. Important new and controversial issues make this edition key for every primatologists, anthropologist, and anatomist. - Offers up-to-date reviews of molecular primatology and primate genomics - Concentrates on living primates and their overall biology - Discusses the genetic connection of function where known - Introduces primate genomics for the first time in a textbook - Provides instructive and comprehensive review tables - Includes many unique, novel and easily understandable illustrations

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anatomy of a monkey: Veterinary Anatomy and Physiology , 2019-03-13 Knowledge of

veterinary anatomy and physiology is essential for veterinary professionals and researchers. The chapters reflect the diverse and dynamic research being undertaken in a variety of different species throughout the world. Whether the animals have roles in food security, agriculture, or as companion, wild, or working animals, the lessons we learn impact on many areas of the profession. This book highlights research ranging from the cardiovascular and musculoskeletal systems, prostate and hoof, through to histopathology, imaging, and molecular techniques. It investigates both healthy and pathological conditions at differing stages of life. The importance of each cell and tissue through to the whole organism is explored alongside the methodologies used to understand these vital structures and functions.

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anatomy of a monkey: *The Parietal Cortex of Monkey and Man* J. Hyvärinen, 2012-12-06 An invitation from the Editors to contribute to 'Studies of Brain Functions' with a monograph on the parietal lobe of fers me an opportunity to present in a concentrated form my studies on this part of the brain from a period of some what over a decade. The parietal lobe, notably its posterior part, is a very complex neural system whose functions I have been able to study only superficially and without ex tensive coverage of all its parts. Therefore I did not want to limit myself entirely to my own work but found the task of writing more interesti'ng by including sections reviewing rel evant literature. Thus Chapter III dealing with the primary somatosensory cortex and Chapters IX, X, and XI concerning area 7 describe work done in my laboratory. Chapter VIII describes microelectrode work on area 7 and covers both the work of my group and that of others working on this area. Chapters II and IV to VII are based on closely related anatomical, physiological and clinical studies performed by others, and Chapter XII is a personal attempt at a synthesis of the functions of the parietal lobe. Thus this monograph is neither a strict review of all important works on the parietal lobe nor is it limited only to my own studies and those of my collaborators. Instead it attempts to be a balanced ex position of both aspects promoting, hopefully, a synthetic view of the primate parietal lobe.

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anatomy of a monkey: *Primate Comparative Anatomy* Daniel L. Gebo, 2014-10-13 Ideal for college and graduate courses, Gebo's book will appeal to researchers in the fields of mammalogy, primatology, anthropology, and paleontology. Included in this book are discussions of: Phylogeny; Adaptation; Body size; The wet- and dry-nosed primates; Bone biology; Musculoskeletal mechanics; Strepsirhine and haplorhine heads; Primate teeth and diets; Necks, backs, and tails; The pelvis and reproduction; Locomotion; Forelimbs and hindlimbs; Hands and feet; Grasping toes

anatomy of a monkey: *Primate Adaptation and Evolution* Bozzano G Luisa, 2013-10-22 Primate Adaptation and Evolution is the only recent text published in this rapidly progressing field. It provides you with an extensive, current survey of the order Primates, both living and fossil. By combining information on primate anatomy, ecology, and behavior with the primate fossil record, this book enables students to study primates from all epochs as a single, viable group. It surveys major primate radiations throughout 65 million years, and provides equal treatment of both living and extinct species.ĩ Presents a summary of the primate fossilsĩ Reviews primate evolutionĩ Provides an introduction to the primate anatomyĩ Discusses the features that distinguish the living groups of primatesĩ Summarizes recent work on primate ecology

anatomy of a monkey: *Association and Auditory Cortices* Alan Peters, Edward G. Jones, 2013-12-01 This volume deals with some of the association areas of the cerebral cortex and with the auditory cortex. In the first chapter, by Deepak Pandya and Edward Yeterian, the general architectural features and connections of cortical associ ation areas are considered; as these authors point out, in primates the association areas take up a considerable portion of the total cortical surface. Indeed, it is the development of the association areas that accounts for the greatest differ

ences between the brains of primate and non primate species, and these areas have long been viewed as crucial in the formation of higher cognitive and behavioral functions. In the following chapter, Irving Diamond, David Fitzpatrick, and James Sprague consider the question of whether the functions of the association areas depend on projections from the sensory areas of the cortex. They use the visual cortex to examine this question and show that there is a great deal of difference between species in the amount of dependence, the differences being paralleled by variations in the manner in which the geniculate and pulvinar nuclei of the thalamus project to the striate and extrastriate cortical areas. One of the more interesting and perhaps least understood of the association areas is the cingulate cortex, discussed by Brent Vogt. Cingulate cortex has been linked with emotion and with affective responses to pain, and in his chapter Vogt gives an account of its cytoarchitecture, connections, and functions.

anatomy of a monkey: An Atlas and Dissection Manual of Rhesus Monkey Anatomy

Orville M. Berringer, Freddie M. Browning, Charles Roy Schroeder, 1968

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de Schotten, 2012-06-14 One of the major challenges of modern neuroscience is to define the complex pattern of neural connections that underlie cognition and behaviour. This atlas capitalises on novel diffusion MRI tractography methods to provide a comprehensive overview of connections derived from virtual in vivo tractography dissections of the human brain.

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each species act in a group, communicate, hunt and feed, and rear its young, Monkeys is a brilliant examination in 150 outstanding color photographs of these remarkable primates. As our closest relatives in the animal world, monkeys have always fascinated and amused humans in equal measure. Monkeys is an outstanding collection of photographs showing these complex, intelligent animals in their natural habitat. Arranged in chapters covering anatomy, family, behavior, feeding, and young, Monkeys features a wide variety of monkeys and apes, including baboons, gorillas, Orang Utans, macaques, howler monkeys, spider monkeys, marmosets, gibbons, mandrills, and chimpanzees. The smallest monkey is the pygmy marmoset, which can be just 4.6 inches in length with a 6.8-inch tail and weighing just over 3.5 oz., while the massive Grauer's gorilla can weigh over 400 lbs.

anatomy of a monkey: New World Monkeys Alfred L. Rosenberger, 2020-09 This book is a

broad synthesis of new world monkey evolution, integrating their unique evolutionary story into the bigger picture of primate evolution and Amazon biodiversity. Capsule For more than 30 million years, New World monkeys have inhabited the forests of South and Central America. Whether these primates originally came from Africa by rafting across the Atlantic or crossing overland from North America, they soon flourished. This book tells the story of these New World monkeys. Integrating data from fossil and living animals, it explores the evolution of the three major New World monkey lineages as well as how they fit into the broader story of primate evolution and Amazon biodiversity. After providing readers with necessary background in primate taxonomy and systematics, Rosenberger shows that the notion of adaptive zones is central to our understanding of primate evolution. The idea of adaptive zones can explain how radiations evolve, morphological adaptations appear, and communities form. From here, Rosenberger synthesizes what is known about New World monkeys' unique ecological adaptations, including those involving feeding and locomotion, as well as their social behaviour. The book's concluding chapters explore theories of how primates first arrived in South America and what their future looks like given the threat of extinction. Biography Internal Use Only Alfred L. Rosenberger is Professor Emeritus of Biological Anthropology at Brooklyn College. An expert on the origin and evolution of New World Monkeys, Rosenberger has contributed numerous articles in edited volumes and his work is published in journals such as Nature, Journal of Human Evolution and American Journal of Primatology . Audience The audience for this book is scholars and graduate students in biological/physical anthropology and primatology, and to a lesser extent conservation biology, evolutionary biology, and behavioral ecology . Rationale - no copy text Other Relevant Info - no copy text--

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anatomy of a monkey: In the Light of Evolution National Academy of Sciences, 2014-05-19 Humans possess certain unique mental traits. Self-reflection, as well as ethic and aesthetic values, is among them, constituting an essential part of what we call the human condition. The human mental machinery led our species to have a self-awareness but, at the same time, a sense of justice, willing to punish unfair actions even if the consequences of such outrages harm our own interests. Also, we appreciate searching for novelties, listening to music, viewing beautiful pictures, or living in well-designed houses. But why is this so? What is the meaning of our tendency, among other particularities, to defend and share values, to evaluate the rectitude of our actions and the beauty of our surroundings? What brain mechanisms correlate with the human capacity to maintain inner speech, or to carry out judgments of value? To what extent are they different from other primates' equivalent behaviors? In the Light of Evolution Volume VII aims to survey what has been learned about the human mental machinery. This book is a collection of colloquium papers from the Arthur M. Sackler Colloquium The Human Mental Machinery, which was sponsored by the National Academy of Sciences on January 11-12, 2013. The colloquium brought together leading scientists who have worked on brain and mental traits. Their 16 contributions focus the objective of better understanding human brain processes, their evolution, and their eventual shared mechanisms with other animals. The articles are grouped into three primary sections: current study of the mind-brain relationships; the primate evolutionary continuity; and the human difference: from ethics to aesthetics. This book offers fresh perspectives coming from interdisciplinary approaches that open new research fields and constitute the state of the art in some important aspects of the mind-brain relationships.

anatomy of a monkey: A Combined MRI and Histology Atlas of the Rhesus Monkey Brain in Stereotaxic Coordinates Kadharbatcha S. Saleem, Nikos K. Logothetis, 2012-04-23 A

Combined MRI and Histology Atlas of the Rhesus Monkey Brain in Stereotaxic Coordinates, Second Edition maps the detailed architectonic subdivisions of the cortical and subcortical areas in the macaque monkey brain using high-resolution magnetic resonance (MR) images and the corresponding histology sections in the same animal. This edition of the atlas is unlike anything else available as it includes the detailed cyto- and chemoarchitectonic delineations of the brain areas in all three planes of sections (horizontal, coronal, and sagittal) that are derived from the same animal. This is a significant progress because in functional imaging studies, such as fMRI, both the horizontal and sagittal planes of sections are often the preferred planes given that multiple functionally active regions can be visualized simultaneously in a single horizontal or sagittal section. This combined MRI and histology atlas is designed to provide an easy-to-use reference for anatomical and physiological studies in macaque monkeys, and in functional-imaging studies in human and non-human primates using fMRI and PET. The first rhesus monkey brain atlas with horizontal, coronal, and sagittal planes of sections, derived from the same animal Shows the first detailed delineations of the cortical and subcortical areas in horizontal, coronal, and sagittal plane of sections in the same animal using different staining methods Horizontal series illustrates the dorsoventral extent of the left hemisphere in 47 horizontal MRI and photomicrographic sections matched with 47 detailed diagrams (Chapter 3) Coronal series presents the full rostrocaudal extent of the right hemisphere in 76 coronal MRI and photomicrographic sections, with 76 corresponding drawings (Chapter 4) Sagittal series shows the complete mediolateral extent of the left hemisphere in 30 sagittal MRI sections, with 30 corresponding drawings (Chapter 5). The sagittal series also illustrates the location of different fiber tracts in the white matter Individual variability - provides selected cortical and subcortical areas in three-dimensional MRI (horizontal, coronal, and sagittal MRI planes). For comparison, it also provides similar areas in coronal MRI section in six other monkeys. (Chapter 6) Vasculature - indicates the corresponding location of all major blood vessels in horizontal, coronal, and sagittal series of sections Provides updated information on the cortical and subcortical areas, such as architectonic areas and nomenclature, with references, in chapter 2 Provides the stereotaxic grid derived from the in-vivo MR image

anatomy of a monkey: Colobine Monkeys Glyn Davies, John Oates, 1994-11-24 Colobine monkeys have a unique digestive system, analogous to that of ruminants, which allows them to exploit foliage as a food source. This gives them a niche in Old World forests where they are often the only abundant medium-sized arboreal folivorous mammal. From a possible Miocene origin, Colobine monkeys have radiated into a wide variety of forms inhabiting a range of tropical woodlands in Africa and Asia. Most of the extant species have been subject to long term field studies, but until this book, no synthesis of work on this group has been available. The central theme of is that of adaptive radiation, showing how the special features of colobine anatomy interacted with a range of ecosystems to produce the distinctive species of today. The book discusses parallels with other mammalian groups, and will be of relevance to workers in evolutionary ecology, primatology and tropical ecology.

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scientists on the feeding ecology, behavior, mating strategies, and management and conservation of howlers. This book also contains chapters on the howler microbiome, the concept of behavioral variability, sexual selection, and the role of primates in forest regeneration.

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