

internal anatomy of a turtle

internal anatomy of a turtle plays a crucial role in understanding how these fascinating reptiles function and thrive in their environments. The internal structures of turtles are specifically adapted to their aquatic lifestyle, with features that differ significantly from terrestrial animals. This article will explore various aspects of turtle anatomy, including the skeletal system, muscular system, respiratory system, and organ systems. By delving into the intricacies of the internal anatomy of a turtle, readers will gain insights into how these creatures have evolved to survive in diverse habitats, from oceans to freshwater environments. This comprehensive overview will also touch on the unique adaptations that turtles possess, making them a subject of great interest among biologists and wildlife enthusiasts alike.

- Understanding the Skeletal System
- The Muscular System of Turtles
- Respiratory System Adaptations
- Digestive and Excretory Systems
- Reproductive Anatomy
- Circulatory and Nervous Systems
- Unique Adaptations of Turtles

Understanding the Skeletal System

The skeletal system of a turtle is one of its most distinctive features. Unlike mammals, turtles possess a shell that serves as a protective structure and plays a vital role in their anatomy. The turtle's shell is composed of two main parts: the carapace (the upper part) and the plastron (the lower part).

The Carapace

The carapace is a bony structure that is fused with the ribs and vertebrae, providing both protection and support. It is covered by scutes, which are made of keratin, similar to human nails. The carapace's shape can vary significantly among species, aiding in camouflage and hydrodynamics.

The Plastron

The plastron provides a protective barrier for the turtle's underside and is connected to the carapace at the sides. The plastron is also made of bony elements and covered with scutes. Together, the carapace and plastron form a protective enclosure that is critically important for the turtle's survival, offering defense against predators.

Vertebral Column and Ribs

Turtles possess a unique vertebral column that is adapted for their lifestyle. The vertebrae are fused with the carapace, allowing for a rigid yet flexible structure. Turtles have fewer ribs than many other reptiles, and these ribs are also fused to the carapace. This anatomical structure aids in their buoyancy and helps them swim effectively.

The Muscular System of Turtles

The muscular system of turtles is intricately designed to support their movements, especially in water. Turtles have strong muscles that facilitate swimming, walking, and digging.

Swimming Muscles

Turtles primarily use their limbs for propulsion in water. The forelimbs are adapted into flippers in aquatic species, allowing for efficient movement through water. The powerful muscles in these flippers enable turtles to swim gracefully and cover large distances.

Walking and Digging Muscles

Terrestrial turtles have adapted limbs that support walking and digging. The muscles in their hind limbs are robust, providing strength for movement on land. These adaptations allow turtles to forage for food and escape predators effectively.

Respiratory System Adaptations

Turtles have a unique respiratory system that differs significantly from that of mammals. They rely on their lungs for respiration, but their anatomy

allows them to have some interesting adaptations.

Lung Structure

Turtle lungs are relatively large and are located near the carapace. Unlike mammals, turtles do not have a diaphragm. Instead, they rely on movements of their limbs and the shell to expand and contract their lungs during respiration.

Breathing Mechanisms

Turtles can hold their breath for extended periods, especially aquatic species, which have adapted to dive for long durations. They can also engage in cloacal respiration, where they absorb oxygen through their cloaca, allowing them to stay submerged longer.

Digestive and Excretory Systems

The digestive system of turtles varies based on their diet, which can be herbivorous, carnivorous, or omnivorous. This diversity in diet influences their internal anatomy.

Digestive Tract

The digestive tract of a turtle includes a beak instead of teeth, which helps in processing food. The food passes through the esophagus into the stomach, where it is mixed with digestive enzymes. The intestines are long, allowing for the absorption of nutrients.

Excretory System

Turtles excrete waste through the cloaca, a multipurpose opening. The kidneys play a critical role in filtering blood and producing urine, which is expelled through this opening. Some turtles have specialized adaptations to conserve water and excrete salt, particularly in marine species.

Reproductive Anatomy

The reproductive anatomy of turtles is also fascinating, with distinct

differences between males and females.

Male Turtles

Male turtles typically have a concave plastron, which assists in mating. They possess a pair of reproductive organs called testes, located internally, and they use their cloaca for sperm transfer.

Female Turtles

Female turtles have a flatter plastron and possess ovaries that produce eggs. During the breeding season, females will dig nests in the sand or soil to lay their eggs. The number of eggs can vary significantly based on the species.

Circulatory and Nervous Systems

The circulatory and nervous systems of turtles are essential for their overall function and survival.

Circulatory System

Turtles have a three-chambered heart, consisting of two atria and one ventricle. This structure allows for some mixing of oxygenated and deoxygenated blood but is efficient enough for their metabolic needs. The circulatory system delivers oxygen and nutrients throughout the body.

Nervous System

The nervous system of turtles includes a well-developed brain, spinal cord, and nerves. Turtles possess sensory organs that help them navigate their environment, including vision, smell, and touch. Their nervous system is adapted to process information related to swimming, foraging, and mating.

Unique Adaptations of Turtles

Turtles have evolved several adaptations that enhance their survival strategies in various environments.

Camouflage and Defense Mechanisms

The coloration and pattern of a turtle's shell can provide effective camouflage against predators. Additionally, turtles can retreat into their shells for protection when threatened.

Behavioral Adaptations

Turtles exhibit various behaviors that are crucial for their survival, such as basking in the sun to regulate body temperature and migrating to breeding grounds. Their adaptive behaviors also include nesting strategies that maximize the survival rate of their offspring.

In summary, the internal anatomy of a turtle is a complex and specialized system that has evolved over millions of years. Understanding these structures provides valuable insights into how turtles thrive in their environments and adapt to various challenges.

Q: What is the main function of a turtle's shell?

A: The main function of a turtle's shell is to provide protection from predators and environmental hazards. It serves as a hard protective barrier that shields vital organs and allows turtles to retreat inside when threatened.

Q: How do turtles breathe underwater?

A: Turtles primarily breathe using their lungs, but they can hold their breath for extended periods. Some aquatic turtles also utilize cloacal respiration, absorbing oxygen through their cloaca while submerged, which helps them stay underwater longer.

Q: What adaptations do turtles have for swimming?

A: Turtles have adapted strong, muscular flippers for swimming, particularly in marine species. Their streamlined bodies and powerful limbs allow for efficient movement through water, enhancing their swimming capabilities.

Q: How do turtle reproductive systems differ between genders?

A: Male turtles typically have a concave plastron for mating, while females have a flatter plastron for egg-laying. Males possess internal testes, and females have ovaries that produce eggs, which they lay in nests.

Q: What role do the kidneys play in a turtle's excretory system?

A: The kidneys filter blood and produce urine, which is expelled through the cloaca. Turtles have adaptations to conserve water, especially in arid environments, and some species can excrete excess salt.

Q: Why do turtles bask in the sun?

A: Turtles bask in the sun to regulate their body temperature, as they are ectothermic animals. Basking helps them maintain optimal metabolic function and assists in the synthesis of vitamin D for shell health.

Q: How does a turtle's diet affect its digestive anatomy?

A: A turtle's diet significantly influences its digestive anatomy, as herbivorous turtles have longer intestines for nutrient absorption from plant materials, while carnivorous turtles may have shorter, more efficient digestive tracts suited for protein digestion.

Q: What is the significance of the turtle's three-chambered heart?

A: The three-chambered heart of turtles allows for some mixing of oxygenated and deoxygenated blood, which is efficient enough for their metabolic needs. This circulatory arrangement supports their varying activity levels in different environments.

Q: How do turtles exhibit unique behavioral adaptations?

A: Turtles demonstrate unique behavioral adaptations such as nesting strategies that maximize offspring survival, basking to regulate body temperature, and migrating to breeding grounds, all of which are critical for their survival and reproductive success.

Q: What are some common threats to turtle anatomy and health?

A: Common threats to turtle anatomy and health include habitat destruction, pollution, climate change, and predation. These factors can lead to physical injuries and impact their reproductive success and overall population health.

[Internal Anatomy Of A Turtle](#)

Find other PDF articles:

<http://www.speargroupplc.com/business-suggest-001/pdf?ID=JD08-5441&title=agri-business-solutions.pdf>

internal anatomy of a turtle: *Guide to Sea Turtle Visceral Anatomy* William E. Rainey, 1981

internal anatomy of a turtle: *A Laboratory manual for comparative vertebrate anatomy* Libbie Henrietta Hyman, 1922

internal anatomy of a turtle: *The Relation of the Internal Anatomy of Fowls to Intensity, Cycle, and Annual Egg Production* Goldan Orlando Hall, 1926

internal anatomy of a turtle: *Exercises for the Zoology Laboratory, 4e* David G Smith, 2018-02-01 This black-and-white laboratory manual is designed to provide a broad, one-semester introduction to zoology. The manual contains observational and investigative exercises that explore the anatomy, physiology, behavior, and ecology of the major invertebrate and vertebrate groups. This manual is designed to be used in conjunction with Van De Graaff's Photographic Atlas for the Zoology Laboratory, 8e.

internal anatomy of a turtle: Turtle Lenny Flank, Jr., 2007-07-17 The authoritative information and advice you need, illustrated throughout with full-color photographs--now revised and redesigned to be even more reader-friendly! With their interesting shells and slow, deliberate demeanors, turtles are intriguing creatures. The more you know about turtles, the more fascinated you'll be as you watch your pet enjoy life in the slow lane. With colorful photos, charts, and tables, this guide covers the basics, including: * Choosing your turtle--terrestrial or aquatic * Setting up a tank with the right environment * Essential equipment and supplies * Maintaining the proper temperature, lighting, and humidity * Feeding and caring for your turtle

internal anatomy of a turtle: *Synopsis of the Biological Data on the Loggerhead Sea Turtle* C. Kenneth Dodd, 1988

internal anatomy of a turtle: Exploring Zoology: A Laboratory Guide, Third Edition David G. Smith, Michael P. Schenk, 2021-01-01 Exploring Zoology: A Laboratory Guide provides a comprehensive, hands-on introduction to the field of zoology. Knowledge of the principal groups of animals is fundamental to understanding the central issues in biology. This full-color lab manual provides a diverse selection of exercises covering the anatomy, physiology, behavior, and ecology of the major invertebrate and vertebrate lineages. Great care has been taken to provide information in an engaging, student-friendly way. The material has been written to be easily adapted for use with any introductory zoology textbook.

internal anatomy of a turtle: North American Box Turtles C. Kenneth Dodd, 2002 Once a familiar backyard visitor in many parts of the United States and Mexico, the box turtle is losing the battle against extinction. In *North American Box Turtles*, C. Kenneth Dodd, Jr., has written the first book-length natural history of the twelve species and subspecies of this endangered animal. This volume includes comprehensive information on the species' evolution, behavior, courtship and reproduction, habitat use, diet, population structure, systematics, and disease. Special features include color photos of all species, subspecies, and their habitats; a simple identification guide to both living and fossil species; and a summary of information on fossil *Terrapene* and Native uses of box turtles. End-of-chapter sections highlight future research directions, including the need for long-term monitoring and observation of box turtles within their natural habitat and conservation applications. A glossary and a bibliography of literature on box turtles accompany the text. All royalties from the sales of this volume will go to the Chelonian Research Foundation, a nonprofit foundation for the conservation of turtles.

internal anatomy of a turtle: *Evolution's Witness* Ivan R. Schwab, Richard R. Dubielzig, Charles Schobert, 2012-01-05 The evolution of the eye spans 3.75 billion years from single cell organisms with eyespots to Metazoa with superb camera style eyes. At least ten different ocular models have evolved independently into myriad optical and physiological masterpieces. The story of the eye reveals evolution's greatest triumph and sweetest gift. This book describes its journey--Provided by publisher.

internal anatomy of a turtle: Proceedings of the Fifteenth Annual Symposium on Sea Turtle Biology and Conservation, 20-25 February 1995, Hilton Head, South Carolina John A. Keinath, Debra E. Barnard, John A. Musick, Barbara A. Bell, 1996

internal anatomy of a turtle: *Birds, Beasts and Relatives* Gerald Durrell, 2016-10-11 The follow-up to *My Family and Other Animals* and the inspiration for *The Durrells in Corfu*: A naturalist's memoir of his family's time on a Greek island. In the years before World War II, Gerald Durrell's family left the gloomy shores of England for the sun-drenched island of Corfu. Against this picturesque backdrop, Durrell fondly recalls his family's disorderly household and outrageous antics, including their interactions with locals of both human and animal varieties. After a boyhood spent studying zoology and acquiring the island's exotic insects, reptiles, birds, mammals, and sea creatures as pets, Durrell's budding naturalism would later bloom into a passion for conservation that would last a lifetime. Filled with clever observations, amusing anecdotes, and childlike wonder, *Birds, Beasts and Relatives* is half nature guide, half coming-of-age tale, and all charmingly funny memoir. This ebook features an illustrated biography of Gerald Durrell including rare photos from the author's estate.

internal anatomy of a turtle: *The Biology of Sea Turtles* Jeanette Wyneken, Kenneth J. Lohmann, John A. Musick, 2013-03-25 Since the first volume of *The Biology of Sea Turtles* was published in 1997, the field has grown and matured in ways few of the authors would have predicted—particularly in the areas of physiology, behavior, genetics, and health. Volume III presents timely coverage of emerging areas as well as the integration of approaches and information that did not exist even a decade ago. The book assembles the foremost experts in each topic to provide the most up-to-date and comprehensive book on sea turtles available today. New areas covered include in vivo imaging of structure, spatial distributions of marine turtles at sea, epibiosis, imprinting, parasitology, and climatic effects. Life history is explored in three chapters covering age determination, predator-prey interactions, and mortality from bycatch. *The Biology of Sea Turtles, Volume III* will inspire scientists and students to explore and expand their understanding of these intriguing animals. The book provides clear baseline summaries, thoughtful syntheses, and effective presentation of the most fundamental topics spanning form and function, health, distributions, behavior, genetics, evolution, and ecology. Its scope and depth make it the definitive go-to reference in the field.

internal anatomy of a turtle: *Recovery Plan for Marine Turtles* Sally R. Hopkins, James I. Richardson, 1984

internal anatomy of a turtle: *The Bare Bones* Matthew F. Bonnan, 2016-02-15 “Bonnan combines wit and passion with the sensibilities of a talented instructor in this encyclopedic tour of the vertebrate skeleton.” —Publishers Weekly What can we learn about the evolution of jaws from a pair of scissors? How does the flight of a tennis ball help explain how fish overcome drag? What do a spacesuit and a chicken egg have in common? Highlighting the fascinating twists and turns of evolution across more than 540 million years, paleobiologist Matthew Bonnan uses everyday objects to explain the emergence and adaptation of the vertebrate skeleton. What can camera lenses tell us about the eyes of marine reptiles? How does understanding what prevents a coffee mug from spilling help us understand the posture of dinosaurs? The answers to these and other intriguing questions illustrate how scientists have pieced together the history of vertebrates from their bare bones. With its engaging and informative text, plus more than 200 illustrative diagrams created by the author, *The Bare Bones* is an unconventional and reader-friendly introduction to the skeleton as an evolving machine. “No bones about it, a text like *The Bare Bones* was sorely needed in the popular literature

of vertebrate paleontology. Matthew Bonnan's tome on the evolution, form, and function of the vertebrate skeleton may seem daunting in size, but it is written in an enjoyable and readable fashion that will absolutely delight all sorts of readers from expert to soon-to-be-expert." —Palaeontologia Electronica "A remarkably fun book to read . . . his conversational style and wit make this an unintimidating yet highly informative book that would work wonderfully in college courses." —The Quarterly Review of Biology

internal anatomy of a turtle: The Corfu Trilogy Gerald Durrell, 2016-11-29 National Bestseller: The complete trilogy that inspired Masterpiece production The Durrells in Corfu in one volume. The tales of a naturalist and his family, who left England for the Greek island of Corfu—where they interacted with fascinating locals of both human and animal varieties—these memoirs have become beloved bestsellers and inspired the delightful series that aired on PBS television. Included in this three-book collection are: *My Family and Other Animals*: Ten-year-old Gerald Durrell arrives on sun-drenched Corfu with this family and pursues his interest in natural history, making friends with the island's fauna—from toads and tortoises to scorpions and geckos—while reveling in the joyous chaos of growing up in an unconventional household. *Birds, Beasts and Relatives*: Written after a boyhood spent studying zoology, this memoir is part nature guide, part coming-of-age tale, and all charmingly funny memoir. *The Garden of the Gods*: In the conclusion of the trilogy, Durrell shares more tales of wild animals and his even wilder family, including his mother, Louisa, and his siblings Lawrence, Leslie, and Margo, in the years before World War II. "[Durrell's] books have an unfailing charm. . . . It is a tribute to his skill that one never tires of his accounts" (Chicago Tribune). This ebook features an illustrated biography of Gerald Durrell including rare photos from the author's estate.

internal anatomy of a turtle: Exercises for the Zoology Laboratory David G. Smith, 2000

internal anatomy of a turtle: The Biology of Sea Turtles, Volume III Jeanette Wyneken, Kenneth J. Lohmann, John A. Musick, 2013-03-25 Since the first volume of *The Biology of Sea Turtles* was published in 1997, the field has grown and matured in ways few of the authors would have predicted—particularly in the areas of physiology, behavior, genetics, and health. Volume III presents timely coverage of emerging areas as well as the integration of approaches and information that did

n

internal anatomy of a turtle: Kırmızı Yanaklı Su Kaplumbağası (El Kitabı) Mustafa Selçuk Alataş, Özgür Özdemir, Ayşe Er, Burak Dik, Devran Coşkun, Enver Yazar, Mehmet Burak Ateş, Muhammed Furkan Çiftçi, Mustafa Orhun Dayan, Nermin Işık, Nimet Turgut, Oğuzhan Avcı, Oğuzhan Kahraman, Özlem Derinbay Ekici, Sakine Ülküm Çizmeci, Sedat Aydoğdu, Sema Alaşahan,

internal anatomy of a turtle: The Biology of Sea Turtles, Volume II Peter L. Lutz, John A. Musick, Jeanette Wyneken, 2002-12-17 The success of the first volume of *The Biology of Sea Turtles* revealed a need for broad but comprehensive reviews of major recent advances in sea turtle biology. *Biology of Sea Turtles, Volume II* emphasizes practical aspects of biology that relate to sea turtle management and to changes in marine and coastal ecosystems. These topics i

internal anatomy of a turtle: Animals in the Ancient World from A to Z Kenneth F. Kitchell Jr., 2014-06-23 The ancient Greeks and Romans lived in a world teeming with animals. Animals were integral to ancient commerce, war, love, literature and art. Inside the city they were found as pets, pests, and parasites. They could be sacred, sacrificed, liminal, workers, or intruders from the wild. Beyond the city domesticated animals were herded and bred for profit and wild animals were hunted for pleasure and gain alike. Specialists like Aristotle, Aelian, Pliny and Seneca studied their anatomy and behavior. Geographers and travelers described new lands in terms of their animals. Animals are to be seen on every possible artistic medium, woven into cloth and inlaid into furniture. They are the subject of proverbs, oaths and dreams. Magicians, physicians and lovers turned to animals and their parts for their crafts. They paraded before kings, inhabited palaces, and entertained the poor in the arena. Quite literally, animals pervaded the ancient world from A-Z. In entries ranging from short to long, Kenneth Kitchell offers insight into this commonly overlooked world, covering representative and intriguing examples of mammals, reptiles, amphibians and

invertebrates. Familiar animals such as the cow, dog, fox and donkey are treated along with more exotic animals such as the babirusa, pangolin, and dugong. The evidence adduced ranges from Minoan times to the Late Roman Empire and is taken from archaeology, ancient authors, inscriptions, papyri, coins, mosaics and all other artistic media. Whenever possible reasoned identifications are given for ancient animal names and the realities behind animal lore are brought forth. Why did the ancients think hippopotamuses practiced blood letting on themselves? How do you catch a monkey? Why were hyenas thought to be hermaphroditic? Was there really a vampire moth? Entries are accompanied by full citations to ancient authors and an extensive bibliography. Of use to Classics students and scholars, but written in a style designed to engage anyone interested in Greco-Roman antiquity, *Animals in the Ancient World from A to Z* reveals the extent and importance of the animal world to the ancient Greeks and Romans. It answers many questions, asks several more, and seeks to stimulate further research in this important field.

Related to internal anatomy of a turtle

INTERNAL Definition & Meaning - Merriam-Webster The meaning of INTERNAL is existing or situated within the limits or surface of something. How to use internal in a sentence

INTERNAL Definition & Meaning | Internal definition: situated or existing in the interior of something; interior.. See examples of INTERNAL used in a sentence

INTERNAL | definition in the Cambridge English Dictionary (Definition of internal from the Cambridge Advanced Learner's Dictionary & Thesaurus © Cambridge University Press)

Internal - definition of internal by The Free Dictionary Define internal. internal synonyms, internal pronunciation, internal translation, English dictionary definition of internal. adj. 1. Of, relating to, or located within the limits or surface; inner

INTERNAL definition and meaning | Collins English Dictionary Internal is used to describe things that exist or happen inside a country or organization. The country stepped up internal security. We now have a Europe without internal borders

internal - Wiktionary, the free dictionary internal (comparative more internal, superlative most internal) Of or situated on the inside. We saw the internal compartments of the machine. (medicine) Within the body

Internal - Wikipedia Look up internal or internals in Wiktionary, the free dictionary

internal, adj. & n. meanings, etymology and more | Oxford English There are 15 meanings listed in OED's entry for the word internal, three of which are labelled obsolete. See 'Meaning & use' for definitions, usage, and quotation evidence

internal - Dictionary of English of or relating to the inside or inner part: the internal organs of the body. Government of or relating to the domestic affairs of a country:[before a noun] a bureau of internal affairs

INTERNAL - Definition & Meaning - Reverso English Dictionary Internal definition: located inside the body or an object. Check meanings, examples, usage tips, pronunciation, domains, and related words. Discover expressions like "internal conflict",

INTERNAL Definition & Meaning - Merriam-Webster The meaning of INTERNAL is existing or situated within the limits or surface of something. How to use internal in a sentence

INTERNAL Definition & Meaning | Internal definition: situated or existing in the interior of something; interior.. See examples of INTERNAL used in a sentence

INTERNAL | definition in the Cambridge English Dictionary (Definition of internal from the Cambridge Advanced Learner's Dictionary & Thesaurus © Cambridge University Press)

Internal - definition of internal by The Free Dictionary Define internal. internal synonyms, internal pronunciation, internal translation, English dictionary definition of internal. adj. 1. Of, relating to, or located within the limits or surface; inner

INTERNAL definition and meaning | Collins English Dictionary Internal is used to describe things that exist or happen inside a country or organization. The country stepped up internal security. We now have a Europe without internal borders

internal - Wiktionary, the free dictionary internal (comparative more internal, superlative most internal) Of or situated on the inside. We saw the internal compartments of the machine. (medicine) Within the body

Internal - Wikipedia Look up internal or internals in Wiktionary, the free dictionary

internal, adj. & n. meanings, etymology and more | Oxford English There are 15 meanings listed in OED's entry for the word internal, three of which are labelled obsolete. See 'Meaning & use' for definitions, usage, and quotation evidence

internal - Dictionary of English of or relating to the inside or inner part: the internal organs of the body. Government of or relating to the domestic affairs of a country:[before a noun] a bureau of internal affairs

INTERNAL - Definition & Meaning - Reverso English Dictionary Internal definition: located inside the body or an object. Check meanings, examples, usage tips, pronunciation, domains, and related words. Discover expressions like "internal conflict",

INTERNAL Definition & Meaning - Merriam-Webster The meaning of INTERNAL is existing or situated within the limits or surface of something. How to use internal in a sentence

INTERNAL Definition & Meaning | Internal definition: situated or existing in the interior of something; interior.. See examples of INTERNAL used in a sentence

INTERNAL | definition in the Cambridge English Dictionary (Definition of internal from the Cambridge Advanced Learner's Dictionary & Thesaurus © Cambridge University Press)

Internal - definition of internal by The Free Dictionary Define internal. internal synonyms, internal pronunciation, internal translation, English dictionary definition of internal. adj. 1. Of, relating to, or located within the limits or surface; inner

INTERNAL definition and meaning | Collins English Dictionary Internal is used to describe things that exist or happen inside a country or organization. The country stepped up internal security. We now have a Europe without internal borders

internal - Wiktionary, the free dictionary internal (comparative more internal, superlative most internal) Of or situated on the inside. We saw the internal compartments of the machine. (medicine) Within the body

Internal - Wikipedia Look up internal or internals in Wiktionary, the free dictionary

internal, adj. & n. meanings, etymology and more | Oxford English There are 15 meanings listed in OED's entry for the word internal, three of which are labelled obsolete. See 'Meaning & use' for definitions, usage, and quotation evidence

internal - Dictionary of English of or relating to the inside or inner part: the internal organs of the body. Government of or relating to the domestic affairs of a country:[before a noun] a bureau of internal affairs

INTERNAL - Definition & Meaning - Reverso English Dictionary Internal definition: located inside the body or an object. Check meanings, examples, usage tips, pronunciation, domains, and related words. Discover expressions like "internal conflict",

Back to Home: <http://www.speargroupllc.com>