

BOOK REVIEW

Review of *Mader's Reptile and Amphibian Medicine and Surgery*, third edition, edited by Stephen Divers and Scott Stahl. Saunders. 2016. 1537 pp. ISBN: 9780323676618. US \$144.00.

Mader's Reptile and Amphibian Medicine and Surgery, edited by Dr Stephen Divers and Dr Scott Stahl, covers the entire spectrum of reptile and amphibian care. Not only is this new edition updated but also it has expanded from eight to 14 sections; each of the original sections has more material, and several of the chapters from the previous edition's sections are now sections in their own right. Instead of a single chapter overview of amphibian medicine, amphibians have chapters in each section. This new edition is vastly improved with the most up-to-date information.

The book begins with an in-depth explanation of the anatomy, physiology and natural behaviour of reptiles and amphibians by type: chelonian, snake, lizard, crocodylian, tuatara and amphibian. Readers are given enrichment tools to alleviate stress and encourage the natural behaviours of the animals in their care. This is followed by a discussion of the husbandry and nutrition requirements of each of the reptile and amphibian types, as well as lighting, disinfection and quarantine protocols. Instructions on conducting examinations (including proper restraint techniques for each type of species) and procedures for blood collection, catheter placement and euthanasia are thorough, and accompanied by excellent illustrations and photographs.

A section covering infectious diseases includes bacteriology, virology, mycology and parasitology, as well as haematology and biochemistry tables for comparison when interpreting the results of blood panel. Cytology and biopsy techniques are demonstrated, as well as the proper procedure for conducting a necropsy.

Anaesthesia, endoscopy and imaging each have dedicated sections detailing the specifics for each species. The section outlining anaesthesia discusses sedation and general anaesthesia, and includes analgesia, both systemic and regional. The diagnostic imaging section shares radiographic techniques and normal images for each species, and includes chapters on ultrasonography, computed tomography (CT), scintigraphy and magnetic resonance imaging. While the imaging section is helpful and includes wonderful images, the only positioning

techniques explained are the dorso-ventral position and the use of horizontal beams. Many rehabilitators and veterinary clinics may not have the capability of performing horizontal beam radiography; examples of more traditional lateral positioning and how to interpret that view would be helpful in future editions.

One of the two largest sections in the book, devoted to medicine, is divided by body system. Each system's normal anatomy and physiology is described and is followed by the methods of investigating disease for that system, including sample collection, imaging, and laboratory tests and results. Each system's chapter ends with a list of the most common diseases and conditions that affect that system, outlining the clinical signs and presentation, diagnosis techniques, treatment, prognosis and prevention. The section addresses every system, as well as neonatology, nutrition, geriatric medicine, emergency and critical care, and toxicology. Two other sections work hand-in-hand with the medicine section; one lists possible diseases and conditions by clinical signs (grouped by species), and the other section discusses specific diseases, outlining clinical signs, diagnostics required to confirm the disease, and treatment and prevention protocols.

The surgery section details how to perform fracture, shell, and prolapse repair, amputations and coeliotomy (by species), as well as surgeries of the eye, ear, oral cavity and other systems. The instructions are easy to understand, and include illustrations and photographs that demonstrate the procedures. Following the surgery section is one that outlines various therapies, including nutritional, behavioural, laser, physical therapy, wound management and various drug therapies. The book ends with sections discussing population and public health, including conservation and ecosystem health, and laws and regulations in the United States and around the world.

This invaluable resource contains copious tables detailing normal ranges for various laboratory tests, nutritional requirements, formularies for both reptiles and amphibians, key husbandry requirements by species, analgesic and anaesthetic protocols, common parasites and best drugs to use by body system. It is a reference book that should be available to every rehabilitator and veterinarian that treats reptiles and amphibians.

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