PREFACE

This text has been compiled to fill a void in the current literature. We recall on many occasions, while interpreting radiographs of various Australian mammals, saying 'We need to do a text on the normal radioanatomy of Australian mammals'. We have acted on it and produced *Radiology of Australian Mammals*.

The recognition, diagnosis and treatment of injury and disease in wildlife species present unique challenges for the veterinarian. This is particularly true for many species of Australian native mammals. Many are cryptic in nature and frequently mask their clinical signs when injured or suffering from disease – the 'preservation response'. When animals can no longer compensate and appear clinically affected, the effects of their injuries or diseases are advanced and efforts to treat these animals are often fruitless. Veterinarians dealing with wildlife must draw on all their skills and powers of observation to recognise the signs of injury and disease. In the majority of cases, further examination and diagnostic workup will be required to confirm a diagnosis. As with domestic species, a suite of diagnostic modalities can be used to further define the nature and extent of injury or disease, guide therapeutic decisions and determine prognosis. Radiology is a fundamental diagnostic modality that is generally readily available and, with the advent of digital radiology, provides high-quality images that can be viewed almost instantly. These can also be easily electronically transferred for referral to a specialist wildlife veterinarian or radiologist for interpretation and opinion if required.

Two important aspects of radiology are the recognition and description of abnormal findings and the interpretation of these findings. In order to recognise abnormalities, knowledge of normal radioanatomy is required. This is particularly challenging with wildlife because of the frequent lack of familiarity with a species and anatomic descriptions, and because radiographic images of normal animals are not readily available for comparison. A further challenge is the variation in anatomy among the different wildlife species; in some instances, even those within the same taxonomic group. One option that can increase one's confidence in distinguishing normal from abnormal is consultation of reference sources on normal radioanatomy. This, until now, has not been available for Australian mammals. *Radiology of Australian Mammals* is the first comprehensive resource on the normal radioanatomy of Australian mammals.

The primary aim of this text is to provide a detailed reference on the normal radioanatomy of Australian mammals. As there are over 380 native mammal species in 48 families and 150 genera in Australia, to represent all of these radiographically would be impossible. We have used selected, readily available species to represent a typical species within each of the major taxonomic groups. We have not included rodents, as Australian native rodents are not anatomically sufficiently different from exotic rodent species described in other texts. We have not included marine mammals, as acquiring complete image sets for available species was not possible. We have also not included the dingo, as this species has similar radioanatomy to that of domestic canids. In most cases clinically normal, healthy animals were used. In some instances, radiographs were opportunistically obtained from animals undergoing investigative procedures for injury or disease. After careful scrutiny by the authors, only radiographs representing normal radioanatomy have been used in Chapters 2 to 9. In some cases, however, radiographs with abnormalities were selected if the abnormality did not detract from the intent to demonstrate other normal radiographic features. Radiographic abnormalities in these images are indicated by annotations on the