

INTRODUCTION

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Carnivores play a strong role in the functioning of the world's ecosystems (Estes *et al.* 2011), and the carnivores of Australia are no exception. For many millions of years, Australia boasted a spectacular array of fierce predators, including giant marsupials, reptiles and birds, most of which have now disappeared. The causes of their extinctions are still debated. Since European settlement, Australia has seen the extinction of one large marsupial predator (the thylacine), while another (the Tasmanian devil) is in danger of imminent extinction, and still others have suffered dramatic declines.

By contrast, two recently introduced predators, the European red fox and the feral house cat, have been spectacularly successful at exploiting the Australian environment, and continue to have devastating impacts on the native fauna. The dingo* was also brought to Australia by humans, although after more than 4000 years on the continent it is viewed by many as native. Dingoes can have both positive and negative impacts on biodiversity, and on the pastoral industry. While predation of livestock is a problem, dingoes may also help suppress pests such as large herbivores, foxes and feral cats. The issue of how to manage the dingo is further complicated by uncertainty about the purity of remaining dingo populations, many of which are gradually becoming hybridised with domestic dogs.

This volume explores Australia's unique predator communities from prehistoric, historic and

current perspectives, examines the biology of many individual species, and uses the insights gained to suggest future directions in management and research. This book is about 'carnivores with a small c'. In other words, we do not deal only with mammals in the order Carnivora. Instead, we take a broader approach, defining carnivores as predators of vertebrate prey. This expansive definition allows us to include carnivorous birds, reptiles and mammals. Only by viewing these animals as components in diverse and complex ecosystems will we preserve Australia's priceless biological heritage and economic prosperity.

References

- Crowther MS, Fillios M, Colman N, Letnic M (2014) An updated description of the Australian dingo (*Canis dingo* Meyer, 1793). *Journal of Zoology* **293**, 192–203.
- Estes JA, Terborgh J, Brashares JS, Power ME, Berger J, Bond WJ, Carpenter SR, Essington TE, Holt RD, Jackson JBC, Marquis RJ, Oksanen L, Oksanen T, Paine RT, Pikitch EK, Ripple WJ, Sandin SA, Scheffer M, Schoener TW, Shurin JB, Sinclair ARE, Soulé ME, Virtanen R, Wardle DA (2011) Trophic downgrading of Planet Earth. *Science* **333**, 301–306.

* The dingo has recently been described as a distinct species (*Canis dingo*) (Crowther *et al.* 2014). It was previously considered to be a subspecies of wolf, and was classified as *Canis lupus dingo*. Nomenclature has been altered throughout the book to reflect this change.