

Thursday 2 October 2014, 1115, Ellery Room D

WHAT'S FOR DINNER? A CONTINENTAL-SCALE ANALYSIS OF FERAL CAT DIET IN AUSTRALIA

Tim Doherty¹, Dr Dave Algar², Dr Eddie Van Etten¹, Dr Neil Collier³, Dr Rob Davis¹, Professor Chris Dickman⁴, Dr Glenn Edwards⁵, Dr Pip Masters⁶, Russell Palmer², Dr Sue Robinson⁷

¹School of Natural Sciences, Edith Cowan University, ²Science and Conservation Division, WA Department of Parks and Wildlife, ³Faculty of Health, Engineering and Science, Edith Cowan University, ⁴Desert Ecology Research Group, School of Biological Sciences, The University of Sydney, ⁵Northern Territory Department of Land Resource Management, ⁶Natural Resources Kangaroo Island, ⁷Invasive Species Branch, Tasmanian Department of Primary Industries, Parks, Water and Environment

Reducing the harmful impact of feral cats is a priority for conservation managers across the globe and success in achieving these aims requires a detailed understanding of feral cat ecology across a broad spectrum of environmental conditions. We reviewed the diet of the feral cat in Australia, seeking to identify biogeographical patterns in diet diversity and composition. We specifically sought to examine: (1) how consumption of prey groups varies across rainfall and latitudinal gradients, (2) the relationship between consumption of rabbits and other prey groups, and (3) how trophic diversity and composition differ between different climate-habitat regions. We modelled feral cat diet against latitude, longitude and climatic variables using 49 published and unpublished data sets.

Feral cats consume or predate at least 400 vertebrate species in Australia, including predation of at least 28 Red List species. Consumption of arthropods, reptiles, rabbits and rodents varied with latitude. Consumption of medium-sized mammals was highest in the southeast and consumption of birds was highest on islands. Consumption of rabbits was negatively correlated with that of rodents and dasyurids. Our findings confirm that the feral cat is an opportunistic, generalist carnivore capable of exploiting a diverse range of prey across Australia. The feral cat uses a facultative feeding strategy, feeding mainly on rabbits when they are available, but exploiting other prey like small mammals when rabbits decrease in availability or are absent altogether. We discuss these results in the context of previous dietary studies on feral cats and other medium-sized carnivores from elsewhere in the world.

Tim Doherty is a PhD student at Edith Cowan University in Western Australia, studying the the impact of feral cats on native fauna and the interaction between habitat use and fire ecology. His research interests include arid and semi-arid systems, fire ecology, predators and conservation of threatened fauna.