

Matthew Rees

Applied Ecologist

Curriculum Vitae

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Profile

I use quantitative methods to improve monitoring, management and decision-making around invasive species. I specialise in modelling population dynamics and species interactions using hierarchical models, as well as structured decision-making methods to prioritise actions and policies. I have extensive fieldwork experience, leading teams in remote conditions and hold a manual drivers licence, 4WD and first aid training. Working on-ground, alongside stakeholders motivates me to consider landscape context as well as feasibility and socio-economic constraints. I am passionate about applying newly developed statistical methods to real-world datasets, as well as conducting transparent and collaborative science. I am currently finishing up my PhD with the *Quantitative and Applied Ecology group* while tackling the occasional, related contracting job.

Education

2017-present	PhD (Conservation Biology) Interactions between invasive predators and native prey	University of Melbourne
2013-2016	Bachelor of Environmental Science (1st class Honours) Prioritising invasive animal management in the Lake Eyre Basin, Australia	Queensland University of Technology

Professional Experience

2019-2020	Ecologist (private contractor) Training Indigenous rangers in fauna monitoring protocols and grant writing	Winda-mara Aboriginal Corporation, Treetec
2020-2020	Research assistant Designing fox density field surveys	University of Melbourne
2018-2020	Demonstrator Conservation Biology, Environmental Risk Assessment subjects	University of Melbourne

Publications

Peer-reviewed

1. **MW Rees**, J Carwardine, A Reeson and J Firn (2020). Rapidly assessing cobenefits to advance threat-management alliances. *Conservation Biology*. <https://doi.org/10.1111/cobi.13490>
2. **MW Rees**, JH Pascoe, BA Wintle, M Le Pla, EK Birnbaum and BA Hradsky (2019). Unexpectedly high densities of feral cats in a rugged temperate forest. *Biological Conservation*, 239, 108287. <https://doi.org/10.1016/j.biocon.2019.108287>

In peer-review

1. H Davies, Tiwi Land Rangers, **MW Rees**, D Stokeld, A Miller, G Gillespie and B Murphy. Variation in feral cat density between two large adjacent islands in Australia's monsoon tropics.
2. M Le Pla, EK Birnbaum, **MW Rees**, BA Hradsky, AR Weeks, A Van Rooyen and JH Pascoe. Genetic sampling and an activity index indicate contrasting lethal control outcomes.
3. A Stobo-Wilson... **MW Rees**... Sharing meals: predation on Australian mammals by the introduced European red fox compounds and complements predation by feral cats.
4. A Stobo-Wilson... **MW Rees**... Reptiles as food: predation of Australian reptiles by introduced red foxes compounds and complements predation by cats.
5. A Stobo-Wilson... **MW Rees**... Compounding and complementary carnivores: Australian bird species eaten by the introduced European red fox *Vulpes vulpes* and domestic cat *Felis catus*
6. A Stobo-Wilson... **MW Rees**... Counting the bodies: the numbers of, and spatial variation in, Australian reptiles, birds and mammals killed by two introduced predators.

Reports

1. **MW Rees (2020).** Monitoring and managing critical weight range mammals in the indigenous protected areas of the world heritage Budj Bim cultural landscape. *A report prepared for the Victorian Government, Department of Environment, Land, Water and Planning.*

Grants and awards

2020	University of Melbourne, School of Biosciences, Jasper Loftus-Hills award	\$2.25K
2020	University of Melbourne, School of Biosciences, travel grant	\$2K
2020	Ecological Society of Australia, Hoslworth research endowment	\$7.5K
2019	Ecological Society of Australia, Hoslworth research endowment	\$6.75K
2018	Conservation Ecology Centre student scholarship	\$5K
2017	Victorian Environmental Assessment Council, Bill Borthwick scholarship	\$2K
2017	Victorian Government, Parks Victoria research partners program (co-investigator)	\$20K
2017	Victorian Government, Department of Land, Environment, Land, Water and Planning research grant	\$15K
2017	Victorian Government, Department of Land, Environment, Land, Water and Planning, PhD top-up scholarship	\$15K
2017	Australian federal government, RTP PhD scholarship	\$98K
2016	Commonwealth Scientific and Industrial Research Organisation, honours top-up scholarship	\$10K
2015	University of Wollongong, undergraduate research scholarship	\$7.2K

Presentations

- Australian Wildlife Management Society (virtual), December 2020. *Drivers of feral cat density and spatio-temporal behaviour.*
- Ecological Society of Australia (virtual), December 2020. *Drivers of feral cat density and spatio-temporal behaviour.*
- Australian Mammal Society (virtual), November 2020. *Drivers of feral cat density and spatio-temporal behaviour.*
- International Statistical Ecology Conference (virtual), June 2020. *Using spatial mark-resight and GAMs to infer predator interactions.*
- Guest lecture, University of Melbourne, Australian Wildlife Biology, May 2020, *Invasive mammals in Australia.*
- Ecological Society of Australia, Launceston, November 2019, *Does fox control increase feral cat population density?*
- Wimmera Biodiversity Seminar, Rupanyup, September 2019, *Monitoring predators and prey in south-west VIC.*
- Otway Threatened Species Forum, Geelong, August 2019, *Monitoring predators and prey in the Otways .*
- Victorian Biodiversity Conference, Melbourne, February 2019, *Prioritising invasive animal management in the Lake Eyre Basin to benefit both threatened species and agriculture.*
- Ecological Society of Australia, Brisbane, November 2018, *Modelling invasive predator density in mesic forests.*
- Otway Threatened Species Forum, Geelong, August 2018, *How many feral cats are in the Otway Ranges?*
- Mathematics of Biological Systems Symposium, Melbourne, April 2018, *Integrating co-benefits into the cost-effective prioritisation of conservation strategies.*
- Victorian Biodiversity Conference, Melbourne, February 2018, *How many cats are in the Otways?*
- Environmental Institute of Australia & New Zealand conference, Brisbane, August 2017, *Building alliances between the agriculture and conservation sectors.*

Media

09/12/2019	Radio interview	ABC Melbourne	Invasive predators interactions
20/09/2019	Television segment feature	TF1 French National News	Invasive animals in Australia
08/08/2019	Radio interview	3AW	Invasive predators in south-west VIC
08/08/2019	Newspaper article (front page)	Geelong Advertiser	Invasive predators in south-west VIC
07/08/2019	Radio interview	ABC South West Victoria	Invasive predators in south-west VIC
13/03/2019	Newspaper article	Colac Herald	Feral cat density in the Otway Ranges
11/03/2019	Radio interview	ABC Melbourne	Feral cat density in the Otway Ranges
11/03/2019	Live TV interview	ABC news	Feral cat density in the Otway Ranges
10/03/2019	Online news article	ABC news	Feral cat density in the Otway Ranges
10/03/2019	Radio interview	ABC Ballarat	Feral cat density in the Otway Ranges

Service

- Peer-reviewer (*Conservation Biology, Wildlife Research, Austral Ecology, Australian Mammalogy*)
- Treasurer, BioSciences Postgraduate Society (2019-2020)
- Coding club and social media contributor with QAECO lab group
- Ecological Society of Australia award judging panel (2020)