

PATRICK B FINNERTY, CV

Postdoctoral Research Fellow, The University of Sydney

Director of Early Career Ecologists - Ecological Society of Australia

'Next Generation Ecologist' – Ecological Society of Australia 2024

6/3 Council Street, Marrickville NSW 2204, Mobile +61 498 102 984

patrick.finnerty@sydney.edu.au



RESEARCH PHILOSOPHY

My research is hypothesis-driven and takes a quantitative, experimental, and field-based approach. I produce findings that offer tangible benefits in real-world conservation and wildlife management. I have collaborated widely, allowing for a more comprehensive understanding and robust solutions to ecological challenges. Moreover, to ensure my research and conservation efforts have the highest chance of success, I ensure inclusivity, incorporating local knowledge and diverse perspectives. The quality of my research has been recognised through multiple prestigious awards, including the 2025 Australian Academy of Science Margaret Middleton Award for Endangered Australian Native Vertebrate Animals, the 2024 Ecological Society of Australia 'Next Generation Ecologist' award, and I was part of the larger core 'Sensory Conservation' team winning the 2024 Australian Museum Eureka prize for Environmental Research. My current research focus is multifaceted, exploring ways in which species reintroduction efforts in Australia can be successfully taken 'beyond the fence', investigating complex food web dynamics across multiple ecosystems, as well as improving our understanding of unknown migratory routes of large herbivores to inform novel wildlife management approaches, and mitigate human-wildlife conflict.

EDUCATION AND QUALIFICATIONS

2020 - 2024 Doctor of Philosophy (Science), University of Sydney (affiliated with University of Pretoria, South Africa)

2016 - 2017 BSc (Advanced) (Honours Class I and University Medal) University of Sydney

2013 - 2015 BSc (Advanced) Biology, University of Sydney

PROFESSIONAL POSITIONS HELD

- **Elected Councillor** (2025 – *current*) Royal Zoological Society of NSW Council
- **Director of Early Career Ecology** (2024 – *current*) Ecological Society of Australia Board
- **Early Career Coordinator** (2024 – *current*) Australasian Wildlife Management Society Committee
- **Postdoctoral Research Fellow** (2024 – *current*) Global Ecology Lab, University of Sydney
- **Principle investigator / project partner** (2023 – *current*) 'Rangelands Regeneration' Greater Mapungubwe Transfrontier Conservation Area African Elephant Collaring Project, Zimbabwe
- **Research Assistant / Demonstrator / Lecturer** (2020 – *current*) School of Life and Environmental Sciences, USyd (multiple casual contracts)
- **Ecologist / Senior Ecologist** (2018 – 2020) EMM Consulting
- **Research team member** (2017 – 2018) NSW Office of Environment and Heritage historical and current koala ecological research team
- **Research team member** (2016 – 2017) Invasive species and pest control research, The University of Sydney and Western Australia department of Parks and Wildlife, Kununurra, Western Australia

SCIENTIFIC PUBLICATIONS

I have a growing list of first author publications in internationally recognised journals and I am a co-author on a multitude of other papers. Many of my papers have included collaboration with academics

both across multiple Australian and international universities including The University of Cambridge, UK, The University of North Dakota and The University of California, USA, The University of Pretoria, and The University of KwaZulu-Natal South Africa. My total citation rate and h-index has an upward trajectory, with 207 total citations since my first publication and a h-index of 7.

- **Finnerty PB**, Carthey AJR, Banks PB, Brewster R, Grueber CE, Houston D, Martin JM, McManus P, Roncolato F, van Eeden LM, Wauchope M, Newsome TM. (*In Press*) Urban rewilding to combat global biodiversity decline and reconnect people with nature. *BioScience* [Impact factor: 9.4, Altmetric: 76 / top 5%]
- Wauchope M, **Finnerty PB**, Pierson J, Banks PB, Carthey A, Newsome TM. (*In Press*) Who's been lost from the landscape? Identifying missing terrestrial fauna to inform urban rewilding. *Pacific Conservation Biology* [Impact factor: 1.9]
- Boer-Cueva M, Cairncross R, Crowther MS, **Finnerty PB**, Rana AF, Banks PB, Newsome TM. (2024) Life in the big smoke: terrestrial vertebrate assemblages and their drivers along an urbanisation gradient in Sydney, Australia. *Wildlife Research* [Impact factor: 1.9]
- **Finnerty PB**, Bonat S, Spencer EE, Cairncross RJ, Meisuria N, Raña AF, Fust C, Vandersteen J, Dickman CR, Greenville A, Barton PS, Crowther MS, McArthur C, Newsome TM. (2024) Brushing up on carcass consumption: Investigating spatiotemporal scavenging dynamics of brushtail possums in Australian ecosystems. *Austral Ecology* [Impact factor: 1.7]
- **Finnerty PB**, Shrader MA, Banks P, Schmitt M, & McArthur C. (2024) Odour information enables patch choice by mammalian herbivores from afar, leading to predictable plant associational effects. *Functional Ecology* [Impact factor: 5.1]
- Brewster R, Jameson T, Roncolato F, Crowther MS, **Finnerty PB***, & Newsome TM. (2024) Islands in the sky – could complex topography help us rewild beyond the fence? *Pacific Conservation Biology* (Impact factor: 1.6, Corresponding author)
- **Finnerty PB**, Possell M, Banks PB, Orlando CG, Price CJ, Shrader AM, & McArthur C. (2024). Olfactory misinformation provides refuge to palatable plants from mammalian browsing. *Nature ecology & evolution* [Impact factor: 16.5, Altmetric: 263 / top 1%]
- Price CJ, Bytheway JP, **Finnerty PB**, Grant LS, Masani S, Orlando CG, Parker FCG, Possell M, McArthur C, & Banks P. (2024) Altering reality—sensory tactics to manage wildlife and conserve threatened species. *Australian Zoologist* [Impact factor: 1.1]
- **Finnerty PB**, McArthur C, Banks PB, Price CJ, & Shrader MA. (2022). The olfactory landscape concept: a key source of past, present and future information driving animal movement and decision-making. *BioScience* [Impact factor: 9.4, Altmetric: 76 / top 5%]
- Shine R, *et al.* (14 co-authors including **Finnerty PB**) Increased rates of dispersal of free-ranging cane toads (*Rhinella marina*) during their global invasion. *Nature Scientific Reports* [Impact factor: 3.8]
- McArthur C, **Finnerty PB**, Schmitt MH, Shuttleworth A, & Shrader AM. (2019). Plant volatiles are a salient cue for foraging mammals: elephants target preferred plants despite background plant odour. *Animal behaviour* [Impact factor: 2.5]
- Brandenburger C, Sherwin WB, Creer SM, Buitenwerf R, Poore AGB, Frankham R, **Finnerty PB**, & Moles AT. (2019) Rapid reshaping: the evolution of morphological changes in an introduced beach daisy. *Proceedings of the Royal Society B* [Impact factor: 4.7]
- **Finnerty PB**, Shine R, & Brown G P. (2018). The costs of parasite infection: Effects of removing lungworms on performance, growth and survival of free-ranging cane toads. *Functional Ecology* [Impact factor: 5.1]
- **Finnerty PB**, Shine R, & Brown G P. (2018). Survival of the feces: Does a nematode lungworm adaptively manipulate the behavior of its cane toad host? *Ecology and Evolution* [Impact factor: 3.2]
- **Finnerty PB**, Stutz R, Price CJ, Bank P, & McArthur C (2017) Leaf odour cues enable non-random foraging by mammalian herbivores. *Journal of Animal Ecology* [Impact factor: 5.6]

- **Finnerty PB**, Shilton CM, Shine R, & Brown, GP. (2017). Using experimental de-worming to measure the immunological and pathological impacts of lungworm infection in cane toads. *International Journal for Parasitology: Parasites and Wildlife* [Impact factor: 3.8]

OTHER PUBLICATIONS

- **Finnerty PB**, Banks P, & McArthur C (2024) Animals keep eating precious plants – we used ‘smell misinformation’ to keep them away (*The Conversation*, 15,859 reads)
- **Finnerty PB**, & Newsome TM (2024) Islands in the sky: could steep-sided hilltops offer safe haven to our threatened species? (*The Conversation*, 11,496 reads)
- **Finnerty PB** Improving our understanding of ‘blood hungry’ herbivores. (*The Conversation*, 6,387 reads)
- **Finnerty PB**, Banks P, & McArthur C (2024) How do you stop elephant herds from trashing crops and trees? Target sensitive nostrils with a ‘scent fence’ (*The Conversation*, 5,162 reads)

ACADEMIC SCHOLARSHIPS AND AWARDS

- **Australian Academy of Science** (2025) The Margaret Middleton Award for Endangered Australian Native Vertebrate Animals
- **Ecological Society of Australia** (2024) ‘Next Generation Ecologist’
- **Australian Museum Eureka Prize Winner for Environmental Research** (2024) – research member, part of larger core ‘Sensory Conservation’ team
- **Australian Academy of Science** (2023) Max Day Environmental Science Fellowship
- **Australasian Wildlife Management Society** (2023) Best Student Presentation Award
- **USyd SOLES** (2022) Best Presentation Award, higher degree research showcase
- **Australian Postgraduate Award** (2020 – 2024) Research Training Program PhD Stipend Scholarship
- **The University of Sydney** (2017) University Medal
- Faculty of Science Dean's List of Excellence in Academic Performance (2015)
- University of Sydney Academic Merit Prize (2015)
- Biological Sciences senior Hawsell Prize for excellence in zoological studies (2015)
- University of Sydney Summer Research Scholarship (2015)
- University of New South Wales Summer Research Scholarship (2015)
- Faculty of Science Dean's List of Excellence in Academic Performance (2014)
- University of Sydney Academic Merit Prize (2014)
- Biological Sciences senior student GS Caird Scholarship for botanical excellence (2014)

RESEARCH FELLOWSHIPS AND ACADEMIC GRANTS (\$180,876 AUD)

- **Australian Academy of Science** The Margaret Middleton Award for Endangered Australian Native Vertebrate Animals (2025) \$19,876
- **Australian Academy of Science** Australian Academy of Science Max Day Environmental Science Fellowship (2023) \$20,000
- **Elephant Crisis Fund** – Rangelands Regeneration: ‘Greater Mapungubwe Transfrontier Conservation Area African Elephant Collaring Project’ (Current) \$100,000 *Principal Investigator*
- **Australian Academy of Science** Max Day Environmental Science Fellowship (2023) \$20,000
- **NSW Government DPE-USyd MoU Partner Grant** (2022) \$13,000
- **Ecological Society of Australia** Holsworth Wildlife Research Endowment (2021) \$8,500
- **The Royal Zoological Society of NSW Paddy Pallin Foundation Science Grant** (2021) \$10,000
- **Ecological Society of Australia** Jill Landsberg Trust Fund Scholarship (2021) \$6,000

- **Australia Wildlife Society** University Student Grant (2021) \$2,000
- **The Royal Zoological Society of NSW** EMR Research Grant (2021) \$1,500

COURSES TAUGHT AND OTHER ACADEMIC SERVICES

- **Lecturer / Co-course coordinator, University of Sydney** (2025) WILD4001: Wildlife Management – multiple lectures and workshops, redesigned assessments.
- **Lecturer, University of Sydney** (2024) ENVI5705: Ecological Principles – Lecture 12 Herbivore induced headaches – are smelly plants the antidote?, ‘Warrah’ Field Course
- **Lecturer, University of Sydney** (2024) AVBS3004: Wildlife Conservation – Lecture 20 Rewilding – an emerging global conservation tool, Lecture 21 Predation and Conservation
- **Guest Lecturer, University of North Dakota** (2023) BIOL435: Large Mammal Ecology and Management – People in Large Mammal Ecology and Management
- **Guest Lecturer, University of Pretoria** (2023) Wildlife Science Seminar
- **Postgraduate Student supervision:** I currently supervise three PhD Students (including one at the University of Pretoria, South Africa) and seven Honours (USyd). Three past honours students received First Class results.
- **Demonstrator and Supervisor (including running lab classes, tutorials, field trips and assessment and exam marking), University of Sydney** (2020 – 2023) BIOL1006/1906 Life and Evolution, BIOL1007 From Molecules to Ecosystems, BIOL2022/2922 Biology Experimental Design and Analysis, BIOL2030/2930 Botany, BIOL2032 Australian Wildlife Biology, BIOL3007 Ecology
- **Scientific Peer Reviews:** 9 pre-publication reviews for 6 journals
- **Information/Communications Manager (2022 – 2023)** Society for Conservation Biology (Australian branch)
- **Honours Marking:** I am currently marking one honours research proposal, literature review, and thesis at USyd

COMMUNITY

- **SOLES Postgraduate Society Co-President** (2022 – 2023), University of Sydney
- **‘Unearthing Science’ & Biology outreach program leader** (2020 – 2022), University of Sydney
- **Invited Presentations (Students, Community groups, and Societies)** (2020 – 2024): Royal Zoological Society of NSW, Wildlife at the Watering Hole (2024); Willoughby Council Chatswood community library evening talk (2024); NSW State Government Dept of Planning and Environment, monthly branch seminar (2023); Australian Plants Society NSW, quarterly academic talk (2023); University of North Dakota, student talk (2023)
- **Association Memberships:** Australasian Wildlife Management Society; Ecological Society of Australia; Australian Mammal Society; Royal Zoological Society of NSW

SELECT RADIO, TV, AND NEWSPAPER COVERAGE

- Harnessing mesas as a new tool to reintroduce threatened species in Australia ‘beyond the fence’ (2024, **2GB Radio**, Morning Show)
- Bringing rewilding ‘beyond the fence’ in Australia (2024, **ABC Radio Sydney**, **Richard Glover’s ‘self-improvement Wednesdays’**)
- ‘Using smell to protect native plants from herbivores’ (2024 **ABC radio Sydney**, **Richard Glover’s ‘self-improvement Wednesdays’**)
- A novel way to stop animals eating your plants (2024, **The Weekend Australian Magazine**)
- ‘Olfactory misinformation’ as a new tool to protect plants from pesky herbivores (2024 **ABC radio Canberra**, and **ABC Radio National**)

- Smell misinformation’ used to stop animals eating threatened plant species (2024, **Australian Geographic**)
- ‘Gently Nudging Giants’ (2023 **Bela-Bela Times**, local South African newspaper article)
- ‘Nudging Giants with Plants’ (2023 **Modimolle Times**, local South African newspaper article)
- ‘Ecology Matters’ podcast, ‘Episode 7: Patt Finnerty’ (2022 **Ecological Society of Australia**)

CONFERENCE PRESENTATIONS

- **PLENARY: Finnerty PB** (2024): ‘Harness olfactory misinformation as a novel conservation tool’, Ecological Society of Australia Conference, Melbourne Australia
- **Finnerty PB** (2024): The future of rewilding in Australia – moving beyond the fence, Australasian Wildlife Management Society Conference, Fremantle, Australia
- **Finnerty PB** (2023) ‘Gently nudging giants: harnessing ‘virtual’ neighbours to manipulate African elephant foraging behaviour as a novel management tool’, Australasian Wildlife Management Society Conference, Melbourne, Australia
- **Finnerty PB** (2023) ‘Neighbourhood watch – how ‘virtual’ neighbours can be used to manipulate mammalian herbivore foraging behaviours as a wildlife management and conservational tool’, South African National Park – Savanna Science Network Meeting, Kruger National Park, South Africa
- **INVITED: Finnerty PB** (2023) ‘Introducing the olfactory landscape: an information source driving mammal movement and decision making’, International Mammalogical Congress, Anchorage, Alaska, USA
- **Finnerty PB** (2022) ‘Defining the olfactory landscape to better understand animal movement and decision-making’, Animal Behaviour Society Conference, San Jose, Costa Rica
- **INVITED: Finnerty PB** (2022) ‘Strategically exploiting plant odours to manipulate mammalian herbivore foraging behaviour as a wildlife management and conservational tool’, Jill Landsberg Trust Fund plenary, Ecological Society of Australia – Society for Conservation Biology Conference, Wollongong, Australia
- ‘Neighbourhood watch – using ‘virtual’ neighbours to manage problematic herbivores during habitat restoration and post-fire recovery’
- **Finnerty PB** (2022) ‘Neighbourhood watch – using ‘virtual’ neighbours to manage problematic herbivores during habitat restoration and post-fire recovery’, Australasian Wildlife Management Society Conference, Napier, New Zealand

GENERAL INTERESTS

- Long distance running, bikepacking, fly fishing, & competitive polocrosse

REFeree DETAILS

Academia

Thomas Newsom

Associate Professor, The University of Sydney, Sydney

Email: thomas.newsom@sydney.edu.au

Phone: +61 476 042 069

Clare McArthur

Professor, The University of Sydney, Sydney

Email: clare.mcarthur@sydney.edu.au

Phone: +61 429 081 257

Adrian Shrader

Professor, The University of Pretoria, South Africa

Email: adrian.shrader@up.ac.za

Phone: +27 84 568 6640

Teaching and education

Francesca Van Den Berg

Lecturer, The University of Sydney, Sydney

Email: francesca.vandenberg@sydney.edu.au

Phone: +61 431 241 701

International research collaboration

Melissa Schmitt

Assistant Professor, University of North Dakota, Grand Forks, USA

Email: melissa.schmitt.1@UND.edu

Phone: +1 805 637 5861