

Eve B. Cooper

Assistant Teaching Professor
University of Colorado Boulder
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Education

- 2017 - 2020 **Ph.D. in Ecology and Evolution**
Australian National University (ANU), Research School of Biology
Thesis: *Evolutionary causes & ecological consequences of ageing in the wild*
Advisor: Dr. Loeske Kruuk
- 2012 - 2016 **B.Sc. in Environmental Science: Ecology (honors)**
University of Guelph (UoG)
Thesis: *Personality and dispersal in North American red squirrels*
Advisor: Dr. Andrew McAdam
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Academic Positions

- 2024 - present **Assistant Teaching Professor**
University of Colorado Boulder, Ecology and Evolutionary Biology
- 2020 - 2024 **Postdoctoral Research Fellow**
New York University, Department of Anthropology
Research focus: *immune system function, aging, and sociality in rhesus macaques*
Supervisor: Dr. James Higham
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Teaching Experience

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| <i>Animal Behavior</i> (EBIO3240) | Instructor of Record (Fall 2024)
University of Colorado, Boulder |
| <i>General Biology II</i> (EBIO1220) | Instructor of Record (Fall 2024, Spring 2025)
University of Colorado, Boulder |
| <i>Primate Behavior</i> (ANTH311) | Instructor of Record (Summer 2023)
University of Calgary |
| <i>Genetics</i> (BIOL2151) | Teaching Assistant (Spring 2019, Spring 2020)
Australian National University |
| <i>Field Ecology</i> (BIOL2203) | Teaching Assistant & Course Development (Fall 2018)
Australian National University |
| <i>Environment Research</i> (ENVS1003) | Teaching Assistant (Spring 2017, Spring 2018)
Australian National University |
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Peer-Reviewed Publications

EB Cooper, C Whalen, N Beeby, Negron JE, Philips D, LNJ Brent, N Snyder-Mackler, JP Higham. (2025). "Associations between social behavior and inflammation are modulated by age in a free-ranging primate population" *Animal Behaviour*, 209: 123021. <https://doi.org/10.1016/j.anbehav.2024.10.035>

EB Cooper, LNJ Brent, N Snyder-Mackler, JP Higham. (2024). "Demography and climate influence sex-specific survival costs of reproduction over 60 years in a free ranging primate population" *Oikos*, e10624. <https://doi.org/10.1111/oik.10624>

L Newman, C Testard, AR DeCasien, KL Chiou, MM Watowich, MC Janiak, MA Pavez-Fox, MR Sanchez Rosado, **EB Cooper**, CE Costa, RM Petersen, MM Montague, ML Platt, LNJ Brent, N Snyder-Mackler, JP Higham. (2023). "The biology of aging in a social world: insights from free-ranging rhesus macaques" *Neuroscience & Biobehavioral Reviews*, 154. 105424. <https://doi.org/10.1016/j.neubiorev.2023.105424>

JP Higham, **EB Cooper**, C Whalen, C Stahl-Hennig, LD Giavedoni, M Heistermann. (2023). "Urinary cytokine measurements do not reflect surgery-induced inflammation in rhesus macaques" *American Journal of Primatology*, e23506. <https://doi.org/10.1002/ajp.23506>

RA Munds, **EB Cooper**, MC Janiak, LG Lam, AR DeCasien, SB Surratt, MJ Montague, MI Martinez, Cayo Biobank Research Unit, S Kawamura, JP Higham, AD Melin. (2022). "Variation and heritability of retinal cone ratios in a free-ranging population of rhesus macaques" *Evolution*, 76: 1776-1789. <https://doi.org/10.1111/evo.14552>

AE Colby, AR DeCasien, **EB Cooper**, JP Higham. (2022). "Greater variability in rhesus macaque (*Macaca mulatta*) endocranial volume among males than females." *Proceedings of the Royal Society B*, 289(1986), p.20220728. <https://doi.org/10.1098/rspb.2022.0728>

EB Cooper, LNJ Brent, N Snyder-Mackler, M Singh, A Sengupta, S Khatiwada, S Malaivijitnond, JP Higham. (2022). "The Natural History of Model Organisms: The rhesus macaque as a success story of the Anthropocene" *Elife*, e78169. <https://doi.org/10.7554/eLife.78169>

EB Cooper, MM Watowich, N Beeby, C Whalen, MJ Montague, LNJ Brent, N Snyder-Mackler, JP Higham. (2022). "Concentrations of urinary neopterin, but not suPAR, positively correlate with age in rhesus macaques" *Frontiers in Ecology and Evolution*, 1031. <https://doi.org/10.3389/fevo.2022.1007052>

EB Cooper, T Bonnet, H Osmond, A Cockburn, LEB Kruuk. (2021). "Aging and senescence across reproductive traits and survival in superb fairy-wrens (*Malurus cyaneus*)" *The American Naturalist*, 197:1, 111-127. <https://doi.org/10.1086/711755>

EB Cooper, T Bonnet, H Osmond, A Cockburn, LEB Kruuk. (2020). "Do the ages of parents or helpers affect offspring fitness in a cooperatively breeding bird?" *Journal of Evolutionary Biology*, 33: 1735–1748. <https://doi.org/10.1111/jeb.13712>

S Nakagawa, AG Dunn, M Lagisz, A Bannach-Brown, EM Grames, A Sánchez-Tójar, RE O’Dea, DWA Noble, MJ Westgate, PA Arnold, S Barrow, A Bethel, **EB Cooper**, YZ Foo, SR Geange, E Hennessy, W Mapanga, K

Mengersen, C Munera, MJ Page, V Welch, NR Haddaway. (2020) "A new ecosystem for evidence synthesis" *Nature Ecology & Evolution*, 498–501. <https://doi.org/10.1038/s41559-020-1153-2>

EB Cooper, and LEB Kruuk. (2018) "Ageing with a silver-spoon: A meta-analysis of the effect of developmental environment on senescence" *Evolution Letters*, 2: 460-471. <https://doi.org/10.1002/evl3.79>

EB Cooper, RW Taylor, AD Kelley, AR Martinig, S Boutin, MM Humphries, B Dantzer, JE Lane, AG McAdam. (2017) "Personality is correlated with natal dispersal in North American red squirrels (*Tamiasciurus hudsonicus*)" *Behaviour*, 154, 939-961. <https://doi.org/10.1163/1568539X-00003450>

Pre-Prints

MR Sanchez Rosado, N Marzan-Rivera, MM Watowich, P Pantoja, MA Pavez-Fox, ER Siracusa, **EB Cooper**, JE Negron-Del Valle, D Phillips, A Ruiz-Lambides, Cayo Biobank Research Unit, MI Martinez, MJ Montague, ML Platt, JP Higham, LJM Brent, CA Sariol, N Snyder-Mackler. (2021). "Sociodemographic effects on immune cell composition in a free-ranging non-human primate" *bioRxiv*.

Teaching Professional Development

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| 2024 | Asynchronous Teaching Excellence: Course Development Micro-Credential
University of Colorado Boulder; 3-month course |
| 2018 | Principles of Tutoring and Demonstrating Certification
Australian National University; 20-hour course |

Service

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| 2024 - present | General Biology Curriculum Committee
University of Colorado Boulder |
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Supervision & Mentorship

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| 2021 - 2024 | Internship Director (Cayo Santiago Field Technicians) <ul style="list-style-type: none">- Hiring, training, supervision, and mentorship of over 25 field technicians (1-5 interns active at a time) |
| 2023 - 2024 | Mentor (Noor Naheed, undergraduate thesis and continuing work at NYU) <ul style="list-style-type: none">- project design, data analysis |
| 2022 | Mentor (Madelynne Dudas, PhD student at NYU) <ul style="list-style-type: none">- Quantitative genetic model data analysis |
| 2021 - 2022 | Mentor (Ailin Xu, undergraduate thesis at NYU) <ul style="list-style-type: none">- Project design, 'omics' data analysis |
| 2020 - 2021 | Mentor (Clare Kimock, PhD student at NYU) <ul style="list-style-type: none">- Quantitative genetic model data analysis |
| 2019 - 2020 | Mentor (Carolina Dolan, Masters student at ANU) <ul style="list-style-type: none">- mixed regression model data analysis |
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Conference Presentations

- 2023 **EB Cooper**, C Whalen, N Beeby, Cayo Biobank Research Unit, MJ Montague, N Snyder-Mackler, LJM Brent, JP Higham. Investigating links between sociality and biomarkers of health in the Cayo Santiago Rhesus macaques. *Poster presentation*. American Association of Biological Anthropology.
- 2019 **EB Cooper**, T Bonnet, H Osmond, A Cockburn, LEB Kruuk. Disentangling environmental and genetic effects of paternal age in a promiscuous songbird. *Oral presentation*. Australasian Evolution Society.
- 2019 **EB Cooper**, T Bonnet, H Osmond, A Cockburn, LEB Kruuk. Ageing and senescence across reproductive traits and survival in superb fairy-wrens. *Poster presentation*. European Society for Evolutionary Biology.
- 2018 **EB Cooper** and LEB Kruuk. The effects of early-life environment on senescence rates in birds and mammals. *Oral presentation*. Australasian Society for the Study of Animal Behaviour.

Invited Presentations

- 2023 **Animal Behavior Society Conference Symposium: The social domains of Aging**
Friend & Enemies: How Social Behavior Modulates the Immune System
- 2023 **New York Consortium in Evolutionary Primatology**
Aging and the Immune System in the Cayo Santiago Rhesus Macaques
- 2020 **University of Oxford, Field Ornithology Seminar Series (virtual)**
The Evolutionary Ecology of Aging
- 2019 **University of Edinburgh, Evolutionary Ecology Seminar Series**
Aging Varies Across Traits in the Superb Fairy-Wren

Science Communication & Outreach

- 2021 Mentor and instructor for inner-city high school students in a 6-week intensive 'Applied Research in Science and Engineering' (ARISE) program
- 2020 Digest for Evolution: *Indirect genetic effects of males on female reproductive traits in the wild*
- 2017 - 2019 Chair of *Ecology and Evolution Journal Club* (weekly), ANU
- 2018 Radio interview for ABC Saturday Morning: *The evolutionary ecology of aging*
- 2018 Invited blogpost for Evolution Letters: *The influence of the beginning of life on the end: A silver-spoon for senescence?*

Grants & Fellowships

- 2019 Vice Chancellor's Higher Degree Research Grant, ANU
- 2017 Holsworth Wildlife Research Endowment, Ecological Society of Australia
- 2017 - 2020 Higher Degree Research Scholarship (stipend & tuition waiver), ANU
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Awards

- 2018 *Hiroto Naora Student Academic Achievement Award, ANU*
2018 *Outstanding Speed Talk, Australasian Society for the Study of Animal Behaviour*
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Workshops

- 2019 *Methods in meta-analysis and comparative analysis, ANU (3-day workshop)*
2019 *Evidence Synthesis Hackathon, ANU (3-day workshop)*
2018 *Genomic estimation of relatedness, Center for Biodiversity Analysis (4-day workshop)*
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Field Experience

- 2021 - present **Supervisor of field data collection on free-ranging rhesus macaques population**
 - behavioral observation and non-invasive biological sample collection
 - supervision and training of over 25 field technicians
- 2017 - 2019 **PhD data collection on wild superb fairy-wren population (Canberra, Australia)**
 - small passerine mist netting & handling, behavioral observation
- 2016 **Head Field Technician for the Kluane Red Squirrel Project**
 - training and supervision of a team of 5 field technicians
- 2015, 2016 **Field Technician for Kluane Red Squirrel Project**
 - small mammal live-trapping and handling, biological material sampling, ear tagging, behavioral assays, telemetry
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Laboratory Experience

- 2021 – present **Enzyme-linked (ELISA) Immunoassays**
 - 2 types of immunoassays (suPAR and neopterin)
 - Data generated for over 1000 urine samples
- 2021 - present **Alcohol extractions for glucocorticoid assays**
 - Data generated for over 300 fecal samples
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Statistical & Coding Proficiencies

- R & SQL programming languages • Bayesian and Frequentist inference methods • generalized linear mixed modelling • generalized additive mixed modelling • quantitative genetic analysis • meta-analysis • genome-wide association studies •
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Peer Review (~15 articles)

- The American Naturalist (3X) • Scientific Reports • Behavioural Ecology and Sociobiology • Frontiers in Ecology and Evolution • PLOS ONE (2X) • Evolution (2X) • Journal of Evolutionary Biology • Oecologia •
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