

Dr Natalie Cooper

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ACADEMIC CAREER

2015-present. Principal Researcher, Natural History Museum, London, UK.

2012-2015. Assistant Professor, School of Natural Sciences, Trinity College Dublin, Ireland.

2010-2011. Postdoctoral Fellow, Human Evolutionary Biology, Harvard University, USA.

2009-2010. Postdoctoral Associate, Ecology and Evolutionary Biology, Yale University, USA.

EDUCATION

2005-2009. Ph.D, Phylogenetic approaches for studying competition in mammals. Imperial College London & Institute of Zoology, UK.

Thesis: Phylogenetic approaches for studying competition in mammals.

2004-2005. M.Sc. (Distinction), Advanced Methods in Taxonomy and Biodiversity. Imperial College London & Natural History Museum, London, UK.

2001-2004. B.Sc. (1st class honours) Biological Sciences. University of Exeter, UK.

RESEARCH

PUBLICATIONS

1. Cranston, A., **Cooper, N.**, Bro-Jørgensen, J. 2024. Using joint species distribution modelling to identify climatic and non-climatic drivers of Afrotropical ungulate distributions. *Ecography*. in press.
2. Park T, Burin G, Lazo-Cancino D, Rees J.P.G., Rule J.P, Slater G.J, Cooper N. 2024. Charting the course of pinniped evolution: insights from molecular phylogeny and fossil record integration. *Evolution*, 78, 1212-1226. DOI: 10.1093/evolut/qpae061.
3. **Cooper, N.** Clark, A.T., Lecomte, N., Qiao, H., & Ellison, A.M. 2024. Harnessing large language models for coding, teaching, and inclusion to empower research in ecology and evolution. *Methods in Ecology and Evolution*. online.
4. Wainwright, T., Trevena, M., Alewijnse, S.R., Campbell, P.D., Jones, M.E.H., Streicher, J.W. & **Cooper, N.** 2024. Sex biases and the scarcity of sex metadata in global herpetology collections. *Biological Journal of the Linnean Society*. 142, 308-318. DOI: 10.1093/biolinnean/blad129.
5. Guillerme, T., Bright, J., Cooney, C., Hughes, E.C., Varley, Z., Beckerman, A.P., **Cooper, N.**, & Thomas, G.H. Innovation and elaboration on the avian tree of life. 2023. *Science Advances*. 9, eadg1641. DOI: 10.1126/sciadv.adg1641.

6. Mezzasalma, M., Streicher, J.W., Guarino, F.M., Jones, M.E.H, Loader, S.P., Odierna, G. & **Cooper, N.** 2023. Microchromosome fusions underpin convergent evolution of chameleon karyotypes. *Evolution*. 77, 1930-1944. DOI: 10.1093/evolut/qpad097.
7. Burin, G., Park, T., James, T.D, Slater, G.J. & **Cooper, N.** 2023. The dynamic adaptive landscape of cetacean body size. *Current Biology*. 33, 1787–1794. DOI: 10.1016/j.cub.2023.03.014.
8. Sanders, N.J., **Cooper, N.**, Davis Rabosky, A.R. & Gibson, D.J. 2023. Leveraging natural history collections to understand the impacts of global change. *Journal of Animal Ecology*. 92, 232-236. DOI: 10.1111/1365-2656.13882.
9. V. Deepak Gower, D.J., & **Cooper, N.** 2023. Diet and habit explain head-shape convergences in natricine snakes. *Journal of Evolutionary Biology*. 36, 399-411. DOI: 10.1111/jeb.14139.
10. Maher, A.E., Burin, G. Cox, P.G., Maddox, T.W., Maidment, S.C.R., **Cooper, N.**, Schachner, E.R., & Bates, K.T. 2022. The evolution of body size and shape in tetrapods. *Nature Communications*. 13, 4340. DOI: 10.1038/s41467-022-32028-2.
11. Isip, J.E., Jones, M.E.H, & **Cooper, N.** 2022. Clade-wide variation in bite-force performance is determined primarily by size, not ecology. *Proceedings of the Royal Society B*. 289, 20212493. DOI: 10.1098/rspb.2021.2493.
12. Rombaut, L.M.K., E.J.R., Hughes, E.C., Varley, Z.K., Beckerman, A.P., **Cooper, N.**, & Thomas, G.H. 2022. The evolution of the traplining pollinator role in hummingbirds: specialization is not an evolutionary dead end *Proceedings of the Royal Society B*. 289, 20212484. DOI: 10.1098/rspb.2021.2484.
13. Deepak. V., **Cooper, N.**, Poyarkov, N.A., Kraus, F., Burin, G., Das,A., Snarayanan, S., Streicher, J.W., Smith, S.J., & Gower, D.J. 2021. Multilocus phylogeny, natural-history traits, and classification of natricine (Serpentes: Natricinae) snakes. *Zoological Journal of the Linnean Society*. 2021, zlab099. DOI: 10.1093/zlab099.
14. Alewijnse, S.R., Stowasser, G., Saunders, R.A., Belcher, A., Crimmen, O.A., **Cooper, N.**, & Trueman, C.N. 2021. Otolith-derived field metabolic rates of myctophids (family Myctophidae) from the Scotia Sea (Southern Ocean). *Marine Ecology Progress Series*. **675**, 113-131. DOI: 10.3354/meps13827.
15. V.Deepak, Maddock, S.T., Williams, R., Zoltan Nagy, Z., Conradie, W., Rocha, S. Harris, D.J., Perera, A., Gvoždík, V., Doherty-Bone, T.M., Menegon, M., Labisko, J., Morel, C., **Cooper, N.**, Day, J.J. & Gower, D.J. 2020. Molecular phylogenetics of sub-Saharan African natricine snakes, and the biogeographic origins of the Seychelles endemic *Lycognathophis seychellensis*. *Molecular Phylogenetics and Evolution*. **161**, 10712. DOI: 10.1016/j.ympev.2021.107152.
16. Mezzasalma, M., Guarino, F.M., Loader, S., Odierna, G., Streicher, J.W., & **Cooper, N.** 2020. First karyological analysis of the endemic Malagasy phantom gecko *Matoatoa brevipes* (Squamata: Gekkonidae). *Acta Herpetologica*. **15**, 137-141. DOI: 10.13128/a_h-8437.
17. Buckingham, E., Curry, J., Emogor, C., Tomsett L. & **Cooper, N.** 2021. Using natural history collections to investigate changes in pangolin (Pholidota: Manidae) geographic ranges through time. *PeerJ*. **9**, e10843 DOI: 10.7717/peerj.10843.

18. Bonsor, J.A., Barrett, P.M., Raven, T.J., & **Cooper, N.** Dinosaur evolutionary rates were not in decline prior to the K-Pg boundary. *Royal Society Open Science*. **7**, 201195. DOI: 10.1098/rsos.201195.
19. Guillerme, T., **Cooper, N.**, Brusatte, S.L., Davis, K.E., Jackson, A.L., Gerber, S., Goswami, A., Healy, K., Hopkins, M.J., Jones, M.E.H., Lloyd, G.T., O'Reilly, J.E., Pate, A., Puttick, M.N., Rayfield, E., Saupe, E.E., Sherratt, E. Slater, G.J., Weisbecker, V., Thomas, G.H. & Donoghue, P.C.J. 2020. Disparities in the analysis of morphological disparity. *Biology Letters*. **20200199**. DOI: 10.1098/rsbl.2020.0199.
20. Martins, M.C.I, Park, T., Racicot, R. & **Cooper, N.** 2020. Intraspecific variation in the cochleae of harbour porpoises (*Phocoena phocoena*). *PeerJ*. **8**, e8916 DOI: 10.7717/peerj.8916.
21. Jones, M.E.H, Pisteos, J.C.A, **Cooper, N.**, Lappin, A.K., Georges, A., Hutchinson, M.N., & Holleley, C.E. 2020. Reproductive phenotype predicts adult bite-force performance in sex-reversed dragons (*Pogona vitticeps*). *Journal of Experimental Zoology*. **333**, 252-263. DOI: 10.1002/jez.2353.
22. **Cooper, N.**, Bond, A.L., Davis, J.L., Portela Miguez, R., Tomsett, L., & Helgen K.M. Sex biases in natural history collections of birds and mammals. 2019. *Proceedings of the Royal Society B: Biological Sciences*. **286**, 20192025. DOI: 10.1098/ rspb.2019.2025.
23. Park, T., Mennecart, B., Costeur, L., Grohe, C. & **Cooper, N.** 2019. Convergent evolution in toothed whale cochleae. *BMC Evolutionary Biology*. **19**, 195. DOI: 10.1186/s12862-019-1525-x.
24. Trueman, C.N., Jackson, A.L., Chadwick, K.E., Feyrer, L.J., Magozzi, S., Coombs, E.J., Sabin, R.C., & **Cooper, N.** 2019. Reconstructing the last known movements of one of Nature's giants. *PeerJ*. **7**, e7912. DOI: 10.7717/peerj.7912.
25. Coombs, E.J., Deaville, R., Sabin, R.C., Allan, L., O'Connell, M., Berrow, S. Smith, B., Brownlow, A., Ten Doeschate, M., Penrose, R., Williams, R., Perkins, M.W., Jepson, P.D., & **Cooper, N.** 2019. What can cetacean stranding records tell us? A study of UK and Irish cetacean diversity over the past 100 years. *Marine Mammal Science*. **35**, 1527-1555. DOI: 10.1111/mms.12610.
26. Verde Arregoitia, L.D., **Cooper, N.**, & D'Elia, G. 2018. Good practices for sharing analysis-ready data in mammalogy and biodiversity research. *Hystrix, the Italian Journal of Mammalogy*. **29**, 155-161. DOI: 10.4404/hystrix-00133-2018.
27. Guillerme, T. & **Cooper, N.** 2018. Time for a rethink: time sub-sampling methods in disparity-through-time analyses. *Palaeontology*. **61**, 481-493. DOI: 10.1111/pala.12364.
28. Page, C.E. & **Cooper, N.** 2017. Morphological convergence in 'river dolphin' skulls. *PeerJ*. **5**, e4090. DOI: peerj.com/articles/4090.
29. **Cooper, N.**, Thomas, G.H., & FitzJohn, R.G. 2016. Shedding light on the "Dark Side" of phylogenetic comparative methods. *Methods in Ecology and Evolution*. **7**, 693699. DOI: 10.1111/2041-210X.12533.
30. Guillerme, T. & **Cooper, N.** 2016. Assessment of available anatomical characters for linking living mammals to fossil taxa in phylogenetic analyses. *Biology Letters*. **12**, 20151003. DOI: 10.1098/rsbl.2015.1003.
31. Guillerme, T. & **Cooper, N.** 2016. Effects of missing data on topological inference using a Total Evidence approach. *Molecular Phylogenetics and Evolution*. **94**, 146158. DOI: 10.1016/j.ympev.2015.08.023.

32. **Cooper, N.**, Thomas, G.H., Venditti, C., Meade, A. & Freckleton, R.P. 2016. A cautionary note on the use of Ornstein Uhlenbeck models in macroevolutionary studies. *Biological Journal of the Linnean Society*. **118**, 64-77. DOI: 10.1111/bij.12701.
33. Finlay, S., **Cooper, N.** 2015. Morphological diversity in tenrecs (Afrosoricida, Tenrecidae): comparing tenrec skull diversity to their closest relatives. *PeerJ*. **3**, e927. DOI: 10.7717/peerj.927.
34. Nunn, C.L., **Cooper, N.** 2015. Investigating evolutionary lag using the species-pairs evolutionary lag test (SPELT). *Evolution*. **69**, 245–253. DOI: 10.1111/evo.12520.
35. Healy, K., Guillerme, T., Finlay, S., Kane, A., Kelly, S.B.A., McClean, D., Kelly, D.J., Donohue, I., Jackson, A.L., & **Cooper, N.** 2014. Ecology and mode-of-life explain lifespan variation in birds and mammals. *Proceedings of the Royal Society of London Series B: Biological Sciences*. **281**, 20140298. DOI: 10.1098/rspb.2014.0298.
36. Kelly, S.B.A, Kelly, D.J., **Cooper, N.**, Bahrn, A., Analuddin, K. & Marples, N. 2014. Molecular and phenotypic data reveal a cryptic species (Aves: *Dicaeum*) from the unique and understudied Sulawesi region. *PLoS ONE*. **9**, e98694. DOI: 10.1371/journal.pone.0098694.
37. **Cooper, N.**, & Nunn, C.L. 2013. Identifying future zoonotic disease threats: Where are the gaps in our understanding of primate infectious diseases? *Evolution, Medicine and Public Health*. **2013**, 26-37. DOI: 10.1093/emph/eot001.
38. Kamilar, J.M. & **Cooper, N.** 2013. Phylogenetic signal in primate behaviour, ecology, and life history. *Philosophical Transactions of the Royal Society of London Series B: Biological Sciences*. **368**, 20120341. DOI: 10.1098/rstb.2012.0341.
39. Healy, K., McNally, L., Ruxton, G.D., **Cooper, N.**, & Jackson, A.L. 2013. Metabolic rate and body size are linked with perception of temporal information. *Animal Behaviour*. **86**, 685-696. DOI: 10.1016/j.anbehav.2013.06.018. *F1000 recommended*.
40. **Cooper, N.**, Griffin, R., Franz, M., Omotayo, M., & Nunn, C.L. 2012. Phylogenetic host specificity and understanding parasite sharing in primates. *Ecology Letters*. **15**, 1370-1377. DOI: 10.1111/j.1461-0248.2012.01858.x. *F1000 recommended*.
41. **Cooper, N.**, Kamilar, J.M., & Nunn, C.L. 2012. Host longevity and parasite species richness in mammals. *PLoS ONE*. **7**, e42190. DOI: 10.1371/journal.pone.0042190.
42. Davies, T.J., **Cooper, N.**, Diniz Filho, J.A.F, Thomas, G.H. & Meiri, S. 2012. Using phylogenetic trees to test for character displacement: a model and an empirical example from a desert mammal community. *Ecology*. **93**, S44-S51. DOI: 10.1890/11-0400.1.
43. **Cooper, N.**, Freckleton, R.P. & Jetz, W. 2011. Phylogenetic conservatism of environmental niches in mammals. *Proceedings of the Royal Society of London Series B: Biological Sciences*. **278**, 2384-2391. DOI: 10.1098/rspb.2010.2207.
44. Freckleton, R.P., **Cooper, N.** & Jetz, W. 2011. Comparative methods as a statistical fix: the dangers of ignoring an evolutionary model. *The American Naturalist*. **178**, E10-E17. DOI: 10.1086/660272.
45. Collen, B., McRae, L., Deinet, S., De Palma, A., Carranza, T., **Cooper, N.**, Loh, J. & Baillie, J.E.M. 2011. Predicting how populations decline to extinction. *Philosophical Transactions of the Royal Society of London Series B: Biological Sciences*. **366**, 2577-2586. DOI: 10.1098/rstb.2011.0015.

46. **Cooper, N.**, Jetz, W. & Freckleton, R.P. 2010. Phylogenetic comparative approaches for studying niche conservatism. *Journal of Evolutionary Biology*. 23, 2529-2539. DOI: 10.1111/j.1420-9101.2010.02144.x.
47. **Cooper, N.** & Purvis, A. 2010. Body size evolution in mammals: complexity in tempo and mode. *The American Naturalist*. 175, 727-738. DOI: 10.1111/j.1420-9101.2009.01714.x.
48. Belmaker, J., **Cooper, N.**, Lee, T.M. & Wilman, H. 2010. Specialization and the road to academic success. *Frontiers in Ecology and the Environment*. 8, 514-515. All authors contributed equally. DOI: 10.1890/10.WB.25.
49. **Cooper, N.** & Purvis, A. 2009. What factors shape rates of phenotypic evolution? A comparative study of cranial morphology of four mammalian clades. *Journal of Evolutionary Biology*. 22, 1024-1035. DOI: 10.1111/j.1420-9101.2009.01714.x.
50. Bielby, J., Cardillo, M. **Cooper, N.** & Purvis, A. 2009. Modelling extinction risk in multispecies data sets: phylogenetically independent contrasts versus decision trees. *Biodiversity and Conservation*. 19, 113-127. DOI: 10.1007/s10531-009-9709.0.
51. **Cooper, N.**, Rodriguez, J. & Purvis, A. 2008. A common tendency for phylogenetic overdispersion in mammalian assemblages. *Proceedings of the Royal Society of London Series B: Biological Sciences*. 275, 2031-2037. DOI: 10.1098/rspb.2008.0420.
52. **Cooper, N.**, Bielby, J., Thomas, G.H. & Purvis, A. 2008. Macroecology and extinction risk correlates of frogs. *Global Ecology and Biogeography*. 17, 211-221. DOI: 10.1111/j.1466-8238.2007.00355.x.
53. Meiri, S., **Cooper, N.** & Purvis, A. 2008. The island rule: made to be broken? *Proceedings of the Royal Society of London Series B: Biological Sciences*. 275, 141-148. DOI: 10.1098/rspb.2007.1056.
54. Bielby, J., **Cooper, N.**, Cunningham, A., Garner, T. & Purvis, A. 2008. Predicting susceptibility to future declines in the world's frogs. *Conservation Letters*. 1, 82-90. DOI: 10.1111/j.1755-263X.2008.00015.x.

BOOKS

1. Petchey, O.L., Beckerman, A.P., **Cooper, N.**, and Childs, D.Z. 2021. *Insights from data with R: an introduction for the life and environmental sciences*. Oxford University Press, Oxford, UK. 320 pages. DOI: 10.1093/oso/9780198849810.001.0001.

GRANTS

Dates	Awarding body and type of grant	Project title	Total value	Role	Collaborators	Funded
2024 - 2027	NERC Pushing the Frontiers	CONVERGE: Evolutionary routes to phenotypic convergence in vertebrates.	£800,000 - £1,000,000	Co-I	Gavin Thomas (PI) (University of Sheffield) Thomas Guillaume (University of Sheffield)	YES
2022 - 2024	Marie Skłodowska-Curie Individual Fellowship to JR	SEAL: Evolution of hearing in pinnipeds.	€220,908	Host	James Rule	YES
2022 - 2024	Marie Skłodowska-Curie Individual Fellowship to LDA	CONVERS: Convergent evolution in rodents and other small mammals.	€220,908	Host	Luis Darcy Verde Arregoitia	NO
2022 - 2024	Marie Skłodowska-Curie Individual Fellowship to IB	EARtH: Exploring the Australian Reptile Hypervolume: Assembly and evolution of a continental fauna	€224,934	Host	Ian Brennan (application for 2021 start delayed to 2022 due to COVID)	YES
2021 - 2023	Marie Skłodowska-Curie Individual Fellowship to LDA	CONVERS: Convergent evolution in rodents and other small mammals.	€212,934	Host	Luis Darcy Verde Arregoitia	NO
2020 - 2023	NERC Standard Grant	Unshifting the baseline: inferring global patterns of pre-Anthropocene vertebrate diversity v2.	£572,278	PI	Jeffrey Streicher Andy Purvis	NO (scored 8/10)
2020 - 2023	Leverhulme Research Project Grant pre-proposal	Constraining past biodiversity patterns through simulations in time and space.	£259,499	Co-I	Phil Mannion (UCL) Erin Saupe (University of Oxford)	NO
2020 - 2023	Leverhulme Research Project Grant	Back to the water: macroevolutionary dynamics of secondarily aquatic tetrapods.	£337,468	PI	Graham Slater (University of Chicago) Erich Fitzgerald (Museums Victoria) Travis Park (PDRA)	YES
2019 - 2022	NERC Standard Grant	MacroCovar: The macroevolutionary consequences of trait correlations v2.	£586,643	Co-I	Gavin Thomas (PI) (University of Sheffield) Andrew Beckerman (University of Sheffield)	YES
2019 - 2022	NERC Standard Grant	Unshifting the baseline: inferring global patterns of pre-Anthropocene vertebrate diversity.	£572,278	PI	Jeffrey Streicher Andy Purvis	NO (scored 8/10)
2019 - 2022	NERC Standard Grant	Assessing sponge reproductive biology in warming oceans: molecular toolkits for sex determination and adaptation.	£739,662	Co-I	Ana Riesgo Gil (PI) Jordi Paps (University of Bristol) Jordi Solana (Oxford Brookes University) Alison Wright (University of Sheffield)	NO (scored 7/10)

2019 - 2021	Royal Commission of 1851 Research Fellowship to TP	ECHO part 2: Evolution of the Cochlea and Hearing in Odontocetes	£129,000	Host	Travis Park	NO
2019 - 2021	Marie Skłodowska-Curie Individual Fellowship to JC	FISHDIV: Testing major controls on the evolution of morphological diversity in fish.	€163,454	Host	John Clarke	NO
2018 - 2021	NERC Standard Grant	MacroCovar: The macroevolutionary consequences of trait correlations.	£586,643	Co-I	Gavin Thomas (PI) (University of Sheffield) Andrew Beckerman (University of Sheffield)	NO (scored 6/10)
2018 - 2021	H2020-WIDESPREAD grant	iBioGen: Twinning for European excellence in Island Biodiversity Genomics	€999,320	Participant	Alfried Vogler (PI) + many others	YES
2018 - 2020	Marie Skłodowska-Curie Individual Fellowship to MM	CHROMREP: An integrative approach linking chromosomal evolution and biodiversity in reptiles from Madagascar	€183,454	Host	Marcello Mezzasalma Jeffrey Streicher Simon Loader	YES
2018 - 2020	Royal Commission of 1851 Research Fellowship to JC	Testing major controls on the evolution of morphological diversity	£127,000	Host	John Clarke	NO
2017 - 2019	Marie Skłodowska-Curie Individual Fellowship to TP	ECHO: Evolution of the Cochlea and Hearing in Odontocetes	€195,454	Host	Travis Park	YES
2017 - 2019	Marie Skłodowska-Curie Individual Fellowship to VD	NATRICINE: Phenotypic and lineage diversification of natricine snakes	€183,000	Co-host	Deepak Veerappan David Gower (Main host)	YES
2017 - 2020	NERC Standard Grant	Reef refugia out of the shadows: dynamics of marginal coral reef ecosystems over the past 30 million years in the Coral Triangle v2.	£614,919	Co-I	Ken Johnson (PI) Nadia Santadomingo (named PDRA)	YES
2016 - 2020	Leverhulme Research Project Grant	Molecules meet fossils - an integrated approach to studying marine palaeodiversity.	£350,090	Co-I	Andrea Waeschenbach (PI) Paul Taylor Lee Hsiang Liow (University of Oslo)	YES
2016 - 2019	NERC Standard Grant	Reef refugia out of the shadows: dynamics of marginal coral reef ecosystems over the past 30 million years in the Coral Triangle.	£614,919	Co-I	Dr Ken Johnson (PI). Dr Nadia Santadomingo (named PDRA)	NO
2016 - 2018	Royal Commission of 1851 Research Fellowship to TP	Ears and Echoes: Cochlear evolution in toothed whales.	£129,000	Host	Travis Park	NO
2016 - 2021	ERC Starting Grant	Convergent evolution across species, space, traits and time.	€1,499,787	PI	NA	NO

TALKS TO SCIENTIFIC AUDIENCES

INVITED TALKS AT CONFERENCES

2023. British Ecological Society annual meeting, Belfast, UK.

Using ChatGPT and other LLMs for coding.

2020. WISE: Women in Science Ecology meeting. Online.

My experiences as a woman in ecology.

2019. American Ornithological Society annual meeting, Anchorage, Alaska, USA.

Sex biases in natural history collections of birds.

2018. Chilean Society for Evolution annual meeting, Puerto Varas, Chile.

Convergent evolution and echolocation.

2017. Palaeontological Association annual meeting, London, UK.

Time for a rethink - time slicing approaches to disparity-through-time.

2015. Methods in Ecology & Evolution 5th anniversary symposium, London, UK.

The limitations of PCMs.

2014. Linnaean Society Radiations & Extinctions meeting, London, UK.

Reproducibility in macroevolution.

INVITED SEMINARS

2024 University of Sheffield, UK.

2019 University of York, UK.

University of Nottingham, UK.

2018 University of Durham, UK.

2017 University of Bangor, Wales, UK.

2016 Tel Aviv University and Israeli National Natural History Museum, Israel.

Edward Grey Institute for Ornithology, University of Oxford, UK.

CMEC (Centre for Macroecology Evolution & Climate), University of Copenhagen, Denmark.

2015 University of Lausanne, Switzerland.

Dublin City University, Dublin, Ireland.

2014 Swansea University, Wales, UK.

University of Exeter, UK.

Queens University, Belfast, UK.

University College Dublin, Ireland.

2013 University of Southampton, UK.

University of Sheffield, UK.

University of Liverpool, UK.

University of Chicago, IL, USA.

Trinity College Dublin, Ireland.

University of Southampton, UK.

2011 Harvard University, MA, USA.

INVITED KEYNOTES AT EARLY CAREER EVENTS

2018

School of Natural Sciences Postgraduate Symposium plenary speaker.
Trinity College Dublin, Dublin, Ireland.

2015

LERN: London Evolutionary Research Network, UK.
BLAM: Biology at Lund Annual Postgraduate Symposium plenary speaker.
Lund University, Lund, Sweden.

CONFERENCE PRESENTATIONS AND POSTERS

- 2024** BES Macro 2024, Cardiff, UK. *TALK.*
Using natural history collections to study global change
- 2022** BES Macro 2022, Sheffield, UK. *TALK.*
10 years of BES Macro.
- 2018** BES Annual Meeting, Birmingham, UK. *TALK.*
Sex biases in natural history collections
- 2017** Joint BES and SfE Annual Meeting, Ghent, Belgium. *POSTER.*
Reconstructing the last known movements of one of Nature's giants
- 2016** Evolution, Austin, TX, USA. *POSTER.*
Skeletons in the closet: using NHM collections for evolutionary research
- 2014** Evolution, Raleigh, NC, USA. *SYMPOSIUM TALK.*
The "Dark Side" of phylogenetic comparative methods
- 2013** ESEB, Lisbon, Portugal. *POSTER.*
Ecological correlates of extrinsic mortality in mammals and birds
Evolution, Snowbird, UT, USA. *TALK.*
Ecological correlates of extrinsic mortality in mammals and birds
- 2012** Evolution, Ottawa, Canada. *TALK.*
Host phylospecificity and parasite sharing in primates and humans
- 2011** EEID, Santa Barbara, CA, USA. *POSTER.*
Methods for detecting phylogenetic host specificity in parasites
- 2010** Evolution, Portland, OR, USA. *TALK.*
Phylogenetic niche conservatism in mammals
- 2008** Evolution, Minneapolis, MN, USA. *TALK.*
A common pattern of overdispersion in mammalian assemblages

SUPERVISION AND MENTORING

STUDENT SUPERVISION

PhD students

Name	Dates	Project title	DTP	University	Main supervisor
Caleb Scutt	2024-2027	Mass extinctions and the evolution of biodiversity	NA	Sheffield	Dr Thomas Guillerme
Sophie Ryan	2024-2027	Evolution of island syndromes	ACCE	Sheffield	Dr Gavin Thomas
Sidney Leedham	2024-2027	Axial underpinnings of mammalian locomotor and ecological diversity	ACCE	Liverpool	Dr Karl Bates
Joel Heath	2022 - 2025	The biogeographic origins of dinosaurs	London	UCL	Dr Phil Mannion
Alex Cranston	2021 - 2024	Ungulate community dynamics in a changing world.	ACCE	Liverpool	Dr Jakob Bro-Jorgenson
Dr Louie Rombaut	2019 - 2023	Trait correlations: linking micro- and macro-evolutionary patterns.	ACCE	Sheffield	Dr Gavin Thomas
Dr Sarah Alewijnse	2017 - 2022	Field metabolic rate in fishes using otoliths.	SPITFIRE	Southampton	Dr Clive Trueman
Dr Ellen Coombs	2016 - 2021	Cetacean responses to climate change: past, present and future.	London	UCL	Prof Anjali Goswami
Dr Thomas Guillerme	2012 - 2015	Macroevolution with fossils and living species.	NA	Trinity College Dublin	NA

Interns/visiting PhD students

1. Mario Gil Castro. PhD visit. Spain. 2024. 3 months.
Co-hosted with Roberto Portela-Miguez.
2. Nola Scholte. Internship. HAS Green Academy, Netherlands. 2024. 6 months.
Co-hosted with Roberto Portela-Miguez.
3. Daniella Lazo Cancino. PhD visit. Universidad de Concepción, Chile. 2022. 3 months.

Masters students

I was primary supervisor for the majority of these students; the main supervisor's name is in **bold** where this was someone other than me.

No.	Name	Year	Project title	Course	Project length	Host	Co-supervisor
38	Siobhan Pearson	2024	Morphology of fur seals	MRes Biodiversity, Evolution & Conservation	4.5 months	UCL	James Rule
37	Jack Smith	2024	Chaffinch beak shapes across the world.	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	-
36	Xinyu Zhao	2024	Data science for a brighter future	MSc Ecology and Data Science	4.5 months	UCL	-
35	Anna Ustaran-Anderegg	2024	How the antelope got its stripes.	MRes Biodiversity, Evolution & Conservation	5 months	UCL	Alex Cranston
34	Joe Hammond	2023	Dinosaur disparity at the Tr-Jr mass extinction.	MRes Biosystematics	5 months	ICL	Paul Barrett
33	Sophie Ryan [†]	2023	Filter feeding teeth in seals.	MRes Biodiversity, Evolution & Conservation	5 months	UCL	James Rule
32	Alice Armstrong	2023	Crocodile distributions and human interaction maps	MRes Ecology, Evolution & Conservation	4.5 months	ICL	Patrick Campbell
31	Moganavalli Kattan [†]	2023	Rings of acoustic power: understanding pinniped hearing.	MRes Ecology, Evolution & Conservation	4.5 months	ICL	James Rule
30	Joseph Rees*	2023	Pinniped diversification through time.	MRes Biosystematics	4 months	ICL	Gustavo Burin
29	Clement Prieul	2023	Basilosaurid description and phylogeny.	MRes Biosystematics	4 months	ICL	Travis Park
28	Tom Trapman	2022	Disparity changes across mass extinctions.	MPhil	4 years	Bath	Prof. Matthew Wills (Bath)
27	Melina Lenk*	2022	Pinniped proxies for global change.	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	Gustavo Burin Travis Park
26	Tara Wainwright*	2021	Sex biases in herpetology collections worldwide	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	-
25	Noah Hearne	2021	Geographical biases in NHM collections; investigating the imprint of colonialism.	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	-
24	Christian Ching	2021	Exploring cryptic diversity in colugos	MSci Zoology	9 months	RVC	Roberto Portela Miguez
23	Lucy Ball	2021	Limb proportions and locomotion in miniature frogs	MSci Biological Sciences	9 months	UCL	-
22	Morwenna Trevenna*	2020	Sex biases in herpetology museum collections.	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	-

21	Justin Isip*	2020	A comparative study of bite force in reptiles	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	Marc Jones (UCL)
20	Hermione Blomfield-Smith	2020	Methods for investigating extinction risk in chameleons.	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	Marcello Mezzasalma
19	Rebecca Bentley	2020	Diversity of catfishes.	MRes Biosystematics	3.5 months	ICL	-
18	Shizhe Ma	2020	Correlates of extinction risk in chameleons.	MRes Biosystematics	3.5 months	ICL	-
17	Mengdi Li [†]	2020	Amphibian type specimen localities and IUCN ranges.	MSci Biological Sciences	9 months	UCL	Jeff Streicher
16	Maria Iruzun Martins*	2019	Intraspecific variation in harbour porpoise cochleae.	MRes Biodiversity, Evolution & Conservation	5 months	UCL	Travis Park
15	Jake Curry*	2019	Computational approaches for studying species distributions through time.	MRes Computational Methods in Ecology & Evolution	9 months	ICL	Jeff Streicher
14	Emily Buckingham*	2019	Protecting pangolins using museum specimen locality data.	MRes Biosystematics	3.5 months	ICL	Louise Tomsett
13	Steven Allain [†]	2018	Changes in Asian amphibian distributions through time.	MRes Ecology, Evolution & Conservation	5 months	ICL	Jeff Streicher
12	Tom Weeks [†]	2018	Mismatches in East African amphibian type localities and current distributions.	MSci Biological Sciences	9 months	UCL	Jeff Streicher
11	Naomi Berkowitz [†]	2018	South American amphibian type distributions and IUCN Red List maps.	MRes Biodiversity, Evolution & Conservation	5 months	UCL	Jeff Streicher
10	Alice Pawlik [†]	2018	Salamander type specimen localities and current distributions.	MRes Ecology, Evolution & Conservation	5 months	ICL	Jeff Streicher
9	Joseph Bonsor*	2017	Were dinosaurs in decline before K-Pg?	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	Paul Barrett
8	Wui Shen Ng [†]	2017	Convergence in afrotherian and laurasiatherian “insectivores”.	MSc Evolution, Taxonomy & Biodiversity	4.5 months	ICL	Louise Tomsett
7	Olivia Morris	2017	Biogeographic origins of Galapagos reptiles.	MSc Ecology, Evolution & Conservation	4.5 months	ICL	-
6	Danielle Moraviec	2017	Geometric morphometrics of ornithischian dinosaurs.	MSc Ecology, Evolution & Conservation	4.5 months	ICL	Paul Barrett
5	Charlotte Page*	2017	Convergence in “river dolphins”.	MSci Biological Sciences	9 months	UCL	Richard Sabin

4	Jack Davies [¶]	2017	Amphibian type distributions and IUCN Red List maps.	MRes Biodiversity, Evolution & Conservation	4.5 months	UCL	Jeff Streicher
3	Andrea Sartorius [¶]	2017	Marsupial type distributions and IUCN Red List maps.	MRes Biodiversity, Evolution & Conservation	4.5 months	UCL	Roberto Portela Miguez
2	Dan Bell	2016	Predicting cetacean length from skull measurements	MRes Ecology, Evolution & Conservation	5 months	ICL	Richard Sabin
1	Guillermo Gilbert	2016	Biogeographic origins of Galapagos mammals and birds.	MRes Ecology, Evolution & Conservation	5 months	ICL	-

**Work done by these students has contributed to publications on which the students are authors. See publications list.*

[¶]Work done by these students has contributed to in prep publications on which the students will be authors.

POST-DOC HOSTING

Name	Dates	Project title	Funding	Location	Supervisor/host
Dr James Rule	2022 - 2024	SEAL: Evolution of hearing in pinnipeds.	MSCA	NHM	-
Dr Ian Brennan	2022 - 2024	EARtH: Exploring the Australian Reptile Hypervolume: Assembly and evolution of a continental fauna	MSCA	NHM	Dr Jeff Streicher
Dr Gustavo Burin	2021 - 2024	Back to the water: macroevolutionary dynamics of secondarily aquatic tetrapods	Leverhulme Trust	NHM	Dr Graham Slater (Chicago)
Dr Travis Park	2020 - 2023	Back to the water: macroevolutionary dynamics of secondarily aquatic tetrapods	Leverhulme Trust	NHM	Dr Graham Slater (Chicago)
Dr Thomas Guillerme	2020 - 2023	MacroCovar: Trait correlations: linking micro- and macro-evolutionary patterns	NERC	University of Sheffield	Dr Gavin Thomas Prof Andrew Beckerman
Dr Marcello Mezzasalma	2018 - 2020	CHROMREP: An integrative approach linking chromosomal evolution and biodiversity in reptiles from Madagascar	MSCA	NHM	Dr Simon Loader Dr Jeff Streicher
Dr Deepak Veerappan	2017 - 2019	NATRICINE: Phenotypic and lineage diversification of natricine snakes	MSCA	NHM	Dr David Gower
Dr Travis Park	2017 - 2019	ECHO: Evolution of Cochlea & Hearing in Odontocetes	MSCA	NHM	-

TEACHING

I have extensive teaching experience. I spent four years as an Assistant Professor at Trinity College Dublin teaching undergraduate classes on a range of subjects. Classes ranged from 20 to 200 students. I taught all year groups and supervised undergraduate projects, graded coursework and exams, and sat on the board of examiners. Below I focus on my more recent teaching experience at NHM London.

MASTERS COURSE TEACHING

Masters course	Years	Topic	Classes	Total annual hours
UCL MRes Biodiversity, Evolution & Conservation (also the MSc course from 2021)	2016 - present	Using phylogenies to ask evolutionary questions.	1 x 3 hours Lecture R practical	3 hours
Imperial MSc Evolution, Taxonomy & Biodiversity	2016 - 2024	Methods in macroecology and macroevolution	7 x 3 hours Lectures R practicals Assessment	21 hours

OTHER TEACHING

Course	Years	Total hours
Intro to R, basic statistics and reproducible research tools (Git, GitHub, RMarkdown etc.).	2016 - present	3-4 days annually (6 hours each day). Sole teacher. ~ 60 students a year
London NERC DTP Evolution week (various topics)	2016 - present	30 minutes annually
LSHTM MSc Planetary Health. Whose stories are missing from our exhibitions? Plus tank room tour.	2024	3 hours annually
ACCE NERC DTP Creativity in research.	2021	One hour
BBSRC STARS "Advancing computational and data literacy skills schools for Life Scientists"	2017 & 2018	Two 5 day courses (8 hours each day). Two co-teachers.
BES and Methods in Ecology and Evolution "Best Practice for Code Archiving" workshop	2016	One day (8 hours). 4 co-teachers

Over 300 Museum staff and students have taken my introductory R course. I also offer informal mentoring to at least four or five students/postdocs a year looking for advice on CVs, jobs and grant writing, R and statistics.

OUTREACH

I take part in a lot of outreach events at NHM and beyond. Here are a selection. Major events in **bold**.

Year	Event	Type event
2024	Using collections to study the planetary crisis.	NHM Nature Live!
	Nature Table with Sue Perkins	BBC Radio 4 podcast
	Schools talk: Using collections to study the planetary crisis	Generation Hope talk
	In conversation with an activist	Generation Hope event
	Speed networking	Generation Hope event
	On gallery: Using collections to study the planetary crisis	Generation Hope on gallery
	Dealing with the climate crisis and ecoanxiety	Instagram Live interview
	Goats and self anointing	NHM Surprising Science and Extra videos
	Meerkat societies	NHM Surprising Science and Extra videos
2023	Museums as tools for future solutions to climate change	Interview for online magazine
	Taste in cats and other animals	NHM Surprising Science and Extra videos
	Changing colour of reindeer eyes	NHM Surprising Science and Extra videos
	Conserving the northern white rhino	Podcast interview
	Climate relay: Museums, climate and ecoanxiety	Podcast interview
	Hidden Treasures: behind the scenes of the mammal collections	NHM YouTube live

	The Lost Rhino - various promotional events	Instagram live, magazine interviews, podcast interviews etc.
	Climate crisis and the media	Generation Hope panel
2022	WPY judging (2 weeks full time)	WPY 58
	The Lost Rhino (Science Lead)	NHM Exhibition
	WPY - various promotional events	WPY 58
2021	Awkward relatives	NHM Nature Live online (NERC event)
	WPY breakfast preview	WPY 57
	Underwater photography (introduction)	Members and Patrons event
	WPY press preview	WPY 57
	WPY judging (2 weeks full time)	WPY 57
	Careers in STEM	NHM Oersted Secondary Schools project
	Wild Crimes podcast: Emerging zoonotic diseases	Podcast contributor
	Wild Crimes podcast: Pangolins	Podcast contributor
	Period drama: Do animals have periods?	NHM Nature Live online
	The ins and outs of vaginas	NHM Nature Live online
	Arctic camels	NHM Surprising Science video
2020	Screaming goats	NHM Surprising Science video
	Spooky animal screams	NHM Surprising Science video
	Living in groups	NHM Lates online panel discussion
	Unlikely animal friends	NHM Surprising Science video
	Hope and the wonderful world of whales	NHM Nature Live online
	Conception and deception: the weird world of animal sex	NHM Valentine's Day Event
	Storytelling	NHM Women in Science Lates
2019	Royal Society of Biology, West Midlands branch Charter Lecture. Aston University, Birmingham	Royal Society of Biology. Public talk.
	Drones in conservation and TV	NHM Nature Live. BBC 7 Worlds One Planet Lates
	Asia Science Stand	NHM BBC 7 Worlds One Planet Lates
	Ask the Scientist	NHM Tour and Evolve magazine article
	Vertebrates Science Stand	European Researchers' Night
	Hyaenas	NHM Surprising Science video
2018	Hope the blue whale	New Scientist Live! ExCel centre, London. Public talk
	Everything you ever wanted to know about mammal and bird genitalia!	NHM Dinosnores for Grownups
	Vertebrates Science Stand	European Researchers' Night
	Green Seas Science Stand	NHM Blue Planet II Lates
	NHM Research Highlights for Hong Kong student prize winners.	NHM Nature Live
2017	Everything you ever wanted to know about mammal and bird genitalia!	NHM Dinosnores for Grownups
	Hope the blue whale	NHM Nature Live
	Marine Vertebrates Science Stand	Science Uncovered
	Hope the blue whale	NHM Nature Live. Science Uncovered
	EU pub	Science Uncovered
	Whale hall tours.	NHM Members' Summer Party
	Wonderful world of whales!	NHM Dinosnores for Kids
	Giraffes	NHM Audio recording for new giraffe WonderBay in Hintze Hall.

	Survival in the Snow	NHM Dinosnores for Kids.
2016	Survival in the Snow	NHM Dinosnores for Kids.
	EU pub	Science Uncovered
	Leading Ladies tour	NHM Pride Lates
	Everything you ever wanted to know about mammal and bird genitalia!	NHM Dinosnores for Grownups
2015	Science Cafe	Science Uncovered

DIGITAL OUTREACH

I have actively engaged with Media, Digital and Website teams to promote my research and activities. Some examples of articles I have contributed to are below.

- <https://www.nhm.ac.uk/discover/convergent-evolution.html>
- <https://www.nhm.ac.uk/discover/news/2023/october/sex-bias-in-amphibian-and-reptile-natural-history-collections.html>
- <https://www.nhm.ac.uk/discover/news/2023/october/bird-beaks-reveal-changeable-nature-evolution.html>
- <https://www.nhm.ac.uk/discover/news/2021/october/documenting-the-most-abundant-vertebrates-in-the-world-before-too-late.html>
- <https://www.nhm.ac.uk/discover/news/2020/april/collections-showing-how-pangolin-populations-have-shrunk.html>
- <https://www.nhm.ac.uk/discover/news/2020/november/dinosaurs-were-not-in-decline-before-the-steroid-wiped-them-out.html>
- <https://www.nhm.ac.uk/discover/news/2019/october/more-male-than-female-specimens-in-natural-history-collections.html>
- <https://www.nhm.ac.uk/discover/news/2018/september/secret-history-of-hope-the-blue-whale-finally-revealed.html>
- <https://www.nhm.ac.uk/discover/news/2019/march/historic-whale-and-dolphin-stranding-data-made-public-for-the-first-time.html>

GALLERY DEVELOPMENT (NHM)

- The Lost Rhino (Science Lead). 2023.
- Fixing Our Broken Planet. 2021-present.
- Children's Gallery. 2022-present.
- Mammals Gallery Enhancement. 2022-24.
- Whales. 2016.

MEDIA COVERAGE

My 2019 paper on sex biases in museum collections received extensive press coverage including in the Guardian, Daily Mail, Economist (magazine and podcast), CNN online, Russia 24 (TV interview), NewsTalk Ireland (radio interview), BBC Three Counties Drive Time show (radio interview), multiple blogs and websites from countries including France, Ireland, Sweden, and China. I have also taken part in media interviews on behalf of WPY, including for New Scientist, and for Spanish and Canadian TV.

I am also an active Twitter user (@nhcooper123) with over 4,200 followers.

PROFESSIONAL SERVICE

EXTERNAL ROLES

Date	Role
2021 - present	Senior Editor (one of four) at Methods in Ecology & Evolution journal.
2021- present	Editor of OUP Primers in Ecology and Evolution book series.
2024	PhD External Examiner, Putter Tiatragul, Australian National University, Sydney, Australia
2023	MSc External Examiner, Anuj Shinde, University of Tel Aviv, Israel.
2023	PhD External Examiner, Matthew Moreira, Universidade de Aveiro, Portugal
2021	PhD External Examiner, Yichen He, University of Sheffield.
2021	PhD External Examiner, Gawain Antell, University of Oxford.
2020	PhD External Examiner, Lewis Jones, Imperial College London.
2019 - 2021	Deputy Chair of BES Publications Committee.
2017 - 2022	Chair of BES Macroecology Special Interest Group committee.
2015 – 2021	Associate Editor at Methods in Ecology & Evolution journal.
2012 - present	Member of BES including Macroecology SIG.
2016	Member of Methods in Ecology & Evolution code archiving strategy group.
2015 - 2019	Ordinary Member of BES Publications Committee.
2015 - 2017	Deputy Chair of BES Macroecology Special Interest Group committee.
2015	PhD External Examiner, Kevin Arbuckle, University of Liverpool.

CONFERENCE ORGANISATION

Note that the below only includes events where I was the main organiser. Events where I organised one session or a workshop at a larger event are not included.

Date	Conference	Location	Length
2023	Leveraging collections to study global change	NHM	1 day
2021	BES Macroecology SIG annual meeting	University of Sheffield	2 days
2021	BES Macroecology SIG annual meeting	Online	3 days
2020	BES Macroecology SIG ECR Twitter mentoring	Online	1 day
2017	BES Macroecology SIG annual meeting	NHM	3 days
2017	BES Macroecology SIG ECR Mentoring event	Charles Darwin House, London	1 day
2016	BES Macroecology SIG annual meeting	University of Oxford	2 days
2016	London Vertebrate Researchers Meeting	UCL	1 day

REVIEWING

I review standard grants for ANR (France), NERC, CSERC (Canada), and FONDECYT (Chile). I also review Systematics Association small grants.

I have reviewed papers for The American Naturalist, Animal Conservation, Biological Reviews, BMC Evolutionary Biology, Conservation Biology, Current Biology, Ecography, Ecology, Ecology and Evolution, Ecology Letters, Evolution, Global Ecology & Biogeography, International Journal of Primatology, Journal of Animal Ecology, Journal of Applied Ecology, Journal of Biogeography, Journal of Evolutionary Biology, Methods in Ecology & Evolution, Nature Communications, Nature Ecology & Evolution, Oecologia, PeerJ, Philosophical Transactions of the Royal Society: B, PLoS One, Proceedings of the National Academy of Sciences USA, Proceedings of the Royal Society: B, Proceedings of the Royal Society: Interface, Trends in Ecology & Evolution.