

Dr Jessica Williams

Imperial College Research Fellow

Other affiliations: Honorary Research Fellow (UCL), Visiting Research Fellow (University of Reading)

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Employment history

2024 – Present Imperial College Research Fellowship, Imperial College London

Exploring Anthropocene landscape permeability for species key to human health & well-being: My aim is to understand how human-modified land uses influence the permeability (i.e. ease of movement) of landscapes for range-shifting species, with a focus on species key for food system sustainability (pollinators & pest management) & zoonotic disease spread.

- Sustainability Champion at Silwood Park (2024 – Present)
- Fellows Representative for the Department of Life Sciences (2024 – Present)
- Mental Health First Aider (2025 – Present)

2023 – 2024 Private Client Manager, Charities Aid Foundation

Philanthropy advisor for (ultra) high net worth individuals, liaising with charities around the world to build relationships between them & my clients, & assessing funding applications for clients.

2021 – 2023 Postdoctoral Research Fellow, Centre for Biodiversity & Environment Research, University College London

Sustainable & Healthy Food Systems (SHEFS) project, funded by the Wellcome Trust: I investigated the impacts of land-use & climate change on biodiversity within South African smallholder farming areas, & the resilience of nature's benefits to people under such changes (paper in prep.).

- Postdoc Representative on the Department's Equality, Diversity, & Inclusion Team (2021 – 2023)
- CBER Media Team, producing the 'CBER Lunchbox Podcast' (2019 – 2023)
- Contributed to CBER's response to DEFRA consultation on Environment Act targets (2022)

Qualifications

2017 – 2021 PhD Student, Global Biodiversity Change Group, Centre for Biodiversity & Environment Research, UCL (Passed, no corrections)

Understanding how local climatic changes modify the response of biodiversity to land-use changes. Supervised by Prof. Newbold & Prof. Pearson, funded by a Royal Society Research Grant

2015 – 2016 MSc Conservation Science, Imperial College London (Distinction, 82)

2011 – 2014 BSc (Hons) Biology & Animal Behaviour, University of Exeter (First Class)

Selected publications (total citations = 885, h-index = 7)

Williams, J.J. et al. (2026). Ethical and equitable approaches in AI for vector-borne disease control. *AI & Ethics* 6(80)

Newbold, T., ..., Williams, J.J., (2025). Bumble bee probability of occurrence responds to interactions between local & landscape land use, climatic niche properties & climate change. *Ecology Letters* 28(5), e70145

Williams, J.J. et al. (2024). Important crop pollinators respond less negatively to anthropogenic land use than other animals. *Ecology & Evolution* 14(11), e70486.

Williams, J.J. et al. (2021). Vertebrate population trends are influenced by interactions between land use, climatic position, habitat loss & climate change. *Global Change Biology* 28(3), 797–815.

Williams, J.J. & Newbold, T. (2021). Vertebrate responses to human land use are influenced by their proximity to climatic tolerance limits. *Diversity & Distributions* 27(7), 1308–1323.

Williams, J.J. et al. (2020). Human-dominated land uses favour species affiliated with more extreme climates, especially in the tropics. *Ecography* 43, 391–405.

Williams, J.J. & Newbold, T. (2020). Local climatic changes affect biodiversity responses to land use: A review. *Diversity & Distributions* 26(1), 76–92.

Newbold, T., ..., Williams, J.J. (2020). Tropical & Mediterranean biodiversity is disproportionately sensitive to land-use & climate change. *Nature Ecology & Evolution* 4, 1630–1638.

Newbold, T., ..., Williams, J.J. (2019). Climate & land-use change homogenise terrestrial biodiversity, with consequences for ecosystem functioning & human well-being. *Emerging Topics in Life Sciences* 3(2), 207–219.

Peer Reviewer for journals including *Science*, *Global Change Biology*, & *Nature Ecology & Evolution*.

Selected reports & articles

WWF (2020), Living Planet Report 2020 - Bending the curve of biodiversity loss.

The Conversation (2021), Biodiversity: why foods grown in warm climates could be doing the most damage to wildlife. Newbold, T., Etard, A., Albaladejo Robles, G. & Williams, J.J.

Grants & awards

Principal Investigator (€2,000), Short Term Scientific Mission, funded by the Cost Action InsectAI, 2025

European Talent Academy awardee (2025)

Principal investigator (£261,179), Imperial College Research Fellowship, 2024 – 2028.

Joint principal investigator (£47,159), NERC Cross Disciplinary Research for Environmental Solutions, 2023 – UCL Internal Call (paper in prep.).

Co-investigator or named PDRA on two NERC Pushing the Frontiers grants (2020, 2022) & a NERC Standard Grant (2021) – these all passed internal UCL selection, the 2020 grant reached the final NERC interview stage (with ideas from this going into a grant written by Prof. Newbold that was successfully funded in 2025).

Selected committees, workshops, & working groups

Committee member, 2025 – Present: International Association for Landscape Ecology, UK chapter.

Committee member, 2024 – Present: BES Conservation Ecology SIG, early-career representative.

Working group, invited collaborator, 2025 – Present: ‘Understanding how land-use-climate interactions restructure terrestrial biodiversity to develop a new generation of global biodiversity models’. Working alongside Prof. Newbold, Dr Suggitt (Northumbria Uni), & Dr Senior (Durham Uni) on a NERC Pushing the Frontiers grant.

Working group, InsectAI member, 2024 – Present: This COST Action is focused around using image-based AI for insect monitoring & conservation.

Working group, invited attendee, 2024 – Present: ‘Combined effects of climate change & habitat destruction on biodiversity’, led by Dr Suggitt & Dr Auffret (Swedish Uni of Agri Sciences) (1 paper in review, 1 paper in prep.)

Co-lead on a multi-institutional paper, 2022 – Present: I was invited to co-lead a paper alongside Prof. Murphey (BAS) & Dr Cavan (Imperial College London) to look ecological feedbacks in the Earth System (paper in review).

Working group, UCL & University of Ottawa, 2018 – 2021: I worked alongside Prof. Newbold (UCL), Prof. Kerr, & Dr Soroye (Uni of Ottawa), investigating how bumblebees are responding to land-use & climate change.

Supervision

Present	1 x PhD student , secondary supervisor, Imperial
Past	4 x MRes/MSc students , primary supervisor, Imperial; 1 x MSc student , secondary supervisor, UCL
	PhD Student (passed, minor corrections) , secondary supervisor, Imperial
	5 x Masters students, 1 x BSc student, 1 x undergraduate student placement , lead or secondary supervisor (Imperial and UCL), 1 x PhD student , mentor (UCL)

Teaching

2025 – Present Associate Fellow of the Higher Education Academy

Lecturer, Landscape Ecology & Conservation (PG), Imperial College London

2022 – 2023 Lecturer & teaching assistant, Biodiversity & Conservation (UG), Species Conservation & Biodiversity (PG), UCL

2017 – 2021 Postgraduate teaching assistant, Quantitative Biology (UG), Computational Methods in Biodiversity Research (PG) UCL

2017, 2018 Guest lecturer, MSc Conservation Science course, Imperial College London

Selected conferences & guest lectures

Invited speaker: Queen Mary University of London’s Biology Department Seminar Series (2025); Imperial’s School of Public Health (2025); University of York’s Leverhulme Centre for Anthropocene Biodiversity (2025); Imperial’s Centre for Environmental Policy (2025); University of Reading’s Sustainable Land Management Department (2024); Imperial’s Ecology & Evolution Seminar Series (2023); UCL’s Institute for the Physics of Living Systems (2022).

Invited conferences: InsectAI 2nd Annual Meeting (2025, invited attendee & workshop participant); Commonwealth Science Conference (2023, invited speaker), organised by The Royal Society & the Uni of the West Indies.

Conference presentations: British Ecological Society Annual Meeting (2019-2021, 2024-2025), European Congress of Conservation Biology (2022), Ecological Society of America Annual Meeting (2020).

Selected community, & outreach

STEM Ambassador & Climate Ambassador (2019 – Present): I am invited to give talks on land-use & climate change at primary & secondary schools & have participate in career Q&A sessions for years 10-12.

Mentor for Brightside (2021 – Present): I volunteer for Brightside Online Mentoring, which supports students in Year 9 - 13 across the UK in making confident & informed decisions about their next steps.

Pint of Science Invited Speaker (2018): ‘Shark Poop & Coral Reefs - An unlikely link!’