Thomas William Scott

Career History

01/01/2026 – present. Postdoctoral Researcher, CNRS, Center for Interdisciplinary Research in Biology, Collège de France. PI: Prof. François Blanquart.

01/11/2024 – 31/12/2025. Postdoctoral Researcher, Department of Biology, University of Oxford. PI: Prof. Stuart West.

01/06/2024 – 31/10/2024. Postdoctoral Researcher, School of Biology, University of St Andrews. PI: Prof. Andy Gardner.

01/07/2021 – 31/05/2024. Postdoctoral Researcher & Co-Investigator (with Profs. Stuart West & Alan Grafen) on NERC Standard grant: "Genetic Kin Recognition and Crozier's Paradox". Department of Biology, University of Oxford.

01/01/2020 – 30/06/2021. Postdoctoral Researcher, Department of Biology, University of Oxford. PI: Prof. Stuart West.

Qualifications

2015 – 2020. DPhil (PhD) in Evolutionary Biology. University of Oxford, Department of Biology. Supervisor: Prof. Stuart West.

2011 – 2014. BA Natural Sciences. University of Cambridge. First Class Honours in Zoology, Swann prize for BA results.

2009 – 2011. A levels, Ilkley Grammar School (state comprehensive). Maths (A*), Chemistry (A*), Biology (A*), English Literature (AS level; A), Extended Project Qualification (titled "The Evolution of Eusociality"; A*).

Awards & Research Funding

2023. American Society of Naturalists Early Career Investigator Award.
I was awarded a $700 prize, a travel allowance of $1200, and the cost of registration for the ASN meetings.

2020. NERC Standard Grant titled "Genetic Kin Recognition and Crozier's Paradox".
I was a Co-Investigator with Prof. Stuart West & Prof. Alan Grafen. I played the leading role in conceptualising and writing this three-year grant.

2014. Swann prize for BA results, University of Cambridge.

Publications

Refereed papers

M. Liu, **T. W. Scott**, G. Shillcock, C. D. Pull, S. A. West (2026). Social immunity can be a consequence and cause of social evolution. *PNAS* 123: e2518957123 https://doi.org/10.1073/pnas.2518957123

T. W. Scott, G. Wild, A. Gardner (2025). Kin-discriminating partner choice promotes the evolution of helping. *Evolution* qpaf032. https://doi.org/10.1093/evolut/qpaf032.

T. W. Scott, E. T. Kiers, S. A. West (2025). The evolution of signaling and monitoring in plant-fungal networks. *PNAS* 122: e2420701122. https://doi.org/10.1073/pnas.2420701122

T. W. Scott (2024). Crozier's paradox and kin recognition: insights from simplified models. *Journal of Theoretical Biology* 581: 111735. https://doi.org/10.1016/j.jtbi.2024.111735

A.E. Dewar, L. J. Belcher, **T. W. Scott**, S. A. West (2024). Genes for cooperation are not more likely to be carried by plasmids. *Proceedings of the Royal Society B* 291: 20232549. https://doi.org/10.1098/rspb.2023.2549

T. W. Scott, G. Wild (2023). How to make an inclusive-fitness model. *Proceedings of the Royal Society B* 290: 20231310. https://doi.org/10.1098/rspb.2023.1310

T. W. Scott, A. Grafen, S. A. West (2023). Host-parasite coevolution and the stability of genetic kin recognition. *PNAS* 120: e2220761120. https://doi.org/10.1073/pnas.2220761120

T. W. Scott, S. A. West, A. E. Dewar, G. Wild (2023). Is cooperation favored by horizontal gene transfer? *Evolution Letters* 7: 113-120. https://doi.org/10.1093/evlett/qrad003

T. W. Scott, A. Grafen, S. A. West (2022). Multiple social encounters can eliminate Crozier's paradox and stabilise genetic kin recognition. *Nature Communications* 13: 3902. https://doi.org/10.1038/s41467-022-31545-4

A. E. Dewar, J. L. Thomas, **T. W. Scott**, G. Wild, A. S. Griffin, S. A. West, M. Ghoul (2021). Plasmids do not consistently stabilize cooperation across bacteria but may promote broad pathogen host-range. *Nature Ecology & Evolution* 5: 1624–1636. https://doi.org/10.1038/s41559-021-01573-2
N.B. This is a joint empirical-theory paper. I led the theory component and wrote the theory sections.

T. W. Scott, S. A. West (2019). Adaptation is maintained by the parliament of genes. *Nature Communications* 10: 5163. https://doi.org/10.1038/s41467-019-13169-3

T. W. Scott, E. T. Kiers, G. A. Cooper, M. dos Santos, S. A. West (2019). Evolutionary maintenance of genomic diversity within arbuscular mycorrhizal fungi. *Ecology & Evolution* 9: 2425–2435. https://doi.org/10.1002/ece3.4834

S. R. Levin, **T. W. Scott**, H. S. Cooper, S. A. West (2019). Darwin's aliens. *International Journal of Astrobiology* 18: 1–9. https://doi.org/10.1017/S1473550417000362

Contributions to compiled volumes

T. W. Scott, S. A. West (2025). Resolving the paradox of the organism with inclusive fitness. In *The Paradox of the Organism: Adaptation and Internal Conflict*, eds. Arvid Ågren & Manus Patten. Harvard University Press. https://www.hup.harvard.edu/file/feeds/PDF/9780674296381_sample.pdf

Submitted papers

T. W. Scott, S. A. West. No clear support for greenbeard genes. In review at *Nature Communications.*

Teaching & Supervision

- Supervised two undergraduate and two Master's research projects in social evolution.
- Ongoing co-supervision of a DPhil project in evolutionary theory.
- Nine years of experience delivering undergraduate tutorials in Biology, Mathematics, and Statistics.
- Delivered a lecture series to Oxford Biology undergraduates on *Using Inclusive Fitness Theory*.
- Conceived and implemented a research-inspired practical on Crozier's paradox, which has now been added to the 3rd year Oxford Biology syllabus.
- Supervised two students on the UNIQ+ scheme, a research internship programme that supports undergraduates from disadvantaged backgrounds to progress to postgraduate study.

Collaborations

- Collaborate extensively with both theoretical and empirical workers. In the UK, I work with four PIs and their group members (Gardner, West, Grafen, Griffin), and one independent fellow (Dewar).
- Collaborate internationally with Geoff Wild (Mathematics Department at Western University, Ontario, Canada) and Toby Kiers (Ecological Science Department at Vrije Universiteit Amsterdam, the Netherlands). I maintain these international working relationships through both online meetings and collaborative visits. In 2022 I visited Wild for 6 weeks, resulting in two papers.
- Member of the 'Paradox of the Organism' working group, which is an international network of philosophers and biologists, set up by Arvid Ågren and Manus Patten. I contributed the opening chapter to a book arising from this working group, published by Harvard University Press in 2025.

Talks

2026. Bristol, UK. Invited seminar, *Randomization in Science, Society and Nature* workshop (July 2026), Representing Evolution (https://tinyurl.com/2jmysmxj).

2026. Chicago, US. Invited seminar, *Internal Conflicts and Organismal Adaptation: Mathematical Foundations* workshop (June 2026), National Institute for Theory and Mathematics in Biology (viewable: https://youtu.be/Eut6LhQx00k).

2026. Montpellier, France. Invited seminar, *Viral adaptation to vaccination: from theory to data analysis* workshop (June 2026), organised by Sylvain Gandon.

2025. UCL, UK. Invited seminar, Department of Genetics, Evolution and Environment.

2024. University of Lausanne, Switzerland. Invited seminar, Department of Ecology & Evolution.

2024. Population Genetics Group conference, St. Andrews, UK.

2023. Evolution conference, Albuquerque, US. Prize/plenary talk (viewable: https://youtu.be/9fXnvsRLjOE).

2023. University of Bath, UK. Invited seminar, Centre for Mathematical Biology.

2023. Georgetown University, US. Invited seminar, graduate Biology / Philosophy course.

2018. 2nd Joint Congress on Evolutionary Biology, Montpellier, France.

2017. European Meeting of PhD Students in Evolutionary Biology (EMPSEB), Krasiczyn, Poland.

2016. Major Evolutionary Transitions Workshop, Magdalen College, Oxford, UK. Invited talk.

Organised Symposia

2019. Mathematical models in evolutionary biology, co-organisers Guy Cooper, Matishalin Patel & Asher Leeks. European Society for Evolutionary Biology, Turku, Finland.

2016. Major Evolutionary Transitions Workshop, organizing committee. Magdalen College, Oxford, UK.

Peer reviewing

- Regular reviewer for leading journals (*PNAS, Nature Ecology & Evolution, Nature Communications, Evolution, Evolution Letters, Journal of Theoretical Biology*).

Outreach

- Partnered with *Stated Clearly* YouTube channel to create two animations about my research, translated into multiple languages (Arabic, Spanish, *etc.*) and viewed over a quarter of a million times:
  - *What Is The Gene's Eye View of Evolution? Stated Clearly* https://youtu.be/KqdlBOoZsXo
  - *Genetic Conflict Stated Clearly* https://youtu.be/LtmAHmTLYy0

- Communicated my research extensively in the media. Several of my papers have been covered in *e.g.* Science Alert (https://tinyurl.com/47sec8pw), The Guardian (https://tinyurl.com/ym5pdkrh), Nature (https://tinyurl.com/3b6zn9yv), Newsweek (https://tinyurl.com/2p8r6n9v), the Independent (https://tinyurl.com/6snjfahz), Live Science (https://tinyurl.com/3pyjaxmv).

- Written about several of my papers in blogs: Nature Research Community, Oxford Biology and Oxford University (https://tinyurl.com/cymanszp ; https://tinyurl.com/metja7j7 ; https://tinyurl.com/5c9bpu9v).

- Appeared on podcasts such as *The Academic Minute* (https://tinyurl.com/ve4abs4s).

- Appeared on radio, for instance I gave an interview about my research on the 'wood wide web', which was aired on 70 stations around the United States and Canada.