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PERMANENT POSITIONS **Assistant Professor of Evolutionary Biology** 2025 - present
Department of Zoology, University of British Columbia

OTHER POSITIONS **JSMF Postdoctoral Fellow** 2022 - 2024
Yale University, with Professor Paul Turner

Stipendiary Lecturer 2021
St. John's College, University of Oxford

FUNDED VISITING POSITIONS **International Program Associate** 2020
RIKEN, Saitama, Japan

EDUCATION **DPhil (PhD) in Evolutionary Biology** 2016 - 2021
St. John's College, University of Oxford, with Professor Stuart West

BA in Biological Sciences (First Class; highest result in year) 2013 - 2016
New College, University of Oxford, with Professor Ashleigh Griffin

RESEARCH INTERESTS I study social evolution in viruses. Viruses can interact socially whenever they share the same cells or hosts, opening the door to both cooperation and conflict. These interactions can have drastic effects on the fitness of viruses, with important consequences for infection outcomes, epidemiology, and emergence. I investigate the evolutionary dynamics of these virus-virus interactions, the consequences of sociality for viruses, and the broader questions that these interactions raise for evolutionary theory.

- PEER-REVIEWED PUBLICATIONS
8. Griffin, A.S., Leeks, A.. 2024. **Exploiting social traits for clinical applications: the future of cheat therapy in bacteria and viruses.** *in press at npj antimicrobials and resistance*
 7. Pyenson, N.C., Leeks, A., Nweke, O.[†], Goldford, J., Turner, P.E., Schluter, J., Foster, K.R., Sanchez, A. 2024. **Diverse phage communities are maintained stably on a clonal bacterial host.** *Science*. doi: 10.1126/science.adk1183
 6. Leeks, A., Bono, L.M., Ampolini, E.A.[†], Souza, L.S., Höfler, T., Mattson, C.L., Dye, A.E., & Díaz-Muñoz, S.L. 2023. **Open questions in the social lives of viruses.** *Journal of Evolutionary Biology* 36: 1551-1567 doi: 10.1111/jeb.14203
(Lead article *JEB* 36:11, with six accompanying commentaries: 10.1111/jeb.13864)
 5. Leeks, A., Young, P.G.[†], Turner, P.E., Wild, G. & West, S.A. 2023. **Cheating Leads to the Evolution of Multipartite Viruses.** *PLOS Biology*. doi: 10.1371/journal.pbio.3002092
 4. Leeks, A., West, S.A., & Ghoul, M. 2021. **The evolution of cheating in viruses.** *Nature Communications*. doi: 10.1038/s41467-021-27293-6
 3. Leeks, A., dos Santos, M. & West, S.A. 2019. **Transmission, relatedness, and the evolution of cooperative symbionts.** *Journal of Evolutionary Biology*. doi: 10.1111/jeb.13505
 2. Leeks, A., Sanjuán, R. & West, S.A. 2019. **The evolution of collective infectious units in viruses.** *Virus Research*. doi: 10.1016/j.virusres.2019.03.013
 1. Leeks, A., Segredo-Otero, E.A., Sanjuán, R. & West, S.A. 2018. **Beneficial coinfection can promote within-host viral diversity.** *Virus Evolution* 4.2. doi: 10.1093/ve/vey028

[†] Denotes Undergraduate co-author

SELECTED OTHER PUBLICATIONS	1. <u>Leeks, A.</u> & West, S.A. 2019. Altruism in a virus . Nature Microbiology 4: 910. doi: 10.1038/s41564-019-0463-0	
OTHER FINISHED MANUSCRIPTS	1. Kawakatsu M*, <u>Leeks A*</u> , Swain A*, Shaw J, Oomen R. Sexual selection networks in Atlantic cod . *equal contribution	
GRANTS AND FELLOWSHIPS	NSF Conference Grant for The Social Lives of Viruses 2024 \$50,000 for a meeting on social evolution in viruses, with Dr Sam Díaz-Muñoz.	2023
	Santa Fe Institute Working Group Grant (x 2) \$14,000 for two week-long working groups, lead PI with three other postdoctoral fellows.	2023
	Santa Fe Institute Working Group Grant \$10,000 for a week-long working group, co-I with four other postdoctoral fellows.	2022
	ESEB Progress Meeting for The Social Lives of Viruses 2022 €15,000 for a meeting on social evolution in viruses, with Dr Sam Díaz-Muñoz.	2021
	RIKEN International Program Associate Provides accommodation and living allowance for up to a year in Japan.	2020
	James S. McDonnell Foundation Postdoctoral Fellowship \$200,000 towards postdoctoral salary and research expenses.	2019
	Joint Clarendon and St. John's College Scholarship £100,000, awarded to the top 1.8% of graduate offer-holders at the University of Oxford.	2016
AWARDS AND PRIZES	North Senior Scholarship (St. John's College, Oxford) Awarded annually for academic excellence, to two out of 250 graduate students.	2019
	Publication Prize (University of Oxford Doctoral Training Centre) Awarded for a high-quality publication arising out of a 12-week research project.	2019
	Gibbs Prize (University of Oxford) Awarded for the highest Finals mark in my 109-student cohort. I scored an average of 80.7 overall, with a first in every examined unit.	2016
	Academic Scholarship (New College, Oxford) Awarded by for excellent results in University examinations.	2015
SELECTED SCIENTIFIC PRESENTATIONS	Invited Departmental Talks	
	• “Social Evolution Theory for Viruses”, Math Bio Seminar, <i>U Penn</i>	2024
	• “Viral Sociality and Public Health”, <i>Verena Institute, USA</i>	2024
	• “Cheating and multipartite viruses”, Applied Maths, <i>Dartmouth</i>	2024
	• “Social Evolution in Viruses”, Center for Population Biology, <i>UC Davis</i>	2023
	• “Viral Cooperation and Conflict”, I2sysbio, <i>Universitat de València, Spain</i>	2021
	• “The Social Lives of Viruses”, iTHEMS Bioseminar Series, <i>RIKEN, Japan</i>	2020
	Invited Conference Talks	
	• Viral Traits and Disease Emergence, <i>Georgia, USA</i>	2024
	• Gordon Research Conference on Collective Behavior, <i>Maine, USA</i>	2023
	• Experimental Evolution in Viruses Meeting, <i>València, Spain</i>	2017
	Contributed Conference Talks	
	• “Evolutionary Conflict in Viral Populations” - Joint Evolution Meeting, <i>Montréal, QC, CA</i>	2024
	• “Cheating and the evolution of multipartite viruses” - Evolution Meeting, <i>Cleveland, OH, USA</i>	2022
	• “Why do Viruses Produce Defective Sequences?” - European Society for Evolutionary Biologists Meeting (ESEB), <i>Turku, Finland</i> - Microbial Population Biology Gordon Research Seminar, <i>NH, USA</i> <i>Voted as one of the top five talks of the seminar</i>	2019

- “The Evolution of Group Size in Viruses” 2018
- European Meeting of Evolutionary Biology PhD Students (EMPSEB), *Spain*
- “Why are Some Symbionts More Beneficial than Others?” 2017
- Animal-Microbe Symbioses Gordon Research Seminar, *VT, USA*
- EMPSEB, *Krasieczyn Castle, Poland*
- Major Transitions in Evolution, *Oxford, UK*

Talks for a General Audience

- “The Social Lives of Viruses”, *TEDxNewEngland* 2024

PROFESSIONAL SERVICE

The Social Lives of Viruses

Together with Dr Samuel Díaz-Muñoz, I organise the biannual meeting [The Social Lives of Viruses](#), a 50-person two-day meeting that brings together virologists and evolutionary biologists studying social interactions in viruses. Maximising access and inclusion at these meetings is a critical priority for us: we implement flat hierarchies, inclusive structures, and secure sufficient funding to cover all attendance costs upfront.

Stand-Alone Conferences Organised

- “The Social Lives of Viruses II” 2024
[Leeks](#) and Díaz-Muñoz *Carolina, Puerto Rico, USA*
- “The Social Lives of Viruses I” 2022
[Leeks](#) and Díaz-Muñoz *St. John’s College, Oxford, UK*
An ESEB Progress Meeting

Conference Symposia Organised

- “The Social Lives of Viruses Day Session” 2019
[Leeks](#) and Díaz-Muñoz, at ASM Microbe, *San Francisco, USA*
- “Mathematical Models in Evolutionary Biology” 2019
Cooper, Patel, Scott, [Leeks](#), at ESEB, *Turku, Finland*
- “Major Transitions in Individuality and Levels of Selection” 2018
Cooper, [Leeks](#), Patel, at Evolution/ESEB, *Montpellier, France*

Peer Review

Science (1); ISME (1); Molecular Biology and Evolution (2); Evolution Letters (1); Plos Pathogens (1); Royal Society Interface (1); Biology Letters (1); Virus Evolution (3); Trends in Microbiology (1); Journal of Evolutionary Biology (1); Frontiers in Virology (1); Viruses (1).

MEDIA

I was a keynote speaker at the inaugural [TEDxNewEngland](#) conference. I have been profiled in [Quanta](#), and quoted in the [New York Times](#) and the [New Scientist](#).

TEACHING AND MENTORSHIP

Mentoring Experience

During my DPhil, I supervised modelling projects by two Oxford undergraduates, one of which received the highest mark in the year, and one Master’s level student from École Normale Supérieure, which received the highest possible grade. I am currently mentoring three undergraduate senior thesis projects in experimental evolution at Yale.

Teaching Experience

I have designed and delivered courses on evolution and quantitative methods. In the final year of my DPhil I was appointed as a stipendiary lecturer at St. John’s College, Oxford, with joint responsibility for undergraduate Biology teaching and admissions.

Science Communication and Outreach

Throughout my PhD, to help improve access to university for students from lower income backgrounds, I gave talks at schools, reviewed personal statements, and offered mock interview practice.

This has included designing an educational board game rooted in my research on host-symbiont cooperation, which I presented at the Royal Society of London and the London Science Museum.