

Luke Ozsanlav-Harris

ECOLOGIST

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Summary

Data: Statistical Modelling | Spatial Data Analysis | Biologging Data | R | Javascript | QGIS

Writing: Scientific | Technical Reports | Public Communication

Interpersonal: Stakeholder Interactions | Collaboration | Project Management

Interests: Avian Migration | Conservation | Animal Movement

Education

PhD in Ecology

Penryn, Cornwall

UNIVERSITY OF EXETER

2019 - 2022

- Dissertation: Understanding the decline of a long-distance migratory bird, The Greenland White-fronted Goose.

MSc in Applied Ecology (Distinction)

Penryn, Cornwall

UNIVERSITY OF EXETER

2017 - 2018

- Dissertation: Understating the genetic basis of colour polymorphism in the green peach aphid.

BSc Natural Sciences (2:1)

Durham

UNIVERSITY OF DURHAM

2014 - 2017

- Literature Review: The decline of farmland birds in the UK.

Employment

RSPB

CONSERVATION SCIENTIST

Sep 2023 - today

- Ran stakeholder workshops to co-develop future landscape conservation strategies
- Carried out predictive scenario modelling to develop and test which future conservation strategies would provide the biggest benefits to lowland breeding waders in the UK

MarPAMM funded project: Isle of Rum Manx Shearwater census

SPATIAL ANALYST & FIELDWORK

May - June 2021

- Surveyed the Manx shearwater colony, carrying out habitat and burrow occupancy surveys.
- Led spatial analysis for the final population estimate; manipulated Sentinel imagery and digital elevation models to build a predictive spatially explicit model that calculated occupied burrow density over the entire colony.

JNCC Consultant: Review of avoidance rates for collision risk modelling of seabirds

ANALYST AND REPORT LEAD AUTHOR

Jan - Feb 2022

- Link to report produced within short 6 weeks deadline: <https://hub.jncc.gov.uk/assets/de5903fe-81c5-4a37-a5bc-387cf704924d>
- Recalculation of avoidance rates in R and sensitivity analysis to test the effect of various input parameters.
- Updated avoidance rates were detailed in a technical report and results were presented to marine scientist and windfarm industry stakeholders.

- Publish work carried out during my PhD in international scientific journals.
- Manage and curate large waterfowl tracking data sets, including upload to online repositories.
- Write guide to help researchers with the processing and visualisation of animal tracking data in R.

Publications

For a list of publications see my [google scholar profile](#).

1. Langley, L. P., Lang, S. D. J., **Ozsanlav-Harris, L.**, & Trevel, A. M. (2024). ExMove: An open-source toolkit for processing and exploring animal-tracking data in R. *Journal of Animal Ecology*, 93 (7), 784-795. <https://doi.org/10.1111/1365-2656.14111>
2. **Ozsanlav-Harris, L.**, Burgess, M. D., Hilton, G. M., & Bearhop, S. (2023). Changes in the spatial patterns of avian migrations: Evidence, mechanisms and causes. *Diversity and Distributions*, 29 (12), 1527-1545. <https://doi.org/10.1111/ddi.13785>
3. **Ozsanlav-Harris, L.**, Hilton, G. M., Griffin, L. R., Walsh, A. J., Cao, L., Weegman, M. D., & Bearhop, S. (2023). Differing drivers of decline within a migratory metapopulation has implications for future conservation. *Ecology and Evolution*, 13 (7). <https://doi.org/10.1002/ece3.10281>
4. McIntosh, A. L. S., **Ozsanlav-Harris, L.**, Taggart, M. A., Shaw, J. M., Hilton, G. M., & Bearhop, S. (2023). Incidence of lead ingestion in managed goose populations and the efficacy of imposed restrictions on the use of lead shot. *Ibis*, 165 (4), 1397-1413. <https://doi.org/10.1111/ibi.13210>
5. Trissi, N., Troczka, B. J., **Ozsanlav-Harris, L.**, Singh, K. S., Mallott, M., Aishwarya, V., O'Reilly, A., Bass, C., & Wilding, C. S. (2023). Differential regulation of the Tor gene homolog drives the red/green pigmentation phenotype in the aphid *Myzus persicae*. *Insect Biochemistry and Molecular Biology*, 153, 103896. <https://doi.org/10.1016/j.ibmb.2022.103896>
6. **Ozsanlav-Harris, L.**, Griffin, L., Weegman, M. D., Cao, L., Hilton, G. M., & Bearhop, S. (2022). Wearable reproductive trackers: quantifying a key life history event remotely. *Animal Biotelemetry*, 10 (24), 1-15. <https://doi.org/10.1186/s40317-022-00298-8>

In press

7. **Ozsanlav-Harris, L.**, McIntosh, A. L. S., Griffin, L., Hilton, G. M., L., Cao, L., Shaw, J. M. & Bearhop, S. (In press) Contrasting effects of shooting disturbance on the movement and behaviour of sympatric wildfowl species. *Ecological Applications*

Research Skills

DATA ANALYSIS

- Statistical analysis in R including: generalized mixed effects models incorporating spatial/temporal autocorrelation, time to event/survival modelling and bayesian generalized linear modelling with brms
- Spatial data manipulation and analysis in Google earth engine, QGIS and R (using sf & terra packages)
- Download, manipulation and analysis of remote sensing data, e.g. MODIS, Sentinel, ECMFW and NCEP
- Collating, analysing and interpreting large databases (more than 250 million biologging data points)
- Machine learning analysis, e.g. Random Forests, clustering analysis and support vector machines

COLLABORATION

- Carrying out research with multiple partners, e.g. WWT, JNCC, BTO, RSPB, SNH, to achieve mutualistic goals
- Engagement with local stakeholders, e.g. with farmers on Islay, Scotland while researching contentious goose management cull

FIELDWORK

- Organised logistics for teams to catch birds and deploy biologging devices at various UK sites, interacting with various local stakeholders and organisations (e.g. NatureScot, WWT, local councils and farmers)

Scottish Goose Forum

INVITED SEMINAR

2024

- Title: The decline of the Islay population of Greenland White-fronted Geese

University of Lund

INVITED SEMINAR

2022

- Title: Differing drivers of decline within a metapopulation has implications for future conservation

BOU Avian Reproduction Conference

POSTER

2022

- Title: Differing demographic drivers of low reproductive success within a high arctic migrant meta-population

Goose News

MAGAZINE ARTICLE

2021

- Article on the research carried out during my PhD research to a broader non-academic audience

Glengoyne Distillery Website

BLOG POSTS

2021

- Multiple blog posts for a funding partner website, conveying the findings of my research to their customers.

References

Prof Stuart Bearhop

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University of Exeter

Professor in Animal Ecology

Dr Robert Hawkes

ROBERT.HAWKES@RSPB.ORG.UK

RSPB

Conservation Scientist