

2019
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2018

Undergraduate Researcher

CRIPES Group, Cardiff University

📍 Cardiff

- Dissertation research project with Dr. Jo Lello on the effect of endemic co-infection on disease transmission of epidemic parasites. Working in a laboratory system with German cockroaches as a model organism and using collected data to build statistical models of disease transmission.
- Dissertation: Low levels of endemic parasite infection reduce the transmission potential of epidemic parasites in co-infected individuals
- Main packages: dplyr, ggplot2, coxme, multcomp, glmmTMB

2018
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2017

Research Assistant

Ezenwa Lab, University of Georgia

📍 Georgia, USA

- Placement year as a Research Intern with Professor Vanessa Ezenwa, working on an independent project on “The effects of anthelmintic treatment on non-target parasites in wild rodents” and assisting on a project on the causal relationship between personality and parasitism in wild rodents.
- Work included extensive trapping and handling of wild cotton rats and administration of behavioural assays, administration of anthelmintic drugs, collection of blood and faecal samples, and the processing and reading of faecal samples for parasite egg and oocyst intensity counts. Completed dissection and extraction of GI tract parasites and statistical analysis with R.
- Main packages: dplyr, ggplot2, glmmTMB

2017
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2017

Research Assistant

CRIPES Group, Cardiff University

📍 Cardiff

- Awarded a Cardiff CUROP grant to work as a summer student research assistant, working on ‘Investigating the effect of temperature on the in vitro growth rate of the oomycete *Saprolegnia parasitica*’. Focused on samples from Welsh salmonid species and worked with Salmon and Brown Trout. ImageJ used for automatic and manual image processing of fungal growth rates and R for data analysis. Wrote macros for automatic image analysis and used R and Tidyverse packages for data processing and analysis.
- Main packages: dplyr, tidyr, ggplot2, glmmTMB



INDUSTRY EXPERIENCE

current
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2021

Research Data Steward

Research Data Service, University of Edinburgh

📍 Edinburgh

- Archiving research data and code, working with researchers on long-term data storage solutions.

2021
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2021



Data Scientist

The Data Lab - Innovation Centre

📍 Edinburgh

- PhD work placement, working for 3 months to help analyse financial data for a startup and incubator-related company. Worked under NDA conditions.
- Used various APIs to retrieve financial data as well as R for cleaning and analysis.
- Main packages: httr, dplyr, tidyr, ggplot2.

2017
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2016



Clinical Trials Administrator

Wales Cancer Trials Unit

📍 Cardiff

- Responsible for gathering and analysing confidential patient clinical data and establishing trends and patterns with data managers and statisticians. Part-time during studies.

2016
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2016



Data Researcher and Administrator

Chartered Institute of PR, Wales

📍 Remote

- Consultant for the Chartered Institute of Public Relations Wales, working on data and database administration under strict NDA conditions. Part-time during studies.



TEACHING EXPERIENCE

current



Mentoring and Supervision

University of Edinburgh

📍 Edinburgh

- Supervised and mentored two undergraduate researchers working on final year Honours dissertation research, teaching statistics and R. Hired and supervised two research assistants for 2021 field season. Mentored NERC REU summer research intern.

2021



Principles of Ecology

University of Edinburgh

📍 Edinburgh

- Teaching various field skills and data analysis in R to undergraduates

2021



Field Ecology

University of Edinburgh

📍 Edinburgh

- Teaching various field skills and data analysis in R to undergraduates

2020



Genomes and Genomics

University of Edinburgh

📍 Edinburgh

- Primarily focused on teaching genomics, helping teach Linux, bash, and command-line tools as well as wet-lab skills.

I am passionate about teaching and enjoy teaching complex concepts. During my PhD I work as a demonstrator (Teaching Assistant), assisting undergraduate students with statistics, laboratory practical work, computational methods, and field work

2020



Evolution in Action

University of Edinburgh

📍 Edinburgh

- Assisting with undergraduate practicals, focused on computational methods in genetics



SELECTED PUBLICATIONS, POSTERS, AND TALKS

2021



Paper: Effects of anthelmintic treatment on target and non-target parasites in cotton rats

In prep

- Paper on dynamics of within-host parasite communities in wild wood mice.
- Used mixed-effects models (GLMMs) in R

2021



Paper: Impact of supplemental resources on space use and contact network structure in wild wood mice

In prep

- Paper on space use, social network, and contact network structure in a wild population of wood mice
- Used social network analysis and mixed-effects models (GLMMs) in R

2021



Paper: Effect of weather and climatic variables on trapping success of small mammals

In prep

- Paper on the effects on weather and climate variables on trapping success in wild small mammals
- Used machine learning (random forest) for feature / variable selection in R

2021



Where the wild mice are: combining multiple data sources to test how resource distribution changes space-use and contact networks

ASAB Easter Meeting 2021

- Contributed talk for the The Association for the Study of Animal Behaviour Spring Meeting

2021



Where the wild mice are: combining multiple data sources to test how resource distribution changes space-use and contact networks

EEID 2021

- Poster presentation for the Ecology and Evolution of Infectious Disease annual conference

2020



The effects of resource distribution on parasite transmission

BSP 2020

- Poster presentation for the British Society For Parasitology annual conference

- 2020 ● **Using both proximity loggers and capture-mark-recapture methods to determine if resource availability and distribution changes space use, movement, and contact network structure in wild wood mice**
 BES 2020
 · Poster presentation for the British Ecological Society annual conference
- 2019 ● **Does resource availability change movement, contact network structure, and potential for parasite transmission in wild wood mice?**
 BES 2019
 · Poster presentation for the British Ecological Society annual conference
- 2018 ● **Effects of anthelmintic treatment on target and non-target parasites in wild rodents**
 BES 2018
 · Poster presentation for the British Ecological Society annual conference
- 2018 ● **The effects of anthelmintic treatment on non-target parasites in wild rodents**
 EEID 2018
 · Poster presentation for the Ecology and Evolution of Infectious Disease annual conference
- 2018 ● **The effects of anthelmintic treatment on non-target parasites in wild rodents**
 CEID 2018
 · Center for the Ecology of Infectious Diseases Member Retreat, Georgia, USA



AWARDS

- 2021 ● **Davis Expedition Fund**
 University of Edinburgh 📍 Edinburgh
 · Awarded £7500 grant from the Davis Expedition Fund to fund two research assistants for my 2021 field research
- 2019 ● **Centenary Prize**
 Cardiff University 📍 Cardiff
 · Awarded for best Biological Sciences Final Year Research Project
- 2018 ● **Certificate of Merit**
 Cardiff University 📍 Cardiff
 · Awarded by Cardiff University for high academic achievement during my placement year at the University of Georgia

- 2017 ● **Professional Training Year (PTY) Bursary** 📍 Cardiff
Cardiff University
- Awarded £600 bursary for Professional Training Year (PTY) work at the University of Georgia.
- 2017 ● **CUROP Research Grant** 📍 Cardiff
Cardiff University
- Awarded Cardiff Undergraduate Research Opportunities Programme (CUROP) grant to work on investigating the effect of temperature on the in vitro growth rate of the oomycete *Saprolegnia parasitica*. Grant worth £1600.

TRAINING

Network analysis in R, Physalia Courses, 2021
Contact Network Epidemiology, University of Washington, 2021
Spatial Statistics in Epidemiology and Public Health, University of Washington, 2021
Mathematical Models for Infectious Disease Dynamics, Wellcome Trust, University of Cambridge, 2021
Linux for Genomics, University of Edinburgh, 2020
Social Networks Analysis Workshop, Max Planck Institute for Ornithology, 2019
Assessing the Environment course (including GIS), Cardiff University, 2018
Computational Modelling workshop, University of Georgia, 2018
R Programming and Statistics with R, Datacamp, 2018
Data Manipulation with R and Intermediate R, Datacamp, 2017
Python for Data Science, Datacamp, 2017
Good Clinical Practice (Primary Care) Certification, NICE, 2016