

Sam Hillman

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Ecologist with interests in disease ecology, eco-immunology and statistical modelling. Research experience with both field and laboratory work, including a year-long international research placement at the University of Georgia. Awarded grants for previous research work at Cardiff University and the University of Georgia and awarded summer studentship with the British Ecological Society summer school.

Driven and passionate about both ecological research and the translation of research into public health action, with additional experience of running Cardiff University's Wildlife and Conservation Society, volunteering with national NGOs and charities, and helping run citizen science programs.

Education

PhD Ecology and Evolutionary Biology
Edinburgh University

2019 - 2023

PhD on 'the ecology of infection and immunity in a wild mouse system' with Amy Pedersen, Simon Babayan and Andy Fenton. Funded through the E4 NERC DTP, starting in September 2019.

BSc. (Hons) Ecology with a Placement Year

2015 – 2019

Cardiff University
Predicted 1st Class Degree
Current cumulative grade: 1st Class

Specialising in Infection Biology and Epidemiology, Systems Biology and Modelling, and Global Change Biology.

Research Experience

Dissertation Research, CRIPES Group
School of Biosciences, Cardiff University

October 2018 – February 2019

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.

Research Intern, The Ezenwa Lab

September 2017 – August 2018

Odum School of Ecology, University of Georgia

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.

A paper is currently in draft from the work at the University of Georgia and a copy can be supplied on request.

Research Assistant, CRIPES Group
School of Biosciences, Cardiff University

July 2017 – August 2017

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/Tidyverse for data processing and analysis.

CENNAD Lichen Apprentice Scheme
Plantlife Wales

May 2016 – September 2017

Awarded two-year CENNAD Lichen Apprenticeship through Plantlife Wales (apprenticeship ended early due to my international placement year). Working with lichenologists throughout Wales to learn the full range of skills needed to carry out site surveys, identify the full range of taxa occurring in Wales (over 1500), and advise on management of lichen species and assemblages.

Research Assistant, Open Air Laboratories (OPAL)
National Museum Cardiff

February 2016 – April 2016

Lichen ecologist surveying lichen distributions as an indicator of air quality near Aberthaw power station, using the OPAL (Open Air Laboratories) and APIS (Air Pollution Information Systems) standard methodologies.

Post-Mortem and Archival Assistant, The Otter Project
School of Biosciences, Cardiff University

September 2015 – July 2016

Post-Mortem Assistant taking faecal and stomach content samples from dissected organs, as well as brain samples from otter skulls, for use in a long-term environmental surveillance scheme.

Outreach Experience

President, Cardiff University Wildlife Conservation Society

May 2016 – September 2017

President of the student society. Setting up community conservation schemes, working with local conservation groups to organise field work and setting up training schemes with local ecologists.

Royal Society for the Protection of Birds Wales

June 2016 – September 2016

Working on citizen science and community engagement projects and land management activities throughout Cardiff.

Urban Buzz Project, Buglife

February 2015 – September 2017

Working on creating pollinator habitats in Cardiff. Includes basic selecting and surveying of potential sites and training on how to provide key needs of pollinators, as well as planting new sites.

Non-Academic Experience

Clinical Studies Administrator

June 2016 – July 2017

Wales Cancer Trials Unit, Centre for Trials Research (part-time during studies)

Responsible for gathering and analysing confidential patient clinical data and establishing trends and patterns with data managers and statisticians.

Researcher and Data Administrator**January 2016 – July 2016**

Chartered Institute of PR, Wales (part-time during studies)

Consultant for the Chartered Institute of Public Relations Wales, working on data and database administration under strict NDA (non-disclosure agreement) conditions.

Microsoft Recruitment Account Manager,**March 2013 – September 2015**

CV Bay

Recruiting for technical data science and IT development roles. Line-managed and trained two other people.

Awards and Grants

- 2018** **Certificate of Merit**
Awarded by Cardiff University for high academic achievement during my placement year at the University of Georgia (2017/18 academic year)
- 2017** **Cardiff University Placement Year Bursary**
£600 for placement year work at the University of Georgia
- 2017** **Cardiff University Research Opportunities Programme (CUROP) Grant**
£1600 for summer research work in the CRIPES lab at Cardiff University
- 2016** **British Ecological Society (BES) Summer School**
Competitively selected for the BES summer school in Summer 2016

Poster Presentations

- December 2018** British Ecological Society (BES) Annual Meeting, Birmingham, UK
Effects of anthelmintic treatment on target and non-target parasites in wild rodents
- June 2018** Ecology and Evolution of Infectious Diseases (EEID) Conference, Glasgow, UK
The effects of anthelmintic treatment on non-target parasites in wild rodents
- March 2018** Center for the Ecology of Infectious Diseases Member Retreat, Georgia, USA
The effects of anthelmintic treatment on non-target parasites in wild rodents

Affiliations and Memberships

- 2017 – present** Center for the Ecology of Infectious Diseases, University of Georgia
- 2015 – Present** British Ecological Society, Undergraduate Member
- 2015 – Present** Association for the Study of Animal Behaviour, Undergraduate Member

Training and Training Courses

- 2018** Assessing the Environment course (including freshwater field survey techniques and basic GIS), Cardiff University
- 2018** Computational Modelling workshop, University of Georgia
- 2018** R Programming and Statistics with R, Datacamp
- 2017** Data Manipulation with R and Intermediate R, Datacamp
- 2017** Python for Data Science, Datacamp
- 2016** Good Clinical Practice (Primary Care) Certification, NICE
- 2016** Great Crested Newt Survey Training
- 2016** Conducting Citizen Science using Open Air Laboratories (OPAL)
- 2016** Conducting Environmental Surveys using Open Air Laboratories (OPAL)
- 2016** Phase One Habitat Surveying for Ecologists

Referees

Professor Vanessa Ezenwa
Odum School of Ecology
University of Georgia
vezenwa@uga.edu

Dr. Sian Griffiths
School of Biosciences
Cardiff University
griffithssw@cardiff.ac.uk

Dr. Léa Briard
Research Center on Animal
Cognition, Toulouse
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