

# Rose McKeon

Currently searching for a postgraduate position.

[rosemckeon.uk](http://rosemckeon.uk) [LinkedIn](#) [Twitter](#) [GitHub](#)

I am an undergraduate Biology student—with a background in programming and graphic design—who's most intrigued by the study of evolution, ecology and biological theory. I'm especially interested in opportunities which revolve around computational biology, and I have a keen interest in overcoming the problems of science communication.

## RECENT EXPERIENCE

### Education

Biology (Bsc Hons) / University of Stirling / 2016–Present  
*Thesis to be regarding the theory of polyploid evolution.*

- **78% of modules at first-class**, mean grade: 75 (N = 18).
- **Won a research studentship** with [The Genetics Society](#).
- **Volunteered** with the [ENDORSE](#) and [WrEN](#) research projects.
- **Secured paid work** within the department to develop web apps (using Shiny) for use as a teaching aid in a 4th-year population ecology module.
- **Ran study sessions** at Stirling University Coding Club and played a key role in increasing engagement.

### Research

Genetics Society Summer Studentship / 2019  
*How disturbance affects the establishment of new polyploid plant species.*

- **Secured funding** (1600 GBP) for 8 weeks of research.
- **Created an Individual-based model**—from scratch in R—which simulates polyploid evolution and disturbance in plant populations.
- **Found that disturbance is a key factor in polyploid establishment.** Population growth/decline was consistently amplified by disturbance, with greater amplification occurring as disturbance frequency was increased.
- **Received a runner up prize** for presenting my work in a 10-minute talk at The Genetics Society Summer School Workshop.
- **Made my model available** as an R package: [DisturPloidy](#)
- **Preparing paper submission** of my results for *Heredity*.

ENDORSE Project / 2018  
*Maintenance of biopesticide susceptibility in polyphagous pest *Helicoverpa armigera*.*

- A multivariate quantitative genetics approach was used to determine that genetic variation for biopesticide susceptibility could be maintained in *H. armigera* (order: Lepidoptera) by controlling diet and pathogen exposure.
- Lab duties: crop cultivation, disposal of hazardous materials, moth rearing, breeding, dissection, feeding, and fungal isolate dilution.
- I also created a unique model interface to aid in the presentation of the project's concepts at the 2018 Brazilian Entomology Conference.

### SKILLS

R / PHP / Git

Individual-Based Modelling

Statistical Analysis

Genome Sequence Analysis

Communication

javaScript

HTML

CSS / Sass / Less

MySQL

Unix

Mac OS

Windows

Adobe Creative Suite

UK Driving Licence

BSAC Ocean Diver

1 Star Canoe & Kayak

## Contact Me

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WrEN Project / 2018

**Monitoring mammal activity in newly restored Scottish woodland.**

- Camera trapping in woodland sites of varying age was used to determine how well-established woodland needs to be before habitat use by mammals is restored.
- Field duties: placed and moved traps.

**How vegetation changes in Scottish *Stercorarius skua* colonies affect invertebrate and beetle diversity.**

- Biodiversity analysis of invertebrate samples which found that diversity was highest where *S. skua* (order: Charadriiformes) colony use was intermediate.
- Lab duties: invertebrate identification and counts to order, beetle (Coleoptera) identification and counts to family.

## Work

Bat Surveyor / Direct Ecology Ltd. / May–July 2018  
Dawn and dusk surveys with ANABAT detectors.

Freelance Web Developer / 2014–2019  
Self-employed programming and design work.

## Volunteering

Glendrick Roost Animal Sanctuary / 2019

Marine Conservation Society / 2015–2017

Cumbria Wildlife Trust / 2014–2016

## ANCIENT HISTORY

### Work

Head of Design / WUKMedia / 2007–2014

- Coordinated a team of 5 designers and developers, liaising closely with the marketing and sales departments.
- Core responsibilities: product development, customer relations, proposal creation, project-management, quality control, and systems administration.

Premium Design Team / Ufindus / 2007

Partner / Crashed Computers / 2004–2007

Various Bar Jobs

## Education

Human Physiology & Psychology (Lvl 3 Diploma) / Distinction  
Lancashire Adult Learning / 2014–2015

Fine Art & Photography (Btec Foundation) / Pass  
Lancaster & Morecambe College of Art & Design / 2003–2004

Art & Design (Btec National Diploma - 1st yr) / Pass  
Lancaster & Morecambe College of Art & Design / 2000–2001

## REFEREES

**Dr Brad Duthie / University of Stirling**  
Bachelors thesis and studentship supervisor.

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**Dr Matt Tinsley / University of Stirling**  
Personal tutor and ENDORSE project supervisor.

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**Mr Tom Parson / Huddle Digital Ltd.**  
Agency director with whom I had a longterm retainer contract for remote programming work.

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