

# Chloe Rickards

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## **OBJECTIVE**

Recently graduated Masters' student with experience in epidemiological statistics and ecological modeling seeking industry or nonprofit applications of biological data, especially in environmental or human health contexts

## **EDUCATION**

### **MS Ecology and Evolutionary Biology (Sept 2022)**

- University of California - Santa Cruz, Kilpatrick Lab
- Recipient of the National Science Foundation Graduate Research Fellowship

### **BS Bioengineering with Honors (June 2018)**

- Stanford University, De Leo Lab

## **TECHNICAL SKILLS**

Python (NumPy, pandas, Matplotlib, Jupyter) | R (tidyverse, ggplot, Shiny) | Stan | SQL | MATLAB | Java | Tableau  
LaTeX | Markdown | Github | Bayesian statistics | Markov chain Monte Carlo | Mathematical modeling | Microsoft Office

## **AWARDS**

National Science Foundation Graduate Research Fellowship Program Winner (2020) | Regent's Fellowship (2020)  
Coha-Gunderson Prize in Speculative Futures (2022)

## **EXPERIENCE**

### **Graduate Student Researcher, 09/2020 – 09/2022, *University of California Santa Cruz, Santa Cruz, CA***

- Estimated Infection Fatality Rate (IFR) of COVID-19 in New York City from serology, case, and death data
- Applied Fourier transforms, Bayesian inference, and a No U-Turn Sampler (NUTS) to infer undiagnosed infections and test for maximum likelihood among IFR estimates
- Assessed several IFRs across the globe for patterns in age-specific mortality and determined potential causes for the patterns observed, including wealth inequality and underlying conditions
- Findings in review, with a preprint available at: <https://bit.ly/3abTiVg>

### **Teaching Assistant, 09/2020 – 08/2022, *University of California Santa Cruz, Santa Cruz, CA***

BIOE 109: Evolution, Fall 2020

BIOE 107: Ecology, Spring 2021

COSMOS: Entomology, Summer 2022

### **MINT Program Mentor, 09/2021-06/2022, *University of California Santa Cruz, Santa Cruz, CA***

- Mentor undergraduate students in the process of applying to graduate schools
- Provide undergraduate students with opportunities to gain lab and field experience

### **Postbac Student Researcher, 06/2020– 08/2020, *Stanford University, Stanford, CA***

- Compared the lifespans and environmental persistence of 150 parasites and pathogens; found that diseases with environmental components are more difficult to control and eradicate
- Published findings available at: <https://bit.ly/3c3oowl>

### **Undergraduate Student Researcher, 06/2015 – 06/2018, *Stanford University, Stanford, CA***

- Constructed a stochastic model of the population genetics of the freshwater snail responsible for transmitting schistosomiasis, a Neglected Tropical Disease and a disease of poverty
- Projected theoretical changes to local disease burden after introducing a CRISPR/Cas9-mediated gene drive designed to confer resistance to the snail hosts
- Findings in review, with a preprint available at: <https://bit.ly/3Mxg4oa>