Kristine Jecha

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Education

University of Lausanne — Lausanne, Switzerland
Ph.D in Ecology and Evolution — Expected 2026
Advisor: Tanja Schwander

University of Lausanne — Lausanne, Switzerland
Master of Science in Behaviour, Evolution and Conservation — February 2022
<u>Specialization</u>: Computational Ecology and Evolution
<u>Masters Thesis</u>:
"Effects of Genome Feature Evolution on Tandem Repeat DNA Patterns"
   Director: Tanja Schwander

University of Minnesota – Twin Cities — Minneapolis, Minnesota
Bachelor of Science — May 2020
<u>Majors</u>: Ecology, Evolution, and Animal Behavior / Plant and Microbial Biology
<u>Minors</u>: Marine Biology / Fisheries, Wildlife, and Conservation Biology
College of Biological Sciences Dean's List- Spring 2020

Laboratory Experience

Student Assistant — University of Lausanne, Switzerland
Department of Ecology and Evolution, Schwander Laboratory — August 2021 – Present
- Annotating transposable element regions within genomes of *Timema* species
- Conducting analysis on a High Performance Computing cluster

Undergraduate Research Assistant — University of Minnesota
Ecology, Evolution, Behavior Department, Zuk Laboratory — September 2019 – May 2020
- Primary assistant of experiments focused on the effects of song on the seminal fluid proteins of *Teleogryllus oceanicus*
- Followed USDA regulations for foreign research species containment
- Participated in collaborative meetings with research group projects centered on sexual selection in crickets

Undergraduate Research Assistant — University of Minnesota
Entomology Department, Aukema Laboratory — May 2018 – August 2018 & June 2019 – October 2019
- Collaborated with PhD student on an emerald ash borer research project
- Identified and sorted insect species (bark beetles, competitors, predators) to monitor pheromone effects
- Performed field work including setting insect traps, catching wasps, identifying and surveying Minnesota trees, injecting emerald ash borer pesticides into trees, and collecting branch samples

Laboratory Assistant — University of Bergen, Norway
Evolutionary Ecology Department, Kirkendall Laboratory — January 2019 – June 2019
- Measured over 200 bark beetle specimens with an ocular micrometer
- Analyzed and gathered specimen data with R to determine morphological differences due to latitude and elevation
- Organized pinned insect specimens and lab equipment to facilitate future research

Undergraduate Research Experience

"A new symptom of emerald ash borer infestation in ash trees" — September 2018 – December 2018
- Completed a directed research project in the Aukema Forest Entomology Lab with PhD student, Dora Mwangola
- Analyzed data in R, finding a correlation between seed abundance and tree health caused by insect damage

"Neogobius melanostomus - Round Goby" — January 2020
- Review paper published to UMN Bell Museum- Minnesota Biodiversity Atlas as part of ichthyology course
- Reviewed species biology, systematics, and economic influence on the Great Lakes region

Additional Experience

Teaching Assistant - Diversité du vivant: botanique (Botany)   University of Lausanne, Switzerland
Faculty of Biology and Medicine   March 2021 – June 2021
- Presented lab information and exam instructions in French
- Aided undergraduate students in Swiss plant species identification
- Explained principles of plant biology

Museum Interpretive Guide   University of Minnesota
Bell Museum of Natural History   September 2019 – March 2020
- Interpreted exhibits to museum guests while expanding on museum information to improve guest experience
- Introduced guests to Minnesotan ecology and connected to global ecology
- Managed school groups within exhibits to create a dynamic and educational experience

Skills

- Skilled in Microsoft Excel and Word
- Comfortable with R, Python, Bash, and ArcGIS
- Practiced with High performance computing clusters and Slurm
- Familiar with sterile technique and general lab safety
- Bilingual in English and French

Additional Workshops Attended

Introduction to Snakemake   University of Lausanne
- Workflow management language and engine to implement reproducible bioinformatic pipelines.   October 2021

EMBO Practical Course on Population genomics: background and tools   European Molecular Biology Organization
- Bioinformatic tools, concepts, and machine learning for population genomic research   March 2022

Awards

UNIL Master's Grant 2020-2022   University of Lausanne
- Scholarship for excellence awarded to foreign students whose academic results are of a very high level

FBM Special Award for Outstanding Dedication in Practical Teaching 2021   University of Lausanne
- Awarded for assistance in practical work teaching during unprecedented and complicated pandemic-related conditions