Kristine Jecha

Ph.D. Student, University of Lausanne kristine.jecha@unil.ch

Education

University of Lausanne Ph.D in Ecology and Evolution Director: Tanja Schwander Thesis: "The Genomic Consequences of Hybridization in Insects"

University of Lausanne

Master of Science in Behaviour, Evolution and Conservation <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

Bachelor of Science <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 – December 2021 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 January 2019 – June 2019 Evolutionary Ecology Department, Kirkendall Laboratory 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

| Lausanne, Switzerland | ł |
|-----------------------|---|
| Expected 2020 | 5 |
| Expected 2020 | 6 |

Lausanne, Switzerland February 2022

Minneapolis, Minnesota May 2020 • Reviewed species biology, systematics, and economic influence on the Great Lakes region

Additional Experience

Teaching Assistant - Diversité du vivant: botanique (Botany)

Faculty of Biology and Medicine

- Presented lab information and exam instructions in French
- Aided undergraduate students in Swiss plant species identification
- Explained principles of plant biology

Museum Interpretive Guide

Bell Museum of Natural History

- 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 SnakemakeUniversity of Lausanne• Workflow management language and engine to implement reproducible bioinformatic pipelines.October 2021EMBO Practical Course on Population genomics: background and toolsEuropean Molecular Biology Organization• Bioinformatic tools, concepts, and machine learning for population genomic researchMarch 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

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Presentations

Jecha K., Lavanchy G., Szewczyk T., Freitag A., Schwander T.. How Reliable are Morphological Criteria for Species Identification: a case study using ants of the *Lasius* genus. Poster presented at: Biology 23 Conference; February 2023; Geneva, Switzerland.

University of Minnesota September 2019 – March 2020

March 2021 – June 2021

University of Lausanne, Switzerland