

# Michelle Kirchner

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## EDUCATION

<b>North Carolina State University</b> - Raleigh, NC PhD Student in Entomology & Biology	<i>Expected 2024</i>
<b>North Carolina State University</b> - Raleigh, NC B.S. Zoology - <i>Valedictorian</i>	<i>January 2017-May 2019</i>
<b>Gottfried Wilhelm Leibniz Universität Hannover</b> - Hannover, Germany Coursework completed in B.S. Life Science	<i>October 2014-April 2016</i>
<b>University of Veterinary Medicine Hanover</b> - Hannover, Germany Coursework completed in Veterinary Medicine State Examinations	<i>October 2013-October 2014</i>

## AWARDS, HONORS, FELLOWSHIPS, & GRANTS

<b>Global Organization of Tree Climbers Rendezvous Scholarship</b> (\$400)	<i>2022</i>
<b>Outstanding MS Student, North Carolina Entomological Society</b>	<i>2020</i>
<b>Student Development Award, North Carolina Entomological Society</b> (\$200)	<i>2020</i>
<b>NSF GRFP Honorable Mention</b>	<i>2020</i>
<b>Graduate Research Assistantship, NCSU Department of Entomology</b>	<i>Fall 2019 - Present</i>
<b>1<sup>st</sup> Place Poster Presentation, North Carolina Entomological Society</b> (\$50)	<i>2019</i>
<b>Canopy Ant Bootcamp Scholarship</b>	<i>2019</i>
<b>Bio REU Travel Grant</b> (\$2,000)	<i>Summer 2019</i>
<b>Margie Collins Student Leaders Scholarship</b> (\$1,000)	<i>Spring 2018</i>
<b>Congress Bundestag Youth Exchange Program</b> <i>Year-long exchange scholarship funded jointly by U.S. Congress and the German Bundestag offered to 250 students annually. Emphasis is placed on citizen diplomacy and a full immersion cultural and lingual experience.</i>	<i>July 2012 -June 2013</i>

## PUBLICATIONS

Kirchner, M., Petzoldt, J. 2022. Entomology stipends fail to cover necessities. *American Entomologist*. (in press)

## PRESENTATIONS

Kirchner, M, Youngsteadt, E. 2022. Urbanization alters the diversity and ecology of temperate canopy ants. Invited talk. Ecological Society of America, Montréal, QC, CA. (upcoming)

Kirchner, M. 2022. Ants in trees! Diversity and ecology of temperate canopy ants. Invited talk. Global Organization of Tree Climbers Rendezvous, Gainesville, FL. (upcoming)

Kirchner, M., Resasco, J., Haddad, N., Burt, M.A. 2019. Pogon on Fire: effects of edges, connectivity, and patch shape on fire ant and harvester ant distributions. Poster. North Carolina Entomological Society, Raleigh, NC.

Kirchner, M., Resasco, J., Haddad, N., Burt, M.A. 2019. Pogon on Fire: effects of edges, connectivity, and patch shape on fire ant and harvester ant distributions. Poster. Ecological Society of America, Louisville, KY.

## RESEARCH EXPERIENCE

**North Carolina State University** - Raleigh, NC August 2019-Present

Graduate Research Assistant - Department of Entomology and Plant Pathology, Department of Applied Ecology

*Dissertation research investigating the abundance, diversity, nutritional, and thermal ecology of temperate canopy ants. This project represents the first exploration of temperate canopy ants in North America with in-situ arboreal sampling.*

- Designed and planned a hypothesis-driven research project at 14 sites across North Carolina.
- Collaborated with North Carolina state agencies to select sites and legally collect on state-owned lands.
- Created and employed novel methods to collect 2,000+ samples.
- Synthesized and analyzed data using Google Sheets, Excel, QGIS, ArcGIS, and R.

**Madagascar Biodiversity Center** - Antananarivo, Madagascar July 2019-August 2019

Scholarship Recipient - Canopy Ant Bootcamp

*NSF-funded workshop on ants, canopy ecology and tree climbing research techniques. Bootcamp participants performed first-ever canopy expedition in the dry forest region of Madagascar, contributing to the Madagascar Ant Microendemism (MAMI) project.*

- Collaborated with diverse team of 16+ researchers to explore canopy ant fauna of Madagascar's dry forest.
- Practiced and employed double rope tree climbing techniques.
- Collected, curated, and identified 600+ ants to species.
- Presented research questions and methods to local university students.

**Michigan State University** - Aiken, SC May 2018-August 2018

Ant Community REU Student - Savannah River Site Corridor Project

*NSF LTREB funded landscape experiment examining impacts of habitat fragmentation and connectivity on the longleaf pine savannah ecosystem. REU project investigated spatial and temporal effects of fragmentation on the Red Imported Fire Ant and Florida Harvester Ant and their species interactions.*

- Designed independent project and presented research proposal to 5 principal investigators.
- Collected measurement and GPS data for 900 ant nests over 20+ hectares of fragmented area.
- Deployed 200 pitfall traps for collection of annual ant community data.
- Synthesized and analyzed data using GPS Pathfinder Office, Excel, QGIS, and R.
- Presented results at Ecological Society of America's 2019 annual meeting.

**North Carolina State University** - Raleigh, NC August 2017 - December 2018

Undergraduate Research Assistant - Human-Animal Interactions Course Evaluation

*Ongoing research project evaluating the effects of Dr. Jenny Campbell's Human-Animal Interactions course on students' perceptions of the human-animal relationship.*

- Autonomously recruited, trained, and managed 9 volunteer graders to assist with the research.
- Drafted individualized grading sheets for each volunteer with 600 student responses for evaluation.
- Organized and analyzed over 5,000 data points and presented findings to head researcher to prepare for publication.
- Explored and summarized current relevant publications to guide the research question and methodology.

**Piedmont Wildlife Center** - Durham, NC June 2017 - August 2017

Wildlife Conservation Summer Intern - Box Turtle Connection

*100-year, state-wide study on box turtles that aims to study population trends, identify threats, and develop long-term conservation strategies.*

- Collected GPS, conditions, and behavioral data on 9 wild box turtles using radio telemetry twice a week.
- Entered data submitted by community scientists for 150 turtles into state-wide database.
- Regularly recruited and advised community scientists to ensure more abundant and accurate data collection.
- Presented project overview and most recent findings to NC State Zoology Club.

## TEACHING EXPERIENCE

**North Carolina State University** - Raleigh, NC

*January 2022 - May 2022*

Graduate Teaching Assistant - ENT 163: Ornamental and Turf Insects

- Taught labs on insect biology, diversity, classification, curation, and identification.
- Graded all lab assignments and quizzes.
- Assisted students with questions about class material and assignments.

**Meredith College** - Raleigh, NC

*February 2021*

Guest Lecturer - BIO 222: Animal Biology

- Emphasized the variety of paths to and careers in science to biology majors at a women's liberal arts college.
- Presented my graduate research and results.
- Answered student questions about graduate school, science, and getting involved in research.

**North Carolina State University** - Raleigh, NC

*August 2020 - December 2020*

Graduate Teaching Assistant - ENT 201: Insects and People

- Developed and created lectures and projects appropriate for online learning.
- Designed and taught lectures on major insect orders: Hymenoptera, Lepidoptera, Orthoptera, Diptera.
- Assigned and graded a major project demonstrating the scientific method.
- Assisted students with questions about class material and assignments.

**North Carolina State University** - Raleigh, NC

*January 2018 - May 2018*

Tutor - Academic Support Program for Student Athletes

- Led twice weekly one-on-one tutoring sessions in introductory cell biology to encourage better comprehension of lecture material.
- Facilitated students' understanding of basic and advanced mathematical concepts in one-on-one and small group settings.
- Participated in monthly trainings to improve tutoring skills and methods.

**North Carolina State University** - Raleigh, NC

*January 2018 - May 2018*

Undergraduate Teaching Assistant - BIO 333: Captive Animal Biology

- Drafted lecture timeline, project assignments, and due dates in weekly meetings with the professor and fellow teaching assistant.
- Assigned and graded the individual research sections of a semester-long zoo project.
- Assisted students with questions about class material and assignments in person and via email.

## SERVICE

**Ecological Society of America Annual Meeting**

2022

Lead Organizer - Organized Oral Session, *Life in the changing forest canopy: Ecology, function, and conservation*

**North Carolina State University**

2021

Panelist - Field Ecology in Graduate School, AEC 460: Field Ecology

**North Carolina State University**

May 2020-Present

Vice President - Entomology Graduate Student Association

- Served as representative to university-wide Graduate Student Association.
- Negotiated graduate student stipend raises with departmental leadership.
- Motivated the successful vote for the removal of GRE admissions requirement.
- Implemented a gender-neutral restroom in a main department building.
- Presented minutes and outcomes of regular and special administrative meetings to entomology students.

**North Carolina State University**

2018, 2018, 2021

Panelist - Getting Involved in Undergraduate Research, BSC 303: Transfer Student Transitions

**North Carolina State University**

2017, 2018, 2020, 2020, 2020

Panelist - Transitioning to NC State, BSC 303: Transfer Student Transitions

**North Carolina State University - Raleigh, NC**

August 2017 - May 2018

Transfer Student Peer Mentor - Department of Biological Sciences

- Met regularly one-on-one with 8 transfer student mentees to offer advice on the transition to NCSU.
- Planned, organized, and supervised monthly social events with up to 30 attendees.
- Assisted with BSC 303: Transfer Student Transitions as a teaching assistant liaison.

**North Carolina State University**

January 2017-May 2019

Head of Service Committee - NC State Hunt Seat Equestrian Team

- Conceived and organized opportunities for team community service activities.
- Rode in weekly practice lessons with teammates and team coach.
- Competed in regular horse shows against North Carolina university teams.

**OUTREACH AND PUBLIC EDUCATION****Ant Pinning Tutorial**

2021

<https://bit.ly/ant-pinning>

- Produced, shot, and edited a detailed tutorial for point mounting ants.
- Trained undergraduate researchers in proper ant curation techniques using this video.

**BugFest - Raleigh, NC**

September 2018, 2019

Booth Volunteer

- Engaged with NC Natural Science Museum visitors to teach about the diversity and ecology of insects.

**North Carolina State University - Raleigh, NC**

January 2018 - May 2018

Zoology Capstone: Welcome to the Anthropocene

*Group capstone project aiming to educate the general public about the human influences on White-Nose Syndrome in bats and Chytrid fungus in amphibians.*

- Collaborated with 4 classmates to develop and propose project ideas.
- Reviewed and summarized current literature on the history, treatment, impacts, and mitigation techniques of White-Nose Syndrome and Chytrid fungus.
- Corresponded with and interviewed leading experts about their research and work.
- Recorded and produced an informational podcast summarizing our findings.
- Presented podcast to a group of departmental professors, students, and classmates.

**Piedmont Wildlife Center**

*June 2017-June 2019*

Raptor Team

- Participated in weekly training and enrichment sessions to learn and practice raptor handling techniques.
- Created and taught educational wildlife programs for up to 30 participants using animal ambassadors.
- Supervised and participated in outreach booths for public education at major community events.
- Provided care and enrichment for small mammals, reptiles, birds, raptors, and insects.

**Carolina Tiger Rescue - Pittsboro, NC**

*June 2017 - August 2017*

Program Leader/Wildlife Conservation Summer Intern

- Customized and taught educational domestication programs for up to 20 children in grades 3-8 both collaboratively and autonomously.

**PROFESSIONAL EXPERIENCE**

**Nufarm Americas, Inc. - Morrisville, NC**

*August 2018 - June 2019*

Regulatory Intern

- Organized and proofread 350 current label registrations in accordance with EPA standards.
- Revised 150 registered chemical labels, following recent EPA directive.
- Generated personal data entry tracking spreadsheet and timeline for project milestones.

Registrations Database Intern

*March 2017 - November 2017*

- Worked collaboratively with supervisors and programmers to improve on data processing, aesthetics, and overall functionality of web database.
- Completed data entry of over 2,000 individual confidential EPA statements of formula.

**ADDITIONAL INFORMATION**

**Organizational Memberships:** Entomological Society of America, Ecological Society of America, North Carolina Entomological Society, International Union for the Study of Social Insects, Graduate Women in Science

**Languages:** Fluent English and German