Courtney Giebink

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clgiebink.github.io

EDUCATION

University of Arizona   **Tucson, AZ**

Adviser: *Dr. Margaret Evans*   [Laboratory of Tree Ring Research](#)

Ecology and Evolutionary Biology   Fall 2018 – Spring 2021

Masters of Science   GPA: 4.000/4.0

Relevant Coursework
- Forest Ecology
- Dendrochronology Intensive Summer Course
- Ecological Forecasting
- Advanced Geographic Information Systems
- General Linear and Mixed Effect Models

University of Wisconsin-La Crosse   **La Crosse, WI**

Major: Biology: Environmental Science Concentration   Fall 2013 – Spring 2017

Minor: Statistics   GPA: 3.840/4.0

Relevant Coursework
- Mathematical Models in Biology
- Analysis of Variance and Design of Experiments
- Correlation and Regression Analysis
- Quantitative Methods in Ecology

University of Cape Town   **Cape Town, South Africa**

Faculty of Science: Biology   Spring 2016

RESEARCH

Climate-sensitive stand-level growth and yield model   **2018 - 2021**

Adviser: *Dr. Margaret Evans*
- Created climate-sensitive, LMM version of a forestry growth and yield model (FVS) using the information contained in tree-ring time series and forest inventory data.

Community responses to simulated climate change   **2016 – 2017**

PI: *Dr. Meredith Thomsen*
- Statistically analyzed data from a five-year study to determine how precipitation and nitrogen availability affect the biomass of several plant functional groups in a California prairie system

Temperature-driven outbreak of waterfowl disease   **2014 – 2015**

PI: *Dr. Gregory Sandland & Dr. James Pierce*
- Collected data on the effect of temperature on parasite production, which was incorporated in an annual model of waterfowl disease through a temperature-dependent transmission parameter.

PUBLICATIONS

Giebink, C. L., G. M. Domke, R. A. Fisher, K. A. Heilman, D. J. P. Moore, R. J. DeRose, and M. E. K. Evans. *In Review*. The policy and ecology of forest-based climate mitigation: challenges, needs and opportunities. Plant and Soil.

Giebink, C. L., R. J. DeRose, M. Castle, J. D. Shaw, and M. E. K. Evans. *In Prep*. Tree-ring-based climatic sensitivity improves predictions of the Forest Vegetation Simulator growth and yield model.

Evans, M. E. K., R. J. DeRose, S. Klesse, M. P. Girardin, K. A. Heilman, M. R. Alexander, A. Arsenault, F. Babst, M. Bouchard, S. M. P. Cahoon, E. Campbell, M. C. Dietze, L. Duschesne, D. C. Frank, **C. L. Giebink**, A. Gomez-Guerrero, G. Gutierrez-Garcia, S. A. V. Gaytán, E. H. Hogg, J. Metsaranta, C. Olds, S. A. Rayback, A. Reid, M. Ricker, P. Schaberg, J. D. Shaw, and P. F. Sullivan. *In Review*. Enhanced forest ecosystem monitoring with tree rings for carbon accounting and climate repair. BioScience.

Evans, M. E. K., B. A. Black, D. A. Falk, **C. L. Giebink**, and E. L. Schultz. 2021. Growth Rings across the Tree of Life – demographic insights from biogenic time series data. In R. Salguero-Gomez & M. Gamelon (Eds.), Demographic Methods Across the Tree of Life. Oxford University Press.

ORAL PRESENTATIONS

Nov 2021	Society of American Foresters National Convention
Mar 2021	Tree Ring Days
May 2020	Ecosystem Resilience: Ecosystem Transformation After Large-Scale Disturbance
Nov 2019	Forest Inventory and Analysis Stakeholder Science Meeting
April 2019	Women in Data Science

OUTREACH

Oct 2020	AGU Science Advocacy Days
Fall 2019	Development of dendro kit for high school science classes
Nov 2019	Sonoran Institute fish survey
Sep 2019	Sense of Place Excursion for Today's Teachers
Mar 2019	Tucson Festival of Books Dendroecology Outreach

WORKSHOPS

May 2020	Ecological Forecasting Initiative's Research Coordination Network (EFI-RCN)
May 2020	ResBaz Arizona 2020
Mar 2020	Docker Container Camp
Feb 2020	Machine Learning Literacy Workshop
Feb 2020	Introduction to Python
Feb 2019	Forest Vegetation Simulator (FVS) Training
Nov 2018	Geospatial Data Carpentry in R
Oct 2018	Software/Data Carpentry
June 2018	Navajo Forests Tour

SKILLS

Advanced
- R and Rstudio
- Git and GitHub integration
- Microsoft Word, Microsoft Excel, PowerPoint, Outlook

Proficient
- ArcGIS Pro
- Tellervo, Open Data Kit (ODK) Collect, and Avenza Maps (field sampling)

Basic
- SQL
- Linux, Bash
- Python
- Docker containers with automated builds using GitHub and Cyverse

HONORS & AWARDS

Spring 2021   Galileo Circle Fellow Scholarship
Spring 2019   College of Science Award in Teaching
Spring 2017   UWL Senior of the Year: Environmental Science Concentration
Fall 2013   Wisconsin Academic Excellence Scholarship

EXPERIENCE

UA Sky School   **Tucson, AZ**
Graduate Instructor – *Rebecca Lipson*   August 2019 – June 2021
- Led place-based and inquiry-based science education programs to K-12 students.
- Designed curriculum and led programs for students that are visually impaired - [Project POEM](#).

University of Arizona   **Tucson, AZ**
Teaching Assistant – *Margaret Evans*   August 2018 – May 2021
- Conservation Biology
- Introduction to Ecology and Evolutionary Biology Lab
- Introduction to Global Change

Tumacácori National Historical Park   **Tumacacori, AZ**
Student Conservation Association & AmeriCorps Intern-*Roger Dorr*   August 2017 – August 2018
- Invasive plant management, fish and wildlife monitoring, water quality testing.
- Lead park's dark sky designation.
- Science communication, including natural resource walks and a middle school science fair.

University of Wisconsin-La Crosse   **La Crosse, WI**
Biology Tutor   January 2015 – May 2017
- Teach course concepts, help with assignments, proofread essays, advise on study habits.

Forage Genetics International   **West Salem, WI**
Research Technician   May 2015 – December 2015
- Assist in breeding program, measure protein levels via near-infrared spectroscopy (NIRS).

REFERENCES

Dr. Margaret Evans   *University of Arizona*
Assistant Research Professor   Laboratory of Tree Ring Research
margaret.ekevans@gmail.com   520.621.0778

Dr. R. Justin DeRose   *Utah State University*
Assistant Professor   Ecology Center & Wildland Resource Department
rjustinderose@gmail.com

Dr. John D. Shaw   *U.S. Forest Service*
Analyst   Forest Inventory and Analysis
jdshaw@fs.fed.us   801.598.5902

Rebecca Lipson   *UA Science*
Assistant Director for Education   Sky School
rlipson@arizona.edu

Roger Dorr   *Tumacácori National Historical Park*
Archeologist   Chief of Resource Management
roger_dorr@nps.gov   520.377.5090

Dr. Meredith Thomsen   *University of Wisconsin-La Crosse*
Professor   Biology Department
mthomsen@uwlax.edu   608.785.8245