

HEATHER COX

~ 126A Russell Labs, 1630 Linden Drive, Madison, Wisconsin 53706 ~ hrcox@wisc.edu

EDUCATION

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|------------|--|--------------------------|
| PhD | University of Wisconsin – Madison
Forestry, Research Assistant in the SILVIS Lab | Expected ~ December 2026 |
| BS | Middlebury College
Double Major, Biology and Geography | May 2019 |

RESEARCH EXPERIENCE

January 2022 - Present

Graduate Research Assistant, University of Wisconsin – Madison

- Research Assistant in the SILVIS Lab in UW-Madison's Department of Forest & Wildlife Ecology
- Use remote sensing and GIS to map the extent of the Wildland-Urban Interface in Africa and explore associated ecological impacts on invasive species and fire regimes

July 2019 – January 2022

Spatial Ecologist, Stone Environmental

- Gathered, analyzed and visualized spatial data to help clients understand and address environmental problems
- Created static, dynamic and web-based maps, applications and graphics to facilitate land and water resource management
- Conducted ecological field work, spatial data validation and accuracy assessments

May 2019 - August 2019

Ornithology Research Assistant, Jama-Coaque Reserve

- Captured and banded 77 species of birds including hummingbirds, hawks and owls as part of a long-term study of tropical bird populations in West Ecuador
- Collected, digitized and analyzed biometric data about over 10,000 captured birds using Excel and R
- Repaired mist-nets and maintained trails between bandingsites

September 2018 - December 2018

Research Assistant, Defenders of Wildlife

- Worked with Defenders of Wildlife to develop and test a new land use/land cover change detection tool for monitoring endangered habitats
- Used Google Earth Engine JavaScript API to process multi-spectral satellite imagery
- Conducted statistical analyses on tool performance and accuracy across different environments

RESEARCH INTERESTS

- Land Use/Land Cover Change
- Remote Sensing of the Environment
- Terrestrial Landscape Ecology
- GIS and Spatial Data Science

FELLOWSHIPS, AWARDS AND HONORS

- Graduated *Summa Cum Laude* from Middlebury College 2019
- Inducted into Phi Beta Kappa Academic Honor Society 2019
- United World College Davis-Mahindra International Scholar 2015

TECHNICAL SKILLS

- ArcGIS Pro (certified ArcGIS Desktop Associate)
- ArcGIS Online (Web maps, Dashboards, Experiences, Web Applications)
- Python (including ArcPy, numpy, pandas)
- R
- Google Earth Engine
- Google BigQuery
- Statistical Analysis

CONFERENCE PRESENTATIONS

- Mapping the Wildland-Urban Interface in Africa* 2022
 - Poster presentation at the American Geophysical Union's Annual Meeting
- PermianMAP: Mapping Methane Emissions in the World's Largest Oil Field* 2020
 - Oral presentation at ESRI New England ArcGIS User Conference (NEARC)
- Exploring Spatio-temporal patterns in community structure and molt in West Ecuadorian Avifauna* 2018
 - Oral presentation at Middlebury College Academic Symposium