

# HEATHER COX

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## EDUCATION

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- MS**    **University of Wisconsin – Madison**    Expected ~ December 2023  
Forestry, Research Assistant in the [SILVIS Lab](#)
- BS**    **Middlebury College**    May 2019  
Double Major, Biology and Geography

## RESEARCH EXPERIENCE

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*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 emerging hotspots of the Wildland-Urban Interface in sub-Saharan Africa and explore associated ecological impacts

*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 banding sites

*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**

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

## **FELLOWSHIPS, AWARDS AND HONORS**

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- 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**

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- 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**

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- 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