



I'm interested in using and developing new ecological sampling and modeling methods to inform biodiversity conservation at broad spatial scales by leveraging the power of today's tools such as remote sensing and parallel computing.



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SOFTWARE

- R
- Vortex
- Program MARK
- QGIS
- Raven Pro
- Python
- R Shiny
- MATLAB
- Maxima
- Pplane
- Populus
- EasyPop
- GenePop
- GeneClass2
- Ne Estimator
- JAGS (in R)



EDUCATION

MASTER OF SCIENCE | Organismic and Evolutionary Biology University of Massachusetts Amherst

Fall 2019 – Present

Dr. Christopher Sutherland, Dr. Ali Nawaz

Developing optimal sampling designs for Spatial Capture-Recapture to estimate the range-wide density of Snow Leopards and other big cats to inform conservation.

BACHELOR OF SCIENCE | Environmental and Sustainability Sciences Cornell University

Spring 2019

Dr. Evan Cooch, Dr. David N. Bonter, Dr. Amanda Rodewald

Thesis: Recent avian population dynamics in the Northeastern United States suggest persistent but diminished impacts of West Nile virus

- Modeled spatiotemporal trends of avian populations from citizen-science count data
- Implemented statistical and machine learning models
- Identified novel conclusions to the fields of population and disease ecology

SUMMER FELLOW | Population Sustainability Group

June – Sept 2019

San Diego Zoo Global — Institute for Conservation Research

Dr. Mathias Tobler

- Collaborating to consolidate camera trap data of Jaguars for range-wide SCR modeling
- Compiling remote sensing data (environmental covariates) throughout Jaguar range
- Comparing methods for species distribution modeling using virtual species and xenarthrans

AVIAN CONSERVATION INTERN

May – Aug 2018

Massachusetts Division of Fisheries and Wildlife

Dr. Andrew Vitz

- Conducted research with the State Ornithologist related to avian ecology and conservation
- Banded songbirds using a MAPS protocol, designed to inform natural resource management
- Fitted MESA-listed Eastern Whip-poor-wills with geolocator tracking devices

NSF REU — BIOACOUSTICS ANALYST | BirdVox

July 2017 – May 2019

Cornell Lab of Ornithology

Dr. Andrew Farnsworth

- Annotated nocturnal flight calls of migrating birds from overnight recordings
- Identified high-frequency short calls to species-level
- Learned about the automatic detection of bioacoustic data

ECOTOURISM CONSULTANCY INTERNSHIP DESIGNER

Oct 2017 – May 2018

Cornell University

- Designed and coordinated an internship opportunity for undergraduates
- Collaborated with ecolodges to attract clients by incorporating sustainable practices
- Co-authored a consultancy guide to 'Aviturismo' (a.k.a. bird-watching tourism)

GUEST EDUCATOR & CURRICULUM DESIGNER

Jan 2018 – Present

The Fenn School, Boy Scouts of America, Concord Public Schools

- Invited to present to K-12 students on birds, ecology and conservation
- Designed a curriculum to utilize newly-purchased land to teach students about ecology

Panthera's Sabin Snow Leopard Grant (\$8,600) — Designing scalable study design protocols to estimate snow leopard (*Panthera uncia*) density and population size using non-invasive sampling

Undergraduate Research Funds, Cornell Lab of Ornithology (\$1,593)

American Ornithological Society Travel Award (\$550)

Funding for Undergraduate Research, History Department, Cornell University (\$400)

American Ornithological Society 137th Stated Meeting (2019) — Modeling Persistent Effects of West Nile Virus on Avian Population Dynamics in the Northeastern United States

New York State Ornithological Association (Invited, 2018) — Spatiotemporal Trends in Avian Populations Following the Introduction of West Nile Virus in North America

Time, Space & Narrative in Medieval Icelandic Literature, University of Iceland, Reykjavik (2017) — Seabirds to Starboard: Notes on Norse Navigational Technique

WORK EXPERIENCE

OUTREACH

FUNDING

TALKS