

Amelia Untiedt

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EDUCATION

Gustavus Adolphus College, St. Peter, MN - Bachelor of Arts, June 2020

Majors: Anthropology/Sociology and Dance GPA: 3.71 Magna Cum Laude

Classes: Calculus II, Data Science: R Basics, Environmental Geography, Fundamentals of GIS, Fundamentals of Plant Biology, Fundamentals of Python, Methods of Research

RESEARCH EXPERIENCE

Predicting Future Conflicts between Loon Habitats and Human Development in New Hampshire using NASA Earth Observations

NASA DEVELOP | Boston University 2023

- Acted as data manager for four researchers to examine land cover change, water quality, land surface temperature, and loon nest presence data over twenty years
- Collected imagery and datasets from Google Earth Engine, Earth Explorer, local governments, and partners
- Organized and monitored all data acquired and created by packaging over twenty maps in ArcGIS Pro and Seadas and pushing to GitHub
- Identified land surface temperature change trends by developing maps from Landsat and MODIS imagery in using JavaScript Google Earth Engine and ArcGIS Pro
- Analyzed turbidity of eight case study lakes by processing Landsat and Sentinel imagery and developing maps in Acolite, R Programming, and Seadas
- Analyzed the impact of urban development and proximity of development on loon nest success in all of New Hampshire and the eight case study lakes using ArcGIS and TerrSet
- Managed a tight schedule to meet all deliverable deadlines, including a technical report and a report aimed at general audiences

Assessing Land Cover Change and Habitat Connectivity to Inform Management Planning for the Mesoamerican Biological Corridor

NASA DEVELOP | Marshall Space Flight Center 2022

- Worked within a team of four researchers assessing forest cover change in the past thirty years using Landsat Satellite 5, 7, 8, and 9 in ArcGIS Pro
- Created a forest cover change map and deforestation time series analysis
- Developed a forest/non forest classification for the entire Mesoamerican Biological Corridor in using JavaScript Google Earth Engine
- Coordinated between NASA DEVELOP, NASA SERVIR, and international partners by accounting for availability, language differences, and expectations of the project
- Presented deliverables to partners and non-geospatial professionals to help inform policy and decision makers

Influences of Gender on Recycling

Gustavus Adolphus College | Spring 2020

- Designed and conducted a researcher project observing recycling habits of different genders for Senior Research Seminar
- Discretely observed and recorded recycling habits of students and faculty during midday break at the cafeteria and cafes on campus
- Planned to conduct interviews investigating student and faculty recycling habits and their perceived opinions on gender in recycling and waste management
- Interviews were not conducted because of the COVID-19 pandemic and subsequent school wide quarantine

Waste Management Habits of Households in Boquete, Panama

Boquete, Panama 2019

- Independently designed and led the research project waste management habits and the relationships between waste management and global development
- Conducted 40 interviews in Spanish of 20 Panamanian households and 20 foreign households living in Panama
- Analyzed responses in Excel and wrote a final report

PROFESSIONAL EXPERIENCE

US Fish and Wildlife Island Keeper Intern

Stewart B McKinney Wildlife Refuge Summer 2022

- Worked on long term monitoring projects within the largest common tern colony in Connecticut and endangered Roseate terns
- Conducted daily nest visits to collect data on chick survival, weight, predation, provisioning, and DNA samples, and banded chicks
- Actively managed predators through non-lethal methods
- Assisted with invasive species mapping within the refuge using Arc FieldMap

AmeriCorps GreenCorps Member: Waste Reduction, Recycling and Organics

Prairie Island Indian Community September 2020- August 2021

- Established waste reduction and solid waste management protocols for commercial and residential waste, launched first ever waste reduction initiatives
- Established a food donation project, installed a food waste tracking system, organized and managed a month long waste clean up event, diverted 21.7 tons amount of waste from a landfill
- Created a map of illegal dump sites on flood plains using data collected with ArcGIS Field Maps
- Collected surface water quality samples from lakes, rivers and wetlands surrounding Tribal land for +13 water quality parameters
- Supported the coordinators of the Green Team and led training sessions for the 12 members
- Proposed projects to Tribal Council and spoke at Tribal quarterly meetings with over 100 attendants
- Led classes on composting and household waste reduction to groups of 10+ attendants
- Assisted with bird nest monitoring of 75 nest boxes for 5 different species
- Assisted at the community garden with the Food Sovereignty initiative and cultural plant

harvesting

School of International Training Panama: Tropical Ecology, Marine Ecosystems, and Biodiversity Conservation Fall 2019

- Practiced research methods and ethics for tropical ecology, mangroves and seagrass, coral reefs, ichthyology, and amphibians.
- Methods included mist netting and bird identification, point count surveys, and herbivory surveys

Mammal Nursery Intern - Wildlife Rehabilitation Center of Minnesota Summer 2019

- Cleaned, fed, and administered medicine to wildlife brought into the center
- Worked up to ten hour shifts, worked independently caring for and making life-saving decisions with 15 species of mammals
- Performed under stressful and sometimes emotionally challenging conditions

TEACHING EXPERIENCE

End of Term Dance Concert

Gustavus Adolphus College 2018, 2019

- Conducted biweekly rehearsals of my own choreography on multiple small groups of three to five dancers
- Developed choreography to best match the skills of the dancers
- Incorporated feedback from faculty and advisors

Dance Composition Final Performance

Gustavus Adolphus College 2019

- Created choreographed for six dancers during one month of biweekly rehearsals
- Developed a choreography vocabulary that was easy to learn in a short time span

CATS Assistant Choreographer

Ashland Productions 2019

- Helped to create and independently run choreography under the direction of the choreographer, organized and directed additional rehearsals for actors
- Worked one on one and up to groups of 50 people in rehearsal

PRESENTATIONS

NASA DEVELOP MA Close Out Presentation

- Summarized the research on “Predicting Future Conflicts between Loon Habitats and Human Development in New Hampshire using NASA Earth Observations” for a general audience in a virtual public presentation with other DEVELOP nodes

NASA DEVELOP MSFC Close Out Presentation

- Spoke about “Assessing Land Cover Change and Habitat Connectivity to Inform Management Planning for the Mesoamerican Biological Corridor” in a virtual public presentation with the virtual MSFC NASA DEVELOP team

2021 ITEP Growing Compost to Grow Your Food System

- Presented the “Science of Compost” and acted as advisor to 35 attendees from various regions of the U.S. on composting and other waste reduction solutions during the conference

2020 Human Development Conference

University of Notre Dame 2020

- Presented research on waste management habits and the relationships between waste management and global development in local contexts to a conference of 150 attendees

PUBLICATIONS

Green Team Report 2021 Prairie Island Indian Community

Jung, H., Kalter, R., Untiedt, A., & Villalobos-Heredia, C. (2022). Mesoamerica Ecological Forecasting: Assessing Land Cover Change to Inform Management Planning for the Mesoamerican Biological Corridor.

Zugarek, J., Arndt, M., Gray, J., & Untiedt, A. (2023). New Hampshire Ecological Conservation: Predicting Future Conflicts between Loon Habitats and Human Development in New Hampshire using NASA Earth Observations.

LEADERSHIP AND SERVICE

AmeriCorps InterCorps Council Service Committee

- Organized events for all members across the state of MN, such as events for Martin Luther King Junior Day and Earth Day
- Developed a Letters to Elders program that connected AmeriCorps members with local senior living centers to create a letter exchange to help address isolation in elderly during the COVID-19 pandemic

Wetland Health Evaluation Program 2021

- Collected macroinvertebrates using bottle traps and dip nets, collected vegetation samples
- Analyzed collected samples in order to conduct an Index of Biological Integrity

Campus Activity Executive Board 2018-2019

- Designed and led events on the Gustavus Adolphus campus
- Managed a \$2000 budget and considered diverse options for traditionally feminine activities
- Coordinated with hired performers and agents to organize accommodations, arrival times, and needs of the performers

SKILLS

Programming

- Acolite
- ArcGIS Pro
- Google Earth Engine
- Microsoft Excel
- Python
- R Programming
- SeaDas
- TerrSet

Language

- Intermediate Spanish

Certifications

- Red Cross First Aid and CPR/AED certified
- DOI Motorboat Operator Certified

MEMBERSHIP

Alpha Kappa Delta - International Honor Society of Sociology
Women in GIS (WiGIS)