

209 Mackay Science Building, University of Nevada, Reno

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## Profile

I am a biogeographer and doctoral candidate at the University of Nevada, Reno, where I am expanding my college teaching, spatial ecological modeling, GIS, UAS, and remote sensing skillsets. My current research focuses on distribution modeling and applied habitat mapping for threatened birds, as well as UAS applications in wildlife conservation. I am broadly interested in applied biogeographic research that engages undergraduate students and community members in the scientific process and collaborative conservation initiatives. Furthermore, I am an enthusiastic instructor with dedicated training in inclusive, experiential, student-centered learning in higher education.

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## Education

### Doctorate of Geography

Expected Conferral May 2023

**Dissertation Working Title:** *On the persistence of passerines: Applying spatial ecological modeling to inform the conservation of threatened Nearctic and Neotropical riparian songbirds*

University of Nevada, Reno, **4.0 GPA**

### Masters of Science in Fisheries and Wildlife

May 2017

**Thesis Title:** *Modeling the effects of subsistence livelihoods on mammalian occupancy and understanding the importance of values held by Miskito indigenous forest users for carnivore conservation in working forests*

Michigan State University, **3.7 GPA**

### Tropical Biology: An Ecological Approach

Summer 2016

Organization for Tropical Studies, Costa Rica

6-credit immersive graduate course exploring the fundamentals of Tropical Biology through research projects and guest lectures; Resulted in two manuscripts published in academic journals, **3.96 GPA**

### Bachelor of Science in Zoology

May 2012

Michigan State University, Honors College

**Concentrations:** Ecology, Evolution and Organismal Biology; General Zoology

**Specialization:** Environmental Studies

**3.93 GPA; 2012 Outstanding Student of Zoology**

### Minor in Applied Conservation

Fall 2010

**Smithsonian-Mason Semester in Conservation Studies**

Smithsonian Conservation Biology Institute, Front Royal, VA

16-credit intensive, experiential residency program in interdisciplinary conservation studies, **3.96 GPA**

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## Publications

Mitchell C.I., D.A. Friend, **L.T. Phillips**, E.A. Hunter and others. 2021. 'Unscrambling' the drivers of egg production in Agassiz's desert tortoise: climate and individual attributes predict reproductive output. *Endangered Species Research* 44:217-230.

Burnett, K., M.N. Zippel, **L.T. Phillips**, P. Panwar, L.P. Mcguire, and W.A. Boyle. 2019. Nocturnal reductions in body temperature in high-elevation Neotropical birds. *Tropical Ecology*, 60(4):581-586.

**Phillips, L.T.**, S. Zlotnik, M.N. Zippel, K. Burnett, and T. Doan. 2017. Prevalence of saurian malaria in *Anolis* lizards of La Selva, Costa Rica. *Herpetological Review* 48(4):770-771.

## Fellowships and Grants

- NASA Graduate Research Opportunity Fellowship** **2019 – 2020**  
**\$17,000**; NASA Nevada Space Grant Consortium  
 Awarded competitive fellowship to support UAS applications in habitat characterization and selection modeling for Mojave Desert Songbirds
- Graduate Dean's Fellowship** **2018 – 2019**  
**\$35,000 + \$14,472 tuition waiver**; The Graduate School, UNR  
 One of six recipients selected from the 2018 – 2019 incoming doctoral class  
 Awarded in recognition of outstanding academic record and promise of productive scholarship
- Graduate Research Grant** **2014**  
**\$3,000**; College of Agriculture and Natural Resources, MSU  
 Awarded funds for last field season of camera trapping and community interviews

## Teaching Experience

- GEOG 103: *Physical Geography of the Earth's Environment*** **Fall 2022**  
**Instructor of Record**; Department of Geography, UNR  
 ❖ Enthusiastically lectured on the natural and physical processes of Earth's interconnected systems  
 ❖ Tailored lectures, classroom activities, assignments, and teaching-style to audience with diverse majors  
 94 students; Rating: 3.4/4.0 (28 responses)
- GEOG 210: *Introduction to Geotechnology*** **Spring 2022**  
**Graduate Teaching Assistant**; Department of Geography, UNR  
 ❖ Lead ArcGIS Pro-based laboratory for lower division undergraduate students  
 ❖ Addressed a difficult, multi-student academic dishonesty situation  
 80 students; 3.7/4.0 (37 responses)
- GEOG 405/605: *GIS I - Geographic Information Systems and Science*** **Spring 2021**  
**Graduate Teaching Assistant**; Department of Geography, UNR  
 ❖ Lead ArcGIS Pro-based laboratory via remote instruction for undergraduate and graduate students  
 ❖ Helped new GIS faculty create and refine course material  
 80 students; 3.9/4.0 (21 responses)
- GEOG 416/616: *Spatial Analysis*** **Fall 2021, Fall 2019**  
**Graduate Teaching Assistant**; Department of Geography, UNR  
 ❖ Introduced students to R programming and statistical computing in analysis-focused laboratory  
 ❖ Helped students overcome significant learning challenges and achieve phenomenal learning outcomes  
 ❖ Supported an average of 15-20 students in weekly office hours  
 25 students per semester; no formal assessment
- GEOG/NRES 411/611: *Remote Sensing*** **Fall 2020**  
**Graduate Teaching Assistant**; Department of Geography, UNR  
 ❖ Lead ENVI-based laboratory with in-person and remote students as the sole instructor  
 35 students; 3.6/4.0 (10 responses)
- GEOG 413/613: *Use and application of UAS (Drone) technologies in GIS*** **Spring 2020**  
**Graduate Teaching Assistant**; Department of Geography, UNR  
 ❖ Guided field-based learning with a focus on group research projects and licensing preparation  
 ❖ Facilitated migration to remote learning while maintaining excellent student engagement  
 18 students; no formal assessment

## Teaching Experience continued...

### **IBIO 355: *Ecology***

**Summer 2017, 2018**

**Graduate Teaching Assistant;** Kellogg Biological Station, MSU

- ❖ Co-instructed a fundamental ecology course using an entirely experiential learning framework
- ❖ During each class period, students designed their own experiments, collected their own data and applied their interpretations of their data to ecological concepts

18 students; No formal assessment

### **LB144: *Organismal Biology***

**Fall 2013 – Spring 2018**

**Graduate Teaching Assistant;** Lyman Briggs College, MSU

**10 semesters**

- ❖ Organized and supervised 10 independent student research projects per semester
- ❖ Contributed to course design, co-authored course materials, and maintained captive aquatic systems

40 students per semester; 3.9/4.0 rating

### ***Rainforests and Reality in Nicaragua***

**Spring break 2014, 2016, 2018**

**Study Abroad Program Assistant;** Lyman Briggs College, MSU

- ❖ Responsible for curriculum planning, coordination of in-country activities and field lectures

18 students; 4.0/4.0 rating

### **FW 238: *Field Techniques in Fisheries and Wildlife***

**Summer 2015**

**Graduate Teaching Assistant;** Department of Fisheries and Wildlife, MSU

- ❖ Co-instructed a fundamental ecology course using an experiential learning framework

5 students; No formal assessment

### **ZOL365: *Biology of Mammals***

**Spring 2011, 2012**

**Undergraduate Teaching Assistant;** Department of Zoology, MSU

**Two semesters**

60 students; No formal assessment

## Research Experience

### **Graduate Research Assistant**

**Summer 2022**

**Supervisor: Dr. Anne Nolin,** University of Nevada, Reno - Department of Geography

Worked with Dr. Nolin and Dr. Stephen Drake to summarize and map massive daily climate data variables using R programming software and ArcGIS Pro for an NSF INFEWS project

### **Graduate Research Assistant**

**Summer 2019, 2020**

**Supervisor: Dr. Thomas Albright,** University of Nevada, Reno - Department of Geography

Collaborated with Paso Pacifico and South Sierra Research Station to perform species distribution modeling for Southwestern Willow Flycatcher on a USFWS Neotropical Migratory Bird Treaty Act grant

### **Graduate Research Assistant**

**Summer 2012, 2014, 2015**

**Supervisor: Dr. Gerald Urquhart,** Michigan State University - Department of Fisheries and Wildlife

Conducted sea turtle harvest surveys and predator value and risk surveys in indigenous communities in the RACCS, Nicaragua for research funded by an NSF Coupled Human-Natural Systems grant

### **Undergraduate Research Assistant**

**Fall 2009 – Spring 2012**

**Supervisor: Barbara Lundrigan,** Michigan State University - Department of Zoology

Generated data on the comparative skull morphology of carnivores using museum collections and digitizing software for five semesters

### **Field Technician I & II**

**Fall 2010, Summer 2011**

Smithsonian Conservation Biology Institute, Front Royal, VA

Carried out Wood Turtle nesting and spatial ecology surveys via terrestrial and stream hibernation sampling using radio telemetry, morphological measurements, and GPS

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## Undergraduate Mentorship

- Nevada Undergraduate Research Award, \$3,300** 2021 – 2022  
Office of Undergraduate Research, UNR  
Assisted undergraduate Avery Sigarroat in writing a grant proposal to fund her active participation in our research in the Mojave Desert on Riparian Songbird nesting habitat.
- Undergraduate Mentoring Program** Fall 2013 – Spring 2017  
Graduate Women in Science, MSU, East Lansing, MI
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## Awards and Honors

- Pepsi Graduate Student Scholarship, \$3,100** 2021 – 2022  
The Graduate School, UNR
- Graduate Student Access Grant, \$2,500** 2021 – 2022  
Regents' Higher Education Opportunity Award, UNR
- Joseph Stuntebeck Geography Award, \$1,100** 2020 – 2021  
Department of Geography, UNR
- Rich Taylor Endowed Scholarship, \$1,000** 2019 – 2020  
Department of Geography, UNR
- Research Enhancement Grant, \$1000** 2016  
The Graduate School, MSU
- Graduate Service Fellowship, \$350** 2015 – 2017  
Department of Fisheries and Wildlife, MSU
- Outstanding Student of Zoology** 2012  
Department of Zoology, MSU  
One of two students chosen for highest academic achievement in the graduating class of 2012
- County Conservation Scholarship, \$1000 per award** 2009, 2010  
Livingston County Wildlife Conservation Club, Hamburg, MI
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## Professional Development

- Community and Citizen Science – A Primer for Researchers** 2022  
UC Davis Center for Community and Citizen Science; Short Course at NACCB
- A Crash Course in Managing Conservation Projects** 2022  
WildTeam Conservation; Short Course at NACCB
- Species Distribution Models in Practice - A Modeler-Practitioner Roundtable** 2022  
Interactive discussion to highlight the needs of and bridge the gap between modelers and agency practitioners
- Racial Literacy Training** 2017  
The Graduate School, MSU  
Completed three-week workshop to proactively combat racial encounters in teaching and academia
- Emerging Linkages between Mathematics and Ecology** 2017  
Kellogg Biological Station, Battle Creek MI, MSU  
Completed week-long intensive course in Maximum Likelihood Estimation for ecologists

## Professional Development continued...

- University Graduate Certification in College Teaching Institute** 2017  
The Graduate School, MSU  
Completed an innovative two-day workshop focused on the core competencies of teaching at the college level
- Graduate Writing Group** 2015 – 2017  
Department of Fisheries and Wildlife, MSU  
Active member of weekly review team; participate in dedicated writing blocks
- Write Winning Grant Proposals Workshop** 2016  
The Graduate School, MSU  
Participated in eight-hour workshop focused on the aspects that drive successful grant proposals

## Presentations and Symposia

- 6<sup>th</sup> Biennial North American Congress for Conservation Biology** 2022  
**L.T. Phillips**, T.P. Albright, M. Torrez, W. Arendt. Evidence Indicates a Critical Need to Reassess Conservation Status of the Nicaraguan Grackle (*Quiscalus nicaraguensis*). *Oral Presentation.*
- UNR Undergraduate Research Symposium** 2022  
**Nesting Phenology and Fledgling Success of Amargosa Birds.** A.M. Sigarroa, L.T. Phillips, C. McCreedy, and T.P. Albright, Poster Presentation
- 46<sup>th</sup> Annual Desert Tortoise Council Symposium** 2021  
C.I. Mitchell, D.A. Friend, **L.T. Phillips\*** *et al.* “Unscrambling” the Drivers of Egg Production in Mojave Desert Tortoise: Climate and Individual Attributes Predict Reproductive Output. *Oral Presentation.*
- Great Basin Bird Observatory Public Lecture Series** 2020  
**Phillips, L.T.** “Where Western WIFL Winter” and UAS Uses for Avian Conservation. *Oral Presentation*
- The Wildlife Society 26<sup>th</sup> annual meeting** 2019  
**Phillips, L.T.**, T.P. Albright, M.J. Whitfield, and S. Otterstrom. Where Western WIFL Winter: A Species Distribution Model for Non-Breeding Willow Flycatchers. *Oral Presentation.*
- Association of Pacific Coast Geographers 81<sup>st</sup> annual meeting** 2018  
**Phillips, L.T.**, T.P. Albright, and M. Torrez. ¿Dónde volará el zanate? Preliminary Species distribution modeling of the Nicaraguan Grackle (*Quiscalus nicaraguensis*). *Oral Presentation.*
- The Wildlife Society 24<sup>th</sup> annual conference** 2017  
**Phillips, L.T.** and G.R. Urquhart. Mammals persist near communities practicing subsistence livelihoods in southeastern Nicaragua. *Oral Presentation.*
- Ecological Society of America Annual Meeting** 2017  
**Phillips, L.T.** and G.R. Urquhart. Mammals persist near communities practicing subsistence livelihoods in southeastern Nicaragua *Poster Presentation.* DOI: 10.7490/f1000research.1114754.1
- Fisheries and Wildlife Graduate Research Symposium** 2016  
Phillips, L. T. Changes in Occupancy of Jaguars and Ocelots on the Caribbean Coast of Nicaragua. *Oral Presentation, Session Moderator*
- Fisheries and Wildlife Graduate Research Symposium** 2015  
Phillips, L. T. Discovering Applications of Wildlife Data to Develop Alternative Livelihood Strategies in an Indigenous Community in Nicaragua. *Oral Presentation*

## Affiliations and Professional Memberships

International Association for Landscape Ecology-North America Chapter	Fall 2020 – Present
Association of Pacific Coast Geographers	Fall 2018 – Present
Graduate Geography Club, UNR	Fall 2018 – Present
The Wildlife Society	Spring 2017 – Present
Society for Conservation Biology	Spring 2017 – Present
Graduate Women in Science	Fall 2016 – Spring 2018
Fisheries and Wildlife Graduate Students Organization, MSU	Fall 2013 – Spring 2018

## Service

Tenure-Track Hiring Committee, Graduate Representative Department of Geography, UNR, Reno, NV	Fall 2019 – Spring 2020
Geography Graduate Club Department of Geography, UNR, Reno, NV President, three semesters Faculty Meeting Representative, three semesters Fundraising Committee, Raised \$3,000	2018 – Present
G.S.O. Research Symposium Committee Fisheries and Wildlife Graduate Students Organization, MSU, East Lansing, MI 2017 Symposium: Chairperson, Oral Session Moderator, Raised \$8,000 2016 Symposium: Fundraising committee and Gift committee, Raised \$1,700 2015 Symposium: Fundraising committee, Raised \$2,900	2015 – 2017
Environmental Outreach and Education Zoological Students Association and MSU Herpetology Club	2009 – 2016 Two events per semester

## Highlighted Skills

- ◆ Commercially-licensed UAS Pilot ◆ Species Distribution Modeling ◆ Geospatial Statistics
- ◆ Programming in R ◆ Student-centered Teaching ◆ Ecological Monitoring ◆ Public Outreach
- ◆ ArcMap & ArcPro ◆ UAS image processing Software ◆ Bayesian Hierarchical Modeling
- ◆ Camera Trapping (temperate and tropical conditions) ◆ Radio Telemetry
- ◆ Occupancy Modeling ◆ Mark-recapture (small mammal and reptile) ◆ Biological Illustration

## References

### Thomas Albright PhD - *Doctoral Research Advisor*

Associate Professor of Geography, University of Nevada, Reno; 207 Mackay Science Bldg, Reno, NV 89557  
Phone: (775) 784-6673, Email: [talbright@unr.edu](mailto:talbright@unr.edu)

### Kenneth Nussear PhD – *Doctoral Committee Member*

Associate Professor of Geography, University of Nevada, Reno; 326 Mackay Science Bldg, Reno, NV 89557  
Phone: (702) 423-8308, Email: [knussear@unr.edu](mailto:knussear@unr.edu)

### Scott Kelley, PhD – *Academic Mentor*

Associate Professor of Geography, University of Nevada, Reno; 223 Mackay Science Bldg, Reno, NV 89557  
Phone: (775) 784-7605, Email: [scottkelley@unr.edu](mailto:scottkelley@unr.edu)

### Gerald Urquhart PhD – *Master's Research Advisor*

Associate Professor of Fisheries and Wildlife, Michigan State University, East Lansing, MI 48825  
Phone: (517) 353-1759, Email: [urquhart@msu.edu](mailto:urquhart@msu.edu)