

# April D. Lamb | CV

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I am looking for a full-time position in the field(s) of ecology, biology, geospatial information systems (GIS), bioinformatics, and/or environmental quality. I have a wide range of experience in these fields and am an extremely dedicated and detail-oriented worker with a passion for the dissemination and communication of research results.

## Education

### **North Carolina State University** (2017- 2020) Raleigh, NC

Degree: M.Sc. in Biology: Ecology and Evolution

Thesis: Evaluating the feasibility of Common Carp removal and aquatic vegetation restoration in Lake Mattamuskeet

Honors: 2017 National Science Foundation Graduate Research Fellow

GPA: 4.0

### **North Carolina State University** (2017- 2019) Raleigh, NC

- Degree: Graduate Certificate in Geospatial Information System

- GPA: 4.0

### **North Carolina State University** (2013- 2017) Raleigh, NC

- Degree: B.Sc. in Zoology; Minor in Applied Ecology

- Honors: Graduated Magna Cum Laude, University Scholar's Program, Zoology Scholar's Program, University Dean's List- 6 semesters

- GPA: 3.51

## Peer Reviewed Publications

10. **2021.** A.D. Lamb, J.R. Fischer, K. Dockendorf, K. Potoka, C. Smith. Live fast, die young: Highlighting the challenges Common Carp (*Cyprinus carpio*) removal in a large North Carolina lake. (In prep)

9. **2021.** J.P. Townsend, A.D. Lamb, H.B. Hassler, P. Sah, A.A. Nishio, C. Nguyen, A.P. Galvani, A. Dornburg. Coronavirus evolution illuminates seasonality of COVID-19. (In review, *Science Advances*)

8. **2021.** M.S. Lamm, A.D. Lamb, S.G. Sanchez, B.P. Klapheke, W.A. Tyler, J.R. Godwin. Characterization and Distribution of Kisspeptins, Kisspeptin Receptors, GnIH, and GnRH1 in the Brain of the Protogynous Bluehead Wrasse (*Thalassoma bifasciatum*). (In review, *Journal of Chemical Neuroanatomy*).

7. **2021.** J. Prim, M. Phillips, M. Lamm, J. Brady, I. Cabral, E. Dustin, A. Hazellief, B. Klapheke, A.D. Lamb, A. Lukowsky, S. Sanchez, K. Thompson, W. Tyler, J. Godwin. Estrogenic Signaling and Sociosexual Behavior in the Sex-Changing Bluehead Wrasse, *Thalassoma bifasciatum*. *Journal of Experimental Zoology and Integrated Physiology*, doi: 10.1002/jez.2558. Online ahead of print.

6. **2021.** A.D. Lamb, C. Lippi, G.J. Watkins-Colwell, A. Jones, D. Warren, T. Iglesias, M.C. Brandley, A. Dornburg. Comparing the dietary niche overlap and ecomorphological differences between *Hemidactylus mabouia* and *Phyllodactylus martini*. (In press, *Ecology and Evolution*).

5. **2019.** A. Dornburg, A.D. Lamb, D. Warren, G. Lewbart, J. Flowers. Are geckos paratenic hosts for Caribbean Island Acanthocephalans? Evidence from *Gonatodes antillensis* and a review of squamate reptiles acting as transport hosts.

4. **2018.** A. Dornburg, D. Warren, K. Zapfe, R. Morris, T. Iglesias, **A.D. Lamb**, G. Hogue, L. Lukas, R. Wong. Testing ontogenetic patterns of sexual size dimorphism against expectations of the expensive tissue hypothesis, an intra-specific example using Oyster Toadfish (*Opsanus Tau*). *Ecology and Evolution*, 8(7), 3609–3616.

3. **2017.** A. Dornburg, S. Federman, **A.D. Lamb**, T. Near. Cradles and museums of Antarctic Biodiversity. *Nature Ecology and Evolution*, 8(7), 3609–3616.

2. **2017. A.D. Lamb**, G. Watkins-Colwell, J. Moore, D. Warren, T. Iglesias, M. Brandley, A. Dornburg. Endolymphatic sac use and reproductive activity in the Lesser Antilles endemic gecko *Gonatodes antillensis* (Gekkota: Spaerodactylidae). *Bulletin of the Peabody Museum of Natural History*, 58(1), 17–29.

1. **2016.** A. Dornburg, C. Smith, S. Federman, J. Moore, D. Warren, T. Iglesias, M. Brandley, G. Watkins-Colwell, **A.D. Lamb**, A. Jones. Disentangling the influence of urbanization and invasion on endemic reptiles in tropical biodiversity hotspots: A case study of *Phyllodactylus martini* along an urban gradient in Curaçao. *Bulletin of the Peabody Museum of Natural History*, 57(2), 147–164.

## Research and Work Experience

**Research Technician** (March 2021-present)

**Laboratory of Dr. Alex Dornburg, University of North Carolina, Charlotte, Charlotte, NC**

- Conduct routine laboratory work including stock solution preparation, DNA/RNA extraction, and next-gen sequencing.
- Manage the laboratory space and inventory and ensure that protocols are established and followed by all persons.
- Conduct bioinformatic analyses, including the assembly and mining of transcriptome and genome data, phylogenomic analyses of next-generation sequence data-sets, molecular evolutionary analyses of the rates of sequence evolution, the detection of gene orthologs, and multivariate statistical analyses
- Build, test, and document bioinformatic pipelines
- Contribute to the dissemination of research results (e.g., manuscript preparation, data visualization) and ongoing publication efforts.

**Project Manager** (July 2020- February 2021) \*intern/volunteer from 2015-2019

**North Carolina Museum of Natural Sciences; Raleigh, NC**

- Managed all aspects of grant-funded research projects
- Databased, georeferenced, and organized locality and specimen data in the Unit's database (MS Access)
- Processed and prepared specimens for long-term storage in natural history collections following current archival standards
- Oversaw one part-time technician and two virtual interns on tasks relating to specimen preparation, maintenance, and science communication

**Research Internship, paid** (September 2019- December 2019)

**Okinawa Institute of Science and Technology; Okinawa Prefecture, Japan**

- Prepared and CT-scanned field collected specimens from over 30+ fish families using a high-resolution ZEISS Xradia 510 Versa X-ray machine
- Segmented brain scans into identified brain regions and produce computer-generated, reconstructed 3D brain models using the software AMIRA.
- Tested hypotheses of interest regarding teleost brain evolutions and tradeoffs in brain region investment and morphology.

**Crop Science Research Technician** (2015-2017)

**USDA-ARS Eastern Regional Small Grains Genotyping Laboratory; Raleigh, NC**

- Ran KASPar and PCR reactions to test genetic markers and characterize polymorphisms in wheat populations as part of regional breeding projects
- Performed weekly sequencing runs and maintenance on an ABI 3730xl DNA Analyzer and an ABI 3130 DNA Analyzer
- Analyzed sequencing runs and created allele reports using the SoftGenetics software package, Gene Marker

### **Research Assistant, unpaid (2014-2016)**

#### **Laboratory of Dr. John Godwin, North Carolina State University; Raleigh, NC**

- Performed a manipulative field experiment on a natural, patch reef in Key Largo, Florida
- Cryosectioned field-caught Bluehead Wrasse (*Thalassoma bifasciatum*) brain samples and performed weekly in situ hybridizations to assess neuronal gene expression
- Successfully designed and amplified a fluorescein-labeled Gonadotropin-releasing hormone 1 (GnRH1) probe for laboratory classroom use.

### **Funded Grants and Scholarships**

2019. Noreen Clough Memorial Scholarship- \$1000

2019. NC American Fisheries Society Project Funding- \$1000

2018. US Fish and Wildlife Service Project Funding- \$20,000

2018. NC American Fisheries Society Student Travel Award- \$400

2018. Harkema Graduate Scholarship- \$350

2017. National Science Foundation Graduate Research Fellowship Award- \$138,000 across 4 years.

2016. NC State Undergraduate Research Grant, Fall/Spring- \$1000

2016. Harkema Scholarship for Off-Campus Experiences- \$500

2016. Don Reynolds Memorial Dive Scholarship- \$1000

2016. Ella Jean Morgan Memorial Dive Training Grant- \$1000

2015. NC State Undergraduate Research Grant, Summer- \$750

### **Conference Presentations**

2019. "Evaluating the Feasibility of Common Carp Exclusion and Targeted Restoration in Lake Mattamuskeet". NC Water Resources Research Institute Conference Annual Conference; Raleigh, NC

2019. "Population Characteristics and Simulated Exploitation Responses of Common Carp (*Cyprinus carpio*) in a shallow, eutrophic lake". North Carolina Chapter of the American Fisheries Society Meeting; Winston Salem, NC

2019. "Population Characteristics and Simulated Exploitation Responses of Common Carp (*Cyprinus carpio*) in a shallow, eutrophic lake". Southern Division of the American Fisheries Society Meeting; Galveston, TX

2018. "Evaluating the Feasibility of Common Carp Exclusion and Targeted Restoration in Lake Mattamuskeet". American Fisheries Society Parent Meeting; Atlantic City, NJ

2018. "Investigating ecological impacts of Common carp to inform biomass removal and restoration efforts in Lake Mattamuskeet". NC American Fisheries Society Chapter Meeting; Morganton, NC

2017. "Cradles and museums of Antarctic biodiversity". NC State Spring Undergraduate Research Symposium; Raleigh, NC

2017. "Cradles and museums of Antarctic biodiversity". Society of Integrative and Comparative Biology; New Orleans, LA "Determining potential colocalization of neuronal GnRH1 and Kisspeptin receptors in *Thalassoma bifasciatum* using non-radioactive, double-label FISH" (2016) World Congress on Undergraduate Research; Doha, Qatar

2016. "Reproductive biology of *Thalassoma Bifasciatum*" (2016) National Council on Undergraduate Research Symposium; Asheville, NC"

2015. "Characterizing neuronal expression of GnRH1 in stressed vs. unstressed *Thalassoma bifasciatum* using non-radioactive in situ hybridization". National Council on Undergraduate Research Symposium; Spokane, WA

2015. "Determining potential colocalization of neuronal GnRH1 and Kisspeptin receptors in *Thalassoma bifasciatum* using non-radioactive, double-label FISH". NC State Summer Undergraduate Research Symposium; Raleigh, NC

## **Invited Talks, Panels, & Stakeholder Engagement**

2021. "Transforming Your Research Experience Beyond Graduation – Young Alumni Panel Discussion". Spring 2021 Virtual Undergraduate Research & Creativity Symposium. Invited by Heather King, University Program Coordinator, Office of Undergraduate Research

2020. "Informing Common Carp (*Cyprinus carpio*) Removal and Submerged Aquatic Vegetation Restoration in Lake Mattamuskeet" (MS Thesis). Lake Mattamuskeet Technical Working Group. Invited by Wendy Stanton, Biologist, Mattamuskeet NWR

2019. "Common Carp Exclusion and Vegetation Restoration in Lake Mattamuskeet". North Carolina Museum of Natural Sciences Teacher Workshop Panel. Invited by Meslissa Dowland, Coordinator of Teacher Education, NCMNS

2019. "Evaluating the Feasibility of Common Carp Exclusion and Targeted Restoration in Lake Mattamuskeet". Series of Public Symposia during the creation and unveiling of the Mattamuskeet Watershed Restoration Plan. Invited by Michael Flynn, N.C. Coastal Federation

2018, 2019. "Evaluating the Feasibility of Common Carp Exclusion and Targeted Restoration in Lake Mattamuskeet". Lake Mattamuskeet Technical Working Group. Invited by Wendy Stanton, Biologist, Mattamuskeet NWR

2017. REU Workshop: GRFP Information Session and Panel. Invited by Chris Ashewell, Director, NC State Office of Undergraduate Research

## **Community Outreach**

2014- 2018. \*Event Volunteer and \*\*Content Creator, North Carolina Museum of Natural Sciences; Raleigh, NC

- \*Bugfest (annual)
- \*Reptile and Amphibian Day (annual)
- \*Triangle SciTech Expo (annual)
- \*Natural Selections (annual)
- \*\*Brain Awareness Night (annual)
- \*\*Final Friday Movie Nights: Jaws, Pirates of the Caribbean (in partnership with the Ichthyology Unit)
- \*\*Adult Nights: Mardi Gras, May the 4th be with you, the Upside Down Halloween (in partnership with the Ichthyology Unit)

2017, 2018. Club President and Event Volunteer, Student Fisheries Subunit of the American Fisheries Society at North Carolina State University

- Rocky Branch Stream Clean Up (bi-annual)
- Shad In The ClassroomProgram (annual)
- Fiesta Kids Fishing Day (annual)

2016. Scuba Rangers Volunteer Instructor, Gypsy Divers Aquatic Center; Raleigh, NC

## **Students Mentored**

2021. Manav Rohilla (undergraduate)- UNCC laboratory volunteer and technician  
Kevin Zhang (undergraduate)- UNCC laboratory volunteer  
Sofia Mizrachi (undergraduate)- UNCC laboratory volunteer  
Hannah Bowman (undergraduate)- UNCC laboratory volunteer

2020. Lucie Ciccone (undergraduate)- NCMNS Ichthyology Unit Virtual Intern

Cayla Cassuci (undergraduate)- NCMNS Ichthyology Unit Virtual Intern

2018, 2019. Sasha Pereira (undergraduate)- NCSU laboratory and field research volunteer  
Connor Neagle (undergraduate)- NCSU laboratory and field research volunteer  
James Daw (undergraduate)- NCSU laboratory and field research volunteer (2018) and technician (2019)  
Rory Miller (high school student)- NCMNS volunteer (2018)

## Skills and Training

	Laboratory	Software	General
<b>0-1 years</b>	Immunohistochemistry. Titration. Infrared spectroscopy. Thin layer chromatography.	  <b>Amira 6.3</b> 3D Visualization & Analysis Software For Life Sciences	Building and testing data pipelines.
<b>1-3 years</b>	Cryosectioning. In-situ hybridization. KASPar SNP Genotyping. Polymerase chain reactions (PCR). Sequencing.	   	Inventory management. Relational databases.
<b>3-5 years</b>	Water quality analysis (YSI multimeter, Hach kit, chlorophyll-a). DNA isolation RNA isolation	   	Project management. International collaboration. Website design. Mentorship of undergraduate-level students. Coordination with key stakeholders. Ecological modeling.
<b>5+ years</b>	Pipetting. Laboratory compliance.	   	Data collection. Technical writing. Grant writing. Academic publishing. Creating publication-quality figures. Presenting research findings. Coding and data analysis. Conducting field research in challenging environments.

## Certifications

2019. Graduate Certification in Geospatial Information Systems.

2018. Scuba Schools International (SSI) Open Water Dive Certification

## Media

### Speaking Mattamuskeet – And Saving A Research Project

August 21, 2018 | [Chelsea Kellner](#)



**Applied Ecology graduate student April Lamb talks about using her CALS training in a deceptively unrelated field: communications.**

#### Lake Mattamuskeet Plan Gets State's OK

08/16/2019 by [Jennifer Allen](#)

HYDE COUNTY — A casual observer gazing out over the serene waters of the 40,000-plus acre Lake Mattamuskeet may not know that the lake is in trouble.

But the state's largest natural lake, the centerpiece of the 50,180-acre Mattamuskeet National Wildlife Refuge on the Albemarle-Pamlico Peninsula, needs help.



Lake Mattamuskeet is known for attracting migratory waterfowl. Photo: Mark Hibbs

Lake Mattamuskeet Watershed Restoration Plan revealed at Public Symposium



Photo by Jennifer Allen