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Graduate Student
Communication & Information Science
Science communication

Senior Fellow Blount Scholars Program Research Technician
Department of Biological Sciences

EDUCATIONAL BACKGROUND

University of Alabama, Tuscaloosa, Alabama
PhD Graduate student, Communication, and Information Science 2022
Science Communication/ Nature PR expected degree 2025
Advisor: Dr. Matt VanDyke

University of Texas at Austin, Austin, Texas

Masters Ecology, Evolution and Behavior, August 2010

Thesis: Past, Present and Future Status of the Endangered American Burying Beetle (*Nicrophorus americanus*) in Texas

University of Kentucky, Lexington, KY B.S. in Biology; Minor in Animal Science, December 2001

Science Communication

Natural History in UA Museums Exhibits in Bryce Superintendent House 2022 for Chancellor of University of Alabama Systems

- Guided students to create 5 exhibits on UA Research and Collections biodiversity

Dragonfly workshop from DNA to Field ID Colombia June 2022 Dragonfly Society of the Americas

Crayfish of Alabama Exhibit 2022 Alabama Museum of Natural History

- Worked with mussel and crayfish experts to create info on AL biodiversity

Bama Bug Fest 2022 Festival centered around insects and insect research at UA

- Organized over 70 volunteers for 1700 participants in a 4-hours

Live Bug Exhibit 2022 Alabama Museum of Natural History

- Focused on various Alabama School standards like herbivore and predator/prey interactions

Moon Moth Exhibit 2021 Alabama Museum of Natural History

- Worked with student to create an exhibit about Luna Moths around the world

Cephalopods in Alabama through time Exhibit 2021 Alabama Museum of Natural History

- Worked with student and faculty to create exhibit on Cephalopods

Live Honeybee Exhibit 2021 Alabama Museum of Natural History

- Worked with local Beekeepers to create a live exhibit for the public

Mussels of Alabama Exhibit 2021 Alabama Museum of Natural History

- Worked with mussel and crayfish experts along with Fashion Archive to create info on AL biodiversity and effects on the economy in the early 1900's

Taught Course on Communicating Science through outreach

- Created online content and exhibit in the natural history museum

Family Night at the Museum - Feb 2019

- Fossil Insects and today's insects



Paint Rock Forest Research Center - Info video - Oct. 2018

Moth Fest - UA Museums - Live insect outreach - July 2018

- Educated on the natural history of insects as well as entomophagy

BioBlitz 2018 UA Arboretum- April 2018

- Live insects, how to curate arthropods and Insect walks

Audubon Mountain Workshop May 2017

- Dragonfly walk and Dragonfly Migration

Using Native Plants to make Soap Birmingham Botanical Gardens March 2017

- Native Plants, their pollinators and Handmade Soap

Family Night at the Museum - Feb. 11th 2017

- Entomophagy - insect as food for humans

Big Bend TX Nature Fest - Invited speaker/Insect Walk - Aug 2016

Limestone Park Bioblitz Birmingham Audubon May 28th

- Insect Walks/assessment and education

Bug Night Out at the Lady Bird Johnson Wildflower Center Oct. 2015

- Outreach event and insect education for all ages

Master Naturalist Dragonfly Migration Workshop Sept 2015

- Co-instructor for citizen science-based monitoring program

Museum Day - Laguna Gloria - Sept 2015

- Education and outreach on insects and their importance

National Science Foundation - SciFund Challenge, communication science through video.

- Created Invertebrate outreach video, "Why We NEED Insects"

Austin Zoo - Home school day invertebrate outreach booth 2013-2015

- K-12 invertebrate education, voted best booth by students

Advisory Board - Sapling Learning - Advised in 2013 and 2014 the development of STEM learning tools Supervised students creating educational displays at Wild Basin Creative Research Center

- Using TEKS when possible, to be applied to various educational displays

Supervised the creation of self-guided hike for K-2 and 3-5 at Wild Basin Creative Research Center

- Self-guided nature hike geared towards TEKS.

Master Naturalist Dragonfly Migration Workshop

- Co-instructor for citizen science-based monitoring program

Co-organized Insecta Fiesta. Austin, TX Jan 2012- April 2012

- Outreach event for teacher training and insect education for all ages, 5,000 people attended
- Helped recruit volunteer involvement for Insecta Fiesta
- Managed over 120 volunteers

Texas Teaching Fellow, Austin, TX 2010-2011

- Accepted into alternative K-12 teaching certification for high needs schools

Fright at the museum Texas Natural Science Center, Austin, TX Oct. 2009 -2012

- Prepared insect food for entomophagy
- Showed and discussed different insects

Environmental Science Institute - outreach lecture, Austin, TX Sept. 2010

- Prepared insect food for outreach talks on insects
- Helped organize and transport animals for outreach and teacher training

Colima Warbler Survey, Big Bend National Park, TX, April 201

- Surveyed mountains for sighting and vocalizations of Colima Warbler.

Travis Audubon Odonate Workshop, Austin, TX 2007, 2010, and 2015

Museum day at Wild Basin, Austin, TX 2008

- Exposed individuals of all ages to a variety of insects

Balcones Canyon Land Preserve Nature Walk Austin, TX 2007 and 2008

- Exposed individuals of all ages to a variety of insects

LBJ Wildflower Center Vegetation Study with Fire Regimes, TX 2005-2006

- Identified and counted herbaceous and woody plants along a line transect.

NATURE FILM EXPERIENCE

Science expert for Plimsol -2021-2022 Disney + nature show - several episodes

- Science expert for various insects on the show

Science expert for Silverback Films - 2021 Netflix series

- Scientific expert for tiger and trap door spiders beetles
- Insect expert on set to help tell story

Science expert for Films - 2020 National Geographic - America the Beautiful

- Scientific and trap camera expert

Science expert for Discovery - 2007 - Raw Nature episode on Tapirs and human conflict

- Have knowledge and location of tapirs
- Guide and story tell about tapirs in nature

WORK EXPERIENCE

CEO/CFO Abbott Nature 2009-Present

- Managing budgets and writing proposals
- Organizing photo workshops national and internationally (Mozambique, Ecuador, Brazil, Belize, Peru)
- Writing Peterson Field Guide to Insects, Houghton Mifflin Harcourt
- Writing Field Guide to Common Texas Insects, University of Texas Press
- Insect surveys, Texas National Guard
- Invertebrate outreach videos, National Science Foundation, SciFund Class
- Insect outreach walks
- Austin Zoo Home school day- invertebrate outreach

Research Technician - 2019 - Present Department of Biology University of Alabama

- Grant on Dragonfly conservation in Texas - environmental DNA and phylogenetics

Senior Fellow Blount Scholars Program - 2019 - Present

- Naturalist Outreach Course communicating science -created an exhibit at the Natural History Museum and online material
- Nature Photography Course students created images that were utilized in an exhibit

Research and Outreach Coordinator - 2020 - 2022 Alabama Museum of Natural History

- Write broader impacts for 24 faculty and staff to communicate their science to the community
- Create exhibits communicating science
- Create online content for exhibits
- Work with undergrads and grad students to teach them how to communicate science through exhibits and other hands-on outreach

Research Associate, University of Alabama - 2018 - Present

- Population Genetics lab work
- Assessing connectivity of small populations, population size and diversity of a rare dragonfly

CEO/CFO Arthropod Apothecary - 2016 - P2020- Educational Bug Soap

- Create Insect themed soap that educates children and adults about the importance of insects.

Adjunct Faculty, St. Edwards University, Austin, TX, Jan. 2011 - May 2014

- Taught General Biology Labs including dissections of several different phyla and subphyla
- Designed and taught Biodiversity in a Changing Climate and a field Ecology course

Interim Instructor of Wild Basin Research and Education Coordinator, Austin, TX, May 2013 - Dec. 2013

- Manage Natural Resources
- Organize and coordinate research activities at Wild Basin
- Liaison for St. Edwards University to Travis County
- Mentor SEU 144 students at Wild Basin
- Coordinate and organize volunteers

- Create educational pamphlets and displays to Texas teaching standards
- Visiting Professor, St. Edwards University, Austin, TX Aug. 2012 May 2013
 - Teaching 4 classes per semester including creating an Entomology class, creating a Field Biology class, and teaching Organisms and Populations' lecture and lab, and Cells, Genetics and Organ Systems lecture and lab

Research Associate, University of Texas, Austin, TX, Sep. 2010 - Aug. 2013

Conduct research on Endangered American Burying Beetle; regularly involve undergraduate
researchers. Research involves understanding what environmental requirements are needed for
different species of Nicrophorus to survive in Texas, analyze what volatiles that are coming off of the
carrion attract Nicrophorus beetles and if there is any selection for a specific carrion type.

Research Assistant, University of Texas, Austin, TX, Aug. 2007 - Aug. 2010

- Conducted the Camp Swift Mammal study, Bastrop, Texas
- Conducted Endangered American Burying Beetle survey following USFWS guidelines
- Conducted Insect Surveys at Camp Maxey National Guard
- Organized and managed a crew including 3 employees to conduct mammal study and endangered beetle study

AECOM Endangered American Burying Beetle Contract for Lamar County Texas, summer 2009

- Designed/implemented transects for presence/absence survey following USFWS guidelines

University of Texas at Austin, Aug. 2004 - Aug. 2007

- Teaching Assistant

Fossil Rim Wildlife Center NGO, Jan. 2002 - July 2004

- AZA accredited animal hospital
- Head Veterinary Technician instructing vet students how to run diagnostic tests
- Extensive interactions with endangered species in a semi-free ranging environment.
- Organized and maintained all supplies, drugs and veterinary staff
- Experience immobilizing and interacting with large ungulates and predators

RESEARCH EXPERIENCE

December 2018 - Present: Conservation Assessment of 165 Texas Dragonflies Focusing on the 24 Most Imperiled

- Quantitatively assess S-rankings for all 165 species of dragonflies in Texas
- Screen for cryptic species using a phylogenomic approach
- We will estimate current and ancestral population sizes of the rarest dragonflies in Texas
- We will use environmental DNA (eDNA) in water samples from all possible habitats of rare dragonflies in Texas.
- May 2016 Present: Population Genetics and Life History of the Sarracenia Spiketail (Cordulegaster sarracenia)
 - Provide an estimate of population size and connectedness of C. sarracenia
- Aug. 2010 December 2017: *Nicrophorus* reproduction requirements in a Post/Oak backland prairie habitat in Texas
 - Understanding what environmental requirements are needed for different species of *Nicrophorus* to survive in Texas.
 - Analyze what volatiles that are coming off of the carrion attract *Nicrophorus* beetles and if there is any selection for a specific carrion type.
 - American Burying Beetle Community: what other competitors and predators are present and attracted to the same carrion as the American Burying Beetle?

Jan. 2008 - Aug. 2010: Conservation Genetics of the Endangered American Burying Beetle

(Nicrophorus americanus)

- Designed and implemented randomized pitfall traps for a mark-recapture study
- Collected DNA from the endangered American Burying Beetle
- Designed microsatellites for the American Burying Beetle

Apr. 2010: Colima Warbler Survey Big Bend National Park

- Surveyed mountains for sighting and vocalizations of Colima Warbler.

Jun. 2009 – Aug. 2009: AECOM contracted endangered species presence absence survey for *Nicrophorus* americanus

- Designed and executed pitfall traps placement according to USFW guidelines
- Completed a desktop habitat evaluation for Nicrophorus americanus in Oklahoma and Texas
- Submitted required paper work to USFW on behalf of the AECOM and KXL Trans Canada pipeline

Feb. 2007 - Apr. 2009: Continuation of the Endangered Baird's Tapir Project in Costa Rica

- Continuation of the largest ongoing tapir study in the world
- Consists of 12 radio-collared animals

Jan. 2007 - Feb. 2008: Mammal survey of Camp Swift National Guard Facility in Bastrop, Texas

- Trapped and tracked all species of mammals, excluding bats

Jun. 2006 - Jul. 2006: Preliminary dissertation study on tapir exclosures, Costa Rica

- Conducted several replicates of 4x4m tapir exclosures
- Identified plant species and abundance change over time

Apr. 2006 - Jan. 2008: Effects of Deer Brows on the forest understory, Austin, Texas

- Created several deer exclosures throughout different Texas Ecolab properties
- Measured plants inside and outside of exclosure

Jul. 2005 - Aug. 2005: Preliminary Tapir Browse Study, Costa Rica

- Collected and identified plants browsed by tapirs
- Conducted a point quarter of tapir browse density

Apr. 2004: Volunteer Endangered Baird's Tapir Project Costa Rica

Measured and collected data on vegetation on impacts of large ungulates on vegetation

Feb. 2002 - Jul. 2004: Veterinary Technician for Endangered Species at Fossil Rim Wildlife Center

- Assisted in the organization and collection of field samples for the veterinary staff
- Worked with USFWS on reintroduction program

Mar. 1999 - May 2001: Field Assistant University of Kentucky

- Assisted in field collection (Physid snails and Crayfish) for lab experiments.
- Supervised undergraduate researchers

CONFERENCES, INVITED TALKS, AND RADIO/TV INTERVIEWS

2022 National Communication Association - What Doesn't Bug Usl: Engaging the Community with Science

2022 Alabama Science Teacher Association - Museums in your school?!

2019 Entomological Society of the America's – invited speaker for insect color and outreach

2019 Dragonfly Society of the America's Co-organizer

2019 International Congress of Odonatology Co-organizer

2018 Dragonfly Society of the America's - Duluth, MN

2015 Good Day Austin Insect TV interview - Insect Outreach

2015 NANPA invited speaker on photographing insects

2013 Co-instructor at Dragonfly Migration Partnership for Texas Master Naturalist annual meeting

2013 Invited Speaker Concordia University: American Burying Beetle in Texas

2012 YNN Network Insecta Fiesta Interview

2011 Entomological Society of America's Meeting, Reno, Nevada

2011 Dragonfly Society of America's Annual Meeting, Fort Collins, Colorado

2010 Austin Butterfly Forum Invited speaker (scheduled for September)

- "The American Burying Beetle in Texas and Beyond"

2010 Dragonfly Society of America's Annual Meeting, Orono, Maine

2009 NPR American Burying Beetle Interview

2009 Entomological Society of America meeting, Indianapolis, Indiana

2009 Invited Speaker Gray Fossil Museum in Gray Tennessee

- "The Baird's Tapir Project of Costa Rica"

2008 4th International Tapir Symposium Cancun, Mexico

Presentation - The Baird's Tapir Project of Costa Rica

2008 Raw Nature (Discovery Channel/Animal Planet)- What is in your stomach? Tapir Interview

2007 National Academy of Sciences' Sackler Colloquium

- In the Light of Evolution II: Biodiversity and Extinction

2007 American Burying Beetle Workshop Oklahoma

2007 Zoos and Aquariums Commitment to Conservation

2006 3rd International Tapir Symposium Argentina, South America

Poster - Selection and Reflection in a Large Herbivore:

Tapirus bairdii's Vegetation Selection in a Costa Rican Forest

2005 Graduate Symposium, University of Texas at Austin

Presentation - Selection and Reflection in a Large Herbivore:

Tapirus bairdiis Vegetation Selection in a Costa Rican Forest

2004 2nd International Tapir Symposium Panama City, Panama

2003 Attwater's Prairie Chicken Recovery Team Meeting

TEACHING EXPERIENCE

University of Alabama - Jan 2019 - Present

Nature Photography

- Photography skills from white box to macro to stacking 200 images

Insect Decline and Climate Change

- Hands on bugs while dissecting peer reviewed insect apocalypse papers

Naturalist Outreach Course

- Teach students science communication,
- Create exhibits
- Hands on outreach/teacher guides/activities for UA museums website

St. Edwards University Jan. 2011 - May 2014

Cells, Genetics and Organ Systems

- Taught introductory biology to incoming freshmen

Cells, Genetics and Organ Systems Lab

- Used hands on demonstrations to teach introductory biology

Organisms and Populations

- Introduced Ecology, Evolution, Behavior and Biodiversity

Organisms and Population Lab

- Dissection of over 12 different organisms
- Hands on population experiments

Biodiversity in a Changing Climate

- Non-majors biology course on the effects of a changing climate on biodiversity

Entomology

- Introduced all the Orders of insects and common families in Texas
- Taught lab on how to identify the different insects.

Field Biology

- Created and taught various methods in Ecology and Biology in a field setting at Wild Basin Preserve.

Wild Basin Creative Research Center May 2013 - Dec. 2013

- Managing 40+ volunteers and staff for trail maintenance, PreK-12 outreach, designing education center, general public outreach.
- Teaching students to conduct research in the field
- Teaching students through internships in various fields (environmental education, research, ecological management, displays)

University of Texas at Austin (Teaching Assistant): TX, Sep. 2004 - Aug. 2007

Ecology, Evolution and Society

- Created interactive visual examples of topics covered in class



Intro Biology II

 Taught basic genetics using interactive moving movies to show how meiosis and mitosis happen

Introduction to the Plant Kingdom

 Used hands on examples to introduce students to a variety of plants and plant-like species from algae to angiosperms

Field Biology

- Introduced the scientific method and how to find, read, and cite scientific papers
- Took students on field trips to conduct field experiments and interact in nature
- Guided students as they wrote scientific questions and papers for the first time Ecology & Diversity
- Investigated diversity through out the world, with live examples

GRANTS (\$1,127,940)

- 2020 2022 Grants for Broader impacts and outreach through the museums \$81,400
- 2018 Conservation Assessment of 165 Texas Dragonflies Focusing on the 24 Most Imperiled. Texas Parks & Wildlife, \$500,239.
- 2018 Assessing Rate of DNA Degradation in a Stream Ecosystem for Detecting Environmental DNA. Dragonfly Society of the Americas, \$970 (July 2018) (with UA undergraduate student).
- 2016 Population Genetics and Life History of the Sarracenia Spiketail (*Cordulegaster sarracenia*). Louisiana Department of Wildlife and Fisheries, State Wildlife Grant, \$52,621 (July 2016).
- 2015 Texas National Guard Endangered Beetle Survey \$58,088
- 2014 Texas National Guard Endangered Beetle Survey \$10,311
- 2013 Texas National Guard Endangered Beetle Survey \$45,000
- 2012 Texas Ecolab Survey of common Texas Insects \$18,027
- 2012 Texas National Guard Endangered Beetle Survey \$48,856
- 2011 Texas National Guard Endangered Beetle Survey \$ 25,279
- 2010 Texas National Guard Endangered Beetle Survey \$30,910
- 2009 St. Louis Zoo Endangered Beetle genetics \$5,000
- 2008 Texas National Guard Grant Endangered Beetle Survey \$189,997
- 2007 Texas National Guard Grant Mammal Study \$ 48,242
- 2006 Texas Ecolab Deer Browse study \$10,000
- 2005 University of Texas Graduate preliminary study funds \$3,000

CERTIFICATION AND TRAINING

- 2014 NSF Communicating Science through Video
- 2014 Texas Wildlife Society Program R training
- 2013 Balcones Canyonlands Preserve Infrastructure certification
- 2013 Pesticide applicator license
- 2013 Webinar: Teaching in Spatial Environmental Education
- 2013 Training: Principles of Pruning
- 2013 Webinar: Driving to the Trailhead the Missing Link, American Trails
- 2013 Webinar: The Art of Sustainable Trail Management, American Trails
- 2010 Nonprofit training LBJ School of public affairs
- 2010 Texas Teaching Fellow K-12
- 2008 MARK workshop-learning mark/recapture program, Fort Collins, CO

PUBLICATIONS/REPORTS

- John C. Abbott and Kendra Abbott. Common insects of North America, Princeton University Press, 2023
- John C. Abbott and Kendra Abbott. Common Insects of Texas and the Surrounding States. University of Texas Press, 2021.

- Kendra K. Abbott, John C. Abbott, Jeffrey D. Lozier, Rochelle R Beasley & Stacey L. Lance. 2018. Development of polymorphic microsatellite markers for a rare dragonfly, Cordulegaster sarracenia (Odonata: Cordulegastridae), with notes on population structure and genetic diversity, International Journal of Odonatology, DOI: 10.1080/13887890.2018.1498398
- Abbott, K., and J.C. Abbott. In Prep. New trapping methodology for the endangered American Burying Beetle, *Nicrophorus americanus* in the presence of the invasive Fire Ants, *Solenopsis invicta*.
- Abbott, J.C., and K. Abbott. In Prep. Community Structure of the American Burying Beetle, *Nicrophorus americanus*, in Texas based on pitfall data.
- Abbott, K., and J.C. Abbott. In Prep. Historical and current patterns of the American Burying Beetle *Nicrophorus americanus* in Texas.
- Abbott, K.K. and J.C. Abbott. 2015. Presence or Absence of the American Burying Beetle (*Nicrophorus americanus*) in Texas. Final report for Permit TE172278-1 and Texas Army National Guard
- Abbott, K.K. and J.C. Abbott. 2013. How Temperature Affects *Nicrophorus carolinus* as a Proxy for Understanding the Presence or Absence of the American Burying Beetle (*Nicrophorus americanus*) in Texas. Final report for the Adjutant
- Bauer, K.K. and J.C. Abbott. 2010. The Affect of the Red Imported Fire Ant (*Solenopsis invicta*) on the Endangered American Burying Beetle (*Nicrophorus americanus*). 2010 Annual Report for Permit TE172278-1 and Texas Army National Guard Contract Tx08-ENV-01.
- Bauer, K.K. and J.C. Abbott. 2010. Population modeling, habitat characterization, and reasons for the decline in the endangered American burying beetle, *Nicrophorus americanus*. 2009 Annual Report for Permit TE172278-1 and Texas Army National Guard Contract TX08-ENV-01.
- Bauer, K., J.C. Abbott, K. Quigly. 2009. Range Extension of the Collared Peccary. Southwestern Naturalist 55:141-142.
- Bauer, K.K. and J.C. Abbott. 2008. Mammal Richness and Presence Survey Results Camp Swift, Texas. (Contract Number: TX06-ENV-19 401-6-5064).

NATURAL RESOURCE EXPERIENCE

- Managed Natural Resources including habitat for the Endangered Golden-cheeked Warbler at Wild Basin
- Trail Maintenance at Wild Basin
- Trail Maintenance at Fossil Rim Wildlife Center (including creating new trails)
- Colima Warbler survey (Big Bend National Park)
- Jollyville Salamander survey (with the City of Austin)
- Mammal surveys (Camp Swift, Elgin, Texas for Army National Guard)
- Extensive experience in monitoring mammals with trap cameras (Costa Rica and throughout Texas)
- Extensive Tracking skills (tracked and trained under some of the best trackers in US)
- Browse surveys (White-tailed deer, Baird's Tapir, Brocket deer)
- Insect Surveys throughout the U.S.
- Ant Surveys (Camp Maxey National Guard, Powderly, Texas, Vireo Preserve, BCP)
- Vegetation surveys (Costa Rica, Wildflower Center, Wild Basin, various other locations in Texas)
- Bat Survey (assisted with research on several occasions)
- Biomonitoring for water quality analysis
- Working with Federally Endangered Species (Baird's Tapir, American Burying Beetle, Atwater's Prairie Chicken, Golden-cheeked Warbler, Cheetah, Black and White Rhino)
- Hold Federally Endangered species permit for Endangered Burying Beetle
- Managed Land for Endangered Burying Beetle
- Pesticide Applicators License

COMPUTER/PROGRAM SKILLS

Proficient in Adobe products (InDesign, Photoshop, Illustrator, Lightroom, Acrobat Pro, Premiere Pro), ESRI ArcGIS, R, and MARK. Work on both Mac OS and Windows operating systems, Microsoft products (Word, PowerPoint, Excel), File Maker Pro, and WordPress. Social medial platforms including Facebook, Instagram, Google Plus, Twitter, Snapchat, Tumbler. Familiar with website design in WordPress, Squarespace, and Shopify.

SCIENTIFIC SOCIETIES, AFFILIATIONS AND ORGANIZATIONS

National Communication Association International Communication Association Worldwide Dragonfly Association Dragonfly Society of the Americas Bat Conservation International Xerces Society for Invertebrate Conservation Entomological Society of America Southwestern Naturalists Animal Behavior Society Wildlife Society Austin Butterfly Forum

