

Elizabeth L. Roesler, M.Sc.

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EDUCATION

- Expected Dec. 2020 **Ph.D.** in Natural Resources Management, Texas Tech University, Lubbock, TX,
Dissertation: Influence of climate change, freshwater inflows, and changing
land use on the distribution of seahorses on the Texas coast
Advisor: Dr. Matthew Barnes
- May 2016 **M.S.** in Natural Resources Management, Texas Tech University, Lubbock, TX,
Thesis: Development of habitat use & monitoring methods for the endangered
gastropod, Pecos assiminea (*Assimineea pecos*)
Advisor: Dr. Timothy Grabowski
- May 2010 **B.S.** in Biology, University of Illinois at Chicago, Chicago, IL

PROFESSIONAL EXPERIENCE

- Aug 2017 – May 2018 **Writing Tutor, The Graduate Student Writing Center, Graduate School, Texas
Tech University, TX**
 - Execute writing tutorials for graduate students from all departments and fields
 - Provide guidance on publications, theses, dissertations, cover letters, CVs, research
statements, personal statements, and grant proposals
- Aug – Dec 2016 **Lab Coordinator, Introduction to Natural Resources Management NRM 1401,
Department of Natural Resources Management, Texas Tech University, TX**
 - Organized & coordinated natural resources outdoor lesson plans
 - Led off-campus outdoor field trips for 300 students, primarily non-majors
 - Graded laboratory portion of course
- Sep 2013 – Dec 2014 **Community Intern, Environmental Outreach, Ogallala Commons, TX**
 - Organized, coordinated, & led lesson plans for 5th grade students on aquatic
resources
 - Created numerous ArcMap GIS maps for general organization purposes
- Sep 2011 – Dec 2012 **Biological Technician, Wildlife Surveying & Management, Student
Conservation Association/AmeriCorps, Bitter Lake National Wildlife Refuge,
NM**
 - Assisted in policy writing, including Section 7s and special use permits
 - Organized & coordinated natural resources outdoor lesson plans
 - Surveyed and monitored endangered and invasive species, & conducted biweekly
bird surveys
- Jul – Aug 2010 **Research Intern, Behavior & Mating of the American Burying Beetle
(*Nicrophorus americanus*), Nature Conservancy's Tallgrass Prairie Preserve,
OK**
 - Performed daily surveys of pitfall traps throughout entire preserve
 - Captured, marked, and recaptured individual burying beetles
 - Conducted and observed mating trials with sympatric species

Jul – Aug 2009

Research Intern, Fire Regime & Land Use Impacts on the American Burying Beetle (*Nicrophorus americanus*), Nature Conservancy's Tallgrass Prairie Preserve, OK

- Performed daily surveys of pitfall traps throughout entire preserve
- Compared abundance between and among fire regimes and habitat types
- Presented research poster of findings at American Behavioral Society

Jun 2009 – Jun 2010

Lab Technician, Biodiversity of Macroinvertebrates among Different Land Managements, Department of Biological Sciences, University of Illinois at Chicago, IL

- Sorted and identified all invertebrate specimens down to family, collected via sweep nets and pitfall traps
- Created an insect identification guide for future technicians
- Presented research poster of findings at Undergraduate Research Forum

PUBLICATIONS

Grabowski, TB, **EL Roesler**, F Martinez-Andrade, & M Barnes. 2018. Cooperative Research Unit Corner: *Data Sources Matter - A Case Study of the Dwarf Seahorse*. Outdoor News Bulletin. Wildlife Management Institute. July 2018 Ed. 72(7).

Acre MR, C Alejandrez, J East, WA Massure, S Miyazono, JE Pease, **EL Roesler**, HM Williams, & TB Grabowski. 2017. *Comparison of the precision of age estimates generated from fin rays, scales, and otoliths of Blue Sucker*. Southeastern Naturalist. 16(2): 215-224. doi: 10.1656/058/058.016.0208

Roesler, EL, K Brautigam, S Freeman, D Gary, A Godar, C Griffin, B Smith, & G Perry. 2017. A classic updated. Review of: *Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America*. IRCF Reptiles & Amphibians. 24(1):81-82.

Roesler, EL, & TB Grabowski. 2017. *Estimating factors influencing the detection probability of semi-aquatic freshwater snails using quadrat survey methods*. Hydrobiologia. 808(1):153-161. doi: 10.1007/s10750-017-3415-9

Roesler, EL. 2016. *Development of habitat use data, detection, and survey methods for the endangered gastropod, Pecos assiminea (Assiminea pecos), at Bitter Lake National Wildlife Refuge, MS* Thesis, Texas Tech University, Lubbock.

PRESENTATIONS

Aug 2018 Oral presentation, Ecological Society of America, *Data collection methods and species traits influence species distribution model predictions*, New Orleans, Louisiana

Apr 2018 Oral presentation, Texas Tech Annual Biological Sciences Symposium, *Evaluating suitable habitat of invasive tilapia and forecasting hotspots for potential impacts on imperiled fishes of Texas*, Lubbock, Texas

Feb 2018 Oral presentation, Texas Academy of Sciences, *Evaluating suitable habitat of invasive tilapia and forecasting hotspots for potential impacts on imperiled fishes of Texas*, Midland, Texas

- Apr 2017 Poster Presentation, Texas Tech Annual Biological Sciences Symposium, *Influence of climate change, freshwater inflows, and changing land use on the distribution of seahorses and pipefishes on the Texas coast*, Lubbock, Texas
- Mar 2017 Poster Presentation, Texas Tech Graduate Student Poster Competition, *Influence of climate change, freshwater inflows, and changing land use on the distribution of seahorses and pipefishes on the Texas coast*, Lubbock, Texas
- Feb 2016 Poster Presentation, Texas Chapter of the American Fisheries Society, *Influence of climate change, freshwater inflows, and changing land use on the distribution of seahorses and pipefishes on the Texas coast*, Kerrville, Texas
- Jul 2015 Poster presentation, Annual Texas Unit Cooperators Meeting, *Assessing the effectiveness of two survey methodologies on the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife Refuge*, Kerrville Wildlife Management Area, Hunt, Texas
- Apr 2015 Oral presentation, Texas Tech Annual Biological Sciences Symposium, *Assessing habitat use patterns of the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife*, Texas Tech University, Lubbock, Texas. 1st Place Oral Presentation in Natural Resources Management, Warren Ballard Award, **\$500**.
- Apr 2015 Poster presentation, Graduate Student Research Poster Competition, *Assessing the effectiveness of two survey methodologies on the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife Refuge*, Texas Tech University, Lubbock, Texas. 1st Place Poster Presentation in Agricultural Sciences Category III, **\$125**.
- Feb 2015 Oral presentation, Arizona and New Mexico Chapters of the American Fisheries Society and the Wildlife Society Joint Annual Meeting, *Assessing habitat use patterns and survey methodologies of the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife Refuge*, Las Cruces, New Mexico. Best Student Oral Presentation, **\$50**.
- Aug 2014 Oral presentation, American Fisheries Society Annual Meeting, *Assessing habitat use patterns of the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife Refuge*, Quebec City, Quebec
- Jul 2014 Poster presentation, Annual Texas Unit Cooperators Meeting, *Assessing habitat use patterns of the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife Refuge*, Texas Tech University, Lubbock, Texas
- Mar 2014 Oral presentation, Texas Tech Annual Biological Sciences Symposium, *Assessing habitat use patterns of the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife*, Texas Tech University, Lubbock, Texas. 1st Place Oral Presentation in Natural Resources Management, Warren Ballard Award, **\$250**.
- Feb 2014 Oral presentation, Oklahoma and Texas Chapters of the American Fisheries Society Joint Annual Meeting, *Assessing habitat use patterns of the endangered snail, Pecos assiminea, at Bitter Lake National Wildlife Refuge*, Pottsboro, Texas
- Oct 2013 Poster presentation, Society for Ecological Restoration Annual Meeting, *The effects of habitat restoration at Bitter Lake National Wildlife Refuge on the presence of the endangered snail, Pecos assiminea (Assiminea pecos)*, Madison, Wisconsin
- Aug 2010 Poster presentation, Animal Behavior Society Annual Meeting, *Response to disturbance by fire in the endangered American Burying Beetle*, Williamsburg, Virginia

Mar 2010 Poster presentation, University of Illinois at Chicago Research Forum, *Biodiversity on macroinvertebrates among different land managements*, Chicago, Illinois

RESEARCH FUNDING

Mar 2017 Helen DeVitt Jones Graduate Fellowship, **\$3500** for 3 years, Texas Tech University

Nov 2016 Research Grant, Texas Parks and Wildlife Department, Evaluation of Research Needs Related to Tilapia in Texas and Areas with High Potential Risks to SGCN Fishes, **\$40,000**, collaborated with Dr. Matthew Barnes

Oct 2016 Houston Livestock Show and Rodeo Graduate Assistantship Program for Texas Tech University, **\$5,000** awarded, Nominated by Dr. Mark Wallace

Oct 2012 Science Support Partnership Award, Education Grant, U.S. Geological Survey & U.S. Fish and Wildlife Service, **\$109,885** collaborated with Drs. Timothy Grabowski & David Rogowski

COMMUNITY FUNDING

Nov 2015 Full Community Grant, Pollination Project, **\$1,000** awarded to Heart of Lubbock Community Garden

Sep 2014 Mini-Grant, **\$1,000**, CHS Foundation, awarded to the Heart of Lubbock Community Garden

Mar 2015 Full Community Grant, Sow It Forward Food Garden Grants 2015, **\$300** cash, \$100 Gardener's Supply Co. gift card, and \$50 worth of seeds, awarded to Heart of Lubbock Community Garden

Aug 2014 Volunteer Manager Leadership Program Grant, **\$667**, Volunteer Center of Lubbock, awarded to the Heart of Lubbock Community Garden

HONORS & AWARDS

May 2017 The Gamma Sigma Delta Honor Society of Agriculture Outstanding Graduate Student Award in the College of Agriculture and Natural Resources, Texas Tech University, Nominated by Dr. Kerry Griffis-Kyle

Sep 2015 Texas Tech Alumni Association Student Leadership Award, Texas Tech University

Nov 2014 Get Involved Award, College Category, Community Recognition at the Cornucopia Luncheon, Volunteer Center of Lubbock

Jul 2014 Summer Funding Award, **\$1,250** President's Summer Scholarship Program, Texas Tech University

Jun 2014 Nominated recipient of the American Association for the Advancement of Science and the associated two-year membership

Dec 2012 Segal Educational Award, **\$5,550**, AmeriCorps Service Hours

TEACHING EXPERIENCE

Sept – Oct 2018	<u>Lecturer</u> , undergraduate major course “Quantitative Methods in Natural Resources” involving statistical methods, like t-tests & ANOVAs, grading, and examination
Nov 2014 – Present	<u>Volunteer Teaching Assistant</u> , undergraduate non-major course “Introduction to Natural Resource Management”, involving vegetation sampling, scent stations, avian surveys, water quality, fish seining, vegetation sampling, small mammal trapping, VHF telemetry, orienteering, and macroinvertebrate sampling techniques
Mar 2017	<u>Invited Presentation</u> , 2 lectures titled “Invertebrates in Freshwater Ecology”, Freshwater Ecology, NRM 2305
Dec 2016 – Present	<u>Invited Presentation</u> , “Ways You Can Make a Difference in Every Day Life”, Introduction to Natural Resources Management, NRM 1401 every spring and fall semester
Nov 2016	<u>Invited Presentation</u> , “Listing Process of Endangered Species”, Natural Resources Policy, NRM 5320
Feb 2015	<u>Invited Instructor</u> , R Workshop short course on Classification & Regression Trees
Fall 2013 – 2015	<u>Volunteer Teaching Assistant</u> , undergraduate Plant Inventory & Wildlife Techniques Course, involving training on orienteering, vegetation surveys, and small mammal trapping techniques
Aug 2013, Mar 2014, Jun 2015	<u>Volunteer Teacher</u> at Lubbock Memorial Arboretum’s Garden Camp, designed and taught interactive science lessons on backyard gardening and aquatic invertebrates
May 2014	<u>Teacher</u> at Playa Day Festival, presented lessons on macroinvertebrates at Portales Playa Festival at Muleshoe National Wildlife Refuge, Muleshoe, Texas
Sep 2013	<u>Teacher</u> at Playa Day Festival, presented lessons on playas and macroinvertebrates to 5th graders at Whiteface Elementary, Whiteface, Texas, Ervin Elementary, Lubbock, Texas, & DuPre Elementary, Lubbock, Texas

SERVICE

Aug 2017– May 2018	Elected President, Association of Natural Resource Scientists Graduate Student Organization
Aug 2017 – Jan 2018	Seminar Chair, Association of Natural Resource Scientists Graduate Student Organization
Oct 2016 – Jan 2018	Study Abroad Competitive Scholarship Awards Committee Member
Sep 2014 – Present	Member of Texas Tech University Entomology Club
Feb 2014 – Present	Member of Texas Tech’s West Texas Women in STEAM
Aug 2014 – Jun 2015	Elected Secretary, Association of Natural Resource Scientists Graduate Student Organization
Sep 2013 – Present	Member of Texas Tech’s Association of Natural Resource Scientists Graduate Student Organization
Mar 2013 – Present	Founder & Facilitator of the Heart of Lubbock Community Garden
Mar 2013 – Present	Founder & President of Texas Tech Student Organization Heart of Lubbock

OUTREACH

Nov 2018 TV interview with local Fox 34 News about the Heart of Lubbock Community Garden's 5th annual Fall Harvest Festival

Sept 2018 TV Interview with local Fox 34 News about food deserts and how the Heart of Lubbock Community Garden can mitigate this issue

Aug 2018 Lubbock Magazine Cover Story the Heart of Lubbock Community Garden

July 2018 Author, USGS Outdoor News Bulletin "Data Sources Matter A Case Study of the Dwarf Seahorse"

May 2018 TV Interview with local KMAC News ABC about the Heart of Lubbock Community Volunteer Day with Moms of Preschool Children

Apr 2018 Guest on Fox News 34 segment titled Good Day Lubbock performing cooking demos

Apr 2018 Outdoor educator at annual graduate student led event, Scales, Tails, and Trails held at Lubbock Laker Landmark to educate on local natural resources and environment

Apr 2017 Outdoor educator at annual graduate student led event, Scales, Tails, and Trails held at Lubbock Laker Landmark to educate on local natural resources and environment

Oct 2016 Featured in Videos for Science, Climate Science Center, Texas Tech University {<https://www.youtube.com/watch?v=QBgHkxPI9Qs>}

May 2016 Featured in online article of community garden: http://www.huffingtonpost.com/ari-nessel/building-capacity-this-we_b_9815316.html

Apr 2016 Outdoor educator at annual graduate student led event, Scales, Tails, and Trails held at Lubbock Laker Landmark to educate on local natural resources and environment

Oct 2015 Invited presentation, Landscape Architecture Course Landscape Arch Site Design, *The Heart of Lubbock Community Garden*, Texas Tech University, Lubbock, TX

Jun 2015 TV Interview with local KMAC News about the Heart of Lubbock Community Garden

Apr 2015 Outdoor educator at annual graduate student led event, Scales, Tails, and Trails held at Lubbock Laker Landmark to educate on local natural resources and environment

Mar 2015 Newspaper Spotlight, Lubbock Avalanche Journal, "Community Garden Designed for Everybody", Heart of Lubbock Community Garden

Feb 2015 Presented informational booth about the Heart of Lubbock Community Garden at Texas Tech's TEDx Talks

Oct 2014 Planned and implemented a Fall Harvest Festival at the Heart of Lubbock Community Garden with a raffle, workshops, kid's activities, and an all-day barbeque

Oct 2014 TV interview with local Fox News about the Heart of Lubbock Community Garden

Aug 2014 Presented informational booth about the Heart of Lubbock Community Garden at Texas Tech's Agricultural Festival

Aug 2014 Presented informational booth about the Heart of Lubbock Community Garden at Texas Tech's Student Organization Fair

Jun 2014 TV interview with local Fox News about the Heart of Lubbock Community Garden

Apr 2014	Outdoor educator at annual graduate student led event, Scales, Tails, and Trails held at Lubbock Laker Landmark to educate on local natural resources and environment
Apr 2014	TV interview with local Fox News about the Heart of Lubbock Community Garden
Sep 2013	Wildlife treasure hunt tour guide at the annual Dragonfly Festival at Bitter Lake National Wildlife Refuge, Roswell, NM
Sep 2012	Kids arts and crafts planner and facilitator and wildlife treasure hunt tour guide at the annual Dragonfly Festival at Bitter Lake National Wildlife Refuge, Roswell, NM
Jul 2012	Published article on local moth species in the Roswell Daily Record Newspaper
May 2012	Roswell's National Kids to the Park Day-designed and implemented kite making activity
Jan 2011	Published article on crane migration in the Roswell Daily Record Newspaper
Aug 2007	Australia Walkabout Wildlife Park-Restored animal habitats, mulched, built fences, responsible for animal food preparation and distribution, performed sanctuary maintenance

ACADEMIC/CIVIC AFFILIATIONS

May 2018– Present	Member of the Ecological Society of America
Feb 2018– Present	Member of the Texas Academy of Science
Mar 2016 – 2018	Member of Marine Fisheries Section of American Fisheries Society
Mar 2016 – 2017	Member of Imperiled Aquatic Species Section of American Fisheries Society
Jan 2015 – 2016	Member of New Mexico Chapter of American Fisheries Society
Feb 2014 – Dec 2016	Member of American Fisheries Society
Dec 2013 – Dec 2016	Member of Texas Chapter of American Fisheries Society

CERTIFICATIONS/TRAININGS

Apr 2016	Certified Texas Parks & Wildlife Angler Education Instructor
Mar 2016	Certified Texas Parks & Wildlife Project WILD Instructor
Jul 2015	Habitat Analysis Short Course
Mar 2015	Excel Statistical Analyses Short Course
Mar 2015	Microsoft Access Database and SQL Short Course Training
Feb 2015	SAS I & II Short Course Trainings
Feb 2014	Volunteer Manager Leadership Program, Volunteer Center of Lubbock
Oct 2013	CPR Training and Certification
Jul 2013	Electrofishing Safety DOI Learn online training
Jul 2013	Groundwork Program Teaching training
May 2013	Thesis/Dissertation Boot Camp
Oct 2012	ESRI Learning ArcGIS Desktop (for ArcGIS 10) online class
Oct 2011	ATV/UTV Vehicle Safety Training by USFWS