

**KRISTIN E. BRZESKI**

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**APPOINTMENTS**

- 2018-present Assistant Professor of Wildlife Science and Conservation, College of Forest Resources and Environmental Science, Michigan Technological University.  
2016-2018 Postdoctoral fellowship. Ecology and Evolutionary Biology, Princeton University.

**EDUCATION**

- 2015 PhD. Renewable Natural Resources: Wildlife, Louisiana State University.  
2010 MS. Natural Resources: Wildlife, Humboldt State University.  
2005 BS. Environmental Science, Loyola University Chicago. Cum Laude

**CURRENT PROJECTS**

- Red wolf conservation genomics and ancestry.
- Isle Royale conservation genomics and population monitoring.
- Biodiversity conservation and capacity building in Equatorial Guinea.
- Epigenetic and fitness consequences of environmental contaminant exposure in wildlife.
- Application of environmental DNA and ancient DNA analyses for wildlife conservation and management.

**RESEARCH INTERESTS**

- Impact of environmental stress and disease on wildlife.
- Noninvasive methods to monitor and manage wildlife populations.
- Genetic management of small populations and threatened wildlife species.

**TEACHING INTERESTS**

- Mammalogy (FW4240)
- Conservation Genetics (FW4128)
- Wildlife Conservation, Techniques, and Scientific Writing

**RESEARCH GRANTS AND FELLOWSHIPS**

Awarded

- June 2020. Detroit Zoological Society, \$11,446 donation: *Isle Royale Wolf Health Monitoring during Population Reestablishment*. PI in collaboration with Isle Royale National Park Service and Mark Romanski.
- May 2020. Wolf Conservation Center, \$25,000 donation: *Rediscovering red wolf ancestry in the southeastern United States*. PI.
- April 2020. United States Fish & Wildlife Service, \$318,424: *Rediscovering red wolf ancestry in the southeastern United States*. PI of a large research team (11 researchers from 8 institutions).
- January 2020: Isle Royale National Park Service, \$65,766: *Monitoring genetic health of Isle Royale wolves*. PI.

- December 2019: Great Lakes Fishery Commission, \$142,283: *An epigenetic assessment of stamp sand toxicity to salmonid eggs at Buffalo Reef, Lake Superior*. Co-PI with Dr. Gordon Paterson (PI), MTU.
- December 2019. BCBI/WWF, \$25,000 donation: *Technical Support for the Bonobo and Congo Biodiversity Initiative/World Wildlife Fund-US (BCBI/WWF) Work Plan FY20*. Co-PI with Dr. Jared Wolfe (Co-PI), MTU.
- December 2019: Martin Jurgensen Teaching Development Award Endowed Fund & Hammer's Endowed Field Equipment Fund, \$5,806: *Bringing CFRES to the forefront of forestry and wildlife genetics education with wet lab teaching equipment*. Co-applied with Dr. Carsten Kuelheim, MTU.
- October 2019: Pangolin Consortium Grant, \$4,019: *Ecology of pangolins in Equatorial Guinea assessed through DNA metabarcoding and camera trapping*. PI with Tiffany DeGroot (PhD student on project), MTU.
- May 2019: Research Excellence Fund Seed Grant, MTU, \$30,645: *Assessing novel enforcement methodologies to reduce illegal bushmeat hunting and logging in Equatorial Guinea's Protected Areas*. Co-PI with Dr. Jared Wolfe (PI) and Dr. Ezequiel Medici (Co-PI) MTU.
- April 2019: Saint Mary's University Faculty Grant, \$4,573.33: *Assessment of the canid population on Galveston Island, TX to determine continued evidence of endangered red wolf ancestry*. Project Collaborator with Dr. Melissa Karlin (PI), St. Mary University.
- October 2018-October 2020: McIntire Stennis SFRES Research Award, \$24,000: *Monitoring wildlife response to variation in silviculture practices in the Upper Peninsula of MI*. PI.
- October 2018: Martin Jurgensen Teaching Development Award Endowed Fund, \$2,500: *Building a world-class osteology teaching collection at SFRES*. PI.
- January 2016: National Science Foundation Postdoctoral Research Fellow, \$138,000: *ecological epigenetics and landscape genomics*. PI.
- March 2016: USFWS Wildlife Without Border, \$50,000: *Protected Areas monitoring and capacity building in Africa*.
- May 2015: Stone Hill Education, \$15,000: *Equatorial Guinea wildlife research and science education*.
- 2014: USFWS Flex Fund, \$12,000: *Inbreeding and disease monitoring in endangered red wolves*.
- May 2013: National Science Foundation Doctoral Dissertation Improvement Grant, \$17,000: *immunogenetic variation in wild canids*.
- September 2012: Point Defiance Zoo & Aquarium Grant, \$12,000: *Predator conservation and disease management*.
- March 2012: American Society of Mammalogists Grant-in-Aid, \$1,500: *Ancient canid DNA analyses*.
- August 2010- December 2015: McIntire-Stennis Fellowship recipient, \$500,000.

#### Awarded Student Grants

- June 2020: Ecosystem Science Center Graduate Research Grant, \$1,000: *Establishing Genetic Monitoring of the Isle Royale Wolves*. PhD student Sam Hervey.
- May 2020 (postponed until summer 2021 due to COVID19 pandemic): Summer Undergraduate Research Fellowship, \$4,000: *Do Birds of a Feather Flock Together? Testing*

*Flock Relatedness in Blue Jays*. Undergraduate Claudia Zinser, Co-adviser with Dr. Jared Wolfe, MTU.

- December 2019: Ecosystem Science Center Graduate Research Grant, \$1,000: *Red Wolf Ancestry in Wild Canids on Galveston Island*. MSc student Tanner Barnes.
- May 2019: Summer Undergraduate Research Fellowship, \$4,000: *Silphid beetles as novel iDNA tool for measuring small mammal community biodiversity*. Undergraduate Katherine E. Schneider, Co-adviser with Dr. Tara Bal, MTU.
- May 2019: Ecosystem Science Center Graduate Research Grant, \$1,000: *Ecology of threatened mammals in Equatorial Guinea assessed through DNA metabarcoding and camera trapping*. MSc student Tiffany DeGroot.
- May 2019: Ecosystem Science Center Graduate Research Grant, \$1,000: *Developing iDNA methodology in the Keweenaw Peninsula to monitor mammal communities*. MSc student Shallen Gurtler, MTU.
- May 2019. Ecosystem Science Center Undergraduate Research Grant, \$750: *Avian malaria presence in Michigan's Keweenaw Peninsula*. Undergraduate Rachel Christensen.

#### Pending

- May 2020: University of Glasgow, The Global Challenges Research Fund, \$77,511: *Levelling the field study: Empowering female biologists to protect endangered wildlife in Central Africa*. Co-investigator with Dr. Luke Powell (PI), University of Glasgow, Dr. Alicia Davis (PI), University of Glasgow, and Biodiversity Initiative's international team of collaborators.
- May 2020: Animal Welfare Institute, Christine Stevens Wildlife Award, \$21,726: *Developing a noninvasive genetic sampling tool to conserve emblematic American wolf populations*. Co-PI with graduate students Sam Hervey (PhD candidate) and Tanner Barnes (MSc candidate).
- May 2020: United States Department of State, Equatorial Guinea Embassy REOs Small Grant Program, \$14,490: *Visiting professors and internship program to foster informed stewardship in Equatorial Guinea*. Co-PI with Dr. Jared Wolfe (Co-PI), MTU.

#### Rejected

- October 2019: Darwin Initiative, \$65,514: *Strategically Combatting Poaching and Logging in Central African Protected Areas*. Co-PI with Dr. Jared Wolfe (PI), MTU.
- October 2019. National Geographic, \$35,492: *Rediscovering endangered red wolves along America's Gulf Coast*. PI with Dr. Bridgett vonHoldt (Co-PI), Princeton University, Dr. Melissa Karlin (Co-PI) St. Mary's University, Ron Wooten (Research support), citizen scientist, & Dr. Joe Szewczak (Research support), Humboldt State University.
- August 2019: Jana Robeyst Trust Fund, \$1,650: *Protecting vulnerable wildlife in the Congo Basin*. PI.
- June 2019: Mohamed bin Zayed Species Conservation Fund, \$10,600: *Searching for endangered red wolf ancestry to identify regions suitable for red wolf reintroduction and conservation efforts*. PI.
- June 2019: Mohamed bin Zayed Species Conservation Fund, \$8,000: *Enhancing conservation of the white-bellied pangolin in Equatorial Guinea through DNA metabarcoding and camera trapping*. PI with Dr. Jared Wolfe (Co-PI), MTU & Tiffany DeGroot (MSc student on project), MTU.

- May 2019: Animal Welfare Institute, Christine Stevens Wildlife Award, \$13,600: *Developing noninvasive tools to identify red wolf x coyote hybrids*. PI
- May 2019: Animal Welfare Institute, Christine Stevens Wildlife Award, \$12,800: *A noninvasive iDNA methodology to monitor wildlife to facilitate conservation*. Co-PI with Dr. Carsten Kuelheim (Co-PI), MTU & Shallen Gurtler (MSc student on project), MTU.
- April 2019: United States Fish and Wildlife Service Africa's Program Pre-Proposal, \$787,999: *Directed enforcement to reduce illegal bushmeat hunting and logging in Equatorial Guinea's Protected Areas*. Co-PI with Dr. Jared Wolfe (Co-PI), MTU.
- February 2018: Noble Energy, \$99,900: *Nature education center, student nature club in Equatorial Guinea*.
- January 2018: Marathon Oil, \$150,000: *Educational outreach and wildlife conservation in Equatorial Guinea's Protected Areas*.
- May 2017: SeaWorld, \$25,000: *Training the next generation of Equatorial Guinea's conservation leaders*.
- April 2017: United States Fish and Wildlife Service Africa's Program Pre-Proposal, \$427,721: *Adaptive conservation and enforcement to reduce illegal bushmeat hunting and logging in Equatorial Guinea's Protected Areas*.
- March 2017: National Geographic, \$24,700: *Building Equatorial Guinea's capacity to conserve wildlife and defend protected areas*.

#### **HONORS, AWARDS, AND SCHOLARSHIPS**

- January 2020: Recognition for Receiving First-Time Funding as a PI. *Research Development Day, Michigan Technological University*.
- January 2019: Recognition of Exceptional Teaching Evaluations, Top 10% of MTU, *Provost & Senior Vice President for Academic Affairs, Michigan Technological University*.
- December 2016: Distinguished Dissertation Award, *College of Agriculture, Louisiana State University*.
- May 2015: Clark M. Hoffpauer Memorial Graduate Student of the Year Scholarship, *Department of Renewable Natural Resources, Louisiana State University*.
- September 2014: Honorable mention Best Student Presentation, *Louisiana Association of Professional Biologists annual meeting*.
- August 2013-2014: Rockefeller Louisiana State Wildlife Scholarship, *Louisiana Department of Wildlife and Fisheries*.
- June 2011: Glasgow Travel Grant, *Department of Renewable Natural Resources, Louisiana State University*.
- December 2010: Patricia O. McConkey Outstanding Graduate Student, *Humboldt State University*
- December 2010: Wildlife Graduate Student of the Year, *Humboldt State University*.
- April 2010: Richard J. Guadagno Memorial Scholarship award, *Humboldt Bay National Wildlife Refuge*.
- May 2009: Stanley W. & Lorene J. Harris Scholarship award, *Wildlife Department, Humboldt State University*.
- May 2009: Marin Rod & Gun Club Annual Scholarship award, *Marin County Rod and Gun club, CA*.
- September 2008: Student Travel Award, *The Wildlife Society Western Section*.
- August 2008: Joseph S. Woolford Scholarship award, *Eureka Rotary, CA*.
- October 2007: Women's Enrichment Fund Award, *Humboldt State University*.

- May 2005: Track Team Leadership Award, *Loyola University of Chicago*.
- May 2004: Female Cross Country/Track & Field Scholar Athlete of the Year, *Loyola University of Chicago*.

## PUBLICATIONS

Manuscripts peer reviewed:

2020

21. Jarret, C., T. Smith, C. Tabe, D. Ferreira, M. Tchoumbou, E. Malange, J. Wolfe, **K. Brzeski**, R. Hanna, C. Masso, K. Fiaboe, L. Powell. *in review*. Low-intensity cocoa agroforests as habitat for Afrotropical bird communities. *Journal of Applied Ecology*.
20. Wolfe, J., **K. Brzeski**, C. West, G. Testa, T. Williams, S. Beesley. *in review*. Recommendations for feral cattle removal based on a short-term monitoring program. *Wildlife Society Bulletin*.
19. Ferreira, D., L. Torrent, J. Wolfe, **K. Brzeski**, L. Powell. *in 2<sup>nd</sup> review* (resubmitted 2019). First record of a piebald Large-eared Slit-faced Bat, *Nycteris hispida* (Chiroptera: Nycteridae) from Equatorial Guinea, Central Africa. *Mammalia*.
18. **Brzeski, K.**, S. Taylor. *in prep for resubmission*. Endangered red wolves (*Canis rufus*) are not immunocompromised despite being depauperate at immune genes when compared to sympatric coyotes (*Canis latrans*). *Conservation Genetics*.
17. Heppenheimer, E., **K. Brzeski**, J. Hinton, M. Chamberlain, J. Robinson, R. Wayne, B. vonHoldt. 2020 (accepted 2019). A Genome-wide perspective on the persistence of red wolf ancestry in southeastern canids. *Journal of Heredity*. 111(3), 277-286.
16. vonHoldt, B., A. DeCandia, E. Heppenheimer, I. Koch, R. Shi, H. Zhou, C. German, **K. Brzeski**, K. Cassidy, D. Stahler, J. Sinsheimer. 2020 (accepted 2019). Heritability of inter-pack aggression in a wild pedigreed population of North American gray wolves. *Molecular Ecology*. DOI: 10.1111/mec.15349. \*cover article

2019

15. DeCandia, A. **K. Brzeski**, E. Heppenheimer, C. Carol, G. Camenisch, P. Wandeler, C. Driscoll, B. vonHoldt. 2019. Urban colonization through multiple genetic lenses: The city-fox phenomenon revisited. *Ecology and Evolution*. 9(4), 2046-2060. DOI: 10.1002/ece3.4898

2018

14. Heppenheimer E. \*, **K. Brzeski\***, R. Wooten, W. Waddell, Rutledge, M. Chamberlain, D. Stahler, J. Hinton, B. vonHoldt. 2018. Rediscovery of red wolf ghost alleles in a canid population along the American Gulf Coast. *Genes*. 9(12):618. \*co-lead & corresponding author.
13. Heppenheimer, E., **K. Brzeski**, J. Hinton, B. Patterson, L. Rutledge, A. DeCandia, T. Wheeldon, S. Fain, P. Hohenlohe, R. Kays, B. White, B. vonHoldt. 2018. High genomic diversity and candidate genes under selection associated with range expansion in eastern coyote (*Canis latrans*) populations. *Ecology and Evolution*. 8(24):12641-12655.
12. vonHoldt, B., **K. Brzeski**, D. Wilcove, L. Rutledge. 2018. Redefining the impact of admixture and genomics in endangered species conservation. *Conservation Letters*. 11(2): e12371 doi:10.1111/conl.12371
11. Heppenheimer, E., R. Harrigan, L. Rutledge, K. Koepfli, A. DeCandia, **K. Brzeski**, J. Benson, T. Wheeldon, B. Patterson, R. Kays, P. Hohenlohe, B. vonHoldt. 2018. Population

genomic analysis of North American eastern wolves (*Canis lycaon*) supports their conservation priority status. *Genes*. 9(12):606.

10. Heppenheimer E., D. Cosio, **K. Brzeski**, D. Caudill, M. Chamberlain, J. Hinton, B. vonHoldt. 2018. Demographic history influences spatial patterns of genetic diversity in recently expanded coyote (*Canis latrans*) populations. *Heredity*. 120:183-195. doi:10.1038/s41437-017-0014-5.

2017

9. Cooper, J., O. Johnson, T. Davis, R. Terrill, **K. Brzeski**., J. Wolfe., A. Etingüe, L. Powell. 2017. Notes on the distribution of the avifauna of Bioko Island, Equatorial Guinea, with one new country record. *Malimbus*. 39(1):1-15.

2016

8. **Brzeski, K.**, J. Wolfe., J. Cooper, L. Powell. 2016. Camera sighting of Congo Clawless otter in the midst of rapid development on mainland Equatorial Guinea. *IUCN Otter Specialist Group Bulletin*. 33 (1), 96-101.
7. **Brzeski, K.**, M. DeBiasse, D. Rabon, M. Chamberlain, S. Taylor. 2016. Mitochondrial DNA variation in Eastern pre-Columbian canids. *Journal of Heredity*, 107:287-293.
6. Hinton, J., **K. Brzeski**, D. Rabon, M. Chamberlain. 2016. Effects of anthropogenic mortality on red wolf breeding pairs: Implications for red wolf recovery, *Oryx*:1-8. doi:10.1017/S0030605315000770

2015 & older

5. **Brzeski, K.**, B. Bartel, W. Waddell, K. Wolf, D. Rabon, S. Taylor. 2015. Infectious disease and red wolf conservation: assessment of disease occurrence and associated risks. *Journal of Mammalogy*, 96:751-761.
4. **Brzeski, K.**, D. Rabon, M. Chamberlain, L. Waits, S. Taylor. 2014. Inbreeding and inbreeding depression in endangered red wolves (*Canis rufus*). *Molecular Ecology*, 23:4241-4255.
3. **Brzeski, K.**, M. S. Gunther, J. Black. 2013. Evaluating river otter demography using noninvasive genetic methods. *Journal of Wildlife Management*, 77:1523-1531.
2. Wolfe, J, E. Johnson, P. Stouffer, F. Owens, E. DeLeon, E. Liffmann, **Brzeski, K.**, et al. 2013. Annual survival of birds captured in a habitat island bordered by the urban matrix of Baton Rouge, Louisiana. *South Eastern Naturalist*, 12:492-499.
1. Wolfe, J., E. Johnson, P. Stouffer, E. Liffmann, E. DeLeon, K. Mokross, **Brzeski, K.** 2013. Brown Thrasher (*Toxostoma rufum*) with bill deformity captured at Bluebonnet Swamp Nature Center, Baton Rouge, LA. *Journal of Louisiana Ornithology*, 9:27-30.

**CONTRIBUTED PAPERS AND POSTERS**

(underlined indicates student author)

25. **Brzeski, K.**, E. Heppenheimer, B. vonHoldt. October 2019. North American Canine Ancestry Project: Large genetic datasets for effective conservation & management of canids. The Wildlife Society Annual Conference, Reno, NV. \**Symposium Organizer*
24. Gusick, B., J. Wolfe, **K. Brzeski**, Y. Dickinson. October 2019. Effects of different silviculture treatments on small mammal diversity in northern hardwoods. The Wildlife Society Annual Conference, Reno, NV. *Oral Presentation*

23. Gurtler, S., C. Kulheim, **K. Brzeski**. October 2019. Developing Multiple Invertebrate iDNA Methodology in the Keweenaw Peninsula, Michigan to Monitor Mammal Communities. The Wildlife Society Annual Conference, Reno, NV. *Poster presentation*
22. Christensen, R. A., J. Wolfe, **K. Brzeski**. October 2019. Avian malaria presence in Michigan's Keweenaw Peninsula. The Wildlife Society Annual Conference, Reno, NV. *Poster presentation*
21. Barnes, T. M., **K. Brzeski**. October 2019. Variation in communities and activity patterns in urban and rural wildlife. The Wildlife Society Annual Conference, Reno, NV. *Poster presentation*
20. Christensen, R. A., **K. Brzeski**. April 2019. Avian malaria presence in Michigan's Keweenaw Peninsula. Ecosystem Science Center Student Research Forum, Michigan Technological University. *Awarded Grand Prize best undergraduate poster presentation*
19. Barnes, T. M., **K. Brzeski**. April 2019. Variation in communities and activity patterns in urban and rural wildlife. Ecosystem Science Center Student Research Forum, Michigan Technological University. *Poster presentation*
18. Barnes, T. M., **K. Brzeski**. March 2019. Variation in communities and activity patterns in urban and rural wildlife. Pavlis Honors College Undergraduate Research Symposium, Michigan Technological University. *Poster presentation*
17. **Brzeski, K.** October 2018. Red wolves rediscovered! Now what? The Wildlife Society Annual Conference, Cleveland, OH. *\*Invited SPARK Speaker*
16. **Brzeski, K.**, J. Wolfe, F. Eyono, L. Powell. October 2018. Education, research, and passive protection to conserve wildlife and defend protected areas in Central Africa. The Wildlife Society Annual Conference, Cleveland, OH. *\*Invited Symposium Speaker*
15. **Brzeski, K.** September 2017. Beyond population genomics- ecological epigenetics and application to wildlife management. The Wildlife Society Annual Conference, Albuquerque, NM. *\*Symposium Organizer*
14. **Brzeski, K.**, D. Cristol, B. vonHoldt. May 2017. Mercury Rising: Epigenetic response to mercury exposure in songbirds. Canadian Society of Ecology and Evolutionary Biology, Victoria, British Columbia. *\*Invited Symposium Speaker*
13. **Brzeski, K.**, M. Chamberlain, S. Taylor. October 2016. Inbreeding and mate-choice in wild canids. The Wildlife Society Annual Conference, Raleigh, NC. *Oral Presentation*
12. Johnson, E., **K. Brzeski**, S. Duke-Sylvester, A. Jackson, et al. September 2016. The Louisiana Bird Observatory 6 years of avian monitoring and a platform for scientific investigations. LA Association of Professional Biologists' Symposium, Baton Rouge, LA. *Oral Presentation*
11. **Brzeski, K.**, J. Wolfe, E. Johnson, A. Jackson, C. Eagles-Smith, B. vonHoldt. August 2016. Blood-mercury contamination, carotenoid-based plumage coloration, and epigenetics. The North American Ornithological Conference, Washington DC. *Poster presentation*
10. **Brzeski, K.** April 2016. Contemporary conservation challenges for endangered red wolves. Northeast Natural History Conference, Springfield, MS. *\*Invited Symposium Speaker*
9. **Brzeski, K.**, M. Chamberlain, S. Taylor. August 2015. Genetic variation at MHC and TLR genes and their relationship to disease in red wolves and sympatric coyotes. The International Congress for Conservation Biology, Montpellier, France. *Poster presentation*

8. **Brzeski, K.**, M. Chamberlain, S. Taylor. May 2015. Endangered red wolves: assessing inbreeding, immune gene variation, and disease. Wildlife & Fisheries Science Symposium, Humboldt State University, Arcata, CA. *Oral Presentation*
7. **Brzeski, K.**, B. Bartel, W. Waddell, K. Wolf, D. Rabon, S. Taylor. October 2014. Infectious disease and red wolf conservation: baseline pathogen prevalence. The Wildlife Society Annual Conference, Pittsburgh, PA. *Poster presentation*
6. **Brzeski, K.**, D. Rabon, M. Chamberlain, S. Taylor. September 2014. Endangered red wolves: historic and contemporary threats. Louisiana Association of Professional Biologist Fall Symposium, Baton Rouge, LA. *Honorable mention Best Student Oral Presentation*
5. **Brzeski, K.**, D. Rabon, M. Chamberlain, S. Taylor. August 2013. MHC variation and its effects on red wolf fitness. Annual Conference of the European Society of Evolutionary Biology, Lisbon, Portugal. *Poster presentation*
4. **Brzeski, K.**, M. S. Gunther. November 2011. Non-invasive approach evaluating river otter abundance and sociality. The Wildlife Society Annual Conference, Waikoloa, HI. *Oral Presentation*
3. **Brzeski, K.**, D. Rabon, M. Chamberlain, S. Taylor. November 2011. Inbreeding in wild wolves. The Wildlife Society Annual Conference, Waikoloa, HI. *Poster presentation*
2. **Brzeski, K.**, M. Gunther. May 2009. Non-invasive river otters genetics. Wildlife & Fisheries Science Symposium, Humboldt State University, Arcata, CA. *Oral Presentation*
1. **Brzeski, K.**, J. Terry, J. Black, M. Gunther. October 2008. Using non-invasive techniques to study stress and genetics in river otters. The Wildlife Society Western Section's Conference, Redding, CA. *Poster presentation*

#### INVITED PRESENTATIONS AND SEMINARS

- April, 2020: Invited Webinar, Wolf Conservation Center, South Salem, NY. *Red, Gray, and Isolated: new discoveries of two emblematic wolf populations- red wolves and Isle Royale wolves.*
- March, 2020: Ecology, Evolution, and Conservation Biology Seminar, Oregon State University, Corvallis, OR. *Red, Gray, and Isolated: new discoveries of two emblematic wolf populations- red wolves and Isle Royale wolves.*
- October, 2019: Arkansas Biosciences Institute Seminar, Arkansas State University, Jonesboro, AR. *Ecology, Evolution, and the Ongoing Controversy of America's Most Endangered Wolf.*
- August, 2019: Invited Science Seminar and Webinar, USFWS, South Atlantic-Gulf Region & Mississippi-Basin Region Office, Lafayette, LA. *Red wolf ancestry rediscovered along the Gulf Coast.*
- May, 2019: Invited Webinar, Wolf Conservation Center, South Salem, NY. *Red Wolves Rediscovered: a discussion about red wolf ancestry along the Gulf Coast.*
- April, 2019: Invited Seminar Speaker, Michigan Technological University, Biology Department, Houghton, MI. *Ecology, evolution, and the ongoing controversy of America's most endangered wolf.*
- January, 2019: Guest Seminar Speaker, National University of Equatorial Guinea, Malabo, EG. *Camera traps for Protected Area's management.*
- October, 2018: Invited Webinar, Wolf Conservation Center, South Salem, NY. *The American Red Wolf: disease, genetics, and the future.*

- October, 2017: Conservation Science Seminar, Princeton University, NJ. *Conservation action in Equatorial Guinea.*
- June, 2017: Renewable Natural Resources invited Seminar, Louisiana State University, LA. *Wildlife ecology & extension from Central Africa to the Gulf Coast.*
- April, 2016: Ecology and Evolution Seminar, Princeton University, NJ. *Immunogenetic variation and disease susceptibility in red wolves.*
- November, 2015: Ecoseries, Wildlife Department, Humboldt State University, Arcata, CA. *An introduction to the red wolf; disease, genetics, and introgression.*
- March, 2015: Redwood Region Audubon Society, Eureka, CA. *Conservation of an endemic America predator: Endangered red wolves.*
- January, 2015: Museum of Natural Science, Louisiana State University, Baton Rouge, LA. *Endangered red wolves: ecology, evolution, and introgression.*
- October, 2014: Smithsonian Conservation Biology Institute, Washington D.C. *Endangered red wolves: inbreeding, MHC, and the future.*
- July, 2013: AZA Species Survival Plan Meeting, *C. rufus gregoryi*, Homosassa Springs, FL. *Inbreeding, mate choice, and immunocompetence in wild red wolves.*

## MENTORING EXPERIENCE

### *Current Lab Members:*

- Tanner Barnes, MSc, MTU. Fall 2019-current. *Thesis title: Genetic Ancestry and Population Structure of Galveston Island Canids.* Awards and distinctions:
  - Outstanding Senior in Wildlife Ecology and Management 2019
  - ESC research grant 2019
  - ESC travel grant 2020
  - Student Award for Outstanding Graduate Student Teaching Assistant 2020
- Tiff DeGroot, PhD, MTU. Spring 2019-current. *Dissertation title: Biodiversity Conservation in Central Africa.* Awards and distinctions:
  - Pangolin Consortium research grant 2019
  - ESC research grant 2019
  - ESC travel grant 2020
- Sam Hervey, PhD, MTU. Spring 2020-current. *Dissertation title: Establishing Noninvasive Monitoring of Isle Royale Wolves.* Awards and distinctions:
  - ESC travel grant 2020
  - ESC research grant 2020
- Claudia Zinser, Undergraduate, MTU. Fall 2020-2021. *Thesis title: Do Birds of a Feather Flock Together? Testing Flock Relatedness in Blue Jays.* Awards and distinctions:
  - Summer Undergraduate Research Fellowship recipient.

### *Past Lab Members:*

- Rachel Christensen, Senior Thesis, MTU. Spring 2019-Spring 2020. *Thesis title: Avian Malaria Presence in Michigan's Upper Peninsula.* Awards and distinctions:
  - Best student poster award at ESC Research Symposium 2019
  - ESC research grant 2019
  - Outstanding Senior in Wildlife Ecology and Management 2020.
- Shallen Gurtler, MSc, MTU. Fall 2018-Summer 2020. *Thesis title: Comparison of noninvasive iDNA and camera trap methods in detecting mammalian community change.* Current position: Americorp Project Lead at Achieve Brown County. Awards and distinctions:
  - ESC research grant 2019.

- Kath Schneider, Undergraduate, MTU. Summer 2019-Spring 2020. *Thesis title: Silphid beetles as novel iDNA tool for measuring small mammal community biodiversity*. Current position: PhD student in CFRES, MTU. Awards and distinctions:
  - Summer Undergraduate Research Fellowship recipient
  - ESC research grant 2019
- Tabitha N. Lumour-Mensah, Senior Thesis, Princeton University. Fall 2017- Spring 2018. *Thesis title: Epigenetic Modifications in Response to Mercury Exposure: A Study of Differential Methylation Patterns in Wild Louisiana Bird Populations*. Awards and distinctions:
  - Charles M. Cannon Memorial Prize: best senior thesis research presentation in Princeton's Ecology and Evolutionary Biology Department

*MTU Earn and Learn Undergraduate Student Mentees:*

- Academic year 2019-2020: Sarah Arnold, Megan Baird, Jenna Brewer, Heidi Feliczak, Natalie Howard, Claudia Zinser
- Academic year 2018-2019: Kadie Gehrke, Claudia Zinser

*International Student Mentees:*

- Silvestre Esteban, undergraduate intern, Equatorial Guinea. 2015-current
- Ernest Fotsing, BRLI-Biomonitoring Technical Assistant: Mpem and Djim National Park, Cameroon. Assist with grant writing and research design. 2019-current.

**TEACHING EXPERIENCE**

- Spring 2020 Conservation Genetics lecture and lab – Michigan Technological University
- Spring 2020 Guest Lecturer – Michigan Technological University, Invited lecture for Conservation Biology.
- Spring 2020 Guest Lecturer – Michigan Technological University, Invited lecture for Restoration Ecology.
- Spring 2019 Guest Lecturer – Michigan Technological University, Invited lecture for Forest Genetics.
- Feb. 2019 Invited instructor for Ecological Bioinformatics Workshop – Yaoundé, Cameroon, Biodiversity Initiative.
- Fall 2018-19 Mammalogy lecture and lab – Michigan Technological University
- Fall 2017 Guest Lecturer, Princeton University– Invited lecturer for Evolutionary Biology.
- Fall 2017 Guest Lecturer, Humboldt State University– Invited lecturer for Wildlife Techniques.
- 2015, 2016 Program Developer, Bioko and Oyalá, Equatorial Guinea– Creator and instructor of a wildlife ecology, conservation, and techniques workshop taught to Equatoguinean university students and government biologists.
- Fall 2015 Lecturer, Humboldt State University– Instructor for Wildlife Ecology & Management for non-majors.
- 2012-2014 Instructor, LSU 4-H Clover College– Designed and taught 4-H summer course to introduce Louisiana high school students to wildlife conservation and management.
- Fall 2012 Lecturer, Louisiana State University– Instructor for Introduction to Natural Resources, a seminar course with weekly lectures, discussion, and writing assignments.

- Fall 2011 Guest Lecturer, Louisiana State University– Invited lecturer for Conservation Genetics.
- 2009-2010 Graduate Teachers Assistant, Humboldt State University– Teaching assistant in Department of Wildlife, responsible for lab instruction, grading, office hours, and assisting with class projects.
- 2009-2010 Elderhostel instructor, Humboldt State University– Lecturer for adult learning course on ecology, natural history, and behavior of North American river otters.

### **SERVICE AND OUTREACH**

- 2020-2021 Chair, The Wildlife Society’s Molecular Ecology Working Group
- 2019-2020 Co-Faculty Advisor, MTU Wildlife Student Club
- 2018-2020 Vice-Chair elect, The Wildlife Society’s Molecular Ecology Working Group
- 2016-present IUCN Otter Specialist Working Group member
- 2016-present African Otter Network member
- 2016-present Louisiana Bird Observatory Scientific Advisory Board Member
- 2015-present Biodiversity Initiative Co-founder
- 2014-2018 Founding board member of The Wildlife Society’s Molecular Ecology Working Group
- 2011-2014 Conservation outreach volunteer and natural history instructor at Bluebonnet Swamp Nature Center summer camps, Baton Rouge, LA.
- 2010-2015 Primary bird bander and founding member of Louisiana Bird Observatory, Baton Rouge, LA.
- 2008-2010 Treasurer/Co-President of HSU Wildlife Graduate Student Society, Arcata, CA.

### **RELEVANT PROFESSIONAL EXPERIENCE**

- 2010-present Invited Reviewer for: Animal Conservation, Biological Conservation, Forests, Journal of Heredity, Journal of Mammalogy, Journal of Wildlife Management, Molecular Ecology, Molecular Ecology Resources, Polish-Lithuanian Funding Initiative Grant Proposal, Scientific Reports, University Wisconsin Milwaukee Grant Proposal, ZooKeys.
- 2018 Invited Workshop participant, Red Wolf Science and Conservation Workshop that at the Smithsonian Conservation Biology Institute, Front Royal Virginia. USFWS sponsored, Aug. 7<sup>th</sup>-8<sup>th</sup>.
- 2010-2015 Graduate Research Assistant, Louisiana State University, Baton Rouge, LA.
- 2007-2009 Wildlife Game Pens Graduate Technician, Humboldt State University, Arcata, CA.
- 2005-2007 USDA Animal and Plant Health Inspection Service Tree Climber, Chicago, IL.
- 2004 Student Conservation Association Field Intern, Sierra Nevada Mountain Range, CA.
- 2003 Women in Science Enabling Research Intern, Loyola University Chicago, IL.
- 2002 Conservation Department Intern, Zoological Society of Milwaukee, WI.

### **SELECTED POPULAR PRESS COVERAGE**

My research has been featured in the following media outlets:

- Texas Parks & Wildlife (Dec. 2019), canid research in TX, cover article.  
[https://tpwmagazine.com/archive/2019/dec/ed\\_3\\_wolves/index.phtml](https://tpwmagazine.com/archive/2019/dec/ed_3_wolves/index.phtml)
- The Atlantic (Nov. 8 2019), canid research in TX, featured science article.  
<https://www.theatlantic.com/science/archive/2019/11/the-ghost-genes-of-a-nearly-extinct-animal-live-on-in-texas/601624/>

- International Wolf Center (Summer 2019 magazine), canid research in TX, featured article. <https://wolf.org/wolf-info/wolf-magazine/summer-2019/>
- Audubon Magazine (July/August 2016), Biodiversity Initiative featured on cover. <http://www.audubon.org/magazine/summer-2016/land-lost-birds-searching-life-forests-bioko#8>
- The Magazine of Humboldt State University (Spring 2014), featured river otter research. <http://magazine.humboldt.edu/spring14/critter-census>
- The North Coast Journal (20 March 2014), featured river otter research. <http://www.northcoastjournal.com/humboldt/otter-spotter/Content?oid=2516458>
- The Wildlife Professional (Spring 2014), Science in Short, featured river otter manuscript.

Additional Press for rediscovering red wolf ancestry on the Gulf Coast in December 2018:

From Red Wolves, Lessons in Resilience. Hybrids — and maybe a full red wolf — found in former range. <http://wildlife.org/hybrids-and-maybe-a-full-red-wolf-found-in-former-range/>

A future for red wolves may be found on Galveston Island, Texas.

<https://www.sciencedaily.com/releases/2018/12/181211122449.htm>

A Future for Red Wolves May Be Found on Galveston Island.

<https://www.mtu.edu/news/stories/2018/december/a-future-for-red-wolves-may-be-found-on-galveston-island.html>

Mysterious Texas canines have 'ghost' DNA of red wolves.

<https://www.mnn.com/earth-matters/animals/blogs/red-wolf-dna-texas-canines>

Red wolf DNA found in mysterious Texas canines.

<https://www.princeton.edu/news/2018/12/18/red-wolf-dna-found-mysterious-texas-canines>

Island coyotes carry 'ghost' genes of red wolves.

[https://www.galvnews.com/news/article\\_4f9a4cf1-d990-52fa-9ac5-8afad7dd6079.html](https://www.galvnews.com/news/article_4f9a4cf1-d990-52fa-9ac5-8afad7dd6079.html)

## **PROFESSIONAL MEMBERSHIPS**

The Wildlife Society