

CAROLINE HARMS

Flagstaff, AZ 86001 • charms@tgen.org

RESEARCH EXPERIENCE

Research Associate

Translational Genomics Research Institute North.....July 2021 – Present

Assistant to Dr. John Altin

- RNA extraction from whole blood and sorted cells
- T-cell receptor immune repertoire profiling
- Genomic library construction
- Sequencing with Illumina MiSeq

Graduate Research Assistant: Master Thesis Project.....Aug 2018 – May 2021
West Virginia University

- DNA extraction of degraded and chemically treated mammal samples
- Development of several PCR protocols
- Use of software GeneMarker for genetic analysis and individual allele assignment
- Genetic structure analysis conducted under several genetic software
- Developing species specific primers
- Conducting qPCR on unknown species

Assistant to Dr. Amy Welsh

- Identification of subspecies strain of walleye (*Sander vitreus*) through genetic analysis
- Identification of unknown owl species from pellet DNA extraction and analysis

Research Assistant

Purdue University

Assistant to Dr. Timothy Smyser.....**Oct 2014 – May 2016**

- Comparison of bait dispenser design for target species
- Wildlife camera trap data analysis
- GPS navigation

Assistant to Dr. Liz Flaherty.....**Oct 2015 – March 2016**

- Macroscopic identification and collection of mammal hairs
- Stable isotope collection and analysis

Assistant to Dr. Jason Hoverman.....**July 2017 – June 2018**

- Measuring physiological effects of chemical load on amphibians
- Small- and large-scale amphibian dissections
- Visual implant elastomer (VIE) and toe clipping techniques
- Laboratory DNA extraction

Field Technician

Purdue University

Technician to Abby-Gayle Prieur.....**April 2018-July 2018**

- ArcGIS planning and implementation of large-scale small mammal trapping with Sherman traps
- Damage survey of soy bean and other cover crops by vole species
- Identification, marking, and camera set up at known vole colonies
- Greenhouse based planting, raising, and LiDAR recording of cover crop species
- Construction and installation of outdoor vole enclosures

Technician to Megan Zagorski.....**Jan 2018 – April 2018**

- Construction and installation of artificial perches for raptor species
- Installation and weekly retrieval/review of camera traps
- Roadside bird surveys for raptor species
- Ground surveys and collection of raptor pellets

TEACHING EXPERIENCE

Graduate Teaching Assistant West Virginia University

Assistant to Dr. Christopher Rota.....**Aug – Dec 2018, 2020**

- Wildlife Techniques Course
- Led outdoor and indoor labs twice a week
- Demonstrated multiple wildlife and vegetative survey techniques
- Telemetry analysis, camera trapping, datasheet development, water quality, and statistical analysis
- Developed and graded all assignments

Assistant to Dr. John Edwards.....**Jan – April 2019, 2020**

- Wildlife Silviculture Course
- Developed and graded all labs for the first semester of this new class
- Forestry measurement tools and techniques, forestry plot survey, coarse woody debris survey and snag survey
- Created and presented all lectures
- Developed and graded all assignments
- Led outdoor (on and off campus) and indoor labs twice a week

Student Chapter of Environmental Education.....Sep 2016 – May 2018 Purdue University

- Local outreach to youth and adults
- Development of environmental education programs, events, and publications
- Presented programs to wide age range and education levels
- Hands on and involved education techniques
- Organization of all events as President (Aug 2017 – May 2018)

Interpretive Services Intern.....May 2015 – Aug 2015 St. Joseph County Parks and Recreation, Indiana

- Led and developed diverse natural resources education programs with the public
- Created visual education displays
- Led hikes and youth camp events
- Live animal handling and care for programs

PRESENTATIONS

PowerPoint Presentation; “Genetic structure of a reintroduced fisher (*Pekania pennanti*) population in West Virginia”

- West Virginia Trappers Association.....**Sep 2018**
- West Virginia Pelt Sale.....**Feb 2019**
- West Virginia DNR Annual Meeting.....**June 2019**
- MAFWA/SEAFWA Furbearer Conference.....**April 2019**

Poster Presentation; “Genetic structure of a reintroduced fisher (*Pekania pennanti*) population in West Virginia”

- Women in Natural Resources Research Symposium.....**Dec 2018**
- The Wildlife Society/American Fisheries Society Annual National Meeting.....**Sep 2019**

EDUCATION

Master of Science in Wildlife and Fisheries Resources.....Aug 2018-May 2021

West Virginia University, Morgantown, WV

GPA: 3.71

Bachelor of Science in WildlifeAug 2014 – May 2018

Minor in Biological Sciences

Minor in Fisheries and Aquatic Sciences

Purdue University, West Lafayette, IN

GPA: 3.34, GPA in major: 3.66

PUBLICATIONS

Hassler, K.N., B.E. Kessinger, **C.E. Harms**, L.E. Price, E.P. Barton, K.J. Oxenrider, R.E. Rogers, K.J. Pearce, T.L. Serfass, and A.B. Welsh. Accepted January 2021. Genetic Confirmation of Predation of an Adult Female Eastern Spotted Skunk by a Barred Owl. *Southeastern Naturalist*.