

Emma Fehlker Campbell

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Education

Murray State University, Murray, KY |

Bachelor of Science in Wildlife and Conservation Biology | May 2022

- GPA 3.91
- Dean's list 5 semesters

Professional Experience

Avian Undergraduate Researcher.

October 2020-Present

Murray State University, Department of Biological Sciences.

Supervisor: Dr. Andrea Darracq.

- Lead a project monitoring Avian diversity in response to Timber management
- Program Audiomoth acoustic monitoring devices
- Deployed Recording units following a deployment scheme and navigate using GPS.
- Managed large amounts of acoustic and location data.

Cottonmouth Undergraduate Researcher

March 2020-Present

Murray State University, Department of Biological Sciences

Supervisor: Dr. Andrea Darracq.

- Lead research on a project on the relationships between stress, Snake fungal disease, and Parasitism in Cottonmouths.
- Process 21 cottonmouths by drawing blood samples and collecting tissue swabs for snake fungal disease.
- Create thin blood smears, stained smears following a standard Giemsa Wright Staining procedure, identified blood parasite load, and quantified stress through Heterophil/Lymphocyte ratios.
- Conduct corticosterone ELISA Immunoassays.
- Write grant and permitting applications.
- Awarded funding (\$1100) through the Watershed Studies Institute (WSI) at Murray State University.

Teaching Assistant.

January 2020-Present

Murray State University, Department of Biological Sciences.

Supervisor: Drs. Terry L Derting, and Chris Trzepacz.

- Assist in the teaching of a single section of BIO 216, an introductory biology class focused on study design, scientific writing, data analyses and field techniques.
- Aided in teaching four laboratory sections of BIO 101, an introductory biology class for non-majors.
- Prepared materials for use in four class sections of BIO 216.

Arthropod Research Assistant**September 2019-Present****Murray State University, Department of Biological Sciences.**

Supervisors: Clay Bliznick (MS Student) and Dr. Andrea K Darracq

- Sort terrestrial arthropods from detritus from over 500 samples following a defined protocol.
- Enter locality Data into database for future analysis.

Timber Rattlesnake Field Technician**March 2019- Present****Murray State University, Department of Biological Sciences**

Supervisors: John Hewlett (MS Student) and Dr. Andrea K Darracq

- Conduct ground and aerial based VHF radio telemetry of 17 Timber rattlesnakes.
- Assist in blood draws and swabs for snake fungal disease following standardized protocol.
- Aide in the surgical implantation of transmitters in 10 timber rattlesnakes.
- Perform vegetation surveys
- Provide assistance with DNA extractions, ELISA Immunoassays, and Quantitative Polymerase Chain Reaction (qPCR).
- Carried 40lb backpack 5-10 miles in rugged terrain while navigating off trail.
- Analyze of canopy cover photographs using ImageJ software.

Green Heart Field Technician**June 2020-August 2020****Murray State University, Department of Biological Sciences.**

Supervisors: Clay Bliznick (MS Student) and Dr. Andrea K Darracq

- Worked as a member of an urban greening project, Project Greenheart
- Conducted Urban arthropod surveys and collected arthropod and detritus samples.
- Acoustically monitored urban bat populations using Sonobat Live with Petterson Microphones.

Western Kentucky Bat Intern**May-August 2019****Murray State University, Department of Biological Sciences.**

Supervisor: Dr. Terry Derting.

- Monitored bat usage and climate variables for Brandenbark™ artificial roost structures at 4 sites across western Kentucky.
- Conducted pre-management acoustic monitoring of bats, and identified species using Kaleidoscope software, and Petterson, SM4 Bat, and Anabat recorders.
- Conducted emergence counts on natural roosts following Indiana Bat protocol
- Assisted US Fish and Wildlife with endangered bat surveys.
- Mist netted, transmittered and tracked bat species of concern using radio telemetry.
- Assisted in winter cave surveys for endangered bats.
- Prepared data for entry into state and federal databases.
- Operated a Government owned 4WD vehicle on poorly maintained roads

Office Assistant and Assistant Unit Leader

Summers 2016-2018

Girl Scouts of Eastern Missouri Resident Camps.

- Lead a week-long STEM program focusing on robotics for middle school girls for three summers.
- Worked as a member of a team to plan and implement camp activities and promote camp wide safety
- Effectively established rapport with camp administration and peers.
- Worked independently under minimal supervision to implement a camp wide mailing system.
- Worked in remote areas for eight weeks in all weather conditions.

Volunteer Experience

Camera Trapping Volunteer | Murray State University

August 2020-Present

- Deploy sets of 20 camera traps on two-week rotations, with three rotations per semester
- Navigate off trail in wetlands using GPS

Springer-Franklin Residence College Council | Murray State University August 2018-Present

- Served on multiple roles including Vice President, Outreach Coordinator, and Honors College Represented
- Aided in the planning and facilitation for
- 2019-present- Biology student Ambassador

Natural History Collection Volunteer | Murray State University

August 2019-Present

- Identified and catalogued numerous small mammal skulls.
- Prepared Museum study skins of small and medium sized mammals
- Prepared wet specimens for reptiles and amphibians.
- 2019 RCC outreach coordinator

Rehabilitation Volunteer | Wild Bird Rehabilitation, St. Louis MO

December 2018-Present

- Identified, handled and medicated many different of injured and juvenile songbirds.
- Fed numerous species of birds and performed upkeep of animal enclosures.

Avian Nest Monitoring Volunteer | Murray State University

April-July 2019

- Located and identified Osprey nests
- Monitored Osprey nesting behavior, feeding behavior, and nesting disturbances
- Assisted in Conducting Aerial nest surveys of Telecommunication Towers from airplanes

MAPS Bird Banding Volunteer | Clarks River National Wildlife Refuge

June 2019

- Safely handled and removed songbirds from mist nets.
- Determined species, age, sex, and body condition for numerous types of wild songbirds.
- Conducted work following a defined MAPS protocol

Biological Volunteer | Clarks River National Wildlife Refuge

October 2018-March 2020

- Identified and collected Post Oak acorns to use for restoration of imperiled Xero-hydric flatwood forests.
- Planted trees as a part of a management plan.
- Identified and banded birds following MAPS protocol

Chronic Wasting Disease Volunteer | Indiana DNR

November 2018 & 2019

- Assisted Indiana DNR personnel with the removal of deer lymph nodes for the testing of Chronic wasting disease.
- Communicated effectively with hunters and processor owners during opening weekend of hunting season.

Publications

- Hewlett, J. B., **Fehlker Campbell, E.**, Whiteman, H. 2020. Survey of the Amphibians and Reptiles of the Clarks River National Wildlife Refuge in Marshall, McCracken, and Graves Counties, Kentucky. *Report submitted to Clarks River National Wildlife Refuge.* Murray State University, Murray KY.

Presentations

- **February 2021** *Poster Presentation* “Understanding Relationships between Stress, Snake Fungal Disease, and Parasitism in Wild Cottonmouth Snake Populations”, Annual Meeting of the Kentucky chapter of The Wildlife Society.
- **October 2020** *Poster Presentation* “Corticosterone levels and heterophil to lymphocyte ratios in response to parasitism in wild cottonmouth populations” Annual Meeting of the Wildlife Society.
- **February 2020** *Poster Presentation* “Increase in bat use of Brandenbark™ poles over time in western Kentucky”, Annual Meeting of the Kentucky chapter of The Wildlife Society.
- **February 2020** *Poster Presentation* “Increase in bat use of Brandenbark™ poles over time in western Kentucky”, Southeastern Bat Diversity Network Annual Meeting.
- **October 2019** *Oral Presentation*: “Increase in Brandenbark Pole Use by Bats in Western Kentucky over Time”, Annual Meeting of the Kentucky Bat Working Group.

Awards & Scholarships

- **Watershed Studies Institute Watershed Research Grant** | \$1100 | June 2020
- **Dr. W.J. & Martha Pitman Biology Scholarship**, Murray State University | 2019-2020.
- **Students United in Preserving, Exploring, and Researching Biodiversity (SUPERB) Scholarship** | Up to \$720 per year for research, \$430 per year for travel, and \$720 per year for travel to conferences | June 2020- May 2022
- **Murray State University Regents Stipend** | \$700.00 per semester- 8 semesters | 2018-2022
- **Regents Scholarship** | \$4,262.00 per semester- 8 semesters | 2018-2022

Skills

- Up-to-Date with Rabies Pre-Exposure Vaccination
- Proficient in Petterson, SM4 Bat, Audiomoth, and Anabat technologies

- Certifications: American Red Cross Small Craft Safety and Basic Water Rescue, Project WILD and Aquatic WILD.

Professional Society Memberships

- The Wildlife Society
 - Member of the National, Kentucky State Murray State Student Chapters
 - Murray State Student Chapter President | June 2020-May 2021
- Southeastern Bat Diversity Network
- Kentucky Bat Working Group