

Samantha Courtney:

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Narrative: **Motivated and inspired by a lifelong passion for wildlife and wild places, my dedication to enrich conservation through quality scientific research defines my ambitions in the wildlife field.**

Education:

2021-present Master of Science, Fisheries and Wildlife Management
Thesis: Group Size, Bioaccumulation, and Baiting: Quantifying Factors Affecting Chronic Wasting Disease Transmission Among Deer
Advisors: Dr. David Williams and Dr. Dwayne Etter
Michigan State University, East Lansing MI.

2013-2015: Bachelor of Science in Fisheries and Wildlife Management, Specialization in Wildlife Biology.
Michigan State University, East Lansing, MI.

Professional Experience:

09/19-present: Game Management Assistant – ND Game & Fish Department, Bismarck, ND.
05/19-08/19: Research Technician- Michigan State University – Clatskanie & Lincoln City, OR
10/18-12/18: Chronic Wasting Disease Technician – Colorado Parks & Wildlife, Craig, CO.
05/18-08/18: Wildlife Research Technician - University of Idaho, Challis, ID.
09/13-05/18: Research Technician - Michigan State University, East Lansing, MI.
05/17-08/17: Wildlife Research Technician - University of Wyoming, Rock Springs, WY.
05/15-08/15: Wildlife Specialist - USDA-APHIS Wildlife Services, Rhinelander, WI.
05/14-08/14: Wildlife Specialist - USDA-APHIS Wildlife Services, Rhinelander, WI.

Publications:

Hausbeck, M.K., Harlan, B.R., and **Courtney, S.E.** 2017. Evaluation of experimental fungicides for the control of Pythium root rot of geranium in the greenhouse, 2016. Plant Disease Management Report 11:OT025.
Hausbeck, M.K., Harlan, B.R., and **Courtney, S.E.** 2017. Evaluation of experimental fungicides and biopesticides against Botrytis blight on poinsettia, 2016. Plant Disease Management Report 11:OT030.
Hausbeck, M.K., Harlan, B.R., and **Courtney, S.E.** 2017. Evaluation of experimental fungicide drenches for the control of Thielaviopsis root rot of pansy in the greenhouse, 2016. Plant Disease Management Report 11:OT031.
Hausbeck, M.K., **Courtney, S.E.**, and Harlan, B.R. 2016. Evaluation of a biopesticide for the control of Rhizoctonia root rot of zinnia, 2016. Plant Disease Management Report 10: (OT004).

References:

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Dr. Mary Hausbeck
University Distinguished
Professor and Extension
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Professional Experience:

05/19-08/19 Game Management Assistant – ND Game and Fish Department, Bismarck, ND.

- Extract various tissue and organ samples from mule deer, white-tailed deer, pronghorn, elk, moose bighorn sheep, mountain lions, raccoons, bats, and waterfowl for testing
- Remove lymph nodes and obex from deer, elk, and moose for CWD testing
- Train other departmental staff in lymph node removal and technique
- Remove lower jaws of elk, pronghorn, and moose for aging
- Estimate age for deer and mountain lions
- Routinely drove around the state checking collection sites for CWD samples
- Contact cooperators to set up collection sites for CWD surveillance
- Maintain CWD database of samples submitted
- Organize and ship biological samples weekly
- Maintain hunter information database for CWD-positive hunting units
- Contact hunters to inform of CWD test results
- Answer questions regarding CWD and deer management via telephone and face-to-face interaction
- Weld signs and spray-painted stands for deer collection sites
- Respond to calls from the public regarding sick animals and perform technical assistance
- Perform full-body necropsies on a wide range of animals including deer, moose, pronghorn, bighorn sheep, mountain lions, fishers, otters, bobcats, marten, waterfowl, and bats
- Fill out necropsy forms and maintain necropsy database
- Utilize an X-Ray machine to identify shot for illegally harvested animals including ungulates and waterfowl
- Used radio telemetry from a fixed-wing plane to locate bighorn sheep for capturing
- Used GPS coordinates to navigate to waypoints to refuel helicopter
- Used centrifuge to spin bighorn sheep blood samples
- Pipetted serum into labeled vials
- Retrofit horse trailers for bighorn sheep relocation
- Prepare capture kits for sheep captures-build syringes, match ear tags, label test tubes, etc.
- Perform TPR on bighorn sheep during capture
- Load syringes with various veterinary drugs
- Assist wildlife veterinarians with processing of sheep
- Measure length of pheasant spurs and primary feathers for aging
- Determine sex and age of turkeys based on hunter submitted feathers
- Assist in banding migratory waterfowl species
- Operated an outboard motor on a boat to assist in driving and capturing Canada Geese
- Perform listening runs and lek surveys for sharp-tailed grouse
- Sample brains of furbearer species for rabies screening
- Boil jaws and extract teeth from mountain lions, bobcats, otter, fisher, and marten for aging
- Remove reproductive tracts from female furbearers to count placental scars
- Examine stomach contents of all furbearer species
- Skin and put up fur for fishers, wolves, otters, and marten
- Create and maintain spreadsheet for PPMV-1 outbreak, respond to calls from the public, assist in news/media coverage

- Used R Studio to analyze deer archery harvest data to create a database for future journal publication
- Test northern pike and walleye for viral hemorrhagic septicemia
- Euthanize raccoons and skunks via chemical injection
- Perform blood draw on deer for brain worm sampling
- Operated an ATV with a spotlight at night for sage grouse captures
- Performed sharp-tailed grouse lek surveys using a spotting scope to count birds lekking, identifying sex of birds, and locating new leks
- Conducted pheasant crowing surveys by driving a transect and methodically counting crows
- Assisted in sage grouse capture and translocation
- Keep laboratory sterile and stocked with equipment
- Sharpen knives for necropsies

05/19-08/19 Research Technician I - Michigan State University, Lincoln City & Clatskanie, OR

- Utilized Sherman and tomahawk traps to trap various species including mice, shrews, voles, squirrels, and chipmunks
- Set traps following grid protocols and checked traps daily
- Ear tagged small mammals as part of mark and recapture protocols
- Identified and sexed small mammals as part of data collection
- Euthanized animals as needed and disposed of properly
- Routinely disassembled traps and cleaned
- Entered information into database
- Measured diameter and height of saplings in clear cut areas owned by timber companies
- Used 4WD trucks to navigate on timber industry land
- Utilized CB radios to communicate with logging trucks in active logging areas
- Followed timber industry protocols when operating on timber company property

10/18-12/18: Chronic Wasting Disease Technician – Colorado Parks & Wildlife, Craig, CO.

- Extracted lymph nodes, tonsils, or brain stem tissue from mule deer, elk, or moose
- Removed ivories from elk and teeth from deer for age samples
- Interacted with hunters during testing process, answered questions and phone calls
- Entered sample data and harvest information into database
- Picked up samples from various CWD check station locations
- Assisted in incineration of heads and positive tested meat
- Operated skid steer to remove and dump ash from incinerator
- Organized and maintained samples and collection bags
- Kept warehouse environment sterile and orderly
- Assisted game wardens in wildlife management tasks such as wounded animals and radio collar re

05/18-08/18: Wildlife Research Technician - University of Idaho, Challis, ID.

- Tracked collared sheep via radio telemetry and GPS data through mountainous terrain
- Used spotting scopes and binoculars to identify and observe collared sheep
- Monitored sheep for signs of sickness and recorded behavior data
- Identified vegetation along 100 m transects
- Used Dobbenmeier frames and densitometers to calculate percent cover
- Collected vegetation and fecal samples for biomass and quality assessment

- Backpacked and car camped in locations for long periods of time

05/17-08/18: Wildlife Research Technician - University of Wyoming, Rock Springs, WY.

- Experienced in assembling and programming radio collars
- Used Advanced Telemetry Systems (ATS) to radio collar and track mule deer fawns and elk calves
- Recorded body measurements, took blood samples, and collected environmental data during fawn and calf collaring
- Investigated adult and neonate mortalities and carried carcasses out for necropsy
- Set and routinely checked coyote traps
- Collected and identified vegetation samples in a methodical manner
- Collected and processed deer and elk fecal samples and entered into database
- Navigated in remote areas on two-tracks with a four-wheel drive vehicle
- Navigated across a large geographic region to extremely specific locations and navigated in the field using a GPS while using a vehicle or on foot
- Worked with landowners, Wyoming Game and Fish Department, Wyoming Game and Fish Commission, the and Muley Fanatic Foundation

05/14-08/14: Wildlife Specialist - USDA-APHIS Wildlife Services, Rhinelander, WI.

05/15-08/15

- Trapped nuisance beavers using cable restraints, body grip traps, and foothold traps
- Well versed in identifying beaver sign and discerning inactive v. active beaver sign
- Navigated across a large geographic region (northern Wisconsin) to extremely specific locations (coordinates) and navigate in the field using a GPS while using a vehicle, ATV, canoe, or on foot
- Trapped and relocated nuisance black bears using culvert traps
- Navigated in remote areas on secondary and unimproved woods roads with a four-wheel drive vehicle
- Well versed with canoeing remote areas
- Conducted trout stream surveys in remote and difficult to access locations and recorded GPS coordinates of beaver dams
- Removed beaver dams by hand using hand tools from cold water ecosystems
- Assisted certified blasters in dam removal using explosives
- Participated in all aspects of capturing nuisance Canada geese
- Collected fecal samples from geese following laboratory procedures
- Experienced in backing a trailer up with a pickup truck
- Can effectively set up turbo fladry on farms and ranches
- Can effectively set up electric poly tape fences on farms and ranches
- Maintained bear complaint database
- Compiled wolf depredation data from previous years
- Answered calls from the public about West Nile Virus on a hotline and entered data into database
- Performed general office maintenance tasks
- Mowed grass, emptied garbage cans, made beaver castor, made bear lure, and took direction from several supervisors and accomplished all minimal tasks
- Was responsible for setting priorities within a broad framework of work that needed to be accomplished

09/13-05/18: Research Technician - Michigan State University, East Lansing, MI.

- Conducted scientific experiments in the greenhouse resulting in peer reviewed publications
- Collected and entered data for statistical analysis purposes
- Took pictures of trials for comparison of treatments in a greenhouse and lab setting
- Analyzed of data using Statistical Analysis System (SAS), including separation of means (Fisher's LSD)
- Conducted experiments using various levels of heavy metals in agar to test what levels of heavy metals inhibit or accelerate the growth of *Cylindrocarpon*.
- Experienced in operating Watch Dog temperature devices and uploading weather data into SpecWare 9
- Created graphs using SigmaPlot
- Fungal transfers in a lab environment using aseptic techniques
- Experienced in isolating and identifying pathogens from plant root samples in a lab environment
- Cultured ornamental crops from sowing seed, transplanting, and maintaining including: begonia, geranium, osteospermum, impatiens, roses, coleus, azalea, pansy, pointsettia, mandevilla, dahlia, snapdragon, zinnia, petunia, nicotiana, and calibrachoa
- Maintained and prepared inoculum fungal cultures of: *Pythium*, *Rhizoctonia*, *Myrothecium*, *Cylindrocarpon*, *Phytophthora*, *Botrytis*, and *Thielaviopsis*
- Prepared various types of culture media for growing fungal pathogens including V8 agar, potato dextrose agar, millet seed, and field isolate
- Experienced in maintaining active cultures of obligate parasites: downy mildew, powdery mildew, and black spot
- Maintained greenhouse plant experiments, including determining fertilizer and pH requirement calculations and dilutions
- Prepared graphs from data for reports and presentations
- Co-authored trial reports prepared for grant and contract research in Plant Disease Management Reports format
- Aided in harvesting vegetable research trials to obtain yield data including tomatoes, cucumbers, ginseng, onion, and asparagus
- Maintained ornamental plants in greenhouse setting by checking water and fertilizer levels daily, pruning plants, and checking for insects
- Maintained greenhouse facilities by washing floors, vacuuming, cleaning gutters, and taking out garbage
- Oversaw greenhouse research trials, including developing protocols, initiating the experiment, preparing and inoculating plants, applying fungicide treatments, taking data, statistical analysis, and writing reports
- Experienced in extracting DNA from fungal cultures and running Polymerase Chain Reactions
- Conducted bacterial colony counts using serial dilution methods

Additional Education:

2010-2012: Associate of Science Degree.
St. Clair County Community College, Port Huron, MI.

Relevant courses taken: Mammalogy, ornithology, upland ecosystem management, wetland ecosystem management, wildlife research and techniques, human dimensions, fundamentals of fisheries and wildlife, biology, forest vegetation, ecology, ecological problem solving, statistics, population analysis and management.

Certification/Training:

2019: Basic First Aid and CPR Certification, Bismarck, ND.
2019: AED Certification, Bismarck, ND.
2016: Michigan Commercial Certified Pesticide Applicator, Michigan Department of Agriculture.
2015: Ojibwa Cultural Awareness Training Workshop, Lac du Flambeau, WI.
2015: Chemical Immobilization of Free-Ranging and Captive Wildlife, Stevens Point, WI.
2015: NRA Basic Pistol Certification, Rhinelander, WI.
2014: NRA Basic Rifle Certification, Rhinelander, WI.
2014: ATV Certification, Rhinelander, WI.
2014: Defensive Driving Certification, Rhinelander, WI.
2014: Boater's Certification, Rhinelander, WI.
2014: Michigan Trapper's Education Certification, Lansing, MI.
2010: Michigan Hunter's Safety Education, Sandusky, MI.

Affiliations:

2021-present: MSU FW Graduate Student Organization, seminar series chair, welcoming chair, and departmental faculty representative
2021-present: Wildlife Disease Association-Michigan State University Student Chapter, treasurer.
2014-present: The Wildlife Society, member-MI chapter 2014-present, ND chapter 2019, Wildlife Disease Working Group member.
2014, 2019-20: Pheasants Forever, member.

Conferences/Seminars/Talks:

2019: Invited Speaker, "Deer Management in North Dakota" Habitat, Hunt, Harvest, Fort Ransom, ND.
2018: Invited Speaker, "Fisheries and Wildlife Management as a Career" Sanilac Career Center, Peck, MI.
2016, 2017: Attendee, Great Lakes Grower's Expo, Grand Rapids, MI.
2015: Attendee, GLIFWC Annual Rice Meeting, Rhinelander, WI.
2014, 2015: Invited Speaker, Wildlife Services Northern District Meeting, Rhinelander, WI.
2014: Attendee, The Wildlife Society Midwest Student Conclave, Marquette, MI.

Computer Applications:

- Detailed understanding of Microsoft applications including Word, Excel, Access, and Powerpoint.
- Fundamental knowledge of SigmaPlot.
- Extensive background in Watchdog Specware Software to record and plot weather data.
- Statistical Analysis System (SAS) used for experimental data analysis including SAS PROC GLM for separation of means.

- Fundamental knowledge of R and R Studio.
- Strong background in use of Global Positioning System (GPS) for navigation.
- Demonstrated knowledge and experience utilizing Advance Telemetry Systems (ATS) to locate and track wildlife.