

ALEX MAY

MOOSE@BACKCOUNTRY.SCIENCE

EDUCATION

University of Wyoming, Laramie, WY

August 2020

Wyoming Cooperative Fish and Wildlife Research Unit

Master of Science in Zoology and Physiology, graduate minor in Statistics · GPA 4.0

The Colorado College, Colorado Springs, CO

May 2008

Bachelor of Arts in Biology · GPA 3.4

EXPERIENCE

Seattle Public Utilities—Wildlife Biologist

September 2019 – Present

North Bend WA

- Responsible for the wildlife monitoring programs in the Cedar and Tolt River Municipal Watershed
- Developed and implemented a passive acoustic monitoring program for sensitive species
- Provided consultation on and ensured compliance with ESA, MBTA, and SEPA for non-fish wildlife
- Collaborated with outside agencies, including WDFW and Muckleshoot Indian Tribe
- Safety Committee and Branch Equity Team

Wyoming Co-op Unit—Graduate Research Assistant

September 2014 – August 2019

Laramie WY

- Designed and implemented an applied research project on nutritional condition of moose, demographics, and their responses to beetle-killed forest in the Snowy Range of Wyoming
- Conducted extensive fieldwork, planned and executed five helicopter captures, conducted calf recruitment surveys, terrestrial habitat condition assessments, and vegetation line transects
- Worked on public and private lands and maintained landowner relationships
- Prepared reports and presented findings to researchers, agency personnel, and the public
- Managed data using Access and completed spatial and statistical analyses using ArcGIS and R
- Volunteered for numerous other animal captures throughout the state — 625 ungulates handled

HWA Wildlife Consulting, LLC—Wildlife Biologist and Project Manager

August 2017 – December 2018

Laramie WY

- Performed field and office work to fulfill wildlife research/monitoring and reclamation contracts
- Conducted surveys and wrote assessments for species of conservation concern
- Modeled land usage by big game species from pellet group counts
- Collated and managed data, created maps, and authored technical reports
- Communicated findings to clients and discussed scientific needs
- Used R to streamline report generation, file management, and to conduct spatial modeling and analyses

Lone Pine Analytics, LLC—Statistical Analyst

Contract Work - February 2017

Laramie WY

- Data management, exploratory analyses, and formal statistical analysis for a golden eagle project
- Calculated dynamic Brownian bridge movement models, seasonal utilization distribution summations, and created maps in a reproducible and automated fashion using R

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EXPERIENCE (continued)

National Park Service—Biological Science Technician (Wildlife) April – September 2014
Moose WY April – October 2011, 2012, 2013

- Crew leader for multiple concurrent wildlife projects within Grand Teton NP
- Assisted with black and grizzly bear trapping, helicopter elk surveys, and trend counts/classifications for pronghorn, mountain goats, and bighorn sheep
- Supervised 2 to 6 seasonal biological technicians, wrote technical reports, and maintained databases
- Surveyed sage and sharp tailed grouse leks and monitored nests of numerous raptors and waterfowl
- Created a field method for estimating tick burden of moose and developed an avian point-count project
- Conducted fieldwork in rugged backcountry

Round River Conservation Studies—Wolverine Technician December 2013 – March 2014
Driggs ID

- Checked and maintained box traps and assisted in wolverine processing
- Recruited backcountry skiers and snowmobilers to participate in GPS-logging of their activities and discussed a controversial topic with an opinionated public
- Crew lead for trapping, recreation monitoring, and data quality in March

Teton Science Schools—Research Associate October 2012 – March 2013
Jackson WY

- Provided study design, literature review, data management, and field work for a study of road-kill mitigation with roadside reflectors
- Developed an automated system for data collection
- Conducted nighttime behavioral observations of mule deer
- Contacted landowners, coordinated with WYDOT personnel, and delivered professional presentations

Colorado Parks and Wildlife—Black Bear Technician January – March 2012
Durango CO

- Immobilized black bears in their dens with Telazol
- Checked collar fit, performed body condition assessments, drew blood, and PIT-tagged cubs
- Pinpointed den locations using radio telemetry and reprogrammed collars
- Compiled, organized, and implemented analyses of GPS collar data
- Worked long hours in winter conditions

US Forest Service— Biological Science Technician (Wildlife) January – March 2010
Macdoel CA

- Snow tracked martens through backtracks and transects
- Established hair snares and remote cameras
- Supervised QA/QC
- Cross country skied off-trail and drove a snowmobile 20-60 miles daily in deep powder
- Worked alone and maintained radio contact with another technician
- Discussed project goals with interested members of the public

Archbold Biological Station—Post-Baccalaureate Research Intern February – August 2009
Venus FL

- Performed field and laboratory duties for an endemic arthropod conservation project
- Conducted fieldwork during mid-day sun and thunderstorms in central Florida

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VOLUNTEER EXPERIENCE (full-time)

Lajuma Research Centre— Leopard Project Volunteer
Louis Trichardt South Africa

November – December 2011

- Maintained a large remote camera grid to study leopard abundance in the Soutpansberg Mountains
- Processed a large volume of digital photos and identified individual leopards based on spot patterns

National Park Service— Wolf Technician
Moose WY

January – April 2011

- Tracked wolves via snow and radio telemetry for a predation study
- Performed detailed field necropsies at kill sites to determine species, cause of death, and condition
- Traveled 3-18 miles daily on cross-country skis in temperatures as low as -20° F
- Identified GPS clusters with ArcMap and trained other technicians

US Fish and Wildlife Service— Kodiak Bear Technician
Kodiak AK

May – August 2010

- Conducted habitat selection surveys during multi-day backpacking trips in very remote wilderness
- Bushwhacked daily in areas of intense brown bear concentration and carried a firearm for safety
- Assisted with aerial telemetry on collared bears and bear population surveys from a Husky floatplane
- Established remote cameras
- Drove an outboard powered boat to access field sites

University of Alberta— Cougar Field Technician
Elkwater Alberta

September – December 2009

- Used radio telemetry to locate collared cougars and download GPS data
- Investigated movement data to find cache sites
- Performed field necropsies to confirm cause of death and identify prey species
- Spoke with ranchers for permission to conduct fieldwork on private property
- Used a chainsaw, winch-equipped 4x4, and snowmobile in highly variable conditions

PUBLICATIONS

Ortega, A., S. Dwinnell, T. LaSharr, R. Jakopak, K. Denryter, K. Huggler, M. Hayes, E. Aikens, T. Verzuh, A. May, M. Kauffman, K. Monteith. 2020. Effects of partial sedation on reducing stress in mule deer. *Journal of Wildlife Management*.

Riginos, C., M. Graham, M. Davis, A. Johnson, A. May, K. Ryer and E. Hall. 2018. Wildlife warning reflectors and white canvas reduce deer-vehicle collisions and risky road-crossing behavior. *Wildlife Society Bulletin*. DOI: 10.1002/wsb.862

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ANIMAL HANDLING EXPERTISE

- Over 600 large mammals handled (with and without chemical immobilization)
 - 397 mule deer (physically restrained)
 - 118 moose (immobilized with Carfentanil/Xylazine or Etorphine/Xylazine or physically restrained)
 - 51 elk (physically restrained or immobilized with BAM)
 - 35 bighorn sheep (physically restrained or immobilized with BAM)
 - 35 black bears and 2 grizzly bears (immobilized with Telazol)
 - 2 wolverines (immobilized with Ketamine/Medetomidine)
- Volunteer raptor rehabilitation handler 2013, 1 osprey and 3 passerines banded
- Numerous wildlife immobilization courses
 - Colorado Parks and Wildlife (Lisa Wolfe, DVM), Durango CO 2012
 - Idaho Department of Fish and Game (Mark Drew, DVM), Island Park ID 2013
 - Wyoming Game and Fish Department (Mary Wood, DVM), Laramie WY 2014
 - Wyoming Game and Fish Department (Mary Wood, DVM), Laramie WY 2016
- Trained and experienced in administering agonists and reversals with jab-sticks, syringes, and dart guns
- Safely captured large animals via free-darting, culvert traps, box traps, and in-den capture
- Highly practiced in fitting collars, drawing blood, administering drugs, implanting PIT and ear tags, collecting samples and measurements (disease/tonsil swabs, parasites, hair, fecal, etc.), titrating anesthesia, temperature mitigation, wound care, and emergency medical decision-making

COMPUTATIONAL and ANALYTICAL SKILLS

- High-level command of R for statistical and spatial analyses, remote sensing, and data manipulation
 - Machine Learning, GLMs, GLMMs, Model Selection/AIC, Home Range Analyses, Resource and Step Selection Functions, Survival analyses
- Advanced skills in ArcGIS Desktop, Access, Excel, Publisher, etc.
- Extensive use of ImageJ, GIMP, and Adobe Photoshop for image-based analyses and alteration
- Beginner abilities in RMark/Program MARK, Python, and SAS from quantitative graduate coursework

OUTDOOR TRAINING and EXPERIENCE

- Continuous Wilderness First Responder and CPR certification since 2010
- Previous Wilderness-EMT certification (highest attainable wilderness first aid certification)
- Ten years of experience safely working outdoors in extreme environments
- Skilled backcountry traveler (foot/snowshoe/skis, snowmobile, ATV, kayak, canoe)
- AIARE Avalanche Level 1 certification, numerous other avalanche safety courses
- EXUM mountain safety and snowfield travel courses (2011, 2012, 2013)

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RECENT PRESENTATIONS

May, A. B. 2020. “Moose don’t respond to beetle kill despite an appetite for somethin’ fresh” *Master’s thesis defense* delivered via Zoom. Laramie, WY.

https://1drv.ms/v/s!Ar9ujDz9uKN7hKpJII_bdbeAIHKbZw?e=Os4qeb | pw = moose

May, A. B., K. L. Monteith. M. J. Kauffman. 2019. “Responses of moose to beetle-killed forest in the Snowy Range” *Ignite-style oral presentation* to the USGS and Wyoming Game and Fish Department Cooperator Meeting; Annual Meeting. Laramie, WY.

<https://wyocast.uwyo.edu/WyoCast/Play/2dbc3c7832a94ffc88c007ba9e5e17861d> | 1:03:30–1:11:15

May, A. B. 2019, 2018, 2017, 2016, 2015. Training Seminar on Ecology, Tracking, and Classification of Shiras Moose. *Oral presentation* to Winter Moose Day Participants in February. Laramie, WY.

May, A. B., K. L. Monteith. M. J. Kauffman. 2016. “Nutritional Responses of Moose to Beetle-Killed Forests in Southeast Wyoming” *Poster presentation* at the Wyoming Chapter of the Wildlife Society Conference. Cody, WY.

<https://1drv.ms/b/s!Ar9ujDz9uKN7-XAJ4ONIpurbSKpE> | pw = moose