

Alyssa M. Davidge

Graduate Research Assistant

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Education

- 2020-Present Graduate Studies in Integrative Biology, University of Colorado, Denver
Current GPA: 3.7
- 2010-2014 Bachelor of Science in Wildlife and Fisheries Science; Wildlife Specialty, Minor in Biology, Pennsylvania State University

Research Experience

- 2020 Research Assistant: University of Colorado, Denver, Yellowstone, WY.

Project: Habitat use modeling as a tool to further describe the symbiotic relationship between Clark's nutcracker, (*Nucifraga columbiana*) and whitebark pine, (*Pinus albicaulis*) (Data Collection).
- 2019-2020 Population Dynamics Lab Assistant: Pennsylvania State University, PA.

Project: Data management and validation related to Salamander Population and Adaptation Research Collaboration Network (SPARC Net), (Data Analysis).
- 2019 & 2020 Painted Turtle Research Assistant: Northeastern Illinois University, IL.

Projects: Mite diversity as a water quality indicator (Project Lead), long-term mark-recapture study of painted turtles, (*Chrysemys picta*), on Lac Courte Oreilles Lake, Wisconsin (Data Collection).
- 2017 & 2019 Raptor Banding Blind Lead: HawkWatch International, 2017 Chelan Ridge WA, 2019 Manzano Mountain NM.

Projects: Morphological changes in American kestrels, (*Falco sparverius*) at continental migration sites (Data Collection), spatial distribution of golden eagles, (*Aquila chrysaetos*) across North America (Data Collection), Fall 2017 & Fall 2019 raptor migration annual report (Data Collection Lead, Technical Manuscript Reviewer).
- 2017-2018 Condor Field Biologist: The Peregrine Fund, Marble Canyon, AZ.

Projects: Portable X-ray fluorescence device for bone lead measurements of condors (Lead Handler, Data Collection), protocols for lead exposure, diagnosis, and treatment in California condors released in Arizona (Project Lead), tracking patterns of mortality in free-ranging California condors, (*Gymnogyps californianus*) (Data Collection Lead), quantifying voluntary lead reduction efforts

within the Northern Arizona range of the California condor (Outreach), utility of portable lead analyzers for wildlife conservation (Data Collection), bullet fragmentation and implications for lead exposure in avian scavengers (Data Collection and Outreach).

2017 California Spotted Owl Wildlife Technician: University of Wisconsin, Eldorado Owl Crew, Georgetown, CA.

Projects: Movement and occupancy data in a territorial species (Crew Lead), California spotted owl, (*Strix occidentalis occidentalis*), habitat climate change risk assessment and management (Data Collection), assessment of tall tree cover in California spotted owl habitat (Data Collection), megafire site survey and scope of threats to old-forest species (Data Collection), California spotted owl territory occupancy in the Sierra Nevada: habitat associations and their implications for forest management (Data Collection), investigation into agenda-driven science in conservation (Data Collection).

2016 California Least Tern and Western Snowy Plover Research Assistant: San Diego Zoo Global, Institute for Conservation Research, San Diego, CA.

Projects: Factors influencing California least tern, (*Sterna antillarum browni*) colony site selection (Data Collection and Analysis), mark re-sight/re-capture study looking at tern and Western snowy plover, (*Charadrius alexandrinus nivosus*) fecundity (Lead Bander), capture of nest predators for the protection of threatened and endangered shorebird species (Data Collection).

2015-2016 California Condor Monitoring Technician: The Great Basin Institute, Hopper Mountain National Wildlife Refuge Complex, Ventura, CA.

Projects: Remote observation of California condor nesting behavior (Intern Lead), wing loading capacity of California condors (Data Collection Lead), supplementary feeding and endangered avian scavengers (Data Collection), lead exposure risk from trash ingestion by the endangered California condors (Data Collection), Ethogram evaluation of behavior in a reintroduced population of California condors (Data Collection), Outreach and environmental education for reintroduction programs (Outreach).

2012 Research Assistant: Operation Wallacea, Guyana, South America.

Projects: Iwokrama International Center for Rain Forest Conservation and Development Annual Report 2012-2013 (Data Collection), collection of reptiles and amphibians across the Guiana Shield as a tool to better understand species diversity and endemism (Data Collection), dung beetle presence as indication of large predator presence (Data Collection), capture of *Artibeus* and other frugivorous bats within the Iwokrama Forest in Guyana, South America: inventory of dispersed seeds (Data Collection), bat specimen collection for Royal Ontario Museum (Data Collection).

Volunteer and Rehabilitation Experience

- 2020-Present Entomology Collections Assistant: Denver Museum of Nature and Science, Denver, CO.
Directive: Assist with specimen acquisition, digital cataloging, pin specimens, general collection care and maintenance.
- 2018-2019 Visiting Bander: Cape May Raptor Banding Project, Cape May, NJ.
Directive: Cared for lure birds, extracted raptors from net set, administered band, measured weight, age, sex, and species for all captures.
- 2013-2019 Bird Banding Volunteer: U.S. Geological Survey and Pennsylvania State University Extension Education, State College, PA.
Directive: Extracted songbirds from mist nets. Aged, sexed, and correctly identified species. Safely administered unique identification bands.
- 2018 Wildlife Rehabilitation Technician: Best Friends Animal Society, Kanab, UT.
Directive: Handled sick/injured raptors, small-large mammals, reptiles and amphibians. Led educational public tours and gave public presentations about department progress.
- 2011-2014 Wildlife Rehabilitation Volunteer: Centre Wildlife Care, Port Matilda, PA.
Directive: Observed behavior and evaluated detained wildlife for potential for release. Participated in public outreach events, classroom visits, and handling trainings.

Awards

- 2015-2016 AmeriCorps Eli Segal Education Award
Received for service and dedication as AmeriCorps Corps Member, \$5,645.
- 2010-2014 Grace D Dreher Scholarship
Received for outstanding academic achievement and writing expertise, \$4,000.
- 2010 Dr. Jean Dace Golden Scholarship
Received for recognized outreach and community service, \$200.

Publications

Peer-reviewed

- 2020 Davidge, Alyssa and Andrea Contina. Stable Isotope Analysis and Painted Buntings in International Pet Trade. (First Draft)
- 2020 Davidge, Alyssa and Beth A. Reinke. Mite diversity as a water quality and development indicator. (Second Year of Data Collection)

Technical

- 2019 Watson, Jesse. In Reivew. "In-Hand Guide to Raptors of North America" HawkWatch International (Contributions and manuscript review).
- 2015 Davidge, Alyssa. "VHF Radio Telemetry Protocol Manual." Hopper Mountain National Wildlife Refuge Complex. US Fish and Wildlife Service (Author).

Popular

- 2018 Davidge, Alyssa. "Crazy Martha: A Story of Plover Persistence." Science Blog. San Diego Zoo Institute for Conservation Research (Author).

Public Presentations

Professional Talks:

- 2019 Representative Bander: Educational discussion on raptor migration, diversity, and banding procedures. SP Entertainment, Manzano, NM
- 2019 Guest Lecturer: Avian mortality, wind farms, and multiple stakeholders. Animal Welfare, Pennsylvania State University
- 2018 Department Elected Representative: Anthropogenic risks to wildlife and post-intervention rehabilitation success. Best Friends Animal Society, Kanab, UT
- 2018 Invited Speaker: Progress of The Peregrine Fund on California condor reintroduction, current population status, and barriers to future success. Road Scholars, Marble Canyon, AZ
- 2017 Representative Bander: Educational discussion on raptor migration, diversity, and banding procedures. Hawkfest, Pateros, WA
- 2015 Representative Condor Biologist: Discussion on captive breeding as a tool to combat extinction and relevance to the California condor recovery program. Public release of California condor AC-4, Bitter Creek National Wildlife Refuge, Maricopa, CA
- 2012 Invited Panelist: Discussion for fellow students on research opportunities and findings during research abroad with Operation Wallacea. Penn State University, Department of Ecosystem Science and Management, State College, PA

Outreach:

- 2019 Invited Presenter: Color in freshwater ecosystems. Hayward Primary School Summer Camp, Hayward, WI
- 2018 Invited Speaker: Lead ammunition alternatives, specifications, and implications for wildlife. North American Non-Lead Partnership, Grand Canyon National Park, AZ
- 2017 Invited Speaker: California condor history and reintroduction dynamics. Non-lead ammunition initiatives and public science opportunities. National Public Lands Day, Navajo Bridge, AZ
- 2014 Outdoor School Camp Counselor: Led co-ed group of 5th grade students through a natural history, science-based curriculum. Shaver's Creek Environmental Center, Pine Grove Mills, PA
- 2012 Raptor Handler: Introductory education for public about wildlife and raptors specifically. Wild About Animals, Penn State University, Agricultural Arena, State College, PA

Certifications

- 2019-Present Wilderness First Responder (NOLS Wilderness Medicine)
- 2015-Present Operation of government utility task vehicles (USFWS)
- 2014-Present Associate Wildlife Biologist (The Wildlife Society)

2008-Present	CPR/AED Child and Adult (American Heart Association)
2016	Naval Airfield Driver's License (US Navy)
2016	Unexploded Ordinance Protocol (US Navy)
2012	Zoonotic Disease and Rabies Vector Species Handling (Centre Wildlife Care)

Specialized Training

Field

General: anchor construction, climbing/belaying, extreme camping, extreme hiking, GPS navigation, heavy lifting, topographic map navigation.

Capture Methods: use of snares, nooses, mist nets, bow nets, drop nets, doh 'gaza nets, live spring traps, pitfall traps.

Tracking and Count Methods: color band and patagial wing tag attachment/re-sighting, Passive Integrated Transponder injection and tracking, plot abundance and density estimates, solar powered nest camera construction, sub-permitted raptor and songbird banding, transect surveys and point counts, vegetation surveys, VHF radio telemetry.

Field care: administration of IV fluids and chelation treatment in large raptors, blood draws in raptors, gavage feeding of song birds, raptors and small mammals.

Technical

ArcMap, ESRI Software, GIMP, GitHub, JMP, Microsoft Office Suite, off-grid nest camera networks, R and JavaScript programming languages, remote telemetry stations, SQL Server Management Studio, website creation and design.

Natural History

Identification of 200 unique bird species by sight and/or sound, identification of 150 species of tree with or without leaves, identification of 50 species of reptiles and amphibians by sight and/or sound, identification of 30 different animal tracks, identification of 20 families of fish, use of dichotomous keys for tree, reptile, amphibian and insect identification.

Machine

Arborist's harness and rope, ATV operation, chainsaws, charge controllers, manual transmission, mechanical advantage raising/lowering systems, MIG welding, motor boat operation, operation of 4x4 trucks with load bearing trailers on unmaintained roads, prusiks, skid-steer loaders, snow mobiles, solar panels, UTV operation, winches, .22 caliber rifle.

Academic/Professional Membership

2019-Present	American Ornithological Society
2019-Present	Association of Field Ornithologists
2019-Present	Ecological Association of America
2019-Present	Raptor Research Foundation
2019-Present	Wilson Ornithological Society
2011-Present	The Wildlife Society: Biological Diversity, Women in Wildlife, Out in the Field Working Groups

Relevant Coursework

University of Colorado, Denver

2020 Graduate Level: Biological Data Analysis (R), Advanced Ecology

Raptor Research Foundation

2019 Workshop-All About Permits

The Wildlife Society

2019 Workshop-An Applied Introduction to Bayesian Statistics for Ecologists, Workshop-Spatial Sampling and Study Design, Workshop-Bird Conservation Database (IMBCR) use and access for Federal Agencies, Workshop-Data Integration for Species Distribution Modeling

Western Colorado State University

2019 Wilderness First Responder Training

Pennsylvania State University

2014 Sensory Biology of Insects, Global Evolution and Conservation of Amphibians and Reptiles, Wildlife

and Fisheries Population Dynamics, Intermediate Applied Statistics

2013 Wildlife and Fisheries Management Techniques; Field Dendrology; Plant Physiology; Field Ichthyology; Ornithology Field, Class, and Practicum; Genetics and Evolution of the Human Species; Wilderness First Aid Training; Technical Writing; Effective Speech

2012 Field Biology; Applied GPS/GIS; Vertebrate Field, Class, and Lab; Wildlife and Fisheries Science

Measurements; Introduction to Biometry; Biological Functional Diversity; Animal Welfare; Principles of Animal Breeding and Genetics

2011 Wildlife and Fisheries Conservation; Introductory Soil Science; Philosophy of Nature and the Environment; Biology: Populations and Communities; Biology: Basic Concepts and Biodiversity

Press and Media

2019 Featured in The Independent as a blind lead of the HawkWatch International Manzano raptor counting/banding crew, article authored by Thomas Campbell

2017 Featured in HawkWatch International blog as a member of the Chelan Ridge raptor counting/banding crew

2015 Featured in US Fish and Wildlife Service Pacific Southwest Regional News and Santa Barbara Zoo's Condor Cave "California Condor AC-4 Returns to the Wild after 30 Years"

2015 Featured in Penn State News "Student Stories: Recent wildlife, fisheries science grad monitoring condors" authored by Mariah Chuprinski

2012 Featured in informational video "Project Guyana-Operation Wallacea and Royal Ontario Museum" produced by Joshua See

References

Name	Relationship	Title	Organization	Email	Phone
Dr. Mike Wunder	Mentor/ Instructor	Associate Professor, Department of Integrative Biology	Pennsylvania State University, University Park	michael.wunder@ucdenver.edu	(303) 315-7661
Dr. Beth Reinke	Mentor	Assistant Professor, College of Arts and Sciences	Northeastern Illinois University	ereinke@niu.edu	(773) 442-5727
Sheila Whitmore	Supervisor	Associate Researcher, Peery Lab	University of Wisconsin, Madison	whitmore2@wisc.edu	(530) 414-8824