

Julia S. Polasik

The Institute for Bird Populations
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Professional Interest

My professional interest is to conduct research and monitoring of avian species to help guide management actions for the conservation of Sierra Nevada ecosystems.

Education

University of Wyoming M.S. ó Rangeland Ecology and Watershed Management
Laramie, Wyoming (August 2012 ó December 2014)

Thesis: Factors limiting survival and reestablishment of the critically endangered Wyoming toad (*Anaxyrus baxteri*). Major Advisor: Dr. Melanie Murphy

Paul Smith's College B.S. ó Fisheries and Wildlife Sciences (Wildlife concentration)
Paul Smiths, New York (September 2004 ó May 2008)
Graduated Summa cum Laude, 3.94 GPA

Work Experience

Sierra Nevada Avian Biologist ó The Institute for Bird Populations
Point Reyes Station, California (January 2015 ó Present)

- Geospatial modeling to predict potential locations of avian species
- Development of sampling designs and protocols for Sierra Nevada research projects
- Database design and management in Microsoft Access
- Data analysis, report writing, and conservation strategy updating
- Training and supervising field crews on Sierra Nevada projects

Graduate Research Assistant ó University of Wyoming

Laramie, Wyoming (May 2013 ó August 2013 and May 2014 ó December 2014)

- Led research on limits to early life stages of the endangered Wyoming toad that included conducting the following tasks:
 - Hiring, training and supervising two field assistants and three to four volunteers each field season (May ó August)
 - Training and supervising a new graduate student (June 2014 ó October 2014)
 - Field enclosure design and construction
 - Daily husbandry and size measurements of 8400 tadpoles and 2500 toadlets
 - Visible implant elastomer tagging toadlets
 - Vegetation and physical habitat measurements
 - Water quality assessment
 - Toadlet skin swab collection for *Batrachochytrium dendrobatidis* (*Bd*) testing
 - DNA extractions and quantitative polymerase chain reaction (qPCR) for detection of *Bd*
 - Data analysis and report writing for submission to the U.S. Fish and Wildlife Service

Biological Technician ó Wyoming Natural Diversity Database

Laramie, Wyoming (June ó August 2012)

- Assisted with design and implementation of a pilot study on the early life stage survival of the endangered Wyoming toad
- Developed data collection protocols and entered data
- Conducted field data collection on growth rates, metamorphosis and habitat use of tadpoles and toadlets held in soft-release enclosures at Mortenson Lake National Wildlife Refuge
- Data analysis and report writing for submission to the U.S. Fish and Wildlife Service

Bird Banding Volunteer ó Wyoming Natural Diversity Database

Laramie, Wyoming (June ó August 2012)

- Assisted with running a Monitoring Avian Productivity and Survivorship (MAPS) bird banding station two to three times per month including set up, bird extraction and processing
- Assisted with training volunteers in bird extraction and MAPS protocols for processing birds

Lift Operations Foreman ó Winter Park Resort

Winter Park, Colorado (October 2011 ó April 2012 and October 2010 ó April 2011)

- Assisted with training 30 lift operators in all daily duties and safe operation of lifts
- Supervised 30 lift operators on a daily basis at 12 different ski lifts
- Conducted preparation work at lifts prior to opening
- Completed paperwork associated with lift operations: incidents at lifts, disciplinary actions, guest complaints and timekeeping

Banding Intern ó Alaska Bird Observatory

Fairbanks, Alaska (August ó September 2011)

- Assisted with operating 30 mist nets at the Creamerø Field Migration Station
- Monitored and extracted birds from mist nets
- Banded migratory birds and collected data on their age, sex and overall physical condition including molt and the amount of fat they had stored for migration
- Assisted with teaching volunteers how to extract birds
- Greeted visitors and educated them on bird banding techniques

Biologist ó PRBO Conservation Science (now Point Blue Conservation Science)

Chester, California (April ó July 2011)

- Conducted avian point count surveys in chaparral, forested and riparian environments of the northern Sierra Nevada to obtain avian diversity and abundance and determine presence of management indicator species
- Estimated the distance to all birds observed during point count surveys
- Completed call-playback surveys for management indicator species (Mountain Quail, Hairy Woodpecker and Black-backed Woodpecker)
- Entered and proofed point count data for use in long-term management of forested habitats

Forestry Technician ó USDA Forest Service, Sulphur Ranger District

Granby, Colorado (May ó October 2010)

- Stratified USDA Forest Service road segments into units for hazard tree removal based on stand composition, slope and trees per acre

- Marked timber sale units to both leave tree and individual tree marking prescriptions
- Assisted with setting up cruise plots and cruising trees in timber sale units
- Conducted regeneration surveys in previously cut timber sale units
- Assisted with completing stand exams in USDA Forest Service campgrounds

Lift Operations Crew Leader ó Winter Park Resort

Winter Park, Colorado (November 2009 ó April 2010)

- Supervised a crew of five lift operators in daily duties while ensuring a safe work environment
- Verified all paperwork related to lift operations and potential incidents at the lift

Biological Technician – IAP World Services (Northern Prairie Wildlife Research Center)

Yankton, South Dakota (April ó August 2009)

- Searched for and monitored nests of endangered interior Least Terns and threatened Piping Plovers along the Missouri River of South Dakota and Nebraska
- Assisted with conducting a weekly adult census on the Missouri River for shorebirds
- Monitored chick and fledgling success rates by recapturing individuals or resighting bands
- Entered data associated with monitoring nests along the Missouri River

Project Assistant – Cary Institute of Ecosystem Studies

Millbrook, New York (August ó September 2008)

- Supervised mist-netting and banding of various avian species for ongoing tick research
- Assisted with trapping mammals using Sherman and Tomahawk traps
- Assisted with animal husbandry of bird and mammal species
- Collected and weighed replete ticks from animals in captivity for Anaplasma research

Research Assistant ó Texas Tech University (Field site: Cary Institute of Ecosystem Studies)

Millbrook, New York (May ó August 2008)

- Searched for and monitored nests of ground nesting species
- Mist-netted, target-netted, banded and bled Veeries
- Monitored predator activity around Ovenbird nests using track plates
- Entered data for banding, nest monitoring and track plating research

Applied Conservation Biology Intern – Seney National Wildlife Refuge

Seney, Michigan (May ó August 2007)

- Conducted independent comparative research on passerine communities in northern hardwood and mixed pine ecosystems through point count surveys
- Monitored anurans for ecotoxin affects
- Surveyed anurans for relative abundance using vocalizations
- Assisted in invasive plant research and management
- Assisted in forest ecosystem restoration research and management
- Assisted with endangered Kirtland's Warbler research and management
- Monitored Common Tern colony reproductive output

Watershed Steward – Adirondack Watershed Institute

Paul Smiths, New York (June ó September 2006)

- Monitored banded Common Loons as part of the Adirondack Cooperative Loon Program

- Educated public boat launch users on transport of invasive aquatic species
- Assisted with data entry and drafting seasonal reports

Teaching Experience

Teaching Assistant ó University of Wyoming

- Rangeland Management and Planning (Spring 2013 and 2014)
- Nutritional Management of Grazing Ungulates (Fall 2012 and 2013)

Supplemental Instructor and Tutor ó Paul Smith's College

- Science and Math Courses (Fall 2004 ó Spring 2008)

Ecological Field Skills

Amphibian

- Vocalization surveys
- Field enclosure design and construction
- Husbandry of anuran early life stages
- Size measurements and photography for image analysis
- Skin swab collection for *Batrachochytrium dendrobatidis* testing
- Marking with visible implant elastomer (VIE) tags
- Telemetry with harmonic tracking devices

Avian

- Nest-searching and monitoring reproductive success
- Mist-netting, banding, bleeding and size measurements of passerines
- Point count surveys (eastern and western U.S. species)
- Adult shorebird censuses
- Husbandry
- Predator activity monitoring with track plates
- Resighting color banded individuals

Forestry

- Species identification
- Stand exams
- Timber cruising
- Tree marking to prescriptions
- Regeneration surveys

Grasslands

- Basal and canopy cover vegetation measurements
- Species identification

Small and mesomammal

- Trapping
- Marking with ear tags
- Husbandry
- Lab and Computer Skills

- Proficiency with ArcGIS
- Statistical and spatial analyses in R
- Statistical analysis in SPSS
- Proficiency with Microsoft Access database design and use
- Occupancy modeling in Presence
- Image analysis of anuran photographs with ImageJ software
- Proficiency with HOBO data logger software
- Replete tick measurements using fine measurement scales
- DNA extraction from water samples and amphibian skin swabs
- Quantitative PCR (qPCR) detection of *Batrachochytrium dendrobatidis*

Oral Presentations

Polasik J. 2014. Factors limiting survival, growth and reestablishment of the critically endangered Wyoming toad, phase II testing habitat improvements using disturbance ó 2014 field season summary. Wyoming Toad Recovery Team Meeting, Cheyenne, WY.

Polasik, J. and M. Murphy. 2014. Habitat factors limiting Wyoming toad (*Anaxyrus baxteri*) survival and growth at a reintroduction site in the Laramie Basin of Wyoming. North American Congress for Conservation Biology Meeting, Missoula, MT.

Polasik, J. 2014. Factors limiting survival, growth and reestablishment of the critically endangered Wyoming toad ó 2013 field season summary. Wyoming Toad Recovery Team Meeting, Cheyenne, WY.

Polasik, J. 2014. Wyoming toad habitat and restoration efforts in the Laramie Basin. Invited guest speaker for Wildlife Habitat Restoration Ecology, University of Wyoming, Laramie, WY.

Polasik, J. 2013. Factors limiting survival and reestablishment of the critically endangered Wyoming toad ó 2013 research. Wyoming Toad Species Survival Plan Meeting, Laramie, WY.

Polasik, J. 2013. Proposed research for 2013: factors limiting survival and reestablishment of the critically endangered Wyoming toad. Wyoming Toad Recovery Team Meeting, Cheyenne, WY.

Polasik, J. 2012. Results of the 2012 Wyoming toad pilot study and future research directions. Wyoming Toad Recovery Team Meeting, Cheyenne, WY.

Poster Presentations

Polasik, J. and M. Murphy. 2014. Habitat factors limiting Wyoming toad (*Anaxyrus baxteri*) survival and growth at a reintroduction site in the Laramie Basin of Wyoming. Annual Meeting of the Colorado Chapter of the Wildlife Society, Fort Collins, CO.

Polasik, J., Murphy, M., McKee, J., Estes-Zumpf, W., and D. Keinath. 2012. Growth and survival of the Wyoming toad (*Anaxyrus baxteri*) at a reintroduction site in the Laramie Basin. Annual Meeting of the Wyoming Chapter of the Wildlife Society, Laramie, WY.

Polasik, J. and J. Favreau. 2008. Avian community composition in pine and northern hardwood

stands at Seney National Wildlife Refuge. Annual Meeting of the New York Chapter of the Wildlife Society, Owego, NY.

Reports and Research Briefs

Polasik, J. , Murphy, M. and J. Vance. 2014. Factors limiting survival and reestablishment of the critically endangered Wyoming toad (*Anaxyrus baxteri*): phase II ó testing Habitat improvements using disturbance ó 2014 field season report. Internal report for the U.S. Fish and Wildlife Service Wyoming Ecological Services Field Office, Cheyenne, WY, 52 pages.

Polasik, J. and M. Murphy. 2014. Factors limiting survival, growth and reestablishment of the critically endangered Wyoming toad ó 2013 field season report. Internal report for the U.S. Fish and Wildlife Service Wyoming Ecological Services Field Office, Cheyenne, WY, 69 pages.

Jakopak, R. and J. Polasik. 2014. Fire and black-backed woodpeckers in Upper Michigan. Lake States Fire Consortium Research Brief.

Polasik, J., and J. Lewis. 2012. Summary report on the 2012 Wyoming toad pilot study at Mortenson Lake National Wildlife Refuge. Internal report for the U.S. Fish and Wildlife Service Ecological Services Office, Cheyenne, WY, 48 pages.

Grants Awarded

Society of Wetland Scientists Student Research Grant ó 2013
Wyoming NASA Space Grant for Travel to Conferences ó 2014

Scholarships and Awards

College of Agriculture and Natural Resources Brand of Excellence Scholarship ó 2013
Outstanding Forestry Graduate Award ó 2008
Edward F. Prescott ø2 Memorial Scholarship ó 2007
Faculty Tutor Award ó 2007
Augsbury Scholarship ó 2006
Paul Smithø College Academic Scholarship ó 2004 to 2008

Professional Affiliations

American Ornithologists Union
Association of Field Ornithologists
Society for Conservation Biology
The Wildlife Society