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Carolyn Byers (Schmitz)

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EDUCATION

Aug 2013 MS: Wildlife Ecology, the University of Wisconsin- Madison.
"*Grassland bird use of warm season grass fields in Southwest Wisconsin with implications for harvesting warm season grasses for bioenergy*"

May 2009 BS: Biology: Ecology, Evolution, and Behavior, University of New Hampshire, Durham NH.

ENVIRONMENTAL EDUCATOR EXPERIENCE

Oct 2015 – present **Director of Education, Madison Audubon Society (MAS)**

Create goals and pursue education -related opportunities that advance the overall mission of MAS. Since Jan of 2016 MAS has reached 2,464 people, 97% of which were kids. Serves as liaison in the MAS service area with public schools and nonprofit efforts focusing on youth conservation education. Develop, implement, and evaluate curricula for all educational programming. Coordinate, teach, and evaluate classroom, after school, and other off-site programs primarily for children in grades K-8. Hire, train, and supervise education interns in the duties related to the education program. Recruit, train, and organize education volunteers. Lead professional development workshops for teachers and non-traditional educators. Assist with the identification and pursuit of funding sources for conservation education and related activities. Track and report on all grants awarded.

2015-Present Madison Audubon's Climate Lessons: teaching climate change through birds.

Developed, created and tested these lessons in partnership with Lincoln Elementary School (Madison, WI). These hands-on lessons span the school year and distill a complicated scientific topic into something kids can understand and relate to. Kids learn about the scientific method, collect pheonology data throughout the year, and then compare their data to the historic Aldo Leopold data set. The program ends with kids teaching their peers about climate change in a school-wide Birdathon. Lessons all contain a "lecture" followed by a game or activity that clarifies lesson materials. Currently working to align lessons with Next Generation Science Standards. All lesson materials and teaching instructions are available for FREE on the MAS website: http://madisonaudubon.org/climate-change-curricula.

Hosted three educator workshops which familiarized local educators with curriculum, allowed them to learn about ways to adapt lessons to fit their classroom needs, and gave them opportunities to practice playing all games and activities. Continued to provide educators with support throughout the school year.

Read more about this program:
MAS Fall 2015 Newsletter:
http://madisonaudubon.org/newsletter/

National Audubon website: http://www.audubon.org/news/wanted-bird-teachers-no-minimum-age-requirement

Oct 2014-15 Education and Operations Specialist, Madison Audubon Society

Assist Education Director with teaching programs, including those at schools and community centers. Create and teach interactive and engaging lessons that introduce inner-city kids to nature, and inspire them to continue nature exploration. Programming primarily targeted children K-8 at underfunded

schools or centers. Lessons encourage children to become scientists by asking them to make observations, form hypotheses, and collect data. We also explore various scientific careers, travel to local natural areas, and complete community service projects. Assisted Education Director and Executive Director with grant writing and review.

Other activities included assisting other staff with event planning (summer trails festival, Birds Bikes and Brews, MAS program series), database management, responding to phone calls and emails from the general public, and other administrative tasks.

OUTREACH EXPERIENCE

2010-14 Birding field trip leader for Grandparents University, a summer program at the University of Wisconsin, Madison (Madison, WI) that allows elementary and middle school students to attend classes with their grandparents at the University.

Various family presentations at local parks. Teach children and their parents about the grassland ecosystem. Discuss nesting ecology of grassland birds and their predators using both video footage of nest predators and predator study skins.

Mar 2013 Led field trips for local schools *Highland Elementary* and *High Marq Environmental Charter School*. Focused on local natural ecology and wildlife identification. Discussed ways of improving diversity and overall health of the school's forest.

Spring 2012 *Bird Kids*: I worked with 6th grade special education teacher at *PS382: Elementary School for Math, Science, and Technology* (New York, NY) to develop curriculum to educate students about birds. Answered email questions from students about bird evolution, behavior, and conservation. Students not only learned about birds, but developed writing and communication skills.

Summer 2008-9 Volunteer at Environmental Education Summer Camp, Pack Forest. The goal of this New York State's Department of Environmental Conservation camp was to provide teenagers from the inner city with an opportunity to get closer with nature in the Adirondack Mountains of NY. Duties included teaching teens basic ecology lessons, leave no trace backpacking, and monitoring the general safety of campers.

ACADEMIC TEACHING EXPERIENCE

2013 Teaching Assistant:WE424 *Wildlife Ecology Summer Field Course*, University of Wisconsin, Madison (Madison, WI). A two week field course in which I worked closely with a group of four students teaching them ways to survey the mammals, birds, herpetiles, and vegetation of a study area in Northern WI. I also assisted them with developing and writing a management plan for the study area. In addition to small group work, I taught a group of 40 students bird survey techniques such as mist netting, banding, point count surveys, and nest searching. Track stations, small mammal trapping, pitfall traps, camera trapping, frog call surveys, and research ethics were also covered.

2013 Teaching assistant: FWE306 *Terrestrial Vertebrates*, University of Wisconsin, Madison (Madison, WI). A course which teaches students to identify many of the terrestrial vertebrates found in WI, as well as their lifehisotry characteristics. We cover 54 species of birds, 69 mammals, 37 reptiles, and 19

amphibians. Primary duties: assisting with preparations for lab, teaching students during lab, leading field trips to local parks and wildlife refuges, and grading assignments.

2012 Teaching Assistant: FEW110 *Living with Wildlife*, University of Wisconsin, Madison (Madison, WI). Elective course for non-majors offering an overview of the history of wildlife conservation, wildlife ecology, and human-wildlife interactions. Primary duties: meeting with students to answer questions, grading, leading several birding field trips.

2011-3 Mentored undergraduate students involved in independent research projects. Assisted students developing hypothesis and research proposal, advised them about statistical analysis, and helped them prepare final posters and oral presentations. Topics covered include avian sleeping behavior, male Bobolink feeding rates at nests, male and female Common Yellowthroat feeding behavior, fledging ecology of grassland bird nestlings.

2008-9 Undergraduate teaching assistant: ZOOL542 *Ornithology*, University of New Hampshire (Durham, NH). Responsible for the museum specimens, preparing labs for students, assist students in learning to identify most species of birds found in Eastern North America. Also taught a bird calls class. Responsible for all aspects of bird calls class: deciding which species would be covered, preparation of power point presentations, teaching, and exams.

RESEARCH AND TECHNICAL EXPERIENCE

Fall 2013 – present: *Research Intern, UW-Madison dept. of Wildlife Ecology*

Data archivist for the US Forest Service: archive data from various projects, including Minnesota Forest Breeding Bird Project, RITS publication project, as well as my thesis data.

Summer 2014: *Grassland bird surveys in the Driftless Area of Wisconsin*.

Conducted roadside and field-based point counts for grassland birds and other focal species. Coordinated efforts with Wisconsin Department of Natural Resources personnel. Assisted with data entry and checking.

Fall 2013 – Spring 2014: *Research Intern, UW-Madison dept. of Wildlife Ecology*

Field Technician: winter bird foraging project: use bird feeders equipped with Radiofrequency Identification (RFID) data loggers to track frequency of visitation of birds marked with Passive Integrated Transponder (PIT) tags. I independently mist net, band, collect feather samples, and take morphometric measurements of birds caught at bird feeders. Typically worked with Black-capped Chickadee, Tufted Titmouse, White-breasted Nuthatch, and Downy Woodpecker. I then fitted birds with PIT tags (leg band), and collected data from smart feeders. I also prepared avian diet samples for isotope analysis.

Summer 2012-13: *Grassland bird surveys on Wisconsin Leopold Waterfowl Production Areas.*

Conduct point counts to determine grassland bird use of WPAs in Southwest WI. Extensive vegetation surveys also completed, including Robel measurements, ID of and ocular estimation of cover of prairie plants within a quadrat, litter depth and percent cover litter within a quadrat.

2011- Present: *Developing a field guide to grassland bird nests, eggs, and nestlings.*

Using photographs taken during my thesis research to create a field guide which will aid future field crews to identify and age nestlings. Will also be drawing and painting egg, nest, and adult bird ID plates.

2011- 2013*: Circadian rhythm in nesting male and female Bobolinks (Dolichonyx oryzivorus).*

Behavioral study using video footage collected during the summer of 2009 – 2011. Record female brooding rates, male and female feeding rates, and nighttime sleep behavior at nests containing varying numbers of chicks. Responsible for project design, hiring, training, and monitoring undergraduate technicians, compiling and analyzing data. Publication anticipated.

2010-11: *Thesis field work: Nest searching and monitoring of grassland birds*
Responsible for hiring, training and monitoring undergraduate field technicians, also coordinated my crew's nest searching and monitoring activities with those of Wisconsin Department of Natural Resources (WNDR) personnel. Searched for nests using rope dragging, systematic walking, and behavioral observations. Monitored nests using both manual techniques and remote infrared video cameras.

2011 *Study of nocturnal activity of nesting grassland passerines*
Hired undergraduates and trained them in data procedures for collecting behavioral data. Collected data on nocturnal behavior of nesting passerines using video footage from previous studies. Compiled data, author on publication (see publication below).

2009 *Summer internship with BioDiversity Research Institute (Gorham, ME)*
Mist netting, banding, and collection of blood samples from saltmarsh passerines in order to monitor mercury levels.

PUBLICATIONS

2012 Slay, Cm. M, K. S. Ellison, C. A. Ribic, K. G. Smith, C. M. Schmitz. 2012 . Nocturnal activity of nesting shrubland and grassland passerines. C. A. Ribic, F. R. Thompson III, P. J. Pietz (Eds.). Advances in Nesting Ecology Based on Video Surveillance. Studies in Avian Biology.

ARTISTIC WORK

2016- Present *Plumage variation in subspecies of Saltmarsh and Nelson's Sparrow*
Currently working on illustrations to be used in a scientific publication being developed at the Cornell Lab of Ornithology.

2013 *Photographs published in:*
S. Hull, B. Bhuey, S. Lutz, C. Pollentier, S. Walter. 2013. Why Turkeys Thrive in Wisconsin: Blending social science and ecology for optimal management. P 25. In L. Moore (Ed.) The Wildlife Professional.7(3).

2012 *Photograph published as cover art in:*
C. A. Ribic, F. R. Thompson III, P. J. Pietz. 2012. Video Surveillance of Nesting Birds. Studies in Avian Biology. Berkeley: University of California Press.

2012 Photographs published in Military Ridge Prairie Heritage Area 2012 Calendar (June, July, and August)

** Portfolio of other artistic work, including scientific illustration photographs, drawing, and painting, can be found at carolynbyers.com

WEBSITE DESIGN & MANAGEMENT

2016 Currently designing my own website using square space. It is still under construction, but will provide a good example of my design preferences and skills. www.carolynbyers.com

2014-6 Assist with creating content for and upkeep of Madison Audubon Society education webpages. www.madisonaudubon.org/youth-education

Interests: I enjoy birding, camping, canoeing, fishing, and generally spending time outdoors. During the summer months, I am an avid gardener, and enjoy canning, pickling, fermenting, and eating as much locally grown food as possible. I have recently started working with our black lab puppy so that he may one day become a therapy dog.