



Karina Sanchez

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urbanbirdnerd.com**

EDUCATION

2017-Present	Ph.D.	<i>University of Northern Colorado, Greeley, CO</i> Biological Education PhD Program
2014	B.S.	<i>Westminster College, Salt Lake City, UT</i> B.S. in Biological Sciences.

RESEARCH INTERESTS

I use behavioral ecology and field studies to gain a better understanding of how altered habitats change behaviors and the repercussions of these behaviors on spatial and regional population patterns. My research has an ultimate goal of preserving biodiversity and providing information for conservation efforts.

- Urban ecology • Behavioral ecology • Population ecology • Light Ecology • Sound Ecology • STEM education
- Diversity and Inclusion in STEM • Inquiry-based learning

CURRENT RESEARCH

University of Northern Colorado

The Effects of anthropogenic noise, light, and landscape on American Robin songs and reproductive success.

I am investigating the behavior of a songbird that has persisted across all landscape types in Weld County, CO. I quantify noise, light, and landscape in and document bird behavior. I use a combination of field work, citizen science data, and mapping techniques to understand how our changing world is affecting wildlife.

The Effects of anthropogenic noise, light, and landscape on avian diversity and abundance in Weld County, CO.

Urban environments are a combination of conditions including, excess noise, light, and novel structures. I worked with the National Parks Service to measure noise and light in Weld County, CO. I conducted avian surveys and used GIS National Land Cover Database layers to quantify developed land to show that developed land is associated with decreased avian diversity. Analyses ongoing.

University of Northern Colorado • University of California, Berkeley

*Spotted Towhee (*Pipilo maculatus*) song characteristics at two time points across an urban gradient*

I am analyzing how bird song has changed in Spotted Towhees of Berkeley, California between 1970 and 2015. I use song characteristic analysis in combination with GIS landcover layers to assess the relationship of time and landcover change with birdsong. Manuscript in preparation.

PRESENTATIONS

Sanchez, K., Kennedy, C., Salo, J., Benedict, L., (07/23-27 2019) Uptown birds; living in an altered world: Urban characteristics and avian species in Weld County, CO, 56th Annual Conference of the Animal Behavior Society and the 36th International Ethological Conference, Chicago, IL.

Sanchez, K., Kennedy, C., Salo, J., Benedict, L., (2019) The effects of urban landscape characteristics on avian diversity and abundance in Weld County, Colorado, US-International Association for Landscape Ecology Annual Meeting, Fort Collins, CO.

Sanchez, K., Benedict, L., Cicero, C., Fialko, K., (2018) Spotted Towhee (*Pipilo maculatus*) song characteristics at two time points across an urban gradient, American Ornithology Meeting, Tucson, AZ.

Sanchez, K., Benedict, L. (2018) The effects of urban noise and light on songbird abundance, richness, and song characteristics in a rapidly urbanizing area, Front Range Student Ecology Symposium, Fort Collins, CO

Sanchez, K., Neville, A., (2015) Predator Control on Utah's managed wetlands, Utah Wetlands Foundation Annual Meeting, Salt Lake City, UT.

Sanchez, K., Hawkins, D., Stracey, C., (2013) Singing on the nest: the occurrence of a paradoxical behavior

- Ecological Society of America 98th Annual Meeting, Minneapolis, MN
- 2013 Utah Conference on Undergraduate Research, Logan, UT
- Utah Audubon Society Meetings, Salt Lake City, UT

SELECTED WORK AND PRIOR RESEARCH EXPERIENCE

- 2017-present **Graduate Teaching Assistant**, University of Northern Colorado
Lab instructor for introductory biology, organismal biology, and museum studies.
- 2016- 2017 **Outreach Educator**, Loveland Living Planet Aquarium
Developed/delivered engaging, educational presentations and workshops for elementary students and teachers using Utah State Core standards.
- 2016- 2017 **Youth educator**, Red Butte Garden
Developed, prepared, and delivered educational science-based lesson plans for 5-13 y/o students.
- 2016 **Wildlife Technician**, Utah Division of Wildlife
Population management of brine shrimp, waterfowl, and shorebirds. Assisted on various research projects, waterfowl management plans, outreach, and presentations.
Research Conducted: • *Management of nesting American White Pelicans on Gunnison Island, UT.*
• *Brine shrimp cyst buoyancy and behavior in the water column of Great Salt Lake.*
- 2014-2015 **Intern and research associate**, Rio Tinto Kennecott
Management of wildlife populations and vegetation on Inland Sea Shorebird Reserve (ISSR) and Kennecott property. Initiated research to improve effectiveness of monitoring and habitat management. Public outreach, presentations, and development of educational content.
Research Conducted: • *Predation of shorebirds on the Inland Sea Shorebird Reserve* • *Heavy metal contamination in macro-invertebrates of the Rio Tinto Kennecott Copper Mine tailings*
- 2012-2014 **Research student and research assistant**, Westminster College
Developed and carried out research projects addressing ecological questions. Engaged the public by presentations and poster sessions at both local and national meetings.
Research Conducted: • *Singing on the nest: a paradoxical behavior of Northern Mockingbirds* • *Bioaccumulation of methyl-mercury in terrestrial environments on Antelope Island* • *Investigating urban house finch songs in and around Salt Lake City, UT*

GRANT SUPPORT AND AWARDS

2019	-	NSF Graduate Research Fellowship Program Honorable Mention
2019	\$3500	Colorado Graduate Grant
2019	\$762.5	Dr. Albert M. Winchester Graduate Fellowship in Biology
2019	\$150	Animal Behavioral Society Diversity Travel Award
2019	\$1500	Zoological Lighting Institute Diversity in Light Grant
2019	\$1500	Colorado Field Ornithologists
2019	\$3200	UNCO School of Biology Summer Funding
2019	\$300	UNCO NHS Student Award Fund
2019	\$600	UNCO Graduate Student Association Travel Award
2018	\$300	UNCO Graduate Student Association Travel Award
2018	\$150	UNCO Graduate Student Association Research Award
2018	\$3200	UNCO School of Biology Summer Funding Grant
2018	\$3500	Colorado Graduate Grant
2013-14	\$3000	Great Salt Lake Institute B.R.I.N.E. Research Grant
2012-14	\$7500	Westminster College Summer Undergraduate Research Stipend

OUTREACH AND PUBLIC SERVICE

- 2018-Present Community Outreach and Education with the UNCO's Natural History Museum
- 2017-Present Undergraduate Student Mentoring at the University of Northern Colorado
- 2019 Manuscript Review for the Journal of Animal Behavior
- 2018-2019 Founder and President of University of Northern Colorado Women In Graduate STEM (WIGS)
- 2018-2019 Biology Graduate Student Representative
- 2016-2017 Mentor for the Westminster College Alumni Mentoring Program
- 2016 Great Salt Lake Audubon Education Committee Member

