

Karina Sanchez, Ph.D.

Curriculum Vitae || August 2022

Email || urbanbirdnerd@gmail.com / karina.sanchez@unh.edu

Phone || 801-631-5634

Website || urbanbirdnerd.com

ACADEMIC APPOINTMENTS

2022 - Postdoctoral Diversity and Innovation Scholar
University of New Hampshire
Department of Natural Resources and the Environment, Department of Biology

EDUCATION

2022 Ph.D. Biological Education
University of Northern Colorado (UNCO), Greeley, CO
Advisor: Dr. Lauryn Benedict

2014 B.S. Westminster College, Salt Lake City, UT
B.S. Biological Sciences.

SUMMARY

Research: Broadly trained biologist with an emphasis in **biological education research**, **behavioral ecology**, **urban ecology**; and 2 biological education paper and 3 behavioral ecology paper currently in review, 3 papers in preparation for submission. 4 poster presentations and 10 oral presentations at national and international conferences. Have obtained ~ \$100,000 in research associated funding.

STEM education • Diversity and Inclusion in STEM • Inquiry-based learning • Evidence-based pedagogy • Decolonizing Ecology • Behavioral ecology • Ornithology • Urban ecology • Light Ecology • Sound Ecology

Teaching: Instructor of record for 1 semester (Organismal Biology); co-taught for 1 semester; teaching assistant for 14 lab sections (2 different courses), 5 lecture sections (2 different courses), experience in curriculum development, pedagogy training from 4 program courses and 3 workshops. Funding support to transform a high-enrollment course into an accessible Open Educational Resource.

Mentoring: As a doctoral student, I mentored 12 undergraduate students including 5 independent study research projects. Currently, I am mentoring one PhD student at the University of New Hampshire.

PUBLICATIONS

Under Review **Sanchez, K.A.**, Fialko, K., Benedict, L., Cicero, C., *Time alters urban singing strategies in a North American songbird.*, Journal of Urban Ecology.

Under Review Layden, T., Nelson, J., Bombaci, S., Laverty, T., Edder, A., Verahmi, A., **Sanchez, K.**, Khalighifar, A., Starr., S, *The consequences of inequitable noise on urban wildlife.*

Under Review Stracey, C.M., **Sanchez, K.A.**, Brown, B., Hawkins, D., Shepherd, T., *Singing on the nest is a common behavior in incubating Northern Mockingbirds*, Ornithology.

Under Review **Sanchez, K.A.**, Bevan, A., Vita, A., Royse, E.A., Januszkiewicz, E., Holt, E.A., *Grit matters to biology doctoral students' perception of barriers to degree completion.*, Journal of Biological Education.

- In Prep [Sanchez, K.A.](#), Bevan, A., Holt, E.A. Bringing awareness of social justice issues in ecology to the classroom.
- In Prep [Sanchez, K.A.](#), *Landscape is a stronger determinant than noise and light of avian community structure in a newly urbanized county*. *Frontiers of Ecology and Evolution*.
- In Prep [Sanchez, K.A.](#), Benedict, L., *The effects of noise, light, and landscape composition on singing behavior and reproduction of a common urban bird*.
- In Prep Barros, C., Benedict, L., [Sanchez, K.A.](#), *Current evidence for the functions of female song*.

Current Projects

- Assessing the efficacy of research programs designed for post-baccalaureates: an assessment of the NSF Research and Mentoring Program (RaMP) program across 12 institutions (Lead-PI)
- Biodiversity matters: Exploring links between species richness and psychological wellbeing (Co-PI)

RESEARCH POSTERS* AND ORAL PRESENTATIONS

- 2022 *Bevan, A., [Sanchez, K.A.](#), Holt, E., Intervention to Address Representation and Social Justice Issues in Ecology. 2022 Ecological Society of America / Canadian Society for Ecology and Evolution joint meeting. Montreal, Canada
- [Sanchez, K.A.](#), Benedict, L., Development drives song changes but has little effect on reproductive success in American Robins (*Turdus migratorius*).
- American Ornithological Society and the Birds of the Caribbean 2022 meeting. San Juan, Puerto Rico.
 - Colorado Field Ornithologists 2022 Convention, Pueblo, CO.
- 2021 [Sanchez, K.A.](#), Kennedy, C., Benedict, L., Avian community structure across an urbanizing county: The effects of noise, light, and landscape composition. American Ornithological Society/ Society of Canadian Ornithologists joint meeting.
- [Sanchez, K.A.](#), Benedict, L., Cicero, C., Fialko, K., Bird song characteristics respond differently to landscape development at two points in time. Animal Behavior Society meeting.
- [Sanchez, K.](#), Studying birds in a rapidly urbanizing county. University of Northern Colorado Biology Lightning Talks, Greeley, CO.
- [Sanchez, K.A.](#), Benedict, L., Cicero, C., Fialko, K., Patterns of change in bird song characteristics across space and time; an update. Front Range Student Ecology Symposium, Fort Collins, CO
- 2020 [Sanchez, K.A.](#), Measuring the effects of urban characteristics on a common backyard bird. University of Northern Colorado 2020 Research Day.
- *[Sanchez, K.A.](#), Benedict, L., Cicero, C., Fialko, K., Patterns of change in bird song characteristics across space and time. University of Northern Colorado Fall 2020 Research Evening.

- 2019 [Sanchez, K.A.](#), Kennedy, C., Salo, J., Benedict, L., 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.A.](#), Salo, J., Benedict, L., Urban landscape characteristics and avian diversity. University of Northern Colorado 2019 Research Day.
- [Sanchez, K.A.](#), Kennedy, C., Salo, J., Benedict, L., 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.
- 2018 [Sanchez, K.A.](#), Benedict, L., Cicero, C., Fialko, K., Spotted Towhee (*Pipilo maculatus*) song characteristics at two time points across an urban gradient,
- *American Ornithology 136th Meeting, Tucson, AZ.
 - University of Northern Colorado 2018 Research Day
- *[Sanchez, K.A.](#), Benedict, L., 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
- 2015 [Sanchez, K.A.](#), Neville, A., Predator Control on Utah's managed wetlands, Utah Wetlands Foundation Annual Meeting, Salt Lake City, UT.
- 2013 *[Sanchez, K.A.](#), Hawkins, D., Stracey, C., Singing on the nest: the occurrence of a paradoxical behavior
- 98th Annual Ecological Society of America Meeting, Minneapolis, MN
 - 2013 Utah Conference on Undergraduate Research, Logan, UT
 - Utah Audubon Society Meetings, Salt Lake City, UT

FUNDING, GRANT SUPPORT, AND AWARDS

Research

2022	\$50,000	Collaborative Research Enhancement and Team Exploration grant, New Hampshire Agricultural Experiment Station [co-PI]
2021	\$20,000	American Dissertation Fellowship, American Association of University Women
2021	\$3235	Summer Research Funding, UNCO School of Biology
2020	\$900	Publication Grant, UNCO CARES Funding
2020	\$2433	Hesse Research Award, American Ornithological Society
2020	\$480	NHS Student Research Award, UNCO
2020	\$3200	Summer Research Funding, UNCO School of Biology
2019	\$1500	Diversity in Light Grant, Zoological Lighting Institute
2019	\$1500	Colorado Field Ornithologists Research Grant
2019	\$3200	Summer Research Funding, UNCO School of Biology
2019	\$300	NHS Student Research Award, UNCO
2018	\$150	UNCO Graduate Student Association Research Award
2018	\$3200	Summer Research Funding, UNCO School of Biology
2013-14	\$3000	Great Salt Lake Institute B.R.I.N.E. Research Grant

2012-14 \$7500 Westminster College Summer Undergraduate Research Stipend

Travel

2019 \$150 Animal Behavioral Society Diversity Travel Award
2019 \$600 UNCO Graduate Student Association Travel Award
2018 \$300 UNCO Graduate Student Association Travel Award

Teaching /Service

2021 \$500 CO-WY/ LEAP Summer STEM Mentor
2020 \$3000 UNCO Open Educational Award: OER Adopt-Adapt-Create Grant

Academic support

2020 \$3500 Colorado Graduate Grant
2019 \$762.5 Dr. Albert M. Winchester Graduate Fellowship in Biology
2019 \$3500 Colorado Graduate Grant
2018 \$3500 Colorado Graduate Grant

Awards and Honors

2022 - The Graduate Dean's Citation for Excellence (UNCO)
2021 - UNCO Graduate Student Excellence in Teaching Award
2021 - UNCO Graduate Student Excellence in Mentorship Award
2020 - UNCO Research Excellence Award -First Place in NHS Graduate
2020 - Oral Presentation Competition (\$100 prize)
2019 - Hutchinson -Lahman Research Award- First Place (\$500 prize)
2019 - NSF Graduate Research Fellowship Program **Honorable Mention**

TEACHING

University of New Hampshire

Instructor of record

2023 - Environmental Biology –

University of Northern Colorado

Instructor of record

2020 Introduction to **Organismal Biology** (BIO 111) - 60 undergraduate students

Teaching assistantships

2017- 2018 Introduction to **Biology: Atoms to Cells** (BIO 110) – *taught and graded*
4 lab sections, 3 lecture sections

2018 -2019 Museum Studies – *taught*
3 sections

2018 – 2021 Introduction to **Organismal Biology** – *taught and graded*
3 lab sections (2018 – 2019)
2 lab sections, 1 lecture section, preparation lead for 9 lab sections (2019 – 2020)
2 lab sections, 1 lecture section, preparation lead for 9 lab sections (2020 – 2021)

Curriculum development

2020 – 2021 Introduction to **Organismal Biology**

- Developed online and in-person materials for both lecture and lab.
- Organized and led committee to redesign and transform the course to an Open (cost-free to students) course by adapting and curating an online textbook.
- Developed active learning activities for lecture and lab courses.

SERVICE

Student Mentoring

University of Northern Colorado

- 2021 Aubree Raimer, Colorado-Wyoming Alliance for Minority Participation / LEAP Summer STEM Program Mentee. Nestling diet in urban and non-urban habitats
- 2021 Amirah Brockington, Undergraduate field research assistant
- 2020-2021 Michelle Mutu, Colorado Wyoming Alliance for Minority Participation mentee in undergraduate research experience.
- 2020-2021 Alex Glennemeier, Research: Standardizing American Robin Recordings
- 2019-2020 Yessica Rodriguez, McNair Scholar Program Mentee. Research: Feather coloration and heat in American Robin male and females.
- 2019-2020 Branden Lawson, Research: Tree cover and nest survival of American Robins in urban and non-urban environments.
- 2019-2020 Kali Thompson and Gabrielle Mendoza Undergraduate field research assistants for several research projects
- 2018-2019 Cameron Kennedy, Research: Effects of habitat composition on avian composition.
- 2018-2019 Kinsey Freeman, Undergraduate research experience
- 2018-2019 Alexandria Colpitts, Research: Avian dawn chorus across urban and non-urban landscapes.

Westminster College SLC

- 2016-2017 Claire Prasad, Biology Undergraduate Student, Alumni Mentoring Program

Institutional service

- 2020-Present **Graduate School Representative**, Enhance and Invest subcommittee, UNCO
- 2019 **Graduate School Representative**, Student First Subcommittee, UNCO
- 2018-2019 **Graduate Student Representative**, School of Biological Sciences, UNCO

Professional service - Manuscript reviews

- 2021 Journal of Urban Ecology
- 2019 Journal of Animal Behavior

Community service

- 2021 **Graduate student panelists** at Association of Field Ornithologists Café Series: Demystifying grad school: how to find, apply, and get into graduate school.

2020 **Coordinator, creator, and panelist** for the First-Generation Students in Graduate School Panel. University of Northern Colorado graduate school 2020 orientation
2018-Present **Founder and President** of University of Northern Colorado Women In Graduate STEM (WIGS) Organization
2018-Present **Community Outreach and Education** with the UNCO's Natural History Museum
2016 **Committee Member**, Great Salt Lake Audubon Education Committee

Professional memberships

2021 – Present Society for the Advancement of Biological Education Research
2021 – Present American Association of University Women
2019 – Present US-International Association for Landscape Ecology
2019 – Present Colorado Field Ornithologists
2019 – Present Animal Behavior Society
2017 – Present American Ornithological Society

TRAINING / CERTIFICATES

Pedagogical training

2022 Implicit Biases and Bystander Awareness Training
2020 Diversity, Equity, and Inclusion in Biology
2020 College Biology Course Development
2019 Teaching College Biology
2017 Teaching Assistant Development

Professional development

2021 Supporting Student Success Through Teaching & Learning, LA Learning Lab
2021 Understanding & Navigating Inclusion Through Education (UNITE) Program

- Examining Race Relations and Racism Training
- Exploring Equity and Including Foundations Training
- Disability & Accessibility Training

2020 Graduate Student Teaching Group, UNCO
2020 COMPASS Scientist Sentinels: Civic Engagement & Leadership Program

SELECTED WORK AND PROFESSIONAL EXPERIENCE

2016- 2017 **Outreach Educator**, Loveland Living Planet Aquarium
Developed and delivered engaging, educational presentations and workshops for elementary/secondary students and teachers using Utah State Core standards. Assisted in the care of a variety of animals (tarantulas, amphibians, reptiles, insects) on a daily basis.

2016- 2017 **Youth Educator**, Red Butte Garden
Developed, prepared, and delivered educational lesson plans on a variety of science-based topics for ages 5-13 years.

2016 **Wildlife Technician**, Utah Division of Wildlife
Conducted population surveys on brine shrimp, waterfowl, and shorebirds. Assisted on brine shrimp behavior studies, nutrient tests, water quality tests, bird banding, waterfowl management plans, outreach and presentations.
Research Conducted:

- Monitoring and 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

Assistant land manager of the Inland Sea Shorebird Reserve (ISSR) and Kennecott property. Conducted wildlife population surveys, and vegetation surveys. Managed field data, developed databases, and performed water flow analysis. Initiated research to understand outcomes and improve effectiveness of monitoring and habitat management. Engaged the public through outreach and presentations and prepared educational content for field trips.

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 dike

2012-2014

Research student and research assistant, Westminster College

Developed and carried out research projects addressing ecological questions and assisted in ecological field work of several research projects. 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