

Karina Sanchez

Curriculum Vitae || September 2021

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EDUCATION

2017-Present	Ph.D.	University of Northern Colorado (UNCO), Greeley, CO Biological Education PhD Program Expected graduation date: May 2022
2014	B.S.	Westminster College, Salt Lake City, UT B.S. in Biological Sciences.

SUMMARY

Research: Broadly trained biologist with an emphasis in behavioral ecology, urban ecology, and biological education research; 2 papers currently in review, 2 papers in preparation for submission. 4 poster presentations and 10 oral presentations at national and international conferences. Have obtained ~ \$50,000 in research associated funding.

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

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: 12 undergraduate students including 5 independent study research projects.

PUBLICATIONS

In Review	Sanchez, K.A. , Bevan, A., Vita, A., Royse, E.A., Januszkiewicz, E., Holt, E.A., <i>Grit matters to biology doctoral students' perception of barriers to degree completion</i> , PLOS One, submitted March 2021
In Review	Sanchez, K. , Fialko, K., Benedict, L., Cicero, C., <i>Time alters urban singing strategies in a North American songbird</i> , Journal of Behavioral Ecology and Sociobiology. Submitted June 2021
In Prep	Sanchez, K. , <i>Developed land alters avian composition in Weld County, CO</i> .
In Prep	Stracey, C.M., Shepherd, T., Sanchez, K. , Hawkins, D., Palaninathan V., <i>Singing on the nest is a common behavior in incubating Northern Mockingbirds</i> .
In Prep	

RESEARCH POSTERS* AND ORAL PRESENTATIONS

Sanchez, K., Kennedy, C., Benedict, L. (2021) 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., Benedict, L., Cicero, C., Fialko, K. (2021) Bird song characteristics respond differently to landscape development at two points in time. Animal Behavior Society meeting.

Sanchez, K., (2021) Studying birds in a rapidly urbanizing county. University of Northern Colorado Biology Lightning Talks, Greeley, CO.

Sanchez, K., (2021) Benedict, L., Cicero, C., Fialko, K., (2021) Patterns of change in bird song characteristics across space and time; an update. Front Range Student Ecology Symposium, Fort Collins, CO

Sanchez, K., (2020) Measuring the effects of urban characteristics on a common backyard bird. University of Northern Colorado 2020 Research Day.

***Sanchez, K.**, Benedict, L., Cicero, C., Fialko, K., (2019) Patterns of change in bird song characteristics across space and time. University of Northern Colorado Fall 2020 Research Evening.

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., Salo, J., Benedict, L., (2019) Urban landscape characteristics and avian diversity. University of Northern Colorado 2019 Research Day.

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 136th Meeting, Tucson, AZ.
- University of Northern Colorado 2018 Research Day

***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

- 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

2021	\$20,000	American Dissertation Fellowship, American Association of University Women
2021	\$3235	Summer Research Funding, UNCO School of Biology
2021	\$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	UNCO School of Biology Summer Research Funding
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

2020		UNCO Research Excellence Award -First Place in NHS Graduate Oral Presentation Competition (\$100 prize)
2019		Hutchinson -Lahman Research Award- First Place (\$500 prize)
2019		NSF Graduate Research Fellowship Program <u>Honorable Mention</u>

TEACHING

(Primary institution: University of Northern Colorado)

Instructor of record

Fall 2020	Introduction to Organismal Biology (BIO 111) - 60 undergraduate students
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Teaching assistantships

2020 – 2021	Introduction to Organismal Biology – <i>taught and graded</i> 2 lab sections, 1 lecture section, preparation lead for 9 lab sections
2019 – 2020	Introduction to Organismal Biology – <i>taught and graded</i> 2 lab sections, 1 lecture section, preparation lead for 9 lab sections
2018 – 2019	Introduction to Organismal Biology – <i>taught and graded</i> 3 lab sections
2018 -2019	Museum Studies – <i>taught</i> 3 sections
2017- 2018	Introduction to Biology: Atoms to Cells; Biology (BIO 110) – <i>taught and graded</i> 4 lab sections , 3 lecture sections

Curriculum development

2020 – 2021	Introduction to Organismal Biology <ul style="list-style-type: none">- 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.
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TRAINING / CERTIFICATES

Pedagogical training

2020	Diversity, Equity, and Inclusion in Biology
2020	College Biology Course Development
2019	Teaching College Biology
2017	Teaching Assistant Development

Workshops

2021	Understanding & Navigating Inclusion Through Education (UNITE) Program <ul style="list-style-type: none">- Examining Race Relations and Racism- Exploring Equity and Including Foundations- Becoming a Hispanic Serving Institution
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- Disability and Accessibility
 - Equity Minded Syllabus
- 2021 Teaching and Assessment Symposium and workshops
- Supporting Student Success Through Teaching and Learning
- 2020 Graduate Student Teaching Group
- 2020 COMPASS Scientist Sentinels: Civic Engagement & Leadership Program

SERVICE

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 in urban bird song measurements.
- 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, University of Northern Colorado
- 2019 **Graduate School Representative**, Student First Subcommittee, University of Northern Colorado
- 2018-2019 **Graduate Student Representative**, School of Biological Sciences

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
- 2019 **Manuscript Reviewer** for the Journal of Animal Behavior
- 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

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

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