

CURRICULUM VITAE

Antonio Cantu de Leija

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EDUCATION

Ph.D. Coastal and Marine Systems Science, Texas A&M University-Corpus Christi, TX, 2021-present. Anticipated graduation: Summer 2025

Dissertation: Spatiotemporal dynamics of foraging habitat availability for wading birds in intertidal zones of the Gulf of Mexico.

M.S. Renewable Natural Resources, Louisiana State University, LA, 2019-2021.

Thesis: Effects of wetland management and associated abiotic factors to rare plant communities of Bitter Lake National Wildlife Refuge, New Mexico.

B.S. in Biology, Autonomous University of Nuevo Leon, Mexico, 2008-2013. Thesis: Birds of the Chihuahuan Desert and their relationships to grassland ecosystems within Maderas del Carmen Protected Area, Coahuila, Mexico.

EMPLOYMENT

Graduate Research Assistant

Aug 2021 – present

Harte Research Institute for Gulf of Mexico Studies, Texas A&M University-Corpus Christi, TX

- Developed quantitative and mapping tools to assess spatiotemporal patterns of foraging habitat availability for waterbirds in intertidal zones of the Gulf of Mexico and how they may change with sea level rise. Developed satellite-derived bathymetry to improve the modeling of foraging habitats in intertidal systems.

Graduate Research Assistant

Jan 2019 – Jul 2021

School of Renewable Natural Resources, Louisiana State University, Baton Rouge, LA

- Research evaluating the effects of moist-soil management aimed at migratory bird habitat and associated abiotic processes on the establishment of rare wetland plants at Bitter Lake National Wildlife Refuge, New Mexico.

Projects supervisor

Jul 2015 – Nov 2018

Ducks Unlimited de México, A. C. (DUMAC), Monterrey, Mexico

- Designed and supervised on-the-ground wetland and waterfowl conservation, restoration, and management projects in the states of Tamaulipas, Guanajuato, Durango, and Jalisco, Mexico, spanning coastal, subtropical, semi-arid and arid systems. Coordinated waterbird monitoring programs in the states of Sonora, Coahuila, Nuevo Leon, and Chiapas. Developed eight grant proposals for wetland and wildlife conservation projects for national and international agencies and foundations, including the North American Wetland Conservation Act (NAWCA), AXALTA, Gonzalo Rio Arronte Foundation, and National Institute for Social Development in Mexico. Strengthened relationships and

collaboration with federal, state, private, and local stakeholders, communities, and partners for the implementation of conservation projects and land protection agreements.

Research Assistant

Dec 2014 – Jun 2015

Lab of Ornithology, Autonomous University of Nuevo Leon, Monterrey, Mexico

- Assisted avian research projects to guide management in Natural Protected Areas of northeast Mexico, including endangered species monitoring, spatial modeling, data analysis, and reporting.

Science and Resource Management Intern

Jun 2013- Nov 2014

Big Bend National Park, Texas

- Coordinated a bi-national workshop between U.S. and Mexico sister parks for establishing conservation goals of shared natural resources in the U.S.-Mexico border. Assisted multiple projects related to the management of natural resources at Big Bend National Park, including wildlife monitoring, control of invasive species, GIS, and habitat assessment.

PUBLICATIONS

- **Cantu de Leija A** and King SL (2023) Relationships among rare plant communities and abiotic conditions in managed spring-fed arid wetlands. *Restoration Ecology*: e14011. <https://doi.org/10.1111/rec.14011>.
- **Cantu de Leija A**, Mirzadi RE, Randall JM, Portmann MD, Mueller EJ and Gawlik DE (2023) A meta-analysis of disturbance caused by drones on nesting birds. *Journal of Field Ornithology* 94(2):3. <https://doi.org/10.5751/JFO-00259-940203>. (2023 AFO Best Student Publication Award)
- **Cantu de Leija A**, King SL and Hawkins TS (2022) Seed germination responses to salinity for three rare wetland plants of spring-fed arid systems. *Journal of Arid Environments* 199:104705. <https://doi.org/10.1016/j.jaridenv.2021.104705>.
- **Cantu de Leija A** (2021) Effects of wetland management and associated abiotic factors on rare plant communities of spring-fed arid wetlands. Master's Thesis, 5407, Louisiana State University, Baton Rouge. https://digitalcommons.lsu.edu/gradschool_theses/5407.
- **Cantu de Leija A**, Castillo Muñoz M, Galvan Longoria N, Guzman Hernandez JL, Limones Banda CA, Marquina Luevano I, Salinas Camarena MA, Borre Gonzalez DA, Salas JA, and Contreras A (2012) Situación de la influenza aviar causada por el virus H7N3 en México. *Entorno Universitario* 13(37):12-15.

PRESENTATIONS & WORKSHOPS

Regular Presentations:

- Cantu de Leija A, Gawlik DE, Cox A (2025) “Changes in intertidal foraging habitat for wading birds under different sea level rise scenarios”, Waterbird Society Annual Meeting, San Jose, Costa Rica.
- Cantu de Leija A, Gawlik DE, Cox A, Calle L (2024) “Mapping time-integrated intertidal foraging habitat availability for imperiled wading birds” Gulf of Mexico Conference, Tampa, FL.
- Cantu de Leija A, Gawlik DE, Cox A, Calle L (2023) “Mapping foraging habitat availability for Reddish Egrets (*Egretta rufescens*) in Florida”, Waterbird Society Annual Meeting, Ft. Lauderdale, FL.
- Cantu de Leija A, Donnelly PJ, and King SL (2022) “Surface Water Dynamics in Wetlands of the Chihuahuan Desert”, North America Arctic Goose Conference, Corpus Christi, TX.
- Cantu de Leija A, Donnelly PJ, and King SL (2022) “Surface Water Dynamics of Chihuahuan Desert Wetlands: Implications for Migratory Waterbird Habitat Conservation”, Waterbird Society Annual Meeting, Corpus Christi, TX. (Best Student Paper Conservation Award)
- Cantu de Leija A, Mirzadi RE, Randall JM, Portmann MD, Mueller EJ and Gawlik DE (2022) “A Meta-Analysis of Disturbance Caused by Drones on Nesting Birds”, Waterbird Society Annual Meeting, Corpus Christi, TX.
- Cantu de Leija A, Mirzadi RE, Randall JM, Portmann MD, Mueller EJ and Gawlik DE (2022) “A Meta-Analysis of Disturbance Caused by Drones on Nesting Birds”, Gulf of Mexico Conference, Baton Rouge, LA.
- Cantu de Leija A and King SL (2021) “Interior Wetlands of Mexico: Status and Issues of Waterbird Habitats”, Society of Wetland Scientists Virtual Meeting.
- Cantu de Leija A and King SL (2021) “Effects of Wetland Management and Associated Abiotic Factors to Rare Plant Communities in a Managed Arid Wetland”, Society of Wetland Scientists Virtual Meeting.
- Cantu de Leija A, Chacon de la Cerda E, and King SL (2020) “Sandhill Cranes in Mexico: status of Historical Habitats and Conservation Challenges”, 15th North American Crane Workshop, Lubbock, TX.

- Cantu de Leija A and King SL (2019) “Status and Challenges of Wetland Habitats for Migratory Birds in Mexico’s Highlands”, The Wildlife Society Conference, Reno, Nevada.

Outreach and Educational Presentations:

- Cantu de Leija A (2024) “Assessing wading bird foraging habitat availability in intertidal zones of the Gulf of Mexico” U.S. Environmental Protection Agency Region 4 2024 Hispanic Heritage Month Event.
- Cantu de Leija A (2024) “Coastal Birds of Texas: Diversity, Habitats and Conservation Challenges” Texas Retired Teachers Association Convention.
- Cantu de Leija A (2024) “Coastal Birds: foraging behaviors, physical adaptations, and habitats” Gulf Reach Institute Teens Café.
- Cantu de Leija A (2023) “Perspectives as an International Student: past and current research” Department of State International Visitor Program.
- Cantu de Leija A (2023) “Biología de la Conservación: Principios y Perspectivas en Humedales y las Aves Acuáticas”, Wildlife Summit, Jalisco, Mexico.
- Cantu de Leija A (2023) “Assessing wading bird foraging habitat availability in intertidal zones of the Gulf of Mexico” Coastal Bend Audubon Society.
- Cantu de Leija A (2022) “Wetland and Waterbird Conservation”, Wildlife Summit of Tlajomulco, Mexico.

Workshops and Training:

- Student Workshop on International Coastal and Marine Management (SWIMM) in the Gulf of Mexico, Tabasco, Mexico, January 2025.
- North American Crane Workshop, Baraboo, WI, October 2023.
- Wetlands of Utah, Idaho, and Montana field workshop, July 2022.
- Gulf of Mexico Sea Level Rise Workshop, Baton Rouge, LA, April 2022.
- A Process-based Approach to Wetland Management, TWS-AFS Joint Conference, Reno, Nevada, 2019
- Management and Conservation of Waterfowl and their Habitat Workshop. Durango, Mexico, 2018.

- Mexico’s National Strategy for the Conservation of Shorebirds and their Habitat Workshop. Celestun, Mexico, 2016.
- Management and Conservation of Waterfowl and their Habitat Workshop. Bosque del Apache National Wildlife Refuge, San Antonio, New Mexico, 2016.
- Wetland and Waterfowl Management and Conservation Workshop. Celestun, Mexico, 2016.
- Management and Conservation of Waterfowl and their Habitat Workshop. Bosque del Apache National Wildlife Refuge, San Antonio, New Mexico, 2015.

OTHER PROFESSIONAL EXPERIENCE AND SERVICE

- Guest Lecturer:
 - Experimental Design, Coastal and Marine Systems Science Program, College of Science, Texas A&M University-Corpus Christi, Spring 2024.
 - Special Topics in Natural Resources, School of Renewable Natural Resources, Louisiana State University, Fall 2019
- Board Member – North American Crane Working Group, 2020-2023 and 2023-2026.
- Scientific Program Committee member – North American Crane Working Group Meeting, October 2023, Baraboo, WI.
- Co-organizer and Instructor: “Introduction to Google Earth Engine for Wildlife and Ecology Workshop”. Texas A&M University-Kingsville, Kingsville, TX, April 14 & 21, 2023
- Planning committee member and co-chair of Student Activities and Cultural Heritage and Diversity subcommittees – The Waterbird Society Annual Meeting, Corpus Christi, TX, October 31-November 4, 2022.
- Co-organizer and co-instructor of the “Modeling water level dynamics in intertidal zones using the Time-integrated Model of Shallow-water Availability (TIMSA)” workshop, Corpus Christi, TX, September 2022.
- Manuscript Reviewer – 2021-present:
 - Restoration Ecology: The Journal of the Society for Ecological Restoration
 - Journal of Arid Environments
 - Waterbirds: The International Journal of Waterbird Biology
 - Ecosphere
 - Proceedings of the North American Crane Working Group

- Lead researcher – “Surface water dynamics in wetlands of the Chihuahuan Desert: implications for migratory bird habitat availability”, 2020-present.
- Co-advisor for undergraduate students:
 - **David A. Aguilar**, thesis: Breeding biology of Painted Bunting (*Passerina ciris*) in Rancho San Pablo, Cuatrociénegas, Coahuila, Mexico. Universidad Autonoma de Nuevo Leon, 2015-2016.
 - **Velia P. Carrillo**, thesis: Comparison of waterbird diversity over two seasons of Presa Piedritas, Ocampo Natural Protected Area, Coahuila, Mexico. Universidad Autonoma de Nuevo Leon, 2017-2018.
- Co-organizer and modulator of the “Bi-National Strategic Planning Event for Sister Parks, Big Bend National Park, Texas”, 2013.

AWARDS AND SCHOLARSHIPS

- Association of Field Ornithologists 2023 Best Student Publication Award
- The Waterbirds Society Annual Meeting Travel Award 2025
- The Thomas and Susan Shirley Graduate Student Travel Endowed Scholarship
- International Graduate Scholarship 2023-2024
- C. J. Watson Memorial Scholarship Endowment Graduate 2023-2024
- Richard A. Davis Jr. PhD and Mary Ann Davis, Ph.D. Endowed Scholarship, 2023-2024
- College of Science Spring 2023 Graduate Scholarship.
- North American Arctic Goose Conference Student Award, December 2022.
- Waterbird Society Annual Meeting Best Paper Conservation Award, November 2022.
- Maggie Bains Endowed Scholarship 2022-2023.
- The Texas State Aquarium Endowed Scholarship in Biodiversity and Conservation Science in memory of Dr. Wes Tunnell 2022-2023.
- Coastal and Marine Systems Science Travel Award, Summer 2022.
- Gulf Estuarine Research Society Workshop Participation Grant, April 2022.
- CONACYT International Graduate Student Scholarship, 2022 – 2023.
- Crutchfield Fellowship 2022 – 2023.

SKILLS

- GIS skills: ArcGIS, QGIS, Google Earth Engine – remote sensing, project planning, and reporting.
- Programming languages: R, Python
- Bilingual: Spanish (native) and English (TOEFL IBT 100 points).
- Incident Command System I-100 and I-200 Certificate, 2013.
- Waterfowl banding (>50 ducks at Bosque del Apache, New Mexico, 2015-2016).
- Adult CPR/AED, Pediatric CPR and First Aid Certificate, American Red Cross, 2019, 2023.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Waterbirds Society
- Society of Wetland Scientist
- North American Crane Working Group
- The Wildlife Society
- Texas Chapter of the Wildlife Society
- Gulf Estuarine Research Society

REFERENCES

Dale E. Gawlik

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