

MICHELLE MARÍA EARLY CAPISTRÁN | PHD

Curriculum Vitae

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EDUCATION

- 2021 **Universidad Nacional Autónoma de México** - Ph.D., Marine Science and Limnology
Dissertation: *Conectando el pasado con el presente: evaluación de los cambios a largo plazo en la abundancia de la tortuga prieta, *Chelonia mydas*, en el Golfo de California.* (Connecting past and present: evaluating long-term changes in green sea turtle (*Chelonia mydas*) abundance in the Gulf of California).
- 2014 **Universidad Nacional Autónoma de México** - M.S., Marine Science and Limnology
Thesis: *Análisis diacrónico de la explotación, abundancia y talla de *Chelonia mydas* en la península central de Baja California, 12,000 A.P.-Presente.* (Diachronic analysis of the exploitation, abundance, and size of *Chelonia mydas* in the central Baja California peninsula, 12,000 B.P.- Present).
- 2009 **Universidad de las Américas-Puebla** - Licenciante (B.A. equivalent), Cultural Anthropology
Thesis: *Voces del oleaje: ecología políticas de las tortugas marinas en la costa de Oaxaca* (Voices of the swell: political ecology of sea turtles on the coast of Oaxaca).
- 2005 **Universidad Austral de Chile** - Study Abroad
Honors Program in Environment, Society, and Climate Change.

PROFESSIONAL APPOINTMENTS

- 2022 **Postdoctoral Researcher** - Stanford University.
David H. Smith Conservation Fellow, Woods Institute for the Environment / Hopkins Marine Station.

PUBLICATIONS

Peer-reviewed articles

- 2022 **Early-Capistrán, M. M.**, Solana-Arellano, E., Abreu-Grobois, F. A., Garibay-Melo, G., Seminoff, J. A., Sáenz-Arroyo, A., & Narchi, N. E. (2022). Integrating local ecological knowledge, ecological monitoring, and computer simulation to evaluate conservation outcomes. *Conservation Letters*. <https://doi.org/10.1111/conl.12921>.
- 2020 **Early-Capistrán, M.-M.**, Solana-Arellano, E., Abreu-Grobois, F. A., Narchi, N. E., Garibay-Melo, G., Seminoff, J. A., & Saenz-Arroyo, A. (2020) Quantifying local ecological knowledge to model historical abundance of long-lived, heavily-exploited fauna. *PeerJ*, 8 e9494. <https://doi.org/10.7717/peerj.9494>.
- 2018 **Early-Capistrán, M.-M.**, Sáenz-Arroyo, A., Cardoso-Mohedano, J.-G., Garibay-Melo, G., Peckham, S. H., & Koch, V. Reconstructing 290 years of a data-poor fishery through ethnographic and archival research: The East Pacific green turtle (*Chelonia mydas*) in Baja California, Mexico. *Fish and Fisheries*, 19(1), 57-77. <https://doi.org/10.1111/faf.12236>.
- Narchi, N.E., Cariño, M., Mesa-Jurado, M.A., Espinoza, A., Olivos, A., **Early Capistrán, M.M.**, et al. El CoLaboratorio de Oceanografía Social: espacio plural para la conservación integral de los mares y las sociedades costeras. (The CoLaboratory of Social Oceanography: a pluralistic space for the integrative conservation of seas and coastal societies) *Sociedad y Ambiente*, 18(7), 285–301.

Books

- 2010 **Early Capistrán, M.M.**, *Voces del oleaje: ecología políticas de las tortugas marinas en la costa de Oaxaca* (Voices of the Swell: Political Ecology of Sea Turtles on the Coast of Oaxaca). Puebla, México: ICSyH BUAP/CONACYT. ISBN: 978-607-487-188-3.

Book chapters

- 2014 **Early Capistrán, M.M.**, Lo vulnerable y lo sanguinario: explotación histórica de tortugas y tiburones en la Costa de Oaxaca. (The vulnerable and the bloodthirsty: historical exploitation of sea turtles and sharks on the coast of Oaxaca). In R. Macip-Ríos & O. Espinosa Santiago (Eds.), *Problemas ambientales asociados al desarrollo* (Environmental problems associated with development) (pp. 51–70). Puebla, México: Benemérita Universidad Autónoma de Puebla. ISBN: 978-607-487-810-3.

Technical reports

- 2022 Shanker, K., **Early Capistrán, M. M.**, Urteaga, J., Mohd Jani, J., & Wallace, B.. Moving Beyond Parachute Science in the Sea Turtle Community. In *State of the Worlds Turtles (SWOT)* (Vol. 17, pp. 36–37). <https://www.seaturtlestatus.org/swot-report-vol-17>
- 2018 Wilder, B., **Early-Capistrán, M.M.**, & Vanderplank, S. (eds.) *2018 N-Gen Border BioBlitz* (p. 38). Next Generation Sonoran Desert Researchers (N-Gen).

Published datasets and code

- 2020 **Early-Capistrán, M.-M.**, Solana-Arellano, E., Abreu-Grobois, F. A., Narchi, N. E., Garibay-Melo, G., Seminoff, J. A., Koch, V., & Saenz-Arroyo, A. (2020). Quantitative datasets and R Code: Quantifying local ecological knowledge to model historical abundance of long-lived, heavily-exploited fauna. *PeerJ*, 8, e9494. <https://doi.org/10.7717/peerj.9494/supp-16>.

Science communication & published outreach (selected)

- 2022 **Early Capistrán, M. M.**. Navigating deserts and seas. *Current Conservation*, 16(2), 13–17. <https://www.currentconservation.org/navigating-deserts-and-seas/>
- 2019 **Early Capistrán, M. M.**. Tortugas en Baja California: de la pesca a la conservación (Turtles in Baja California: from fishing to conservation). *La Jornada Del Campo*, (137), 30.
- Early Capistrán, M. M.**, CoLaboratorio de Oceanografía Social de El Colegio de Michoacán, Red Temática sobre el Patrimonio Biocultural (CONACYT). Pesca y conservación de tortugas en Baja California (Sea turtle fishing and conservation in Baja California). Online video clip (length: 3 minutes) <https://www.youtube.com/watch?v=hVuAPUJCoLY>.
- 2018 **Early-Capistrán, M.-M.**, Sáenz-Arroyo, A., Cardoso-Mohedano, J.-G., Garibay-Melo, G., Peckham, S.H. and Koch, V. (2018) Complex past, promising future: Baja California's green sea turtles. *dataMares*. <https://doi.org/10.13022/M3934Q>.
- 2016 **Early Capistrán, M.M.**, El sigiloso regreso de las nutrias (The stealthy return of the otters). *Latinamericanscience.org*, <https://bit.ly/3iKqO5E>.
- Early Capistrán, M.M.**, Elephants and spearheads in Sonora, Mexico: an interview with Dr. Guadalupe Sánchez. *Latinamericanscience.org* <https://bit.ly/3kPDYkL>.
- Early Capistrán, M.M.**, Baja California's Sea Turtles Swim Out of the Past. *Latinamericanscience.org* http://latinamericanscience.org/turtles_mexico.
- 2014 **Early Capistrán, M.M.**, Amazons, Pirates, and Turtles on the Island of California. *The Appendix*, 2(4). <https://bit.ly/2Tvmej9>.

GRANTS, AWARDS & FELLOWSHIPS

- 2022 **Society for Conservation Biology / Cedar Tree Foundation** - David H. Smith Conservation Research Fellowship.
- 2022 **Universidad Nacional Autónoma de México** - Stimulus for timely graduation.
- 2017-2021 **Consejo Nacional de Ciencia y Tecnología (CONACYT)** - Doctoral Fellowship National Postgraduate Fellowship, Contract No. 289695.
- 2020 **Marisla Foundation / Jiji Foundation** - N-Gen sustainability and targeted action grant
Awarded to Next Generation Sonoran Desert Researchers (N-Gen). Co-P.I. with Benjamin Wilder, Sula Vanderplank & Charlie de la Rosa.
- 2018 **Jiji Foundation / Packard Foundation** - N-Gen Research grants program
Awarded to Next Generation Sonoran Desert Researchers (N-Gen). Co-P.I. with Benjamin Wilder & Adrián Munguía.
- 2017 **Marisla Foundation / Jiji Foundation / Packard Foundation** - N-Gen Research grants program
Awarded to Next Generation Sonoran Desert Researchers (N-Gen). Co-P.I. with Benjamin Wilder & Adrián Munguía.
- 2015 **Universidad Nacional Autónoma de México** - Stimulus for timely graduation.
- 2014 **Universidad Nacional Autónoma de México** - Cum Laude
- 2013-2014 **Consejo Nacional de Ciencia y Tecnología (CONACYT)** - Postgraduate Fellowship National Postgraduate Fellowship, Contract No. 289695.
- 2012-2014 **Walton Family Foundation** - Research Grant
M.S. Project: "Diachronic analysis of the exploitation, abundance, and size of *Chelonia mydas* in the central Baja California peninsula, 12,000 B.P.-Present". (Funds awarded via Grupo Tortuguero de las Californias, A.C.). Mentors: Andrea Sáenz-Arroyo (ECOSUR), S. Hoyt Peckham (Stanford).
- 2010 **Trinity College Dublin** - Travel Grant
- 2009 **Universidad de las Américas-Puebla** - Cum Laude

INVITED ACADEMIC PRESENTATIONS

- 2022 **Aquarium of the Pacific / NOAA / SoCal Sea Turtles** - Aquarium of the Pacific, Long Beach, USA
Oral Presentation: "Integrating local ecological knowledge and mathematical models to evaluate conservation outcomes for green turtles". October.
- Universidade Federativa do Pará / Universidad Autónoma de Barcelona** - *Online Panelist:* "Ocean Social Science and Policy in the Context of Academic Careers".
- Stanford University** - Hopkins Marine Station, Monterey, USA
Isabella Abbott Memorial Lecture: "Integrating Local Ecological Knowledge and Marine Conservation Science". May.
- Hawaii Pacific University** - 2nd Annual Workshop on Sea Turtle Research and Conservation in the Hawaiian Islands/Oceania, Honolulu, USA (*online*)
Oral Presentation: "People and sea turtles in Baja California: cultural practices and connections across the Pacific". April.
- 2019 **Citizen Science Association** - Citizen Science Conference, Raleigh, USA
Recorded Oral Presentation: "Border BioBlitz". Presentation for the panel *Scaled BioBlitzes: Engaging Community Organizers to Increase Participation in Large-Scale Biodiversity Monitoring Efforts*. March.
- 2016 **International Sea Turtle Society** - Annual Symposium, Lima, Peru
Guest speaker: "Swimming Out of the Past: Reconstructing Sea Turtle Populations Through Ethnographic and Archival Research". Presentation for the panel *Turtles in Time*. March.
- 2015 **Grupo Tortuguero de las Californias** - Annual Meeting, Mazatlán, Mexico
Keynote speaker: "Historias de pescadores y bucaneros: cambios en la abundancia y explotación de *C. mydas* en la península de Baja California." (Stories of Fishers and Buccaneers: Changes in the Abundance and Exploitation of *C. mydas* in the Baja California Peninsula). January.

CONFERENCE PARTICIPATION

Papers presented (* indicates presenter)

- 2020 **Western Society of Naturalists** - 101st Annual Meeting, *Online*
Oral presentation: "Learning from Hawaiian culture to improve marine conservation research". (Puniwai, N.*, **Early-Capistrán, M.M.***). Presentation for the panel *Special Session: Towards equitable collaboration in community-based research*. November.
- 2019 **Western Society of Naturalists** - 100th Annual Meeting, *Ensenada, Mexico*
Oral presentation: "Quantifying Local Ecological Knowledge to Reconstruct Green Turtle Abundance in the Gulf of California". (**Early-Capistrán, M.M.***, Solana-Arellano, E., Abreu-Grobois, F.). November.
- 2013 **Grupo Tortuguero de las Californias** - Annual Meeting, *Loreto, Mexico*
Oral presentation: "Historia ambiental de las tortugas marinas en la península de Baja California." (Environmental History of Sea Turtles in the Baja California Peninsula) (**Early-Capistrán, M.M.***). January.
- 2010 **History of Marine Animal Populations / Census of Marine Life** - Oceans Past III, *Dublin, Ireland*
Oral presentation: "Shark Fins and Turtle Leather: Historic Marine Animal Exploitation on Mexico's Southern Pacific Coast" (**Early-Capistrán, M.M.***). November.

Panel organization

- 2020 **Western Society of Naturalists** - 101st Annual Meeting, *Online*
Panel co-chair (with Jeniffer Selgrath). "Special Session: Towards equitable collaboration in community-based research." November.
- 2015 **Next Generation Sonoran Desert Researchers** - 2nd N-Gen Summit, *Guaymas, Mexico*
Moderator. "Desert Hackathon". October.

RESEARCH EXPERIENCE

- 2017-Present **Visiting Scientist** - Mathematical Ecology Lab, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), *Ensenada, Mexico*.
- Developed methods for coding and quantifying ethnographic data for integration with ecological modeling.
 - Developed mathematical models (nonlinear regressions, generalized linear models, and multiple imputation) and open-source *R* code.
 - Reconstructed, modeled, and evaluated long-term changes in green turtle (*Chelonia mydas*) abundance in the Gulf of California
- 2012-2013 **Researcher** - Grupo Tortuguero de las Californias, A.C., *La Paz, Mexico*.
- Conducted ethnographic fieldwork in the central desert of the Baja California peninsula, including participant observation, informal and semi-structured interviews.
 - Conducted bibliographical and archival research; qualitative and quantitative data analysis; technical report writing; and presentations.
 - Reconstructed 290 years of human impacts and variations in abundance of *Chelonia mydas* in the Baja California peninsula.
- 2007-2009 **Research Assistant** - Benemérita Universidad Autónoma de Puebla (BUAP), *Puebla, Mexico*
- Conducted ethnographic fieldwork on the coast of Oaxaca, Mexico, including participant observation, informal and semi-structured interviews, and surveys.
 - Carried out bibliographical and archival research and qualitative and quantitative data analysis.
 - Project: "Tercer sector y generación de alternativas en la Costa Chica de Oaxaca" (Third sector and creation of alternatives on the coast of Oaxaca). (CONACYT Grant #57815). P.I: Ricardo Macip Ríos (BUAP).
- 2006 **Research Internship** - Universidad de las Américas-Puebla, *Puebla, Mexico*
- Conducted ethnographic fieldwork in the Tehuacán Valley (Puebla, Mexico) and interview transcriptions through the UDLA-P undergraduate internship program.

- Project: "The Struggle for Maize: Campesinos, Workers, and Transgenic Corn in the Mexican Countryside". P.I.: Elizabeth Fitting (Dalhousie University).

RELATED PROFESSIONAL EXPERIENCE

- 2016-2022 **Associate Director** - Next Generation Sonoran Desert Researchers (N-Gen), *Ensenada, Mexico*
- Directed an international, transdisciplinary research network with 900+ members across 40+ disciplines in the broader Sonoran Desert region.
 - Coordinated and integrated strategies to achieve organizational vision through collaboration between the board of directors, network members, stakeholders, funders, and partner organizations (NGOs, government, and academia).
 - Assumed leadership in operative tasks, including grant writing, financial management, administration, communication, translations, media engagement, and website development (<https://nextgensd.com/>).
- 2018-2022 **Border BioBlitz Binational Program Coordinator** - Next Generation Sonoran Desert Researchers (N-Gen) & International Community Foundation, *National City, CA, USA (remote)*
- Developed and implemented a scaled bioblitz model to gather community science data along both sides of the U.S.-Mexico border.
 - Coordinated binational community science efforts between diverse partner organizations (NGO, government agencies, academia) and community volunteers in the U.S. and Mexico.
 - Developed websites and outreach materials in English and Spanish (<https://nextgensd.com/border-bioblitz-2021/>).
- 2016 **Contributing Editor** - Latinamericanscience.org, *Boston, USA (remote)*.
- Coordinated, edited, and developed online science communication materials in English and Spanish in collaboration with contributors in multiple countries (Argentina, Australia, Ecuador, Mexico, Puerto Rico, U.K., and U.S.).
- 2015 **Contributor** - Latinamericanscience.org, *Boston, USA (remote)*.
- Developed online science communication materials in English and Spanish, including writing, copy-editing, and translation, as well as video editing, subtitling, and post-production.

TEACHING & MENTORSHIP EXPERIENCE

Teaching experience

- 2021 **Workshop designer and instructor** - PRONACES-ARSEC, *Ensenada, Mexico*.
Semi-structured interview training for transdisciplinary teams.
- 2016 **Workshop co-designer and instructor** - Next Generation Sonoran Desert Researchers (N-Gen), *Ensenada, Mexico*
Communicating Science Up and Down the Gulf of California.
- 2003 **Instructor** - Centro de Estudios Superiores Indígenas Kgojom, *Huehuetla, Puebla, Mexico*
Volunteer instructor of humanities and social science at an indigenous community high school (Nahua / Totonac) through the UDLA-P social service program.

Undergraduate Mentorship

- 2021 **Universidad Nacional Autónoma de México** - - Thesis Committee Member, Huran Drouet Cruz.
Licentiate in Environmental Science.

Extracurricular instruction

- 2014-Present **Self-defense & Martial Arts Instructor** - Freelance.

Provided training in womens' self defense and martial arts in person and online, with students ages 13-55 in Mexico, the U.S., and the U.K..

PROFESSIONAL SERVICE & LEADERSHIP

Significant leadership roles

- 2020-Present **Member** - IUCN-SSC Marine Turtle Specialist Group (MTSG): East Pacific region
- 2016-2022 **Associate Director** - Next Generation Sonoran Desert Researchers (N-Gen)
- Executive Producer** - N-Gen website (www.nextgensd.com)

Workshop organization

- 2016 **Workshop Co-organizer** - Next Generation Sonoran Desert Researchers (N-Gen)
Communicating Science Up and Down the Gulf of California. Ensenada, Mexico, December.

Manuscript Review

Reviews in Fish Biology and Fisheries, Trends in Ecology & Evolution, Reviews in Fish Biology and Fisheries, Nature Sustainability, Perspectives in Ecology and Conservation, Journal of Environmental Management, Región y sociedad

Grant Proposal Review

- 2017-2018 **Student and Early Career Grant Program** - Next Generation Sonoran Desert Researchers (N-Gen).
- Collaborative Grant Program** - Next Generation Sonoran Desert Researchers (N-Gen).

COMMUNITY OUTREACH EVENTS

- 2022 **International Faculty Connections, Stanford, USA** - Stanford Doerr School of Sustainability / Bechtel International Center
Facilitator of a discussion group to connect international students and faculty. October.
- International Forum of Women Scientists: Understanding sea turtles, Loreto, Mexico (Online)** - Eco-Alianza de Loreto, A.C.
Bilingual video and Q&A (Spanish/English): "Sea turtle fishing and conservation in the central desert of Baja California". May.
- 2019 **Border BioBlitz, Tijuana, Mexico** - Next Generation Sonoran Desert Researchers (N-Gen)
Team coordinator for Tijuana, Mexico. March.
- 2018 **Border BioBlitz, Tijuana, Mexico** - Next Generation Sonoran Desert Researchers (N-Gen)
Team coordinator for Tijuana, Mexico. March.
- 2017 **Noche de las Ciencias, Ensenada, Mexico** - Centre de Investigación Científica y de Educación Superior de Ensenada (CICESE)
CICESE Mathematical Ecology Lab. "¿Porqué es importante conservar a las tortugas marinas?" (Why is it important to conserve sea turtles?). April.
- 2011 **BUAP National Book Fair, Puebla, Mexico** - Benemérita Universidad Autónoma de Puebla
Book Launch: *Voces del oleaje: ecología políticas de las tortugas marinas en la costa de Oaxaca*. March.
- Book Launch, Puebla, Mexico** - Universidad de las Américas-Puebla
Voces del oleaje: ecología políticas de las tortugas marinas en la costa de Oaxaca. March.
- 2010 **Book Launch, San Agustinillo, Oax., Mexico** - San Agustinillo Community Library
Voces del oleaje: ecología políticas de las tortugas marinas en la costa de Oaxaca. December.

MEDIA COVERAGE OF RESEARCH & OUTREACH

- 2019 **KJZZ Tucson** - Tucson, USA
Radio segment: "Sonoran Desert Inspires 'Next Generation' Researchers To 'Shake Things Up'. *Fronteras*. <https://fronterasdesk.org/content/796841/sonoran-desert-inspires-next-generation-researchers-shake-things>. March.
- 2018 **Agencia EFE** - Madrid, Spain
Press coverage: *Ante muro de Trump, científicos de México y EEUU se unen por la naturaleza*. (Facing Trump's Wall, Mexican and U.S. Scientists Unite for Nature"). March. <https://bit.ly/2WflwHX>
- El Universal** - Mexico City, Mexico
Press coverage: *Científicos de México y EU se unen ante muro de Donald Trump*. (Mexican and U.S. Scientists Unite Before Trump's Border Wall"). <https://bit.ly/3kRQIXY> March.
- San Diego Union Tribune (Spanish Edition)** - San Diego, USA
Press coverage: *Ante muro de Trump, científicos de México y EEUU se unen por la naturaleza*. (Facing Trump's Wall, Mexican and U.S. Scientists Unite for Nature"). <https://bit.ly/36Yezgw>. March.
- Sin Embargo** - Mexico City, Mexico
Press coverage: *Científicos mexicanos y de EU se unen para salvar a la naturaleza de la construcción del muro fronterizo*. (Mexican and U.S. Scientists Unite to Save Nature from the Construction of Trump's Border Wall). <https://bit.ly/3kPt8uV>. Mexico City, March.
- NTN24** - New York, USA
Television segment: Sea Turtle Conservation in Baja California. *Ciencia, Salud y Tecnología*. March.
- 2014 **Latinamericanscience.org** - Boston, USA
Online article: *Five impressive scientists we met in 2014*. Boston, December.
<http://latinamericanscience.org/2014/12/five-impressive-scientists-we-met-in-2014/>
- 2011 **Radio BUAP** - Puebla, Mexico
Radio segment: *Voces del oleaje: ecología política de las tortugas marinas en la costa de Oaxaca*. March.
- 2010 **Trinity College News & Events** - Dublin, Ireland
Online article: *Conference at TCD Highlights How Good Management Helps Ocean Life to Recover – Message from Oceans Past*. <https://bit.ly/3mb3e5D>. November.

ACADEMIC SOCIETIES & RESEARCH NETWORKS

Academic societies

Society for Conservation Biology, International Sea Turtle Society, International Society of Ethnobiology, Western Society of Naturalists

Research networks

Next Generation Sonoran Desert Researchers, PICES SEAturtle, International Thematic Network for Drylands Sustainability (RISZA), Patrimonio Biocultural en México (Biocultural Heritage in Mexico), Climate Science Alliance - Baja California Working Group

TECHNICAL SKILLS

Operating systems

Linux, MacOS, Windows

Programming and web development

Profficient: R, HTML/CSS, Markdown, WordPress

Basic: Python, LaTeX, Git

Specialized software

Statistics: SPSS, Statistica, STELLA/iThink, QtiPlot, Gnumeric

Design: Adobe Photoshop, Adobe Illustrator, GIMP, Inkscape, Scribus

Audiovisual production and post-production: FinalCut Pro, KDENLive, AviDemux, Jubler

Audiovisual production

Professional training in visual anthropology and technical photography (DSLR).

Practical training and experience in videography, script-writing, video editing, post-production, and subtitling.

Hardware

Electronics: Basic knowledge of schematics, prototype design, and microcontroller programming (Arduino)

LANGUAGES

Spanish: Native language / bilingual

English: Native language / bilingual

French: Intermediate level speaking and listening comprehension (CEFR B1), advanced reading (university-level academic texts)

Japanese: Beginner level speaking, reading, and listening comprehension (CEFR A1/JLPT N5)

Classical Náhuatl: Reading only, with dictionary