Danielle E. Haulsee

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EDUCATION

Ph.D. Oceanography, University of Delaware 2017
B.S. Environmental Studies, Gettysburg College 2010
Minor: Biology, Spanish

RESEARCH & PROJECT MANAGEMENT EXPERIENCE

Chief Science Officer • Hubbs-SeaWorld Research Institute December 2022 – Present

- Oversees a collaborative and interdisciplinary marine science research team in California and Florida of various disciplines, working with investigators to set research priorities and goals.
- Developing and maintaining a strategic research plan for the institute's research programs focused on sustainable seafood, ocean health, animal behavior and wildlife populations.
- Oversees the IACUC and associated project approval process relative to animal welfare
- Serves as an interface/catalyst with HSWRI's management team, board of trustees, science staff, development team, and SeaWorld
- Works with Institute consultants, administration, collaborators and research staff to assist in media outreach and marketing
- Interfaces with colleges and universities to create joint research opportunities

Research Scientist • Stanford University, Hopkins Marine Station April 2022 – December 2022

- Developing & implementing a strategic framework for increasing the capacity & efficacy of biological monitoring & community engagement within Long-Term Ecological Research programs in the California Current
- Facilitating the development of a collaborative monitoring project for the Harbor Seal rookery in Pacific Grove, CA by engaging with scientists & community members to study population dynamics in a changing climate & disturbance induced behavioral responses
- Overseeing completion & dissemination of project deliverables for an international Dynamic Ocean Management project (*Project DynaMAR*) with a team of 18 investigators, 6 undergraduate & graduate students & local stakeholders (*fishers, government, etc.)*
- Analyzing biological records & environmental conditions to create predictive models of the distribution of species of concern in the Eastern Tropical Pacific Ocean to support conservation & policy initiatives in response increased human impacts including climate change
- Leading a multi-institutional team developing & implementing a bilingual (English & Spanish) survey to capture local ecological knowledge of fishing stakeholders in Costa Rica

Postdoctoral Researcher • Stanford University, Hopkins Marine Station September 2018 – April 2022

- Designed, strategized & executed multi-year international research project requiring extensive in the field & computational work to study the ecology of highly migratory pelagic predatory fish
- Coordinated project schedule, international field work logistics, data management & facilitated collaboration among 18 principal investigators leading to the successful deployment of 75+ geo-location tags on fish & the collation of historical geo-location datasets from collaborators

- Compared species observation time series from commercial & recreational fisheries records to environmental & climate variables at multiple scales in the Eastern Tropical Pacific Ocean; Primary author on resulting publication & many presentations
- Co-Chair of the Hopkins Marine Station Postdoc Organization, secured seed funding & served as postdoc representative in faculty meetings to advocate for postdoc led initiatives
- Mentored & oversaw education, professional development, & research of 3 graduate, 4 undergraduate & 4 high school students
- Prepared final report & technical summary of research related to the occurrence of an endangered species & commercial fishery in the context of offshore wind development in the Atlantic Ocean for federal funding agency (BOEM) in support of federal policy requirements
- Organized & facilitated symposiums at the international American Fisheries Society Meetings (2018 & 2019) focused on offshore wind energy development, stakeholder perspectives & dynamic ocean management

Postdoctoral Researcher • University of Delaware — March 2017-September 2018

- Quantified annual species occurrence & habitat selection using species distribution modeling of acoustically tagged fish in the Delaware Wind Energy Lease Area in support of environmental assessment efforts
- Coordinated project schedule, field work logistics, data management & facilitated collaboration among stakeholder groups
- Prepared quarterly & annual reports to fulfill funding agency requirements
- Acted as spokesperson for fisheries research project in public townhall discussions related to offshore wind energy development

September 2010 – March 2017

Doctoral Researcher • University of Delaware

- Designed, strategized & executed multi-year research project requiring extensive in the field & computational work to study the ecology of a coastal shark species
- Successfully designed & implemented a novel study on the social networks of a coastal shark species leading to publication in Nature Scientific Reports & international media attention
- Developed tagging protocol & assisted in training crew in proper shark & boat handling techniques, surgically implanted 75+ acoustic transmitters, attached 30+ geo-location tags
- Organized & maintained large database of species location records

PUBLICATIONS

Blondin, H.E., D.E. Haulsee, R. Logan, M. Shivji, E. R. Hoffmayer, J. H. Walker, J. M. Dean, E. L. Hazen, L. B. Crowder. (2023) Variability in billfish vertical distribution and fishing interactions driven by environmental conditions in the Eastern Tropical Pacific Ocean, **ICES Journal of Marine Science**. fsad090

McCormack, J., Karnes, M., Haulsee, D., Fox, D. and Kim, S.L., 2023. Shark teeth zinc isotope values document intrapopulation foraging differences related to ontogeny and sex. **Communications Biology**, 6(1), p.711.

Hoschke, A.M., Whisson, G.J. and Haulsee, D., 2023. Population distribution, aggregation sites and seasonal occurrence of Australia's western population of the grey nurse shark Carcharias taurus. **Endangered Species Research**, *50*, pp.107-123.

Halpern, B.S., Boettiger, C., Dietze, M.C., Gephart, J.A., Gonzalez, P., Grimm, N.B., Groffman, P.M., Gurevitch, J., Hobbie, S.E., Komatsu, K.J., …Haulsee, D.E…, and Kroeker, K.J., 2023.

Priorities for synthesis research in ecology and environmental science. **Ecosphere**, *14*(1), p.e4342.

Haulsee, D.E., H. Blondin, R.K. Logan, L.B. Crowder. (2022) Where do the billfish go? Using recreational catch data to relate local and basin scale environmental conditions to billfish occurrence in the Eastern Tropical Pacific. **Fisheries Oceanography**. 31(2): 135-148

Roose, R., Oliver, M., Haulsee, D., Breece, M., Carlisle, A. and Fox, D., 2022. The sociality of Atlantic sturgeon and sand tiger sharks in an estuarine environment. **Animal Behaviour**, *193*, pp.181-191.

Blondin, H.E., Armstrong, K.C., Hazen, E.L., Oestreich, W.K., Santos, B.S., Haulsee, D.E., Mikles, C.S., Knight, C.J., Bennett, A.E. and Crowder, L.B., 2022. Land-dependent marine species face climate-driven impacts on land and at sea. **Marine Ecology Progress Series**, *699*, pp.181-198.

Chapman, M.S., W.K. Oestreich, T.H. Frawley, C. Boettiger, S. Diver, B.S. Santos, C. Scoville, K. Armstrong, H. Blondin, K. Chand, D.E. Haulsee, C.J. Knight, L.B. Crowder (2021) Promoting equity in the use of algorithms for high-seas conservation. **One Earth**. 4(6): 790-794

Breece, M.W., Oliver, M.J., Fox, D.A., Hale, E.A., Haulsee, D.E., Shatley, M., Bograd, S.J., Hazen, E.L. and Welch, H., 2021. A satellite-based mobile warning system to reduce interactions with an endangered species. **Ecological Applications**, *31*(6), p.e02358.

Haulsee, D.E., M.W. Breece, D.A. Fox, M.J. Oliver. (2020) Simple is sometimes better: a test of the transferability of species distribution models. **ICES Journal of Marine Science**. 77(5): 1752–1761

Rothermel, E.R., Balazik, M.T., Best, J.E., Breece, M.W., Fox, D.A., Gahagan, B.I., Haulsee, D.E., Higgs, A.L., O'Brien, M.H., Oliver, M.J. and Park, I.A., 2020. Comparative migration ecology of striped bass and Atlantic sturgeon in the US Southern mid-Atlantic bight flyway. **PLoS One**, *15*(6), p.e0234442.

Haulsee, D.E., D. A. Fox, M. W. Breece, B. M. Wetherbee, J. Manderson, M. J. Oliver. (2018) Spatial ecology of Carcharias taurus in the northwestern Mid-Atlantic coastal ocean. **Marine Ecology Progress Series**. 597: 191-206.

Breece, M.W., Fox, D.A., Haulsee, D.E., Wirgin, I.I. and Oliver, M.J., 2018. Satellite driven distribution models of endangered Atlantic sturgeon occurrence in the mid-Atlantic Bight. **ICES Journal of Marine Science**, *75*(2), pp.562-571.

Oliver, M.J., Breece, M.W., Haulsee, D.E., Cimino, M.A., Kohut, J., Aragon, D. and Fox, D.A., 2017. Factors affecting detection efficiency of mobile telemetry Slocum gliders. **Animal Biotelemetry**, *5*, pp.1-9.

Haulsee, D.E., D. A. Fox, M. W. Breece, L. M. Brown, J. Kneebone, G. B. Skomal, M. J. Oliver. (2016) Social Network Analysis Reveals Potential Fission-Fusion Behavior in a Shark. **Nature Scientific Reports**. 6: 34087

Haulsee, D.E., M. W. Breece, T. M. Clauss, D. A. Fox, M. J. Oliver. (2016) Implantation and recovery of long-term archival transceivers in a migratory shark with high site fidelity. **PLOSone**. 11(2): e0148617.

Commito, J.A., Gownaris, N.J., Haulsee, D.E., Coleman, S.E. and Beal, B.F., 2016. Separation anxiety: mussels self-organize into similar power-law clusters regardless of predation threat cues. **Marine Ecology Progress Series**, *547*, pp.107-119.

Haulsee, D.E., M.W. Breece, D. A. Fox, D. C. Miller, B. M. Wetherbee, M. J. Oliver (2015) Estimating fine scale habitat selectivity of an apex predator with an autonomous underwater vehicle. **Marine Ecology Progress Series**. 528, 277–288.

Oliver, M.J., Breece, M.W., Fox, D.A., Haulsee, D.E., Kohut, J.T., Manderson, J. and Savoy, T., 2013. Shrinking the haystack: using an AUV in an integrated ocean observatory to map Atlantic Sturgeon in the coastal ocean. **Fisheries**, *38*(5), pp.210-216.

COMMUNICATION & SCIENTIFIC REVIEW EXPERIENCE

Advisory Presentations & Workshops

- Using Expert Opinion to Determine Bycatch Susceptibility of Finfish, Forage Fish, Batoids, Invertebrates & Habitat Forming Species for the Monterey Bay Aquarium Seafood Watch Fisheries Assessment. Annual AFS Meeting, Reno, NV.
- Changing Ocean Conditions Related to Fisheries, Rutgers University, New Brunswick, NJ
- Haulsee, D. E. (2017) Using Remote Sensing & Acoustic Telemetry to Study the Spatial & Behavioral Ecology of the Sand Tiger Shark. NOAA North Atlantic Regional Team Annual Meeting. Dover, DE. **Invited Speaker**.
- Haulsee, D.E., M.W. Breece, B. M. Wetherbee, D. A. Fox, M. J. Oliver. (2017) Predictive Species Distribution Model for Conservation of the Sand Tiger Shark. NASA Biodiversity and Ecological Forecasting Annual Meeting, Washington, D.C.

Communication & Outreach

- Experience communicating science & project goals/outcomes with local (Coastal Angler, WDDE, Delaware News Journal, Delaware Legislative Hall, Western Outdoor News) & national media outlets (Fox, ABC, Sportfishing Magazine, National Geographic)
- Science briefings to state and federal political representatives
- Experience promoting & engaging the public with science & project goals using social media platforms (ex. Facebook, Twitter, Instagram)
- Women in STEM Alumni Panel, Gettysburg College (2022)
- Skype-a-Scientist, 12+ classrooms across US (elementary - high school) connections since June 2020
- Gill's Club Featured Female Scientist (2016)
- Reading & conversational skills in Spanish

Diversity, Equity, Inclusion & Justice

- Unlearning Racism in Geosciences, 8-week program, Monterey Bay Pod, 2021
- Implicit Bias Workshop, Stanford Biology Preview Program
- Intersectionality Workshop: Developing tools for intersectionality awareness & advocacy, University of Delaware, Lewes, DE

Scientific Review

**number indicates number of manuscripts handled/reviewed*

- Journal Editorial Board: Animal Biotelemetry (4)
- Manuscript reviewer: Marine Ecology Progress Series (4), Animal Biotelemetry (3), Marine and Coastal Fisheries (3), Behavioral Ecology and Sociobiology (2), Journal of Animal Ecology (1), Ecosphere (1), Fish and Fisheries (1), Fisheries Management & Ecology (1), Marine Biology (1), Movement Ecology (2), Drones (1)

SELECTED PRESENTATIONS

Haulsee, D.E., Blondin, H., Logan, R., Gutierrez, E., Crowder, L. (2022) Where do the billfish go? Using recreational catch data to understand how billfish occurrence changes due to climate oscillations in the Eastern Tropical Pacific. Ocean Sciences Meeting. Virtual.

Haulsee, D.E. (2020) Dynamic Ocean Management: Using Technology to Capture the Complexities of Spatial Ecology for Marine Conservation and Management. Distinguished Scholars Seminar

Series, Chesapeake Bay Laboratory, University Of Maryland Center for Environmental Science, **Invited speaker**

Haulsee, D.E., H. Blondin, W. Oestreich, L. Crowder. (2019) Seasonal Occurrence and Distributions of Billfish Related to Climate Variability in the Eastern Pacific Ocean. American Fisheries Society. Reno, NV.

Haulsee, D.E., M.W. Breece, D.A. Fox, K Hudson, M.J. Oliver. (2019) Testing the transferability of species distribution models using acoustic telemetry and an autonomous underwater vehicle. American Fisheries Society. Reno, NV.

Haulsee, D.E., M. W. Breece, D. A. Fox, M. J. Oliver. (2018) Occurrence of commercially important and endangered fishes in Delaware Wind Energy areas using acoustic telemetry. American Fisheries Society. Atlantic City, NJ.

Haulsee, D.E., M.W. Breece, L. Brown, D. A. Fox, B. M. Wetherbee, and M. J. Oliver. (2018) Dynamic Prediction of Sand Tiger Occurrence in the Mid-Atlantic Bight Using Remote Sensing and Acoustic Telemetry. American Fisheries Society. Atlantic City, NJ.

Haulsee, D.E., M. W. Breece, D. A. Fox, M. J. Oliver. (2018) Using Remote Sensing and Acoustic Telemetry to Understand the Spatial and Behavioral Ecology of Sharks. **Inspire talk**, Ecological Society of America. New Orleans, LA.

Haulsee, D.E. (2016) Habitat Selection and Social Networks of Sand Tigers. Gettysburg College Environmental Studies Seminar Series, Gettysburg, PA. **Invited Speaker.**

Haulsee, D.E., D. A. Fox, M. W. Breece, B. M. Wetherbee, L. M. Brown, J. Kneebone, G. Skomal, M. J. Oliver. (2016) Internal Acoustic Transceivers Reveal the Annual Social Network Patterns in a Coastal Top Predator. Ocean Sciences Meeting, New Orleans, LA.

Haulsee, D.E., D. A. Fox, M. W. Breece, L. M. Brown, B. M. Wetherbee, T. M. Clauss, M. J. Oliver. (2016) Habitat Selection and Social Networks of Sand Tigers. Regional Aquatics Workshop, New Orleans, LA. **Invited Speaker. Best of RAW.**

Haulsee, D.E., M. W. Breece, L. M. Brown, B. M. Wetherbee, D. A. Fox, M. J. Oliver. (2014) Social Sharks: Long-term Internal Acoustic Transceivers Reveal Species Associations and Large-scale Movements of a Coastal Apex Predator. American Fisheries Society. Quebec City, Canada.

Haulsee, D.E. (2014) Habitat selection and socials networks of Sand Tigers. Friends of Bombay Hook Annual Business Meeting, Bombay Hook National Wildlife Refuge, Smyrna, DE. **Invited Speaker**.

Haulsee, D.E. (2014) Habitat selection and socials networks of Sand Tigers. Ocean Currents Lecture, University of Delaware, Lewes, DE. **Invited Speaker.**

Haulsee, D.E., M. W. Breece, D. A. Fox, D. A. Miller, B. W. Wetherbee, M. J. Oliver. (2014) Estimating fine scale habitat selectivity of an apex predator with an autonomous underwater vehicle. Ocean Sciences Meeting, Honolulu, HI.

Haulsee, D.E., B. M. Wetherbee, D. A. Miller, M. A. Cimino, M. W. Breece, D. A. Fox, M. J. Oliver. (2012) Incorporating acoustic telemetry and underwater robots to understand fish movements and species assemblages in the Mid-Atlantic bight. Mid-Atlantic Chapter of American Fisheries Society Meeting. Wilmington, DE. **Best Student Oral Presentation**.

Haulsee, D.E., M. J. Oliver, B. M. Wetherbee, D. A. Fox. (2011) Mapping Spatiotemporal Patterns in Tiger Shark Habitats Using Satellite Technology. Mid-Atlantic Chapter of the American Fisheries Society Meeting. Poster presentation. **Best Student Poster Presentation**.