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### ***Professional Appointments***

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Assistant Professor, School of Marine Science & Policy, University of Delaware, 2018 - present  
Postdoctoral Research Fellow, Stanford University, 2012 - 2014, 2016 - 2018  
National Research Council Postdoctoral Research Associate, NOAA SWFSC, 2014 - 2016  
Member, IUCN Species Survival Commission, Shark Specialist Group, 2010 - present

### ***Education***

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Ph.D. Stanford University, Biological Sciences, 2012  
M.Sc. San Jose State University/Moss Landing Marine Laboratories, Marine Science, 2006  
B. A. Princeton University, Ecology and Evolutionary Biology, 1999

### ***Awards and Grants***

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2019 Delaware Sea Grant (PI), “Characterizing the ecological role of apex predators in the Delaware Bay Ecosystem and their potential impacts on managed species”  
2018 University of Delaware Research Foundation Strategic Initiative Grant (PI), “Development of a new biologging tag to record *in-situ* oxygen use of fish in the wild”  
2016 NOAA Cooperative Research Program Grant (Co-Investigator)  
2014 National Research Council Fellowship (2014-2016)  
2014 The Nature Conservancy, “Nursery functions of west coast estuaries: a state of the knowledge report” (Co-Investigator)  
2013 Coastal and Estuarine Research Federation Early Career Travel Award  
2012 American Society of Ichthyologists & Herpetologists Student Travel Award  
2012 The Nature Conservancy, “Investigation of the relationship between the nursery function of estuaries and nutrient loading” (Co-Investigator)  
2011 PADI Foundation Grant  
2011 MBNMS Sanctuary Currents Symposium, Honorable Mention in poster competition  
2011 American Elasmobranch Society Student Travel Award  
2009 Dr. Earl Myers and Ethel Myers Oceanographic and Marine Biology Trust  
2008 Stanford VPGE SCORE Grant  
2007 Elkhorn Slough Conservation Research Award  
2006 Grover Hermann Foundation Graduate Fellowship in Marine Science, 2006-2012 (tuition and stipend at Stanford University)  
2005 American Elasmobranch Society Student Travel Award  
2004 PADI Project AWARE Grant  
2004 Monterey Bay National Marine Sanctuary, Sanctuary Integrated Monitoring Network

- Grant, 2004 (co-PI)  
2003 PADI Foundation Grant  
2003 PADI Project AWARE Grant  
2003 Archimedes Scholarship  
2002 PADI Project AWARE Grant  
2002 Dr. Earl Myers and Ethel Myers Oceanographic and Marine Biology Grant  
1995 Mary John Goree Scholarship (4-year full tuition scholarship to Princeton University)

## ***Publications***

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- 35) **Carlisle, A.B.**, Tickler, D., Dale, J.J., Ferretti, F., Curnick, D.J., Chapple, T.K., Schallert, R.J., Castleton, M. and Block, B.A. (2019) Estimating space use of mobile fishes in a large marine protected area with methodological considerations in acoustic array design. *Frontiers in Marine Science*, 6: 256.
- 34) Chiang, W., Chang, Y., Chang, C., Musyl, M., Sun, C., Madigan, D., **Carlisle, A.**, Hsu, H., Chang, Q., Nan-Jay, H., & Tseng, C. (2019) Stable isotope analysis reveals ontogenetic feeding shifts in Pacific blue marlin (*Makaira nigricans*) off eastern Taiwan. *Journal of Fish Biology*
- 33) Queiroz, N., Humphries, N.E., ... **Carlisle, A.B.**, ... Sims, D.W. (2019). Global spatial risk assessment of sharks under the footprint of fisheries. *Nature*, 572(7770):461-466.
- 32) White, T.D., Ferretti, F., Kroodsma, D.A., Hazen, E.L., **Carlisle, A.B.**, Scales, K.L., Bograd, S.J., & Block, B.A. (2019) Predicted hotspots of overlap between Pacific highly migratory fishes and industrial fishing fleets. *Science Advances* 5(3): p.eaau3761
- 31) Curnick, D.J., **Carlisle, A.B.**, Gollock, M., Schallert, R.J. & Hussey, N. (2019) Evidence of dynamic resource partitioning between two sympatric reef shark species within the British Indian Ocean Territory. *Journal of Fish Biology* 94(4): 680-685
- 30) Lyons, K., Bigman, J.S., Kacev, D., Mull, C.G., **Carlisle, A.B.**, Imhoff, J.L., Anderson, J.M., Weng, K.C., Shaw, A.L., Cave, E., Gunn, T.R., Lowe, C.G., Brill, R.W. & Bedore, C.N. (2019) Bridging disciplines to advance elasmobranch conservation: applications of physiological ecology. *Conservation Physiology* 7(1): coz011.
- 29) Tickler, D., **Carlisle, A.B.**, Chapple, T., Dale, J., Schallert, R., & Block, B. (2019) Potential detection of illegal fishing by passive acoustic telemetry. *Animal Biotelemetry* 7(1): 1
- 28) Huveneers, C., Apps, K., Becceri-Garcia, E., Bruce, B., Butcher, P., **Carlisle, A.**, Chapple, T., Christiansen, H., Cliff, G., Curtiss, T., Daly-Engel, T., Dewar, H., Dicken, M., Domeier, M., Duffy, C., Ford, R., French, G., Francis, M., Galvan-Magana, F., Garcia-Rodriguez, E., Gennari, E., Graham, B., Hayden, B., Hoyos-Padilla, M., Hussey, N., Jewell, O., Jorgensen, S., Kock, A., Lowe, C., Lyons, K., Meyer, L., Oelofse, G., Oñate-González, E., Oosthuizen, H., O'Sullivan, J., Ramm, K., Skomal, G., Sloan, S., Smale, M., Sosa-Nishizaki, O., Spreone, E., Tamburin, E., Towner, A., Wcisel, M., Weng, K., Werry, J. (2018). Future research directions on the 'elusive' white shark. *Frontiers in Marine Science* 5: 455

- 27) Harrison, A., Costa, D., Winship, A., Benson, S., Bograd, S., **Carlisle, A.**, Dewar, H., Dutton, P., Jorgensen, S., Antolos, M., Kohin, S., Mate, B., Robinson, P., Schaefer, K., Shaffer, S., Shillinger, G., Simmons, S., Weng, K., Gierde, K., Block, B. (2018). The political biogeography of migratory marine predators. *Nature Ecology & Evolution* 2(10): 1571.
- 26) Bird, C.S., Veríssimo, A., Magozzi, S., Abrantes, K.G., Aguilar, A., Al-Reasi, H., Barnett, A., Bethea, D.M., Biais, G., Borrell, A., Bouchouca, M., Boyle, M., Brooks, E.J., Brunnschweiler, J., Bustamante, P., **Carlisle, A.**, Catarino, D., Caut, S., Cherel, Y., Chouvelon, T., Churchill, D., Ciancio, J., Claes, J., Colaço, A., Courtney, D.L., Cresson, P., Daly, R., de Necker, L., Endo, T., Figueiredo, I., Frisch, A.J., Hansen, J.H., Heithaus, M., Hussey, N.E., Iitembu, J., Juanes, F., Kinney, M.J., Kiszka, J.J., Klarian, S.A., Kopp, D., Leaf, R., Li, Y., Lorrain, A., Madigan, D.J., Maljković, A., Malpica-Cruz, L., Matich, P., Meekan, M.G., Ménard, F., Menezes, G.M., Munroe, S.E.M., Newman, M.C., Papastamatiou, Y.P., Pethybridge, H., Plumlee, J.D., Polo-Silva, C., Quaeck-Davies, K., Raoult, V., Reum, J., Torres-Rojas, Y.E., Shiffman, D.S., Shipley, O.N., Speed, C.W., Staudinger, M.D., Teffer, A.K., Tilley, A., Valls, M., Vaudo, J.J., Wai, T.-C., Wells, R.J.D., Wyatt, A.S.J., Yool, A. & Trueman, C.N. (2018) A global perspective on the trophic geography of sharks. *Nature Ecology & Evolution* 2: 299-305.
- 25) Bizzarro, J.J., **Carlisle, A.B.**, Smith, W.D. and Cortés, E., 2017. Diet composition and trophic ecology of Northeast Pacific ocean sharks. In *Advances in marine biology* (Vol. 77, pp. 111-148). Academic Press.
- 24) Lyons, K., **Carlisle, A.B.** and Lowe, C.G., 2017. Influence of ontogeny and environmental exposure on mercury accumulation in muscle and liver of male Round Stingrays. *Marine environmental research* 130: 30-37.
- 23) \*Coffey, D.M., **Carlisle, A.B.**, Hazen, E.L. and Block, B.A., 2017. Oceanographic drivers of the vertical distribution of a highly migratory, endothermic shark. *Scientific reports*, 7(1): 10434.  
\*Student advisee
- 22) Madigan, D.J., Baumann, Z., **Carlisle, A.B.**, Snodgrass, O., Dewar, H. and Fisher, N.S., 2017. Isotopic insights into migration patterns of Pacific bluefin tuna in the eastern Pacific Ocean. *Canadian Journal of Fisheries and Aquatic Sciences*, 75: 260-270.
- 21) White, T.D., **Carlisle, A.B.**, Kroodsma, D.A., Block, B.A., Casagrandi, R., De Leo, G.A., Gatto, M., Micheli, F., & McCauley, D.J. (2017) Assessing the effectiveness of a large marine protected area for reef shark conservation. *Biological Conservation*, 207: 64-71.
- 20) **Carlisle, A.B.**, Litvin, S., Madigan, D., Bigman, J., Lyons, K., Ibarra, M. & Bizzarro, J. (2017) Interactive effects of urea and lipid confound stable isotope results in chondrichthyan fishes. *Canadian Journal of Fisheries and Aquatic Sciences*, 74(3): 419-428.
- 19) Briscoe, D.K., Hobday, A.J., **Carlisle, A.B.**, Scales, K., Paige-Eveson, J., Arrizabalaga, H., Druon, J.N., Fromentin, J. (2016) Ecological bridges and barriers in pelagic ecosystems. *Deep-Sea Research Part II* 140: 182-192

- 18) Chapple, T.K., Chambert, T., Kanive, P.E., Jorgensen, S.J., Anderson, S.D., **Carlisle, A.B.**, Rotella, J.J., & Block, B.A. (2016) A novel application of multi-event modeling to efficiently estimate spatial segregation among sex and age classes of a highly migratory pelagic vertebrate. *Ecology* 97(12): 3494-3502.
- 17) **Carlisle, A.B.**, Kochevar, R., Arostegui, M., Ganong, J., Castleton, M., Schratwieser, J., & Block, B.A. (2016) Influence of temperature and oxygen on the distribution of blue marlin (*Makaira nigricans*) in the Central Pacific. *Fisheries Oceanography* 26(1): 34-48.
- 16) Hazen, E.L., **Carlisle, A.B.**, Wilson, S.G., Ganong, J.E., Castleton, M.R., Bograd, S.J., & Block, B.A. (2016) Quantifying overlap between the Deepwater Horizon oil spill and predicted bluefin tuna spawning habitat in the Gulf of Mexico. *Scientific Reports* 6: 33824.
- 15) Madigan, D.J., **Carlisle, A.B.**, Gardner, L.D., Jayasundara, N., Micheli, F., Schaefer, K.M., Fuller, D.W., & Block, B.A. (2015). Assessing niche width of endothermic fish from genes to ecosystem. *Proceedings of the National Academy of Sciences* 112(27): 8350-8355.
- 14) Hughes, B.B., Levey, M.D., Fountain, M.C., **Carlisle, A.B.**, Chavez, F.P., & Gleason, M.G. (2015) Climate mediates hypoxic stress on fish diversity and nursery function at the land–sea interface. *Proceedings of the National Academy of Sciences* 112(26): 8025-8030.
- 13) **Carlisle, A.B.**, Goldman, K.J., Litvin, S.Y., Madigan, D.J., Bigman, J., Swithenbank, A., Kline, T. & Block, B.A. (2015) Stable isotope analysis of vertebrae reveals ontogenetic changes in habitat in an endothermic shark. *Proceedings of the Royal Society B* 292: 20141446.
- 12) **Carlisle, A.B.**, Litvin, S., Hazen, E., Madigan, D., Goldman, K., Lea, B. & Block, B. (2015) Reconstructing habitat use by juvenile salmon sharks links upwelling to strandings in the California Current. *Marine Ecology Progress Series* 525: 217-228.
- 11) Chang, C-C, C., Jang-Liaw, N-H., Lin, Y-S., **Carlisle, A.B.**, Hsu, H., Liao, Y-C, & Shao, K-T (2014) The complete mitochondrial genome of the salmon shark, *Lamna ditropis* (Chondrichthyes, Lamnidae). *Mitochondrial DNA* 27(1): 316-317.
- 10) Madigan, D., Baumann, Z., **Carlisle, A.B.**, Hoen, D., Popp, B., Dewar, H., Snodgrass, O., Block, B. & Fisher, N. (2014) Reconstructing trans-oceanic migration of a Pacific predator using a chemical tracer toolbox. *Ecology* 95(6): 1674-1683.
- 9) Field, J., Litvin, S., **Carlisle, A.B.**, Stewart, J., Gilly, W., & Ruiz-Cooley, R.I. (2014) Stable isotope analysis of Humboldt squid prey preferences should be interpreted with caution: Comment on Miller et al. (2014). *Marine Ecology Progress Series* 500: 281-285.
- 8) Lyons, D. **Carlisle, A.B.**, Preti, A., Blasius, M., Mull, C., Winkler, C., O’Sullivan, J., & Lowe, C. (2013) Effects of trophic ecology and habitat use on maternal transfer of contaminants in four species of young of the year lamniform sharks. *Marine Environmental Research* 90: 27-38.

- 7) Madigan, D.J., Litvin, S.Y., Popp, B.N., **Carlisle, A.B.**, Farwell, C.J., & Block, B.A. (2012) Turnover rates and isotopic trophic discrimination factors in the endothermic teleost, Pacific bluefin tuna (*Thunnus orientalis*). PLoS ONE 7(11): e49220.
- 6) Madigan D.J., **Carlisle A.B.**, Dewar H., Snodgrass O.E., Litvin S.Y., Micheli F., Block B.A. (2012) Stable isotope analysis challenges wasp-waist food web assumptions in an upwelling pelagic ecosystem. Scientific Reports 2: 654.
- 5) **Carlisle, A.B.**, Kim S.L., Semmens, B.X., Madigan, D.J., Jorgensen, S.J., Perle, C.R., Anderson, S.D., Chapple, T.K., Kanive, P.E., Block, B.A. (2012) Using stable isotope analysis to understand the migration and trophic ecology of northeastern Pacific white sharks (*Carcharodon carcharias*). PLoS ONE 7(2): e30492.
- 4) **Carlisle, A.B.**, Perle, C.R., Goldman, K.J. & Block, B.A. (2011) Seasonal changes in depth distribution of salmon sharks (*Lamna ditropis*) in Alaskan waters: implications for foraging ecology. Canadian Journal of Fisheries and Aquatic Sciences 68: 1905-1921.
- 3) **Carlisle, A.B.** & Starr, R.M. (2010) Tidal movements of female leopard sharks (*Triakis semifasciata*) in Elkhorn Slough, California. Environmental Biology of Fishes 89:31-45.
- 2) **Carlisle, A.B.** & Starr, R.M. (2009) Habitat use, residency, and seasonal distribution of female leopard sharks (*Triakis semifasciata*) in Elkhorn Slough, California. Marine Ecology Progress Series 380: 213-228.
- 1) **Carlisle, A.B.**, King, A., Brennan, J.S. & Cailliet, G.M.C. (2007) Long-term trends in catch composition from elasmobranch derbies in Elkhorn Slough, California. Marine Fisheries Review 69 (1-4): 25–45.

### ***Technical Reports***

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Hughes, B., Levey, M., Brown, J., Fountain, M., **Carlisle, A.**, Litvin, S., Heady, W., Gleason, M. & Greene, C. (2014) Nursery functions of U.S. West Coast estuaries: the state of the knowledge for juveniles of fifteen representative fish and invertebrate species. A report prepared for the Nature Conservancy and Pacific Marine and Estuarine Fish Habitat Partnership. 186 pp.

Hughes, B., Fountain, M., **Carlisle, A.**, Levey, M. & Gleason, M. (2012) The impacts of nutrient loading and environmental conditions on the fish assemblage and available nursery habitat in Elkhorn Slough. A report prepared for the Nature Conservancy and the Elkhorn Slough Foundation. 53 pp.

### **Peer-Reviewed IUCN Species Assessments**

**Carlisle, A.B.**, Smith, S.E., Launer, A.L. & White, C.F. (2015) *Triakis semifasciata*. The IUCN Red List of Threatened Species 2015: e.T39363A80672743. Downloaded on 18 October 2016.

Lawson, J., **Carlisle, A.B.** & Villavicencio-Garayzar, C.J. (2016) *Platyrrhinoidis triseriata*. The IUCN Red List of Threatened Species 2016: e.T60112A80673588. Downloaded on 18 October 2016.

Cailliet, G.M., Chabot, C.L., Nehmens, M.C. & **Carlisle, A.B.** (2016) *Squatina californica*. The IUCN Red List of Threatened Species 2016: e.T39328A80671059. Downloaded on 18 October 2016.

**Carlisle, A.B.** 2015. *Heterodontus francisci*. (2015) The IUCN Red List of Threatened Species 2015: e.T39333A80671300. Downloaded on 18 October 2016.

**Carlisle, A.B.**, Launer, A.L. & Ebert, D.A. (2015) *Bathyraja microtrachys*. The IUCN Red List of Threatened Species 2015: e.T161683A8067518. Downloaded on 18 October 2016.

Tope shark (*Galeorhinus galeus*) In: Camhi, M.D., Valenti, S.V., Fordham, S.V., Fowler, S.L., and Gibson, C. (2009) The Conservation Status of Pelagic Sharks and Rays: Report of the IUCN Shark Specialist Group Pelagic Shark Red List Workshop. IUCN Species Survival Commission Shark Specialist Group. Newbury, UK.X+78p.

Southern shark (*Galeorhinus galeus*) In: Gibson, C., Valenti, S.V., Fordham, S.V., and Fowler, S.L. (2008) The Conservation of Northeast Atlantic Chondrichthyans: Report of the IUCN Shark Specialist Group Northeast Atlantic Red List Workshop, 76 pp.

Leopard shark (*Triakis semifasciata*), horn shark (*Heterodontus francisci*), southern shark (*Galeorhinus galeus*), gray smoothhound shark (*Mustelus californicus*), brown smoothhound shark (*Mustelus henlei*), narrowfin smoothhound shark (*Mustelus norrisi*), sicklefin smoothhound (*Mustelus lunulatus*), narrowfin smoothhound shark (*Mustelus norrisi*), Gulf of Mexico smoothhound (*Mustelus sinusmexicanus*), thornback ray (*Platyrrhinoidis triseriata*), Finespined skate (*Bathyraja microtrachys*), In: Kyne, P.M., Carlson, J.K., Ebert, D.A., Fordham, S.V., Bizzarro, J.J., Graham, R.T., Kulka, D.W., Tewes, E.E., Harrison, L.R., and Dulvy, N.K. (eds). (2012) The conservation status of North American, Central American, and Caribbean Chondrichthyans. IUCN Species Survival Commission Shark Specialist Group, Vancouver, Canada. 156 pp.

### ***Popular Press & Media***

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**Carlisle, A.**, & Kochevar, R. (2015) Spotlight on the IGFA great marlin race. NMFS 2014 Billfish Newsletter.

Baumwell, L & **Carlisle, A.** (2014) New satellite tag technology provides insight into marlin behavior. Marlin Magazine, Aug-Sep Issue.

Jorgensen, A. (2013) Sharks: ancient predators in a modern sea (subject consultation, research and editing).

Research featured on: Animal Planet's Wild Case Files, Discovery Channel's River Monsters, KNTV, Santa Cruz Sentinel, Monterey County Herald, U.D. Daily, Environmental Coastal and Offshore Magazine, Smithsonian, Forbes, Newsweek

### ***Invited Seminars***

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Tags to tracers: Revealing the hidden lives of sharks and fishes through integrative approaches to ecology. Distinguished Scholar Seminar Series. University of Maryland Chesapeake Biological Laboratory, Solomons Island, MD. 2018

Tags to tracers: Revealing the hidden lives of sharks and fishes through integrative approaches to ecology. School of Marine Sciences Seminar Series. University of Maine Orono, Orono, ME. 2018

The voyage to the White Shark Café. Ocean Currents Seminar. University of Delaware, Lewes, DE. 2018.

The tradeoff of being a warm shark in a cold ocean. Friends of Hopkins Marine Station Seminar. Pacific Grove, CA. 2016.

Warm sharks in a cold ocean: Integrative approaches for revealing the ecology and life history of an endothermic shark. Seminar Series, Moss Landing Marine Laboratories. Moss Landing, CA. 2016.

Inferring natal origins and movements of sharks and rays: novel applications of intrinsic markers from vertebral chemistry. American Fisheries Society, Portland, OR, 2015.

Using stable isotope analysis to inform tracking data in eastern North Pacific white sharks. California-Nevada Chapter of American Fisheries Society. Santa Cruz, CA, 2015

Integrating Electronic Tagging and Stable Isotope Analysis: New Approaches for Revealing the Ecology and Life History of Fishes. University of Texas Marine Science Institute, Port Aransas, TX, 2013.

Reconstructing the life history of a pelagic predator. Conservation and Marine Biology Seminar series, Scripps Institution of Oceanography, San Diego, CA. 2013.

Reconstructing ontogenetic shifts in habitat of a pelagic predator: insights from stable isotope analysis. Seminar series, California State University Monterey Bay. Marina, CA. 2012.

Variability in the depth distribution of salmon sharks (*Lamna ditropis*) in the eastern North Pacific: Implications for foraging ecology. American Fisheries Society, Minneapolis, MN. 2012

Investigating Ontogenetic Changes in Habitat Use in Salmon Sharks (*Lamna ditropis*) Using Stable Isotope Analysis. American Society of Ichthyologists and Herpetologists, Vancouver, Canada. 2012.

Movements and habitat use of female leopard sharks in Elkhorn Slough, California. Elkhorn Slough Research Symposium, Moss Landing, CA. 2007.

Movements and habitat use of female leopard sharks in Elkhorn Slough, California. Elkhorn Slough National Estuarine Research Reserve. Watsonville, CA. 2007.

### ***Academic Presentations***

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Oral Presentation: New insights into the trophic ecology of the Cookie Cutter Shark from stable isotope analysis and environmental DNA. American Fisheries Society, Atlantic City NJ, 2018

Poster Presentation: Does ENSO Drive Changes in the Trophic Ecology of Juvenile Market Squid? American Fisheries Society, Atlantic City NJ, 2018

Poster Presentation: Niche partitioning and variability in resource use in mesopredators in BIOT. Fondation Bertarelli Marine Science Symposium, London, UK, 2018

Poster Presentation: The environmental drivers influencing the movement networks and social ecology of reef sharks in BIOT. Fondation Bertarelli Marine Science Symposium, London, UK, 2018

Oral Presentation: Comparative trophic ecology and movement patterns in two migratory apex predators (black marlin and swordfish) in Taiwan inferred from stable isotope analysis and electronic tagging. Fisheries Society of the British Isles, Norwich, UK, 2018.

Oral Presentation: A tale of two krill: ENSO driven changes in the trophic ecology of market squid. Ocean Sciences 2018, Portland OR, 2018.

Oral Presentation: Oceanographic drivers of the vertical distribution of a highly migratory, endothermic shark. Ocean Sciences 2018, Portland OR, 2018.

Poster Presentation: Fine-scale variability in stomach temperature of White Sharks (*Carcharodon carcharias*) links to digestion and homeothermy. 6<sup>th</sup> International Bio-logging Science Symposium. Konstanz, Germany, 2017.

Oral Presentation: Warm Sharks in a Cold Ocean: How Thermal Physiology Influences the Distribution and Migration of Lamnid Sharks. American Elasmobranch Society, Austin, TX, 2017.

Oral Presentation: Early life history habitat models of lamnid sharks: linking thermal physiology with habitat availability. 3<sup>rd</sup> CLIOTOP Symposium (Climate Impacts on Oceanic Top Predators), San Sebastian, Spain, 2015.

Oral Presentation: Linking thermal physiology with habitat availability in juvenile lamnid sharks in the California Current. American Elasmobranch Society, Reno, NV, 2015.



Oral Presentation: Stable isotope analysis of salmon shark vertebrae reveals ontogenetic changes in habitat in a pelagic shark. Coastal and Estuarine Research Federation, San Diego, CA, 2013.

Oral Presentation: Habitat use and trophic ecology of juvenile salmon sharks in the California Current. American Elasmobranch Society, Albuquerque, NM, 2013.

Oral Presentation: Use of the California Current as a nursery area by juvenile salmon sharks. Western Society of Naturalists, Monterey, CA, 2012.

Poster Presentation: Reconstructing the life of a pelagic shark using stable isotope analysis. Ocean Sciences, Salt Lake City, UT. 2012.

Poster Presentation: Using stable isotope analysis to understand migration and trophic ecology of eastern Pacific white sharks. Monterey Bay National Marine Sanctuary Currents Symposium, Marina, CA. 2011.

Oral Presentation: Reconstructing the life of a pelagic shark: Investigating ontogenetic changes in distribution in salmon sharks using stable isotope analysis. American Elasmobranch Society, Minneapolis, MN, 2011.

Poster Presentation: Using stable isotope analysis to understand trophic ecology of eastern Pacific white sharks. International White Shark Science Symposium, Honolulu, HI, 2010.

Oral Presentation: Movements, depth and temperature preferences of salmon sharks in Alaskan waters. Third International Biologging Science Symposium, Asilomar, CA. 2008

Oral Presentation: Patterns of movement and habitat utilization of female leopard sharks in Elkhorn Slough, California. American Elasmobranch Society, New Orleans, LA, 2006

Poster Presentation: Spatial and temporal patterns of movement and habitat utilization of female leopard sharks in Elkhorn Slough, California. Western Society of Naturalists, Monterey, CA, 2005.

Oral Presentation: Long-term trends in elasmobranch catch composition from fishing derbies in Elkhorn Slough, California. Western Society of Naturalists, Monterey, CA, 2005

Poster Presentation: Spatial and temporal patterns of movement and habitat utilization of female leopard sharks in Elkhorn Slough, California. American Elasmobranch Society, Tampa, FL, 2005

Oral Presentation: Long-term trends in elasmobranch catch composition from fishing derbies in Elkhorn Slough, California. American Elasmobranch Society, Tampa, FL, 2005

Poster Presentation: Long-term trends in elasmobranch catch composition from fishing derbies in Elkhorn Slough, California. Monterey Bay National Marine Sanctuary Currents Symposium, Marina, CA, 2005

Poster Presentation: A life history data matrix for chondrichthyan fishes of the eastern North Pacific Ocean. Western Groundfish Conference, Victoria, British Columbia, Canada, 2004.

Poster presentation: A life history data matrix for chondrichthyan fishes of the eastern North Pacific Ocean. American Elasmobranch Society, Norman, OK, 2004.

### ***Academic Committees***

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Taylor Deemer, MSc, University of Delaware, 2018  
Jennifer Joseph, MSc, University of Delaware, 2018  
Justin Kuntz, MSc, University of Delaware, 2019  
Hunter Tipton, MSc, University of Delaware, 2019  
Natalie Arnoldi, PhD, Stanford University, 2019  
Kanaheera Harishchandra, MSc, University of Maine, 2019

### ***Academic Mentoring Experience***

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Devon Scott, REU, Undergraduate, Stockton University, 2019  
Richard Wong, Ph.D., University of Delaware, 2018-present  
Haley Oleynick, M.S., University of Delaware, 2018-present  
Kathryn Sloane, Undergraduate, University of Delaware, 2018  
Emily Wilkins, Undergraduate, University of Delaware, 2018  
Kelsey Ward, REU, Undergraduate Stockton University, NJ, 2018  
Madeline Lee, Undergraduate, Stanford University, 2016,  
Megs Malpani, High School, Palo Alto, CA, 2015.  
Kyle Mundy, Undergraduate, California State University Monterey Bay, 2014.  
Emily Dial, Undergraduate, Stanford University, 2014.  
Melissa Ibarra, Postgraduate, Mount Holyoke University, 2013.  
Roberto Guzman, Undergraduate, Stanford University, 2013.  
Martini Arostegui, Undergraduate, Stanford University, 2013.  
Natalie Sarah Arnoldi, Undergraduate/Graduate, Stanford University, 2011-2012.  
Molly Fredle, Undergraduate, California State University Monterey Bay, 2012.  
Daniel Coffey, M.Sc., University of Lund, Sweden, 2010-2011.

### ***Teaching Experience***

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Ichthyology, University of Delaware.  
Methods in Fish Ecology, University of Delaware.  
Guest Lecturer: Physiology of Marine Organisms, University of Delaware, 2018.  
Guest lecturer: Marine Conservation, Moss Landing Marine Laboratories, 2013.  
Guest lecturer: Ecology, California State University Monterey Bay 2012  
Co-Instructor: Biocore Explorations Seminar, Stanford University 2011.

Guest Lecturer, Sharks: Biology, Ecology, & Natural History, Moss Landing Marine Laboratories 2010  
Guest Lecturer: Topics in Marine Vertebrates: Advanced Ichthyology, Moss Landing Marine Laboratories, 2008  
Teaching Assistant: Plant Biology, Evolution, and Ecology, Stanford University, 2008  
Teaching Assistant: Core Experimental Laboratory, Stanford University, 2008  
Teaching Assistant: Stanford@Sea, Stanford University/Sea Education Association, 2007  
Guest Lecturer: Population Biology, Moss Landing Marine Laboratories, 2007  
Adjunct faculty: Human Anatomy and Physiology, Hartnell College, Salinas, CA. 2006.  
Teaching Assistant: Marine Ecology, Moss Landing Marine Laboratories, 2003  
Teaching Assistant, Marine Ichthyology, Moss Landing Marine Laboratories, 2002

### ***Professional Service***

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Member, Science Panel and Strategic Planning Team of the Elkhorn Slough Tidal Wetland Project

Member, Science Panel, San Francisco Bay Conservation and Development Commission

Grant Fund Committee for the American Elasmobranch Society (2015-1018)

*Professional affiliations:* American Fisheries Society, American Elasmobranch Society, International Bio-logging Society, Coastal and Estuarine Research Federation, Western Society of Naturalists, Sigma Xi Scientific Research Society

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