

Danielle E. Haulsee

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EDUCATION

Ph.D. Candidate, University of Delaware

Anticipated Graduation 2016

School of Marine Science and Policy
Oceanography Program
GPA: 3.94/4.0

B.S. Gettysburg College

2010

Major: Environmental Studies Minor: Biology, Spanish
GPA: 3.57/4.0 Major GPA: 3.56/4.0

RESEARCH EXPERIENCE

Graduate Research Assistant

06/15/10 - Present

University of Delaware, Lewes, DE

Sand Tiger Shark (*Carcharias taurus*) Study Project leader:

- Coordinated small boating operations and crew for shark tagging and tracking efforts
- Developed tagging protocol and assisted in training crew in proper shark and boat handling techniques
- Surgically implanted acoustic transmitters in sharks (>75 surgeries performed)
- Assist in maintenance of telemetry equipment on moorings/ATONs in estuarine and coastal waters
- Assist in sampling efforts for various fishes using long lines and gillnets
- Organized and maintain large database of species location records

Slocum Electric Gliders:

- Perform mission check-in and check-out procedures for Slocum Electric Gliders (G1 and G2) including: testing navigational functionality, testing sensor functionality, ballasting, software updates
- Assist in mission planning and piloting of Slocum Electric Gliders
- Download and manage data from acoustic telemetry receivers deployed on Slocum Electric Gliders along the Eastern Seaboard, multi-institutional collaborative effort

Satellite Remote Sensing:

- Download and process satellite data from various NASA satellites
- Create/maintain satellite measured ocean property layers available to the public through Google Earth

Undergraduate Research Assistant

09/01/07 – 05/10/10

Gettysburg College, Environmental Studies Department, Gettysburg, PA

- Conducted field experiment measuring effect of predator and non-predator cues to blue mussel (*Mytilus edulis*) clumping response using ArcGIS and Benoit fractal dimension software
- Processed preserved biologic and sediment samples; input and organized data

GIS Specialist Research Assistant

06/01/08 – 09/01/08

Gettysburg College, Environmental Studies Department, Gettysburg, PA

- Processed aerial photograph using ArcGIS; input and organized data

SELECTED PUBLICATIONS

Haulsee, D. E., M. W. Breece, J. Kneebone, L. M. Brown, B. M. Wetherbee, D. A. Fox, M. J. Oliver. Evidence of the fission-fusion social structure of a coastal shark species from internal acoustic transceivers. *In prep.*

Haulsee, D. E., M. W. Breece, T. M. Clauss, D. A. Fox, M. J. Oliver. (2016) Long-term archival transceiver implantation and recovery in a migratory shark with high site fidelity. *PLoS ONE* 11(2): e0148617 doi:10.1371/journal.pone.0148617.

Commito J. A., Gownaris N. J., Haulsee D. E., Coleman S. E., Beal B. F. Separation anxiety: Mussels self-organize into similar power-law clusters regardless of predation threat cues. *MEPS In press.*

Haulsee, D. E., Breece, M.W., Fox, D.A., Miller, D.C., Wetherbee, B.M., Oliver, M.J. (2015) Estimating fine scale habitat selectivity of an apex predator with an autonomous underwater vehicle. *Marine Ecology Progress Series*. 528, 277–288. doi: 10.3354/meps11259

Oliver, M. J., Breece, M. W., Fox, D. A., Haulsee, D. E., Kohut, J. T., Manderson, J., & 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), 210-216.

SELECTED PRESENTATIONS

Scientific Conferences

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. 144th National American Fisheries Society. Quebec City, Canada. Oral Presentation

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

Haulsee, D. E., B. M. Wetherbee, D. A. Miller, M. E. 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. Oral presentation. **Best Student 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**

Public Presentations

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

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

Haulsee, D. E. (2013) Using Remote Sensing Technology to Study Biogeography in the Ocean. Gettysburg College, Gettysburg, PA. Oral Presentation. *Invited Speaker*

Haulsee, D. E., D. A. Fox, M. J. Oliver. (2012) Satellites, robots, electronic tags and sharks. Environmental Technology Workshop. Lewes, DE. Oral presentation. *Invited Speaker*

HONORS AND AWARDS

- Lenfest Ocean Program. Developing Actionable Spatial Models for Atlantic Sturgeon and Sand Tiger Sharks in the Mid-Atlantic. PI – M. J. Oliver \$365,873 (Funding Period June 2013- May 2016)
- Graduate Fellowship, Delaware Space Grant (2012 – 2013)
- Best Student Presentation, MAC AFS Annual Conference, Wilmington, DE 2012
- Best Student Poster, MAC AFS Annual Conference, Barnegat Bay, NJ (2011)
- Dr. Carl Arnold Hanson Leadership Award (2010)

PROFESSIONAL SKILLS AND TRAINING

Certifications

- PADI: Advanced Open Water, Drysuit diver, IANTD: Enriched Air Nitrox diver
- Diving experience in current, cold water, poor visibility, fresh/salt water, caverns/overhead environments
- Heartsaver First Aid CPR AED, American Heart Association (2015)
- Basic Boating and Water Safety certification, Delaware DNREC NASBLA (2012)

Seamanship

- R/V New Horizon: 15 days, California coastal ocean, deploy/recover Remus 600 AUV
- R/V Daiber: several day trips deploying scientific equipment on cages from crane
- Over 500 hours small boat experience in estuarine and coastal ocean

Training

- Slocum Glider Training, Coastal Ocean Observation Laboratory, Rutgers University
- Animove: Animal Movement Analysis for Conservation, Smithsonian-Mason School of Conservation, Smithsonian Conservation Biology Institute in Front Royal, Virginia, USA

Computer Skills

- Extensive experience with R coding language, Microsoft, OSX, Microsoft Office, and Geographic Information Systems (ArcGIS, QGIS).
- Working familiarity with Matlab, Python, LaTeX, Remote Sensing Operational System (ENVI), Exploratory Data Analysis System (Geoda095i), Primer, network analysis software (Gephi), and Inkscape.

Communication

- Experience communicating science and project goals/outcomes with local (WDDE, News Journal) and national media outlets (Fox, ABC)
- Science briefings to U.S. Senator Coons (2011, 2015), U.S. Senator Carper (2010, 2014), U.S. Representative Carney (2014)
- Experience promoting and engaging the public with science and project goals using social media platforms
- Basic reading and conversational skills in Spanish

COMMUNITY SERVICE AND OUTREACH

- UD Day at Legislative Hall, poster presentation, Dover, Delaware (2015)
- Coast Day Oral Presentation to general public, University of Delaware, Lewes, DE (2010-2014)
- Oceanography mini-seminars to groups of students (all-ages) and educators (all levels) for the Delaware Sea Grant Marine Advisory Service, Lewes, Delaware (2010-2015)
- Careers in STEM field presentation to students from St. Andrews private co-educational boarding school, University of Delaware, Lewes, DE (2010-2014)