

Cara C Schweitzer, Ph.D.

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EDUCATION

- 2014-2019 University of Maryland Eastern Shore
Ph.D. in Ecology, with Bradley Stevens
- 2011-2013 Washington University
MS in Biology, with distinction in Neuroscience
- 2003-2007 University of Missouri – St. Louis
BS in Biology with distinction in Biology

RESEARCH EXPERIENCE

- 2020 – current Investigating how temperature and elevated CO₂ exposure levels effect neurosensory functions, specifically the auditory brainstem response, of soniferous fishes, with Dr. Andrij Horodysky
- 2019 – 2020 Conducted research to better understand diseases and treatment of skin disorders that uniquely affect people with skin of color, with Dr. Joanne Chan.
- 2016 – 2019 Determine the relationship between benthic habitat composition and degradation, and fish abundance while using sea whips, *Leptogorgia spp.*, as an indicator species within the mid-Atlantic Bight, with Dr. Bradley Stevens.
- 2016 - 2019 Investigated how fragmentation and increasing connectivity influences fish aggregation and abundance on habitat patches within the mid-Atlantic, with Dr. Bradley Stevens.
- 2015 - 2019 Developed mortality predictors using physiological and behavioral impairments in addition to physiological indicators to estimate delayed mortality for black sea bass, *Centropristis striata*, discards, with Dr. Andrij Horodysky and Dr. Bradley Stevens.
- 2014 - 2015 Investigated how the use of a multi-trap line impacts benthic habitat containing biogenic epifauna within the mid-Atlantic Bight, with Dr. Romauld Lipcius and Dr. Bradley Stevens.
- 2012 - 2014 Conducted research on behavioral phenotypes in the deletion of the gene *Bmal1* in vasoactive intestinal polypeptide (VIP) neurons. Measuring circadian rhythmicity of the *Period2* gene within mouse Suprachiasmatic

Nucleus under the deletion of VIP neurons. Circadian rhythm of olfactory system under the deletion of Period1 and Period2 genes in mouse model, with Dr. Erik Herzog

- 2012 Vertical dive migrations in accordance with environmental cues of the great white shark, *Carcharodon carcharias*, off the coast of Mossel Bay, South Africa with Enrico Gennari and Ryan Johnson
- 2010-2012 Researched the recovery of stepping patterns in spinalized red-eared turtle, *Trachemys scripta*, with Dr. Paul Stein
- 2007-2008 Neural activation and sensory pathway of the Dorsal Octavolateral Nucleus via electro-sensory stimulus of the paddlefish brain, with Dr. Lon Wilkens and Dr. Michael Hofmann.
- 2007 Sexual selection and trade off of the life history strategies and flexibility of behavioral syndromes in populations of *Poecilia Parae* of the Guyanese rainforest, with Dr. Godfrey Bourne

PUBLICATIONS

1. Schweitzer, C. C., Horodysky, A. Z., Price, A. L., Stevens, B. G. (2020). Impairment indicators for delayed mortality in black sea bass (*Centropristis striata*) discards in the commercial trap fishery. *Conservation Physiology* 8(1), coaa068.
2. Schweitzer CC, Stevens BG. (2019) The relationship between fish abundance and benthic community structure on artificial reefs in the Mid-Atlantic Bight, and the importance of sea whip corals *Leptogorgia virgulata*. *PeerJ* 7:e7277 <https://doi.org/10.7717/peerj.7277>
3. Schweitzer, C. C., Lipcius, N. R., Stevens, B. G. (2018). Impacts of multi-trap-line on benthic habitat containing emergent epifauna within the Mid-Atlantic Bight. *ICES Journal of Marine Science*, Volume 75: 6, 2202–2212
4. Pothmann, L., Wilkens, L. A., Schweitzer, C., & Hofmann, M. H. (2009). Two parallel ascending pathways from the dorsal octavolateral nucleus to the midbrain in the paddlefish *Polyodon spathula*. *Brain research*, 1265, 93-102

MANUSCRIPTS IN PREPARATION

1. Schweitzer, C. C., Stevens, B. G. (2020) Response of fish abundance to increased seascape connectivity using a mosaic corridor connecting artificial reefs in the mid-Atlantic.

PRESENTATIONS

1. Schweitzer, C. C., and Stevens, B. G., “The effectiveness of increasing connectivity between two patch reefs for increasing site fish abundance in the Mid-Atlantic”. Presented at Ecological Society of America, New Orleans, LA August 2018.
2. Schweitzer, C. C., Horodysky, A. Z., Price, A. L., Stevens, B. G., “Evaluating the effectiveness of reflex action mortality predictor (RAMP) in black sea bass, *Centropristis striata*, bycatch within the commercial trap fishery”. Presented at American Fisheries Society: Tidewater Chapter, Beaufort, NC January 2018. *Won third prize*
3. Schweitzer, C. C., Lipcius, N. R., Stevens, B. G., “The use of sea whips (*Leptogorgia sp.*) as an indicator species (IS) for habitat quality assessment within the Mid-Atlantic Bight”. Presented at American Fisheries Society (AFS) conference, Tampa, FL August 2017.
4. Schweitzer, C. C., Lipcius, N. R., Stevens, B. G., “Disturbance of Essential Fish Habitat by Commercial Passive Fishing Gear in the Mid-Atlantic Bight”. Presented at Association for the Sciences of Limnology and Oceanography (ASLO) Conference, New Orleans, LA February 2016.
5. Schweitzer, C. C., Lipcius, N. R., Stevens, B. G., “Trap Fishing Impacts on Benthic Live-Bottom Habitat within the Black Sea Bass Fishery in the Mid-Atlantic Bight”. Presented at American Fisheries Society (AFS) Conference, Portland, OR August 2015.
6. Schweitzer, C. C., Lipcius, N. R., Stevens, B. G., “Trap Fishing Impacts on Benthic Live-Bottom Habitat within the Black Sea Bass Fishery in the Mid-Atlantic Bight”. Presented at International Conference of Biodiversity, Ecology and Conservation of Marine Ecology (Become), Hong Kong, China June 2015

GRANTS AWARDED

1. NOAA-EPP, LMRCSC Program. **\$53,953**. (2016). Discard mortality of sub-legal black sea bass in the commercial trap fishery: Impacts of air exposure and acute temperature changes.
2. Atlantic Coastal Fishery Habitat Partnership (ACFHP). **\$216,394**. (2016). Hab in MAB: Characterizing black sea bass habitat in the Mid-Atlantic Bight.
3. NOAA-EPP, LMRCSC Program. **\$57,421**. (2015). Bycatch and discard mortality for the commercial black sea bass trap fishery: Assessment of behavioral and physiological predictors of mortality.