

# Bruce W Pfirrmann

Baruch Marine Field Laboratory, University of South Carolina  
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## EDUCATION

2017 – **MS, Marine Science**, Virginia Institute of Marine Science (VIMS)

2013 – **BS, Biology**, William & Mary

## PROFESSIONAL POSITIONS

**Research Specialist II**, Baruch Marine Field Lab, University of South Carolina, Georgetown, SC

October 2018 – Present | Hours per week: 37.5

- Coordinate and conduct field research in support of long-term water quality, plankton, and nekton monitoring; manage collected and archived long-term data
- Design and implement short-term and/or grant-funded field-oriented research projects
- Lead ecological excursions of North Inlet estuary for visiting classes
- Facilitate use of field site and laboratory by visiting researchers (faculty, students, staff)
- Maintain research and facility infrastructure, including seawater laboratory
- Supervise one full-time employee and two part-time hourly employees

**Biological Technician**, Prince William Sound Science Center, Cordova, AK

August 2018 – September 2018 | Hours per week: 40

- Collected and processed biological samples from adult pink salmon collected from remote Alaskan streams in western Prince William Sound
- Lived aboard 42' vessel for duration of month-long deployment

**Sea Grant Coastal Policy Fellow**, Virginia Dept. of Conservation & Recreation, Tappahannock, VA

August 2017 – July 2018 | Hours per week: 40

- Estimated pollution reduction credits for shoreline management projects within Virginia's Chesapeake Bay watershed using regulatory databases and geographic information systems
- Participated in Shoreline Erosion Advisory Service site visits with coastal landowners

**Graduate Research Assistant**, Community Ecology Lab, VIMS, Gloucester Point, VA

July 2014 – August 2017 | Hours per week: 40

- Designed and coordinated field and laboratory sampling program to assess linkage between restored oyster reefs and finfish production
- Contributed findings to technical reports and participated in interagency fishery and habitat meetings.
- Participated in fishery-independent surveys for Chesapeake Bay adult and juvenile blue crabs

**Research Assistant**, Zooplankton Ecology Lab, VIMS, Gloucester Point, VA

December 2013 – January 2014 | Hours per week: 40

- Deployed to the West Antarctica Peninsula & the Southern Ocean aboard the R/V *Laurence M. Gould*;
- Collected and identified marine zooplankton and assisted with laboratory experiments

**Field Specialist**, Juvenile Striped Bass Seine Survey, VIMS, Gloucester Point, VA

June 2013 – September 2013 | Hours per week: 40

- Operated seine and identified juvenile finfish from multiple Virginia tidal tributaries to evaluate recruitment of striped bass and other important fishery species

## PUBLICATIONS

Thompson MA, **Pfirrmann BW**, Pinckney JL, Peng X. Diversity and ecology of fungi using metabarcoding in the sediments and surface water of brackish and salt marshes. *In revision*, Environmental Microbiome.

Batchelder LJ, Stone JP, Kimball ME, **Pfirrmann BW**, Dunn RP. Phenology of penaeid shrimp nursery habitat use: trends and environmental drivers over 4 decades. *Marine Ecology Progress Series* 751:79-95.

Dunn RP, Kimball ME, **Pfirrmann BW**, Bruck A, Lane W. Temporal habitat partitioning and resource competition between congenics: testing for density-dependent growth and mortality in estuarine shrimp. *PLOS One* 19(12):e0316219.

- Glover KM, Kimball ME, **Pfirschmann BW**, Pelton MM, Dunn RP (2023). Juvenile brown shrimp (*Farfantapenaeus aztecus*) use of salt marsh intertidal creeks as nursery habitat. *Estuaries and Coasts* 46(7):1895-1906.
- Quezada-Villa K, Cannizzo Z, Carver J, Dunn RP, Fletcher LS, Kimball ME, McMullin AL, Orocu B, **Pfirschmann BW**, Pinkston E, Reese TC, Smith N, Stancil C, Toscano BJ, Griffen BD (2023). Predicting diet in brachyuran crabs using external morphology. *PeerJ* 11:e15224.
- Pfirschmann BW**, Dunn RP, Kimball ME, Levesque EM (2023). Experimental tests of post-release habitat selection by hatchery-reared juvenile red drum (*Sciaenops ocellatus*). *Journal of Experimental Marine Biology and Ecology* 559:1852.
- Kimball ME, **Pfirschmann BW**, Allen DM, Ogburn-Matthews V, Kenny PD (2023). Intertidal creek pool nekton assemblages: Long-term patterns in diversity and abundance in a warm-temperate estuary. *Estuaries and Coasts* 46(3):860-877.
- Dunn RP, **Pfirschmann BW**, Kimball ME (2021). Juvenile white shrimp (*Litopenaeus setiferus*) can be effectively implanted with passive integrated transponder tags. *Journal of Experimental Marine Biology and Ecology* 540:151560.
- Pfirschmann BW**, Kimball ME, Mace MM, III, Turley BD (2021). Summer ichthyoplankton assemblage diversity within a southeastern United States estuary. *Estuaries and Coasts* 44(1):253-268.
- Lefcheck JS, **Pfirschmann BW**, Fodrie FJ, Grabowski JH, Hughes AR, Smyth AR (2021). Consumption rates vary based on the presence and type of oyster structure: A seasonal and latitudinal comparison. *Journal of Experimental Marine Biology and Ecology* 536:151501.
- Pfirschmann BW**, Seitz RD (2019). Ecosystem services of restored oyster reefs in a Chesapeake Bay tributary: abundance and foraging of estuarine fishes. *Marine Ecology Progress Series* 628:155-169.
- Lefcheck JS, Hughes BB, Johnson AJ, **Pfirschmann BW**, Rasher DB, Smyth AR, Williams BL, Beck MW, Orth RJ (2019). Are coastal habitats important nurseries? A meta-analysis. *Conservation Letters* 12(4):e12645.

### **SELECTED PRESENTATIONS**

- Pfirschmann BW**, Kimball ME, Szweczyk CJ, 2023. “*What a difference 45 years makes: Comparing nekton communities of the late 1970s with the 2020s for the Winyah Bay estuary.*” Southern Division, American Fisheries Society Annual Meeting, Norfolk, Virginia.
- Pfirschmann BW**, Glover KM, Kimball ME, Pelton MM, Dunn RP, 2022. “*Intertidal creek habitat use and growth of juvenile brown shrimp in the North Inlet estuary.*” Southern Division, American Fisheries Society Annual Meeting, Charleston, South Carolina.
- Pfirschmann BW**, 2020. “*Long-term change in the intertidal creek nekton assemblage of a southeastern US estuary.*” South Carolina Chapter, American Fisheries Society, Santee, South Carolina.
- Pfirschmann BW**, Seitz RD, 2017. “*Influence of restored oyster habitat on fish stomach fullness and diet composition.*” American Fisheries Society Tidewater Chapter, Virginia Beach, Virginia.

### **PROPOSALS & GRANTS**

- Lovelace S, Strosnider W, Carbajales-Dale M, Dugo M, Gorstein M, Guthrie A, Lowe R, Pedigo S, **Pfirschmann BW**, Robinson J, Saari B, Schneider S, White S, 2023-2026. National Oceanographic and Atmospheric Administration. “*From blue-gray to blue-green: facilitating the transition to non-plastic natural material use within the coastal zone economy.*” **\$2,600,000.**
- Strosnider W, **Pfirschmann BW**, Warren T, 2022-2023. University of South Carolina, McCausland Innovation Fund. “*Engaging the African-American community and acknowledging the Black experience at the Baruch Marine Field Laboratory.*” **\$26,339.00.**
- Houghman RJ, Strosnider W, Ryker K, Gannon, D, 2020-2021. National Science Foundation, Ocean Education. “*Response to COVID-19 field research and education disruptions: Creating virtual field experiences in coastal and estuarine science.*” **\$97,450.** Role: Team Member and Contributor.
- Smith E, Strosnider W, 2020-2022. National Oceanic and Atmospheric Administration. “*The North Inlet–Winyah Bay NERR visiting scientist housing.*” **\$393,492.** Role: Team Member and Contributor.

Pickney J, Strosnider W, Smith E, 2020. University of South Carolina Advanced Support for Innovative Research Excellence. “*Enhancing research and education capacity at the Baruch Marine Field Lab: Expansion of research capabilities.*” \$79,497. Role: Team Member and Contributor.

## **TEACHING & MENTORING**

- Co-instructor**, Baruch Marine Field Lab Semester at the Coast Program 2022
- Created and taught two 4-credit immersive courses for USC Honors College undergraduates, “Coastal and Estuarine Ecology” (SCHC 307) and “Ecosystems of the Lowcountry” (SCHC 308)
- Mentor**, Baruch Marine Field Lab Summer Internship Program 2020 – 2024
- Co-supervised nine student research experiences, two virtual and seven in-person
- Teaching Assistant**, William and Mary Coastal Studies Field Course 2016 – 2017
- Supervised students in residence; coordinated daily research activities and meals; taught lectures
- Teaching Assistant**, Natl. Science Foundation Research Experience for Undergraduates 2016
- Organized weekly seminars; coordinated field trips; edited student presentations
- Mentor**, Virginia Governor’s School Program 2015 – 2016
- Managed orientation for high school interns; supervised two student research projects

## **COMMUNICATION & OUTREACH**

- Booth Organizer**, SC Pathways 2 Possibilities Career Fair, Marine Science Pathway 2022 – Present
- Invited Speaker**, Johnson C. Smith University Natural Sciences Departmental Seminar 2024
- Volunteer**, North Inlet-Winyah Bay National Estuarine Research Reserve ‘Estuaries Day’ 2019, 2022
- Guest Speaker**, 25<sup>th</sup> Annual Virginia Chef’s Seafood Symposium 2017
- Lesson Plan Creator**, Virginia Sea Grant Scientists and Educators Alliance Project 2016

## **HONORS & AWARDS**

- VIMS Best Student Paper Award, Master’s Category (\$250) 2020
- William J. Hargis, Jr. 1st Year Graduate Student Fellowship (\$6000) 2015
- VIMS Foundation Hager Fellowship (\$2000) 2014
- Phi Beta Kappa & *Summa Cum Laude* 2013

## **SERVICE & PROFESSIONAL MEMBERSHIPS**

- Reviewer: Estuaries and Coasts, Environmental Biology of Fishes, Frontiers in Marine Science, Marine Ecology Progress Series, North American Journal of Fisheries Management
- Meeting Organizer & Presenter: Scheduled submitted oral presentations for 3-day program and moderated general sessions, Southern Division American Fisheries Society Annual Meeting, Charleston SC, 2022
- Member: American Fisheries Society (2017 – Present)

## **SKILLS & CERTIFICATIONS**

- Field sampling in coastal, marine, and freshwater systems, including work with fishes, zooplankton, crustaceans, shellfish, benthic invertebrates, seagrasses, wetland vegetation, and coastal sediments
- Sample processing, species identification, diet analysis, stable isotope analysis preparation
- 300+ days small boat and trailer operation in coastal and estuarine environments
- Data visualization and statistical analysis with R/RStudio, SAS, and Microsoft Excel
- Data analysis & map creation with ESRI ArcGIS