

# WALTER BLAIR

1852 Cheshire Drive, Charleston, SC 29412 | 843-822-6632 | wmbclair@cofc.edu

## EDUCATION

College of Charleston, Charleston, SC

**M.S. in Marine Biology [GPA: 3.7]** **2009 - 2013**

Western Illinois University, Moline, IL

**Post-Bac. Certificate in Zoo & Aquarium Studies [GPA: 4.0]** **2008 - 2009**

Furman University, Greenville, SC

**B.S. in Chemistry, Biology [GPA: 3.2]** **2004 - 2008**

## TEACHING EXPERIENCE

College of Charleston, Charleston, SC

**Adjunct Professor** **2013 – Current**

Biol 211, Biol 102, Biol 102 **Spring 2016**

Biodiversity, Ecology, and Conservation Biology – BIOL 211 **Fall 2015**

- Taught third-semester biology for majors, focusing on evolutionary patterns and processes, a survey of biodiversity, introductory ecology, and conservation applications. Associated discussion section focused on scientific skills including peer review, presentation, publication, research proposals, primary literature, data analysis and interpretation, and experimental design.

Concepts and Applications in Biology – BIOL 101 and 102 **Spring 2014, Fall 2014**

- Taught first and second semester biology for non-majors, focusing on biological chemistry, metabolism, and genetics in BIOL 101 and evolutionary processes, biodiversity, and ecology in BIOL 102.
- Combined traditional lecture with student discussions in order to encourage students to learn foundational biological concepts and apply those concepts to their own areas of academic and personal interest. Assignments were designed to provide practice in the scientific method, background research, and oral and written communication.

Introduction to Environmental Studies – ENVT 200 **Fall 2013**

- Co-taught science portion of sophomore-level interdisciplinary course on environmental and economic issues including population and community ecology, production and consumption of resources, climate change, and sustainability.
- Developed new course preparation for the scientific portion of the class with a dual emphasis on student engagement with primary scientific literature and critical thinking around the nature of the scientific process.

College of Charleston, Charleston, SC

**Teaching Assistant**

**Fall 2012, Spring 2010**

Concepts and Applications in Biology – BIOL 101

- Guided lectures and demonstrations for a problem-based learning laboratory experience. Taught one section in Spring 2010 to fulfill teaching requirement for Graduate Fellowship in Applied Marine Genomics, and taught three sections in Fall 2012.
- Emphasized the hands-on role that students have in the problem-based learning environment and challenged students to work with their teammates to find solutions to problems and questions.
- Responsible for writing and administering examinations and assigning overall grades.

**PUBLICATIONS**

Blair, W.B., Doucette, G.J. 2013. The *Vibrio harveyi* bioassay used routinely to detect AI-2 quorum sensing inhibition is confounded by inconsistent normalization across marine matrices. *Journal of Microbiological Methods*. 92(3):250-252.

Blair, W.B., May, A.L., Campagna, S.R., Doucette, G.J. 2016. No AI-1 or AI-2 production detected in several harmful dinoflagellates or algicidal bacteria. In Prep.

**RESEARCH EXPERIENCE**

Graduate Program in Marine Biology, College of Charleston, Charleston, SC

**Research Assistant**

**September 2009 – December 2012**

- Investigated the potential role of quorum sensing in the microbial community of harmful algae and learned laboratory techniques that are widely applicable in the fields of microbiology and phycology.
- Published recommended improvements to established quorum sensing detection methods based on our detailed demonstration of false positive and false negative signals when using these methods in marine matrices.
- Following initial published and unpublished reports of quorum sensing activity in several important strains of harmful algae and algicidal bacteria, screened these strains using improved methods and failed to detect quorum sensing signals.

Department of Chemistry, Furman University, Greenville, SC

**Furman Advantage Undergraduate Researcher**

**Summer 2007**

- Developed microwave synthesis of a photometric glucose sensor based on cyclic and fluorescently labeled boronic acid derivatives.

Department of Chemistry, Furman University, Greenville, SC

**Undergraduate Researcher**

**Summer 2006**

- Developed organic synthesis of Dynabead-linked molecular tag for the evolution of novel DNA aptamers and gained proficiency with NMR and HPLC.

## SKILLS

### Leadership

- Project management and team building.
- Interdisciplinary communication and collaboration.
- Oral and written presentation.
- Creative, expository, and technical writing and editing.

### Technical

- Laboratory safety, including BBP control, use of PPE in chemistry, biochemistry, and biology laboratories, and understanding of OSHA's HazCom Standard.
- Phycological and microbiological culturing techniques.
- Light and fluorescence microscopy, UV-vis and NMR spectroscopy.
- Undergraduate-level synthetic organic chemistry techniques and analytical instrumentation.
- Microsoft Excel, Word, Powerpoint, Publisher.
- Canon DSLR photography and videography, Adobe Photoshop, GIMP, InDesign.
- Web design using html, css, php, ssh, elastic cloud computing, javascript, CMS (Cascade & WordPress).

## WORK EXPERIENCE

The Office of Sustainability, College of Charleston, Charleston, SC

### Web Developer

**Fall 2013 – Spring 2014**

#### Projects

- [synergies.cofc.edu](http://synergies.cofc.edu)
  - Served as Editor-in-Chief, contributing writer, and photographer for the debut Spring 2014 issue.
  - Assembled and led a small team to plan the concept and organization of *Synergies*. Engaged available and interested students in the ongoing evolution of the magazine.
  - Prepared a talented intern for the role of Editor-in-Chief and designer for the sophomore Summer 2014 issue.
  - Initiated mutually beneficial relationships with key faculty, alumni, and community members that will continue to provide the Office with opportunities for future growth and enrichment.
- STEM “SolarPonics”
  - Developed aquaponics and solar display for STEM outreach. Established the system and then coordinated and participated in the Office’s first STEM outreach at the debut Lowcountry STEM Festival 2014. Initiated contacts at various schools and continuing to coordinate the solarponics demonstration at upcoming STEM and educational events.

**Graduate Intern****Summer 2013**

- Green Roof Report
  - Worked with fellow intern to conduct literature review and interviews regarding the feasibility of building a green roof on campus.
  - Generated project report for proposed campus green roof project.
- [zerowaste.cofc.edu](http://zerowaste.cofc.edu)
  - Assigned the task of building new recycling website (recycle.cofc.edu) for the Office. Learned css, html, and Google Fusion Tables in order to construct an interactive and real-time responsive set of recycling guides that provide not only convenient access to recycling information for end users but also a relatively simple and free cloud-based database for the Office. Recycle.cofc.edu is now zerowaste.cofc.edu.

**PRESENTATIONS**

AASHE 2014 Conference &amp; Expo, Portland, OR

**Oral Presentation****Fall 2014**

Online Magazine and Social Media Network for Regional Synergies.

Marine Biology Graduate Student Colloquium, College of Charleston, Charleston, SC

**Oral Presentation****September 2011**

Toxic dinoflagellates and their associated microbial community: Preliminary evidence that algicidal bacteria interfere with the AI-2 quorum sensing system.

Marine Biology Graduate Student Colloquium, College of Charleston, Charleston, SC

**Poster Presentation****September 2010**Toxic dinoflagellates and their associated microbial community: Interactions of *Karenia* spp. with algicidal bacteria and the potential role of quorum sensing.

Undergraduate Thesis, Furman University, Greenville, SC

**Poster Presentation****May 2008**

Rapid sugar reduction for photometric glucose detection.

**AWARDS**

Graduate Fellowship in Applied Marine Genomics, College of Charleston 2009 - 2011

Achiever Scholarship &amp; Honor Scholarship, Furman University 2004 - 2008

**STUDENT LEADERSHIP**Marine Biology Graduate Student Association, College of Charleston, Charleston, SC**President****2010 – 2011**

Improved financial and communication resources by:

- Increasing merchandise sales over previous year.

- Designing and launching website for student activities and alumni relations.

Expanded role in the community through new initiatives:

- Participation in Race for the Cure, the Grice Teaching Garden, and the Southeastern Wildlife Exposition.
- First Annual Grice Marine-ival spring fling for the Fort Johnson community.

**Graduate Student Association Downtown Representative**

**2009 – 2010**

Served as liaison and voting delegate to the Graduate Student Association.

Graduate Student Association, College of Charleston, Charleston, SC

**Treasurer**

**2010 – 2011**

Collaborated with other members of the GSA Executive Board to:

- Introduce successful amendments to the Constitution.
- Secure increased funding from the College of Charleston for the following year.

Developed GSA Student Research Grant by:

- Increasing available grant funds three-fold over the previous year.
- Awarding grants to more students than in all previous years combined.

Habitat for Humanity, Furman University, Greenville, SC

**Treasurer, House Leader**

**2005 – 2006**

Managed chapter funds as well as volunteer support and on-site construction for the first two Habitat for Humanity homes in the state to be certified by Energy Star.

**Religious Council Representative**

**2005 – 2008**

Served as liaison and voting delegate to the Religious Council.

Religious Council, Furman University, Greenville, SC

**Secretary**

**2007 – 2008**

Helped to organize and manage all of the religious and interfaith student groups at Furman University.

FUtones, Furman University, Greenville, SC

**Treasurer**

**2007 – 2008**

Managed budget, fundraising, and album production for student-run vocal ensemble.