Jillian M. Bible

Assistant Professor
Department of Environmental Science and Studies
Washington College
jbible2@washcoll.edu
jillbible.com

EDUCATION

2016 **Ph.D., Ecology, University of California Davis, CA**
Emphasis in marine ecology

2007 **Master of Science, Earth Systems Program, Stanford University, CA**
Emphasis in communication and education

2004 **Bachelor of Science, With Distinction, Earth Systems Program, Stanford University**, **CA**
Biology track within Earth Systems
Minor in Studio Art

PUBLICATIONS

Wasson, K., D. J. Gossard, L. Gardner, P. Hain, C. J. Zabin, S. Fork, A. D. Ridlon, **J. M. Bible**, and B. B. Hughes. 2020. A scientific framework for conservation aquaculture: a case study of oyster restoration in central California. *Biological Conservation* 250:108745.

Bible, J. M., T. Evans, and E. Sanford. 2019. Differences in induced thermotolerance among populations of Olympia oysters. Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology 239:110563.

Maynard, A., **J. M. Bible**, M. H. Pespeni, E. Sanford, and T. G. Evans. 2018. Transcriptomic responses to extreme low salinity among locally adapted populations of Olympia oyster (*Ostrea lurida*). Molecular Ecology 21:4225–4240.

Bible, J. M., B. S. Cheng, A. L. Chang, M. C. Ferner, K. Wasson, C. J. Zabin, M. Latta, E. Sanford, A. Deck, and E. D. Grosholz. 2017. Timing of climate-driven stressors alters interactive effects on an estuarine foundation species. *Ecology* 98:2468-2478.

Bible, J. M., K. R. Griffith, and E. Sanford. 2017. Inducible defenses in Olympia oysters in response to an invasive predator. *Oecologia* 3:809–819.

Bible, J. M. and E. Sanford. 2016. Local adaptation in an estuarine foundation species: implications for restoration in the face of climate change. *Biological Conservation* 193:95–102.

Cheng, B., **J. M. Bible,** A. Chang, M. Ferner, K. Wasson, C. Zabin, M. Latta, A. Deck, A. Todgham, and E. Grosholz. 2015. Local and global stressor impacts on a coastal foundation species: using an ecologically realistic framework. *Global Change Biology* 21:2488–2499.

Wasson, K., C. Zabin, **J. M. Bible,** S. Briley, E. Ceballos, A. Chang, B. Cheng, A. Deck, E. Grosholz, A. Helms, M. Latta, B. Yednock, D. Zacherl, and M. Ferner. 2015. *A Guide to Olympia Oyster Restoration and Conservation: Environmental Conditions and Sites that Support Sustainable Populations.* Elkhorn Slough National Estuarine Research Reserve.

Wasson, K., C. Zabin, **J. M. Bible,** E. Ceballos, A. Chang, B. Cheng, A. Deck, E. Grosholz, M. Latta, and M. Ferner. 2014. *A Guide to Olympia Oyster Restoration and Conservation: Environmental Conditions and Sites that Support Sustainable Populations in Central California.* San Francisco Bay National Estuarine Research Reserve.

Bible, J. M. and T. Ornduff. 2010. *Google Earth: Using a Virtual Tool to Better Understand the Real World*. Connect Magazine. Synergy Learning International, Inc. Brattleboro, Vermont, USA.

Bible, J. M. and R. Wright Dunbar. 2007. Interdisciplinary Soapbox. Pages 68–69 *in* C. Ross and J. Dunphy, editors. *Strategies for Teaching Assistant and International Teaching Assistant Development: Beyond Micro Teaching.* Jossey-Bass, San Francisco, CA, USA.

Zabin, C. J., L. Jurgens, **J. M. Bible**, M. V. Patten, A. L. Chang, E. D. Grosholz, K. E. Boyer. Building resilience into ecological restoration in anticipation of extreme climatic events. *In prep for Biological Conservation.*

TEACHING EXPERIENCE

2018 – present **Assistant Professor, Environmental Science and Studies, Washington College, Chestertown, MD.**

Teaching courses including:

- *Introduction to Environmental Studies*
- *Marine Conservation*
- *Atmosphere, Ocean, and Environment*
- *Environmental Communication*
- *Restoration Ecology*
- *Applied Ecology*

2017-2018 **Lecturer, Marine Conservation Science, University of California Davis, CA**

Designed and taught course on threats to marine ecosystems and the management and policy options for addressing these stressors.

2017 **Guest Lecturer, Experimental Invertebrate Biology, Bodega Marine Lab, Bodega Bay, CA**

Lectured on "Shifting Baselines" to an undergraduate audience.

2012 **Guest Lecturer, Topics in Conservation Biology, University of California Davis, CA**

Lectured on "Restoring Native Oysters" to an undergraduate audience.

2011 **Teaching Assistant, Bodega Marine Lab, Bodega Bay, CA**

"Experimental Invertebrate Biology" – Prepared and facilitated field and lab experiments focused on marine invertebrate physiology and ecology.

2011 **Teaching Assistant, Bodega Marine Lab, Bodega Bay, CA**

"Coastal Marine Research" – Mentored students in designing, implementing, and analyzing independent research projects. Guided students in scientific writing and presentations.

2008–2010 **Curriculum Developer, Teacher Institute on Science and Sustainability, California Academy of Sciences, San Francisco, CA**

- Designed and launched two-year teacher professional development program focused on increasing the quantity and quality of science and sustainability taught in schools.
- Developed lessons and taught classes on subjects ranging from genetics to climate change.
- Supported and assessed teachers in implementing curricula in their classrooms.
- Created online materials including our most commonly downloaded lesson: carbon cycle.
- Co-managed the logistics of the program.

2009 **Lecturer, Earth Systems Program, Stanford University, CA**

Designed and taught new course entitled "Effectively Communicating Environmental Concepts," a writing-intensive course for Earth Systems seniors focused on communicating complex environmental issues to a broad range of audiences.

2008 **Guest Lecturer, San Francisco State University, CA**

Lectured on "Coral Reefs and Climate Change*"* to an undergraduate audience.

2007–2008 **Teacher Services Educator, California Academy of Sciences, San Francisco, CA**

Developed and delivered educational workshops for K–12 teachers and students. Managed the Academy's classroom kit program that brings hands-on, science education materials into classrooms.

2005–2007 **Head Teaching Assistant, Earth Systems Program, Stanford University, CA**

- Hired, trained, and managed a team of teaching assistants.
- Co-coordinated a large (150 students, 22 lecturers), interdisciplinary, undergraduate course entitled "Introduction to Earth Systems." Designed and taught weekly sections that synthesized material from disparate fields such as biology and environmental policy.
- Assisted with "Senior Seminar in Earth Systems." Worked one-on-one with students to improve their presentation skills. Gave written and oral feedback on student papers. Worked with teams of students on their culminating senior projects.

2007 **Eastside College Preparatory School Field Studies, Stanford University, CA**

Taught students from East Palo Alto environmental science at Jasper Ridge Biological Preserve.

2006 **Workshop Coordinator, Center for Teaching and Learning, Stanford University, CA**

Designed and executed workshops on developing interdisciplinary teaching and assessment.

PREVIOUS RESEARCH POSITIONS

2017–2018	**Olympia Oyster Restoration, Elkhorn Slough National Estuarine Research Reserve, CA** Co-developed methods to restore and assess native oysters in Elkhorn Slough.
2011–2016	**Dissertation Research, University of California Davis, CA** Anthropogenic impacts on native Olympia oysters: Understanding the roles of local adaptation and multiple stressors
2011–2014	**National Estuarine Research Reserve Science Collaborative Project, San Francisco, CA** Managing for resilience in the face of climate change: A scientific approach to targeted oyster restoration in San Francisco Bay and Elkhorn Slough, California
2007	**Interdisciplinary Teaching and Learning, Stanford University, CA** Literature review on what contributes to successful learning in interdisciplinary settings.
2006	**Research Assistant, Stanford University, CA** Contributed field and laboratory data to project assessing impacts of climate change on wine.

HONORS & AWARDS

2020	Co-PI on NOAA Ocean Acidification Mini Grant ($40,000)
2019	Washington College Faculty Enhancement Grant ($1750)
2019	Washington College Faculty Enhancement Grant (>$800)
2018	Washington College Travel Grant for Ecological Society of America Conference (>$1,400)
2018	Washington College Faculty Enhancement Grant (>$2000)
2014	University of California Davis Ecology Grant, UC Davis, CA ($21,000)
2013	Honorable Mention Best Student Paper, Western Society of Naturalists
2012	Pacific Coast Science and Learning Center, Point Reyes National Seashore Grant ($2000)
2012	Environmental Protection Agency STAR Graduate Fellowship ($126,000)
2011, 2012	National Science Foundation Graduate Research Fellowship Program Honorable Mention
2011	University of California Davis Ecology Grant, UC Davis, CA ($10,500)
2010	University of California Davis Ecology Grant, UC Davis, CA ($21,000)
2006, 2007	Centennial Teaching Assistant Award, Stanford University, CA
2006	United Parcel Service Grant - for summer research, Stanford University, CA

SELECTED PRESENTATIONS

Aug 2019	*Differences in induced thermotolerance among populations of Olympia oysters.* Ecological Society of America Conference. Louisville, KY.
Mar 2019	*Timing of multiple stressors alters effects on oysters*. Invited guest speaker at Horn Point Laboratory.
Oct 2018	*Timing of multiple stressors alters effects on oysters*. Invited guest speaker at Virginia Institute of Marine Science.
Nov 2015	*Olympia oysters respond to invasive predators with inducible defenses.* Western Society of Naturalists. Sacramento, CA.
May 2015	*Multiple stressor effects on Olympia oysters: implications for conservation and restoration.* Bay Area Conservation Biology Symposium, Berkeley, CA.
Oct 2014	*Variation in salinity tolerance among Olympia oyster populations: implications for restoration in the face of climate change.* Bay-Delta Science Conference. Sacramento, CA.
Sept 2013	*Variation in salinity tolerance of Olympia oysters: implications for restoration in the face of climate change.* Ecological Society of America. Minneapolis, MN.
Dec 2009	*Green Curriculum*. Green California Schools Summit and Exposition, Pasadena, CA.
Oct 2009	*Introduction to the Teacher Institute on Science and Sustainability.* National Science Teachers Association Conference, Minneapolis, MN.
Oct 2009	*Climate Change: Causes, Impacts, and Solutions*. California Science Teachers Association Conference, Palm Springs, CA.
Oct 2009	*Sketching as a Science Tool*. California Science Teachers Association Conference, Palm Springs, CA.
Mar 2009	*Energy Issues in a Changing World*. Council of Math/Science Educators of San Mateo County Conference, Cañada College, CA.

OUTREACH

2020	Lecture on oyster research for citizen scientists at ShoreRivers, Chestertown, MD
2019	Society for Women in Marine Science outreach event for middle school and high school girls, Horn Point Marine Laboratory, Cambridge, MD
2019	Guest lecture and lab at Gunston School, Centreville, MD
2014	Presentation on anthropogenic impacts on native oysters for general public at local wine bar (Gourmet au Bay), Bodega Bay, CA
2014	Presentation for K–12 teacher workshop on ocean acidification, Farallones Marine Sanctuary Association, San Francisco, CA
2014	Featured in National Parks Service video on ocean acidification
2013	Featured in California Academy of Sciences video on ocean acidification
2012	Featured in UC Office of the President promotional video created about my research.
2012	Panelist for film screening of *Shellshocked: Saving Oysters to Save Ourselves*, Watershed Project, Aquarium of the Bay, San Francisco, CA

PROFESSIONAL ACTIVITIES

2019	Reviewer for Oecologia
2018, 2019	Reviewer for NSF proposals
2018	Attended Chesapeake Watershed Forum
2017	Reviewer for Ecology and Evolution
2016	Reviewer for Global Change Biology
2016–present	AAAS, American Association for the Advancement of Science
2011–present	ESA, Ecological Society of America
2015–2019	POD, Professional and Organizational Development Network in Higher Education
2010–2019	WSN, Western Society of Naturalists
2007–2010	NSTA, National Science Teachers Association
2007–2010	CSTA, California Science Teachers Association

SERVICE

2020–present	**Washington College Appointments Committee, Washington College, Chestertown, MD** Interview and provide feedback on all potential faculty hires.
2019–present	**Chester River Watershed Board**, **ShoreRivers, Chestertown, MD** Serve on board of non-profit focused on research, advocacy, and outreach with the goal of restoring clean rivers to Maryland's Eastern Shore.
2018–present	**Virginia Institute of Marine Science:** PhD dissertation committee member for Annie Schatz.
2012–2016	**Bodega Marine Sciences Association Member, Bodega Marine Lab, Bodega Bay, CA**
2012–2014	**Graduate Group in Ecology Awards Committee, UC Davis, CA** Served as one of two graduate students on committee that awards fellowships to incoming and continuing graduate students in Ecology.
2013–2014	**Bodega Marine Sciences Association Secretary, Bodega Marine Lab, Bodega Bay, CA**
2010–2011	**Graduate Student Association Representative, University of California Davis, CA**
2009–2010	**California Academy of Sciences Vision Team, San Francisco, CA** Collaborated with small group of appointed staff members to envision and plan for the next decade of the Academy's programs.
2008–2010	**California Academy of Sciences Staff Advisory Council, San Francisco, CA** Served as staff-elected representative on council that works on all issues relating to staff. Coordinated volunteer opportunities such as gardening at the National Aids Memorial Grove.
2007–2010	**California Academy of Sciences Green Team, San Francisco, CA** Collaborated with other staff to ensure green practices within our building. Coordinated electronics recycling and proper waste management.
2005–2007	**Earth Systems Committee representative, Stanford University, CA** Appointed to represent graduate students on the Earth Systems Committee that makes all programmatic decisions.