

NICHOLAS B. COLVARD

Division of Academic Enhancement • Milledge Hall
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EDUCATION

Ph.D.	Northeastern University (2016) Ecology, Evolution, and Marine Biology Advisor: Brian Helmuth, Ph.D.
M.S.	California State University, Northridge (2010) Biology Advisor: Peter Edmunds, Ph.D.
B.S.	University of California Los Angeles (2007) Major: Marine Biology

ACADEMIC APPOINTMENTS/AFFILIATIONS

2019 – Present	Assistant Head of Faculty Division of Academic Enhancement University of Georgia
2018 – Present	Lecturer and Academic Coach Division of Academic Enhancement University of Georgia
2017 – 2018	Instructional Laboratory Manager Odum School of Ecology University of Georgia
2017	Research Associate Center for Teaching and Learning University of Georgia
2016	Lecturer Department of Biology Tufts University

PEDAGOGICAL EXPERIENCE

University of Georgia

Assistant Head of Faculty, Division of Academic Enhancement. As the Assistant Head of Faculty, I engage in intensive faculty development projects as well as sustained curricular innovations, enhanced course planning, overseeing instructional/peer observations and educational development opportunities, and assistance with strategic campus partnerships. I actively work to draw on extensive campus networks, teaching expertise, and higher education experience in this new leadership position. Additionally, I serve on the Division's leadership team.

Lecturer and Academic Coach, Division of Academic Enhancement. As a faculty in the Division I contribute in curriculum development, curriculum implementation through instruction, and curriculum scheduling and planning for strategic partnerships within and outside of the Division. In Summer 2018 I developed the curriculum for Developing Literacies in the STEM Fields course (UNIV 2113) and serve as the primary instructor for the course which prepares students for the expectations and rigor of courses in the STEM (Science, Technology, Engineering, and Mathematics) discipline. I also was a partner in developing the curriculum for the Division's Success for Transfer Students course (UNIV 2302), which helps to acclimate and prepare transfer students to the academic expectations and student support services and resources of the University of Georgia. The curriculum development for this course took place in Fall 2018. In Fall 2018 I was a partner in developing the curriculum for the Division's Preparing for Peer Learning course (UNIV 1204), which is a pedagogical course for the undergraduate students that will serve as Peer Learning Assistants supported by the Office of Instruction. In Fall 2018 this course primarily targeted PLAs for Chemistry 1211, and in Spring 2019 it has included PLAs for courses across the STEM discipline. All course curriculum has received continual modifications from formative and summative feedback from students, staff, and faculty that have been involved with these respective courses.

As an Academic Coach I meet with undergraduate students that are seeking academic support in a variety of areas – namely time management, study skills, and test preparation. I meet with these students one-on-one for one hour each week for at least four sessions, helping to develop a strategic learning plan that fits the unique needs and conditions appropriate for that individual.

Instructional Laboratory Manager, Odum School of Ecology. I oversaw the Ecology Laboratory courses, primarily focused on curriculum design and day to day operations for the large introductory non-majors course – Ecological Basis for Environmental Issues, and for the large introductory majors course – Ecology. My job responsibilities included providing logistical and training support for the graduate teaching assistants; developing curriculum to update the ecology lab content, developing and revising instructional activities based on ecological research methods; interacting with faculty, graduate students, and undergraduates relative to the laboratory program; and oversight of instruments, supplies and laboratory teaching spaces.

Research Associate, Center for Teaching and Learning (Spring 2017). I served as the lead research coordinator on an IRB project evaluating the impact and effect of Open Educational Resources on student performance within context of student financial aid support. We worked to determine if student access to free, online based curriculum led to higher final grades, lower drop rates, and lower DFW rates in specific courses that implemented OERs into their curriculum, most notably for students receiving significant financial aid.

Tufts University

Lecturer, Environmental Biology (Fall 2016). Large undergraduate course of over 80 students, satisfying major and non-major science requirement. This course focused on major natural and created ecosystems: ecological basis for sound land use and pollution abatement and the role of science and policy in an ever-changing environment.

Simmons College

Instructor, General Biology laboratory (Fall 2016). Introductory level biology laboratory course for majors and non-majors.

Guest Lecturer, General Biology: Community Ecology and Ecosystems, Micro- and Macroevolution, Macromolecules (2014, 2015) Introductory undergraduate course in large lecture setting.

Northeastern University

Co-Instructor, Urban Coastal Sustainability in a Rapidly Changing Environment (Spring 2015) Nine graduate students in the School of Public Policy and Urban Affairs. This course focused on the challenges facing coastal cities and the ecosystems on which they depend by exploring both threats such as climate change as well as adaptation measures that promote resilience.

Guest Lecturer, Vertebrate Zoology: Life in Water (Fall 2015) Upper division undergraduate course with 40 students.

Guest Lecturer, Environmental Science: Introduction to Ecology, Biomes (Fall 2015) Introductory undergraduate course in large lecture setting.

Teaching Assistant, Vertebrate Zoology laboratory (Fall 2015)

Teaching Assistant, Foundations of Biology laboratory (Fall 2014)

Teaching Assistant, Principles of Biology laboratory (Fall 2013)

University of South Carolina

Lecturer, MCAT Preparation: Biology (Spring 2012) Upper division pre-med course structured to address the major topics of human anatomy and physiology, two sections of 40 students each. Reviewed MCAT Biology materials in a lecture style course and wrote practice MCAT sections for the students. Graded weekly practice sections to chart student progress over the course.

Guest Lecturer, Introduction Biology: Digestion and Nutrition, Form and Function (Fall 2012) Introductory undergraduate course in large lecture setting.

Teaching Assistant, Ecology and Evolution laboratory (2011 – 2012)

Teaching Assistant, Introductory Biology laboratory (Fall 2010)

California State University, Northridge

Teaching Assistant, Introductory Biology laboratory (Fall 2009)

PUBLICATIONS

In Preparation

Colvard, N.B. and B. Helmuth. Evaluating environmental change in a trophic context: interactive impacts of nutrients and temperature on a primary producer and its herbivore.

Peer Reviewed

Colvard, N.B., C.E. Watson, and H. Park. The Impact of Open Educational Resources on Various Student Success Metrics. *International Journal of Teaching and Learning in Higher Education* 30(2):262-276.

Colvard, N.B. and B. Helmuth. 2017. Nutrients influence the thermal ecophysiology of an intertidal macroalga: Multiple stressors or multiple drivers? *Ecol Appl* 27(2):669-681.

Colvard, N.B., E. Carrington, and B. Helmuth. 2014. Temperature-dependent photosynthesis in the intertidal alga *Fucus gardneri* and sensitivity to ongoing climate change. *J Exp Mar Biol Ecol* 458:6-12.

Colvard, N.B. and P.J. Edmunds. 2012. Macroalgae on shallow tropical reefs reduce the availability of reflected light for use in coral photosynthesis. *Bull Mar Sci* 88(4):1019-1033.

Colvard, N.B. and P.J. Edmunds. 2011. Decadal-scale changes in abundance of non-scleractinian invertebrates on a Caribbean coral reef. *J Exp Mar Biol Ecol* 397:153-160.

Books & Book Chapters

Colvard, N.B. and B. Helmuth. 2016 “Thermal Biology” In, *Encyclopedia of Estuaries*, edited by K.M Kennish, Springer Science. Pgs. 661-664.

AWARDS AND HONORS

2016	Northeastern University Dissertation Completion Fellowship – Spring (\$14,900)
2015	Northeastern University College of Science Travel Grant (\$269)
2014	Northeastern University College of Science Travel Grant (\$375)
2014	Northeastern University Graduate Student Government Travel Award (\$300)
2014	Northeastern University Marine & Environmental Science Department Travel Grant (\$300)
2014	Gordon Research Conference Fellowship Grant (\$600)
2013	Northeastern University Graduate Student Government Travel Award (\$375)
2011	University of South Carolina Biological Sciences Graduate Support (\$275)
2011	University of South Carolina Graduate Student Travel Grant (\$275)
2011	Elsie Taber Fellowship - Graduate Student Travel Fund, Biological Sciences at the University of South Carolina (\$2865)
2010	California State University, Northridge Student Project Grant (\$2000)
2010	Society for Integrative and Comparative Biology (SICB) Charlotte Mangum Student Support Grant (\$500)
2009	Teaching Associate Fee Waiver for California State University, Northridge (\$2700)
2008	Graduate Studies, Research and International Programs CSUN grant (\$1000)

GRANTS AND FELLOWSHIPS

2017 - 2018	William and Flora Hewlett Foundation Open Education Resources Research Fellowship (\$5000)
2012	Alan and Marian Kohn Fellowship, Friday Harbor Laboratories, University of Washington (\$3837)
2009	NSF East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI) supplement to Taiwan (\$5678)
2007	NSF REU supplement to Moorea Coral Reef Long Term Environmental Research (LTER) (\$2000)
2007	NSF Research Experience for Undergraduates (REU) supplement to St. John US Virgin Island Long Term Research in Environmental Biology (LTREB) (\$6000)

EXTRAMURAL PRESENTATIONS

Colvard, N.B. and T.C. Hagood. 2019. Developing Literacies in the STEM Fields Course. AACU Transforming STEM Higher Education Conference. Chicago, IL (Oral)

Colvard, N.B. 2019. How to make the most of your OER Fellowship. Conference call for incoming fellows, speaking as a veteran fellow on my experience.

- Colvard, N.B.**, C. Huggins, A. Hunt, Z. Morris, P. Eubing, B. Brunow. 2019. Beyond Content: Exploring the Critical Link between Active Learning and Student Development. USG Teaching and Learning Conference. Athens, GA (Oral)
- Colvard, N.B.** and C.E. Watson. 2018. Beyond Affordability: How OER are Helping to Narrow the Academic Performance Gap in Higher Education. OpenEd 2018. Niagara Fall, NY (Oral)
- Colvard, N.B.** 2018. How to make the most of your OER Fellowship. Conference call for incoming fellows, speaking as a veteran fellow on my experience.
- Colvard, N.B.** and C.E. Watson. 2018. Beyond Affordability: Evidence of OERs Impact on Student Success Metrics. Southern Regional Faculty & Instructional Development Consortium's Annual Conference. Virginia Beach, VA (Oral)
- Colvard, N.B.** and C.E. Watson. 2018. OER Adoption Strategies and the Resulting Effect on Student Success. USG Teaching and Learning Conference. Athens, GA (Oral)
- Watson, C.E. and **N.B. Colvard**. 2018. Open Educational Resources (OERs): Another High Impact Practice? Association of American Colleges & Universities Annual Meeting. Washington, D.C. (Oral)
- Colvard, N.B.** and C.E. Watson. 2017. The effect of Open Educational Resources on student academic performance with regard to student financial need. Textbook Affordability Conference. Georgia Institute of Technology, Atlanta, GA (Oral)
- Colvard, N.B.** 2017. From light to life: Applying our understanding of photosynthesis to the natural world. Department of Biology, University of Alabama, Birmingham, AL (Oral)
- Colvard, N.B.** 2017. Nutrients influence the thermal ecophysiology of an intertidal macroalga: Multiple stressors or multiple drivers? Marine Science Seminar Series, University of Georgia (Oral)
- Colvard, N.B.** 2017. Eco-physiological and ecological responses of a primary producer to changes in the surrounding environment. University of Georgia: Enthusiasts of Diversity, Genetics and Evolution Talk Series (Oral)
- Colvard, N.B.** 2015. The Nutrient Effect: Quantifying how eutrophication influences the eco-physiology and ecology of a primary producer. College of Charleston: Fort Johnson Seminar Series (Oral)
- Colvard, N.B.** and B. Helmuth. 2015. The Enrichment Effect: Determining how added nutrients and an increase in seawater temperature affect organism performance and growth. Benthics Ecology Meeting, Quebec City, Quebec (Oral)
- Colvard, N.B.**, Carrington, E., Helmuth, B. 2014. Withstanding the heat: modeling *Fucus* photosynthesis based on temperature and irradiance changes. Gordon Research Conference: Ocean Global Change Biology, Waterville Valley, NH (Poster)
- Colvard, N.B.**, E. Carrington, B. Helmuth. 2013. Withstanding the heat: How water temperatures affect the photophysiology of *Fucus gardneri*. Benthic Ecology Meeting, Savannah, GA (Oral)
- Colvard, N.B.** and P.J. Edmunds. 2011. Differences in benthic composition influence the light microenvironment on tropical reefs. Benthic Ecology Meeting, Mobile, AL (Oral)
- Colvard, N.B.** and P.J. Edmunds. 2010. The physiological response of tropical reef corals to light reflected from the benthos. Society of Integrative and Comparative Biology, Seattle, WA (Oral)
- Colvard, N.B.** and P.J. Edmunds. 2009. The influence of reflected light from the benthos on coral physiology. Western Society of Naturalists, Monterey, CA (Oral)

Colvard, N.B. and P.J. Edmunds. 2009. Changes in the population density of benthic reef invertebrates over two decades on the south coast of St. John, US Virgin Islands. Benthic Ecology Meeting, Corpus Christi, TX (Oral)

Colvard, N.B. and P.J. Edmunds. 2008. Decadal scale changes in coral reef benthic invertebrates on the south coast of St. John, USVI. Western Society of Naturalist, Vancouver, British Columbia (Oral)

Colvard, N.B. and P.J. Edmunds. 2007. Decadal-scale changes in population density of non-scleractinian invertebrates on a Caribbean reef. Western Society of Naturalist, Ventura, CA (Poster)

INTRAMURAL PRESENTATIONS

Colvard, N.B. 2020. Invited Speaker: How Undergrads Learn (in STEM) Workshop. University of Georgia Division of Academic Enhancement, Athens, GA (Online Oral)

Colvard, N.B. 2020. Student Success Workshop: Time Management. University of Georgia Division of Academic Enhancement, Athens, GA (Online Oral)

Colvard, N.B. 2019. Invited Speaker: Facilitating Learning in STEM, GradTeach Workshop. University of Georgia Center for Teaching and Learning, Athens, GA (Oral)

Colvard, N.B. and C.E. Watson. 2018. OER Adoption Strategies and the Resulting Effect on Student Success. University System of Georgia Teaching and Learning. University of Georgia, Athens, GA (Oral)

Colvard, N.B. 2018. Invited Speaker: Selecting Course Materials. Speaking to Graduate Student Seminar Course on the impact of Open Educational Resources when selecting course materials. University of Georgia Center for Teaching and Learning, Athens, GA (Oral)

Colvard, N.B. and C. Edward Watson. 2017. Improving student performance in your class: The surprising benefits of Open Educational Resources and how you can leverage them to help your students succeed. Center for Teaching and Learning National Speaker Series. University of Georgia, Athens, GA (Oral)

Colvard, N.B. and B. Helmuth. 2014. Modeling the intertidal: developing a simple model to predict net photosynthesis of submerged *Fucus gardneri*. RISE:2014 Research, Innovation and Scholarship Expo. Northeastern University, Boston, MA (Poster)

Colvard, N.B. 2013. Withstanding the heat: the role of water temperature influencing *Fucus gardneri* photophysiology. Northeastern University Biology Department Graduate Student Symposium, Northeastern University, Boston, MA (Oral)

Colvard, N.B. 2012. Effects of temperature and desiccation stress on *Fucus* photophysiology. Friday Harbor Laboratories, Friday Harbor, WA (Oral)

Colvard, N.B. 2012. How temperature and desiccation influence the photophysiology of *Fucus gardneri*. Symbiofest Workshop, University of Georgia, Athens, GA (Oral)

Colvard, N.B. 2011. Temperature and desiccation stress on *Fucus gardneri*. Friday Harbor Laboratories, Friday Harbor, WA (Oral)

Colvard, N.B. and P.J. Edmunds. 2009. Physiological response of coral to high reflectance microenvironment. MCR-LTER All Investigator's Meeting, UCSB, Santa Barbara, CA (Oral)

PROFESSIONAL DEVELOPMENT

Pedagogical

- 2020 Division of Academic Enhancement Faculty Winter (Virtual) Retreat, Organizer – University of Georgia
- 2020 Preparing to Pivot, Participant – University of Georgia Center for Teaching and Learning
- 2020 Division of Academic Enhancement Faculty Spring (Virtual) Retreat, Organizer – University of Georgia
- 2019 Division of Academic Enhancement Faculty Winter Retreat, Organizer – University of Georgia
- 2019 UGA CTL National Invited Speaker Series: Claire Major “Reframing the Lecture as a Pedagogy of Engagement” – University of Georgia
- 2019 Division of Academic Enhancement Faculty Spring Retreat, Organizer – University of Georgia
- 2019 UGA CTL Workshop Series: Peggy Brickman “Giving Effective Feedback During Peer Mentoring and Evaluation of Teaching” – University of Georgia
- 2019 Reacting to the Past Winter Conference – University of Georgia
- 2018 Completed the UGA Certificate in Academic Advising through Training and Development – University of Georgia
- 2018 Association of American Colleges and Universities – Transforming STEM Higher Education: Confirming the Authority of Evidence. Atlanta, GA
- 2018 University System of Georgia Innovation in Teaching Conference – University of Georgia
- 2018 University of Georgia Affordability Learning Institute – University of Georgia
- 2018 Peer Learning Assistants: How Undergraduates Can Support Active Learning in the Classroom Workshop
- 2017 Publishing Education Research in the area of STEM Workshop, Scientists Engaged in Education Research (SEER) – University of Georgia
- 2017 Epistemological and Theoretical Frameworks in Education Research in STEM Workshop, Scientists Engaged in Education Research (SEER) – University of Georgia
- 2014 An Introduction to Evidence-Based Undergraduate STEM Teaching, Coursera Statement of Accomplishment
- 2014 Researchers at the Intersection of Science and Education (RISE) Career Networking Summit – Massachusetts Institute of Technology

Research

- 2015 Biophysical ecology of rocky intertidal systems, Northeastern University
- 2014 Mission 31, Surface Support Team, Florida Keys, FL and Aquarius Reef Base
- 2014 Ocean Genome Legacy (OGL) and International Network for the Study of Rocky Intertidal Ecosystems Workshop, Northeastern University, Nahant, MA
- 2012 Symbiofest Workshop, University of Georgia, Athens, GA
- 2011 Sensor development for the study of global climate change workshop, University of South Carolina, Columbia, SC
- 2011 Biomechanics, Physiological Ecology and Genetics PISCO Course, Hopkins Marine Station, Stanford University
- 2011 Dynamic Energy Budget Workshop and Symposium, Lisbon, Portugal
- 2008 – 2010 MCR-LTER All Investigator’s Meetings, UC Santa Barbara

PROFESSIONAL SERVICE AND MEMBERSHIPS

University and Departmental Service

2019	Coordinator for Enrollment, Data, and Assessment Search Committee Member, Division of Academic Enhancement University of Georgia
2018 – 2019	Co-chair for Academic Resource Working Group, Division of Academic Enhancement, University of Georgia
2018 – 2019	Faculty Learning Community: Active Learning, Student Development, and Student Success
2018	Reviewer for the Affordable Learning Georgia Round Twelve Textbook Transformation Grants
2018	Faculty Search Committee Member, Division of Academic Enhancement University of Georgia
2017	Member – Academic Programs Committee, Odum School of Ecology, University of Georgia
2017	Member – Undergraduate Committee, Odum School of Ecology, University of Georgia
2015	RISE 2015: Research, Innovation and Scholarship Expo. Northeastern University, Boston, MA – Judging panel for the Graduate Innovator Award
2012 – 2013	President – Graduate Association of Biological Studies, University of South Carolina
2011 – 2013	Chair – Integrative Biology Journal Club, University of South Carolina
2011 – 2012	Secretary – Graduate Association of Biology Students, University of South Carolina
2008 – 2009	Secretary – Marine Biology Graduate Student Association, California State University, Northridge

Manuscript Reviewer

2019	CBE – Life Science
2016	Marine Biology
2014	Phycologia
2013	Biological Conservation
2012 – 2014	Marine Ecology Progress Series

Memberships

2018 – Present	Association of American Colleges and Universities – University Member
2017 – Present	Scientist Engaged in Education Research (SEER) at University of Georgia – Affiliate Faculty Member
2017 – Present	Biology Education Research Group (BERG) at University of Georgia
2015 – Present	Society for the Advancement of Biology Education Research (SABER)
2014 – 2016	Phycological Society of America
2011 – 2016	Sigma Xi Student Member
2009 – 2011	Society for Integrative and Comparative Biology
2008 – 2010	International Society for Reef Scientists
2007 – 2010	Western Society of Naturalist

COMMUNITY SERVICE – EDUCATIONAL OUTREACH

Northeastern University Marine Science Center

2014 – 2015 Parents weekend, Nahant, MA
2013 – 2015 Open House, Nahant, MA

Science Outreach for Primary Education

2016 The Dexter Southfield High School, Brookline, MA
2015 Buckingham Browne and Nichols School Cambridge, MA
2014 Devereux School, Marblehead, MA
2012 Milken Community High School, Los Angeles, CA
2011 Satchel Ford Elementary School, Columbia, SC
2009 Saticoy Elementary, Ventura, CA
2008 – 2009 Viewpoint High School, Calabasas, CA

PROFESSIONAL SKILLS

Molecular Techniques

PISCO Course 2011, Hopkins Marine Station, Stanford University - workshop on molecular techniques applied to rocky intertidal and coral reef species
Summer Internship in Dr. Ruth Gates' Lab 2010, Hawaii Institute of Marine Biology –amplifications within the *Symbiodinium* Its2 and LSU region extracted from *Montipora stellata* colonies from southern Taiwan. Advised by Dr. Xavier Pochon and Dr. Hollie Putnam

Ecological Physiology

Rocky intertidal macroalgal physiology
South Pacific and Caribbean coral identification
Hansatech Oxygen Electrode Chambers
Li-Cor Gas Hound CO₂ Gas Analyzer
Walz Pulse Amplitude Modulation (PAM) fluorometry
Thermo Fisher Scientific Flash EA 1112 NC Analyzer
Unisense NO_x Biosensor
Ocean Optics Neofox Oxygen Sensors
Ocean Optics USB4000 Spectrophotometer and SpectraSuite interface

Field Research Techniques

Small boat operations
Ecological monitoring and sampling techniques

Certifications

Certificate in Academic Advising – University of Georgia, Academic Advising Office
American Academy of Underwater Scientists (AAUS) Scientific Diver – 100 ft.
American Heart Association – First Aid, CPR, and AED Certified
French Boating License (Class C) (2008 – 2010)
Emergency Medical Technician (2006 - 2008)

Medical and Clinical Hospital Experience

Laboratory Assistant in Dr. Christopher Giza's Lab, Pediatric Neurology and Neurosurgery at the UCLA David Geffen School of Medicine and UCLA Mattel Children's Hospital (2005 - 2006)
Laboratory Assistant in Dr. Paul M. Vespa's Lab, Department of Neurology at the UCLA David Geffen School of Medicine (2004 - 2005)
Patient Escort at the Ronald Reagan UCLA Medical Center (2004 - 2006)

MENTORING EXPERIENCE

2015	Megan Reilly – Northeastern University, B.S. Marine Biology
2014 – 2015	Paola Salas* – Girls Inc., Lynn, MA
2014	Annie Dobroth – Commonwealth High School, Boston, MA
2013	Phoebe Chatfield – Concord Academy, Concord, MA
2010 – 2012	Nicholas Burnett - University of South Carolina, B.S. Biology
2011	Brooke Slocum – University of South Carolina, M.S. Education
2011	Diana Nguyen* – University of South Carolina, B.S. Biology – Pre-dental
2009	Brett Goodfriend – Viewpoint High School, Calabasas, CA

*underrepresented minority

REFERENCES

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