

Andrea Burton
3029 Cordley Hall, 2701 SW Campus Way
Corvallis, OR 97330
(703) 434-1445
Burtoand@oregonstate.edu

EDUCATION

- PhD in Integrative Biology** **2016 – present**
Oregon State University, Corvallis, OR
Dissertation: Examine how marine invertebrates' susceptibility to ocean acidification
Committee: Felipe Barreto, Chris Langdon, Francis Chan, and Stephen Ramsey
- Graduate Certificate in College and University Teaching** **2017 – 2018**
Oregon State University, Corvallis, OR
Advance course work and experiential learning for teaching in higher education
- PSM in Marine Biology** **2015**
Northeastern University, Boston, MA
Thesis: The invasive parasite, *Orthione griffenis*, takes advantage of its host, *Upogebia pugettensis*, reproductive season
- BS in Marine Biology** **2011**
Juniata College, Huntingdon, PA
- Summer session - Marine Mammal & Conservation** **2010**
University Marine Biological Station Millport, Cumbrae, Scotland
- Summer session – Marine Ecology Field Research Methods** **2009**
Research Station Bonaire, Caribbean, Bonaire

PUBLICATIONS

2021. Chapman, J., B. Dumbauld, I. Waring-Enriquez, **A. Burton**. Morphology and surface area of *Upogebia pugettensis* and *Neotrypaea californiensis* burrows. *Hydrobiologia: Online Resource S1*.
2020. Cosma, A., A. Topală, **A. Burton**, D. Enache, J. Pérez, D. Cosma, M. Mileva, N. Nikolova, A. Tapia, A. Ochando, A. Carrión, E. del Alisal, B. Moreno, R. Ramírez, M. Ríos, G. Angius, G. Griva, I. Ravani, L. Stathopoulou, E. Koromila, N. Athanasopoulou, D. Poulou, M. Kapsali, A. Manolakis. The Non-Formal Cultural Heritage Education Book. mAPP my Europe. (Workbook: 1 chapter)

RESEARCH EXPERIENCE

Graduate Research

2016 – present

Integrative Biology, OSU

- Identify the mechanisms of how ocean acidification impacts *Crassostrea gigas* during settlement
- Estimating the adaptive capacity of marine shellfish to ocean acidification and hypoxia
- Measuring the vulnerability and adaptive potential of two important local Oregon crustaceans to ocean acidification
- Assessing natural sea star populations to resistance to Sea Star Wasting Syndrome

Research Technician

2015 – 2016

USDA, Newport, OR

- Sampled and reared mud and ghost shrimp
- Compare lipids in mud shrimp when infested with parasitic isopod
- Dissected ghost shrimp brains to isolate lipofuscin in order to age shrimp

Research Assistant

2015 – 2016

Oregon State University, OR

- Monitored and sampled tsunami debris washing up on the Pacific Northwest coast
- Cataloged species found on debris

Undergraduate Research

2009 – 2011

Juniata College, PA

- Examined speciation between northern and southern populations of the Bocaccio Rockfish
- Indexed discard-catch from local fisherman in Pondicherry India

Research Assistant

2009

Fish and Wildlife Services, State College, PA

- Profiled stream of fish and macro invertebrates
- Constructed mud sill and log veins to prevent erosion and provide shelter for freshwater organisms

TEACHING

Instructor Positions

Introduction to Human Anatomy and Physiology Laboratory **2017 – present**

Integrative Biology Department, OSU

- 2020-2021, Mentor TA and exam writer for course
- Instructor of three-term introductory series
- 2-credit, 200-level course
- Use of human cadavers
- First-term: Structure, function, and regulatory mechanisms in human skeletal, muscular and integumentary system
- Second-term: Nervous, endocrine, and reproductive systems
- Third-term: Cardiovascular, respiratory, urinary and digestive systems

English Practicum II **2019 – 2020**

- Instructor of year-long English practicum course
- 3-credit, 2nd years

English Practicum III **2019 – 2020**

- Instructor of year-long English practicum course
- 3-credit, 3rd years

Invertebrate Zoology **2019**

Integrative Biology Department, OSU

- Instructor of sing-term course
- 2-credit, 300-level course
- Morphology and anatomy of representative invertebrates
- Dissections and both microscopic and macroscopic examination

Teaching Assistant Position

Principles of Biology Lab **2016 – 2017**

Integrative Biology Department, OSU

- Teaching Assistant of three-term introductory series
- 1-credit, 200-level course
- First-term: Origins of life, energy transformations, plant and animal diversity
- Second-term: Cell biology, organ systems, plant and animal physiology
- Third-term: Genetics, evolution, natural selection, and ecology

Guest Lectures/Workshops

- American Corner** 2020
Ovidius University, Constanta, Romania
- Workshop. *Space Week*. Invited by Dr. Ludmila Martanovschi
- Workshop. *Computer Science*. Invited by Dr. Ludmila Martanovschi
- Invertebrate Zoology** 2019
Oregon State University, OR
- Guest lecture. *Arthropoda development and vision diversity*. Invited by Dr. Eli Meyer
- Graduate Teaching Assistant Orientation** 2018
Oregon State University, OR
- Workshop. *Technology in the classroom*. Invited by Jessica Beck

Other Teaching Experience

- Math/Science Teacher** 2011 – 2013
Machakos School for the Deaf, Kenya
- Peace Corps Volunteer in the Math/Science education and Deaf education sectors
- Taught Biology, Physics, Agriculture, and Math to secondary school
- Classes conducted in Kenyan Sign Language (KSL)
- Percussion Instructor – Summer Camp** 2007 – 2010
McLean High School, BA
- One-and-a-half-week camp
- Led rehearsals for the percussion ensemble in the marching band

MENTORING/TUTORING

- Integrative Biology Peer-Graduate Mentee** 2020 – 2021
- Jared Freedman – Graduate student in Lytle Lab
- Integrative Biology Graduate Mentor**
Integrative Biology Department, OSU
- Brooke Galyon – Current Research Assistant at Oregon State University 2016 – 2018
- Justin Lim – Current Undergraduate Research at Oregon State University 2017
- Timothy Somers – Current graduate at Oregon State University 2017
- Biology Tutor** 2009 – 2010
Biology Department, Juniata College
- Tutored freshman and sophomore students in introductory Biology course

PROFFESIONAL DEVELOPMENT

Organized

Integrative Biology Diversity Values Statement **2020 - 2021**

Oregon State University – EJI committee, OR

- Equity Justice and Integration subcommittee
- Summarized Integrative Biology Department individual contributions to one cohesive diversity statement.
- Represents core values of all members of the department

Decolonizing the Classroom Workshop **2020 – 2021**

Oregon State University – EJI committee, OR

- Three 1-hour workshops where we discussed ways to decolonize the classroom
- Introduce inclusive practices to teaching

Graduate Climate Discussion **2019**

Oregon State University, OR

- Aided in distributing and summarizing surveys
- Assessed how graduate students were filling in the Integrative Biology Department
- Address concerns on equity and inclusivity ranging from graduate life to faculty and student dynamics

Sexual Misconduct and Awareness Training **2018**

Oregon State University, OR

- Helped organize three 4-hour workshops
- Provide participants with practical skills in recognizing and addressing sexual misconduct in academic settings
- Awareness, prevention, and response within the OSU research community

Attended – Science

Department of Biostatistics Summer Institutes Workshops **2019**

University of Washington, WA

- Quantitative Genetics
- Mixed Models in Quantitative Genetics
- Association Mapping: GWAS and Sequencing Data

OMSI Science Communication Fellowship **2019**

Oregon Museum of Science and Industry, OR

- Attended four workshops on science communication
- Developed hands on activities for communicating ocean acidification impacts on calcifying organisms

Attended – Teaching

DEJI Focus Group		2020
Oregon State University, OR		
- Diversity, Equity, Justice and Inclusion Focus Group		
- 90-minute workshop on student and faculty needs to close the gap		
SACNAS Conference		2020
Graduate Certificate in College and University Teaching Coursework		2017 – 2018
Oregon State University, OR		
- Theories of Teaching and Learning in Higher Education		
- Course Design and Methods in Higher Education		
- The Inclusive Classroom		
- Professional Development Seminar		
- Capstone Seminar		
- Internship		
- GTA Orientation Mentor		

FUNDING AND SCHOLARSHIPS

Fulbright English Teaching Assistant	\$19,000	2019 – 2020
Ovidius University, Romania		
SACNAS National Diversity in STEM conference award	\$205	2020
Oregon State University, OR		
UW Biostatistics Summer Institute Scholarship	\$900	2018
OMSI Science Communication Fellowship		
College of Science	\$925	2018
Integrative Biology Department	\$925	2018
ZORF		
Oregon State University, OR	\$300	2018
Oregon State University, OR	\$500	2017

PRESENTATIONS

- Society for the Advancement of Biology Education Research** **2019**
Irvine, CA
Burton A, Dzeidzic K, Biga L: Advantages of laboratory course for learning performance in Anatomy and Physiology courses
- National Shellfisheries Association** **2018**
Seattle, WA
Burton A, Meyer E, Durland E, Langdon C: Impacts of ocean acidification on the settlement of *Crassostrea gigas*
- State of the Coast** **2015**
Florence, OR
Burton A, Chapman J, Caldwell D, Dumbauld B, Copeman L: The introduced Asian parasite, *Orthione griffenis*, waits for its new North American host, *Upogebia pugettensis*, to get fat
- Pacific Estuarine Research Society** **2015**
Seattle, WA
Chapman J, Asson D, **Burton A**, Young D: Invasive parasite *Orthione griffenis* waits for fat *Upogebia pugettensis* hosts
- Liberal Arts Symposium** **2010**
Huntingdon, PA
Burton A, Buonaccorsi V: Development of polymorphic microsatellite markers in bocaccio rockfish from anonymous genomic regions
- American Fisheries Society** **2010**
Pittsburg, PA
Burton A, Buonaccorsi V: Development of polymorphic microsatellite markers in bocaccio rockfish

SCIENCE COMMUNICATION

After Dark 2019

Oregon Museum of Science and Industry, OR

- Related ocean acidification to beverage acidity for 3-hour even for adults visiting OMSI

Meet a Scientist 2019

- 2-hour event in which I communicated upwellings relation to ocean acidification through hands on demonstrations to OMSI visitors.

Open House 2017, 2018

Oregon State University, OR

- Planned and participated in explaining to the public what the Integrative Biology Department is and our research

Marine Science Day 2014 - 2016, 2018

Hatfield Marine Science Center, OR

- Educated the public about sea star wasting syndrome
- Introduced visitors to burrowing shrimp and their importance to the ecosystem

Periwinkle Elementary Family Science Night 2016, 2017

Periwinkle Elementary, OR

- Introduced elementary students to tide pools and research techniques

Discover the Scientist Withing 2017

Oregon State University, OR

- Educated young female scientist about coral disease and stress.

Winter Wonderings 2017

Oregon State University, OR

Educated students aged 10-12 about invertebrates

Newport Elementary Mentor 2015

Newport Elementary, OR

- Mentored a 4th grade class on estuary biology project

OTHER ORGANIZATIONS

Equity, Justice and Inclusion Committee (EJI)	2019 – present
Committee member	
Women in science	2017 – 2018
Committee Organizer	
Open House Planning Committee	2017 – 2018
Committee Chair	
Integrative Biology Graduate Student Association	2017 – 2018
Social Committee Head	
Marine Science Club	2016 – 2018
Member	

OTHER WORK EXPERIENCE

Temping	2013
Randstad, VA	
- Receptionist, filing, organizing and data recording	
National Zoo Invertebrate Exhibit Internship	2008
National Zoo, Washington D.C	
- Maintained and regulated tank temperature, salinity, and sedimentation	
- Educated visitors about the invertebrates during live feedings	

CERTIFICATIONS

- First Aid/CPR and AED (2017)
- Oregon Boat License (2016)
- AAUS certified (2013)