

Biographical Sketch – Emily L. Norton, M.S.

Research Scientist (2017 – present)

University of Washington Joint Institute for the Study of the Atmosphere and Ocean (JISAO) &

NOAA Pacific Marine Environmental Lab (PMEL), Seattle, WA 98115

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Professional Preparation

Bowdoin College, *summa cum laude*, Biology/Math, with honors, B.A. 2010

University of Hawaii, Oceanography, M.S. 2013

Appointments

Research Scientist, University of Washington JISAO	2017 – present
Research Technician, Brown University	2016 – 2017
Senior Planner, Maine Coastal Program (MCP)	2015 – 2016
NOAA Coastal Management Fellow, MCP	2013 – 2015
Graduate Research Assistant, University of Hawaii	2010 – 2013
Graduate Teaching Assistant, University of Hawaii	2011
Summer Research Fellow, Bowdoin College	2009

Products: 5 Most Relevant Papers

- 1) Stepien CA, JE Keister, C Paight, E Slikas, **EL Norton**. **In prep**. Species composition and diversity patterns across the Salish Sea: Multiple targeted metabarcode analyses of zooplankton and eDNA in relation to chemical conditions.
- 2) **Norton EL**, S. Siedlecki, S Officer, I Kaplan, J Fisher, C Morgan, A Hermann, SA Alin, RA Feely, C Saenger, J Newton, N Bednarek. **2020**. The importance of environmental exposure history in forecasting Dungeness crab megalopae distribution using J-SCOPE, a high-resolution model for the US Pacific Northwest. *Frontiers in Marine Science* 7:102. doi: 10.3389/fmars.2020.00102
- 3) Bednarek N, RA Feely, MW Beck, SR Alin, SA Siedlecki, P Calosi, **EL Norton**, C Saenger, J Strus, D Greeley, NP Nezlin, M Roethler, JI Spicer. **2020**. Exoskeleton dissolution with mechanoreceptor damage in larval Dungeness crab related to severity of present-day ocean acidification vertical gradients. *Science of the Total Environment*. doi:10.1016/j.scitotenv.2020.136610
- 4) Goetze E, KR Andrews, KTCA Peijnenburg, E Portner, **EL Norton**. **2015**. Temporal stability of genetic structure in a mesopelagic copepod. *PLoS ONE* 10:e0136087. doi:10.1371/journal.pone.0136087
- 5) **Norton EL**, E Goetze. **2013**. Equatorial dispersal barriers and limited connectivity among oceans in a planktonic copepod. *Limnology and Oceanography* 58:1581–1596. doi:10.4319/lo.2013.58.5.1581

Five Other Related Papers

- 6) Litzow MA, ME Hunsicker, NA Bond, BJ Burke, C Cunningham, JL Gosselin, **EL Norton**, EJ Ward, S Zador. **In Press**. The changing physical and ecological meanings of North Pacific Ocean climate indices. *Proceedings of the National Academy of Sciences*.
- 7) **Norton, EL**, RK Sherwood, RJ Bennett. **2017**. Development of a CRISPR-Cas9 system for efficient genome editing of *Candida lusitanae*. *mSphere* 2:e00217-17. doi:10.1128/mSphere.00217-17
- 8) Andrews KR, **EL Norton**, I Fernandez-Silva, E Portner, E Goetze. **2014**. Multilocus evidence for globally distributed cryptic species and distinct populations across ocean gyres in a mesopelagic copepod. *Molecular Ecology* 23:5462–5479. doi:10.1111/mec.12950

- 9) **Norton, EL**, BS Powell, A Neuheimer, E Goetze. **In prep.** Biophysical modeling to identify oceanic dispersal barriers for holoplankton in the equatorial Atlantic Ocean.
- 10) Berger H, SA Siedlecki, C Matassa, SR Alin, IC Kaplan, EE Hodgson, D Pilcher, **E Norton**, JA Newton. **In prep.** A regional assessment of Dungeness crab (*Cancer magister*) vulnerability to changing ocean conditions.

Synergistic Activities, Grants, and Awards

- *Science communication and outreach*: Fellow at the Pacific Science Center, Seattle, WA (**2019–present**); invited talk at Brunswick Junior High School (Brunswick, ME; **2015**); invited presentation at Tech Night for High School Students (Augusta, ME; **2015, 2016**); Science Interpreter at the Waikiki Aquarium (Honolulu; **2013**); boss of Nerd Nite Honolulu (**2012–2013**)
- *Science writing*: Attended workshops (**2012; 2019**) and participate in bi-weekly agraphia group (**2019–present**)
- *Promoting diversity and equality in science*: Active member of Society for Women in Marine Science, University of Washington (**2019–present**)
- *Programming proficiency*: Fortran, bash, R, Python, and Matlab, and version control with Git/GitHub (**2010–present**)
- *Mathematical modeling*: statistical and dynamical modeling applied to ocean dynamics, habitat modeling, and organismal modeling (**2010–present**)
- *Undergraduate mentoring*: Assisted with mentoring six undergraduate student interns at JISAO (**2017–present**) and the Maine Coastal Program (**2014–2016**).
- *Oceanographic cruise experience*: Participated in four cruises (>30 days at sea) conducting plankton sampling using bongo nets and MOCNESS technology (**2010-2013**)
- *Research grant recipient*: NOAA Project of Special Merit for " Benthic exploration and habitat classification: Tools for building resiliency in Maine" (\$200K; **2015**); Maine Outdoor Heritage Fund Grant for "Benthic habitat characterization of Maine's coastal waters" (\$14K; **2015**)
- *Project management*: Bathymetric mapping and habitat classification program for the State of Maine to improve regional ocean planning in New England (**2013–2016**)
- NOAA Coastal Management Fellowship with Maine Coastal Program (**2013–2015**)
- Charles Carroll Everett Scholarship, Bowdoin College (**2010**)
- Donald and Harriet S. Macomber Prize in Biology, Bowdoin College (**2010**)
- INBRE Academic Year Supply Award, Bowdoin College (**2009**)
- Doherty Coastal Studies Research Fellowship, Bowdoin College (**2009**)
- Abraxas Award, Bowdoin College (**2007**)

Collaborators

Samantha Siedlecki, University of Connecticut; Albert Hermann, JISAO, University of Washington; Nicholas Bond, JISAO, University of Washington; Bonnie Chang, JISAO, University of Washington; Isaac Kaplan, NOAA Northwest Fisheries Science Center; Michael Malick, NOAA Northwest Fisheries Science Center; Mary Hunsicker, NOAA Northwest Fisheries Science Center; Michael Litzow, University of Alaska; Erica Goetze, University of Hawaii; Brian Powell, University of Hawaii