

Dana E Hunt
Duke University Marine Laboratory
135 Duke Marine Lab Rd Beaufort NC 28516
dana.hunt@duke.edu
(252) 504-7542

Education

BA Biochemistry, Rice University	May 2001
BA Environmental Engineering, Rice University	May 2001
PhD Civil and Environmental Engineering, MIT	Feb 2008
Postdoctoral Associate, University of Hawaii	2007-2009
Postdoctoral Associate, Duke University	2009-2010

Appointments

Associate Professor, Duke University <i>Marine Science and Conservation</i> Nicholas School of the Environment	2019-present
Assistant Professor, Duke University	2010-2019
Faculty, <i>University Program in Ecology</i>	2010-present
Faculty, <i>University Program in Environmental Health</i> <i>Department of Biology, Duke University</i>	2010-present
Secondary Appointment	2011-present
<i>Civil and Environmental Engineering, Duke University</i> Secondary Appointment	2011-present

Service

Advisory Boards: C-CoAST Steering Committee (2020-present); Integrative Bioinformatics for Investigating and Engineering Microbiomes (IBIEM) Training Grant Steering Committee (2015-2021); Duke Marine Conservation Molecular Facility (2009-2012)

Contributor: Duke Bass Connections *Oceans of Microbes* (2020-22), United Nations Second World Ocean Assessment (2018-2020)

University Service: Steering Committee on the First Generation/Low-Income Undergraduate Experience (2020-present); Karsh Undergraduate Financial Aid Director Interviewer (2021)

Dept. and School Service: Duke Civil and Environmental Engineering Data Analytics Faculty Search (2019-2020); ad-hoc Graduate Admissions Committee (2009-2021); Oceans and Health (2015); Rachel Carson Scholarship Review Committee (2011); DUML Marine Ecology Faculty Search (2011-2012)

Book Reviewer: Nomad Press “Girls in Science Series” (2016)

University Outreach: Duke Marine Lab Open House (2011-2019), Group Leader: Duke Winter Forum (2013), Duke NC/SC Open House (2011)

Community Outreach/ Service: Organized middle school field trip (~100 students 2016); NOAA/ Duke Storm water monitoring committee (2016-2018)

Judge: North Carolina Coastal Marine Science Competition (2016, 2017), Hawaii State Science Fair (2008, 2009)

External Promotion and Tenure Reviewer: Colorado State University (2019), Canada Research Chair (2019)

Conference Abstract Reviewer: Modeling Ecological and Evolutionary Practices (ASM-2017)

Organizer: Session Organizer: Ocean Sciences Meeting (2014, 2016, 2018), Stewards of the Future Seminar Series (2012-2015), Microbial Systems Initiative Symposium (2006)

Editorial Board: *Environmental Microbiology/ Environmental Microbiology Reports* (2015-present)

Journal Reviewer: *Applied and Environmental Microbiology, Aquaculture, Astrobiology, Chemosphere, Diversity and Distributions, Ecotoxicology, Environmental Microbiology, Environmental Pollution, Environmental Science and Pollution Research, Environmental Science and Technology, FEMS Microbiology Ecology, Frontiers in Microbiology, Global Change Biology, ISME Journal, Limnology and Oceanography, Limnology and Oceanography: Methods, Marine Life Science and Technology, Microbes and Environments, Microbial Biotechnology, Microbial Genomics, Microorganisms, Molecular Ecology* (Top reviewer 2015), *mSphere, mSystems, Nanotoxicology, Nature Climate Change, Nature Communications, PeerJ, PLoS ONE, Scientific Reports, Water Resources Research, World Journal of Microbiology and Biotechnology*

Ad hoc Proposal Reviewer: Canada Foundation for Innovation; French National Research Agency (ANR); Israeli Ministry of Science, Technology and Space; Israel Science Foundation; Kuwait Foundation for the Advancement of Science; NSF Biological Oceanography; NSF-BSF; NSF Centers of Research Excellence in Science (CREST); NSF Ocean Sciences Postdoctoral Research Fellowship; NSF Polar Programs; NSF Population Biology; Wellcome Trust

Proposal Panel Reviewer: Duke Microbiome Center (2021); Dept. of Energy PNNL site review (2021); NSF Understanding the Rules of Life (2021); Dept. of Energy Community Science Program (2018); NSF Biological Oceanography (2018); Louisiana Sea Grant (2017); IDT Sustainability Award (2016, 2017); NSF-GRFP (2014), EPA-STAR Fellowship (2013), American Association of University Women (2011, 2012), NSF MRI (2010), Water Resources Research Institute-UNC (2009)

Awards and Workshops

- Duke Teaching and Leading for Equity (2021)
- Fellow, American Society of Limnology and Oceanography-ASLO (2020)
- Earth Cube Time Series Workshop Honolulu, HI (2019)

- United Nations World Oceans Assessment, Doha, Qatar (2018)
- NSF Coastlines and People Workshop, Atlanta GA (2018)
- Duke Sustainable Classroom Award (2018)
- Ocean Acidification PI meeting (NOAA/ NSF 2018)
- EcoDAS Reunion Symposium (2014)
- Earth Cube Ocean Ecosystem Dynamics Workshop (2013)
- ASLO Early Career Travel Grant (2012)
- Women Evolving Biological Sciences (2011)
- Best Poster Award (Silver) 8th US-Korea Nanoforum (2011)
- Stocker et al (2008) received Lindeman Award (ASLO, 2010)
- Advanced Bacterial Genetics, Cold Spring Harbor Laboratories (2009)
- Ecological Dissertations in the Aquatic Sciences (formerly DIALOG, 2008)
- RM Parsons Travel Grant (2005, 2006, 2007)
- ASM Travel Grant (2005)
- Microbial Diversity Course, MBL (2004)
- Whitaker Foundation Graduate Fellowship (2004-2005)
- National Science Foundation Graduate Fellowship (2001-2004)

Membership

American Society for Microbiology (2004-present)
 American Society for Limnology and Oceanography (2004-present)
 International Society for Microbial Ecology (2016-present)

Teaching

- Oceans in Human and Environmental Health, Fall 2019-Fall 2021
- IBIEM (NSF- NRT) Lecturer Fall 2016, Spring 2020, Spring 2021
- Coastal Watershed Science and Policy Spring (2016-2021)
- Graduate Seminar: Fall 2015, Fall 2018; Fall 2020
- Marine Molecular Microbiology Fall 2011- Fall 2015, Fall 2018
- Graduate Seminar- Current Topics in Marine Microbiology Spring 2014, 2015, 2017, Fall 2017
- Graduate Seminar- Current Topics in Marine Science Fall 2012
- Graduate Seminar Molecular Biodiversity Spring 2011

Publications

Ahern O, K Whitaker, TC Williams, **DE Hunt**, T Rynearson “Host genotype structures the microbiome of a globally dispersed marine phytoplankton” (in review) *PNAS*

Woodroffe CD, Q Bing, **DE Hunt**, R Christofolletti, P Muniz, M Yasuhara (2021) “Chapter 7G: Estuaries and Deltas” United Nations 2nd World Oceans Assessment.

Wang Z, D Tsementzi, TC Williams, DL Juarez, SK Blinebry, NS Garcia, BK Sienkiewicz, ZI Johnson, K Konstantinidis, **DE Hunt** (2021) “Environmental stability impacts the differential sensitivity of marine microbiomes to increases in temperature and acidity” *ISME Journal* **15**:19-28 doi:10.1038/s41396-020-00748-2.

Xie N, **DE Hunt**, ZI Johnson, Y Xie, G Wang (2021) “Annual partitioning patterns of Labyrinthulomycetes protists reveal their multifaceted roles in marine microbial food webs” *Applied and Environmental Microbiology* **87**(2) e01652-20 doi:10.1128/AEM.01652-20

Nayfach S, S Roux, R Seshadri, D Udway, N Varghese, F Schulz, D Wu, D Paez-Espino, I-M Chen, M Huntemann, K Palaniappan, J Ladau, S Mukherjee, TBK Reddy, T Nielsen, E Kirton, JP Faria, JN Edirisinghe, CS Henry, SP Jungbluth, D Chivian, P Dehal, EM Wood-Charlson, AP Arkin, S Tringe, A Visel, **IMG/M Data Consortium**, T Woyke, NJ Mouncey, NN Ivanova, NC Kyrpides, EA Elloe-Fadrosh (2020) “A genomic catalog of earth’s microbiomes” *Nature Biotechnology*

Loftus SE, **DE Hunt**, ZI Johnson (2020) “Reused cultivation water from a self-inhibiting alga does not inhibit other algae but alters their microbiomes” *Algae Research*

Wang Z*, DL Juarez*, JF Pan, J Gronniger, SK Blinebry, JS Clark, ZI Johnson, **DE Hunt** (2019) “Microbial communities across nearshore to offshore coastal transects are primarily shaped by distance and temperature” *Environmental Microbiology* **21**(10), 3862–3872 doi: 10.1111/1462-2920.14734

Ward CS*, JF Pan*, BP Colman, Z Wang, CA Gwin, TC Williams, A Ardis, CK Gunsch, **DE Hunt** (2019) “Conserved microbial responses for acute and chronic silver nanoparticle treatments in wetland mesocosms” *Environmental Science and Technology* **53**, 3268–3276 doi: 10.1021/acs.est.8b06654

Duan, Y, N Xie, Z Song, CS Ward, CM Yung, **DE Hunt**, ZI Johnson, G Wang (2018) “A high resolution time series reveals distinct seasonal patterns of planktonic fungi at a temperate coastal site (Beaufort, North Carolina, USA)” *Applied and Environmental Microbiology* **84** (21) e00967-18 doi: 10.1128/AEM.00967-18

Zhang T, JF Pan, **DE Hunt**, M Chen, B Wang (2018) “Organic matter modifies biochemical but not most behavioral responses of the clam *Ruditapes*

philippinarum to nanosilver exposure” *Marine Environmental Research* **133**: 105-113. doi:10.1016/j.marenvres.2017.10.016

Ward CS*, CM Yung*, KM Davis, SK Blinebry, TC Williams, ZI Johnson, **DE Hunt** (2017) “Annual community patterns are driven by seasonal switching between closely related marine bacteria” *ISME Journal* **11** 1412-1422 doi:10.1038/ismej.2017.4

Garcia NS*, CM Yung*, KM Davis, T Rynearson, **DE Hunt** (2017) “Draft genome sequences of three bacterial isolates from cultures of the marine diatom *Thalassiosira rotula*” *Genome Announcements* **5** (18) e00316-17 doi: 10.1128/genomeA.00316-17

McMurray SE, ZI Johnson, **DE Hunt**, JR Pawlik, CM Finelli (2016) “Selective feeding by the giant barrel sponge enhances foraging efficiency” *Limnology and Oceanography* **61** 1271-1286.

Yung CM, CS Ward, KM Davis, ZI Johnson, **DE Hunt** (2016) “Insensitivity of diverse and temporally-variable particle-associated microbial communities to bulk seawater environmental parameters” *Applied and Environmental Microbiology* **82** (11):3431-3437.

Hunt DE and CS Ward (2015) “A network-based approach to disturbance transmission through microbial interactions” *Frontiers in Microbiology* **6** doi:10.3389/fmicb.2015.01182

Yung CM, MK Vereen, A Herbert, KM Davis, J Yang, A Kantorowska, CS Ward, JJ Wernegreen, ZI Johnson, **DE Hunt** (2015) “Thermally adaptive tradeoffs in closely related marine bacteria” *Environmental Microbiology* **17**(7) 2421-2429.

Kirchberger PC, M Turnsek, **DE Hunt**, BJ Haley, RR Colwell, MF Polz, CL Tarr, Y Boucher (2014) “*Vibrio metoecus* sp.nov., a close relative of *Vibrio cholerae* isolated from coastal brackish ponds and clinical specimens” *International Journal of Systematic and Evolutionary Microbiology* **64** (9) 3208-3214.

Chae SR*, **DE Hunt***, K Ikuma, S Yang, J Cho, CK Gunsch, J Liu, and MR Wiesner (2014) “Aging of fullerene C₆₀ nanoparticles in the presence of microbes” *Water Research* **65** 282-289.

Colman BP, B Espinasse, C Richardson, C Matson, GV Lowry, **DE Hunt**, MR Wiesner, ES Bernhardt (2014) “Emerging contaminant or an old toxin in disguise? Silver nanoparticle impacts on ecosystems” *Environmental Science and Technology* **48**(9), 5229-5236.

Johnson ZI, BJ Wheeler, SK Blinebry, CM Carlson, CS Ward, **DE Hunt** (2013) “Dramatic variability of the carbonate system at a temperate coastal

ocean site (Beaufort, North Carolina, USA) is regulated by physical and biogeochemical processes on multiple timescales” *PLoS ONE* **8**(12), e85117.

Hunt DE*, Y Lin*, MJ Church, DM Karl, S Tringe, LK Izzo, ZI Johnson (2013) “Relationship between abundance and specific activity of bacterioplankton in open ocean surface waters” *Applied and Environmental Microbiology* **79**(1), 177-184.

Boucher Y, OX Codero, A Takemura, **DE Hunt**, K Schliep, E Baptiste, P Lopez, CL Tarr and MF Polz. (2011) “Local mobile gene pools rapidly cross species boundaries to create endemicity within global *Vibrio cholerae* populations” *mBio* **2** (2) e00335-10.

Hunt DE*, E Ortega-Retuerta*, C Nelson* (2010) “Connections between bacteria and organic material in aquatic ecosystems: Linking microscale ecology with global carbon cycling” p. 110-128. In P.F. Kemp [ed.], Eco-DAS VIII Symposium Proceedings. ASLO.

Hunt DE*, LA David*, D Gevers, SP Preheim, EJ Alm, MF Polz. (2008) “Resource partitioning and sympatric differentiation among closely related bacterioplankton” *Science* **320** (5879), 1081-1085.

Stocker R, JR Seymour, A Samadani, **DE Hunt**, MF Polz (2008) “Rapid chemotaxis enables marine bacteria to exploit ephemeral microscale nutrient patches” *PNAS-USA* **105**, 4209-4214.

Hunt DE, D Gevers, NM Vahora, MF Polz (2008) “Conservation of the chitin utilization pathway in the *Vibrionaceae*” *Applied and Environmental Microbiology* **74**, 44-51.

Polz MF, **DE Hunt**, SP Preheim, DM Weinreich. (2006) “Patterns and mechanisms of genetic and phenotypic differentiation in marine microbes” *Phil. Trans. R. Soc. B* **361**, 2009-2021.

Hunt DE, V Klepac-Ceraj, SG Acinas, C Gauthier, S Bertilson, MF Polz (2006) “Evaluation of 23S rRNA PCR primers for use in phylogenetic studies of bacterial diversity” *Applied and Environmental Microbiology* **72**, 2221-2225.

Thompson JR, S Pacocha, C Pharino, V Klepac-Ceraj, **DE Hunt**, J Benoit, R Sarma-Rupavtarm, DL Distel, MF Polz (2005) “Genotypic diversity within a natural coastal bacterioplankton population” *Science* **307** (5713) 1311-1313.

Acinas SG*, V Klepac-Ceraj*, **DE Hunt**, C Pharino, I Ceraj, DL Distel, MF Polz (2004) “Fine-scale phylogenetic architecture of a complex bacterial community” *Nature* **430**, 551 - 554

Polz MF, S Bertilson, SG Acinas, **D Hunt** (2003) “A(r)ray of hope in diversity analysis of microbial function and communities” *Biological Bulletin* **204**(2), 196-199.

* authors contributed equally

Invited Seminars

NC C-CoAST Seminar Series (Fall 2021)
UNC Chapel Hill, Marine Sciences Seminar, Chapel Hill NC (January 2020)
NC State, Biology, Ecology, & Evolution Seminar Raleigh NC (November 2019)
Duke Kunshan University, Kunshan China (October 2019)
MIT, Environmental Sciences Seminar (CEE), Cambridge MA (March 2018)
Duke University Marine Lab, Beaufort NC (January 2018)
IBEIM Seminar Series Duke/ NC Central, Durham NC (November 2017)
University of Chicago, Ecology and Evolutionary Biology, Chicago. IL
(November 2016)
Duke University Ecology Program, Durham, NC (January 2015)
University of Rhode Island, School of Oceanography, Narragansett, RI
(April 2014)
Duke University Marine Lab, Beaufort, NC (January 2014)
Mount Holyoke College, South Hadley, MA (October 2013)
Dept. of Energy Joint Genome Institute, Walnut Creek, CA (April 2012)
University of Freiburg, Freiburg, Germany (October 2011)
Duke University Biology Dept. Seminar Durham, NC (January 2011)
Duke University Marine Lab Beaufort, NC (November 2010)
Center for Environmental Implications of Nanotechnology Seminar Series Duke
University Durham NC (January 2010)
University of Hawaii Microbiology. Seminar Honolulu HI (April 2009)
University of Hawaii, Oceanography Seminar Honolulu HI (September 2008)
Duke University Marine Lab, Beaufort NC (July 2008)

Graduate Students Supervised (PhD/ MS)

Qing Dai, MSC	2021-present
Jessica Gronniger, MSC	2018-present
Zhao “Joanna” Wang, MSC	PhD 2020
Cheuk Man “Charmaine” Yung, MSC	PhD 2016
Christopher Ward, Toxicology/MS	PhD 2015
Katherine Davis, MSC	MS 2014

Postdoctoral Associates

Dr. Nathan Garcia	2016-2017
-------------------	-----------

Dr. Tiffany Williams	2015-2017
Technicians	
Doris Juarez	2017-2019
Professional Masters Students Supervised	
Elizabeth Stokes-Cawley	CEM 2016
Erin Tomaras	CEM 2016
Ashleigh McCord	CEM 2016
Kaitlin Robinson	CEM 2015
Megan Rayfield	CEM 2014
Visiting Scientists Hosted	
Jiaqian Li, <i>Tianjin University</i>	2021-present
Dr. Jinfen Pan, <i>Ocean University of China</i>	2017-2018
Professional Masters Students Assistantship Supervisor	
Virginia “Reilly” Henson	2015-2016
Major Awards to Supervised Students	
Jessica Gronniger: NSF-NRT Training Fellowship	2018-2019
Chris Ward: NSF Graduate Research Fellowship	2012-2015
Katy Davis: James B Duke Scholarship	2011-2014
Graduate Student Committee Member	
Junyao Gu MSC, Duke	2021-present
Courtney Swink MSC, Duke	MS 2020
Sarah Loftus Ecology, Duke	PhD 2019
Sarah Choyke ENV, Duke	PhD 2018
Bryan Brown ENV, Duke	PhD 2017
Megumi Shimizu MSC, Duke	PhD 2017
Carley Gwin CEE, Duke	PhD 2016
Alyse Larkin MSC, Duke	PhD 2016
Raul Gonzalez, UNC-Chapel Hill	PhD 2013
Yajuan Lin MSC, Duke	PhD 2013
Undergraduate Students Supervised	
Marisy Nieto, Wellesley UG (REU)	Summer 2021

Medy Mu, Duke UG	Spring/Summer 2021
Taylor Adams, Wittenburg UG	Fall 2020
Cynthia Wang, Duke UG	Fall 2020
Youyi Xu, Tianjin University (visiting UG)	Spring 2020
Katherine Crider, James Madison University (REU)	Summer 2019
Phoebe Nduta, Duke UG (<i>Honors thesis</i>)	Fall 2018, Summer 2019
Yumin Wang, Tianjin University (visiting UG)	Spring 2018
Michael Saporito, Duke UG	Spring 2018
Claire Yang, Swarthmore UG	Fall 2016
Doris Juarez, Smith College UG (REU)	Summer 2016
Jemima McCluskey, Baylor College (visiting UG)	Spring 2016
Abby Ardis, Duke UG	Spring 2014
Emily King, Cal State Monterey Bay UG	Spring 2014
Alejandra Mera, Northeastern State University UG (REU)	Summer 2013
Jiayu Yang, Duke UG	Summer 2013
Marissa Vereen, Clemson UG (REU)	Summer 2012
Agata Kantorowska, Duke UG	Fall 2011
Amy Herbert, Johns Hopkins UG (REU)	Summer 2011
Michael Khan, University of Iowa UG (REU)	Summer 2010
Sun Ae Kim, University of Hawaii UG/MS	2008- 2009
Nisha Vahora, MIT UG	2005- 2006
Marion Dumas, MIT UG	Spring 2004

Funding

NSF ICER: 2033934 NSF2026: EAGER: Identifying microbes' population-level environmental responses using Bayesian modeling (\$299,693, Sept 2020- Aug 2022) **PI DE Hunt** co-PIs James Clark, Mark Borsuk

Duke Bass Connections: Oceans of Microbes (\$50,000 Sept 2020- Aug 2022) PIs ZI Johnson **DE Hunt**

NSF 1939447 CoPe: RCN: Building a Collaboratory for Coastal Adaptation over Space and Time (C-CoAST) (\$499,864, April 2020- March 2022) **Steering Committee: DE Hunt**

Resilient Coupled Communities and Coasts (RCCoCo) (\$35,000, Jan 2020-Dec 2021) **NSOE Faculty**

Duke Bass Connections: Ecological and Social Time Scales in Hurricane Response and Recovery (\$24,000, Jan 2019-June 2020) Leads **DE Hunt, J Gronniger**

NSF OCE:1416665 Collaborative Research: Ocean Acidification: microbes as sentinels of adaptive responses to multiple stressors: contrasting estuarine and

open ocean environments (Duke portion: \$798,452 Jan 2015- Dec 2019) PIs ZI Johnson, K Konstantinidis (GA Tech), co-PI **DE Hunt**

DOE Community Science Program: Seasonal and disturbance-related alterations in the biogeochemical cycling of estuarine carbon (360 Gbp Metagenome Sequencing, Nov 2016- Oct 2019) PI **DE Hunt**

GBMF3768 Gordon and Betty Moore Foundation: Ecology at the microbial scale: the importance of microscale interactions between heterotrophic bacteria and phytoplankton in marine environments (Duke portion: \$445,135 Sept 2013-August 2019) PI **DE Hunt**, co-PI T. Ryneerson (URI)

NSF OCE 1322950: OCE-RIG: Biological activity on particulate organic material in the coastal ocean. (\$99,999 Sept 2013-Aug 2016) PI **DE Hunt**

Nicholas School of the Environment Seed Grant: Community Building and Logistics to Develop a Coastal Carolina LTER site (\$10,000 May 2015- April 2016) PIs Johnson, Cassar, diGiulio, Forward, Hench, **Hunt**, Nowacek, Read, Silliman, Smith.

NSF/EPA EF-0830093 Center for Environmental Implications of Nanotechnology (subaward **DE Hunt** \$11,744 Oct 2008-Aug 2014) Grant PI MR Wiesner, co-PIs M Hochella, R Di Giulio, K Jones, G Lowry

NSF DBI 0959630: MRI-R2 - Acquisition of High-Speed Sorting Flow Cytometer for Multi-User Environmental Microbiology Research (Total: \$473,370 Feb 2010 – Jan 2013) –PI ZI Johnson and co-PIs **DE Hunt**, E Bernhardt, CK Gunsch