

Amy Apprill

Associate Scientist
Marine Chemistry & Geochemistry Department
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DEGREES

B.A. University of San Diego, Marine Science, Biology, 2001.
M.S. University of Hawaii, Biological Oceanography, 2004.
Ph.D. University of Hawaii, Biological Oceanography, 2009.

ADDITIONAL EDUCATION

'Molecular Biology of Corals' course. 2002 Edwin W. Pauley Summer Program in Marine Biology at the Hawaii Institute of Marine Biology, Kaneohe, HI, 2002.
'Microbial Diversity' course. Marine Biological Laboratory, Woods Hole, MA 2005.
'Strategies and Techniques for Analyzing Microbial Population Structures' course. Marine Biological Laboratory, Woods Hole, MA, 2011.
'Coral Histopathology' course. NOVA Southeastern University, Ft. Lauderdale, FL, 2013.

PROFESSIONAL EXPERIENCE

Scientist in Residence, Mystic Aquarium, Mystic, CT. 2017 – present.
Associate Scientist w/o tenure, Woods Hole Oceanographic Institution, Woods Hole, MA. Dec., 2016 - present.
Assistant Scientist, Woods Hole Oceanographic Institution, Woods Hole, MA. December, 2011 - 2016.
Post-doctoral Scholar, Woods Hole Oceanographic Institution, Woods Hole, MA. September 2009 – 2011. Advisors: Dr. Tracy Mincer & Dr. Konrad Huguen.
Teaching Fellow, 'Microbial Diversity' course, Marine Biological Laboratory, Woods Hole, MA. Summer, 2008.

AWARDS AND HONORS

2018 Early Career Award, WHOI
2017 Alumni Hall of Fame, Raytown, Missouri.
2015 XX Files: Extraordinary Science - Extraordinary Women, *Science* magazine.
2009 – 2011 Post-doctoral scholar fellowship, WHOI Ocean Life Institute.
2007 Best doctoral student poster presentation, Society of Marine Mammalogy.
2004 – 2007 National Science Foundation Graduate Research Fellowship Award.

- 2006 Hiatt Student Education Scholarship, Hawaii Institute of Marine Biology.
 2004 Watumull Scholarship for Academic Achievement, University of Hawaii.
 2000 Outstanding Research in Marine Science, University of San Diego.
 1999 Outstanding Oral Research Presentation, University of San Diego.

PEER-REVIEWED PUBLICATIONS

student or post-doc in my lab; * co-first authorship; + corresponding author(s)

38. Dinh JP, Suca JJ, Lillis A, **Apprill A**, Llopiz J, Mooney TA. 2018. Multiscale spatio-temporal patterns of boat noise on U.S. Virgin Island coral reefs. *Marine Pollution Bulletin*. 136:292-290.
37. Huggett M⁺, **Apprill A**⁺. 2018. Coral Microbiome Database: Integration of sequences reveals high diversity and specificity of coral-associated microbes. *Environmental Microbiology Reports*. In press
36. Ulmo-Díaz G, Casane D, Bernatchez L, González-Díaz P, **Apprill A**, Castellanos-Gell J, Hernández-Fernández L, García-Machado E. 2018. Genetic differentiation in the mountainous star coral *Orbicella faveolata* around Cuba. *Coral Reefs*. In press
35. Bierlich KC[#], Miller CA, DeForce E, Friedlaender A, Johnston DW, **Apprill A**⁺. 2018. Seasonal and regional variability in the skin microbiomes of humpback whales along the Western Antarctic Peninsula. *Applied and Environmental Microbiology*. 84:e02574-17.
34. **Apprill A**⁺, Miller CA^{*}, Moore MJ, Durban DW, Fearnbach H, Barrett-Lennard L.G. 2017. Extensive core microbiome in drone-captured whale blow supports a framework for health monitoring. *mSystems*. 5 e00119-17.
32. Becker C[#], Hughen K, Mincer TJ, Ossolinski J, Weber L, **Apprill A**⁺. 2017. Impact of prawn framing effluent on coral reef water nutrients and microorganisms. *Aquaculture Environmental Interactions*. 9:331-346.
32. **Apprill A**. 2017. Marine animal microbiomes: toward understanding host-microbiome interactions in a changing ocean. *Frontiers in Marine Science*. 4:222.
31. Weber LG[#], DeForce E, **Apprill A**⁺. 2017. Optimizing DNA extraction for coral microbiota investigations. *Microbiome*. 5:18.
30. Neave MJ[#], Michell CT, **Apprill A**⁺, Voolstra CR⁺. 2017. *Endozoicomonas* genomes reveal functional adaptation and plasticity in bacterial strains symbiotically associated with diverse marine hosts. *Scientific Reports*. 7:40579.
29. McNally SP[#], Parsons RJ, Santoro AE, **Apprill A**⁺. 2017. Multifaceted impacts of the stony coral *Porites astreoides* on picoplankton abundance and community composition. *Limnology and Oceanography*. 62:217-234.
28. Neave MJ[#], Rachmawati R, Xun L, Michell CT, Bourne DG, **Apprill A**⁺, Voolstra CR⁺. 2017. Differential specificity between closely related corals and abundant *Endozoicomonas* endosymbionts across global scales. *ISME Journal*. 11:186-200.
27. Rodríguez, VMR, González-Díaz SP, Hernández Fernández L, Siciliano D, Bretos F, **Apprill A**, Hughen K, Santoro A. 2016. Health of the coral's communities on reefs from Jardines de la Reina - golfo de Ana María, south-central region of Cuba. *Revista Investigaciones Marinas*. 36:34-53.

26. Diaz J, Hansel C⁺, **Apprill A⁺**, Brighi C[#], Zhang T, Weber L[#], McNally S[#], Xun L. 2016. Species-specific control of external superoxide levels by the coral holobiont during a natural bleaching event. *Nature Communications*. 7:13801.
25. Zhang T, Diaz J, Brighi C[#], Parsons R, McNally S[#], **Apprill A**, Hansel CM. 2016. Dark production of extracellular superoxide by the coral *Porites astreoides* and representative symbionts. *Frontiers in Marine Science*. 3:232.
24. **Apprill A⁺**, Weber LG[#], Santoro AE. 2016. Distinguishing between microbial habitats unravels ecological complexity in coral microbiomes. *mSystems*. 1 (5) e00143-16.
23. Neave MJ[#], **Apprill A**, Ferrier-Pages C, Voolstra CR⁺. 2016. Diversity and function of prevalent symbiotic marine bacteria in the genus *Endozoicomonas*. *Applied Microbiology and Biotechnology*. 100:8315–8324.
22. Walters W, Hyde E.R., Berg-Lyons D, Ackermann G, Humphrey G, Parada A, Gilbert J, Jansson JK, Caporaso G, Fuhrman JA, **Apprill A**, Knight R. 2015. Improved V4, V4-V5 and ITS marker gene primers for microbial community surveys. *mSystems*. 1(1):e00009-15.
21. **Apprill A⁺**, McNally SP[#], Parsons R & Weber L[#]. 2015. Minor revision to V4 region SSU rRNA 806R gene primer greatly increases detection of SAR11 bacterioplankton. *Aquatic Microbial Ecology*. 75:129-137.
20. Nelson TM, **Apprill A**, Mann J, Rogers TL, Brown MV. 2015. The marine mammal microbiome: current knowledge and future directions. *Microbiology Australia* 36(1):8-13.
19. Neave MJ[#], Michell CT, **Apprill A⁺**, Voolstra CR⁺. 2014. Whole-genome sequencing of three symbiotic *Endozoicomonas* Bacteria. *Genome Announcements*. 2(4):e00802-14.
18. Furby KA^{*}, **Apprill A^{*}**, Cervino JM, Ossolinski, JE, Hughen KA⁺. 2014. Incidence of lesions on Fungiidae corals in the eastern Red Sea related to water temperature and coastal pollution. *Marine Environmental Research*. 98: 29-38.
17. **Apprill A⁺**, Robbins J, Eren, AM, Pack AA, Reveillaud J, Mattila D, Moore M, Niemeyer M, Moore KMT, Mincer TJ⁺. 2014. Humpback whale populations share a core skin bacterial community: towards a health index for marine mammals? *PLoS one*. e90785.
16. Reveillaud J⁺, Maignien L, Eren AM, Huber JA, **Apprill A**, Sogin ML, Vanreusel A. 2014. Host-specificity among abundant and rare taxa in the sponge microbiome. *ISME Journal*. 8:1198-1209.
15. **Apprill A⁺**, Hughen K, Mincer T. 2013. Major similarities in the bacterial communities associated with lesioned and healthy Fungiidae corals. *Environmental Microbiology*. 15:2063-2072.
14. Bayer T, Neave M[#], Alsheikh-Hussain A, Aranda M, Yum L, Mincer T, Hughen K, **Apprill A⁺**, Voolstra CR⁺. 2013. The microbiome of the Red Sea coral *Stylophora pistillata* is dominated by tissue-associated *Endozoicomonas* bacteria. *Applied and Environmental Microbiology*. 79:4759-4762.
13. Measures CI⁺, Brown MT, Selph KE, **Apprill A**, Zhou M, Hatta M, Hiscock MT. 2013. The influence of shelf processes in delivering dissolved iron to the HNLC waters of the Drake Passage, Antarctica. *Deep Sea Research II*. 90:77-88.
12. Selph KE⁺, **Apprill A**, Measures CI, Hatta M, Hiscock WT, Brown MT. 2013. Phytoplankton distributions in the Shackleton Fracture Zone/Elephant Island Region of the Drake Passage in February-March 2004. *Deep Sea Research II*. 90:55-67.

11. **Aprill A**, Marlow HQ, Martindale MQ, Rappé MS⁺. 2012. Specificity of bacteria associated with the coral *Pocillopora meandrina* during early development. *Applied and Environmental Microbiology*. 78(20):7467-7475.
10. Kahng S⁺, Hochberg EJ, **Aprill A**, Wagner D, Luck DG, Perez D, Bidigare RR. 2012. Efficient light harvesting in deep-water, zooxanthellate corals. *Marine Ecology Progress Series*. 455:65-77.
9. **Aprill A**, and Rappé MS⁺. 2011. Response of the microbial community to coral spawning in lagoon and reef flat environments of Hawaii, USA. *Aquatic Microbial Ecology*. 62:251-266.
8. **Aprill A**⁺, Mooney TA, Lyman E, Stimpert AK, Rappé MS. 2010. Humpback whales harbor a combination of specific and variable skin bacteria. *Environmental Microbiology Reports*. 3(2):223-323.
7. **Aprill A**, Marlow HQ, Martindale MQ, Rappé MS⁺. 2009. The onset of microbial associations in the coral *Pocillopora meandrina*. *ISME Journal*. 3(6):685-699.
6. Hiscock MR, Lance VP, **Aprill A**, Bidigare RR, Johnson ZI, Mitchell BG, Smith, Jr. WO, Barber RT. 2008. Photosynthetic maximum quantum yield increases are an essential component of the Southern Ocean phytoplankton response to iron. *PNAS*. 105:4775-4780.
5. **Aprill A**⁺, Bidigare RR, Gates RD. 2007. Visibly healthy corals exhibit variable pigment concentrations and symbiont phenotypes. *Coral Reefs*. 26:387-397.
4. **Aprill A**⁺, and Gates RD. 2007. Recognizing diversity in coral symbiotic dinoflagellate communities. *Molecular Ecology*. 16:1127-1134. **featured article**
3. Hochberg EJ⁺, **Aprill A**, Bidigare RR, Atkinson MJ. 2006. Bio-optical modeling of photosynthetic pigments in corals. *Coral Reefs*. 25:99-109.
2. Hochberg EJ⁺, Atkinson MJ, **Aprill A**, Andréfouët S. 2004. Spectral reflectance of coral. *Coral Reefs*. 23:84-95.
1. **Aprill A**, Lesser MP⁺. 2003. Effects of ultraviolet radiation on *Laminaria saccharina* in relation to depth and tidal height in the Gulf of Maine. *Marine Ecology Progress Series*. 256:75-85.

ELECTRONIC RESOURCES

Coral Microbiome Portal. <https://vamaps2.mbl.edu/portals/CMP>

Coral Microbiome Database. <https://www.bco-dmo.org/dataset/724355>

PARTICIPATION IN EDUCATION AND MENTORING

Teaching

Co-creator and co-instructor of 'Marine Microbiology and Biogeochemistry', Fall 2013, 2015 & 2017, MIT-WHOI Joint Program in Oceanography.

Co-creator and co-instructor of 'Recent Advances in Marine Microbiology and Biogeochemistry', Spring 2018, MIT-WHOI Joint Program in Oceanography.

Advisement

Chemical Oceanography student class co-advisor, 2018- present.

MIT-WHOI PhD student Cynthia (Biological Oceanography, 2018 – present).

MIT-WHOI PhD student Laura Weber (Biological Oceanography, 2014 – present).
Post-doctoral investigators: Carolyn Miller (2013 – 2016), Matthew Neave (2012 – 2015).
Guest graduate students: Kevin Bierlich (Duke University, 2015-2017) Rita Rachmawati (UCLA, 2014 – 2017), Areej Alsheikh-Hussain (King Abdullah University of Science and Technology, 2011).
Guest investigators: Sean McNally (Bermuda Institute of Ocean Sciences, 2014 – 2015).
Undergraduate students: Solange Martin (Montana State University, 2018), Shavonna Bent (Johnston State College, 2017 & 2018), Jordan Wilson (UC Davis, 2017), Cynthia Becker (Ithaca College, 2016 & 2017), Abigail Keller (Havelford College, 2016), Evan Denmark (MIT, 2014 – 2015), Caterina Brighi (Imperial College of London, 2014), Laura Weber (University of Maryland, 2013), Lauren Goodwin (Eckerd College, 2013), Sean McNally (University of Rhode Island, 2013).
High school students: Luci Keleman (2015), Cosette Bardawil (2010 – 2011).

Committees

MIT-WHOI Student Admissions (2017 – present).
Chair of thesis defense: Jesse McNichol (Biological Oceanography, 2016).
Chair of thesis proposal defense: Jesse McNichol (Biological Oceanography, 2014); Winifred Johnson (Chemical Oceanography, 2014).
Member of thesis committee: Andrea Unzueta Martinez (Northeastern University, 2018 – present), Courtney Dunphy (Northeastern University, 2017 – present), Gabriella Farfan (Chemical Oceanography, 2016 – present), Laura Weber (Biological Oceanography, 2016 – present).
Member of advisory committee: Megan May (Biological Oceanography, 2013 – 2014).

PROFESSIONAL AFFILIATIONS

Member: American Society of Limnology and Oceanography, American Society of Microbiology, International Society of Microbial Ecology, International Society for Reef Studies, Society for Marine Mammal Biology.

PROFESSIONAL ACTIVITIES

WHOI –
Search Committee, VP for Advancement, 2018.
Diving Safety Board, 2018 – present.
Development and Communications Advisory Committee, 2017 – present.
Women’s Committee, 2015.
Marine Chemistry & Geochemistry Hiring Selection Committee, 2015.

Outside WHOI –

Reviewer for the journals *Applied and Environmental Microbiology*, *Aquatic Biology*, *Coral Reefs*, *Biological Conservation*, *Diseases of Aquatic Organisms*, *Emerging Infectious Diseases*, *Environmental Microbiology*, *FEMS Microbiology Ecology*, *Frontiers in Marine Science*, *Frontiers in Microbial Symbiosis*, *ISME Journal*, *Limnology and Oceanography*, *Marine Biology*, *Marine Ecology Progress Series*, *Microbial Ecology*, *Molecular Ecology*, *Journal of Marine Science and Engineering*, *Nature Communications*, *PNAS* and *Scientific Reports*.

Grant reviewer for the National Science Foundation, NOAA Sea Grant and Sigma Xi Foundation.

Project node leader for EarthCube CReSCyNT: Coral Reef Science and Cyberinfrastructure Network, 2015 – 2017.

OUTREACH

Outreach to US Virgin Islands minority student summer camps. 2017.

Outreach to pre-school, elementary students and the public on ‘Coral Reef Science’ and ‘Coral Reef Microbiology’, showcasing 3-D videos of coral reefs. Spring 2013 – present.

Outreach to Ocean Science Journalism Fellow program. 2013, 2015 & 2017.

Contributor to ‘A Postdoc’s Guide to Pregnancy and Maternity Leave’, National Postdoctoral Association, 2010.

Co-organizer of mentoring event to support women in academia. 2010.

Community educator for the Hawaii Institute of Marine Biology Community Education Program, 2007 – 2009.

Science fair judge for middle school and high school projects, Hawaii Association of Independent Schools Science Fair, 2007.

Community educator for the UH School of Earth Science and Technology public open house, 2005 & 2007.

FIELD WORK AND CRUISES

R/V *Walton Smith*, St. John, USVI coral reefs, April 5 – 13, 2018, Chief Scientist.

R/V *Walton Smith*, St. John, USVI coral reefs, November 26 – December 1, 2017.

M/V *Alucia*, Jardines de la Reina, Cuba, October 31 – November 24, 2017, Chief Scientist.

St. John, USVI coral reefs, July 17 – 29, 2017.

M/V *Rosita*, Cape Cod Bay, 5 days over March-April 2017.

M/V *Centinela*, Gulf of Corcovado, Chile, February 14 – March 2, 2017, Chief Scientist.

M/V *Big Fun Too*, coastal Florida and Georgia, January 7 – 14, 2017.

St. John, USVI coral reefs, October 23 – November 3, 2016.

St. John, USVI coral reefs, August 7 – 13, 2016.

St. John, USVI coral reefs, June 4 – 12, 2016.

St. John, USVI coral reefs, November 16 – 24, 2015.

R/V *Eugenie Clark*, Florida Keys, Florida, May 10 – 14, 2015, Chief Scientist and Lead Diver.

R/V *Felipe Poey*, Gulf of Batabano coral reefs, Cuba, April 22 – May 2, 2015, Chief Scientist and Lead Diver.

La Reina, Gulf of Ana Maria, Jardines de la Reina coral reefs, Cuba, February 7 – 13, 2015, Chief Scientist and Lead Diver.

Kaneohe Bay, Hawaii coral reefs, October 21 – 30, 2014, Co-Chief Scientist.

Curacao coral reefs (CARMABI laboratory), September 9 – 24, 2014, Co-Chief Scientist and Lead Diver.

Vavvaru Island coral reefs (Korallion laboratory), Maldives, January 12 – 21, 2014, Co-Chief Scientist and Lead Diver.

Tutuila Island coral reefs, American Samoa, November 21-23, 2013, Co-Chief Scientist and Lead Diver.

Ningaloo coral reefs, Western Australia, November 15-17, 2013, Co-Chief Scientist and Lead Diver.

Magnetic Island coral reefs, Eastern Australia, November 11, 2013.

R/V *Eugenie Clark*, Florida Keys coral reefs, FL, April 27 – May 4, 2013. Chief Scientist and Lead Diver.

M/V *Alucia*, Micronesian coral reefs, October 18 – November 15, 2012.

Small boats (100+ hours), Kaneohe Bay coral reefs, Hawaii, 2002 – 2009.

R/V *Revelle*, South Pacific, CLIVAR Program, January 9 – February 20, 2005.

R/V *Gould*, Drake Passage, February 12 – March 24, 2004.

R/V *Melville*, Southern Ocean, Southern Ocean Iron Fertilization Experiment (SOFEX) January 15 – February 28, 2002.

R/V *Endeavor*, Sargasso Sea, October 1 – 16, 2001.

R/V *Sproul*, Southern California, October, 2000.

R/V *Weatherbird*, Sargasso Sea, Hydrostation S, November, 1999.

INVITED PRESENTATIONS

Aprill A. Insights into coral-microbial symbioses. Aquatic Models of Human Disease conference. Marine Biological Laboratory, Woods Hole MA. October 3, 2018.

Aprill A. The secret lives of coral microbiomes. Pennsylvania State University, State College, PA. September 21, 2018.

Aprill A. Unraveling the complexity of the coral reef microbiome. California State University Northridge, Los Angeles, CA, March 16, 2018.

Aprill A. Towards the use of microbiomes to diagnose health and promote conservation of marine animals. Mystic Aquarium, Mystic, CT. February 15, 2018.

Aprill A. Microbiology in Cuban coral reefs. Seminario Científico “Biodiversidad de los Arrecifes de Coral en Cuba” Expedición Científica a bordo del Buque *Alucia*. Hotel Palacio O’Farrill, Havana Vieja Cuba. November 23, 2017.

Aprill A. Unraveling the complexity of the coral microbiome. Center for Marine and Environmental Studies, University of the Virgin Islands, St. Thomas, USVI. June 3, 2016.

Aprill A. Microbiomes as health diagnostic tools for marine animals & ecosystems. Meeting of the NOAA Ecosystem Sciences and Management Working Group. May 12, 2016.

Aprill A. Unraveling the complexity of the coral microbiome. Oceanography Department, Texas A&M, College Station, TX. February 1, 2016.

Aprill A. Coral reef microbiology. Sippican Philosophical Society. Marion, MA. May 6, 2013.

Apprill A. Humpback whale skin associated bacteria: freeloaders or friends? Marine Biological Laboratory, Bay Paul Center Seminar. Woods Hole, MA. March 3, 2013.

Apprill A. The microbiomes of reef-building corals. University of North Carolina, Wilmington. Wilmington, NC. January 25, 2013.

Apprill A. What microorganisms can tell us about the health and ecology of corals and whales. 46th Annual Northeast Regional I Meeting of the American Society for Microbiology. Randolph, MA. Oct. 26, 2011.

Apprill A. The microbiomes of reef-building corals. Woods Hole Oceanographic Institution, Woods Hole, MA. February 22, 2010.

Apprill A. Reef water microbiology, coral-associated microbes and the health of corals. North Carolina State University, Raleigh, NC. January 24, 2011.

Apprill A. What microorganisms can tell us about the health and ecology of corals and whales. University of Rhode Island, Narragansett, RI. November 17, 2010.

Apprill A. What microorganisms can tell us about the health and ecology of corals and whales, University of Massachusetts, Dartmouth, Dartmouth, MA. March 29, 2010.

NATIONAL AND INTERNATIONAL PRESENTATIONS

denotes student or post-doc in my laboratory

Apprill A, Bent S[#], Hansel C, Sharp K. Impacts of antibiotic disturbance on the microbiome of *Astrangia poculata*. *Astrangia* workshop at Roger Williams University, Briston, RI. August 1, 2018.

Weber L[#], Gonzalez-Diaz P, Armenteros M, **Apprill A.** Genomic investigations into coral-picoplankton interactions within the coral ecosphere. Gordon Research Conference on Marine Microbes. July 1-6, 2018.

Apprill A. Evaluating and mapping coral reef health using microbial data. Schmidt Ocean Institute workshop, San Diego, CA. June 21, 2018.

Moore M, Durban J, **Apprill A,** Miller C, Fearnbach H, Avila B, Lynn M, Pettis H, Perryman W. Aerial perspectives of large whale health. International Association for Aquatic Animal Medicine, Long Beach, CA. May 19-23, 2018.

Suca J, Lillis A, Jones I, **Apprill A,** Llopiz J, Mooney TA. The response of reef fish settlement to coral reef soundscapes: A field experiment. ASLO Ocean Sciences, Portland OR. February 13, 2018.

Bent S, **Apprill A,** Hansel C. Reactive oxygen species production by the northern star coral (*Astrangia poculata*). ASLO Ocean Sciences, Portland, OR. February 12, 2018.

Apprill A. Coral Microbiomes. International Year of the Reef kick-off event. Bellairs Research Institute, Barbados. January 31, 2018.

Apprill A. Unraveling the ecological complexity of coral microbiomes. Reef Microbiome workshop, Bellairs Research Institute, Barbados. January 28, 2018. Oral presentation

Apprill A, Miller CA, Moore MJ, Durban JW, Fearnbach H, Barrett-Lennard L. Thar she blows: Drone-enabled breath microbiomes of large whales. Society for Marine Mammalogy. Halifax, Nova Scotia, Canada. October 23 – 27, 2017.

Miller CA, Horstmann-Dehn, George JC, Holm H, Fredricks H, Van Mooy B, **Apprill A.** Microbes, lipids, and digesta: biogeography of the gut microbiome and lipidome of bowhead

whales *Balaena mysticetus*. Society for Marine Mammalogy. Halifax, Nova Scotia, Canada. October 23 – 27, 2017.

Bierlich KC[#], Miller CA, DeForce E, Friedlaender A, Johnston DW, **Apprill A**. Seasonal and regional variability in the skin microbiomes of humpback whales along the Western Antarctic Peninsula. Society for Marine Mammalogy. Halifax, Nova Scotia, Canada. October 23 – 27, 2017.

Apprill A, Miller CA, Moore MJ, Durban JW, Leslie M, Chiang G, Bahamonde P. Remote sensing of Patagonian large whale health using drones. IMPAC4, La Serena, Chile. September 4 – 8, 2017.

Apprill A, Miller CA, Moore MJ, Durban JW, Fearnbach H, Barrett-Lennard LG. Extensive core microbiome in drone-captured whale blow supports a framework for health monitoring. Gordon Research Conference on Animal-Microbial Symbioses, West Dover, Vermont. June 11 – 16, 2017.

Keller A[#], **Apprill A**, Lebaron P, Robbins J, Whalen K. Isolating diverse microorganisms via targeted cultivation of marine animal microbiomes. ASLO Aquatic Sciences, Honolulu, HI. February 26 – March 3, 2017.

Weber LG[#], Santoro S, Gonzalez P, Armenteros M, **Apprill A**. Do Coral ecospheres exist?: Species specific influences of corals on planktonic microbial assemblages in their immediate surroundings. ASLO Aquatic Sciences, Honolulu, HI. February 26 – March 3, 2017. **Oral presentation**

Apprill A, Weber LG[#], Xun L, Santoro AE, Neave M[#], Voolstra CR, Gonzalez P, Armenteros M. Unraveling the complexity of the coral microbiome: descriptions of putative and confirmed endosymbionts. International Coral Reef Symposium, Honolulu, HI. June 19 – 24, 2016. **Oral presentation**

Diaz JM, Hansel CM, **Apprill A**, Brighi C[#], Zhang T, Weber L[#], McNally S[#], Xun L. Species-level variability in superoxide production by symbiotic corals. International Coral Reef Symposium, Honolulu, HI. June 19 – 24, 2016.

Hansel CM, Diaz JM, **Apprill A**, Zhang T, Weber L[#], Parsons R. Decoupling of photosynthesis and extracellular superoxide by corals and their symbionts. International Coral Reef Symposium, Honolulu, HI. June 19 – 24, 2016.

McNally SP[#], Parsons RJ, Santoro AE, **Apprill A**. Multifaceted impacts of the stony coral *Porites astreoides* on picoplankton abundance and community composition. International Coral Reef Symposium, Honolulu, HI. June 19 – 24, 2016.

Rachmawati R[#], **Apprill A**, Barber PH. Variations in coral microbiomes among Indonesian reefs with differential levels of bleaching. International Coral Reef Symposium, Honolulu, HI. June 19 – 24, 2016.

Weber LG[#], DeForce E, **Apprill A**. Optimization of DNA extraction for characterizing the coral microbiome. International Coral Reef Symposium, Honolulu, HI. June 19 – 24, 2016.

Farfan G, **Apprill A**, Webb S, Hansel C. Zinc and sulfur distributions and bonding environments in scleractinian corals. ASLO Ocean Sciences Meeting, New Orleans, LA. February 21 - 26, 2016.

Apprill A, Miller CA[#], Baird R, Robbins J, Niemeyer M, Waring G, Bogolomoni A, Landry S. Comparison of skin microbiomes across 16 marine mammal species. Society for Marine Mammalogy, San Francisco, CA. December 13 - 18, 2015.

Miller CA[#], Horstmann-Dehn L, George JC, Baumgartner MF, Van Mooy B, **Apprill A**. It is not just about the poop: biogeography of the gut microbiota in bowhead whales provides novel

insights into digestion. Society for Marine Mammalogy, San Francisco, CA. December 13 - 18, 2015.

Moore M, Durban J, Chiang G, Hickmott L, Bocconcelli A, Howes G, Bahamonde P, Gilpatrick J, LeRoi D, Perryman W, **Apprill A**, Miller CA#. Photogrammetric and respiratory assessment of blue whales using small drones. Society for Marine Mammalogy, San Francisco, CA. December 13 - 18, 2015.

Apprill A. The marine mammal skin microbiome: a 'non-model' symbiotic system that may advance our knowledge of animal health. Gordon Research Conference on Animal-Microbe Symbiosis, Waterville, NH. June 21 – 26, 2015.

Rachmawati R#, **Apprill A**, Barber P. Coral symbionts and the host susceptibility to bleaching. Yosemite Symbiosis Workshop, Yosemite National Park, CA. May 2 - 3, 2015. **Oral presentation**

Brighi C#, Diaz JM, **Apprill A**, Hansel CM. Temperature and light effects on extracellular superoxide production by algal and bacterial symbionts in corals: Implications for coral bleaching. ASLO Aquatic Sciences Meeting, Granada, Spain. February 22 – 27, 2015.

Farfan G, Webb SM, **Apprill A**, Hansel CM. Elucidating the Composition and Distribution of Trace Metals in Corals. AGU Fall Meeting, San Francisco, CA. December 15 – 19, 2014.

Brighi C#, Diaz JM, **Apprill A**, Hansel CM. Temperature and light effects on extracellular superoxide production by algal and bacterial symbionts in corals: Implications for coral bleaching. AGU Fall Meeting, San Francisco, CA. December 14 – 19, 2014.

Neave M#, **Apprill A**, Voolstra CR. An integrated approach to examining a globally abundant coral symbiont. ISME-15 Meeting, Seoul, Korea. August 25 – 29, 2014.

Neave MJ#, **Apprill A**, Voolstra CR. Comparative Genomics of *Endozoicomonas*, a dominant coral-associated bacteria. ASLO Ocean Sciences Meeting, Honolulu, HI. February 23 – 28, 2014.

Weber LG#, **Apprill A**, Repeta, D. Coral Snot: Exploring the chemical interplay between coral mucus and microbes. ASLO Ocean Sciences Meeting, Honolulu, HI. February 23 – 28, 2014.

Apprill A, Weber LG#, Santoro AE. Constraining microbial communities to micro-niches within the coral holobiont. ASLO Ocean Sciences Meeting, Honolulu, HI. February 23 – 28, 2014. **Oral presentation**

McNally S#, Parsons RJ, **Apprill A**. *Porites astreoides* corals influence reef water bacterioplankton communities. ASLO Ocean Sciences Meeting, Honolulu, HI. February 23 – 28, 2014.

Hansel CM, Zhang T, Diaz JM, **Apprill A**, Parsons R. Unraveling the role of the coral holobiont in superoxide production. ASLO Ocean Sciences Meeting, Honolulu, HI. February 23 – 28, 2014.

Neave MJ#, Alsheikh-Hussain A, Aranda M, Bayer T, **Apprill A**, Voolstra CR. *Endozoicomonas* prevail the microbiome of the coral *Stylophora pistillata*. International Symposium on Microbial Ecology. Copenhagen, Denmark, August 19 – 24, 2012.

Apprill A. Using microorganisms as sensors for detecting stress and health-related alterations in marine mammals. Marine Mammals and Stress Workshop at the 19th Biennial Conference on the Biology of Marine Mammals. Tampa, FL. November 27, 2011. **Oral presentation**

Apprill A, Robbins J, Mincer T, Pack AA, Mattila DK. Specificity of the humpback whale microbiome across geographically distinct populations. 19th Biennial Conference on the Biology of Marine Mammals. Tampa, FL. Nov. 28 – Dec. 2, 2011. **Oral presentation**

- Apprill A**, Hughen K, Mincer T. Bacterial communities associated with healthy and lesioned corals in comparison to reef water biogeochemistry. ASLO Meeting, San Juan, Puerto Rico. February 14 – 18, 2011. **Oral presentation**
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