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Education

2011 **Ph.D. (Biological Oceanography)** Massachusetts Institute of Technology-Woods Hole Oceanographic Institution Joint Program in Oceanography

Dissertation Title: "Functional connectivity of coral reef fishes in a tropical seascape assessed by compound-specific stable isotope analyses." *Advisor: Dr. Simon Thorrold (Biological Oceanography)*

2005 **B.Sc. (Biology)** Bates College, Summa Cum Laude

Honors Thesis Title: "The impact of a changing food supply on Arctic benthos: digestibility of ice algae and phytoplankton" *Advisors: Dr. William Ambrose Jr. (Biology) and Dr. Beverly Johnson (Geology)*

Professional Appointments

2015 – present **Assistant Research Faculty:** Institute of Marine Science, University of California, Santa Cruz, Santa Cruz, CA USA

2014 – present **Faculty Lecturer:** Ocean Sciences Department, University of California, Santa Cruz, Santa Cruz, CA USA

2013 - 2015 **Postdoctoral Scholar:** Ocean Sciences Department, University of California, Santa Cruz, Santa Cruz, CA USA
Supervisors: Dr. Mathew McCarthy and Dr. Thomas Guilderson

2012 - present **Guest Investigator:** Biology Department, Woods Hole Oceanographic Institution, Woods Hole, MA, USA

2011 - 2012 **Postdoctoral Fellow:** Red Sea Research Center, King Abdullah University of Science and Technology, Thuwal, Kingdom of Saudi Arabia and Biology Department, Woods Hole Oceanographic Institution, Woods Hole, MA, USA
Supervisors: Dr. Michael Berumen (KAUST) and Dr. Simon Thorrold (WHOI)

Publications (# indicates student author)

19. **McMahon KW**, McCarthy MD (2016) Embracing variability in amino acid $\delta^{15}\text{N}$ fractionation: Mechanisms, implications, and applications for trophic ecology. *Ecosphere* 7:e01511 (Special issue on Biomarkers in Trophic Ecology)

18. **McMahon KW**, Thorrold SR, Houghton LA, Berumen ML (2016) Tracing carbon flow through coral reef food webs using a compound-specific carbon isotope approach. *Oecologia* **180**:809-821 (Cover of Issue)
17. **McMahon KW**, Guilderson TP, Sherwood OA, Larsen T, McCarthy MD (2015) Millennial-scale plankton regime shifts in the subtropical North Pacific Ocean. *Science* **350**:1530-1533
16. **McMahon KW**, Elsdon T, Thorrold SR, McCarthy M (2015). Trophic discrimination of nitrogen stable isotopes in amino acids varies with diet quality in a marine fish. *Limnology and Oceanography* **60**:1076-1087
15. **McMahon KW**, Polito M, Abel S, McCarthy MD, Thorrold SR (2015) Carbon and nitrogen isotope fractionation of amino acids in an avian marine predator, the gentoo penguin (*Pygoscelis papua*). *Ecology and Evolution* **5**:1278-1290
14. [#]Schiff JT, Batista F, Sherwood OA, Guilderson TP, Hill TM, Ravelo AC, **McMahon KW**, McCarthy MD (2014) Compound specific amino acid $\delta^{13}\text{C}$ patterns in a deep-sea proteinaceous coral: implications for reconstructing detailed $\delta^{13}\text{C}$ records of exported primary production. *Marine Chemistry* **166**:82-91
13. **McMahon KW**, [#]Hamady L, Thorrold SR (2013) Ocean ecogeochemistry – A review. *Oceanography and Marine Biology: An Annual Review* **51**:327-374
12. **McMahon KW**, [#]Hamady L, Thorrold SR (2013) A review of ecogeochemistry approaches to estimating movements of marine animals. *Limnology and Oceanography* **58**:697-714
11. **McMahon KW**, Berumen ML, Thorrold SR (2012) Linking habitat mosaics and connectivity in a coral reef seascape. *Proceedings of the National Academy of Science* **109**:15372-15376
10. **McMahon KW**, Berumen ML, Mateo I, Elsdon TS, Thorrold SR (2011) Carbon isotopes in otolith amino acids identify residency of juvenile snapper (Family: Lutjanidae) in coastal nurseries. *Coral Reefs* **30**:1135-1145 (2011 Best Paper Award finalist)
9. **McMahon KW**, Fogel ML, Johnson BJ, Houghton LA, Thorrold SR (2011) A new method to reconstruct fish diet and movement patterns from $\delta^{13}\text{C}$ values in otolith amino acids. *Canadian Journal of Fisheries and Aquatic Sciences* **68**:1330-1340
8. **McMahon KW**, Fogel ML, Elsdon T, Thorrold SR (2010) Carbon isotope fractionation of amino acids in fish muscle reflects biosynthesis and isotopic routing from dietary protein. *Journal of Animal Ecology* **79**:1132-1141
7. Elsdon T, Ayvazian S, **McMahon KW**, Thorrold SR (2010) Experimental evaluation of stable isotope fractionation in fish muscle and otoliths. *Marine Ecology Progress Series* **408**:195-205

6. Graham BS, Koch PL, Newsome SD, **McMahon KW**, and Aurioles D (2010) Using isoscapes to trace the movements and foraging behavior of top predators in oceanic ecosystems. In *Isoscapes: Understanding Movement, Pattern and Process on Earth Through Isotope Mapping* (eds. J. West, G. J. Bowen, T. E. Dawson, K. P. Tu). pp. 299-318, Springer, New York
5. Skomal GB, Zeeman SI, Chisholm JH, Summers EL, Walsh HJ, **McMahon KW**, Thorrold SR. (2009) Mesopelagic trans-equatorial migrations by basking sharks in the western Atlantic Ocean. *Current Biology* **19**:1019-1022 (Cover of Issue)
4. Carroll M, Johnson B, Henkes G, **McMahon KW**, Voronkov A, Ambrose W, Denisenko S. (2009). Bivalves as indicators of environmental variation and potential anthropogenic impacts in the southern Barents Sea. *Marine Pollution Bulletin* **59**:193-206
3. Ambrose WG, Carroll ML, Greenacre M, Thorrold SR, **McMahon KW**. (2006) Variation in bivalve growth in a Norwegian high-Arctic fjord: Evidence for local- and large-scale climatic forcing. *Global Change Biology* **12**:1595-1607
2. **McMahon KW**, Ambrose WG, Johnson BJ, Sun M-Y, Lopez GR, Clough LM, Carroll ML (2006) Benthic community response to ice algae and phytoplankton in Ny Ålesund, Svalbard. *Marine Ecology Progress Series* **310**:1-14 (Issue's feature article)
1. **McMahon KW**, Johnson BJ, Ambrose WG. (2005). Diet and movement of the killifish, *Fundulus heteroclitus*, in a Maine salt marsh assessed using gut contents and stable isotope analyses. *Estuaries* **28**:966-973

Publications in review or in prep (# indicates student author)

- a. **McMahon KW**, Williams B, Guilderson TP, #Glynn DS, McCarthy MD (in review) Calibrating amino acid $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ offsets between polyp and protein skeleton to develop proteinaceous deep-sea corals as paleoceanographic archives. *Geochimica et Cosmochimica Acta*
- b. Germain LR, **McMahon KW**, Koch PL, Harvey JT, McCarthy MD (submitted). Carbon and nitrogen isotope ratios in individual amino acids ($\delta^{13}\text{C}_{\text{AA}}$ and $\delta^{15}\text{N}_{\text{AA}}$) of California harbor seals (*Phoca vitulina*): a new approach to understanding foraging ecology and trophic dynamics. *Ecology and Evolution*
- c. **McMahon KW**, Reynolds M, Johnson BJ, Ambrose WG, Clough LM (in revision) Terrestrial organic matter fuels Arctic coastal lagoon food webs. *PLOS One*
- d. **McMahon KW**, Thorrold SR, Berumen ML (in prep.) Dietary niche partitioning promotes coexistence in a multispecies school of coral reef snapper. Target journal *Ecology Letters*

- e. [#]Brault EK, Koch PL, **McMahon KW**, [#]Broach K, [#]Rosenfield AP, [#]Sauthoff W, Arrigo KR, Loeb V, Smith W (in prep.) Carbon and nitrogen isoscapes in Western Antarctica reflect oceanographic transitions. Target journal *Marine Ecology Progress Series*
- f. [#]Brault EK, Koch PL, Hall BL, Costa DP, Hückstädt L, McCarthy MD, **McMahon KW**, Hoelzel AR, Welch AJ, [#]Nye J, [#]Rosenfield AP (in pre.p) Antarctic seal bulk and compound-specific isotope analyses reveal Holocene changes in Ross Sea biogeochemistry and pinniped behavior. Target journal *Proceedings of the National Academy of Sciences*
- g. [#]Glynn DS, **McMahon KW**, Sherwood O, McCarthy MD, Guilderson TP, Dunbar R (in prep.) Nutrient source changes in the North Pacific Subtropical Gyre over the past five millennia. Target Journal *Geophysical Research Letters*
- h. Ohkouchi N, Chikaraishi Y, Close H, Fry B, Larsen T, Madigan DJ, McCarthy MD, **McMahon KW**, Naito Y, Ogawa NO, Popp BN, Steffan SA, Takano Y, Wyatt A, Yamaguchi T, Yokoyama Y, and Nagata T (in prep) Progresses and challenges with the use of amino acid nitrogen isotopic compositions in ecological and biogeochemical studies. Target Journal *Organic Geochemistry*
- i. Compound-Specific Isotope Analysis in Trophic Ecology (Book) Editors: K.H. Shin KH, **McMahon KW**, Larsen T, Dharampal P.S., and Chikaraishi Y. (in prep. For 2017 submission) Publisher: Hanyang University.
Contributed chapters primary or coauthor (tentative titles):
 - Chapter [2]: Trophic discrimination factors and trophic ecology
 - Chapter [3]: Disentangling the complexity of food webs with ¹³C fingerprinting
 - Chapter [5]: Case studies in food web ecology

Research Grants and Fellowships

- 2016 United States-Israel Binational Science Foundation (Lead PI, Pending \$197,674)
- 2016 Instituto Antartico Chileno: XXI National Project Competition Antarctic Scientific and Technological Research (Co-PI, \$57,000)
- 2015 Ocean Science and Technology Packard Endowment Research Grant (Co-PI, \$19,817)
- 2015 National Science Foundation: PLR Antarctic Organisms & Ecosystems (Lead PI \$399,273)
- 2012 King Abdullah University of Science and Technology Postdoctoral Fellowship research grant (Lead PI \$25,000)
- 2008 International Society for Reef Studies/Ocean Conservancy Coral Reef Research Fellowship (\$14,546)
- 2008 Ocean Life Institute Student Research Grant (Lead PI \$2,340)
- 2008 Isoscapes Conference Travel Grant (\$400)
- 2006-9 National Science Foundation Graduate Research Fellowship (\$121,500)
- 2005-6 Ocean Life Fellowship (\$28,446)
- 2005 Howard Hughes Travel Grant (Lead PI \$500)
- 2004-5 Howard Hughes Summer Fellowship (\$3,000)
- 2004 Bates College Student Research Grant (Lead PI \$3,000)
- 2004 Howard Hughes Student-Faculty Research Grant (Lead PI \$12,000)

- 2004 Howard Hughes Travel Grant (Lead PI \$500)
2003 Bates College Student Research Grant (Lead PI \$3,000)

Academic Honors and Awards

- 2011 Coral Reefs Volume 30 Best Paper Award finalist
2009 Best Student Paper Award at the 4th International Otolith Symposium
2009 Sally Richardson Best Student Paper Award at the 33rd Annual Larval Fish Conference
2005 Summa Cum Laude at Bates College
2005 Honors Distinction in Biology at Bates College
2005 Phi Beta Kappa Honor Society
2001-5 Dean's Honors List at Bates College (8 consecutive semesters)
2001 Arthur Crafts Award

Teaching Experience

- 2017 **Instructor**, UC-Santa Cruz, OCEA-80A: Life in the Sea, introductory undergraduates
2016 **Guest Lecturer**, UC-Santa Cruz, OCEA-01: The Oceans, introductory undergraduates (150 students)
2016 **Instructor**, UC-Santa Cruz, OCEA-80A: Life in the Sea, introductory undergraduates (110 students), Overall teaching evaluation 4.7 out of 5 (93% response rate)
2015 **Co-Instructor**, University of Utah, Isotopes in Spatial Ecology and Biogeochemistry (SPATIAL Short Course), graduate students (30 students)
2015 **Guest Lecturer**, Wake Forest University, BIO301 Ecology and Biology of Coral Reefs, advanced undergraduates (25 students)
2015 **Guest Lecturer**, UC-Santa Cruz, EART-299 Isotopic Methods in Environmental Science, graduate students (12 students)
2015 **Guest Lecturer**, Claremont-McKenna College, EA 52: Environmental Science, Policy and Politics, introductory undergraduates (45 students)
2014 **Instructor**, UC-Santa Cruz, OCEA-01: The Oceans, introductory undergraduates (151 students), Overall teaching evaluation 4.6 out of 5 (62% response rate)
2014 **Co-Instructor**, University of Utah, Isotopes in Spatial Ecology and Biogeochemistry (SPATIAL Short Course), graduate students (30 students)
2014 **Guest Lecturer**, UC-Merced, ES291: Environmental Systems Seminar, graduate students (45 students)
2013 **Guest Lecturer**, UC-Santa Cruz, OCEA-290J: Topics in Marine Organic Geochemistry, multiple lectures for graduate students (15 students)
2012 **Guest Lecturer**, Bates College, Bio313: Marine Ecology, advanced undergraduates (15 students)
2012 **Guest Lecturer**, Bates College, Geo340: Stable Isotope Geochemistry, advanced undergraduates (12 students)
2012 **Guest Lecturer**, King Abdullah University of Science and Technology, MarSE 221: Marine Life, graduate students (20 students)
2010 **Guest Lecturer**, Sea Education Association, advanced undergraduates (25 students)
2010 **Teaching Assistant**, MIT/WHOI Joint Program: 7.43: Biological Oceanography, graduate students (15 students)

- 2010 **Guest Lecturer**, Connecticut College: Biology/Botany 294: Seminar Series, advanced undergraduates (25 students)
- 2009 **Co-Instructor**, Woods Hole Oceanographic Institution: Developed and co-taught three week course “Human Impacts on the Marine Environment,” advanced undergraduates (5 students)
- 2008 **Guest Lecturer**, Mullen-Hall Elementary School: Multiple lessons on ocean science, Elementary School
- 2008 **Guest Lecturer**, Brown University: BIOL1880: Comparative Biology of Vertebrates, advanced undergraduates
- 2007 **Guest Lecturer**, Codman Academy: Marine Biology Course, high school students (20 students)
- 2005 **Co-Instructor**, Hillview Head Start Program, Lewiston, ME, developed and taught afterschool activity program for K-12 Head Start Program (35 students)
- 2004-5 **Technical Writing Assistant**, Bates College: Biological Principles, Ecology, Cellular and Molecular Biology, undergraduate students
- 2004-5 **Academic Tutor**, Bates College: Organic Chemistry I and II, Calculus I and II, Biological Principles, Ecology, undergraduate students
- 2003-5 **Teaching Assistant**, Bates College: Organic Chemistry I and II, Biological Principles, Ecology, undergraduate students

Academic Advising

Ph.D. Student Co-Advisor: Chantel Michelson (with Dr. Michael Polito at LSU)

Graduate student mentor: Emily Brault (UCSC); Danielle Glynn (UCSC); Li Ling Hamady (WHOI); Santiago Herrera (WHOI); Katherine Pitz (WHOI); John Schiff (UCSC); Jessie Zupcic-Moore (UCSC); Maya Yamato (WHOI)

ASLO mentor: Elizabeth Hetherington (UC-San Diego) and Amanda McCutcheon (U. of Guam)

Undergraduate mentor: Melissa Hanson (UCSC); Jennifer Liu (UCSC); Taylor Mannes (UCSC); Kevin Miles (UCSC CC-RISE Program); Conrado Preciado (UCSC CC-RISE Program); Elizabeth Sonshine (Bates College Career Discovery in Practice); Zoe Wright (UCSC CC-RISE Program)

High school mentor: Anastasia Leopold (UCSC HSSI program); MacKenzie Tasha (Falmouth High School Mentoring Program)

Thesis committee member or outside examiner: Pascale Eisenmann PhD thesis, Griffith University, Australia; Danielle Glynn, Ph.D. thesis, UCSC; Carolyn Harris, Undergraduate honors thesis, Bates College; Matthew Tietbohl, Masters thesis, KAUST, Saudi Arabia

Conference Presentations

McMahon KW, Berumen ML, Thorrold SR: Oral Presentation “Ontogenetic migration of snapper links food webs across a tropical seascape in the Red Sea” 13th International Coral Reef Symposium, June 2016, Honolulu, HI USA

McMahon KW, McCarthy MD. Oral Presentation “Embracing variability in amino acid $\delta^{15}\text{N}$ fractionation: Mechanisms, implications, and applications for trophic ecology.” 10th

International Conference on Applications of Stable Isotope Techniques to Ecological Studies, April 2016, Tokyo, Japan

McMahon KW, Guilderson TP, McCarthy MD, Sherwood OA, Larsen T, Williams B. Oral Presentation: “Millennial-scale plankton regime shifts in the subtropical North Pacific assessed by $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ compound-specific stable isotope analysis of deep-sea corals.” Ocean Sciences Meeting, February 2016, New Orleans, LA, USA

McMahon KW, Williams B, McCarthy M, Etnoyer P. Oral Presentation: “Developing bioproxies of past ocean ecosystem change through compound-specific stable isotope analysis of proteinaceous deep-sea corals.” American Geophysical Union Fall Meeting, December 2015, San Francisco, CA, USA

McMahon KW. Oral Presentation: “Compound-specific stable isotope analysis in population and community ecology: theory, development, and a call for more laboratory experiments.” Ecological Society of America, August 2015, Baltimore, MD, USA (invited speaker)

McMahon KW, McCarthy MD, Guilderson TP. Oral Presentation: “Decadal to century scale changes in North Pacific Ocean phytoplankton communities assessed by $\delta^{13}\text{C}$ compound-specific stable isotope analysis of deep-sea corals.” Ocean Sciences Meeting, February 2014, Honolulu, HI, USA (Session 153 F organizer and chair)

McMahon KW, Berumen ML, Thorrold SR. Oral Presentation: “Unraveling carbon flow pathways on coral reefs with compound specific stable isotope analysis.” 8th International Conference on Applications of Stable Isotope Techniques to Ecological Studies, August 2012, Brest, France

McMahon KW, Berumen ML, Thorrold SR. Oral Presentation: “Seascape connectivity in a Red Sea coral reef ecosystem.” 12th International Coral Reef Symposium, July 2012, Cairns, Australia

McMahon KW, Berumen ML, Thorrold SR. Oral Presentation: “Functional connectivity of coral reef fishes in a Red Sea coral reef seascape assessed by compound specific stable isotope analysis.” Ocean Sciences Meeting, February 2012, Salt Lake City, UT, USA

McMahon KW. Oral Presentation: “Functional connectivity of coral reef fishes in a Red Sea tropical seascape.” Living Oceans Foundation Symposium on Coral Reef Conservation in the Red Sea, January 2012, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia

McMahon KW. Oral Presentation: “Ontogenetic migration and trophic dynamics.” Red Sea Research Center Symposium, April 2011, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia

McMahon KW, Fogel ML, Thorrold SR. Poster Presentation: “A new tool for inferring trophic interactions and fish movement using stable carbon isotope analysis of otolith amino acids.” Ocean Sciences Meeting, February 2010, Portland, OR, USA

McMahon KW, Fogel ML, Mateo I, Thorrold SR. Oral Presentation: “Stable carbon isotope analysis of amino acids in otolith protein: a new tool for tracking fish movement.” 4th International Otolith Symposium, August 2009, Monterey, CA, USA (Best Student Paper Award)

McMahon KW, Fogel ML, Elsdon TS, Thorrold SR. Oral Presentation: “Carbon isotope fractionation of amino acids of a marine fish.” 33rd Annual Larval Fish Conference, July 2009, Portland, OR, USA (Sally Richardson Best Student Paper Award)

McMahon KW, Fogel ML, Elsdon TS, Thorrold SR. Oral Presentation: “Patterns in carbon isotope fractionation of amino acids between diet and consumer in a model fish species.” 6th International Conference on Applications of Stable Isotope Techniques to Ecological Studies, August 2008, Honolulu, HI, USA

McMahon KW, Thorrold SR. Poster Presentation “Ocean ecogeochemistry applied to connectivity analyses in marine populations.” Isoscapes Conference, April 2008, Santa Barbara, CA, USA

McMahon KW, Ambrose WG Jr., Johnson BJ, Sun M-Y., Lopez GR, Clough LM, Carroll M. Oral Presentation: “The impacts of a changing food supply on Arctic benthos: digestibility of ice algae and phytoplankton.” 34th Annual Benthic Ecology Meeting. April 2005, Williamsburg, VA, USA

McMahon KW. Oral Presentation: “The Impacts of a changing food supply on Arctic benthos.” Mount David Research Symposium, March 2005, Lewiston, ME, USA

McMahon KW, Johnson BJ, Ambrose WG Jr. Poster Presentation: “Contributions of local food items to the diet of *Fundulus heteroclitus*: analysis of $\delta^{13}\text{C}/\delta^{15}\text{N}$ and gut contents.” 33rd Annual Benthic Ecology Meeting. March 2004, Mobile, AL, USA

McMahon KW. Poster Presentation: “Contributions of local food items to the diet of *Fundulus heteroclitus*” Mount David Research Symposium, March 2004, Lewiston, ME, USA

McMahon KW, Warren RS, Fell PE. Poster Presentation: “Impacts of *Phragmites* control on selected ecological functions within tidelands of the Lieutenant River.” Connecticut College Research Symposium, August 2003, New London, CT, USA

Coauthored Papers (# indicates student presentation)

#Glynn DS, Guilderson TP, **McMahon KW**, McCarthy MD: “Dramatic nutrient and phytoplankton community shifts in the NPSG during recovery from Younger Dryas Cold Period and Little Ice Age.” 2017 Aquatic Sciences Meeting, February 2017, Honolulu, HI USA

#Preciado C, #Michelson CI, McCarthy MD, **McMahon KW**: “Calibrating compound-specific stable nitrogen isotope analysis in avian eggs as bioarchives for paleoreconstruction.” American Geophysical Union Fall Meeting, December 2016, San Francisco, CA, USA

#Tietbohl MD, Thorrold SR, **McMahon KW**, Berumen ML, Choat JH, Houghton LA: “Assessing functional diversity of reef fish herbivores (and detritivores?) using a compound-specific stable isotope approach. 13th International Coral Reef Symposium, June 2016, Honolulu, HI USA

Thorrold SR, **McMahon KW**, Houghton LA, Sandin SA, Berumen ML: “Tracing carbon flow through coral reef food webs using a compound-specific stable isotope approach. 13th International Coral Reef Symposium, June 2016, Honolulu, HI USA

McCarthy MD, **McMahon KW**, Gier E, Batista F: “Compound specific amino acids as paleo-proxies: Archives, potential, and emerging challenges. 10th International Conference on Applications of Stable Isotope Techniques to Ecological Studies, April 2016, Tokyo, Japan

Thorrold SR, **McMahon KW**, Braun CD, Berumen ML, Houghton LA: “Tracing Carbon Flow Through Food Webs on Isolated Coral Reefs in the Central Pacific Ocean Using a Compound-Specific Stable Isotope Approach” Ocean Sciences Meeting, February 2016, New Orleans, LA, USA

#Glynn D, McCarthy MD, **McMahon KW**, Guilderson TP: “High resolution record of NPSG primary production $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ from deep sea corals suggest major shifts in nutrient and phytoplankton composition over the last 5000 years.” Ocean Sciences Meeting, February 2016, New Orleans, LA, USA

#Wright Z, #Glynn D, **McMahon KW**, McCarthy MD. “A high-resolution, paleo-record of export production from a unique HNLC zone on the California Margin using deep-sea coral stable isotope values.” American Geophysical Union Fall Meeting, December 2015, San Francisco, CA, USA

#Miles KW, #Glynn DS, **McMahon KW**, McCarthy MD, Guilderson TP. “Investigating past ocean ecosystem variability with $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ records in long lived deep-sea proteinaceous corals from the Central Equatorial Pacific. American Geophysical Union Fall Meeting, December 2014, San Francisco, CA, USA

#Glynn D, McCarthy MD, **McMahon KW**, Guilderson T. “Millennial scale oscillations in bulk $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ over the Mid- to Late Holocene seen in proteinaceous corals from the North Pacific Subtropical Gyre. American Geophysical Union Fall Meeting, December 2014, San Francisco, CA, USA

Sherwood O, **McMahon KW**, Guilderson TP, McCarthy MD. “Late Holocene plankton domain shifts in the North Pacific Subtropical Gyre revealed by amino acid specific $\delta^{15}\text{N}$ and

- $\delta^{13}\text{C}$ records from proteinaceous deep-sea corals. American Geophysical Union Fall Meeting, December 2014, San Francisco, CA, USA
- Soreide J, Iken K, Bluhm B, Gradinger R, Renaud PE, Tamelander T, Tremblay JE, Hop H, Carroll ML, Ambrose WG Jr., **McMahon KW**, Wooler M, Dunton K. "Stable isotope baselines in marine food webs: A pan-Arctic review." Ocean Sciences Meeting, February 2014, Honolulu, HI, USA
- Soreide J, Iken K, Bluhm B, Gradinger R, Renaud PE, Tamelander T, Tremblay JE, Hop H, Carroll ML, Ambrose WG Jr., **McMahon KW**, Wooler M, Dunton K. "Stable isotope baselines in marine food webs: A pan-Arctic review." Arctic Marine Science Symposium, January 2014, Anchorage, AK, USA
- #Leopold A, #Brault E, **McMahon KW**. "Variation in bulk $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values of ancient Antarctic seal bones." American Geophysical Union Fall Meeting, December 2013, San Francisco, CA, USA
- Thorrold SR, **McMahon KW**, Berumen ML. "Revisiting the source of carbon fueling fisheries on coral reefs." 12th International Coral Reef Symposium, July 2012, Cairns, Australia
- Thorrold SR, **McMahon KW**, Berumen ML. "Revisiting the source of carbon fueling fisheries on coral reefs." Ocean Sciences Meeting, February 2012, Salt Lake City, UT, USA
- DesRosiers N, Noble, M, **McMahon KW**, Berumen ML. "Distribution patterns and ecology of *Amphiprion bicinctus* in the central Red Sea, Saudi Arabia." 2nd Asia-Pacific Coral Reef Symposium, June 2010, Phuket, Thailand
- Ambrose WG, Carroll ML, Clough LM, Greenacre M, **McMahon KW**, Henkes G, Edgerly J "Bivalve (*Serripes groenlandicus*) and gastropod (*Neptunea heros*) growth in coastal northwest Alaska reflects Arctic climate regime shifts and local environmental factors." International Polar Year Open Science Conference, June 2010, Oslo, Norway.
- Skomal GB, Zeeman SI, Chisholm JH, Summers EL, Walsh HJ, **McMahon KW**, Thorrold SR. "Mesopelagic trans-equatorial migrations by basking sharks in the western Atlantic Ocean" 25th Annual American Elasmobranch Society Meeting, July 2009, Portland, OR, USA
- Carroll ML, Johnson BJ, Henkes GA, **McMahon KW**, Voronkov A, Ambrose WG Jr., Denisenko SG. "Environmental regulation of bivalve growth in the southern Barents Sea: A combined ecological and geochemical approach." EGU General Assembly Conference, April 2009, Vienna, Austria
- Graham B, Fry B, Popp B, Koch P, Newsome S, **McMahon KW**. "Using isoscapes to trace the movements and foraging behavior of predators in oceanic ecosystems." 6th Annual Isotope Ecology Conference, August 2008, Honolulu, HI, USA

- Carroll ML, Denisenko SG, Voronkov A, Ambrose WG, Henkes G, **McMahon KW**. “Arctic bivalves as indicators of environmental variation from intra-annual to centennial timescales.” Ocean Sciences Meeting, ASLO, March 2008, Orlando, FL, USA
- Johnson BJ, Ambrose WG, Henkes G, **McMahon KW**, Carroll ML. “Shifts in the $\delta^{13}\text{C}$ of *Serripes groenlandicus* shell organic matter: A proxy for intra- and interannual changes in primary production in the Arctic?” National American Chemical Society (ACS) Meeting, August 2007, Boston, MA, USA
- Henkes GA, Ambrose WG Jr., Johnson BL, Carroll ML, **McMahon KW**, Denisenko SG, Thorrold SR. “Tracing environmental variation over the past 130 years in the Barents Sea: Mineral ratio (Mg/Ca, Sr/Ca, Ba/Ca, and Mn/Ca) evidence in shells of the circumpolar greenland cockle, *Serripes groenlandicus*.” American Geophysical Union Fall Meeting, December 2007, San Francisco, CA, USA
- Henkes GA, Johnson BJ, Ambrose WG, **McMahon KW**, Carroll ML, Hop H “Examining environmental conditions in a Norwegian High Arctic Fjord: Evidence from *Serripes groenlandicus* (Bivalvia) growth rates and shell organic carbon isotope composition.” 1st International Sclerochronology Conference, July 2007, St. Petersburg, FL, USA
- Carroll ML, Ambrose WG, Greenacre M, Clough L, **McMahon KW**, Thorrold SR, Henkes GA, Stinson L, Edgerly J. “Arctic bivalves as proxies of local and large-scale climatic variations: Analysis of pan-Arctic growth patterns.” 1st International Sclerochronology Conference, July 2007, St. Petersburg, FL, USA
- Carroll ML, Ambrose WG, Greenacre M, Clough LM, **McMahon KW**, Stinson L, Edgerly J, Thorrold S. “Arctic bivalves as proxies of local and large-scale climatic variations: Analysis of pan-Arctic growth patterns.” Ecosystems Dynamics in the Norwegian Sea and Barents Sea. March 2007, Tromsø Norway
- Johnson BJ, Ambrose WG, **McMahon KW**, Carroll ML. “Shifts in the $\delta^{13}\text{C}$ of *Serripes groenlandicus* shell organic matter: A proxy for intra- and interannual changes in primary production in the Arctic?” New England Geological Society American Annual Meeting. March 2007, Durham, NH, USA
- Johnson BJ, Ambrose WG Jr., Henkes GA, **McMahon KW**, Carroll ML. “Shifts in the $\delta^{13}\text{C}$ of *Serripes groenlandicus* shell organic matter: A proxy for intra- and interannual changes in primary production in the Arctic?” American Chemical Society, 2007, Washington, D.C., USA
- Johnson BJ, Ambrose WG, **McMahon KW**, Carroll ML. “Shifts in the $\delta^{13}\text{C}$ of *Serripes groenlandicus* shell organic matter: A proxy for intra- and interannual changes in primary production in the Arctic?” Arctic Frontiers Meeting, January 2007, Tromsø, Norway
- Ambrose WG, Carroll ML, Nolan K, Retelle M, Greenacre M, **McMahon KW**. “Climate change on Svalbard: Evidence from modern and fossil bivalves.” Arctic Frontiers Meeting.

January 2007, Tromsø, Norway

Clough LM, Ambrose WG, Betournay S, Carroll ML, Lopez GR, Meltzer K, Sun M-Y, **McMahon KW**, Richardson M. “The digestibility of ice algae and phytoplankton: Impacts on arctic benthic macrofauna.” Ocean Sciences Meeting. February 2006, Honolulu, HI, USA

Carroll ML, Ambrose WG, Greenacre M, **McMahon KW**, Thorrold SR. “Patterns of variation in bivalve growth in a Norwegian High-Arctic Fjord: Evidence for local- and large-scale forcing.” American Society of Limnology and Oceanography (ASLO) Summer Meeting. June 2005, Santiago de Compostela, Spain

Ambrose WG, Carroll ML, Greenacre M, **McMahon KW**, Thorrold SR. “Patterns of variation in bivalve growth in a Norwegian High-Arctic Fjord: Evidence for local- and large-scale forcing.” 34th Annual Benthic Ecology Meeting. April 2005, Williamsburg, VA, USA

Carroll ML, Clough LM, Sun M-Y, Lopez GR, Ambrose WG, **McMahon KW**. “Response of Arctic benthic communities to variable food supplies associated with climatic change: Ice algae vs. phytoplankton.” Gordon Research Conference on Polar Marine Sciences. March 2005, Ventura, CA, USA

Invited Seminars

Ocean Science Department Seminar, January 2017, University of California-Santa Cruz, Santa Cruz, CA, USA

International Symposium on Stable Isotopes in Marine Environments, May 2016, Hanyang University, Seoul, South Korea

Australian Rivers Institute Department Seminar, April 2016, Griffith University, Brisbane, Australia

College of Coast and Environment Department Seminar, April 2016, Louisiana State University, Baton Rouge, LA, USA

Workshop I and II: Stable isotope analysis in Marine Mammal Ecology, December 2015, 21st Biennial Conference on Marine Mammals, San Francisco, CA. Two-day workshop presenter

Marine and Environmental Biology Seminar, November 2015, University of Southern California, Los Angeles, CA, USA

Ocean Science Department Seminar, October 2015, University of California-Santa Cruz, Santa Cruz, CA, USA

Keck Science Department Seminar, February 2015, Claremont McKenna College, Claremont, CA, USA

Center for Accelerated Mass Spectrometry Seminar, July 2014, Lawrence Livermore National Laboratory, Livermore, CA, USA

Chesapeake Biological Laboratory Seminar, July 2014, University of Maryland, Solomons, MD, USA

Marine Biology Seminar, April 2014, Scripps Institution of Oceanography, La Jolla, CA, USA

Environmental Earth System Science Seminar, March 2014, Stanford University, Palo Alto, CA, USA

Environmental Systems Seminar, January 2014, University of California-Merced, Merced, CA USA

Environmental Earth System Science Seminar, December 2013, Stanford University, Palo Alto, CA, USA

Southwest Fisheries Science Center Seminar, November 2013, NOAA Fisheries Service, Santa Cruz, CA, USA

iDive SCUBA-Hack, August 2013, Marine Science and iOS developer workshop, San Francisco, CA, USA

Ocean Science Department Seminar, May 2013, University of California-Santa Cruz, Santa Cruz, CA, USA

Red Sea Research Center Department Seminar, December 2012, King Abdullah University of Science and Technology, Thuwal, Kingdom of Saudi Arabia

Biology Department Seminar, Oct 2012, Bates College, Lewiston, ME, USA

Workshop II: Sampling animal tissues for stable isotope analysis, August 2012, 8th Annual Isotope Ecology Conference, Brest, France. Workshop co-organizer and presenter.

ARC Centre of Excellence Coral Reef Studies Seminar, June 2011, James Cook University, Townsville, Australia

Sea Education Association, June 2010, Woods Hole, MA, USA

Biology Department Seminar, February 2010, Connecticut College, New London, CT, USA

Biology Department Seminar, November 2009, Woods Hole Oceanographic Institution, Woods Hole, MA

Ocean Science Journalism Fellows Lecture, September 2009, Woods Hole Oceanographic Institution, Woods Hole, MA, USA

Biology Department Seminar, February 2009, Bates College, Lewiston, ME, USA

Trustee and Corporation Member Lecture, October 2008, Woods Hole Oceanographic Institution, Woods Hole, MA, USA

Ocean Science Journalism Fellows Lecture, September 2008, Woods Hole Oceanographic Institution, Woods Hole, MA, USA

School of Marine and Atmospheric Sciences Lecture, April 2005, Stony Brook University, Stony Brook, NY, USA

Ecology and Evolutionary Biology Department Lecture, October 2004, Cornell University, Ithaca, NY, USA

Synergistic Activities

2017 Co-organizer and co-chair, Session: Tracing ecological dynamics and biogeochemical cycles via compound-specific isotope analysis (CSIA) of organic compounds, ALSO 2017 Aquatic Sciences Meeting (Honolulu, HI February 2017)

2016 Co-organizer and co-chair, Session 175: Movement Ecology on Coral Reefs, 12th International Coral Reef Symposium (Honolulu, HI, June 2016).

2014-present Project Leader, Community College Research Internship for Scientific Engagement CC-RISE, University of California, Santa Cruz

2014 Organizer and co-chair, Section F Session 153: Using Compound-Specific Stable Isotope Analysis to Advance Population and Community Ecology, Ocean Sciences Meeting (Honolulu, HI, Feb 2014).

2013 Marine Science advisor, iDive SCUBA-Hack to develop apps for the new Apple iPad underwater housing unit (iDive) in conjunction with iOS developers

2013 Project Leader, High School Summer Student Internship Program, University of California – Santa Cruz (Santa Cruz, CA, June – December 2013).

2012-present Project member, Phoenix Islands Protected Area – Expedition Science Team

2012 Co-Organizer, Workshop II: Sampling animal tissues for stable isotope analysis, 8th Annual Isotope Ecology Conference (Brest, France, August 2012).

2012 Project Leader, Bates College Career Discovery in Practice, Woods Hole Oceanographic Institution (Woods Hole, MA, January 2012).

2010-2011 Mentor, Falmouth High School Volunteer in Public Schools (VIPS) (Falmouth, MA).

Manuscript reviewer for: *Amino Acids, Aquaculture Research, Coral Reefs, Deep Sea Research, Environmental Science and Technology, Ecology, Ecosphere, Environmental Science and Technology, Estuaries, Hydrobiologia, Journal of Animal Ecology, Journal of Experimental Marine Biology and Ecology, Journal of Sea Research, Limnology and Oceanography, Marine Biology, Marine Ecology, Marine Ecology Progress Series, Methods in Ecology and Evolution, PLOS One, Polar Biology, Proceedings of the National Academy of Sciences, Progress in Oceanography, Rapid Communications in Mass Spectrometry*

Grant reviewer for: *National Geographic Society, National Science Foundation (OCE: Bio, EAR: SGP, LTER, AON), NSF Panel Member (2015), Natural Environment Research Council, Sea Grant, UK Department of Environment, Food, and Rural Affairs*

Dive certifications: NAUI Advanced Open Water, NAUI Rescue Diver, NAUI Nitrox, NAUI Drysuit, IANTD Closed-Circuit rebreather

Society membership: American Association for Underwater Scientists, American Fisheries Society, Association for the Sciences of Limnology and Oceanography, Divers Alert Network, Ecological Society of America, Phi Beta Kappa Society, Sigma Xi Scientific Research Society, WHOI Postdoctoral Association

Current as of December 2016

References

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