

**Rhian G. Waller, Ph.D.**  
Senior Lecturer

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**Education**

Southampton Oceanography Centre Ph.D. 2004  
*Thesis – Reproductive Ecology of Deep-Water Scleractinians – Prof. Paul Tyler, Prof. John Gage*  
University of Wales, Aberystwyth Marine and Freshwater Biology B.Sc.(hons) 2000  
*Thesis – Environmental Tolerances in the Beadlet Anemone, Actinia equina – Dr. Simon Creasey*

**Appointments & Positions Held**

**2022 – Present** Senior Lecturer, University of Gothenburg Tjärnö Marine Laboratory, Sweden  
**2020 – 2022** Associate Professor (with tenure), School of Marine Sciences, University of Maine, USA  
**2015 – 2020** Associate Professor (tenure track), School of Marine Sciences, University of Maine, USA  
**2013 - 2015** Associate Research Professor, School of Marine Sciences, University of Maine, USA  
**2011 - 2013** Assistant Research Professor, School of Marine Sciences, University of Maine, USA  
**2007 – 2010** Assistant Researcher (SOEST Young Investigator), University of Hawaii at Manoa, USA  
**2006 – 2007** InterRidge Coordinator, Research Associate, WHOI – MA, USA  
**2005 – 2006** WHOI – USGS Postdoctoral Scholar –MA, USA  
**2003 – 2004** Guest Investigator, Woods Hole Oceanographic Institution – MA, USA  
**2000 – 2003** European Union PhD Fellowship – Southampton Oceanography Centre, UK

**Other Positions Held**

**2021** – Science Lead, Okeanos Explorer, Deep Atlantic Stepping Stones Expedition  
**2019** – Visiting Researcher, University of Gothenburg, Sweden  
**2012 – 2015** – Undergraduate Education Coordinator for the Darling Marine Center, ME, USA  
**2011** - Adjunct Oceanography Faculty, Sea Education Association, Woods Hole, MA, USA  
**August – December 2010** – Adjunct Research Professor, University of Maine, USA  
**February 2010** – Visiting researcher, Paleo-DNA Laboratory, Lakehead University, Canada  
**September 2009** - Visiting Researcher, Paleo-DNA Laboratory, Lakehead University, Canada  
**October 2007** – Visiting Researcher, Paleo-DNA Laboratory, Lakehead University, Canada  
**April 2006** – Visiting Researcher, Paleo-DNA Laboratory, Lakehead University, Canada  
**July 2004** – Collaborating Researcher, Dunstaffnage Marine Laboratory, UK  
**June – September 2002**, Woods Hole Oceanographic Institution Exchange Program (funded by Southampton Oceanography Centre), USA.

**Publications**

**\*Graduate student author \*\* Undergraduate student author**

*H-Index (Google Scholar) = 16; i10 Index (Google Scholar) = 23; All citations 891*

- 40.** \*Farfan, G.A., Apprill, A., Cohen, A., DeCarlo, T.M., Post, J.E., **Waller, R.G.**, Hansel, C.M. (2021) Crystallographic and chemical signatures in coral skeletal aragonite. *Coral Reefs*. <https://doi.org/10.1007/s00338-021-02198-4>
- 39.** \*Johnstone, J.W., **Waller, R.G.** & Stone, R.P. (2021) Shallow-emerged coral may warn of deep-sea coral response to thermal stress. *Sci Rep* 11, 22439, <https://doi.org/10.1038/s41598-021-01948-2>

38. \*\*Pendleton G \*Hartill E, **Waller RG** (2021) Notes on reproduction in the deep-sea cup coral *Balanophyllia malouensis* (Squires 1961) from the Southern Ocean, *Polar Biology*, 44, 977-986, <https://doi.org/10.1007/s00300-021-02854-z>
37. \*Hartill EC, **Waller RG**, Auster PJ (2020) Deep coral habitats of Glacier Bay National Park and Preserve, Alaska. *PLoS ONE* 15(8): e0236945, <https://doi.org/10.1371/journal.pone.0236945>
36. **Waller RG**, Stone RP, \*\*Rice LN, \*Johnstone J, \*Rossin AM, \*Hartill E, \*Feehan KA, Morrison CL (2019) Phenotypic plasticity or a reproductive dead end? *Primnoa pacifica* (Cnidaria: Alcyonacea) in the southeastern Alaska region. *Frontiers in Marine Science*, <https://doi.org/10.3389/fmars.2019.00709>
35. \*Rossin AM, **Waller RG**, Stone RP (2019) The effects of *in-vitro* pH decrease on the gametogenesis of the red tree coral, *Primnoa pacifica*. *PLoS ONE* 14(4): e0203976. <https://doi.org/10.1371/journal.pone.0203976>
34. \*Fountain CT, **Waller RG**, Auster PJ (2019) Individual and Population Level Variation in the Reproductive Potential of Deep-Sea Corals from Different Regions Within the Gulf of Maine. *Frontiers in Marine Science*, <https://doi.org/10.3389/fmars.2019.00172>
33. \*Feehan K, **Waller RG**, Haussermann V, Fosterra G (2019) Highly seasonal reproduction in the deepwater emerged coral *Desmophyllum dianthus*. *Marine Biology*, 166:52
32. \*Farfan GA, Cordes E, **Waller RG**, DeCarlo TM, Post J, Hansel CM (2018) Mineralogy of deep-sea coral aragonites as a function of aragonite saturation states. *Frontiers in Marine Science*, 5, 473, DOI=10.3389/fmars.2018.00473
31. Goldsmith DB, Kellogg CA, Morrison CL, Gray MA, Stone RP, **Waller RG**, Brooke SD, Ross SW (2018) Comparison of microbiomes of cold-water corals *Primnoa pacifica* and *Primnoa resedaeformis*, with evidence connecting microbiome composition to host genotype. *Nature Scientific Reports*, 8, 12383
30. Rooper C, Stone R, Etnoyer P, Conrath C, Reynolds J, Greene HG, Williams B, Salgado E, Morrison C, **Waller RG**, Demopoulos A (2017) Deep-sea coral research and technology program: Alaska deep-sea coral and sponge initiative final report. NOAA Technical Memorandum, NMFS-OHC-2,
29. \*Auscavitch SR & **Waller RG** (2017) Biogeographical patterns among deep sea megabenthic communities across the Drake Passage. *Antarctic Science*, 29(6) 531-543
28. \*\*Rossin A, **Waller RG**, Forseterra G (2017) Seasonal oocyte maturation in the fjord soft coral *Primnoella chillensi* (Philippi, 1894), *Continental Shelf Research*, 144, 31-37
27. \*Feehan, K & **Waller, RG** (2015) Notes on Reproduction of Eight Species of Eastern Pacific Cold-Water Corals. *Journal of the Marine Biological Association, UK*, 95(4) 691-696
26. \*\*Margolin AR; Robinson LF; Burke A; **Waller, RG**; Scanlon KM; Roberts ML; Auro ME; van de Flierdt T (2014) Temporal and spatial distributions of cold-water corals in the Drake Passage: Insights from the last 35,000 years. *Deep Sea Research Part II: Topical Studies in Oceanography*, 99, 237-248
25. **Waller, RG**; Stone RP; \*\*Johnstone J; Mondragon J (2014) Sexual Reproduction and Seasonality of the Alaskan Red Tree Coral, *Primnoa pacifica*. *PLoS ONE*
24. \*Padilla-Gamino, J; Haedoin L; **Waller, RG**; Smith D; Truong W; Gates RD (2014) Sedimentation and the Reproductive Biology of the Hawaiian Reef-Building Coral *Montipora capitata*. *Biological Bulletin*, 226(1), 8-18
23. Auster, PJ; Kilgour M; Packer D; **Waller, RG**; \*Auscavitch S; Watling, L (2013) Octocoral gardens in the Gulf of Maine. *Biodiversity*, 14(4) 193-194
22. **Waller, RG** & \*\*Feehan K (2013) Reproductive Ecology of a Polar Deep-Sea Scleractinian *Fungiacyathus marenzelleri* (Vaughan, 1906). *Deep Sea Research II*, 92, 201-206
21. \*Wagner, D; **Waller, RG**; Montgomery, AD; Kelley, CD; Toonen, RJ (2012) Sexual reproduction of the Hawaiian black coral *Antipathes griggi* (Cnidaria: Antipatharia). *Coral Reefs*. DOI: 10.1007/s00338-012-0882-3

20. **Waller, RG**; Stone, RP; Mondragon, J & \*\*Clark, CE (2011) Reproduction of Red Tree Corals in the Southeastern Alaskan Fjords: Implications for Conservation and Population Turnover. Proceedings of the American Academy of Underwater Sciences 30<sup>th</sup> Symposium, 29-32
19. **Waller, RG** & Robinson, LF (2011) Southern Ocean Corals: Cabo de Hornos, Coral Reefs, *OL*: 10.1007/s00338-011-0852-1
18. \*Wagner, D; **Waller RG** & Toonen, R (2011) Sexual reproduction of Hawaiian black corals, with a review of reproductive processes within the order Antipatharia (Cnidaria: Anthozoa: Hexacorallia). *Invertebrate Biology*, 130(3): 211-225
17. **Waller, RG**; Scanlon, K & Robinson, L (2011) Cold-water coral distributions in the Drake Passage from towed camera observations. *PLoS ONE*, 6(1) e16153. doi:10.1371/journal.pone.0016153
16. \*\*Bayer, SM; Mullineaux, LS; **Waller, RG** & Solow, AR (2011) Reproductive traits of pioneer gastropod species colonizing a deep-sea hydrothermal vent after an eruption. *Marine Biology*, DOI: 10.1007/s00227-010-1550-1
15. Morrison, CL; Ross, SW; Nizinski, MS; Brooke, S; Jarnegren, J; **Waller, RG**; Johnson, RL & King, TL (2011) Genetic discontinuity among regional populations of *Lophelia pertusa* in the North Atlantic Ocean. *Conservation Genetics*, 12:713-729
14. \*Padilla-Gamino, JL; Weatherby, TM; **Waller, RG** & Gates, RD (2011) Formation and structural organization of the egg-sperm bundle of the scleractinian coral *Montipora capitata*. *Coral Reefs*, 30:371-380
13. **Waller, RG** & Tyler, PA (2011) Reproductive patterns in two deep-water solitary corals from the Northeast Atlantic - *Flabellum. alabastrum* and *F. angulare* (Cnidaria: Anthozoa: Scleractinia). *Journal of the Marine Biological Association, UK*, 91(3): 669-675
12. Scanlon, KM; **Waller, RG**; Sirotek, A; Knisel, JM & Alesandrini, SM (2010) USGS Cold-Water Coral Geographic Database – Gulf of Mexico and Western North Atlantic, Version 1.0. *USGS Open File Report*
11. **Waller, RG**; Tyler, PA & Smith, C (2008) Fecundity and embryo development of three Antarctic deep-water scleractinians: *Flabellum thouarsii*, *F. curvatum* and *F. impensum*. *Deep-Sea Research II*, 55: 2527-2534
10. **Waller, RG**; Watling, L; Auster, P & Shank, TM (2007) Fishing Impacts on the Corner Rise Seamounts. *Journal of the Marine Biological Association, UK*, 87: 1075-1076
9. **Waller, RG** & Baco-Taylor, A (2007) Reproductive morphology of three Hawaiian deep-water precious corals. *Bulletin of Marine Science*, 81(3): 533-542
8. Robinson, LF; Adkins, JF; Scheirer, DS; Fernandez, DF; \*Gagnon, A & **Waller RG** (2007) Deep-sea scleractinian coral age and depth distributions in the NW Atlantic for the last 225 thousand years. *Bulletin of Marine Science*, 81(3): 371-391
7. **Waller, RG**; Adkins, J; Robinson, L & Shank, TM (2007) Ancient DNA techniques and their utility in deep-water coral research. *Bulletin of Marine Science*, 81(3): 351-359
6. \*Flint, H; **Waller, RG** & Tyler, PA (2007) Reproduction in *Fungiacyathus marenzelleri* from the northeast Pacific Ocean. *Marine Biology*, 151(3): 843-849
5. **Waller, RG**; Tyler, PA & Gage, JD (2005) Sexual reproduction of three deep water *Caryophyllia* (Anthozoa: Scleractinia) species from the NE Atlantic Ocean. *Coral Reefs*, 24(4): 594-602
4. **Waller, RG** & Tyler PA (2005) The reproductive biology of two deep-sea, reef-building scleractinians from the NE Atlantic Ocean. *Coral Reefs*, 24(3): 514-522
3. **Waller, RG** (2005) Deep Water Scleractinians: Current knowledge of reproductive processes. In: *Freiwald A & Roberts JM (eds) Cold-water Corals and Ecosystems. Springer, Heidelberg*, 691-700
2. Fornari D; Billings, A; Catanach, R; Liberatore, S; Swartz, M; Hammar, T; Meirer, G; Gould, M; Fucile, P; Doherty, K; Duester, A; Bradley, A; **Waller, RG**; Buckman, K; Ferreira M (2003) A new deep-sea towed digital camera and multi-rock coring system. *EOS Transactions of the American Geophysical Union*, 84(8): 69-76

1. **Waller, RG**; Tyler, PA & Gage JD (2002) The reproductive ecology of the deep-sea solitary coral *Fungiacyathus marenzelleri* (Scleractinia) in the NE Atlantic Ocean. *Coral Reefs*, 21(4): 325-331

#### **Publications in revision, submitted, and close to submission**

\*Johnstone J, Lunden J, **Waller, RG** (in Review, Coral Reefs) Long term ocean warming effects on the larvae of *Flabellum impensum* deep sea corals.

\*Heran T, Laudien J, **Waller RG**, Häussermann V, Försterra G, González HE, Richter C (in preparation) Life cycle of the cold-water coral *Caryophyllia huinayensis* from the Patagonian region of Chile

#### **Non-Peer Reviewed Publications**

- **2021** - Cantwell, K; Galvez, K; Hoy, S; **Waller, RG** (2021). Video data collected during the EX2104: 2021 North Atlantic Stepping Stones: New England and Corner Rise Seamounts (ROV and Mapping) expedition on NOAA Ship OKEANOS EXPLORER in the North Atlantic Ocean from 2021-06-30 to 2021-07-29 (NCEI Accession 0240591). NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/pbs1-ad27>.
- **2021** - Cantwell, K; Galvez, K; Hoy, S; **Waller, RG** (2021). Oceanographic data collected during the EX2104: 2021 North Atlantic Stepping Stones: New England and Corner Rise Seamounts (ROV and Mapping) expedition on NOAA Ship OKEANOS EXPLORER in the North Atlantic Ocean from 2021-06-30 to 2021-07-29 (NCEI Accession 0240591). NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/pbs1-ad27>.
- **2021** - Tracey, D.M., Goode, S., Marriott, P., **Waller, R.** Protected coral reproduction. Report prepared for Department of Conservation. NIWA Client Report WN2012-083: 30 p.
- **2020** – Alaska Coral and Sponge Initiative Workshop Report.
- **2017** - Morrison CL, Coykendall DK, Springmann MJ, Shroades KM, Sanders LR, **Waller RG**, Ross SW, Brooke SB. 2017. Chapter 14: Scleractinian coral biodiversity and patterns of inter-canyon connectivity among four coral species. In: CSA Ocean Sciences, Inc. Ross S, Brooke S, Baird E, Coykendall DK, Davies A, Demopoulos A, France S, Kellogg C, Mather R, Mienis F, Morrison C, Prouty N, Roark B, Robertson C. 2017. Exploration and Research of Mid-Atlantic Deepwater Hard Bottom Habitats and Shipwrecks with Emphasis on Canyons and Coral Communities: Atlantic Deepwater Canyons Study. Draft Report. Sterling (VA): U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Atlantic OCS Region. OCS Study BOEM 2017-060. 1,000 p.
- **2015** – Introduction for Drake Passage multibeam data release via PANGEA. Hoy SK, Robinson LF, Scanlon KM, **Waller RG**. PANGEA
- **2015** – *Opportunistic Multibeam Surveying* – Hydro International (October 2015) – Hoy, S; Robinson LF; Huvenne VAI; Contributing Authors, Scanlon K & **Waller RG**.
- **2014** - *Imaging Surveys of Select Areas in the Northern Gulf of Maine for Deep-sea Corals and Sponges during 2013-2014. Report to the New England Fishery Management Council - 30 October 2014.* Peter J. Auster, David Packer, **Rhian Waller**, Steven Auscavitch, Les Watling, Martha S. Nizinski, Ivar Babb, Donna Johnson, Jeffrey Pessutti, Amy Drohan, Brian Kinlan. Available at ResearchGate DOI: 10.13140/RG.2.1.4760.0163.
- **2013** – INDEEP (2) – *Investigating Offshore New England Waters for Deep-Sea Coral Presence.* Kilgour, M., Auster, P., Packer, D., **Waller, R.**, Auscavitch, S.
- **2012** – **Present** - National Geographic Explorers Journal – 2012 - Current - <http://newswatch.nationalgeographic.com/author/rwaller/>

- **2007** - *Corner Rise Seamounts: The Impact of Deep-sea Fisheries*. Watling, L., R. Waller, & P.J. Auster, ICES Insight No. 44: 10-14, 2007

### Selected Recent Abstracts

- Galvez KC, Cantwell K, Hoy S, **Waller RG**, Chaytor J, Mizell K (2022) 2021 North Atlantic Stepping Stones: New Discoveries of the New England and Corner Rise Seamounts Region. Ocean Sciences, Honolulu, HI, USA, January 2022
- Carson H, **Waller RG**, EX2104 Participants (2021) Coral communities on the New England and Corner Rise Seamounts. Deep Sea Biology Symposium, Brest, France, Sept 2021
- Morrison CL, Everett MV, **Waller RG**, Stone RP (2018) Population genomics reveals complex connectivity patterns among southeast Alaskan populations red tree coral (*Primnoa pacifica*). Deep Sea Biology Symposium, Monterey CA, USA, Sept 2018
- Fountain, CT, **Waller, RG**, Auster PJ (2018) From Polyp to Population: A Tale of Two Corals. Deep Sea Biology Symposium, Monterey CA, USA, Sept 2018
- **Waller, RG** and the Science Party (2016) Cold Water Coral Ecosystems in Glacier Bay National Park, 6<sup>th</sup> International Symposium on Deep Sea Corals, Boston, Sept 2016
- Feehan, K; **Waller, RG** (2016) Reproduction in *Desmophyllum dianthus* from the Chilean Fjords. 6<sup>th</sup> International Symposium on Deep Sea Corals, Boston, Sept 2016
- Auster, PA; Packer D; **Waller RG**; Pessutti J (2016) Identifying Spatially rare deep-sea coral communities in the Gulf of Maine. 6<sup>th</sup> International Symposium on Deep Sea Corals, Boston, Sept 2016
- Hoy, SK; Robinson, LF; Huvenne VAI; Scanlon KS; **Waller, RG** (2014) Opportunistic multibeam surveying: a case study expanding bathymetric coverage in remote waters during research expeditions. US HYDRO
- **Waller, RG**; Stone, R; Mondragon, J (2012) Reproduction of a Deepwater Emerged Octocoral in the Southeastern Alaskan Fjords. 5th International Deep-Sea Coral Symposium, Amsterdam, April 2012
- **Waller, RG**; Robinson, LF; Scanlon KM; NBP11-03 Science Party (2012) Southern Ocean Corals: Surprising Diversity and Abundance. 5th International Deep-Sea Coral Symposium, Amsterdam
- **Waller, RG**; Stone, R; Mondragon, J & Clark, CE (2011) Reproduction of Red Tree Corals in the Southeastern Alaskan Fjords: Implications for conservation and population turnover. AAUS, Portland ME.
- **Waller, RG**; Robinson, L; Scanlon, KM; Blackwood, D & NBP08-05 Science Party (2010) Cold-water coral distributions in the Drake Passage from towed camera observations – the NBP08-05 Expedition. Deep Sea Biology Symposium, Reykjavik, Iceland
- **Waller, RG**; Matheson, C; Taviani, M; Shank, T; Adkins, J & Robinson, L (2010) Methodological advances in ancient DNA techniques for cold-water corals: Utility for phylogenetic studies. Deep Sea Biology Symposium, Reykjavik, Iceland
- **Waller, RG**; Robinson, LF; Scanlon, K, Blackwood, D (2008) Corals in the Antarctic, the NBP0805 Expedition. 4<sup>th</sup> International Deep Sea Coral Symposium, Wellington, New Zealand

### Invited Talks

- **2020 – Cool Corals Live Down Deep**. Oregon Institute of Marine Biology Summer Seminar Series (virtual due to covid19).
- **2019 – Climate Change Effects on Cold Water Coral Reproduction**. The Lovén Centre Tjärnö, University of Gothenburg, January 2019
- **2018 – Cool Corals**. Skidompha Library, Chats with Champions, Damariscotta, ME,

- **2017 – Hiding in the Depths; Cool Corals in the Gulf of Maine.** Ocean Engineering/CCOM seminar series, UNH
- **2016 – Cold Water Corals.** Society for Women in Marine Science, WHOI, USA, September 2016
- **2016 – Reproductive Seasonality of the Deepwater Emerged Coral, *Primnoa pacifica*, in the Alaskan Fjords.** Tjarno Marine Laboratory, University of Gothenburg, Sweden, April 2016
- **2016 – Introducing Reproduction in Cold Water Corals.** Tjarno Marine Laboratory, University of Gothenburg, Sweden, April 2016
- **2015 - Coral Ecosystems of the Gulf of Maine.** Belfast Free Library, ME, November 2015
- **2015 - Cool Corals in Hot Water.** Palmer Station Science Night, Antarctica, October 2015
- **2015 - Coral Ecosystems of the Gulf of Maine.** Jesup Memorial Library, ME, January, 2015
- **2014 – Coral Ecosystems of the Gulf of Maine.** Merryspring Nature Center, Camden, ME, April 2014
- **2014 – Peering into the Darkness: Corals in the Strangest Places.** Skidompha Library Chats with Champions, Damariscotta, ME, April 2014
- **2014 – Cold Water Corals.** Shanghai Ocean University, China, March 2014
- **2014 – Cold Water Corals.** Xiamen University, China, March 2014
- **2013 – Into the Deep Unknown.** University of Maine Mid Coast Alumni Association. After dinner speaker, April 2013
- **2013 – From the Poles to the Deep Ocean: Corals living and thriving in cold waters.** Smith College Life Sciences Colloquia Series, Massachusetts, February 2013
- **2012 – Patagonian Fjords Expedition.** Closer Look Seminar Series. National Geographic Headquarters, Washington DC, September 2012
- **2012 – Keynote – Reproduction of a Deepwater Emerged Octocoral in the Southeastern Alaskan Fjords.** 5<sup>th</sup> International Deep-Sea Coral Symposium, Amsterdam, April 2012
- **2010 – Cold Water Corals: The implications of climate change on polar deep-water species.** University of Maine, May 2010
- **2010 - Corals in Cold Water, from the Poles to the Deep Ocean.** Lakehead University, Canada, February 2010
- **2009 - Corals in Cold Water.** Institute of Marine Sciences. University of Alaska, Fairbanks, USA, January 2009
- **2008 - Keynote - Reproduction of Antarctic Cold-Water Corals.** 4th International Deep-Sea Coral Symposium, Wellington, New Zealand, December 2008
- **2007 - Deep Water Corals; Past, Present and Future.** Hawaii Institute of Marine Biology, University of Hawaii, February 2007
- **2007 - Deep Water Corals; Past, Present and Future.** School of Ocean and Earth Sciences, University of Hawaii, February 2007
- **2006 - Ancient DNA Techniques in Deep-Water Corals.** Ocean Climate Change Institute, Woods Hole, MA, October 2006
- **2005 - Cold-Water Scleractinians: Reproductive Processes at Depth.** Darling Marine Center, Maine, November 2005
- **2003 – Keynote - The Reproductive Ecology of Two Deep-Sea Reef Building Corals from the NE Atlantic Ocean.** 2<sup>nd</sup> International Deep-Sea Coral Symposium, Erlangen Germany, September 2003

**Research Funding, Year Received, (\*Active Grants)**

- **\*2022 – Waller RG & Hoff G – Reproduction of Alaskan Corals, \$309,721, North Pacific Research Board**

- **\*2021 – Waller RG & Etnoyer P** – Recruitment, Reproduction and Larval Supply in Alaskan Deep-Water Corals and Sponges, \$187,556, NOAA/NMFS/AFSC, Deep Sea Coral Initiative
- **2017 – Waller RG & Larsson A** – 1,291,373 SEK (\$144,683) - Cold water coral larval survivorship under environmental stressors: assessing anthropogenic impacts on vulnerable ecosystem engineers. Marie Curie, MoRE2020 Vastra Gotaland
- **2015 – Stone R & Waller, RG** - \$73,640 - *Ocean Acidification Experimentation on Primnoa pacifica* - NOAA/NMFS
- **2014 – Waller, RG** - \$875,000 – Exploration of Underwater habitats in Glacier Bay National Park – NOAA Ocean Exploration
- **2014 – Waller, RG & Auster PJ** - \$352,318– *Corals in the Gulf of Maine* – NOAA Deep Sea Coral Research and Technology Program
- **2013 – Waller, RG & Stone R** - \$49,800 – *Reproductive comparisons of deep Primnoa pacifica in the Gulf of Alaska* - NOAA/NMFS
- **2013 - Waller, RG** - \$381,384 - *Cold Corals in Hot Water - Investigating the Physiological Responses of Antarctic Coral Larvae to Climate change Stress* – National Science Foundation: Polar Programs
- **2012 - Waller, RG & Stone R** - \$48,816 – *Reproductive ultrastructure of red tree corals from Tracy Arm Fjord, southeastern Alaska: delving deeper into recovery dynamics* – NOAA/NMFS
- **2012 - Waller, RG** - 22,546 Euros - *Natural Laboratories in the Chilean Fjords: Studying Reproduction and Development in Emergent Deep-Sea Corals* – National Geographic Society, Global Exploration Fund
- **2012 - Waller, RG** - \$78,457 - *RAPID: Natural Laboratories in the Chilean Fjords: Studying Reproduction and Development in Emergent Deep-Sea Corals* – National Science Foundation: Biological Oceanography
- **2012 - Waller, RG** - \$87,082 – *Life history characteristics of West Coast deep-sea coral species* – NOAA West Coast and Polar Regions/ Deep Sea Coral Research and Technology Program.
- **2012 - Waller, RG** - \$2000 – *Deep technical dive training* – Women Divers Hall of Fame
- **2011 - Waller, RG & Robinson, LF** — \$484,774 — *Collaborative Research: Historic perspectives on climate and biogeography from deep-sea corals in the Drake Passage* – National Science Foundation: Polar Programs
- **2011 - Waller, RG** - \$20,000 – Exploring the Gulf of Maine using deep technical SCUBA – UMaine Faculty Research Awards.
- **2011 - Waller, RG** - \$20,000 – *Biogeography of Marine Habitats* - USGS
- **2010 - Waller, RG** — \$13,000 — *Reproduction in Red Tree Coral* - National Geographic/Waitt Foundation
- **2010 - Stone, R & Waller, RG** — \$24,804 — *Reproductive ecology of the red tree coral (Primnoa pacifica)* - NOAA/NMFS
- **2008 - Waller, RG** — \$10,000 — *Biogeography of Deep-Sea Corals from Drake Passage seamounts* - Census of Marine Life for Seamounts
- **2007 - Robinson, LF & Waller, RG** — \$441,543 — *Glacial Radiocarbon Constraints from Drake Passage Deep-Sea Corals* – National Science Foundation: Polar Programs
- **2007 - Waller, RG & Shank, T** — \$207,221 — *Paleogenetics of Pleistocene Deep-Water Corals from the Mediterranean Sea: The Rise and Fall of Coral Populations within the Basin* – National Science Foundation: Biological Oceanography
- **2007 - Waller, RG & Robinson, LF** — \$5,000 — *Establishing Collaborations with La Fundación Huinay, Chile* - WHOI Mary Sears

- **2007** - France, S; Shank, T; **Waller, RG** — \$216,625 — *Collaborative Research: Stepping Stones Across the Atlantic: Co-evolution and Dispersal of Deep-Water Corals and Their Associates on NW Atlantic Seamounts* – National Science Foundation: Biological Oceanography
- **2007** - **Waller, RG** – \$100,000 - *Biogeography of marine habitats* - USGS
- **2005** - **Waller, RG** — \$50,000 — *Marine Habitat Studies* - United States Geological Survey
- **2005** - **Waller, RG** & Shank, T — \$97,779 — *New Molecular Tools to examine Paleophylogeographic Responses to Climate Change: Ancient Coral Migrations in the North Atlantic* - WHOI Ocean Life and Ocean Climate Change Institutes
- **2005** - Shank, T; **Waller, RG**; Adkins, J — \$124,659 — *Stepping Stones Across the Atlantic: Exploring Pathways and Barriers to the Dispersal and Evolution of Deep-Sea Corals and Associated Fauna* - NOAA Ocean Exploration

**Total research funding - \$4.13 Million**

### Teaching Experience

#### **University of Maine**

- **2017 - Present (Spring & Summer)** – SMS374 – Deep Sea Biology (3 credits, online course)
- **2015 – Present (Fall)** - SMS480/INT510 – Invertebrates of the Maine Coast (4 credits)
- **2014 - 2017 (Fall)** - SMS350 - Semester by the Sea Seminar (1 credit)
- **2014 (Summer)** – SMS491 – Larval Ecology (3 credits)
- **2013 (Summer)**– SMS491 – Functional Morphology and Histology of Marine Invertebrates (3 credits) - co-teach ½ course
- **2012** – SEA Semester – Oceanography (3 credits) – Adjunct lecturer for SEA Semester in Woods Hole (MA), six weeks intensive teaching for 15 students

#### **University of Maine – Undergraduate Thesis Supervision (3 credits) Capstone (final year) and Honors -**

- **2020 – 2021** – Capstone Thesis Advised (4) – Ashley Wackerman, Evan Dunn, Megan Dunnock, Jocelyn Cooper
- **2020 – 2021** – Honors Thesis Advised (2) – Ciara Lawrence, Josh Lynn
- **2018 – 2019** - Capstone Thesis Advised (2) – Genny Wilson, Hannah Kerigan
- **2017 – 2018** – Honors Thesis Committee (1) - Molly Westbrook
- **2017 – 2018** – Capstone Thesis Advised (4) - Katherine Lasdin, Jennifer Fields (CUGR Funding), Charles Clark, Joshua Cook
- **2016 – 2017** – Capstone Theses Advised (2) – Taja Harper, Aaron Burdeau
- **2016 – 2017** – Honors Theses Committee (2) – McKenzie Thompson, Kelsey Moon
- **2015 – 2016** – Honors Thesis Advised (1) – Audrey Dean
- **2015 – 2016** – Capstone Theses Advised (2) – Ashley Rossin, Elise Hartill
- **2014 – 2015** – Capstone Theses Advised (5) – Melissa Hoffman, Madison Leary, Darron Kriegel, Sabrina Pearson, Caroline Lawrence
- **2013 - 2014** – Capstone Theses Advised (3) – Amy Wyman, Sam Roush, Colleen Anderson
- **2012–2013** – Capstone Theses Advised (3) – Keri Feehan, Zachary Carbee, Christina Genz
- **2011-2012** – Capstone Theses Advised (2) – Robert Cefola, Iain Philbrook

#### **University of Hawaii at Manoa**

- **2010** – OCN621 – Biological Oceanography (3 credits) – Co-teach 1/3 course
- **2009 - 2010**– OCN201 – Science of the Sea (3 credits) – Co-taught 1/3 course for 2 years.
- **2009** – OCN621 – Biological Oceanography (3 credits) - Corals and Coral Reef Biology – 4 lectures
- **2008** - OCN628 – Benthic Biology (3 credits) – Reproduction and Recruitment – 1 lecture



- **2008** - OCN628 – Benthic Biology (3 credits) – Recruitment and Adult-Larvae Interactions – 2 lectures
- **2008** - OCN628 – Benthic Biology (3 credits) – Corals – 6 lectures, 2 labs – “Corals, the Basics”, “Anthropogenic Impacts”, “Coral Reefs” and “Deep-Water Corals”

#### ***Postdoctoral Fellows Advised***

- **Jay Lunden** (2015 – 2016) – Climate change effects on Antarctic coral larvae – now faculty at Haverford University

#### ***Graduate Advising, Committees & Defenses (\* in progress)***

- **\*Emily Pierce, Ph.D.** – University of Maine/ University of New England – “eDNA in Invasive Invertebrates” - Committee
- **\*Thomas Heran, Ph.D.** – Alfred Wagener Institute for Polar and Marine Research – “Reproductive Ecology of Corals from the Huinay Fjord, Patagonian Chile - Committee
- **2021 - Julia Johnstone, Ph.D.** – University of Maine – “Environmental Impacts on the Reproduction of Three Cold Water Corals, with Implications for their Vulnerability to Ocean Warming and Climate Change.” – Advisor
- **2019 - Elise Hartill, M.Sc.** – University of Maine – “Biogeography across a gradient of glacial retreat in Glacier Bay National Park and Preserve” - Advisor
- **2018 - C. Tyler Fountain, M.Sc.** – University of Maine – “Cold Corals in the Gulf of Maine” - Advisor
- **2018 - Ashley Rossin, M.Sc.** – University of Maine – “Ocean Acidification Effects on Reproduction of *Primnoa pacifica*” - Advisor
- **2016 - Suzanne Stromberg, Ph.D.** – University of Gothenburg – “Embryogenesis and Larval Ecology of the Deep-Water Coral *Lophelia pertusa*” - Ph.D. Opponent
- **2016 - Keri Feehan, M.Sc.** – University of Maine – “Seasonal Reproduction in a Chilean Fjord Coral, *Desmophyllum dianthus*” - Advisor
- **2014 - Steve Auscavitch M.Sc.** – University of Maine – “Biogeographic Patterns Among Deep-Sea Benthic Megafaunal Communities Across the Drake Passage (Southern Ocean)” - Advisor
- **2011 - Daniel Wagner Ph.D.** – University of Hawaii at Manoa – Reproduction in Hawaiian Black Corals – Committee Member
- **2011 - Jackie Padilla-Gamino Ph.D.** – University of Hawaii at Manoa – Ecology of *Montipora capitata* – Committee Member
- **2010 - Anela Choy Ph.D.** – University of Hawaii at Manoa – Food Web Linkages in the Central North Pacific – PQE Exam Committee
- **2003 - Hannah Flint, M.Sc.** – Southampton Oceanography Centre (UK) - “Reproductive ecology of the deep sea scleractinian *Fungiacyathus marenzelleri* from the Pacific Ocean” – Co-Advised under Prof. Tyler
- **2003 - Kathryn Johnson, M.Sc.** – Southampton Oceanography Centre (UK) - “Reproduction of deep-sea Antarctic Actinarians” – Co-Advised under Prof. Tyler

#### **Professional Affiliations & Committees**

- **2021 – Present** - School of Marine Sciences (University of Maine) Peer Committee
- **2021- Present** – Associate Editor, *Frontiers in Marine Science* – Deep-Sea Environments and Ecology
- **2021 – Present** – Deep Ocean Stewardship Initiative: Challenger 150 Decade Working Group on the Arctic
- **2021** – University of Maine College of Natural Sciences, Forestry and Agriculture Research Awards Committee

- **2020 – 2021** – School of Marine Sciences (University of Maine) Retreat organization committee
- **2019 – Present** – Science Council, Horizon 2020 EU Project iAtlantic
- **2015 – 2021** – UNOLS Council (2 terms)
- **2015** – School of Marine Sciences (University of Maine) Hiring Committee, Marine Physiologist
- **2015 – Present** - School of Marine Sciences (University of Maine) Undergraduate Curriculum Committee
- **2014 – 2017** - School of Marine Sciences (University of Maine) Peer Committee
- **2013 – Present** – University of Maine Dive Control Board
- **2013** – Fellow National of the Explorers Club (voted membership)
- **2013** – Women Divers Hall of Fame Associate Member
- **2013** – University of Maine – School of Marine Sciences - Field Experiences for Undergraduates Committee
- **2011 - 2012** - Organizing Committee: 5<sup>th</sup> International Deep-Sea Coral Symposium, Amsterdam
- **2005 - 2006** – Postdoctoral Committee – Woods Hole Oceanographic Institution

### Awards

- **2015** – Voted into the Explorers Club
- **2012** – National Geographic Explorer - <http://www.nationalgeographic.com/explorers/bios/rhian-waller/>
- **2011** – Antarctic Service Medal of the United States of America
- **2002** - Outstanding Student Paper Award - AGU Fall Meeting, San Francisco
- **2002** - Woods Hole Oceanographic Institution – Southampton Oceanography Centre, Exchange Program
- **Daily Telegraph Young Science Writer Award**, 2000 (Merit), 2001 (Runner Up), 2002 (Runner Up), 2003 (Finalist)

### Community Service

#### ***Proposal Panel Member –***

- **2018** – National Science Foundation
- **2017** – National Science Foundation
- **2011** – National Science Foundation EPSCoR Reverse Site Visit

#### ***Proposal Reviewer for –***

- **2020** – National Science Foundation Biological Oceanography
- **2019** - Geschäftsstelle des Gutachterpanels Forschungsschiffe (German Shiptime Proposal); National Science Foundation Biological Oceanography
- **2018** - National Science Foundation Polar Programs, National Science Foundation CAREER
- **2017** – National Science Foundation Polar Programs, NOAA Ocean Exploration
- **2016** - National Science Foundation Polar Programs, CONICYT (Chilean Research)
- **2015** - National Science Foundation Polar Programs, National Science Foundation Biological Oceanography
- **2014** – National Science Foundation Polar Programs; National Science Foundation CAREER; USGS White Paper Reviews
- **2013** – Schmidt Ocean Institute; National Science Foundation: Polar Programs
- **2012** - National Science Foundation: Biological Oceanography
- **2011** - National Science Foundation: Biological Oceanography; US-Israel Binational Science Foundation.

- **2009** – National Science Foundation: Marine Geology and Geophysics; National Science Foundation: Systematic Biology and Biodiversity Inventories; AAUS Student Scholarship Proposals.
- **2008** – National Science Foundation: Population and Evolutionary Processes.
- **2007** – InterRidge Working Group Proposals; National Science Foundation: Biological Oceanography; National Science Foundation: Population and Evolutionary Processes.
- **2005** – NOAA Undersea Research Center.

**Peer-Reviewer for –**

- **2021** – Frontiers in Marine Science
- **2020** - Frontiers in Marine Science, Marine Biology, PLoS ONE
- **2019** – Frontiers in Marine Science, Deep Sea Research Part 1
- **2018** – Frontiers in Marine Science, Marine Biology Research
- **2017** – Marine Biology, Antarctic Science, Frontiers in Marine Science, Marine Biology Research
- **2016** - Polar Biology, Proceedings of the Biological Society of Washington
- **2015** – PLoS ONE, Polar Biology, Coral Reefs
- **2014** – Polar Biology; PLoS ONE
- **2013** – Deep Sea Research Part 2; PLoS ONE; Marine Ecology Progress Series, Invertebrate Reproduction and Development; Marine Ecology Progress Series
- **2012** - Marine Biology; Deep Sea Research Part 2; Invertebrate Reproduction and Development; Marine Ecology Progress Series
- **2011** – Marine Biology; Deep Sea Research Part 1; Invertebrate Reproduction and Development; Molecular Ecology; Hydrobiologia; Invertebrate Biology.
- **2010** – Marine Biology; Marine Ecology Progress Series; Deep Sea Research Part 1; Hydrobiologia; Coral Reefs.
- **2009** – Marine Ecology Progress Series; Marine Biology; Biodiversity and Conservation.
- **2008** – Marine Biology; Marine Ecology Progress Series.
- **2007** – Biological Bulletin, Marine Biology, Coral Reefs.

**Workshop and conference organization**

- **2021** – Faculty retreat to reconfigure our undergraduate curriculum
- **2016** – 6th International Symposium on Deep Sea Corals (Boston) – Steering Committee
- **2012** – 5<sup>th</sup> International Symposium on Deep Sea Corals (Amsterdam) – Scientific Committee
- **2007** – InterRidge Theoretical Institute Meeting – Biogeochemical Interactions at Deep-Sea Vents Working Group Meeting – local organizer as InterRidge Coordinator
- **2004** – 10<sup>th</sup> International Coral Reef Symposium (Okinawa) – Deep Water Corals session – Co-Organized with Amy Baco-Taylor

**Outreach Efforts**

- **2021** – The Maine Question – What’s so cool about cold water corals? – Podcast - <https://umaine.edu/podcasts/2020/11/05/s3e8-whats-so-cool-about-cold-water-corals/>
- **2020** – National Geographic Learning: featured in a math textbook Algebra 1, alongside a video interview and webinar. <https://www.bigideaslearning.com/programs/high-school/aga-2022/rhian-waller/>
- **2019** – UMaine Today - *In Sweden, Waller shares in-depth knowledge of cold-water corals* – Article and Video - <https://umaine.edu/news/blog/2019/02/15/in-sweden-waller-shares-in-depth-knowledge-of-cold-water-corals/>
- **2017** – Touch tank at the local YMCA Preschool

- **2016** – NSF Science 360 News – Research at the Ends of the Earth - <https://news.science360.gov/obj/video/028ad095-fe1a-41c9-9980-b7c34be3300d/research-ends-earth>
- **2016** – UMaine Today – Undergraduate Research – Research at the Ends of the Earth - <https://umaine.edu/news/blog/2016/07/25/research-ends-earth/>
- **2016** – National Geographic Kids – Diving With Sharks! – pp37-67 – Rhian Waller: Keeping Your Cool!
- **2015** – Semester in Antarctica – UMaine News - <https://umainetoday.umaine.edu/archives/fallwinter-2015/semester-in-antarctica/>
- **2014** – National Geographic Learning – Time Zones English Language Course – Student Book 2 – story contributor
- **2014** – National Geographic Learning & Cengage Learning – Environmental Science 15<sup>th</sup> Edition (Miller GT & Spoolman SE) – story contributor & online bio
- **2014** - *Rhian Waller to Examine As-of-yet-unexplored Remote Fjords in Glacier Bay National Park and Preserve* – UMaine News - <https://umaine.edu/news/blog/2014/10/09/going-deep/>
- **2014** – Interviewed by NPR for Cold Water Corals in the Gulf of Maine - <http://news.mpbnet/post/gulf-maine-coral-formations-dazzle-scientists>
- **2013** – National Geographic Learning – Cambridge English – story contributor
- **2013** - *Researchers Recommend Conservation of Coral Communities*. UMaine Today
- **2013** – *UMaine marine scientist, National Geographic 'risk taker' to study effects of climate change in West Antarctica*. Penobscot Bay Pilot
- **2013** - National Geographic – 125<sup>th</sup> Anniversary Special, March 2013 – featured in the “New Age of Exploration: Risk Takers” - <http://ngm.nationalgeographic.com/exploration/risk-takers-gallery#/8>
- **2013** - *National Geographic Magazine Lauds UMaine's 'Ice Water Diver'*. UMaine Today
- **2012** – *Cold Coral*. UMaine Today - <http://umainetoday.umaine.edu/past-issues/winter-2012/8244-2/>
- **2012** – *Slideshow – Cold Water Corals*. UMaine Today
- **2012** - *Marine Biologist Gains Funding for Deep Sea Coral Research*. UMaine Today
- **2012** – **2014** - National Geographic Explorers Journal - <http://newswatch.nationalgeographic.com/author/rwaller/>
- **2012** – Interviewed for video on the 5<sup>th</sup> International Symposium on Deep Sea Corals - <http://www.youtube.com/watch?v=edSsnWmlh68>
- **2011** – COSEE Summer Curriculum Development Workshop – Featured Scientist – Colby College, July 2011
- **2011** – Deep Water Corals in the Drake Passage – online expedition creator and writer
- **2010** – Interviewed for children’s book “Seven Wonders of Exploration Technology”, Fred Borth
- **2008** – Deep Water Corals in the Drake Passage – online expedition creator and writer
- **2007** - *Coral catastrophe on the Corner Rise Seamounts*. Oceanus, Dec 07
- **2006** – NSF Science 360 News – Picture of the Day: Baby Pictures - <https://news.science360.gov/obj/pic-day/86c1de6b-eeb3-4ae2-b22c-a3a8fbb4b467/baby-pictures>
- **2006** - *What other tales can coral skeletons tell?* Oceanus, Nov 06
- **2006** - *Creature Feature – Deep-Water Corals*. CenSeam newsletter No. 5, Nov 2006
- **2006** - *Lullaby for Larvae: A WHOI biologist becomes midwife for Antarctic Deep-Sea Corals*. Oceanus, Aug 2006
- **2006** – “Deep-Water Coral” Podcast for the WHOI Ocean Life Institute – [www.whoi.edu/institutes/podcasts.html](http://www.whoi.edu/institutes/podcasts.html)
- **2006** – Lawrence School (Falmouth) science fair judge

- **2005** – Interview and footage of deep-water coral damage for an UNEP documentary
- **2005** – NOAA Ocean Explorer – North Atlantic Stepping Stones – Topic and “Fun Fact” writer
- **2002** – **2006** - Dive and Discover – Expeditions 5,6,7 and 9 – Mail buoy participant, hot topic writer, photographic contributions

### **Sea Experience**

Over 45 research expeditions on European and American vessels including over a dozen as a Co-PI and three as Chief Scientist. Expeditions took place to the NE, NW and Mid-Atlantic Ocean, Pacific Ocean, Galapagos Islands and the Southern Ocean and involve the use of submersibles, ROV's, AUV's and traditional oceanographic equipment such as OTSB, Agassiz and Blake trawls, dredges, box cores and VanVean Grabs. This does not include numerous undergraduate training cruises onboard small boats and coastal SCUBA expeditions. Lead one Okeanos Explorer Expedition (EX2104) to the New England and Corner Rise Seamounts.

### **SCUBA Experience**

- **2012** – Decompression Procedures (TDI) – 497279 – Instructor Sean Harrison (815) – Maine, USA
- **2012** – Advanced Nitrox (TDI) – 497272 – Instructor Sean Harrison (815) – Maine, USA
- **2012** – Divemaster (SDI) – 17386 – Instructor Christopher Rigaud (16441) – Maine, USA
- **2012** – Ice Diving (PADI) – Instructor David Sinclair (MSDT 41177) – Maine, USA
- **2011** – Enriched Air Nitrox (PADI) – 11080o6633 – Instructor Christopher Rigaud (MSDT 95649) – Maine, USA
- **2011** – Rescue Diver (PADI) – 11080r8348 - Instructor Christopher Rigaud (MSDT 95649) – Maine, USA
- **2010** – Advanced Open Water (PADI) – 10080i6152 – Instructor Kevin Boyce (MSDT 234298) – Hawaii, USA
- **2010** – Dry Suit (PADI) – 10060o7591 – Instructor Stephen B. Carey (57815) – Massachusetts, USA
- **2009** – Open Water (PADI) – 09070J1102 – Instructor Micheal Angelo (OWSI---233599) – Hawaii, USA