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EDUCATION

- 1995 Ph.D., Biology, University of Michigan, Ann Arbor.
1992 M.S., Biology, University of Michigan, Ann Arbor.
1990 B.S., Zoology, Duke University, Durham, North Carolina.

PROFESSIONAL EXPERIENCE

- 2015-present Professor, Department of Ecology & Evolution, Stony Brook University.
2019-present Research Associate, Smithsonian Tropical Research Institute, Republic of Panama
2015-2021 Chair, Department of Ecology & Evolution, Stony Brook University.
2012-2015 Professor, Department of Biology, University of Alabama at Birmingham.
2012-2013 Interim Chair, Department of Biology, University of Alabama at Birmingham.
2006-2015 Scientist, UAB Center for AIDS Research.
2006-2012 Associate Professor, Department of Biology, University of Alabama at Birmingham.
2000-2006 Assistant Professor, Department of Biology, University of Alabama at Birmingham.
1998-2000 Postdoctoral Research Associate, University of Guam Marine Laboratory.
Advisor: Dr. Valerie J. Paul.
1996-1998 Postdoctoral Research Associate, Pacific Biomedical Research Center,
University of Hawaii. Advisor: Dr. Michael G. Hadfield.
1995-1996 Postdoctoral Research Associate, University of Guam Marine Laboratory.
Advisor: Dr. Valerie J. Paul.
1990-1995 Doctoral Research, Dept. of Biology, University of Michigan at Ann Arbor.
Advisor: Dr. Brian A. Hazlett (Retired).

AWARDS

- 2008 Inaugural Dean's Award for Excellence in Mentorship, UAB Graduate School.

GRANTS AND FELLOWSHIPS RECEIVED

- 2024 *FY23 Continued AIS Coordinator, Multi-Purpose AIS Team, and Aquatic Plant Management on Long Island, New York F23AS00259.* Graduate Research Assistant Support with New York State Department of Environmental Conservation. **US Fish & Wildlife Service.** \$95,022.
- 2023 *AIS Coordinator, Multi-Purpose AIS Team, and Aquatic Plant Management on Long Island, New York FY22.* Graduate Research Assistant Support with New York State Department of Environmental Conservation. **US Fish & Wildlife Service.** \$96,553.
- 2022 *AIS Coordinator, Multi-Purpose AIS Team, and Aquatic Plant Management on Long Island, New York FY21.* Graduate Research Assistant Support with New York State Department of Environmental Conservation. **US Fish & Wildlife Service.** \$99,955
- 2021-2025 *Collaborative Research: MTM 2: Marine Invertebrate Microbiome Assembly, Diversification, and Coevolution.* Emerging Frontiers Program, **National Science Foundation** \$2,841,868 total (\$1,102,086 to RWT).
- 2021-2027 *Resilient Communities and Critical Infrastructure: Protecting Groundwater Resources.* **SUNY Empire Innovation Program.** \$600,000. Lead PI: K. Aubrecht; co-PIs: R. Thacker, B. Phillips, A. McElroy. *Funds to support hiring 2 SUNY Professors of Empire Innovation.*
- 2021 *Aquatic Nuisance Species Management: Aquatic Invasive Species Coordinator.* Graduate Research Assistant Support with New York State Department of Environmental Conservation. **US Fish & Wildlife Service.** \$93,804.
- 2020 *Aquatic Nuisance Species Management: Aquatic Invasive Species Coordinator.* Graduate Research Assistant Support with New York State Department of Environmental Conservation. **US Fish & Wildlife Service.** \$63,721.
- 2018-2022 *Collaborative Research: Investigations into microbially mediated ecological diversification in sponges.* Biological Oceanography Program, Division of Ocean Sciences, **National Science Foundation**, \$799,890 total (\$99,068 to RWT).
- 2015-2017 *Collaborative Research: ARTS: Integrative Research and Training in Tropical Taxonomy.* Systematics and Biodiversity Science, Division of Environmental Biology, **National Science Foundation**, \$605,761 total (\$73,406 to RWT).
- 2012-2015 *Collaborative Research: arbor: Comparative Analysis Workflows for the Tree of Life.* Assembling, Visualizing, and Analyzing the Tree of Life, Division of Environmental Biology, **National Science Foundation**, \$4,000,000 total (\$499,999 to RWT).
- 2012-2015 *Collaborative Research: Next Generation Phenomics for the Tree of Life.* Assembling, Visualizing, and Analyzing the Tree of Life, Division of Environmental Biology, **National Science Foundation**, \$3,216,421 total (\$79,110 to RWT).
- 2008-2014 *Collaborative Research: ATOL: PorToL – The Porifera Tree of Life Project.* Assembling the Tree of Life Program, Division of Environmental Biology, **National Science Foundation**, \$2,940,000 (\$1,076,938 to RWT).
- 2007-2011 *Collaborative Research: Aplysina Red Band Syndrome: Investigating the etiology, pathogenesis, and ecology of an emerging marine disease.* Biological Oceanography

- Program, Division of Ocean Sciences, **National Science Foundation**, \$689,512 (\$236,005 to RWT).
- 2011 *Assessing the impact of oil/dispersant on marine sponges and their symbiotic communities.* **BP Gulf Research Institute**, \$12,000.
- 2010 *Research Experiences for Undergraduates Supplement*, **National Science Foundation**, \$15,000.
- 2008-2010 *GAC Biofilters in Retrofit Applications.* American Water Works Research Foundation, **Subcontract to RWT from Birmingham Water Works Board**, \$9,928.
- 2004-2007 *Collaborative Research: Molecular and Chemical Ecology of Freshwater Sponges: Impacts of Sponge Hosts on Symbiotic Microbial Communities.* Molecular and Cellular Biosciences Program, Microbial Observatories, **National Science Foundation**, \$99,090 (\$38,821 to RWT).
- 2004-2007 *Assessing the Diversity of Sponge-Microbial Associations: Developing Bioinformatic Tools for Ocean Biotechnology Research.* **National Institute for Undersea Science and Technology**, NOAA, \$126,990.
- 2005-2006 *Research Experience for Teachers Supplement.* Molecular and Cellular Biosciences Program, **National Science Foundation**, \$9,750.
- 2004-2005 *Research Experience for Teachers Supplement.* Systematic Biology Program, **National Science Foundation**, \$8,500.
- 2002-2005 *Coevolution of Marine Sponges and Symbiotic Cyanobacteria and Eubacteria.* Systematic Biology Program, **National Science Foundation**, \$179,066.
- 2002-2003 *Marine Sponges from the Alabama Coast: Anti-fouling Activity and Symbiotic Bacterial Communities.* **Mississippi-Alabama Sea Grant Consortium**, \$10,000.
- 2002 *Grant-in-Aid: Coevolution of Marine Sponges (Order Dendroceratida) and their Microbial Symbionts.* **Bermuda Biological Station for Research, Inc.**, \$2,919.
- 2002 *Evolution of Antibiotic Resistance by Bacterial Symbionts of Keratose Sponges: Preliminary Collections, DNA Sequencing, and Field Manipulations.* **Faculty Development Program**, University of Alabama at Birmingham, \$10,000.
- 2001 *Biology of Sponges, Cyanobacteria, and Freshwater Communities.* **Faculty Grant for Collection Development**, Mervyn H. Sterne Library, University of Alabama at Birmingham, \$1,983.
- 2001 *Ecology and Diversity of Microbial Communities in Marine Sponges.* **Faculty Research Grant**, Graduate School, University of Alabama at Birmingham, \$3,420.

PEER-REVIEWED PUBLICATIONS

- Lavrov DV, Diaz MC, Maldonado M, Morrow CC, Perez T, Pomponi SA, Thacker RW. 2023. Phylomitogenomics bolsters the high-level classification of Demospongiae (phylum Porifera). *PLoS ONE* 18(12): e0287281. doi: 10.1371/journal.pone.0287281
- Kelly JB, Carlson DE, Low JS, Thacker RW. 2022. Novel trends of genome evolution in highly complex tropical sponge microbiomes. *Microbiome* 10:164. doi.org/10.1186/s40168-022-01359-z
- Kelly JB, Thacker RW. 2021. New shallow water species of Caribbean *Ircinia* Nardo, 1883 (Porifera: Irciniidae). *Zootaxa* 5072(4): 301-323. doi: 10.11646/zootaxa.5072.4.1
- Freeman CJ, Easson CG, Fiore CL, Thacker RW. 2021. Sponge-microbe interactions on coral reefs: multiple evolutionary solutions to a complex environment. *Frontiers in Marine Science* 8:705053. doi: 10.3389/fmars.2021.705053
- Kelly JB, Carlson DE, Low JS, Rice T, Thacker RW. 2021. The relationship between microbiomes and selective regimes in the sponge genus *Ircinia*. *Frontiers in Microbiology* 12:489. doi: 10.3389/fmicb.2021.607289
- Freeman CJ, Easson CG, Matterson KO, Thacker RW, Baker DM, Paul VJ. 2020. Microbial symbionts and ecological divergence of Caribbean sponges: a new perspective on an ancient association. *The ISME Journal* 14(6): 1571-1583. doi: 10.1038/s41396-020-0625-3
- Easson CG, Chaves-Fonnegra A, Thacker RW, Lopez JV. 2020. Host population genetics and biogeography structure the microbiome of the sponge *Cliona delitrix*. *Ecology and Evolution* 10(4): 2007-2020. doi: 10.1002/ece3.6033.
- Wilkins LGE, Leray M, O’Dea A, Yuen B, Peixoto RS, Pereira TJ, Bik HM, Coil DA, Duffy JE, Herre EA, Lessios HA, Lucey NM, Mejia LC, Rasher DB, Sharp KH, Sogin EM, Thacker RW, Thurber RV, Wcislo WT, Wilbanks EG, Eisen JA. 2019 Host-associated microbiomes drive structure and function of marine ecosystems. *PLoS Biology* 17(11): e3000533. doi: 10.1371/journal.pbio.3000533
- Blank CE, Cui H, Mao J, Moore LR, Thacker RW, Walls RL. 2018. Accelerating the large-scale study of prokaryotic phenotypes and niche space evolution through time using the MicroO ontology, MicroPIE, and MicroPIEDigester software. In: Thessen, AE (Ed.) *Application of Semantic Technologies in Biodiversity Science*. Studies on the Semantic Web, IOS Press/AKA Verlag. <http://ebooks.iospress.nl/volume/application-of-semantic-technology-in-biodiversity-science>
- Moitinho-Silva L, Nielsen S, Amir A, Gonzalez A, Ackermann GL, Cerrano C, Astudillo-Garcia C, Easson C, Sipkema D, Liu F, Steinert G, Kotoulas G, McCormack GP, Feng G, Bell JJ, Vicente J, Björk JR, Montoya JM, Olson JB, Reveillaud J, Steindler L, Pineda M-C Marra MV, Ilan M, Taylor MW, Polymenakou P, Erwin PM, Schupp PJ, Simister RL, Knight R, Thacker RW, Costa R, Hill RT, Lopez-Legentil S, Dailianis T, Ravasi T, Hentschel U, Li Z, Webster NS, Thomas T. 2017. The sponge microbiome project. *GigaScience* 6: 1-7. doi: 10.1093/gigascience/gix077
- Pérez T, Díaz M-C, Ruiz C, Córdor-Luján B, Klautau M, Hajdu E, Lobo-Hajdu G, Zea S, Pomponi SA, Thacker RW, Carteron S, Tollu G, Pouget-Cuvelier A, Thélamon P, Marechal J-P, Thomas OP, Ereskovsky AV, Vacelet J, Boury-Esnault N. 2017. How a collaborative integrated taxonomic effort has trained new spongiologists and improved knowledge of Martinique Island (French Antilles, eastern Caribbean Sea) marine biodiversity. *PLoS ONE* 12(3): e0173859. doi: 10.1371/journal.pone.0173859.

- Collin R, Fredericq S, Freshwater DW, Gilbert E, Madrid M, Maslakova S, Miglietta MP, Rocha RM, Rodríguez E, Thacker RW. 2016. TaxaGloss – a glossary and translation tool for biodiversity studies. **Biodiversity Data Journal** 4: e10732. doi: 10.3897/BDJ.4.e10732.
- Thomas T, Moitinho-Silva L, Lurgi M, Björk JR, Easson C, Astudillo-Garcia C, Olson JB, Erwin PM, Lopez-Legentil S, Luter H, Chaves-Fonnegra A, Costa R, Schupp PJ, Steindler L, Erpenbeck D, Gilbert J, Knight R, Ackermann G, Lopez JV, Taylor MW, Thacker RW, Montoya JM, Hentschel U, Webster NS. 2016. Diversity, structure and convergent evolution of the global sponge microbiome. **Nature Communications** 7: 11870. doi: 10.1038/ncomms11870.
- Slattery M, Gochfeld DJ, Diaz MC, Thacker RW, Lesser MP. 2016. Variability in chemical defense across a shallow to mesophotic depth gradient in the Caribbean sponge *Plakortis angulospiculatus*. **Coral Reefs** 35: 11-22. doi: 10.1007/s00338-015-1324-9.
- Easson CG, Matterson KO, Freeman CJ, Archer SK, Thacker RW. 2015. Variation in species diversity and functional traits of sponge communities near human populations in Bocas del Toro, Panama. **PeerJ** 3:e1385. doi: 10.7717/peerj.1385.
- Baker DM, Freeman CJ, Knowlton N, Thacker RW, Kim K, Fogel ML. 2015. Productivity links morphology, symbiont specificity, and bleaching in the evolution of Caribbean octocoral symbioses. **The ISME Journal**. In Press.
- Diaz MC, Thacker RW, Redmond NE, Perez T, Collins AG. 2015. *Vansoestia caribensis* gen. nov., sp. nov.: first report of the family Ianthellidae (Verongida, Demospongiae) in the Caribbean. **Zootaxa** 3956(3):403-412. doi: 10.11646/zootaxa.3956.3.5.
- Freeman, CJ, Baker DM, Easson CG, Thacker RW. 2015. Shifts in sponge-microbe mutualisms across an experimental irradiance gradient. **Marine Ecology Progress Series** 526:41-53. doi: 10.3354/meps11249.
- Deans AR, Lewis SE, Huala E, Anzaldo SS, Ashburner M, et al. 2015. Finding our way through phenotypes. **PLoS Biology** 13(1):e1002033. doi: 10.1371/journal.pbio.1002033.
- Easson CG, Thacker RW. 2014. Phylogenetic signal in the community structure of host-specific microbiomes of tropical marine sponges. **Frontiers in Microbiology** 5:532. doi: 10.3389/fmicb.2014.00532.
- Thacker RW, Diaz MC, Kerner A, Vignes-Lebbe R, Segerdell E, Haendel MA, Mungall CJ. 2014. The Porifera Ontology (PORO): enhancing sponge systematics with an anatomy ontology. **Journal of Biomedical Semantics** 5:39. doi: 10.1186/2041-1480-5-39.
- Koo H, Mojib N, Thacker RW, Bej AK. 2014. Comparative analysis of bacterial community-metagenomics in coastal Gulf of Mexico sediment microcosms following exposure to Macondo oil (MC252). **Antonie van Leeuwenhoek** 106(5):993-1009. doi: 10.1007/s10482-014-0268-3.
- Olson JB, Thacker RW, Gochfeld DJ. 2014. Molecular community profiling reveals impacts of time, space, and disease status on the bacterial community associated with the Caribbean sponge *Aplysina cauliformis*. **FEMS Microbiology Ecology** 87(1):268-279. doi: 10.1111/1574-6941.12222.
- GIGA Community Scientists. 2014. The Global Invertebrate Genomics Alliance (GIGA): Developing community resources to study diverse invertebrate genomes. **Journal of Heredity** 105(1):1-18. doi: 10.1093/jhered/est084.
- Easson CG, Slattery M, Momm HG, Olson JB, Thacker RW, Gochfeld DJ. 2013. Exploring individual- to population-level impacts of disease on coral reef sponges: using spatial analysis to assess the fate,

- dynamics, and transmission of *Aplysina* red band syndrome (ARBS). *PLoS ONE* 8(11): e79976. doi: 10.1371/journal.pone.0079976.
- Camacho FA, Thacker RW. 2013. Predator cues alter habitat use by the amphipod *Hyaella azteca* (Saussure). *Freshwater Science* 32(4):1148-1154. doi: 10.1899/12-176.1.
- Burleigh G, Alphonse K, Alverson AJ, Bik HM, Blank C, Cirranello AL, Cui H, Daly M, Dietterich TG, Gasparich G, Irvine J, Julius M, Kaufman S, Law E, Liu J, Moore L, O'Leary MA, Passarotti M, Ranade S, Simmons NB, Stevenson DW, Thacker RW, Theriot EC, Todorovic S, Velazco PM, Walls RL, Wolfe JM, Yu M. 2013. Next-generation phenomics for the tree of life. *PLoS Currents Tree of Life*. doi: 10.1371/currents.tol.085c713acafc8711b2ff7010a4b03733.
- Harmon LJ, Baumes J, Hughes C, Soberon J, Specht CD, Turner W, Lisle C, Thacker RW. 2013. Arbor: Comparative analysis workflows for the tree of life. *PLoS Currents Tree of Life*. doi: 10.1371/currents.tol.099161de5eabdee073fd3d21a44518dc.
- Thacker RW, Hill AL, Hill MS, Redmond NE, Collins AG, Morrow CC, Spicer L, Carmack CA, Zappe ME, Pohlmann D, Hall C, Diaz MC, Bangalore PV. 2013. Nearly complete 28S rRNA gene sequences confirm new hypotheses of sponge evolution. *Integrative and Comparative Biology* 53(3): 373-387. doi: 10.1093/icb/ict071.
- Morrow CC, Redmond NE, Picton BE, Thacker RW, Collins AG, Maggs CA, Sigwart JD, Allcock AL. 2013. Molecular phylogenies support homoplasy of multiple morphological characters used in the taxonomy of Heteroscleromorpha (Porifera: Demospongiae). *Integrative and Comparative Biology* 53(3): 428-446. doi: 10.1093/icb/ict065.
- Redmond NE, Morrow CC, Thacker RW, Diaz MC, Boury-Esnault N, Cardenas P, Hajdu E, Lobo-Hajdu G, Picton BE, Pomponi SA, Kayal E, Collins AG. 2013. Phylogeny and systematics of Demospongiae in light of new small-subunit ribosomal DNA (18S) Sequences. *Integrative and Comparative Biology* 53(3): 388-415. doi: 10.1093/icb/ict078.
- Diaz MC, Thacker RW, Redmond NE, Matterson KO, Collins AG. 2013. Phylogenetic novelties and geographic anomalies among tropical Verongida. *Integrative and Comparative Biology* 53(3): 482-494. doi:10.1093/icb/ict033.
- Alvizu A, Diaz MC, Bastidas C, Rützler K, Thacker RW, Marquez LM. 2013. A skeleton-less sponge of Caribbean mangroves: invasive or undescribed? *Invertebrate Biology* 132(2): 81-94. doi:10.1111/ivb.12015.
- Huang JP, Swain AK, Thacker RW, Ravindra R, Andersen DT, Bej AK. 2013. Bacterial diversity of the rock-water interface in an East Antarctic freshwater ecosystem, Lake Tawani. *Aquatic Biosystems* 9:4 doi:10.1186/2046-9063-9-4.
- Freeman CJ, Thacker RW, Baker DM, Fogel ML. 2013. Quality or quantity: is nutrient transfer driven more by symbiont identity and productivity than by symbiont abundance? *The International Society for Microbial Ecology Journal* 7(6): 1116-1125. doi: 10.1038/ismej.2013.7.
- Hill MS, Hill AL, Lopez J, Peterson KJ, Pomponi S, Diaz MC, Thacker RW, Adamska M, Boury-Esnault N, Cárdenas P, Chaves-Fonnegra A, Danka E, De Laine B, Formica D, Hajdu E, Lobo-Hajdu G, Klontz S, Morrow CC, Patel J, Picton B, Pisani D, Pohlmann D, Redmond NE, Reed J, Richey S, Riesgo A, Rubin E, Russell Z, Rützler K, Sperling EA, di Stefano M, Tarver JE, Collins AG. 2013. Reconstruction of family-level phylogenetic relationships within Demospongiae (Porifera) using nuclear encoded housekeeping genes. *PLoS ONE* 8(1):e50437. doi:10.1371/journal.pone.0050437.

- Shirey TB, Thacker RW, Olson JB. 2012. Composition and stability of bacterial communities associated with granular activated carbon and anthracite filters in a pilot scale municipal drinking water treatment facility. *Journal of Water and Health* 10(2): 244-255. doi:10.2166/wh.2012.092.
- Thacker RW, Freeman CJ. 2012. Sponge-microbe symbioses: Recent advances and new directions. *Advances in Marine Biology* 62: 57-111.
- Gochfeld DJ, Easson CG, Freeman CJ, Thacker RW, Olson JB. 2012. Disease and nutrient enrichment as potential stressors on the Caribbean sponge *Aplysina cauliformis* and its bacterial symbionts. *Marine Ecology Progress Series* 456: 101-111.
- Gochfeld DJ, Kamel HN, Olson JB, Thacker RW. 2012. Trade-offs in defensive metabolite production but not ecological function in healthy and diseased sponges. *Journal of Chemical Ecology* 38: 451-462.
- Erwin PM, Olson JB, Thacker RW. 2011. Phylogenetic diversity, host-specificity, and community profiling of sponge-associated bacteria in the northern Gulf of Mexico. *PLoS ONE* 6(11): e26806. doi:10.1371/journal.pone.0026806.
- Freeman CJ, Thacker RW. 2011. Complex interactions between marine sponges and their symbiotic microbial communities. *Limnology and Oceanography* 56(5): 1577-1586. doi:10.4319/lo.2011.56.5.1577
- Thacker RW, Diaz MC, de Voogd NJ, van Soest RWM, Freeman CJ, Mobley AS, LaPietra J, Cope K, McKenna S. 2010. Assessment of sponge biodiversity on Saba Bank, Netherlands Antilles. *PLoS ONE* 5(5): e9622. doi:10.1371/journal.pone.0009622.
- Collin R, Mobley AS, Lopez LB, Leys SP, Diaz MC, Thacker RW. 2010. Phototactic responses of larvae from the marine sponges *Neopetrosia proxima* and *Xestospongia bocatorensis* (Haplosclerida: Petrosiidae). *Invertebrate Biology* 129(2): 121-128.
- Sharp K, Arthur KE, Gu L, Ross C, Harrison G, Gunasekera SP, Meickle T, Matthew S, Luesch H, Thacker RW, Sherman DH, Paul VJ. 2009. Phylogenetic and chemical diversity of three chemotypes of bloom-forming *Lyngbya* species (Cyanobacteria: Oscillatoriales) from reefs of Southeastern Florida. *Applied and Environmental Microbiology* 75(9): 2879-2888.
- Slattery M, Kamel HN, Ankisetty S, Gochfeld DJ, Hoover CA, Thacker RW. 2008. Hybrid vigor in a tropical Pacific soft coral community. *Ecological Monographs* 78(3): 423-443.
- Erwin PM, Thacker RW. 2008. Cryptic diversity of the symbiotic cyanobacterium *Synechococcus spongiarum* among sponge hosts. *Molecular Ecology* 17: 2937-2947.
- Erwin PM, Thacker RW. 2008. Phototrophic nutrition and symbiont diversity of two Caribbean sponge-cyanobacteria symbioses. *Marine Ecology Progress Series* 362: 139-147.
- Taylor MW, Thacker RW, Hentschel U. 2007. Evolutionary insights from sponges. *Science* 316: 1854-1855.
- Erwin PM, Thacker RW. 2007. Incidence and identity of photosynthetic symbionts in Caribbean coral reef sponge communities. *Journal of the Marine Biological Association of the United Kingdom* 87: 1683-1692.
- Thacker RW, Diaz MC, Rützler K, Erwin PM, Kimble SJA, Pierce MJ, Dillard SL. 2007. Phylogenetic relationships among the filamentous cyanobacterial symbionts of Caribbean sponges and a comparison of photosynthetic production between sponges hosting filamentous and unicellular cyanobacteria. In: Custódio MR, Lôbo-Hajdu G, Hajdu E, Muricy G (eds.). *Porifera Research*:

- Biodiversity, Innovation, and Sustainability**, Série Livros 28. Museu Nacional, Rio de Janeiro. pp. 621-626.
- Diaz MC, Thacker RW, Rützler K, Piantoni C. 2007. *Haliclona* (*Soestella*) *walentinae* (Chalinidae, Haplosclerida) and *Xestospongia bocatorensis* (Petrosiidae, Haplosclerida), two new sponge species from Caribbean Panamá with filamentous cyanobacterial symbionts. In: Custódio MR, Lôbo-Hajdu G, Hajdu E, Muricy G (eds.). **Porifera Research: Biodiversity, Innovation, and Sustainability**, Série Livros 28. Museu Nacional, Rio de Janeiro. pp. 31-39.
- Gochfeld DJ, Schlöder C, Thacker RW. 2007. Sponge community structure and disease prevalence on coral reefs in Bocas del Toro, Panamá. In: Custódio MR, Lôbo-Hajdu G, Hajdu E, Muricy G (eds.). **Porifera Research: Biodiversity, Innovation, and Sustainability**, Série Livros 28. Museu Nacional, Rio de Janeiro. pp. 335-343.
- Erwin PM, Thacker RW. 2007. Phylogenetic analyses of marine sponges within the order Verongida: a comparison of morphological and molecular data. **Invertebrate Biology** 126(3): 220-234.
- Taylor MW, Hill RT, Piel J, Thacker RW, Hentschel U. 2007. Soaking it up: the complex lives of marine sponges and their microbial associates. **The International Society for Microbial Ecology Journal** 1(3): 187-190.
- Thacker RW, Camacho FA. 2007. Invertebrate herbivores induce saxitoxin production in *Lyngbya wollei*. In: Hudnell HK (ed.) **Cyanobacterial Harmful Algal Blooms: State of the Science and Research Needs**, Advances in Experimental Medicine & Biology 619: 312-313.
- Camacho FA, Thacker RW. 2006. Amphipod herbivory on the freshwater cyanobacterium *Lyngbya wollei*: chemical stimulants and morphological defenses. **Limnology and Oceanography** 51: 1870-1875.
- Thacker RW, McLeod AM, McLeod SW. 2005. Herbivore-induced saxitoxin production in the freshwater cyanobacterium *Lyngbya wollei*. **Algological Studies** 117: 415-425.
- Paul VJ, Thacker RW, Banks K, Golubic S. 2005. Benthic cyanobacterial bloom impacts the reefs of South Florida (Broward County, USA). **Coral Reefs** 24: 693-697.
- Flatt PM, Gautschi JT, Thacker RW, Musafija-Girt M, Crews P, Gerwick WH. 2005. Identification of the cellular site of polychlorinated peptide biosynthesis in the sponge *Dysidea* (*Lamellodysidea*) *herbacea* and symbiotic cyanobacterium *Oscillatoria spongelliae* by CARD-FISH analysis. **Marine Biology** 147: 761-774.
- Thacker RW. 2005. Impacts of shading on sponge-cyanobacteria symbioses: a comparison between host-specific and generalist associations. **Integrative and Comparative Biology** 45: 369-376.
- Sotka EE, Thacker RW. 2005. Do some corals like it hot? **Trends in Ecology and Evolution** 20(2): 59-62.
- Thacker RW. 2004. Biodiversity. **Journal of Natural Products** 67(9): 1636.
- Thacker RW, Paul VJ. 2004. Morphological, chemical, and genetic diversity of tropical marine cyanobacteria, *Lyngbya* spp. and *Symploca* spp. (Oscillatoriales). **Applied and Environmental Microbiology** 70(6): 3305-3312.
- Thacker RW, Starnes S. 2003. Host specificity of symbiotic cyanobacteria, *Oscillatoria spongelliae*, in marine sponges, *Dysidea* spp. **Marine Biology** 142: 643-648.
- Becerro MA, Thacker RW, Turon X, Uriz MJ, Paul VJ. 2003. Biogeography of sponge chemical ecology: comparisons of tropical and temperate defenses. **Oecologia** 135: 91-101.

- Thacker RW, Paul VJ. 2001. Are benthic cyanobacteria indicators of nutrient enrichment? Relationships between cyanobacterial abundance and environmental factors on the reef flats of Guam. **Bulletin of Marine Science** 69: 497-508.
- Thacker RW, Ginsburg DW, Paul VJ. 2001. Effects of herbivore exclusion and nutrient enrichment on coral reef macroalgae and cyanobacteria. **Coral Reefs** 19: 318-329.
- Paul VJ, Cruz-Rivera E, Thacker RW. 2001. Chemical mediation of seaweed-herbivore interactions: ecological and evolutionary perspectives. Pages 227-265 in: J. McClintock and B. Baker (editors). **Marine Chemical Ecology**. CRC Press, Boca Raton, Florida.
- Hazlett BA, Bach CE, McLay C, Thacker RW. 2000. A comparative study of the defense syndromes of New Zealand marine crustacea. **Crustaceana** 73 (8): 899-912.
- Thacker RW, Hadfield MG. 2000. A mitochondrial phylogeny of extant Hawaiian tree snails. **Molecular Phylogenetics and Evolution** 16: 263-270.
- Giménez-Casaldueiro F, Thacker RW, Paul VJ. 1999. Association of color and feeding deterrence by tropical reef fishes. **Chemoecology** 9: 33-39.
- Thacker RW, Becerro MA, Lumbang WA, Paul VJ. 1998. Allelopathic interactions between sponges on a tropical reef. **Ecology** 79(5): 1740-1750.
- Thacker RW. 1998. Avoidance of recently eaten foods by land hermit crabs, *Coenobita compressus*. **Animal Behavior** 55: 485-496.
- Thacker RW, Nagle DG, Paul VJ. 1997. Effects of repeated exposures to marine cyanobacterial secondary metabolites on feeding by juvenile rabbitfish and parrotfish. **Marine Ecology Progress Series** 147: 21-29.
- Thacker RW. 1996. Food choices of land hermit crabs (*Coenobita compressus* H. Milne Edwards) depend on past experience. **Journal of Experimental Marine Biology and Ecology** 199: 179-191.
- Thacker RW. 1994. Volatile shell-investigation cues of land hermit crabs: effect of shell fit, detection of cues from other hermit crab species, and cue isolation. **Journal of Chemical Ecology** 20 (7): 1457-1482.
- Small MP, Thacker RW. 1994. Land hermit crabs use odors of dead conspecifics to locate shell sources. **Journal of Experimental Marine Biology and Ecology** 182: 169-182.
- Thacker RW, Hazlett BA, Esman LA, Stafford CP, Keller T. 1993. Color morphs of the crayfish *Orconectes virilis*. **American Midland Naturalist** 129 (1): 182-199.

TECHNICAL REPORTS

Thacker RW, Hadfield MG. 1998. The status of Newcomb's tree snail, *Newcombia cumingi*, on West Maui. **U. S. Fish and Wildlife Service Report.**

Pegram RA, Humpage AR, Neilan BA, Runnegar MT, Nichols T, Thacker RW, Pflugmacher S, Etheridge SM, Love AH. 2007. Chapter 15: Cyanotoxins Workgroup Report. In: Hudnell HK (ed.) ***Cyanobacterial Harmful Algal Blooms: State of the Science and Research Needs***, Advances in Experimental Medicine & Biology 619: 317-382.

INVITED PRESENTATIONS AT SCIENTIFIC MEETINGS

Thacker RW. 2015. Arbor: Comparative analysis workflows for the Tree of Life. **Phenotype Research Coordination Network.** Tucson, Arizona.

Thacker RW, Dewar MJ, Zappe ME, Easson CG. 2014. Diversity and stability of symbiotic bacterial communities associated with haplosclerid sponges in Bocas del Toro, Panama. **2nd International Symposium on Sponge Microbiology.** Baltimore, Maryland.

Thacker RW. 2012. Sponge Working Group: Moving from analog to digital species descriptions using ontologies. **Phenotype Research Coordination Network.** Asilomar, California.

Thacker RW. 2011. Challenges for large-scale phylogenetics in the Porifera Tree of Life. **NESCent Workshop: Challenges for large-scale phylogeny and alignment estimation.** Durham, North Carolina.

Thacker RW. 2010. Sponge-microbe symbioses: recent advances and new directions. **8th World Sponge Conference.** Girona, Spain.

Thacker RW, Olson JB. 2007. Molecular and chemical ecology of freshwater sponges: Microbial communities associated with the freshwater sponges *Radiospongilla crateriformis* and *Eunapius fragilis*. **4th NSF Microbial Observatories Workshop.** Washington, D.C.

Thacker RW, Camacho FC. 2005. Invertebrate herbivores induce saxitoxin production in *Lyngbya wollei*. **Interagency International Symposium on Cyanobacterial Harmful Algal Blooms.** Research Triangle Park, North Carolina.

Thacker RW. 2005. Sponge-microbe symbioses: model systems for integrating molecular and chemical ecology. **21st Annual Meeting of the International Society of Chemical Ecology.** Washington, D.C.

Olson JB, Thacker RW. 2004. Molecular and chemical ecology of freshwater sponges. **3rd NSF Microbial Observatories Workshop.** Big Sky, Montana.

Thacker RW. 2004. Cyanobacteria in sponges: host specificity and ecological manipulations. **Gordon Research Conference on Marine Natural Products.** Ventura, California.

Thacker RW. 2004. Field manipulations of sponge symbioses: differences between generalist and host-specific cyanobacteria. **Annual Meeting of the Society for Integrative and Comparative Biology.** Symposium: *Sponges: New Views of Old Animals.* New Orleans, Louisiana.

CONTRIBUTED PRESENTATIONS AT SCIENTIFIC MEETINGS (Past 10 years) —

- Thacker RW, Campos Rizzieri R, Moscoso JA, George AM, Karim SO, Poddar U, Shafiq A, Silver R. 2024. Marine invertebrate microbiomes provide an immersive course-based undergraduate research experience. **Annual Meeting of the Society for Integrative and Comparative Biology**. Seattle, Washington.
- George AM, Thacker RW. 2023. Keratose sponges (Porifera) from southern India, including five novel species. **Evolution 2023**. Albuquerque, New Mexico.
- Moscoso JA, Thacker RW. 2023. Convergent microbial community structure of coral colonies beneath mangrove canopies. **Evolution 2023**. Albuquerque, New Mexico.
- Thacker RW, Rugila AL. 2022. Independent microbiome assembly among sponges hosting the filamentous cyanobacterium *Hormoscilla spongelliae*. **11th World Sponge Conference**. Leiden, Netherlands.
- Weigel BL, Janusson CV, Lemay MA, Turner TL, Paulay G, Thacker RW. 2022. Biodiversity of marine sponges (Porifera) in the Northeastern Pacific Ocean (Washington, USA and British Columbia, Canada). **11th World Sponge Conference**. Leiden, Netherlands.
- Akther T, Easson CG, Collin R, Thacker RW. 2021. Comparing adult and larval microbiomes in the tropical sponges *Neopetrosia sigmafera* and *Xestospongia bocatorensis*. **Annual Meeting of the Society for Integrative and Comparative Biology**. Held as a virtual meeting in 2021.
- Collin R, Fredericq S, Freshwater DW, Maslakova S, Miglietta MP, Rocha R, Rodriguez E, Thacker RW. 2017. Increasing access to methods in organismal taxonomy and identification. **Annual Meeting of the Society for Integrative and Comparative Biology**. Portland, Oregon.
- Thacker RW, Matterson KO, Easson CG. 2016. Genetic variability of sponge-cyanobacteria associations across the Caribbean. **Annual Meeting of the Society for Integrative and Comparative Biology**. Portland, Oregon.
- Matterson KO, Thacker RW. 2016. Reduced irradiance and elevated nutrient concentration negatively impacts host growth and symbiont abundance in the tropical ascidian *Trididemnum solidum*. **Annual Meeting of the Society for Integrative and Comparative Biology**. Portland, Oregon.
- Collin R, Fredericq S, Maslakova S, Miglietta MP, Rocha R, Rodriguez E, Thacker RW. 2016. Increasing international access to vocabularies for organismal taxonomy. **Annual Meeting of the Society for Integrative and Comparative Biology**. Portland, Oregon.
- Easson CG, Thacker RW. 2015. Host-specific community structure of tropical sponge microbiomes. **Annual Meeting of the Society for Integrative and Comparative Biology**. West Palm Beach, Florida.
- Hamidi HM, Cardenas P, Thacker RW. 2015. Diversification and correlated trait evolution in astrophorid sponges (Porifera: Demospongiae). **Annual Meeting of the Society for Integrative and Comparative Biology**. West Palm Beach, Florida.
- Jones CL, Hamidi HM, Cui H, Rodenhause T, Wu HH, Thacker RW. 2015. Exploring taxon concepts of sponges (Porifera) through natural language processing of systematic monographs. **Annual Meeting of the Society for Integrative and Comparative Biology**. West Palm Beach, Florida.

Matterson KO, Easson CG, Thacker RW. 2015. Variable impact of top-down forces and photosymbiont-derived nutrition on Caribbean shallow-water sponges. **Annual Meeting of the Society for Integrative and Comparative Biology**. West Palm Beach, Florida.

INVITED SEMINAR PRESENTATIONS (Past 10 Years) ---

Thacker RW. 2022. Living World: Ecological Complexity of Sponge-Microbe Interactions. **Stony Brook University**, Stony Brook, New York.

Thacker RW. 2022. Ecological and Evolutionary Diversification of Sponge-Microbe Interactions. **Louisiana State University**, Baton Rouge, Louisiana.

Thacker RW. 2022. Ecological Complexity of Sponge-Microbe Interactions. **University of California Santa Barbara**, Santa Barbara, California.

Thacker RW. 2021. Celebrating the Complexity of Sponge-Microbe Interactions. **Smithsonian Tropical Research Institute**, Balboa, Panama.

Thacker RW. 2018. Is Sponge Diversification Mediated by Microbial Symbiosis? **American Museum of Natural History**, New York, New York.

Thacker RW. 2016. Evolution of Community Structure in Sponge Microbiomes. Department of Biology, **Long Island University - Post**, Brookville, New York.

Thacker RW. 2015. Evolution of Community Structure in Sponge Microbiomes. School of Marine and Atmospheric Sciences, **Stony Brook University**, Stony Brook, New York.

TEACHING EXPERIENCE ---

2015-present Department of Ecology & Evolution, Stony Brook University

Ecology
Statistics and Data Analysis
Molecular Diversity Laboratory
Undergraduate Research in Ecology & Evolution
Seminar on Population and Community Ecology
Seminar on Evolutionary Processes

2005-present Bocas del Toro Research Station, Smithsonian Tropical Research Institute

Taxonomy and Ecology of Caribbean Sponges

2000-2015 Department of Biology, University of Alabama at Birmingham

Molecular Ecology and Phylogenetics
Ecology
Limnology
Techniques in Biological Research
Seminar in Ecology: Molecular Ecology
Undergraduate Research
Undergraduate Honors Research

PROFESSIONAL SERVICE ACTIVITIES

- 2015-present Editorial Board and Review Editor, *Frontiers in Microbiology*.
2008-2019 Editor, *Invertebrate Biology*.
2012-2014 Program Officer, American Microscopical Society.
2010-2014 Editorial Board, *Integrative and Comparative Biology*.

GRADUATE STUDENT ADVISING

2015-present Stony Brook University

Primary Ph.D. Advisor

Raisa Campos Rizzieri
David Charifson
Joseph Kelly
Alyssa Liguori
Jose Moscoso Nunez
Allison Rugila
Michael Wallstrom

Primary M.A. Advisor

Scott Grimmell
Jessica Lau

M.A. / Ph.D. Committee Member

Michael Schrimpf

2000-2015 University of Alabama at Birmingham

Primary Ph.D. Advisor

Frank Camacho
Patrick Erwin
Chris Freeman
Kenan Matterson

Primary M.S. Advisor

Kevin Bevis
Garner Boogaerts
Kelly Breland
Patrick Erwin
Steve Kimble
Tessa Magnuson
Andrew Mobley
Aida Moran
Zach Nolen

M.S./Ph.D. Committee Member

Lisa Blankinship (Biology)
Philip Bucolo (Biology)
Andrew Coleman (Biology)

Tom Diggs (Biology)
Jenny Estes (Biology)
Alyssa Geiss (Biology)
Yu-Sheng Huang (Biology)
Gil Koplovitz (Biology)
Anne Marie LeBlanc (Biology)
Ruth McDowell (Biology)
Kevin Morse (Biology)
Janna Owens (Biology)
Kevin Peters (Biology)
Ricardo Tapilatu (Biology)
Xin Chen (Computer Science)
Ying Liu (Computer Science)

GRANT PROPOSALS REVIEWED

NASA Exobiology Program
National Fish and Wildlife Foundation
NOAA National Undersea Research Program
NOAA Ocean Exploration Program
NSF Assembling the Tree of Life Program
NSF Biocomplexity in the Environment Program
NSF Biodiversity Surveys and Inventories Program
NSF Ecological and Evolutionary Physiology Program
NSF Ecological Biology Cluster
NSF Eukaryotic Genetics Program
NSF Evolutionary and Population Ecology
NSF Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories
NSF Integrative Organismal Biology Program
NSF Metabolic Biochemistry Program
NSF Microbial Observatories Program
NSF Microbial Interactions and Processes Program
NSF Molecular and Cellular Biosciences Program
NSF Organism – Environment Interactions Program
NSF Systematic Biology Program
NSF / USDA Microbial Genome Sequencing Program
Washington Sea Grant Program

MANUSCRIPTS REVIEWED

Acta Oecologica
Acta Zoologica Sinica
Applied and Environmental Microbiology
Aquatic Biology
Aquatic Toxicology
Biofouling
Biological Bulletin
Biology Letters
Caribbean Journal of Science
Coral Reefs
Ecology
Electronic Journal of Biotechnology

European Journal of Soil Biology
Evolution
FEMS Microbiology Ecology
Hydrobiologia
Invertebrate Biology
ISME Journal
Journal of Biogeography
Journal of Chemical Ecology
Journal of Experimental Marine Biology and Ecology
Journal of Fish Biology
Journal of the Marine Biological Association of the United Kingdom
Journal of Natural Products
Life and Environment
Limnology and Oceanography
Marine Biology
Marine Ecology
Marine Ecology Progress Series
Marine and Freshwater Research
Microbial Ecology
Molecular Ecology
Oecologia
Proceedings of the 6th International Sponge Conference
Restoration Ecology
Science
Vie et Milieu

PROFESSIONAL AFFILIATIONS

American Microscopical Society
American Society of Microbiologists
Ecological Society of America
International Society for Reef Studies
International Symbiosis Society
Sigma Xi Scientific Research Society
Society for Integrative and Comparative Biology
Society of Systematic Biologists