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The Ecosystems Center  
Marine Biological Laboratory  
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*Telephone: 508-289-7292*

## **EDUCATION**

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- 2007    PhD in Biology, Boston University Marine Program, Marine Biological Laboratory, Woods Hole, MA, USA  
  
PhD thesis: Macroalgal growth: Local and global comparisons of nutrient limitation and assimilation
- 2006    MA in Biology, Boston University Marine Program, MBL, Woods Hole, MA, USA
- 1998    BA in Biology, St. Mary's College of Maryland, USA  
  
BA thesis, *Distinction*: An Investigation of the survivability of *Zostera marina* transplants in the St. Mary's River Estuary: A field and laboratory study

## **PROFESSIONAL EXPERIENCE**

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- 9/21-        **Associate Scientist and Incoming Director, Semester in Environmental Science**  
*The Ecosystems Center, Marine Biological Laboratory  
Woods Hole, MA USA*
- 6/12-8/21    **Jr. Research Group Leader, Head of WG Algae and Seagrass Ecology**  
*Leibniz-Centre for Tropical Marine Research, Department of Ecology,  
Bremen, Germany*
- 11/10- 6/12    **Post-doc in ecophysiology**  
*Leibniz Centre for Tropical Marine Research, Bremen, Germany*
- 9/07- 11/10    **Post-doc in marine botany**  
*Jointly at University of Bremen and Leibniz Centre for Tropical Marine  
Research, Bremen, Germany*
- 9/02-6/07    **PhD Research Fellow**  
*Boston University Marine Program, Marine Biological Laboratory, Woods  
Hole, MA, USA*
- 9/02-8/05    **Assistant coordinator of NSF Research Experience for Undergraduates Coastal Bays of New England program**  
*Boston University Marine Program, Marine Biological Laboratory, Woods  
Hole, MA, USA*
- 1/00-9/01    **Research Assistant in Fish Biology**  
*Jointly at University of Maryland, Chesapeake Biological Laboratory and  
NOAA National Marine Fisheries Service Northeast Fisheries Science  
Center, Woods Hole, MA, USA*

10/98-1/00 **Environmental Management Fellow**  
*Jointly at the U.S. EPA Chesapeake Bay Program Office and  
 Chesapeake Research Consortium, USA*

## **AWARDS AND RECOGNITION**

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NSF-Doctoral Dissertation Enhancement Program International Fellowship 2006  
 Palmer McLeod Fellowship 2004  
 Distinction- St. Mary's College Honors Program, 1998  
 Maryland Senatorial Scholarship 1995-1998  
 Brent-Calvert Scholarship 1995-1998  
 Maryland Distinguished Scholar 1994-1998  
 MOST-National Park Scholarship 1994

## **RESEARCH EXPERIENCE**

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I have over 20 years of experience in the study of marine ecology. I have worked comparatively across temperate and tropical estuarine and coastal ecosystems examining the ecological and physiological response of marine organisms to their environment using field and laboratory-based approaches. I have focused on ecological consequences of eutrophication and environmental change on biodiversity and ecosystem function, with an emphasis on marine benthic habitats. Currently, I am researching how marine benthic primary producers respond to environmental change using a trait-based approach further linking morphological, physiological, and biochemical traits to understand shifts in community structure, ecosystem functions and service provision. Additionally, I have led a transdisciplinary research focus area on aquatic resource use and protection.

## **RESEARCH GRANTS**

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2019-2020	Rooting for resilience and carbon sequestration in seagrass restoration (ZMT Internal funds, Lead-PI <b>130,000€</b> )
2019-2020	Seagrass scenarios under thermal and nutrient stress (German Federal Ministry of Education and Research, BMBF, Co-PI <b>289,000€</b> )
2018-2020	Tropical Macroalgae Bio-based Products for Use in Natural Cosmetics (Merck, KGaA, Lead PI <b>300,000€</b> )
2017-2020	Seagrass ecosystem service evaluation using a trait-based approach (ZMT Internal Funds, Lead-PI <b>110,000€</b> )
2016-2020	Seagrass and macroalgal community dynamics and performance under environmental change (German Research Foundation, DFG, PI <b>415,580€</b> )
2013-2016	SUTAS-Sustainable Use of Tropical Aquatic Ecosystems-Sub-project: Seagrass meadows under conditions of increased eutrophication (Leibniz Association, Project Partner)
2012-2016	ZMT Algae and Seagrass Ecology Jr. Research Group Start-up Project: Impacts of eutrophication and climate change on tropical seagrass and macroalgal ecosystems (ZMT Internal funds, PI <b>80,000€</b> + Position)
2012-2016	Coral reef functioning and environmental drivers (German Federal Ministry of Education and Research, BMBF, SPICE III program, Lead-PI <b>130,314€</b> )
2012-2015	Adaptive traits of macrophyte performance and community structure at natural CO <sub>2</sub> vent sites (German Federal Ministry of Education and Research, BMBF, BIOACID II program, Co-PI, <b>150,000€</b> )
2009-2012	Competitive success of calcifying and non-calcifying macroalgae under shifting pH regimes in tropical vs. temperate regions (German Federal Ministry of Education and Research, BMBF, BIOACID program, Co-PI, <b>168,000€</b> )

## TEACHING EXPERIENCE

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- 2021 *Lecturer and mentor* in Aquatic Ecology (Semester in Environmental Science, MBL undergraduate course)
- 2010-2012 and 2014-2019 *Lecturer* of Seagrass Ecology (2.5-day course within Tropical Coastal Ecosystems, Uni Bremen, ISATEC MSc program)
- 2018-2020 *Guest lecturer* "Estuaries and Saltmarshes" in Introductory Marine Biology course (Uni Bremen, BSc program)
- 2017- *Guest lecturer* in Seagrass Biology and Ecology course (IUI, Eilat, Israel)
- 2015 *Guest lecturer* Monitoring Coral Reef Communities (3-day field course as part of Hasanuddin University, Marine Ecology Special Training course, Makassar, Indonesia)
- 2009-2013 *Lecturer* Scientific Writing and Communication (5 day course, Uni Bremen, ISATEC MSc program)
- 2008 *Co-lecturer* Physiology of Aquatic Organisms (Uni Bremen, Marine Biology MSc program)
- 2008 *Lecturer* Aquatic Flora (Uni Bremen, ISATEC Master's level course)
- 2008 *Guest lecturer* Ecophysiology of Marine Algae (Hasanuddin University, Marine Ecology Special Training course, Makassar, Indonesia)
- 2008 *Teaching assistant* Ecophysiology of Marine Algae (10 day field course, Uni Bremen, Marine Biology MSc program)
- 2007 *Guest lecturer* in Phytoplankton Ecology (Woods Hole Oceanographic Institution, Graduate level seminar)
- 2002-2006 *Mentor* National Science Foundation Research Experience for Undergraduates program Coastal Bays of New England
- 2002 *Teaching assistant* Marine Ecology (Boston University Marine Program, Graduate level field course)
- 2001 *Teaching assistant* Ichthyology (Boston University Marine Program, Graduate level field course)

## SUPERVISION

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*Post-doc supervisor* (5 Post-docs + 2 research fellows)

- 2019-2020: Dr. Stephanie Helber
- 2017-2019: Dr. Anna Fricke
- 2018-2020 and 2013-2015: Dr. E. Fay Belshe
- 2018-2019: Dr. Felix Bast (3 month NAM fellow)
- 2017-2018: Dr. Yahu La Nafie (3 month NAM fellow)
- 2015-2017: Dr. Inés Gonzalez Viana
- 2015: Dr. Jeremiah Plass-Johnson

*PhD Oral dissertation examination board* (16 students):

- 2021 Agustín Moreira-Saporiti. A trait-based approach to seagrass ecology.
- 2019 *Examiner* for PhD thesis of Sandra Walløe Thorsen, Ecological succession after coastal realignment with special focus on nutrient enrichment. University of Southern Denmark, Department of Biology, Odense, Denmark
- 2018 *Opponent* for PhD defense of Diana Deyanova. Seagrass productivity from plant to system, Department of Ecology, Environment, and Plant Sciences, Stockholm University
- 2017 Paul Tompkins. Historical knowledge, variation in community composition, ecotrophic parameterization, and invasive species of macroalgae in the Galapagos archipelago
- 2017 Lalita Putchim. Coral Bleaching and recovery in the Thai Andaman Sea
- 2017 Holger Kühnhold. Temperature tolerance of the sea cucumber *Holothuria scabra*: Towards a systematic understanding of multi-level temperature effects
- 2016 Kristina Koch. On the role of fatty acid composition in photoacclimation of seaweeds
- 2016 Friedrich Meyer. The physiology of coral reef calcifiers under local and global stressors
- 2015 Nikolas Vogel. Understanding individual and combined effects of ocean acidification, coastal runoff and warming on marine calcifying organisms on tropical coral reefs
- 2015 Jeremy Plass-Johnson. The functioning of coral reef communities along environmental

gradients

- 2015 Gaëlle Quéré. Ecology of diseases affecting crustose coralline algae  
 2012 Verena Witt. Effects of disturbances on microbial community composition and activity of biofilms from the Great Barrier Reef  
 2012 Tri Dewi Pribadi. Macroalgal ecophysiology in response to high ammonium concentrations and different irradiances  
 2012 Laurie Hofmann. Macroalgal performance and competition under elevated CO<sub>2</sub>  
 2012 Alexander Wolf. The role of macroalgae and the corallivorous fireworm *Hermodice carunculata* on coral reef resilience in the Caribbean  
 2011 Anna Fricke. Succession patterns of turf algal communities in a fringing coral reef  
 2010 Yvonne Savall. Coral resistance to natural and anthropogenic disturbances

*PhD committee panel member (17 students):*

Yvonne Savall; Anna Fricke; Tri Dewi Pribadi; Esteban Acevedo; Ines Stuhldreier; Jeremy Plass-Johnson; Gaëlle Quéré; Friedrich Meyer; Sara Minarro; Paul Tompkins, Holger Kühnhold; Daniel Saavedra Hortua; Dieuwke Hoeijmakers; Agustín Moreira-Saporiti, Paula Senff, Esther Thomsen

*BSc and MSc thesis supervisor (28 students):*

- 2021 Tatiana Torres. Cultivation methods for tropical marine macroalgae. MSc thesis. (1<sup>st</sup> supervisor)  
 2021 Jessica Schiebe. Tropical seagrass and macroalgal community response to climate change. MSc thesis. (1<sup>st</sup> supervisor)  
 2021 Nalukwago Sarah Ahmed. Eutrophication index on assessment of water quality and domestic sewage impact on marine ecosystems. MSc thesis. (2<sup>nd</sup> supervisor)  
 2020 Omar Haji. Restoration of seagrass meadows through seed propagation and field transplantation: A case study in Zanzibar, Tanzania. MSc thesis. (1<sup>st</sup> supervisor)  
 2020 Lara Kalisch. Food selectivity of the key sea urchin species *Tripneustes gratilla* along lagoon Patch Reefs in Mahé, Seychelles. MSc thesis. (1<sup>st</sup> supervisor)  
 2020 Bunmi Deborah Falodun. Effect of sediment amendment on the survival and growth of *Thalassia hemprichii* seedlings. MSc thesis. (host and 2<sup>nd</sup> supervisor)  
 2019 Finn Opätz. Long-term influence of anthropogenic eutrophication on *Posidonia oceanica* - A comparative study between impacted and non-impacted sites. BSc thesis. (1<sup>st</sup> supervisor)  
 2019 Christian Göbel. Seaweed productivity under different cultivation conditions. MSc thesis. (1<sup>st</sup> supervisor)  
 2019 Mondy Muhando. The influence of an invasive seaweed *Gracilaria edulis* and seagrass on performance and growth of the sea cucumber *Holothurian Scabra* in Bweleo, Zanzibar Tanzania. MSc thesis. (2<sup>nd</sup> supervisor)  
 2018 Ashley Miller. Light use efficiencies and photosynthesis of two coral species under varying temperatures. MSc thesis. (1<sup>st</sup> supervisor)  
 2018 Aoife O Sullivan. Investigating the effects of grazing and nutrient enrichment on seagrass and macroalgae community dynamics. MSc thesis. (host supervisor)  
 2017 Mónica Mariño. Social-economic assessment of seaweed farming in coastal communities and spacial planning for future management in Rote, Indonesia. MSc thesis. (1<sup>st</sup> supervisor)  
 2017 Mona Abouhaidar Andskog. Testing the iron limitation hypothesis in benthic algae using hyperspectral imaging, a novel technique. MSc thesis. (2<sup>nd</sup> supervisor)  
 2017 Merlin Helle. Fitness and productivity assessment of *Thalassia hemprichii* along an anthropogenic nutrient gradient in Stone Town (Zanzibar). BSc thesis. (host supervisor).  
 2017 Hugo Duarte Moreno. Impacts of wastewater inputs and seaweed farming on seagrass meadows in the region of Kupang, Indonesia. MSc thesis. (1<sup>st</sup> supervisor).  
 2017 Hannah Scarlett Earp. Nutrient induced florescent transient experiments with pulse amplitude modulation to determine the iron limited productivity of benthic reef macroalgae in Moorea, French Polynesia. MSc thesis. (2<sup>nd</sup> supervisor)  
 2016 Melanie Schulz. Influences of nutrient enrichment on physiological responses of tropical seagrasses. MSc thesis. (1<sup>st</sup> supervisor)

- 2016 Daniel Saavedra Hortua. Physiological response and nutrient uptake of tropical seagrass *Cymodocea serrulata* under varying nutrient conditions. MSc thesis. (1<sup>st</sup> supervisor)
- 2016 Agustín Moreira Saporiti. Sea urchin *Tripneustes gratilla* herbivory in seagrass meadows of Prison Island (Zanzibar). MSc thesis. (1<sup>st</sup> supervisor)
- 2015 Susann Lüneburg. Combined effects of ocean acidification and UV radiation on the calcifying green alga *Udotea occidentalis*. BSc thesis. (2<sup>nd</sup> supervisor)
- 2015 Esther Thomsen. The effects of combined sewage plant effluents and river runoff on seagrass communities, their morphology and physiology, and associated epiphytes in Roatan, Honduras. MSc thesis. (2<sup>nd</sup> supervisor)
- 2014 Laura Schmoock. The combined effects of carbon dioxide and ultraviolet light on the physiology and ecology of the calcifying green macroalgae *Halimeda*. BSc thesis. (2<sup>nd</sup> supervisor)
- 2014 Laura Larissa Fleur Weiland. Top-down and bottom-up drivers regulating macroalgae physiology and distribution along an eutrophication gradient in Spermonde Archipelago, South Sulawesi (Indonesia). MSc thesis. (1<sup>st</sup> supervisor)
- 2014 Florian Roth. Effects of simulated overfishing on the succession of benthic algae and invertebrates in upwelling-influenced coral reefs of Pacific Costa Rica. MSc thesis. (2<sup>nd</sup> supervisor)
- 2013 Jasmin Heiden. Benthic recruitment patterns in response to nutrient availability and grazing pressure in coral reefs of Spermonde Archipelago, Indonesia. MSc thesis. (1<sup>st</sup> supervisor)
- 2011 Jasmin Heiden. Impacts of an altered CO<sub>2</sub> and nutrient regime on the physiological performance of the green calcifying macroalga *Halimeda opuntia*. BSc thesis. (2<sup>nd</sup> supervisor)
- 2010 Maricela Rodriguez. Abiotic and biotic factors controlling the distribution and biomass of macroalgae in *Rhizophora mangle* roots in the Caeté estuary, Braganca (PA), Brazil. MSc thesis. (1<sup>st</sup> supervisor)

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## **EDITORIAL ACTIVITIES, MEMBERSHIPS, AND COORDINATION**

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*Guest Editor for Research Topic “Seagrasses Under Times of Change” in Frontiers of Plant Science (Starting December 2019)*

*Contributing Editor: Marine Ecology Progress Series (starting January 2019)*

*Associate Editor: Estuarine, Coastal, and Shelf Science (June 2014-2017)*

*Subject Editor: Marine Biology Research (2011-2016)*

*Peer reviewer: over 12 international journals including Nature, Estuarine, Coastal and Shelf Science, Marine Ecological Progress Series, Estuaries and Coasts, Aquatic Biology, Aquatic Ecology, Journal of Marine Biology, Harmful Algae, Aquatic Conservation Marine and Freshwater Ecosystems, Journal of Ecology, Marine Biology Research, Marine Biology, Frontiers of Marine Science, Frontiers of Plant Science, Science of the Total Environment*

*Scientific memberships: Estuarine Coastal Sciences Association (ECSA); Coastal and Estuarine Research Federation (CERF); American Society of Limnology and Oceanography (ASLO)*

*Euromarine Network General Assembly representative for the Leibniz Centre for Tropical Marine Research 2017-2020*

*Scientific coordinator: ZMT interdisciplinary Research focus area Marine Bioeconomy: Sustainable Innovative Aquatic Production*

*Scientific coordinator: ZMT Networking Event Marine Bioeconomy: Science meets Business (17-18.05.18)*

*Speaker: ZMT Program Area: Aquatic Resource Use and Protection*

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## **TRAINING COURSES AND SKILLS**

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*Supervision training course: 10/19 Supervision of doctoral candidates, Sabine Lerch, Science*

*Leadership training course:* 09/19 Leadership skills: How to initiate and facilitate constructive communication, collaboration, and innovation, Monika Maria Thiel  
*Leadership training course:* 01/13, CoachingColleg Berlin, Thomas Knappe  
*Diving:* Padi Advanced Diver scuba certification  
*Participation in research cruises:* NOAA Northeast Fisheries Science Center Bottom-Trawl Survey 2000, Northeast Fisheries Science Center 2001 Monkfish Research Survey  
*Languages:* English (native speaker); Spanish (advanced); German (basic)

## **PUBLICATIONS (students or post-docs supervised indicated by \*)**

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2021

- Moreno HD\*, Reuter H, Kase A, **Teichberg M.** 2021. Impacts of off-bottom seaweed farming and wastewater on seagrass meadows in the region of Rote Island, Indonesia. *Estuar Coast Shelf Sci.* doi.org/10.1016/j.ecss.2021.107635
- Moreira-Saporiti A\*, Bejarano S, Viana I\*, Belshe F\*, Mtolera M, **Teichberg M.** 2021 Local victory: Assessing interspecific competition in seagrass from a trait-based perspective. *Front Plant Sci.* doi.org/10.3389/fpls.2021.709257
- Helber SB\*, Procaccini G, Belshe EF, Santillan AR, Cardini U, Bröhl S, Schmid M, Reuter H, **Teichberg M.** Unusually warm summer temperatures exacerbate population and plant level response of *Posidonia oceanica* to anthropogenic nutrient stress. *Front Plant Sci.* https://doi.org/10.3389/fpls.2021.662682
- Helber SB\*, Winters G, Stuhr M, Belshe EF, Bröhl S, Schmid M, Reuter H, **Teichberg M.** 2021. Nutrient history affects the response and resilience of the tropical seagrass *Halophila stipulacea* to further enrichment in its native habitat. *Front Plant Sci* https://doi.org/10.3389/fpls.2021.678341
- Fricke A\*, Nguyen XV, Stuhr M, Hoang TD, Tran MD, Pham TS, Le HC, Le MH, Pham QL, Schmidt, M, Kunzmann A, Gärdes A, von Hagen J, **Teichberg M.** 2021. Subtidal macrophyte diversity and potentials in the Nha Trang Bay - baseline data for the monitoring of a rising natural resource. *Estuar Coast Shelf Sci* 259:107460
- Artika SR\*, Ambo-Rappe R, **Teichberg M,** Samawi MF, Saporiti AM\*, Viana IG\*. 2021. Morphological and physiological responses of *Enhalus acoroides* seedlings under experimental climate change conditions. *Appl Sci* 11: 2730. https://doi.org/10.3390/app11062730
- Reuter H, Breckwoldt A, Dohna T, Ferse S, Gärdes A, Glaser M, Huyghe F, Kegler H, Knittweis-Mifsud L, Kochzius M, Kraemer WE, Leins J, Lukman M, Madduppa H, Nuryanto A, Hui M, Miñarro S, Forero GN, Plass-Johnson J, Ratsimbazafy HA, Richter C, Sawall Y, Schwerdtner-Máñez K, **Teichberg M,** Timm J, van der Ven R, Jompa J. *In press.* Coral reef social-ecological systems under pressure in Southern Sulawesi. In: Jennerjahn T & Rixen T (eds.), *Science for the Protection of Indonesian Coastal Ecosystems*, Elsevier.
- Moriera-Saporiti A\*, Hoeijmakers D\*, Msuya F, Reuter H, **Teichberg M.** 2021. Seagrass and benthic macroalgae response to shading and trampling under seaweed farming pressure. *Reg Environ Change.* doi.org/10.1007/s10113-020-01742-2

2020

- Beca-Carretero P\*, **Teichberg M,** Winters G, Procaccini G, Reuter H. 2020. Projected habitat expansion of subtropical seagrass species in the Mediterranean Sea as climate change progresses. *Front Plant Sci.* 16 November 2020 https://doi.org/10.3389/fpls.2020.555376
- Viana I\*, Moreira-Saporiti A\*, **Teichberg M.** 2020. Species-specific trait responses of three tropical seagrasses to multiple stressors: the case of increasing temperature and nutrient enrichment. *Front Plant Sci.* 05 November 2020 https://doi.org/10.3389/fpls.2020.571363
- Artika SR\*, Ambo-Rappe R, **Teichberg M,** Saporiti AM\*, Viana IG\*. 2020. Morphological and physiological responses of *Enhalus acoroides* seedlings under varying temperature and nutrient treatment. *Front Mar Sci.* 15 May 2020 https://doi.org/10.3389/fmars.2020.00325

2019

- Marino M\*, Breckwolddt A, **Teichberg M**, Kase A, Reuter H. 2019. Livelihood aspects of seaweed farming in Rote Island, Indonesia. *Marine Policy* 107:103600
- Viana IG\*, Arturo Saavedra Hortua D\*, Mtolera M, **Teichberg M**. 2019. Different strategies of nitrogen acquisition in two tropical seagrasses under nitrogen enrichment. *New Phytologist*. <http://doi.org/10.1111/nph.15885>

2018

- Belshe EF\*, Hoeijmakers D\*, Herran N, Mtolera M, and **Teichberg M**. 2018. Seagrass community-level controls over organic carbon storage are constrained by geophysical attributes within meadows of Zanzibar, Tanzania. *Biogeosciences* 15: 4609-4626. <https://doi.org/10.5194/bg-15-4609-2018>
- Teichberg M**, Wild C, Bednarz VN, Kegler H, Lukman M, Gärdes A, Heiden J\*, Weiland L\*, Abu N, Nasir A, Minarro S, Ferse SCA, Reuter H, Plass-Johnson J\*. 2018. Spatio-temporal patterns in coral reef communities of the Spermonde Archipelago, 2012-2014, I: Comprehensive reef monitoring of water and benthic indicators reflect changes in reef health. *Front Mar Sci* 5:33. doi: 10.3389/fmars.2018.00033
- Plass-Johnson JG\*, **Teichberg M**, Bednarz VN, Gärdes A, Heiden J\*, Lukman M, Minarro S, Kegler H, Weiland L\*, Wild C, Reuter H, and Ferse SCA. 2018. Spatio-temporal patterns in coral reef communities of the Spermonde Archipelago, 2012-2014, II: Fish assemblages display structured variation related to benthic condition. *Front Mar Sci* 5:36. doi: 10.3389/fmars.2018.00036
- Plass-Johnson JG\*, Bednarz VN, Hill JM, Jompa J, Ferse SCA, **Teichberg M**. 2018. Contrasting responses in the niches of two coral reef herbivores along a gradient of habitat disturbance in the Spermonde Archipelago, Indonesia. *Front Mar Sci* 5:32. doi: 10.3389/fmars.2018.00032
- Glaser M, Ferse S, Neil M, Plass-Johnson J\*, Satari DY, **Teichberg M**, Reuter H. 2018. Breaking Resilience for a Sustainable Future: Thoughts for the Anthropocene. *Front Mar Sci* 5:34. doi: 10.3389/fmars.2018.00034
- Fricke A\*, Titlyanova TV, **Teichberg M**, Nugues MM, Bischof K. 2018. The Chlorophytes of Curaçao (Caribbean) – a revised checklist for the South-west coast. *Bot Mar* 61:33–46

2017

- Belshe EF\*, Mateo MA, Gillis L, Zimmer M, **Teichberg M**. 2017. Muddy waters: unintentional consequences of blue carbon research obscure organic carbon dynamics in seagrass ecosystems. *Front Mar Sci* doi: 10.3389/fmars.2017.00125
- Kegler H, Lukman M, **Teichberg M**, Plass-Johnson J\*, Wild C, Gärdes A. 2017. Coastal eutrophication controls the bacterial community composition in different reef habitats of the Spermonde Archipelago, Indonesia. *Front Microbiol* doi: 10.3389/fmicb.2017.00662

2016

- Meyer FW\*, Schubert N, Diele K, **Teichberg M**, Wild C and Enríquez S. 2016. Effect of inorganic and organic carbon enrichments (DIC and DOC) on the photosynthesis and calcification rates of two calcifying green algae from a Caribbean Reef Lagoon. *PLoS ONE* DOI: 10.1371/journal.pone.0160268
- Plass-Johnson JG\*, Heiden J, Abu N, Lukman M, **Teichberg M**. 2016. Experimental analysis of the effects of consumer exclusion on recruitment and succession of a coral reef system along a water quality gradient in the Spermonde Archipelago, Indonesia. *Coral Reefs* 35, 229-243
- Plass-Johnson JG\*, Taylor MH, Husain AAA, **Teichberg M**, Ferse SCA. 2016. Non-random variability in functional composition of coral reef fish communities along an environmental gradient. *PLoS ONE* 11, e0154014

2015

- Meyer FW\*, Vogel N, **Teichberg M**, Uthicke S, and Wild C. 2015. The physiological response of two calcifying green algae from the Great Barrier Reef towards high dissolved inorganic and organic carbon (DIC and DOC) availability. *PLoS ONE* 10(8):e0133596.

doi:10.1371/journal.pone0133596

- Plass-Johnson JG\*, Schwieder H, Heiden J\*, Weiland L\*, Wild C, Jompa J, Ferse S, **Teichberg M.** 2015. *Acanthaster planci* outbreak in the Spermonde Archipelago, Indonesia. *Reg Environ Change*: 15:1157-1162
- Plass-Johnson JG\*, Ferse SCA, Jompa J, Wild C, and **Teichberg M.** 2015. Fish herbivory as key ecological function in a heavily degraded coral reef system. *Limnol Oceanogr* 60:1382-1391
- Hofmann LC\*, Bischof K, Baggini C, Johnson A., and **Teichberg M.** 2015. CO<sub>2</sub> and inorganic nutrients effect the performance of a calcifying alga and its noncalcifying epiphyte *Oecologia*: 177:1157-1169
- Jessen C, Bednarz VN, Rix L, **Teichberg M.**, and Wild C. 2015. Marine Eutrophication. In: R.H. Armon and O. Hänninen (eds.), *Environmental Indicators* DOI 10.1007/978-94-017-9499-2\_11
- 2014
- Fricke A\*, **Teichberg M**, Nugues M, Beilfuss S, and Bischof K. 2014. Effects of depth and ultraviolet radiation on coral reef turf algae. *J Exp Mar Biol Ecol* 461:73-84
- Brodie J, Williamson C, Smale D, Kamenos N, Mieszkowska N, Santos R, Cunliffe M, Steinke M, Yesson C, Anderson K, Asnaghi V, Brownlee C, Burdett H, Burrows M, Collins S, Donohue P, Harvey B, Foggo A, Noisette F, Nunes J, Ragazzola F., Raven JA, Schmidt D, Suggett D, **Teichberg M**, Hall-Spencer J. 2014. The future of the NE Atlantic benthic flora in a high CO<sub>2</sub> world. *Ecol and Evol*: 13:2787-98
- Hofmann LC\*, Heiden JP\*, Bischof K, and **Teichberg M.** 2014. Nutrient availability affects the response of the calcifying chlorophyte *Halimeda opuntia* (L.) J.V. Lamouroux to elevated pH. *Planta* 239:231-242
- 2013
- Teichberg M**, Fricke A, and Bischof K 2013. Increased physiological performance of *Halimeda opuntia* in response to experimental nutrient enrichment. *Aquat Bot* 104:25-33
- 2012
- Fox SE, **Teichberg M**, Heffner L, and Valiela I. 2012. The relative role of nutrients, grazing, and predation as controls on macroalgal growth in a temperate estuary. *Estuaries Coasts* 35:1193-1204
- Teichberg M**, Martinetto P, and Fox S. 2012. Bottom-up and top-down controls of macroalgal blooms. In: C. Wiencke and K. Bischof (eds.), *Seaweed Biology, Ecological Studies* 219, DOI 10.1007/978-3-642-28451-9\_21, # Springer-Verlag Berlin Heidelberg
- 2011
- Sawall Y\*, **Teichberg M**, Seemann J, Litaay M, Jompa J, and Richter C. 2011. Nutritional status and metabolism of the coral *Stylophora subseriata* along a eutrophication gradient in Spermonde Archipelago (Indonesia). *Coral Reefs* 30:841-853
- Martinetto P, **Teichberg M**, Valiela I, Montemayor D, and Iribarne O. 2011. Top-down and bottom-up controls in a high nutrient-high herbivory coastal environment. *Mar Ecol Prog Ser* 432:69-82
- Fricke A\*, **Teichberg M**, Beilfuss S, and Bischof K. 2011. Succession patterns in algal turf vegetation on a Caribbean coral reef. *Bot Mar* 54:111-12
- Olsen YS, Fox SE, **Teichberg M**, Otter M, and Valiela I. 2011.  $\delta^{15}\text{N}$  and  $\delta^{13}\text{C}$  reveal dietary shifts of consumers in response to changes in the relative abundance of macroalgae and eelgrass. *Mar Ecol Prog Ser* 421:83-96
- 2010
- Teichberg M**, Fox SE, Olsen YS, Valiela I, Martinetto P, Iribarne O, Muto EY, Petti MAV, Corbisier TN, Soto-Jimenez M., Paez-Osuna F, Castro P, Freitas H, Zitelli A, Cardinaletti M, and Tagliapietra D. 2010. Eutrophication and macroalgal blooms in temperate and tropical coastal waters: Nutrient experiments with *Ulva* spp. *Global Change Biology* 16: 2624-2637
- Olsen YS, Kinney EL, Fox SE, **Teichberg M**, Valiela I. 2010. Differences in coastal



- urbanization and the degree of marine influence reflected in  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  of producers and consumers in seagrass habitats of Puerto Rico. *Mar Environ Res* 69: 198-206
- Fox SE, Olsen YS, **Teichberg M**, Valiela I. 2010. Controls acting on benthic macrophyte communities in a temperate and a tropical estuary. In: *Coastal Lagoons: Critical Habitats of Environmental Change* (eds Kennish, M. and Paerl, H.)
- 2009
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- 2002
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- Other publications*
- Teichberg M**. 2017. Die Seewiesen von Sansibar. In Hempel, Gotthilf; Hempel, Irmtraud; Hornidge, Anna-Katharina, Hrsg. *Klüger nutzen - besser schützen. Bremer Forschung an tropischen Küsten*. 1. Auflage, Edition Falkenberg, Bremen 2017, 160 Seiten, 109 farb. Abb., ISBN 978-3-95494-134-6
- Valiela, I. and **Teichberg, M**. 2007. Waquoit Bay, MA: Increased nitrogen load leads to increased eutrophic symptoms. In *Bricker et al. Effects of nutrient enrichment in the nation's estuaries: A decade of change*. NOAA Coastal Ocean Program Decision Analysis Series No. 26. National Centers for Coastal Ocean Science, Silver Spring, MD. 322pp
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## **PRESENTATIONS/CONFERENCES**

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- 2019 *Oral presentation*, Coastal and Estuarine Research Federation Conference, Mobile, Alabama; Seagrasses under pressure from intensive seaweed farming in Rote Island,

## Indonesia

- 2019 *Invited talk*, Alfred Wegener Institute, Sylt Station, Germany-Linking seagrass traits to community dynamics and ecosystem function under environmental change
- 2019 *Invited talk*, Virginia Institute of Marine Science, USA-Structure, traits, and feedbacks of tropical seagrass ecosystems under environmental change
- 2019 *Invited talk* Biology department, Southern Denmark University, Denmark-Structure and function of tropical coastal ecosystems
- 2018 *Oral presentation* Euromarine Workshop TRAITGRASS, Naples, Italy-Seagrass trait associations with ecosystem functions and services
- 2018 *Oral presentation* ECSA 57 conference, Perth, Western Australia-Tropical seagrass community dynamics reveal the role of biological feedbacks in influencing system resilience
- 2018 *Invited talk*, Biology department, Aarhus University-Macrophytes in a changing environment
- 2016 *Poster presentation* International Seaweed Biology Workshop, Wales-Understanding links between seagrass species traits and carbon storage in sediments
- 2016 *Oral presentation* Final workshop Sustainable Use of Tropical Aquatic Systems (SUTAS), Zanzibar
- 2016 *Oral presentation*- Final Workshop Science for the Protection of Indonesian Coastal Ecosystems (SPICE), Bali, Indonesia- Controls of benthic algae in a disturbed coral reef, Spermonde Archipelago
- 2016 *Invited talk* Euromarine Workshop Linking biodiversity, ecosystem functioning and ecosystem services: a comparison between temperate and tropical seagrass meadows, Sete, France
- 2016 *Poster presentation* International Seaweed Symposium, Copenhagen, Denmark - Seaweed farming effects on seagrass meadows of Chwaka Bay (Zanzibar)
- 2015 *Oral presentation* Coastal and Estuarine Research Federation, Portland, Oregon, Conference – Controls of benthic algae in a disturbed coral reef, Spermonde Archipelago
- 2015 *Oral presentation* American Society of Limnology and Oceanography, Granada, Spain- The effect of elevated CO<sub>2</sub> and inorganic nutrients on competition between the calcifying chlorophyte *Halimeda opuntia* and its noncalcifying epiphyte *Dictyota* sp.
- 2015- *Oral presentation* SIRTRE, Makassar, Indonesia-Linkages between water quality and coral reef benthic and pelagic communities along a nearshore to offshore gradient in the Spermonde Archipelago, Indonesia
- 2009 *Oral presentation* Coastal and Estuarine Research Federation, Portland, Oregon, Conference - Macroalgal blooms in temperate and tropical coastal waters: Nutrient enrichment, grazing, and ecophysiological field experiments
- 2009 *Oral presentation* Botanikertagung, Leipzig, Germany- Physiological responses of tropical reef macroalgae to nutrient enrichment along a reef slope
- 2007 *Invited speaker* Center for Tropical Marine Ecology, Bremen, Germany- Local and global comparisons of macroalgal response to nutrient enrichment
- 2007 *Invited speaker* Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA- Local and global comparisons of macroalgal response to nutrient enrichment
- 2007 *Oral presentation* on American Society of Limnology and Oceanography, Aquatic Science Meeting, Santa Fe, New Mexico- Response of *Ulva lactuca* and *Gracilaria tikvahiae* to nitrate and ammonium enrichment in Waquoit Bay, Massachusetts
- 2005 *Research seminar* University of Coimbra, Portugal-Controls of macroalgal growth: the relative influence of nutrient supply, grazing and predation
- 2005 *Oral presentation* American Society of Limnology and Oceanography, Santiago de Compostela, Summer Conference- Responses of the bloom-forming macroalga *Ulva lactuca* to nutrient supply: growth, enzyme activity, nutrient content, and isotopic signatures
- 2005 *Oral presentation* Estuarine Research Federation, Norfolk, Conference- Experimental and comparative study on macroalgal response to nutrient enrichment and grazing in a tropical mangrove and seagrass ecosystem
- 2005 *Research seminar* Boston University Marine Program -Bottom-up control of macroalgal blooms: A geographic comparison of the response of *Ulva lactuca* to nutrient supply

- 2004 *Research seminar* Boston University Marine Program - Evidence of internal and external nutrient control on growth of the macroalgae *Ulva lactuca* and *Gracilaria tikvahiae*
- 2003 *Research seminar* Boston University Marine Program -Coupling of benthic and pelagic food webs to terrestrial nitrogen
- 2001 *Oral presentation* Atlantic Fisheries Society, Southern New England Chapter Conference-Density-dependent growth and reproduction of Chesapeake Bay Striped Bass
- 1999 *Poster presentation* Atlantic Estuarine Research Society Conference- An Investigation of the survivability of *Zostera marina* transplants in the St. Mary's River Estuary: A field and laboratory study
- 1998 *Oral presentation* St. Mary's College Honors Program Ceremony - An Investigation of the survivability of *Zostera marina* transplants in the St. Mary's River Estuary: A field and laboratory study
- 1997 *Oral presentation* Project Research Investigations at St. Mary's - A comparative study on the allocation of phenols in the seagrasses *Zostera marina* and *Ruppia maritima* in the St. Mary's River estuary

*As co-author:*

- 2019 Coastal and Estuarine Research Federation Conference, Mobile, Alabama; From traits to plasticity: How will seagrass look in a changing world?
- 2019 Coastal and Estuarine Research Federation Conference, Mobile, Alabama; Understanding below-ground feedbacks on seagrass seed-based restoration outcomes
- 2018 ECSA 57 conference, Perth, Western Australia-The influence of environmental factors on seagrass response traits, functional traits and their relationship to ecosystem function
- 2016 International Seaweed Biology Workshop, Wales-Feeding behaviour of the sea urchin *Tripneustes gratilla* in relation to a seagrass overgrazing event in Zanzibar Archipelago, Tanzania
- 2016 International Seaweed Biology Workshop, Wales- Nitrate reductase and glutamine synthetase activity of *Cymodocea serrulata* (R.Brown), under varying concentrations and sources of nitrogen
- 2016 International Seaweed Biology Workshop, Wales-Nitrogen uptake, transport and allocation in tropical seagrasses under different nitrogen sources
- 2016 Estuarine Coastal Sciences Association (ECSA 56), Bremen, Germany-Do nutrients affect seagrasses of the heavily populated western-coast of Zanzibar?
- 2016 Estuarine Coastal Sciences Association (ECSA 56), Bremen, Germany-Nutrient uptake and enzymatic activity of *Cymodocea serrulata* (R. Brown), under varying concentrations and sources of nitrogen and phosphorus
- 2015 American Society of Limnology and Oceanography (ASLO), Granada, Spain- Variability in community functioning: the impact of coral reef habitat degradation on fish communities
- 2015 ASLO, Granada, Spain-Linking carbon sink capacity to community composition within highly diverse seagrass meadows of the Indo-Pacific
- 2009 Coastal and Estuarine Research Federation, Portland, Oregon, Conference-Macroalgae, the "Good" Side: Part 1. The relative roles of seagrass and macroalgae as habitat and food in estuaries with different nutrient loading rates
- 2009 Botanikertagung, Leipzig, Germany- Succession patterns of turf algal communities in a Caribbean coral reef
- 2007 American Society of Limnology and Oceanography, Aquatic Science Meeting, Santa Fe, New Mexico- Effects of hypoxia on consumer communities and trophic food webs
- 2006 Estuarine and Coastal Sciences Association, Venice, Italy-Macroalgal blooms: Control mechanisms in Venice Lagoon and the coasts of the world
- 2005 American Society of Limnology and Oceanography, Santiago de Compostela, Summer Conference:  
-Eutrophication and macroalgal blooms: current understanding of controls and role of macroalgae in community dynamics and coastal services  
-Indicators of aquatic ecosystem change: A review of purposes and attributes

- Macroalgal blooms: The relative influence of nutrient supply, grazing, and predation in Waquoit Bay
  - Coupling of estuarine benthic and pelagic food webs to land-derived nitrogen sources in Waquoit Bay
- 2005 Estuarine Research Federation, Norfolk, Conference-Watershed-estuary coupling: Biological, chemical, and isotopic evidence
- 1999 Estuarine Research Federation, New Orleans, Conference-Revised habitat requirements, restoration goals, and accompanying diagnostic tools for Chesapeake Bay submersed aquatic vegetation

## **PUBLIC OUTREACH**

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I believe it is essential to communicate science with stakeholders, including environmental managers, policy-makers, and the public, in order to help conserve and protect natural coastal habitats. As a scientist, I am driven by environmental challenges and new research questions with the goal of providing solutions that can be applied to coastal management and protection. Throughout my education and scientific career, I have been actively involved in public outreach and education through various activities including outdoor education programs for different school ages as well as a citizen water quality and seagrass monitoring program within the Chesapeake Bay region. These earlier experiences helped shape my perspective on public service outreach and extension which continued to develop throughout my PhD, post-doctoral, and research group activities.

### *Specific activities*

- 2019 "Seagrass for Life" stakeholder workshop and education event in Zanzibar, Tanzania 16<sup>th</sup> November, 2018. <https://www.leibniz-zmt.de/en/news-at-zmt/news/overview/seagrass-for-life-workshop-in-zanzibar.html>
- 2018 Research on use of algae featured in newspaper article "Schätze des Meeres" in Weser Kurier, 25th May, 2018, Bremen.
- 2018 Scientific coordination of Marine Bioeconomy Networking Event-Science meets Business
- 2016 Participation in stakeholder workshop, Final Symposium, Sustainable Use of Aquatic Systems, Zanzibar, Tanzania
- 2016 Participation in stakeholder workshop, Final Conference, Science for the Protection of the Indonesia Coastal Ecosystem (SPICE), Bali, Indonesia
- 2015 Coordinated science day program on coral reefs of Spermonde Archipelago for the local children on Barrang Lompo Island, SPICE, Makassar, Indonesia <http://spice.zmt-bremen.com/bbcmms/site5.php?id=114&pid=380&lng=1#>
- 2015 Participation in stakeholder workshop, Sustainable Marine Areas Between resource use and conservation, the example Savu Sea, SPICE, Kupang, Indonesia
- 2009 Short Film, Deutsche Welle, Tomorrow Today, Brilliant Minds <http://www.dw.com/en/mirta-teichberg-usa/a-3810541>
- 2007 Eutrophication Status Workshop for U.S. NOAA NERR estuaries leading to the development of synthesis for NOAA Coastal Ocean Program Decision Analysis Series
- 1998-2000 EPA Chesapeake Bay Program (MD, USA)-coordinated meetings among scientists, managers, and policy-makers on issues concerning conservation of living resources and contributed to technical synthesis on habitat requirements of submerged aquatic vegetation in the Chesapeake Bay
- 1998 Environmental education program, Solomons Environmental and Archaeological Research Consortium, MD, USA
- 1998 Environmental education program, Bright Futures College Simulation, MD, USA
- 1998 Seagrass transplantation restoration project, St. Mary's River, MD, USA
- 1997-1998 Volunteer in Water Quality Citizen Monitoring Program, St. Mary's City, MD, USA
- 1995 Volunteer as Interpreter, Great Falls National Park, VA, USA
- 1994 Environmental education program, Jr Ranger Program, Great Falls National Park, VA, USA
- 1993 Volunteer Meadowside Nature Center, MD, USA