

Ulisse Cardini, Ph.D.

Research scientist – Integrative Marine Ecology Department
Stazione Zoologica Anton Dohrn, Villa Comunale, 80121 Napoli, IT
<http://www.szn.it/index.php/en/personnel/list-of-personnel/558-cardini-ulisse>

PERSONAL INFORMATION

Web: www.marinesymbiomes.eu Birth date: 22/08/1985
Email: ulisse.cardini@szn.it Languages: Italian, English (Professional Level)

EDUCATION

PhD in Natural Sciences (Summa cum Laude) Feb 2015
University of Bremen (UniBremen, DE)
Advisor: Prof. Christian Wild

MSc in Marine Biology (110/110) Jul 2011
Polytechnic University of Marche (UNIVPM, IT)
Advisor: Prof. Roberto Danovaro

BSc in Environmental Sciences (105/110) Jul 2008
University of Genova (UNIGE, IT)
Advisor: Prof. Carlo Nike Bianchi

PROFESSIONAL APPOINTMENTS

Tenured Research scientist Apr 2017 – present
Integrative Marine Ecology Department, Stazione Zoologica Anton Dohrn (SZN, IT)

Postdoctoral Researcher Oct 2015 – Mar 2017
Dept. of Microbiology and Ecosystem Science, University of Vienna (UniWien, AT)

Postdoctoral Researcher Apr 2015 – Jul 2015
Leibniz Center for Tropical Marine Ecology (ZMT, DE)

Graduate Research Assistant Apr 2012 – Mar 2015
Leibniz Center for Tropical Marine Ecology (ZMT, DE)

Research Intern Feb 2012 – Mar 2012
Department of Life and Environmental Sciences (DISVA, UNIVPM, IT)

Research Intern Jan 2011 – Dec 2011
National Inter-University Consortium for Marine Sciences (CoNISMa, IT)

HONORS & AWARDS

Giuseppe Morabito Award (best publication, *Ital. Assoc. Oceanogr. Limnol.*) 2017

BMC Ecology Image Award (selected among the 'highly commended' out of >140) 2016

Best scientific photo (*GLOMAR-MARUM, Bremen, DE*) 2014

PEER-REVIEWED PUBLICATIONS (ORCID: 0000-0002-0816-6158, RESEARCHERID: I-3735-2013)

18. Bednarz VN, Naumann MS, **Cardini U**, van Hoytema N, Rix L, Al-Rshaidat MMD, Wild C (2018) Contrasting seasonal responses in dinitrogen fixation between shallow and deep-water colonies of the model coral *Stylophora pistillata* in the northern Red Sea. *Plos One*, 13:e0199022

17. **Cardini U**, van Hoytema N, Bednarz VN, Al-Rshaidat MMD, Wild C (2018) N₂ fixation and primary productivity in a red sea *Halophila stipulacea* meadow exposed to seasonality. *Limnology and Oceanography*, 63:786-798
16. Ripple WJ, Wolf C, Newsome TM, Galetti M, Alamgir M, Crist E, Mahmoud MI, Laurance WF, 15,364 scientist signatories from 184 countries (2017) World Scientists' Warning to Humanity: A Second Notice. *BioScience*, 67:1026–1028
15. Tilstra A, Bednarz VN, **Cardini U**, van Hoytema N, Al-Rshaidat MMD, Wild C (2017) Seasonality affects dinitrogen fixation associated with two common macroalgae from a coral reef in the northern Red Sea. *Marine Ecology Progress Series*, 575:69–80
14. Petersen JM, Kemper A, Gruber-Vodicka H, **Cardini U**, van der Geest M, Kleiner M, Bulgheresi S, Mußmann M, Herbold C, Seah BKB, Antony CP, Liu D, Belitz A, Weber M (2016) Chemosynthetic symbionts of marine invertebrate animals are capable of nitrogen fixation. *Nature Microbiology*, 2:16195
13. **Cardini U**, van Hoytema N, Bednarz V, Rix L, Foster RA, Al-Rshaidat MMD, Wild C (2016) Microbial dinitrogen fixation in coral holobionts exposed to thermal stress and bleaching. *Environmental Microbiology*, 18:2620–2633
12. **Cardini U**, Bednarz V, van Hoytema N, Rovere A, Naumann MS, Al-Rshaidat MMD, Wild C (2016) Budget of primary production and dinitrogen fixation in a highly seasonal Red Sea coral reef. *Ecosystems*, 19:771–785
11. van Hoytema N, Bednarz VN, **Cardini U**, Naumann MS, Al-Horani FA, Wild C (2016) The influence of seasonality on benthic primary production in a Red Sea coral reef. *Marine Biology*, 163:52
10. **Cardini U**, Bednarz VN, Naumann MS, van Hoytema N, Rix L, Foster RA, Al-Rshaidat MMD, Wild C (2015) Functional significance of dinitrogen fixation in sustaining coral productivity under oligotrophic conditions. *Proceedings of the Royal Society B* 282:20152257
9. Cardini U, van Hoytema N, Al-Rshaidat MMD, Schuhmacher H, Wild C, Naumann MS (2015) 37 Years later: revisiting a Red Sea long-term monitoring site. *Coral Reefs*, 34:1111
8. Rix L, Bednarz VN, **Cardini U**, van Hoytema N, Al-Horani FA, Wild C, Naumann MS (2015) Seasonality in dinitrogen fixation and primary productivity by coral reef framework substrates from the northern Red Sea. *Marine Ecology Progress Series*, 533:79–92
7. Bednarz VN, van Hoytema N, **Cardini U**, Naumann MS, Al-Rshaidat MMD, Wild C (2015) Dinitrogen fixation and primary productivity by carbonate and silicate reef sand communities of the Northern Red Sea. *Marine Ecology Progress Series*, 527:47–57
6. Bednarz VN, **Cardini U**, van Hoytema N, Al-Rshaidat MMD, Wild C (2015) Seasonal variation of N₂ fixation and O₂ fluxes associated with two dominant zooxanthellate soft corals from the Northern Red Sea. *Marine Ecology Progress Series*, 519:141–152
5. Rådecker N, Meyer FW, Bednarz VN, **Cardini U**, Wild C (2014) Ocean acidification rapidly decreases dinitrogen fixation associated with the hermatypic coral *Seriatopora hystrix*. *Marine Ecology Progress Series*, 511:297–302
4. **Cardini U**, Bednarz VN, Foster RA, Wild C (2014), Benthic N₂ fixation in coral reefs and the potential effects of human-induced environmental change. *Ecology and Evolution*, 4:1706–1727
3. Cerrano C, **Cardini U**, Bianchelli S, Corinaldesi C, Pusceddu A, Danovaro R (2013) Red coral extinction risk enhanced by ocean acidification. *Scientific Reports*, 3:1457

2. Garrard S, Hunter R, Frommel A, Lane A, Phillips J, Cooper R, Dineshram R, **Cardini U**, McCoy S, Arnberg M, Rodrigues Alves B, Annane S, de Orte M, Kumar A, Aguirre-Martínez G, Maneja R, Basallote M, Ape F, Torstensson A, and Bjoerk M (2012) Biological impacts of ocean acidification: a postgraduate perspective on research priorities. *Marine Biology*, 160:1789–1805
1. **Cardini U**, Chiantore M, Lasagna R, Morri C, Bianchi CN (2012) Size-structure patterns of juvenile hard corals in the Maldives. *Journal of the Marine Biological Association UK*, 92:1335–1339

BOOK CHAPTERS

2. Plass-Johnson JG, **Cardini U**, van Hoytema N, Bayraktarov E, Burghardt I, Naumann MS, Wild C (2015) Coral Bleaching. In: Armon RH, Hänninen O (eds) *Environmental Indicators*. Springer Netherlands, pp 117–146
1. Meyer FW, **Cardini U**, Wild C (2015) Ocean Acidification and Related Indicators. In: Armon RH, Hänninen O (eds) *Environmental Indicators*. Springer Netherlands, pp 723–742

PROFESSIONAL SERVICE

Editorial Board

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| Associate Editor – <i>Frontiers in Ecology and Evolution</i> | 2018 – present |
| Review Editor – <i>Frontiers in Microbiology – Aquatic Microbiology</i> | 2017 – present |
| Review Editor – <i>Frontiers in Marine Science – Coral Reef Research</i> | 2016 – present |

Reviewer

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| <i>Nature Communication, Global Change Biology, Frontiers in Marine Science, Frontiers in Microbiology, Environmental Microbiology, Scientific Reports, PLoS One, Coral Reefs, Journal of Experimental Biology, Estuarine Coastal and Shelf Science, Marine Ecology Progress Series, Estuaries and Coasts, Marine Ecology, Chemistry and Ecology, Marine Biodiversity Reports</i> | 2013 – present |
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Grant Reviewer

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| ANR, French National Research Agency | 2017 |
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Meeting Organizing Committee

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| 5th Early Career Scientists Conference for Marine and Climate Research, MARUM and UniBremen, Bremen, DE | Sept 2014 |
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Meeting Session Organizer and Chair

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| “Relevance of host-microbe interactions in aquatic ecosystem functioning”, ASLO Summer Meeting, Victoria, CA | Jun 2018 |
| “Microbial Ecology”, 5th CORE Symposium, Bremen, DE | May 2015 |
| “Coral Reef Resilience and Management”, Annual Conference of the Society for Tropical Ecology, ETH Zurich, CH | Apr 2015 |
| “Coral Reef ecology, management and conservation in a rapidly changing ocean environment”, YOUMARES 5, Stralsund, DE | Sept 2014 |
| Afternoon session, 4th CORE Symposium, Bremen, DE | Jun 2014 |

Memberships

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| Association for the Sciences of Limnology and Oceanography (ASLO) | 2017 – present |
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Italian Association of Oceanography and Limnology (AIOL)	2017 – present
Italian Society of Ecology (SITE)	2015 – present
International Society for Reef Studies (ISRS)	2014 – present
Bremen International Graduate School for Marine Sciences (GLOMAR–MARUM)	2012 – 2015

TALKS & CONFERENCE PRESENTATIONS

Invited Talks

ASLO Summer Meeting, Victoria, CA	Jun 2018
Gordon Research Conference, Applied and Environmental Microbiology, Mount Holyoke College, MA, USA	Jul 2017
G7 Action 1 Workshop - G7 Italian Presidency satellite event, Napoli, IT	Jun 2017
Elba Workshop, Hydra Institute, Elba, IT	May 2017
Max Planck Institute for Marine Microbiology (MPIMM), Bremen, DE	May 2015

Conference Presentations (First Author Only)

XXVII SITE Congress, Napoli, IT	Sept 2017
XXIII AIOL Congress, Cagliari, IT	Sept 2017
1st SITE-UZI-SIB Conjoint Congress, Milan, IT	Aug 2016
Let's talk about symbiosis, Vienna, AT	Nov 2015
AutReef: A workshop on reef research made in Austria, Vienna, AT	Oct 2015
5th CORE Symposium, Bremen, DE	May 2015
Annual Meeting of the Society for Tropical Ecology, ETH Zurich, CH	Apr 2015
4th CORE Symposium, Bremen, DE	Jun 2014
GLOMAR PhD Days, Achim, DE	Apr 2014
1st TraitCore Symposium, Bremen, DE	Dec 2013
8th International Conference on Coelenterate Biology, Eilat, IL	Dec 2013
3° Workshop CEMT - Tropical Marine Ecology Centre CoNISMa, Genova, IT	Nov 2008

WORKSHOPS & COURSES

Expert course on Stable Isotopes Ecology <i>SCIE Center, Siracusa, IT. Lecturers: Drs. C. Harrod, T. O'Connell, S. Newsome, B. Hayden, A. Massa-Gallucci, S. Vizzini</i>	2018
Euromarine Foresight Workshop "Marine Holobionts - concepts and challenges" <i>Station Biologique de Roscoff, FR. Contact: Dr. F. Not</i>	2018
Course on Marie Skłodowska–Curie Individual Fellowships Proposal Writing <i>UniWien. Research Services and Career Development</i>	2016
International Course in Microbial Ecology <i>ISMAR–CNR, Venice, IT. Lecturers: Drs. F. Lauro, R. Rosselló–Móra</i>	2014
Transferable skills course "Job hunting and interview skills" <i>GLOMAR–MARUM. Lecturer: R. Thompson</i>	2014

Expert course "Scientific proposal writing" <i>GLOMAR–MARUM. Lecturers: Drs. D. Hebbeln, M. Schulz</i>	2014
Course "Presentation skills" <i>GLOMAR–MARUM. Lecturer: S. Lerch</i>	2012
Course "Scientific writing" <i>ZMT. Lecturers: Drs. A. Merico, M. Teichberg</i>	2012
Summer school "Coral Reef Ecology" <i>Bermuda Institute of Ocean Sciences (BIOS), BM. Lecturers: Drs. S. de Putron, G. Goodbody–Gringley</i>	2009

RESEARCH GRANTS

EU Structural and Investments Funds, PI: Mindaugas Zilius, Co-PI: Ulisse Cardini <i>INvertebrate-BACTERIAL Associations as a hot spot of benthic Nitrogen Cycling in estuarine Ecosystems (INBALANCE, total budget: ca. 600 k€)</i>	2018–2021
Stazione Zoologica Anton Dohrn (MIUR-CIPE, within the frame of the ABBaCo project), PI: Ulisse Cardini <i>Exploring unconventional restoration strategies exploiting chemosynthetic symbioses in Bagnoli, Napoli, IT (ca. 5 k€)</i>	2018–2019
Stazione Zoologica Anton Dohrn, PI: Ulisse Cardini <i>Medium Instrumentation Grant – acquisition of a TOC Analyser with TN Unit and Autosampler (ca. 35 k€)</i>	2018
Stazione Zoologica Anton Dohrn, PI: Ulisse Cardini <i>Medium Instrumentation Grant – acquisition of a microbalance (ca. 28 k€)</i>	2018

SMALL GRANTS (< 5.000 €)

Best publication Award (500 €) <i>AIOL, IT</i>	2017
Travel and Participation Grant (750 €) <i>GLOMAR–MARUM, DE</i>	2014
Travel and Participation Grant (900 €) <i>GLOMAR–MARUM, DE</i>	2013
Travel Grant (600 €) <i>Institute of Marine Research (IMR), Tromsø, NO</i>	2011
Scholarship (2000 \$) <i>BIOS, BM</i>	2009

FIELD EXPERIENCE

Extensive field work experience with numerous campaigns (weeks to several months in duration) with sea operations and scientific scuba diving from research vessels and from land, in locations ranging from the Mediterranean to the Red Sea, Atlantic and Indian Ocean	2006 – 2018
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TEACHING

Research seminars at the Stazione Zoologica Anton Dohrn, IT	2017
Research seminars at the Division of Microbial Ecology (UniWien, AT)	2015 – 2016
Research seminars at the Marine Science Station (MSS), Aqaba, JO	2013
Lectures at Coral Eye, Bangka Island, Sulawesi, ID	Sept 2011

ADVISING & MENTORING

Doctoral Students Advised

Gabriella Paredes, *University of Vienna* (supervised by S. Bulgheresi) 2016

Master Students Advised

Nils Rådecker, *University of Bremen* (supervised by C. Wild) 2013

Undergraduate Research Supervised

Alessandta Belitz, *University of Vienna* 2016

Antonia Il'ková, *University of Vienna* 2016

Nils Rådecker, *University of Bremen* 2012

Alexandra Gerlach, *University of Bremen* 2012

Stefania Milano, *Polytechnic University of Marche* 2011

Martina Romagnoli, *Polytechnic University of Marche* 2011

FURTHER SKILLS & CERTIFICATES

Diving certificates: European Scientific Diver (ESD); Rescue Diver and Emergency First Response (PADI); Advanced Open Water Diver and Open Water Diver (SSI); Swimming Teacher and Lifeguard (SNS); Free Diver (PSS).

Computer skills: Proficient in the use of different operative systems and software for data analysis, statistics, writing, graphic design and photo editing.

PRESS & OUTREACH

Research group website (www.marinesymbiomes.eu) Regularly updated

Science seminars to secondary school students, Istituto "G. Fracastoro" (Cavaion, Verona, IT) Feb 2018

Press release – *SZN, IT* (Cardini *et al.* 2017, *Limnol. Oceanogr.*) reposted by several forums (e.g. ANSA, Il Mattino) Oct 2017

Blog post "Using the Unusable" on the Nature Microbiology Community Oct 2016

Press release – *MPI, Bremen, DE* (Petersen *et al.* 2016, *Nat. Microbiol.*) reposted by several outlets (e.g. Science Daily) Oct 2016

Press release – *UniBremen, DE* (Cardini *et al.* 2016, *Environ. Microbiol.*) reposted by several outlets (e.g. JuraForum.de) Jun 2016

Press release – *UniBremen, DE* (Cardini *et al.* 2016, *Ecosystems*) reposted by several outlets (e.g. Global Environmental Society) Mar 2016

Newspaper articles – *Der Standard, Die Presse, AT.* Jan–Feb 2016

Press release – *UniBremen, DE* (Cardini *et al.* 2015, *Proc. R. Soc. B*) reposted by several outlets (e.g. Scinexx.de) 18–27 Oct 2015