

CURRICULUM VITAE

Erik Caroselli

Marine Science Group – Freshwater Science Group

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Nationality: Italian

Place and date of birth: Bologna, 16 August 1978



Main research activities

- Sclerochronology and multi-scale models of environmental effects on morphology, crystallography, mechanical properties, reproduction, zooxanthellae photosynthesis, growth, demography, population dynamics, and microbiome ecology in temperate and subtropical corals
- Global climate change effects on temperate and tropical coral communities
- Marine biodiversity monitoring through citizen science
- Monitoring of river fish communities

Education

6 April 2017-2028	<u>National Scientific Qualification</u> to the role of Associate Professor, Scientific Sector 05/C1 ECOLOGY, Italian Ministry of Education, University and Research.
July 2022	<u>Summer School</u> "School for Academics: Innovating instructional practices in HE through video analysis", Department of Education Studies "G.M. Bertin", UniBo.
June 2010-Nov. 2018	<u>Post-doc</u> , Department of Biological, Geological and Environmental Sciences (BiGeA), Alma Mater Studiorum – University of Bologna (UniBo). <u>Research theme</u> : Climate change effects on Mediterranean corals. Funds by the European Research Council (FP7 – IDEAS) for the project "Corals and Global Warming: the Mediterranean versus the Red Sea" (CoralWarm), Total Foundation for the project "Assessing the Impacts of Ocean Acidification on Marine Biodiversity and Species Adaptation" (High-CO ₂ Seas), and UniBo.
22 April 2010	<u>PhD</u> in Biodiversity and Evolution, UniBo (Italy). <u>PhD Thesis</u> : Influence of environmental parameters on population dynamics in solitary corals from the Mediterranean Sea. Supervisor: F. Zaccanti.
March 2008	<u>Winter School</u> "Detecting biological and environmental changes: design and analysis of monitoring and experiments", BES, UniBo (Italy). Lecturers: L. Benedetti-Cecchi (University of Pisa, Italy), R.K. Clarke (Plymouth Marine Lab, United Kingdom), M.-J. Anderson (University of Auckland, New Zealand).
20 July 2006	<u>MSc</u> in Biological Sciences, UniBo (Italy). <u>MSc Thesis</u> : Environmental control on biometry and demography of solitary corals in the Mediterranean Sea. Supervisors: S. Goffredo, F. Zaccanti. Score: 102/110.

Academic professional experience

3 Dic 2021-today	<u>Associate Professor</u> . Academic Recruitment Field 05/C1 ECOLOGY. BiGeA, UniBo.
2022-2023	<u>Teacher</u> . "Climate change impact on biodiversity and ecosystems – Module 3", Minor "The challenge of climate change", UniBo.
2022-2023	<u>Teacher</u> . Class "Laboratory of multidisciplinary approaches to climate change impacts on marine ecosystems", Thematic Course "The challenge of global change for biodiversity in terrestrial and marine ecosystems – Module 2 – Marine ecosystems", PhD program "Future Earth, climate change and societal challenges" (FRONTIERS), UniBo.
2020/2023	<u>Teacher</u> . "Morphometry and phenotypic plasticity", Master Degree in Biodiversity and Evolution (BIOEVO) and Master Degree in Science and Management of Nature (SGN), BiGeA, UniBo.
2019/2023	<u>Teacher</u> . "Management of Resources and Ecosystem Services", SGN, BiGeA, UniBo.
2019/2023	<u>Teacher</u> . "Climate Change Impacts on Coastal Society and Marine Ecosystem", SGN, BiGeA, and Science of Climate, Department of Physics and Astronomy (DIFA), UniBo.
2018/2019, 2021/2023	<u>Teacher</u> . "Laboratory of Underwater Survey – Diving Techniques for Biological Survey - Module 3", Master Degrees BIOEVO and SGN, UniBo.
Nov. 2018-Dic. 2021	<u>Senior Assistant Professor</u> . Academic Recruitment Field 05/C1 ECOLOGY. BiGeA, UniBo.
2012-2018,2020	<u>Teacher assistant</u> . "Laboratory of Scientific Diving", BIOEVO, UniBo (Italy). Teacher: S. Goffredo.
2018-2019	<u>Teacher</u> . "Biochemistry and Ecology - Ecology - Module 2", International Master Degree in Low Carbon Technologies and Sustainable Chemistry (LoCaTe), UniBo.
June-Nov. 2018	<u>Lecturer</u> . "Biochemistry and Ecology - Ecology - Module 2", LoCaTe, UniBo.
June 2010-Nov. 2018	<u>Postdoctoral fellowship</u> . "Calcification physiology and homeostasis of coral growth under ocean acidification" (June 2018-Nov. 2019), "Photosynthesis as a compensation mechanism of the negative effects of ocean acidification on calcification of model Anthozoa of the Mediterranean Sea" (Nov. 2013-May 2018), "Influence of environmental parameters on population dynamics in Mediterranean and Red Sea corals" (June 2010-Oct. 2013), BiGeA, UniBo, Italy. Funds by Total Foundation, for the project "Assessing the Impacts of Ocean Acidification on Marine Biodiversity and Species Adaptation" (High-CO ₂ Seas); European Research Council (FP7 – IDEAS programme), European Union, for the project "Corals and Global Warming: the Mediterranean versus the Red Sea" (CoralWarm); and UniBo.
2007-2011	<u>Teacher assistant</u> . "Laboratory of Underwater Survey", BIOEVO, UniBo (Italy). Teachers: S. Goffredo, F. Zaccanti.
2006	<u>Volunteer researcher</u> . "R/V F. G. Walton Smith", University of Miami (USA). Research cruise in the Bahamas for a study on coral population dynamics and fishery management. Supervisor: H. Lasker, State University of New York at Buffalo. Funds provided by H. Lasker: National Science Foundation.

Academic institutional experience

- 2023-today Director of the Master Degree Programme. Sciences and Management of Nature, BiGeA, UniBo
 2023-today Member of the Teaching Commission. BiGeA, UniBo
 2021-today Member of the Academic Board. PhD program in Earth, Life and Environmental Sciences, BiGeA, UniBo.
 Jan. 2020-today Membro. Alma Mater Research Institute on Global Challenges and Climate Change (Alma Climate), UniBo.
 Jan. 2020-today Membro. Fano Marine Center, BiGeA, UniBo
 Jan. 2020-today Research line responsible. Freshwater Science Group, BiGeA, UniBo.
 April 2016-today Administrator of the official Facebook page of BiGeA, UniBo. (www.facebook.com/bigea.unibo)
 July 2015-today Member of the Working Group for Communication of BiGeA, UniBo.
 2005-today Member of Council of the Department, BES and BiGeA, UniBo.
 Jan.-Nov. 2018 Member of the Department Board of BiGeA, UniBo.

Other professional experience

- 2006-today Diving. Co-founder; Diving Instructor; Webmaster. Constitution of the school of marine research scientific diving "Scientific Diving School" (www.sdseducational.org), in Bologna (Italy).
 2004-today Webmaster. www.marinesciencegroup.org, website of the Marine Science Interdisciplinary Research Group, BiGeA, UniBo (Italy). Research group of Citizen Science & Coral Biology and Ecology.
 2010-2018 Webmaster. www.coralwarm.eu, website of the research project "Corals and Global Warming: the Mediterranean versus the Red Sea" (CoralWarm).
 2007-2018 Research support. Counsellor and Vice-President (2016-2018) of Marine & Freshwater Science Group Association, Bologna (Italy). Social Advancement Association devoted to the support and development of the research in the fields of marine and freshwater bio-ecology and environmental education (www.msgassociation.org).
 2014-2015 Assessor of the status of conservation of Mediterranean corals. Red List of Threatened Species (www.iucnredlist.org) of the International Union for Conservation of Nature (www.iucn.org)
 2006 Environmental education. Teacher in primary, secondary and high schools of Bologna district within the program "School Environment" of Bologna Municipality.

Reviewer and editorial activity

- 2023-today Section Editor. *Discover Oceans*, Springer.
 2020-today Topic Editor. *Diversity*, MDPI.
 2018-today Academic Editor. *PLoS ONE*, Public Library of Science.
 2012-today Reviewer. For several international journals from several publishers.
 2011-today Review Editor. *Frontiers in Physiology*, Frontiers.
 2018-2020 Project Reviewer. Competitive call Fondazione di Sardegna – 2017 for research projects with peer-review, University of Sassari, Italy; Funding of research fellowship, University of Insubria, Italy; National Geographic Society Grant Program.

Prizes

- 2015 Early Career Travel Award of the Association for the Sciences of Limnology and Oceanography.
 2006 Prize "Mario Pasquini" (www.premiomariopasquini.org), for the MSc Thesis "Environmental control on biometry and demography of solitary corals in the Mediterranean Sea".

Other qualifications

2020, Emergency Oxygen Provider, Professional Association of Diving Instructors (PADI). 2017, Master Scuba Diver Trainer, PADI. 2017, Distinctive Specialty Instructor: Scientific Diving Lab, PADI. 2016, Specialty Instructor: Deep Diver, Enriched Air Diver, Underwater Naturalist, Dry Suit Diver, Peak Performance Buoyancy, Project AWARE, AWARE Coral Reef Conservation, PADI. 2016, Emergency First Response Instructor, Care for Children w/AED Instructor, PADI. 2016, Open Water Scuba Instructor, PADI. 2013, Defibrillator Instructor, Scuba Nitrox Safety International (SNSI). 2013, Oxygen Provider, SNSI. 2013, Pool lifeguard, National Lifeguard Society. 2011, Scientific Diving Instructor 50 meters, American Academy of Underwater Sciences (AAUS). 2011, Recreational Deco Instructor, SNSI. 2009, Assistant Trainer, SNSI. 2008, Scientific Diving Instructor, AAUS. 2008, Nitrox Instructor; Basic Life Support Instructor, SNSI. 2007, Instructor Air Program, SNSI. 2006, Divemaster, Dive Control Specialist, SNSI and Scuba Schools International (SSI). 1996, Driving License. 1995, Open Water Diver, PADI.

Membership in professional societies

- 2008-today International Society for Reef Studies
 2007-today American Academy of Underwater Sciences
 2014-2015 Association for the Sciences of Limnology and Oceanography

Participation and responsibility of research projects

- 2023-2025 Researcher. "Environmental Drivers affecting fattening and calcification process of wild and farmed Mussels in the Adriatic Sea" (ENDRIMUS), coordinated by S. Goffredo, funds PRIN 2022 PNRR.
 1 November 2018-31 October 2023 Researcher. "Controlling microbiomes circulations for better food systems" (CIRCLES), coordinated by Marco Candela, funds Horizon2020 (Societal

29 January 2018-31 October 2020	Challenges - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy), European Union (EU). <u>Principal Investigator</u> . “Response strategies to ocean acidification: coral morphologic plasticity and microbial ecosystem variations” (STRAMICRO), funds UniBo, Alma Idea Grant Junior.
June 2016-May 2019	<u>Researcher</u> . “Assessing the Impacts of Ocean Acidification on Marine Biodiversity and Species Adaptation” (High-CO ₂ Seas), coordinated by N. Teixidó Ullod, fund by the Total Foundation.
1 June 2010-31 May 2016	<u>Researcher</u> . Corals and Global Warming: the Mediterranean versus the Red Sea” (CoralWarm), coordinated by S. Goffredo, Z. Dubinsky, G. Falini, funds by the European Research Council (FP7 – IDEAS programme).

Participation and organization of underwater scientific sampling missions

June 2020; May 2022, 2023 2007-2023	<u>Co-organizer</u> . Calafuria (Livorno). Coral sampling for pollutant accumulation analyses. <u>Co-organizer</u> . Calafuria (Italy). Annual coral sampling within the course “Laboratory of Scientific Diving”, Master Degree in Biodiversity of Evolution, UniBo.
21-28 Apr 2019	<u>Co-organizer</u> . Panarea (Italy). Coral, water, and environmental parameter sampling (project STRAMICRO).
24-29 Apr 2018	<u>Expedition Leader</u> . Panarea and Ischia (Italy). Coral, water, and sediment sampling (projects STRAMICRO and High-CO ₂ Seas).
24-28 June 2017	<u>Expedition Leader</u> . Ischia (Italy). Coral transplant and coral, water, and environmental parameter sampling (project High-CO ₂ Seas).
28 May 2016	<u>Expedition Leader</u> . Calafuria (Livorno). Coral sampling for transcriptomics analyses.
23 Apr-3 May 2013	<u>Expedition Leader</u> . Panarea (Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling (project CoralWarm).
27 Apr-5 May 2012	<u>Co-organizer</u> . Panarea (Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling (project CoralWarm).
23 Nov-4 Dec 2011	<u>Co-organizer</u> . Panarea (Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling (project CoralWarm).
1-8 June; 24 July-3 Aug 2011	<u>Co-organizer</u> . Panarea (Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling (project CoralWarm).
4 July 2011	<u>Co-organizer</u> . Porto Azzurro (Italy). Coral, water, and environmental parameter sampling (project CoralWarm).
30-31 May 2011	<u>Expedition Leader</u> . Scilla (Italy). Coral, water, and environmental parameter sampling (project CoralWarm).
24-25 Mar; 12-14 Apr 2011	<u>Expedition Leader</u> . Calafuria (Italy); Recco (Italy). Coral, water, and environmental parameter sampling (project CoralWarm).
1-9 Mar 2011	<u>Co-organizer</u> . Panarea (Italy). Panarea (Italy). Coral transplant and coral, water, gas, and environmental parameter sampling (project CoralWarm).
6-7 Dec 2010	<u>Co-organizer</u> . Porto Azzurro (Italy). Coral, water, and environmental parameter sampling (project CoralWarm).
13-17 Sep; 12-18 Nov 2010	<u>Co-organizer</u> . Panarea (Italy). Coral transplant and coral, water, gas, and environmental parameter sampling (project CoralWarm).
29 Jun-1 Jul; 10-12 Sep 2010	<u>Team member</u> . Palinuro; Pantelleria (Italy). Coral, water, and environmental parameter sampling (project CoralWarm).
5-16 July 2010	<u>Team member</u> . Scilla and Panarea (Italy). Coral transplant and coral, water, gas, and environmental parameter sampling (project CoralWarm).
17 June 2009	<u>Expedition Leader</u> . Calafuria (Italy). Coral and environmental parameter sampling for growth and population dynamics and genetics analyses
Dec 2007; Mar 2008; Jan 2009	<u>Team member</u> . Calafuria (Italy). Coral, polychaetes, and environmental parameter sampling for growth, reproduction, population dynamics, and skeletal crystallographic analyses.
4-22 June 2006	<u>Team member</u> . Bahamas. Gorgonian and environmental parameter sampling for growth and population dynamics and genetics analyses, on the “R/V F. G. Walton Smith”, University of Miami (USA). Supervisor: H. Lasker, State University of New York at Buffalo.
5-9 Jan; Oct 2005	<u>Expedition Leader</u> . Scilla; Pantelleria (Italy). Coral sampling for biometric, growth, and population dynamics and genetics analyses.
31 Jan; 2-5 Apr; 24 Oct 2004	<u>Team member</u> . Calafuria; Palinuro; Genova (Italy). Coral sampling for biometric, growth, and population dynamics analyses.

Supervision of BSc and MSc students

- 41) 2023. Letizia Ripa; MSc in Marine Biology, UniBo; Thesis “Influence of anthropic impacts on benthic community structure temporal trends in the Mediterranean Sea”; supervisor: **E. Caroselli**, co-supervisors: C. Lee, M. Machado Toffolo, S. Goffredo (BiGeA)
- 40) 2023. Riccardo Matteini; BSc in Biological Sciences, UniBo; Thesis “The use of citizen science for *Pinna nobilis* monitoring in the Mediterranean Sea”; supervisor: S. Goffredo, co-supervisors: **E. Caroselli**, M. Machado Toffolo, C.A. Lee (BiGeA)
- 39) 2023. Enrico Pongiluppi; BSc in Biological Sciences, UniBo; Thesis “The use of citizen science for biodiversity monitoring in the Mediterranean Sea: Sea Sentinels project”; supervisor: S. Goffredo, co-supervisors: M. Machado Toffolo, **E. Caroselli**, C.A. Lee (BiGeA)
- 38) 2023. Silvia Dall’Ara; BSc in Biological Sciences, UniBo; Thesis “Environmental characterization of two underwater volcanic sites with CO₂ emissions off the coast of Panarea in the Eolian Islands”; supervisors: S. Goffredo, co-supervisors: A. Mancuso, T. Sani, **E. Caroselli** (BiGeA)
- 37) 2023. Giuseppe Fruttidoro; MSc in Biodiversity and Evolution, UniBo; Thesis “Effects of ocean acidification on skeletal parameters of the colonial coral *Astroides calycularis* cross-transplanted in Ischia Island”; supervisor: **E. Caroselli**, co-supervisor: N. Teixido (Laboratoire d’Océanographie de Villefranche)
- 36) 2023. Xavi Corral Racero; BSc in Environmental Sciences, University of Madrid; Thesis “Application and evaluation of the NISECI index and its refinement in the assessment of ecological status of rivers in the Italian region of Emilia-Romagna”; supervisor: J. L. Riera Rey (Universidad de Madrid), co-supervisor: **E. Caroselli**.

- 35) 2023. Giovanna Rosa; BSc in Biological Sciences, UniBo; Thesis “Reproductive analysis of the Mediterranean endemic non-zooxanthellate coral *Astroides calycularis* naturally living at the CO₂ vents in Ischia Island”; supervisor: **E. Caroselli**, co-supervisors: S. Goffredo, C. Marchini (BiGeA), N. Teixido (Laboratoire d’Océanographie de Villefranche)
- 34) 2023. Riccardo Zampiga; BSc in Biological Sciences, UniBo; Thesis “Monitoring of Mediterranean Sea biodiversity through citizen science: reliability of data collected by recreational divers within the Sea Sentinels project”; supervisor: S. Goffredo (BiGeA), co-supervisors: **E. Caroselli**, M.M. Toffolo, C.A. Lee (BiGeA)
- 33) 2023. Francesca de Witt; MSc in Sciences and Management of Nature, UniBo; Thesis “Management strategy effects on Red Sea coral reef community structure and temporal trends over 8 years of monitoring”; supervisor: **E. Caroselli**, co-supervisors: C.A. Lee, S. Goffredo, M.M. Toffolo (BiGeA)
- 32) 2023. Giorgia Primavera; MSc in Sciences and Management of Nature, UniBo; Thesis “Gametogenesis of the non-zooxanthellate colonial coral *Astroides calycularis* (Scleractinia, Dendrophylliidae) naturally living at CO₂ vents in Ischia Island”; supervisor: S. Goffredo (BiGeA), co-supervisors: C. Marchini (BiGeA), N. Teixido, C. Carbonne (Laboratoire d’Océanographie de Villefranche), **E. Caroselli**
- 31) 2023. Gaia Bravetti; MSc in Biodiversity and Evolution, UniBo; Thesis “Refinement of the NISECI ecological index sub-metrics reference parameters for freshwater fish communities in the Emilia region”; supervisor: **E. Caroselli**, co-supervisors: A. Marchi (Hydrosynergy), S. Goffredo (BiGeA)
- 30) 2023. Gaia Benevenga; BSc in Biological Sciences, UniBo; Thesis “Reproduction of the non-zooxanthellate colonial coral *Astroides calycularis* (Scleractinia, Dendrophylliidae) naturally living at CO₂ vents in Ischia Island”; supervisor: **E. Caroselli**, co-supervisor: C. Marchini (BiGeA)
- 29) 2023. Chiara Cassarino; MSc in Biodiversity and Evolution, UniBo; Thesis “Influence of low aragonite saturation state on growth and population dynamics in the solitary non-zooxanthellate coral *Caryophyllia inornata* naturally living at volcanic vents”; supervisor: **E. Caroselli**, co-supervisors: A. Mancuso, S. Goffredo (BiGeA)
- 28) 2022. Jose Javier Corral Racero; EU ERASMUS+ Traineeship Program, UniBo and University of Barcelona (Spain); Project “Application of the NISECI index for the categorization of the ecological status in Italian rivers”; supervisor: **E. Caroselli**
- 27) 2022. Chloe Alexandra Lee; MSc in Sciences and Management of Nature, UniBo; Thesis “Eight years of community structure monitoring through recreational citizen science at the “SS Thistlegorm” wreck (Red Sea)”; supervisor: **E. Caroselli**, co-supervisor: S. Goffredo (BiGeA)
- 26) 2022. Riccardo Negroni; MSc in Sciences and Management of Nature, UniBo; Thesis “Composition and abundance of beach litter during the tourist season. A case study in Northern Sicily”; supervisor: **E. Caroselli**, co-supervisors: A. Bonoli (DICAM), U. Pantaleo (UBICA s.r.l.)
- 25) 2022. Andrea Marchi; MSc in Biodiversity and Evolution, UniBo; Thesis “Refinement of the NISECI ecological index for freshwater fish communities”; supervisor: **E. Caroselli**, co-supervisor: S. Goffredo (BiGeA)
- 24) 2021. Wenqu Fan; MSc in Sciences and Management of Nature, UniBo; Thesis “Refinement of the NISECI index in Emilia-Romagna, an experimental study towards type-specific reference communities”; supervisor: **E. Caroselli**, co-supervisor: A. Marchi (Hydrosynergy)
- 23) 2021. Giacomo Cavalli; MSc in Sciences and Management of Nature, UniBo; Thesis: “Plant biodiversity and esthetic ecosystem services of the Stagno Didattico in the Giardini Margherita of Bologna”; supervisor: **E. Caroselli**, co-supervisor: M. Salinitro (BiGeA)
- 22) 2021. Martina Cerpelloni; BSc in Biological Sciences, UniBo; Thesis “Biometry and quantitative aspects of gametogenesis of the solitary papillose cup coral *Paracyathus pulchellus* (Scleractinia, Caryophylliidae) in the Mediterranean Sea”; supervisor: S. Goffredo (BiGeA), co-supervisors: C. Marchini, **E. Caroselli** (BiGeA)
- 21) 2021. Oscar Wallnoefer; BSc in Biological Sciences, UniBo; Thesis “Population density of the solitary azooxanthellate coral *Caryophyllia inornata* along an environmental gradient generated by a CO₂ vent”; supervisor: S. Goffredo (BiGeA), co-supervisors: A. Mancuso, F. Prada, **E. Caroselli** (BiGeA)
- 20) 2021. Letizia Ripa; BSc in Biological Sciences, UniBo; Thesis “Colony-level biometric analysis of the Mediterranean orange coral *Astroides calycularis* transplanted at the naturally acidified caves in Ischia Island. A preliminary study”; supervisor: **E. Caroselli**, co-supervisors: N. Teixido (SZN), S. Goffredo (BiGeA)
- 19) 2021. Emma Piccoli; BSc in Biotechnology, UniBo; Thesis “Variations of microbiome in the compartments of the coral *Balanophyllia europaea*, in response to seasonal changes and ocean acidification increase”; supervisor: E. Biagi (Department of Pharmacy and Biotechnology, FaBiT), co-supervisors: **E. Caroselli**, G. Palladino (FaBiT)
- 18) 2021. Andrea Bertaccini; BSc in Statistical Sciences, UniBo; Thesis “Hydromorphological variable statistical analysis techniques for river environment classification”; supervisor: S. Bianconcini (Department of Statistical Sciences “Paolo Fortunati”), co-supervisors: A. Marchi (BiGeA), **E. Caroselli**
- 17) 2019-2021. Francesca De Witt; BSc in Biological Sciences, UniBo; Thesis “Demography of the temperate coral *Balanophyllia europaea* along a depth gradient in the Dardanelles (Turkey)”; supervisor: S. Goffredo (BiGeA), co-supervisors: **E. Caroselli**, B. Ozalp (Canakkale Onsekiz Mart University, COMU)
- 16) 2019-2020. Chiara Cassarino; BSc in Biological Sciences, UniBo; Thesis “Reproduction of the non-zooxanthellate colonial coral *Astroides calycularis* (Scleractinia, Dendrophylliidae) naturally living at CO₂ vents at Ischia Island. A preliminary study.”; supervisor: **E. Caroselli**, co-supervisors: C. Marchini (BiGeA), N. Teixido, M.C. Gambi (SZN), S. Goffredo (BiGeA)
- 15) 2018-2020. Martina Pezzimenti; MSc in Biodiversity and Evolution, UniBo; Thesis “Characterization of the bacterial microbiome associated to the non-zooxanthellate coral *Astroide calycularis* living under natural ocean acidification at the Ischia CO vents.”; supervisor: **E. Caroselli**, co-supervisors: S. Goffredo (BiGeA), E. Biagi, M. Barone (FaBiT), N. Teixido, M.C. Gambi (Stazione Zoologica Anton Dohrn Napoli, SZN)
- 14) 2018-2020. Sara Copelli; BSc in Natural Sciences, UniBo; Thesis “Skeletal properties in a Mediterranean non-zooxanthellate coral naturally living at CO₂ vents. A preliminary study”; supervisor: Stefano Goffredo (BiGeA), co-supervisors: **E. Caroselli**, L. Brizi (Department of Physics, DIFA), M.C. Gambi, Nuria Teixido (SZN)
- 13) 2018-2019. Pietro Fici; Bachelor of Science in Biological Sciences, UniBo; Thesis “Variations in morphology, skeletal characteristics, and growth of a temperate non-zooxanthellate colonial coral naturally living at CO₂ vents”; supervisor: S. Goffredo (BiGeA), co-supervisors: **E. Caroselli**, N. Teixido e M.C. Gambi (SZN)
- 12) 2018-2019. Maila Lavia; MSc in Biodiversity and Evolution, UniBo; Thesis “Population dynamics of a temperate coral along a depth gradient in the Dardanelles”; supervisor: S. Goffredo (BiGeA); co-supervisors: **E. Caroselli**, B. Ozalp (COMU)
- 11) 2018. Pietro Drei; BSc in Biological Sciences, UniBo; Thesis “The influence of ocean acidification on reproductive output of the colonial non-zooxanthellate coral *Astroides calycularis* (Scleractinia, Dendrophylliidae) naturally living at CO₂ vents. A preliminary study.”; supervisor: S. Goffredo (BiGeA), co-supervisors: **E. Caroselli** and C. Marchini (BiGeA), N. Teixido and M.C. Gambi (SZN)
- 10) 2018. Leonardo Morini; BSc in Biotechnology, UniBo; Thesis “Characterization of microbial ecosystems associated to the coral *Astroides calycularis*”; supervisor: Prof. M. Candela (FaBiT); co-supervisors: **E. Caroselli** and M. Barone (FaBiT)
- 9) 2015-2016. Chiara Ceccarelli; BSc in Natural Sciences, UniBo; Thesis “Variations in colony and polyp morphology and skeletal characteristics of a temperate non-zooxanthellate coral naturally living at CO₂ vents”; supervisor: S. Goffredo (BiGeA); co-supervisors: **E. Caroselli**, N. Teixido and M.C. Gambi (SZN)
- 8) 2015-2016. Francesco Raimondi; MSc in Biodiversity and Evolution, UniBo; Thesis “Biometry, growth and skeletal parameters of the temperate zooxanthellate coral *Balanophyllia europaea* along a depth gradient in the Dardanelles (Turkish Straits System, Western Turkey)”; supervisor: S. Goffredo (BiGeA); co-supervisors: **E. Caroselli**, B. Ozalp (COMU)

- 7) 2014-2015. Francesco Ricci; MSc in Biodiversity and Evolution, UniBo; Thesis "Relationships between growth, population dynamics, and environmental parameters in the solitary non-zooxanthellate scleractinian coral *Caryophyllia inornata* along a latitudinal gradient in the Mediterranean Sea"; supervisor: S. Goffredo (BiGeA); co-supervisor: **E. Caroselli**
- 6) 2014. Viviana Brambilla; MSc in Management and Conservation of Natural Resources, University of Lisbona (Portugal); Thesis "Inferred calcification rate of a temperate non-zooxanthellate caryophylliid coral along a wide latitudinal gradient"; supervisor: S. Goffredo (BiGeA); co-supervisors: **E. Caroselli**, M.T. Ferreira (Superior Institute of Agronomy, University of Lisbona)
- 5) 2011-2012. Arianna Mancuso; MSc in Biodiversity and Evolution, UniBo; Thesis: "Skeletal mechanical properties of the Mediterranean corals *Balanophyllia europaea* and *Leptopsammia pruvoti*, in relation to environmental parameters"; supervisor: S. Goffredo, Department of Evolutionary and Experimental Biology (BES); co-supervisors: L. Pasquini (DIFA), **E. Caroselli**
- 4) 2009-2010. Fiorella Prada; MSc in Ecology, University of Parma; Thesis: "Relationship between environmental and skeletal parameters in corals from the Mediterranean Sea"; supervisor: F. Nonnis Marzano, University of Parma; co-supervisors: **E. Caroselli** and S. Goffredo (BES), L. Pasquini (DIFA)
- 3) 2008-2009. Michela Reggi; BSc in Biological Sciences, UniBo; Thesis: "Biom mineralization in the Mediterranean coral *Balanophyllia europaea* (Scleractinia, Dendrophylliidae)"; supervisor: F. Zaccanti (BES); co-supervisors: S. Goffredo and **E. Caroselli** (BES), Giuseppe Falini and Patrizia Vergni Department of Chemistry "G. Ciamician" (CIAM)
- 2) 2008-2009. Francesco Mezzo; BSc in Natural Sciences, UniBo; Thesis: "Morphologic and crystallographic variations of the skeleton during the life cycle in two hard corals (Scleractinia) of the Mediterranean"; supervisor: F. Zaccanti (BES); co-supervisors: S. Goffredo and **E. Caroselli** (BES), G. Falini and P. Vergni (CIAM)
- 1) 2008-2009. Leonardo Laiolo; BSc in Biological Sciences, UniBo; Thesis: "Quantitative variation of aragonite and calcite crystals during the growth of the exoskeleton of Mediterranean corals"; Supervisor: F. Zaccanti (BES); co-supervisors: S. Goffredo and **E. Caroselli** (BES), G. Falini (CIAM)

Supervision of PhD students

- 2) 2024-2026. Francesca de Witt; PhD in Innovative technologies and sustainable use of Mediterranean Sea fishery and biological resources (FishMed-PhD), BiGeA, UniBo; Research project "Multiscale analysis of otolith structure and morphology in model fish species from fresh, brackish and marine waters". Supervisor: S. Goffredo (BiGeA); Co-supervisors: **E. Caroselli**, G. Falini (CIAM), D. Montroni (CIAM)
- 1) 2023-2025. Chloe Alexandra Lee; PhD in Earth, Life and Environmental Sciences, UniBo; Research project "Detecting temporal and spatial trends of marine and freshwater communities in subtropical and temperate ecosystems with multivariate analyses". Supervisor: **E. Caroselli**; Co-supervisor: A. Marchi (Hydrosynergy soc. Coop.).

Membership in academic committees

- 2023-2024 Member of Evaluation Commission. Call for PostDoc position "Environmental drivers affecting calcification process of wild and farmed mussels in the Adriatic Sea", BiGeA, UniBo, Italy.
- 2023-2024 Member of Examination Committee. Call for tutor fellowships, MSc in Sciences and Management of Nature, UniBo.
- 2021-2024 President/Member of the Graduation Committee. MSc in Sciences and Management of Nature, UniBo.
- 2020-2024 Member of the Examination Committee. Climate change impacts on coastal societies and ecosystems, international MSc Course in Sciences and Management of Nature, UniBo.
- 2020-2024 Member of the Examination Committee. Management of resources and ecosystem services, MSc Course in Sciences and Management of Nature, UniBo.
- 2021-2023 Member and President since 2023 of the selection commission for incoming students, MSc in Sciences and Management of Nature, BiGeA, UniBo.
- 2021-2023 Member of the Examination Committee. Morphometry and phenotypic plasticity, MSc Course in Biodiversity and Evolution, UniBo.
- 2014-2023 Member of the Examination Committee. Laboratory of Scientific Diving, MSc course in Biodiversity and Evolution, UniBo.
- 2012-2023 Secretary/Member of the Graduation Committee. MSc course in Biodiversity and Evolution, UniBo.
- 2009-2023 Member of the Graduation Committee. BSc course in Biological Sciences, UniBo.
- 2022 Member of the Admission Examination Committee. PhD program in Earth, Life and Environmental Sciences, 38th Cycle, BiGeA, UniBo.
- 2022 Commissary. Online Test for the Admission to University (TOLC), UniBo, Interuniversity Consortium Integrated Access Systems (CISIA).
- 2017-2021 Member of the Examination Committee. Ecology, BSc course in Biological Sciences, UniBo.
- 2020 Member of Evaluation Commission. Call for non-occasional employment contract, BiGeA, UniBo.
- 2009-2020 Member of the Graduation Committee. BSc course in Natural Sciences, UniBo.
- 2019 Member of Evaluation Commission. Call for PostDoc position "Standardization of refinement methodologies of experimentation and calculation parameters of protocollar/applicative aspects of the NISECI (New Index of the Ecological State of Fish Communities)", BiGeA, UniBo, Italy.
- 2019 Member of the Graduation Committee. MSc course in Marine Biology, UniBo.
- 2019 Member of the Examination Committee. Ecology, International MSc course in Low Carbon Technologies and Sustainable Chemistry, UniBo, Italy.
- 2017-2018 Member of the Examination Committee. Relationships between Biodiversity and Environment, MSc course in Biodiversity and Evolution, UniBo.
- 2017 Member of the Examination Committee. Conservation Biology MSc course in Biodiversity and Evolution, UniBo.
- 2010 Member of the Graduation Committee. MSc course in Ecology, University of Parma (Italy).

Scientific seminars

- 5) 2016-2021. "How scuba divers can help to protect coral reefs". Seminars during the course "Relationships between biodiversity and environment", MSc Degree Course in Biodiversity and Evolution, UniBo. Teacher: S. Goffredo.
- 4) 2016-2021. "How scuba divers can help to protect coral reefs". Seminars during the course "Ecology", BSc Degree Course in Biological Sciences, UniBo. Teacher: S. Goffredo.
- 3) 10 Oct 2018. "Coral population biology". Seminar during the course "Ecology", BSc Degree Course in Biological Sciences, UniBo. Teacher: S. Goffredo.
- 2) 2016-2018. "Using computerized tomography and nuclear magnetic resonance to study growth and skeletal characteristics in animal populations". Seminars during the course "Experimental Zoology", MSc Degree Course in Biodiversity and Evolution, UniBo. Teacher: R. Falconi.
- 1) 16 Jun 2008. "Relationships between growth, population structure and seawater temperature in Mediterranean corals". Cycle of seminars "The Science is Young", Department of Evolutionary and Experimental Biology, UniBo.

Active participation in scientific meetings

ORGANIZATION AND CHAIR

- 6) **Chair**. Session 5B What is the different impact of climate change in temperate reefs relative to tropical regions?, "15th International Coral Reef Symposium". Chairs: **Caroselli E**, Teixido N, Kaandorp J. Bremen, 3-8 July 2022.
- 5) **Chair**. Session 5A-B Cold Water Corals, "14th International Coral Reef Symposium". Chairs: Orejas C, **Caroselli E**. Bremen Virtual, 18-23 July 2021.
- 4) **Organization and Chair**. "BiGeA Recounts – Darwin: The journey, the man, and the science" conference of the Department of Biological, Geological and Environmental Sciences (BiGeA), University of Bologna (UniBo). Organized by: Scarponi D, Azzarone M, **Caroselli E**, Costagli B, Fanti F, Forni G, Franzellitti S, Giambastiani BMS, Giuliani C, Squarzone G, Gargini A. Bologna, 19 February 2019.
- 3) **Organization and Chair**. "BiGeA Recounts – Climatic Changes and Sea: Risks and Implications" conference of BiGeA, UniBo. Organized by: Cariani A, Costantini F, Franzellitti S, Airi V, Azzarone M, **Caroselli E**, Fanti F, Ghiselli F, Gneccchi Ruscone GA, Rossi V, Scarponi D, Gargini A. Chaired by: Franzellitti S, **Caroselli E**, Airi V, Azzarone M. Ravenna, 21 December 2017.
- 2) **Organization and Chair**. "BiGeA Day – The researchers tell about BiGeA" – 2nd Edition: annual conference of BiGeA, UniBo. Organized by: Scarponi D, Fanti F, Ghiselli F, Papi A, Airi V, **Caroselli E**, Cau A, Gargini A, Gneccchi Ruscone G, Greco F, Rossi V. Chaired by: Papi A, **Caroselli E**, 22 December 2016.
- 1) **Organization and Chair**. "BiGeA Day – The researchers tell about BiGeA" – 1st Edition: annual conference of BiGeA, UniBo. Organized by: Scarponi D, Fanti F, Ghiselli F, Papi A, Airi V, Borgatti E, **Caroselli E**, Cau A, Curcio AC, Gargini A, Gneccchi Ruscone G, Greco F, Rossi V. Chaired by: **Caroselli E**, Rossi V, Scarponi D, Sarno S. Bologna, 1 June 2016.

IN EXTENSO CONGRESS PROCEEDINGS

- 6) Gizzi F, Airi V, **Caroselli E**, Goffredo S (2014) Population dynamics model of the solitary symbiotic coral *Balanophyllia europaea* (Scleractinia, Dendrophylliidae) at Calafuria. Congress "Codice Armonico", V^o Regional Congress of Natural Sciences, "Tuscany Environment", Castiglioncello (Livorno, Italy), 27-29 March 2014. ETS, p. 68-72 (Original language: Italian).
- 5) Prada F, **Caroselli E**, Zaccanti F, Capaccioni B, Falini G, Levy O, Dubinsky Z, Goffredo S (2013) Ocean acidification effects on benthic Mediterranean organisms along a natural CO₂ gradient. Joint International Scientific Diving Symposium, American Academy of Underwater Sciences and European Scientific Diving Panel, Curaçao, 24-27 October 2013. American Academy of Underwater Sciences, p. 231-233
- 4) **Caroselli E**, Mattioli G, Zaccanti F, Goffredo S (2012) Growth and population dynamics model for the solitary temperate azooxanthellate coral *Leptopsammia pruvoti* (Scleractinia, Dendrophylliidae). Congress "Codice Armonico", IV^o Regional Congress of Natural Sciences, "Tuscany Environment", Castiglioncello (Livorno, Italy), 14-16 March 2012. ETS, p. 58-66 (Original language: Italian).
- 3) Goffredo S, Marchini C, Rocchi M, Airi V, **Caroselli E**, Falini G, Levy O, Dubinsky Z, Zaccanti F (2012) Reproduction of the solitary coral *Caryophyllia inornata* (Scleractinia, Caryophylliidae). Congress "Codice Armonico", IV^o Regional Congress of Natural Sciences, "Tuscany Environment", Castiglioncello (Livorno, Italy), 14-16 March 2012. ETS, p. 188-198 (Original language: Italian).
- 2) Goffredo S, **Caroselli E**, Mattioli G, Pignotti E, Dubinsky Z, Zaccanti F (2010) Decrease of calcification with increasing temperature in a Mediterranean endemic coral. Congress "Codice Armonico", III^o Regional Congress of Natural Sciences, "Tuscany Environment", Castiglioncello (Livorno, Italy), 11-13 March 2010. ETS, p. 9-16 (Original language: Italian).
- 1) Goffredo S, **Caroselli E**, Pignotti E, Mattioli G, Zaccanti F (2008) Environmental control on biometry and demography of solitary corals in the Mediterranean Sea. Congress "Codice Armonico", II^o Regional Congress of Natural Sciences, "Tuscany Environment", Castiglioncello (Livorno, Italy), 13-15 March 2008. ETS, p. 248-257 (Original language: Italian).

INVITED TALKS

- 1) Franzellitti S, Airi V, Poli D, Calbucci D, **Caroselli E**, Prada F, Voolstra CR, Mass T, Falini G, Fabbri E, Goffredo S (2018) Transcriptional responses of the heat shock gene hsp70 to thermal stress in shallow-water corals: the influence of physiological plasticity and life history traits. 31st Congress of the New European Society for Comparative Physiology and Biochemistry, Porto (Portugal), 9-12 September.

ABSTRACTS

- 45) Teixido N, Carbonne C, Meynadier M, Alliouane S, Capdevilla P, Carlot J, Marchini C, **Caroselli E**, Goffredo S, Copley RR, Gattuso J-P, Guttierrez T, Mirasole A, Comeau S (2024) Coral populations naturally occur in high pCO₂ environments on the coast of Ischia. European Coral Reef Symposium. Napoli, 2-5 July.
- 44) Sani T, Prada F, Radi G, **Caroselli E**, Falini G, Dubinsky Z, Goffredo S (2024) Coral trophic strategy and growth mode affect tissue recovery response to ocean warming and acidification at a shallow CO₂ vent. 7th European Congress of Conservation Biology. Bologna, 17-21 June.
- 43) Machado Toffolo M, Meschini M, Marchini C, **Caroselli E**, Prada F, Mancuso A, Franzellitti S, Locci L, Davoli M, Trittoni M, Nanetti E, Tittarelli M, Bentivogli R, Branchini S, Neri P, Goffredo S (2024) Reliability of data collected by volunteers: a nine-year citizen science study in the Red Sea. 7th European Congress of Conservation Biology. Bologna, 17-21 June.
- 42) Marchini C, Machado Toffolo M, Mancuso A, **Caroselli E**, Goffredo S (2022) Short- and long-term effects of an informal education program on tourist environmental perception. Patrimonio dell'Umanità. 50 anni dalla Convenzione UNESCO: riflessioni nei Campus dell'Alma Mater Studiorum, Turismo sostenibile fra patrimonio locale e cittadinanza globale. Rimini, 10 November.
- 41) Teixido N, Alliouane S, Carbonne C, **Caroselli E**, Comeau S, Copley R, Gattuso J-P, Goffredo S, Mirasole A, Meynadier M, Palumbi SR, Sheets E (2022) Newly discovered CO₂ vent supports a coral population persisting under high pCO₂ environments. 15th International Coral Reef Symposium. Bremen, 3-8 July.
- 40) Cassarino C, Mancuso A, Prada F, **Caroselli E**, Goffredo S (2022) Influence of environmental parameters on growth in the solitary non-zooxanthellate coral *Caryophyllia inornata* naturally living at volcanic vents. 15th International Coral Reef Symposium. Bremen, 3-8 July.
- 39) Machado Toffolo M, Simoncini G, Marchini C, Meschini M, **Caroselli E**, Franzellitti S, Prada F, Goffredo S (2022) Long term effects of an informal education program on tourist environmental perception. 15th International Coral Reef Symposium. Bremen, 3-8 July.
- 38) Marchini C, Fossati V, Cerpelloni M, **Caroselli E**, Falini G, Dubinsky Z, Goffredo S (2022) Reproductive morphology and biometry of the non-zooxanthellate papillose cup coral *Paracyathus pulchellus* (Scleractinia: Caryophylliidae). 15th International Coral Reef Symposium. Bremen, 3-8 July.
- 37) Lee C, **Caroselli E**, Machado Toffolo M, Meschini M, Mancuso A, Marchini C, Pensa F, Branchini S, Goffredo S (2022) Eight years of community structure monitoring through recreational citizen science at the "SS Thistlegorm" wreck (Red Sea). 15th International Coral Reef Symposium. Bremen, 3-8 July.
- 36) Machado Toffolo M, Goffredo S, Meschini M, **Caroselli E**, Franzellitti S, Prati F, Simoncini G, Visentin M, Airi V, Branchini S, Prada F, Boattini A, Brambilla V, Martinez G, Marchini C (2021) Environmental education and tourism: promoting tourist awareness through informal activities. Citizen Science Italia (CSI) National Meeting. Grosseto (Italy), 11-12 November.

- 35) Copelli S, Brizi L, **Caroselli E**, Mirasole A, Teixido N, Fantazzini P, Gambi MC, Goffredo S (2021) A time-domain NMR and nanoindentation analysis of skeletal properties in a Mediterranean non-zooxanthellate coral naturally living at CO₂ vents. 14th International Coral Reef Symposium. Bremen Virtual, 18-23 July.
- 34) Teixido N, **Caroselli E**, Alliouane S, Comeau S, Gattuso J-P, Fici P, Micheli F, Mirasole A, Monismith S, Munari M, Palumbi S, Sheets E, Urbini L, de Vittor C, Goffredo S, Gambi MC (2021) Newly discovered CO₂ vent supports a coral population persisting under high pCO₂ environments. 14th International Coral Reef Symposium. Bremen Virtual, 18-23 July.
- 33) Meschini M, Machado Toffolo M, Marchini C, **Caroselli E**, Prada F, Franzellitti S, Locci L, Davoli M, Trittoni M, Nanetti E, Tittarelli M, Bentivogli R, Branchini S, Neri P, Goffredo S (2020) Reliability of data collected by volunteers, a nine-year citizen science study in three Red Sea touristic facilities. 5th Annual International Conference on Participatory Research, Citizen Science, Crowd Innovation and Fab Labs for Peace and Development. Online, 8-10 December.
- 32) Wall M, Prada F., Fietzke J, **Caroselli E**, Dubinsky Z, Brizi L, Fantazzini P, Franzellitti S, Mass T, Montagna P, Falini G, Goffredo S (2020) Linking internal carbonate chemistry regulation and calcification in corals growing at a Mediterranean CO₂ vent. Conservation Paleobiology Symposium, Bologna (Italy), 3-4 February.
- 31) **Caroselli E**, Fici P, Ceccarelli C, Gambi MC, Teixido N, Goffredo S (2019) Variations in growth and skeletal characteristics of a temperate non-zooxanthellate colonial coral naturally living at CO₂ vents. 13th International Symposium on Fossil Cnidaria and Porifera, Modena (Italy), 3-6 September.
- 30) Prada F, Wall M, Fietzke J, **Caroselli E**, Dubinsky Z, Brizi L, Fantazzini P, Franzellitti S, Mass T, Montagna P, Falini G, Goffredo S (2019) Unpuzzling pH up-regulation and calcification in corals growing at CO₂ Mediterranean vents. 13th International Symposium on Fossil Cnidaria and Porifera, Modena (Italy), 3-6 September.
- 29) Falini G, Fermani S, **Caroselli E**, Prada F, Airi V, Goffredo S (2017) Corals: calcification process and response to ocean acidification. BiGeA Recounts – Climatic Changes and Sea: Risks and Implications, Ravenna (Italy), 21 December.
- 28) Teixido N, Ceccarelli C, **Caroselli E**, di Meglio E, Gambi MC, Goffredo S (2016) Effects of ocean acidification on skeletal characteristics of a temperate coral at a CO₂ vent system. 11th International Temperate Reefs Symposium, Pisa (Italy), 26-30 June.
- 27) **Caroselli E**, Prada F, Capaccioni B, Levy O, Falini G, Dubinsky Z, Kaandorp J, Goffredo S (2016) Growth and demography of the Mediterranean endemic solitary coral *Balanophyllia europaea* living along a natural pCO₂ gradient. 13th International Coral Reef Symposium, Honolulu, Hawai'i (USA), 19-24 June.
- 26) Gizzi F, de Mas L, Airi V, **Caroselli E**, Prada F, Capaccioni B, Levy O, Falini G, Dubinsky Z, Goffredo S (2016) Short-term exposure at CO₂ vent affect spermatogenesis in a temperate non-zooxanthellate coral. 13th International Coral Reef Symposium, Honolulu, Hawai'i (USA), 19-24 June.
- 25) Prada F, **Caroselli E**, Mengoli S, Fantazzini P, Capaccioni B, Pasquini L, Levy O, Weaver JC, Fabricius KE, Dubinsky Z, Falini G, Goffredo S (2016) Ocean warming and acidification synergistically increase coral mortality. 13th International Coral Reef Symposium, Honolulu, Hawai'i (USA), 19-24 June.
- 24) Fantazzini P, Prada F, **Caroselli E**, Capaccioni B, Mengoli S, Pasquini L, Levy O, Weaver JC, Fabricius KE, Dubinsky Z, Falini G, Goffredo S (2015) Differential synergistic adverse effect of increased sea temperature and acidity on corals. International Scientific Conference "Our Common Future Under Climate Change", Paris (France), 7-10 July.
- 23) **Caroselli E**, Prada F, Capaccioni B, Levy O, Falini G, Dubinsky Z, Kaandorp J, Goffredo S (2015) Growth and population dynamics of the Mediterranean endemic solitary coral *Balanophyllia europaea* living along a natural pCO₂ gradient. 2015 ASLO Aquatic Sciences Meeting, Granada (Spain), 22-27 February.
- 22) Gizzi F, de Mas L, Marisaldi L, Lazzari V, Airi V, **Caroselli E**, Prada F, Falini G, Dubinsky Z, Goffredo S (2015) Effects of ocean acidification on the reproductive output of three Mediterranean corals transplanted at an underwater crater characterized by CO₂ emissions. 2015 ASLO Aquatic Sciences Meeting, Granada (Spain), 22-27 February.
- 21) Prada F, **Caroselli E**, Capaccioni B, Levy O, Fabricius KE, Weaver JC, Falini G, Dubinsky Z, Goffredo S (2015) Different sensitivity of Mediterranean scleractinian corals to seasonal changes in temperature along a natural CO₂ gradient. 2015 ASLO Aquatic Sciences Meeting, Granada (Spain), 22-27 February.
- 20) Reggi M, Landi V, Fermani S, Sparla F, **Caroselli E**, Gizzi F, Dubinsky Z, Levy O, Cuif J-P, Dauphin Y, Goffredo S, Falini G (2014) Biomineralization in Mediterranean corals. 2nd Joint Congress of the Italian Society of Synchrotron Light and of the Crystallography Italian Society, Florence (Italy), 15-18 September.
- 19) Prada F, **Caroselli E**, Capaccioni B, Levy O, Fabricius KE, Weaver JC, Falini G, Dubinsky Z, Goffredo S (2014) Different sensitivity of Mediterranean scleractinian corals to seasonal changes in temperature along a natural CO₂ gradient. Diving for Science 2014: American Academy of Underwater Sciences 33rd Scientific Symposium, Sitka (Alaska), 9-13 September.
- 18) Goffredo S, Prada F, **Caroselli E**, Capaccioni B, Reggi M, Fermani S, Fantazzini P, Pasquini L, Levy O, Dubinsky Z, Falini G (2013) Biomineralization and population density of benthic marine calcifiers along a natural carbon dioxide gradient. 8th International Conference on Coelenterate Biology, Eilat (Israel), 1-5 December.
- 17) Nanni V, **Caroselli E**, Levy O, Falini G, Dubinsky Z, Goffredo S (2013) Latitudinal variations in biometry and abundance of a Mediterranean solitary coral suggest higher tolerance to seawater warming for non-zooxanthellate species. 8th International Conference on Coelenterate Biology, Eilat (Israel), 1-5 December.
- 16) Prada F, **Caroselli E**, Capaccioni B, Falini G, Levy O, Dubinsky Z, Zaccanti F, Goffredo S (2013) Different sensitivities among Mediterranean scleractinian corals to enhanced ocean acidification. 8th International Conference on Coelenterate Biology, Eilat (Israel), 1-5 December.
- 15) Prada F, **Caroselli E**, Capaccioni B, Falini G, Levy O, Zaccanti F, Dubinsky Z, Goffredo S (2013) Ocean acidification effects on benthic Mediterranean organisms along a natural CO₂ gradient. 10th Annual conference of the Israeli Association for Aquatic Sciences, Mikhmoret (Israel), 13-14 March.
- 14) Goffredo S, Prada F, **Caroselli E**, Capaccioni B, Falini G, Levy O, Dubinsky Z, Zaccanti F (2012) Different sensitivity among scleractinian corals to enhanced ocean acidification. 12th International Coral Reefs Symposium, Cairns (Queensland, Australia), 9-13 July.
- 13) **Caroselli E**, Levy O, Zaccanti F, Falini G, Dubinsky Z, Goffredo S (2011) Growth and demography of the temperate/subtropical scleractinian *Leptopsammia pruvoti* do not depend on temperature in the Mediterranean Sea. LLXXII National meeting of Italian Zoological Union, Bologna (Italy), 5-8 September 2011 (Original language: Italian).
- 12) Goffredo S, Marchini C, Rocchi M, Airi V, **Caroselli E**, Falini G, Levy O, Dubinsky Z, Zaccanti F (2011) Reproduction of the solitary coral *Caryophyllia inornata* (Scleractinia, Caryophyllidae) in the Mediterranean. LLXXII National meeting of Italian Zoological Union, Bologna (Italy), 5-8 September 2011 (Original language: Italian).
- 11) Goffredo S, Prada F, **Caroselli E**, Levy O, Falini G, Dubinsky Z (2011) Effects of sea acidification on mediterranean corals in a volcanic site with underwater CO₂ emissions. LLXXII National meeting of Italian Zoological Union, Bologna (Italy), 5-8 September 2011 (Original language: Italian).
- 10) Falini G, Goffredo S, Vergni P, Reggi M, **Caroselli E**, Sparla F, Levy O, Dubinsky Z (2011) Biological and environmental influence on Mediterranean corals calcium carbonate precipitation. IUCr2011: XXII Congress and General Assembly of the International Union of Crystallography, Madrid (Spain), 22-30 August.

- 9) **Caroselli E**, Levy O, Zaccanti F, Falini G, Dubinsky Z, Goffredo S (2010) Growth and demography of the temperate/subtropical scleractinian *Leptopsammia pruvoti* are unrelated to seawater temperature in the Mediterranean Sea. EURO ISRS symposium 2010: Reefs in a changing environment, Wageningen (Netherlands), 13-17 December.
- 8) Goffredo S, **Caroselli E**, Prada F, Pasquini L, Nonnis Marzano F, Zaccanti F (2010) Identification of tolerant/sensible Mediterranean coral species in face of global change. EURO ISRS symposium 2010: Reefs in a changing environment, Wageningen (Netherlands), 13-17 December.
- 7) Vergni P, Reggi M, **Caroselli E**, Sparla F, Levy O, Dubinsky Z, Goffredo S, Falini G (2010) The organic matrix influences precipitation patterns of skeletal calcium carbonate in the Mediterranean coral *Balanophyllia europaea*. EURO ISRS symposium 2010: Reefs in a changing environment, Wageningen (Netherlands), 13-17 December.
- 6) Falini G, Goffredo S, Vergni P, **Caroselli E**, Reggi M (2009) The role of organic matrix from Mediterranean corals in CaCO₃ precipitation. International School on Biological Crystallization, Granada (Spain), 18-22 May.
- 5) Tomas MS, Vergni P, **Caroselli E**, Goffredo S, Falini G, Garcia Ruiz JM (2009) Corals biomineralization: unpuzzling biopolymeric function. International School on Biological Crystallization, Granada (Spain), 18-22 May.
- 4) **Caroselli E**, Goffredo S, Zaccanti F (2008) Environmental influence on growth and calcification in a Mediterranean Scleractinian and implications related to global warming. European Network of excellence for Ocean Ecosystems Analysis Final Meeting, Rome (Italy), 25-27 November.
- 3) Goffredo S, **Caroselli E**, Zaccanti F, Falini G (2008) Skeletal calcium carbonate phase polymorphism in two temperate scleractinians. 11th International Coral Reefs Symposium, Ft. Lauderdale (FL, USA), 7-11 July.
- 2) Goffredo S, **Caroselli E**, Mattioli G, Pignotti E, Zaccanti F (2008) Growth and population dynamics model of the solitary Sunset Cup Coral *Leptopsammia pruvoti* (Scleractinia, Dendrophylliidae) in the Mediterranean Sea. 11th International Coral Reefs Symposium, Ft. Lauderdale (FL, USA), 7-11 July.
- 1) Goffredo S, **Caroselli E**, Pignotti E, Mattioli G, Zaccanti F (2006) Environmental control on biometry and demography of solitary corals in the Mediterranean Sea. International Society for Reef Studies European Meeting, Bremen (Germany) 19-22 September.

Technical reports

- 1) **Caroselli E**, Zuffi G, Marchi A, Sacchetti S (2022) Investigation on the specific composition of Gobiid fish community. Parco Nazionale delle Foreste Casentinesi. Torrente Acquacheta. University of Bologna and Hydrosynergy Soc. Coop. 13pp.

Book chapters

- 2) **Caroselli E**, Goffredo S (2016) Population dynamics of temperate corals in a changing climate. In: Goffredo S, Dubinsky Z (eds) The cnidaria, past, present and future. The world of Medusa and her sisters. Springer, Cham, 317-328
- 1) **Caroselli E**, Goffredo S (2014) Mediterranean coral population dynamics: a tale of 20 years of field studies. In: Goffredo S, Dubinsky Z (eds) The Mediterranean Sea: its history and present challenges. Springer Science+Business Media, Dordrecht, pp 275-284

Books

- 1) Otero MdM, Numa C, Bo M, Orejas C, Garrabou J, Cerrano C, Kruzic P, Antoniadou C, Aguilar R, Kipson S, Linares C, Terron-Sigler A, Brossard J, Kersting D, Casado-Amezua P, Garcia S, Goffredo S, Ocana O, **Caroselli E**, Maldonado M, Bavestrello G, Cattaneo-Vietti R, Ozalp B (2017) Overview of the conservation status of Mediterranean anthozoa. IUCN, Malaga, pp 73

Articles in peer review journals without impact factor

- 1) Musco L, Vega Fernández T, **Caroselli E**, Roberts JM, Badalamenti F (2018) Protocooperation among small polyps allows the coral *Astroides calycularis* to prey on large jellyfish. Bulletin of the Ecological Society of America 99:e01445.

Articles in impact factor journals

- 52) Iluz D, Prada F, Abu-Gosh S, Mancuso A, **Caroselli E**, Tittarelli M, Falini G, Goffredo S, Dubinsky Z (2024) Ocean acidification detrimentally affects mineralization and photosynthetic efficiency of the brown alga *Padina pavonica* at a CO₂ vent. Bulletin of Marine Science, in press.
- 51) Sani T, Prada F, Radi G, **Caroselli E**, Falini G, Dubinsky Z, Goffredo S (2023) Ocean warming and acidification detrimentally affect coral tissue regeneration at a Mediterranean CO₂ vent. Science of the Total Environment, 906:167789.
- 50) Marchi A, Bertaccini A, Fan W, Zuffi G, Sacchetti S, Nanetti M, Lee C, Agostini A, Lucchini D, Bianconcini S, Zaccanti F, Goffredo S*, **Caroselli E*** (2023) Refinement of the NISECI ecological index reference conditions for Italian freshwater fish communities in the eastern Emilia-Romagna region. Ecological Indicators, 155:111070. (*corresponding author)
- 49) Lee C, **Caroselli E***, Machado Toffolo M, Mancuso A, Marchini C, Meschini M, Goffredo S (2023) Eight years of community structure monitoring through recreational citizen science at the "SS Thistlegorm" wreck (Red Sea). PLOS ONE, 18:e0282239. (*corresponding author)
- 48) Prada F, Franzellitti S, **Caroselli E***, Cohen I, Marini M, Campanelli A, Sana L, Mancuso A, Marchini C, Puglisi A, Candela M, Mass T, Tassi F, LaJeunesse TC*, Dubinsky Z, Falini G, Goffredo S* (2023) Acclimatization of a coral-algal mutualism at a CO₂ vent. Communications Biology, 6:66. (*corresponding author)
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Funding ID

2018-2023	<u>Ecology</u> , Oriented Fundamental Research (RFO), Italian Ministry of Education, University and Research (MIUR). 19,298.89 €
2023	<u>Project Alma Attrezzature</u> – Line 1 Maintenance. Funds University of Bologna. 10,874 €
29 Jan 2018-31 May 2020	<u>Project "Response strategies to ocean acidification: coral morphologic plasticity and microbial ecosystem variations"</u> (STRAMICRO), funds University of Bologna, Alma Idea Grant Junior. 20,000 €
	TOTAL 2018-2023: 50,172.89 €

Organization and realization of public engagement activities

29 February 2024	<u>Orientation Days and Virtual Fair</u> . UniBo.
2017-2024	<u>Scientific Degrees Plan</u> , Bologna (Italy). Activities for high school students to promote the University courses in scientific disciplines.
6 December 2023	<u>Open Days</u> . Presentation of the International Master's degree programmes in the Biology, Geology, and Environmental Science Area, UniBo.
27 May 2023	<u>BiGeA Day – Aldrovandi</u> , Bologna (Italy). Presentation of research activities of the Department to the public.
2007-2023	<u>European Dive Show (EuDi)</u> , Roma, Bologna, Milano (Italy). Presentation of the projects of the research group.
2020	<u>Alma Orienta</u> , Bologna (Italy). Orientation days of the University of Bologna
2010-2019	<u>European Researchers' Night, Bologna (Italy)</u> . Presentation of the projects "STE: Scuba Tourism for the Environment" (www.steproject.org) and "CoralWarm" (www.coralwarm.eu).
19 June 2019	<u>International School of Bologna</u> , Bologna. Public engagement presentation "Corals and climate change: scientific research in the future oceans".
22 May 2019	<u>Pint of Science 2019</u> , Bologna (Italy). Public engagement presentation "Corals and climate change: research dives into the future oceans".
26 September 2018	<u>Waiting for the Researchers' Night</u> , Scientific High School Augusto Righi, Bologna (Italy). Public engagement presentation "Diving in the Night!...of the Researchers".
16 May 2018	<u>Pint of Science 2018</u> , Bologna (Italy). Public engagement presentation "Corals and climate change: research dives into the future oceans".
18 May 2017	<u>Research on Stage</u> , Bologna, Italy. Show-conference on the results of "CoralWarm" project.
2012-2013	<u>AlmaFest</u> , Bologna (Italy). Presentation of the projects "STE: Scuba Tourism for the Environment" and "CoralWarm".
1-2 June 2012	<u>In the City Square between Bubbles and Corals</u> , Bologna (Italy). Presentation of the project "CoralWarm".
24 January 2010	<u>Science and the City</u> , Bologna (Italy). Presentation of the project "CoralWarm".
2004, 2005	<u>International Po Delta Birdwatching Fair</u> , Comacchio (Italy). Presentation of the project "Divers for the Environment" (www.progettosubambiente.org).
16-17 October 2004	<u>National "Sub per l'Ambiente" Party</u> , Quercianella (Italy). Presentation of the project "Divers for the Environment".
29 May – 5 June 2004	<u>Scuba Diving Fest</u> , Palinuro (Italy). Presentation of the project "Divers for the Environment".

Languages

Mother tongue: Italian.

Other Languages: fluent English.