

Marilena Sanfilippo



Born in Messina (Italy) on 27/10/1974

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Current Position: Collaboratore TER VI livello

Current Affiliation:

Stazione Zoologica Anton Dohrn, Sicily Marine Centre Messina (Italy)

Education/Training/Experience

| Institute and Location | Degree / Function | Year | Field of Study |
|---|---|-----------|---|
| "Maurolico" Classic High School, Messina (Italy) | Student | 1988-1993 | Classical high school Diploma |
| University of Messina, Messina (Italy) | Master's degree | 1994-2000 | Biological Sciences, Bio-Ecological curriculum |
| University of Messina, Messina (Italy) – Ordine Nazionale dei Biologi | Licensing as a biologist and registration with the order of biologists of Sicily under n°.SIC A5462 | 2000-2001 | Environmental Protection, Resources and Territory Management and food chemical-physical analyses |
| University of Messina, Messina (Italy) | Ph.D. in "Environmental Sciences: Marine Environment and Resources" XVI Cycle. | 2000-2004 | Anthropic impact in three Protected Marine Areas: Ustica Island (PA) - Ciclopi Islands (CT) - Capo Rizzuto (KR) |
| Department of Animal Biology and Marine Ecology, University of Messina, Messina (Italy) | Research fellow | 2006-2008 | Chemical and physical analysis of marine waters, use of scientific instruments such as TOC analyzer and HPLC |

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|---|--|--------------|---|
| Department of Animal Biology and Marine Ecology, University of Messina, Messina (Italy) | Postdoc | 2009-2011 | Organic carbon in the brackish environments of the Capo Peloro Natural Reserve |
| Horcynus Orca Foundation, Capo Peloro (Messina, Italy) | Collaborator (project contract) | 2011-2012 | Drafting of the Horcynus Orca Foundation educational offerings plan. Coordinating and conducting educational / scientific visits to first and second grade students in the Horcynus Orca Foundation in Capo Peloro (Messina) |
| CoNISMa (Roma, Italy) | Research collaborator (project contract) | 2012-2014 | Collaboration in the research of the CoNISMa URL of Messina in the context of the RITMARE Project: sampling, in situ determinations and analysis of breeding waters, in an aquaculture industrial plant. |
| University of Messina, Faculty of Veterinary Sciences, Messina (Italy) | Research fellow | 2014-2016 | 1) <i>Gracilaria sp.</i> in wastewater from breeding plants, abatement tests for pollutant loads with algal cultures and extraction of bioactive compounds; 2) Support activities at the experimental centre for the management of stocks of <i>Seriola dumerili</i> broodstock |
| ARPA Sicilia, Enna (Italy) | Biologist expert in biology of internal waters | 2016-2018 | Phytoplankton sampling and determination with identification of algal species, counting and determination of the biovolume with calculation of the final ecological quality index. |
| Stazione Zoologica Anton Dohrn, RIMAR Section, Messina, Italy | Technical collaborator | 2019-present | Technical collaborator Research institutes Level VI |

Appointments and awards

03/15/2024-31/12/2024: Contract Execution Director (DEC) for the service of “Disposal special waste Villa Pace site and supply storage containers” (Executive Orders Sicily Coordinator No. 15/2024 of 19/03/2024).

From 19/07/2022: Assignment of health and safety officer in accordance with the provisions of Legislative Decree 81/2008, for the activities carried out by the Stazione Zoologica Anton Dohrn at the Messina site (Prot. 4614, 01/08/2022).

From 02/05/2022: Functional Area Manager (RAF) 'Biology, Ecology and Management of Fishery Resources' of the Zoological Station Anton Dohrn, Sicily Marine Centre (Order of the Director Sicily Office No. 1/2022).

1/01/2022-31/12/2023: Contract Execution Director for the "Waste Collection, Transport and Disposal" Service for SZN Messina and Milazzo (Determination DG 558/22, 18/11/22).

From 23/06/2021: Delegation of authority to the Head Office Director to safeguard and administer the resources of the bursar's fund entrusted to the Messina office and to account for the expenditure to those responsible in accordance with the "Rules for the management of the bursar's cash service" approved by resolution No. 4 of 11 May 2019 (Prot. 3196, 24/06/2021).

2020-2024: Member of the selection Committee for Fellowship for research activities and for Research Grant at the Stazione Zoologica Anton Dohrn.

Jul-Sept 2022: Member of Technical Committee for negotiated procedure ex art. 63, co. 6 of Legislative Decree 50/2016 for the awarding of the supply of an "Automated Infrared Microscope correlated with a compatible Infrared Spectrophotometer with installation". "CRIMAC Project - Center for Advanced Marine Research and Infrastructure in Calabria (CRIMAC)" CUP:

Dec 2021-Jan 2022 Member of technical commission for negotiated procedure ex art. 63, co. 6 of D.Lgs. 50/2016 for the assignment of the supply of a Flotation System complete with meteorological station, acoustic modems and CH₄ and CO₂ sensors. CIG: 89449863F6; Contract G00076. Project: "Implementation of the ECCSEL natural laboratory in Panarea and of the marine observatory" C64I20000320001 - CIG: 91407376CB. General Director's Determination No. 307, 07/15/2022.

2023: Involved in the project PO FEAMP SICILIA 2014-2020 Mis. 2.51 "Potenziamento della molluschicoltura siciliana nell'areale della laguna di Capo Peloro (ME) - Linea di intervento n. 1 Conservazione e valorizzazione dell'allevamento delle specie endemiche della molluschicoltura del messinese (*Mytilus* spp.)", collaborating in sampling, filtration and analysis of water samples for determination of nutrients, oxygen and TSM. Collaboration in drafting the final report.

2021-2022: Involved in FEAMP MIPAF REsPoNSo (Riduzione Pesca fantasma in Sicilia) Project. Stazione Zoologica Anton Dohrn, Naples.

2019-2022: Involved in "Marine Hazard Project (Sviluppo di tecnologie innovative per l'identificazione, monitoraggio, remediation di sorgenti di contaminazione naturale e antropica" - OR1), Codice identificativo: PON03PE_00203_1. CUP: B62F15000210005.

2019-2023: Involved in PO FEAMP CAMPANIA 2014-2020 Project "Innovazione, sviluppo e sostenibilità nel settore della pesca e dell'acquacoltura per la Regione Campania" (ISSPA), misure 1.26, 1.40 e 2.51. Stazione Zoologica Anton Dohrn, Naples.

2019-2021: Participation in IPANEMA Project (Potenziamento dell'infrastruttura ECCSEL – ERIC NatLib-Italy di Panarea) - PON Ricerca e Innovazione 2014-2020 (Cod.: PIR01_00018). Stazione Zoologica Anton Dohrn, Naples.

2019-2020: Participation in “Potenziamento Ricerca e Infrastrutture Marine (EMBRC IT)” -PON PRIMA Calabria OR 8 Project. Stazione Zoologica Anton Dohrn, Naples.

28/07/2011: European ECDL-GIS (Geographic Information System) certification, GIS000729 (AICA-ECDL Foundation).

From 2016: Referee for international scientific journals (Turkish Journal of Fisheries and Aquatic Sciences, Fish and Shellfish Immunology Annals of Marine Biology and Research, Diversity MDPI, Journal of Food Science & Technology, Data MDPI, Water MDPI, Applied Sciences MDPI (ISSN 2076-3417)).

From 2019: Participation to the Editorial Board of Mathews Journal of Pharmaceutical Science. Mathews Open Access Journal, New Jersey, USA; Research and Advances: Aquatic Sciences. Ocimum Scientific Publisher, Australia; Aquaculture and Fisheries Studies. ResearchOpen World, Isleworth, England).

Education and Training Courses and Attendance at conferences

- 15/05/2024: Online course RIFORMA Mentis by Formez - Syllabus PA. 1 ora.
- 18/02/2024-14/05/2024: Training course for underwater activities (Art. 36 LD 81/2008) activities (Art. 36 of Legislative Decree 81/2008), by RSPP, Physician Specializing in Underwater Medicine, Dr. Vittorio Helzel, and the Physician in Charge.
- 2023-2024: Syllabus formation Digital Skills. Training course on Digital Skills_SYLLABUS, 11 training paths concluded.
- 27/02/2023: Training course on personal data protection, EU Regulation 2016/679 (GDPR), held by Avv. Silvia Misirocchi at the Zoological Station Anton Dohrn.
- 8/11/2022: Training Course for Safety Officers in the Workplace, as Responsible Officer for the Messina site. SZN Naples, 8 hours.
- 26/05/2022-23/06/2022: Course on Popular and Scientific Communication Techniques held by Dr Marco Castellazzi. SZN Naples/on-line, 26/5-23/6/2022, 20 hours.
- 27/07/2021: Basic course on public contracts below the thresholds, organized by the Stazione Zoologica Anton Dohrn and held in webinar mode (6 hours). Teacher: Avv. Alessio Ubaldi, UB LEGAL, Studio Legale Ubaldi.
- 16/05/2021-20/05/2021: EANA Spring School 2021 on hydrothermal vents. The total lecture time was 12 hours and the attendee successfully passed an exam.
- 25/11/2020-2/12/2020: Training course "Scenario and perspectives of the new European program for research and innovation". APRE – Agenzia per la Promozione della Ricerca Europea
- 17-20 /10/2019: Mazara del Vallo (TP), Blue Sea Land Expo. Team SZN Stand.

Publications

List of publications of the last 10 years

1. Arcadi E., Rastelli E., Tangherlini M., Rizzo C., Mancuso M., Sanfilippo M., Esposito V., Andaloro F., Romeo T. (2022). Shallow-Water Hydrothermal Vents as Natural Accelerators of Bacterial Antibiotic Resistance in Marine Coastal Areas. *Microorganisms* 2022, 10(2), 479; <https://doi.org/10.3390/microorganisms10020479>.
2. Sanfilippo M, Albano M, Manganaro A, Capillo G, Spanò N, Savoca S. (2022) - Spatiotemporal Organic Carbon Distribution in the Capo Peloro Lagoon (Sicily, Italy) in Relation to Environmentally Sustainable Approaches. *Water*. 2022; 14(1):108. <https://doi.org/10.3390/w14010108>

3. Longo F., Malara D., Stipa M.G., Consoli P., Romeo T., Sanfilippo M., Abbate F., Andaloro F., Battaglia P. (2021) - Age, Growth and Otolith Microstructure of the Spotted Lanternfish *Myctophum punctatum* Rafinesque 1810. *Journal of Marine Science and Engineering*, 9(8):801. <https://doi.org/10.3390/jmse9080801>
4. Spanò N., Di Paola D., Albano M., Manganaro A., Sanfilippo M., D'Iglio C., Capillo G., Savoca S. (2021) - Growth performance and bioremediation potential of *Gracilaria gracilis* (Steentoft, L.M. Irvine & Farnham, 1995). *International Journal of Environmental Studies*, DOI: 10.1080/00207233.2021.1954775
5. Bottari T., Savoca S., Mancuso M., Capillo G., Panarello G., Bonsignore M., Crupi R., Sanfilippo M., D'Urso L., Compagnini G., Neri F., Romeo T., Luna G.M., Spanò N., Fazio E. (2019) - Plastics occurrence in the gastrointestinal tract of *Zeus faber* and *Lepidopus caudatus* from the Tyrrhenian Sea. *Marine Pollution Bulletin* 146:408-416. DOI: 10.1016/j.marpolbul.2019.07.003.
6. Fazio F., Saoca C., Sanfilippo M., Capillo G., Spano, N., Piccione G. (2019) - Response of Vanadium bioaccumulation in tissues of *Mugil cephalus* (Linnaeus 1758). *Science of The Total Environment*, 689: 774-780. DOI: 10.1016/j.scitotenv.2019.06.476
7. Raffa C., Rizzo C., Strous M., De Domenico E., Sanfilippo M., Michaud L., Lo Giudice A. (2019). Prokaryotic Dynamics in the Meromictic Coastal Lake Faro (Sicily, Italy). *Diversity* 2019, 11, 37. [doi.org/ 10.3390/d11030037](https://doi.org/10.3390/d11030037).
8. Parrino, V., Capello, T., Costa, G., Cannavà, C., Sanfilippo, M., Fazio, F., Piccione, G., & Fasulo, S. (2019). Blood flow cytometry in *Mugil cephalus* and *Carassius auratus*: a comparative study. *Atti della Accademia Peloritana dei Pericolanti - Classe di Scienze Fisiche, Matematiche e Naturali*, 97(S2), A15. [doi:http://dx.doi.org/10.1478/AAPP.97S2A15](http://dx.doi.org/10.1478/AAPP.97S2A15)
9. Capillo G., Sanfilippo M., Savoca S., Albano M., Fazio F., Panarello G., Scifo G., Spanò N. (2019) - Body Patterning of *Sepia officinalis* in Captivity, from Feeding to Reproduction. *Res. Adv. Aquat Sci* 2019(1): 01-09. DOI: 10.33513/RAAS/1901-01.
10. Capillo G., Savoca S., Costa R., Sanfilippo M., Rizzo C., Lo Giudice A., Albergamo A., Rando R., Bartolomeo G., Spanò N., Faggio C. (2018) -New Insights into the Culture Method and Antibacterial Potential of *Gracilaria gracilis*. *Marine Drugs*, 16(12): 492 (21 pp). DOI: doi.org/10.3390/md16120492
11. Parrino V., Cappello T., Costa G., Cannavà C., Sanfilippo M., Fazio F., Fasulo S. (2018) - Comparative study of haematology of two teleost fish (*Mugil cephalus* and *Carassius auratus*) from different environments and feeding habits. *The European Zoological Journal*, 85:1, 194-200, DOI: 10.1080/24750263.2018.1460694
12. Capillo G., Silvestro S., Sanfilippo M., Fiorino E., Giangrosso G., Ferrantelli V., Vazzana I. and Faggio C. (2018) - Assessment of electrolytes and metals profile of the Faro Lake (Capo Peloro Lagoon, Sicily, Italy) and its impact on *Mytilus galloprovincialis*. *Chemistry and Biodiversity*. [doi: 10.1002/cbdv.201800044](https://doi.org/10.1002/cbdv.201800044).
13. Capillo G., Panarello G., Savoca S., Sanfilippo M., Albano M., Li Volsi R., Consolo G., Spanò N. (2018) - Intertidal ponds of Messina's beachrock faunal assemblage, evaluation of ecosystem dynamics and communities' interactions. *AAPP, Atti della Accademia Peloritana dei Pericolanti, Classe di Scienze Fisiche, Matematiche e Naturali*, Vol. 96, No. S3, A4 DOI: 10.1478/AAPP.96S3A4. ISSN 1825-1242.
14. Capillo G., Sanfilippo M., Aliko V., Spanò N., Spinelli A., Manganaro A. (2017). *Gracilaria gracilis*, source of agar: a short review. *Current Organic Chemistry* 21(5): 380-386. [10.2174/1385272820666161017164605](https://doi.org/10.2174/1385272820666161017164605).
15. Sanfilippo M., Capillo G., Spanò N., Manganaro A. (2016). Evaluation of Water Variables in

No-take Zone of Ustica Marine Protected Area (Southern Tyrrhenian Sea. Brazilian Archives of Biology and Technology, v.59: e160330, Jan/Dec 2016: 1-7. DOI: 10.1590/1678-4324-2016160330.

16. Fazio F., Marafioti S., Sanfilippo M., Casella S., Piccione G. (2016) - Assessment of immune blood cells and serum protein levels in *Mugil cephalus* (Linnaeus, 1758), *Sparus aurata* (Linnaeus, 1758) and *Dicentrarchus labrax* (Linnaeus, 1758) collected from the Tyrrhenian sea coast (Italy). *Cahiers de Biologie Marine*, Vol. 57: 235-240. DOI: 10.21411/CBM.A.D1C11DD2.
17. Maisano M., Natalotto A., Cappello T., Giannetto A., Oliva S., Parrino V., Sanfilippo M., Mauceri A. (2016). Influences of Environmental Variables on Neurotransmission, Oxidative System, and Hypoxia Signaling on Two Clam Species from a Mediterranean Coastal Lagoon. *Journal of Shellfish Research*, 35 (1): 41-49. DOI: 10.2983/035.035.0106.
18. Pagano M., Capillo G., Sanfilippo M., Palato S., Trischitta F., Manganaro A., Faggio C. (2016) - Evaluation of Functionality and Biological Responses of *Mytilus galloprovincialis* after Exposure to Quaternium-15 (Methenamine 3-Chloroallylochloride). *Molecules* 2016, 21(2), 144. doi:10.3390/molecules21020144.
19. Silvestro S., Capillo G., Sanfilippo M., Fiorino E., Giangrosso G., Ferrantelli V., Dara S., Vazzana I., Faggio C. (2017) - Appraisal of the abiotic and biotic framework of Faro Lake (Messina, Sicily). *Journal of Biological Research*, Vol. 90, S1: 14.
20. Capillo G., Sanfilippo M., Li Volsi R., Spanò N., Manganaro A. (2016) - The importance of research in economic and environmental exploitation of a fragile transitional ecosystem: the Ganzirri Lagoon (NE Sicily). *Journal of Biological Research*, 89 (S1): 2.
21. Capillo G., Sanfilippo M., Panarello G., Spinelli A., Manganaro A., Spanò N. (2016) – Preliminary investigation of an intertidal zone's faunal assemblages (Beach Rock, R.N.O. Capo Peloro, NE Sicily). *Journal of Biological Research*, 89 (S1): 10.
22. Li Volsi R., Sanfilippo M., Cortese G., Manganaro A., Spanò N., Capillo G. (2016) - Variation of temperature in a coastal protected area (Ganzirri lagoon, ME) during the last half century: global warming? *Journal of Biological Research*, 89 (S1): 13.
23. Manganaro A., Sanfilippo M., Faggio C., Genovese G., Gugliandolo G., Maugeri T.L., Morabito M., Trischitta F., Santulli A. (2015) – Innovaqua "Technological Innovation for the improvement of productivity and competitiveness of Sicilian Aquaculture": aspects of experimental biology. *Journal of Biological Research*, vol.88(1): 96-97.
24. Capillo G., Genovese G., Monteleone A., Morabito M., Sanfilippo M., Manganaro A. (2014) - From culture to application. Agar from *Gracilaria gracilis* of Ganzirri lagoon (Sicily, Italy). *Journal of Biological Research*, vol.87 S1: 9. DOI: 10.4081/jbr.2014.s1.
25. Rinaldi A., Montalto V., Lika K., Sanfilippo M., Manganaro A., Sarà G. (2014) - Estimation of dynamic energy budget parameters for the mediterranean toothcarp (*Aphanius fasciatus*). *Journal of Sea Reserch*, 94: 65-70. doi: 10.1016/j.seares.2014.05.006.
26. Messina C.M., Faggio C., Laudicella A.V., Sanfilippo M., Trischitta F., Santulli A. (2014) - Effect of sodium dodecyl sulfate (SDS) on stress response in the Mediterranean mussel (*Mytilus Galloprovincialis*): Regulatory volume decrease (Rvd) and modulation of biochemical markers related to oxidative stress. *Aquatic Toxicology*, 157: 94–100. doi: 10.1016/j.aquatox.2014.10.001.
27. Rinaldi A., Montalto V., Manganaro A., Mazzola A., Mirto S., Sanfilippo M., Sarà G. (2014) - Predictive mechanistic bioenergetics to model habitat suitability of shellfish culture in coastal lakes. *Estuarine, Coastal and Shelf Science*, 144: 89-98. doi: 10.1016/j.ecss.2014.04.013.

Conference Proceedings of the last 10 years

- Arcadi E., Rizzo C., Sciutteri V., Tangherlini M., Sanfilippo M., Andaloro F., Romeo T., Calogero R., Esposito V. Metal-tolerant bacteria for monitoring Mediterranean Shallow Hydrothermal environments: the case studies of Panarea. 2022 IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters (MetroSea) | 978-1-6654-9942-2/22/\$31.00 ©2022 IEEE | DOI: 10.1109/METROSEA55331.2022.9950824
- Arcadi E., Mancuso M., Sanfilippo M., Malara D., Andaloro F., Esposito V., De Vittor C., Romeo T. Multidrug- resistant marine bacteria isolated from the shallow hydrothermal vent systems of Panarea (Aeolian Islands). Evolmar, Marine Evolution 1st Italian Congress online 23-25 November 2020
- Mancuso M., Arcadi E., Malara D., Sanfilippo M., Battaglia P., Andaloro F., Spanò N., Romeo T. A pre-screening of the presence of antibiotics in traces in two large pelagic fish in the Strait of Messina. Evolmar, Marine Evolution 1st Italian Congress online 23-25 November 2020
- Capillo G., Savoca S., Rizzo C., Sanfilippo M., Spanò N. (2018) - *Gracilaria gracilis* of Capo Peloro lagoon, a powerful product from sustainable aquaculture. 8th EuroLag (European Coastal lagoons Symposium), Athens, Greece, 20-23 March 2018: 32.
- Capillo G., Sanfilippo M., Li Volsi R., Spinelli A., Panarello G., Spanò N., Manganaro A. (2017) - *Gracilaria gracilis* (Gracilariales, Rhodophyta) from Ganzirri Lagoon, state of art and perspectives. XIII Incontro dei Dottorandi in Ecologia e Scienze Ambientali (SIeE-AIOL-LaguNet), Palermo 3-5 Maggio 2017.
- Capillo G., Sanfilippo M., Palato S., Manganaro A. (2015) – Growth of *Gracilaria gracilis* in fish farming and phytoremediation. 88° Congresso Nazionale Società Italiana di Biologia Sperimentale (SIBS), Genova 11-12 dicembre 2015: 98-100. DOI: 10.13140/RG.2.1.5141.4804.
- Sanfilippo M., Capillo G., Palato S., Manganaro A. (2015) – Environmental quality of Ustica Marine Protected Area (Sicily, Italy). 88° Congresso Nazionale Società Italiana di Biologia Sperimentale (SIBS), Genova 11-12 dicembre 2015: 129-131. DOI: 10.13140/RG.2.1.2520.0404.
- Sanfilippo M., Capillo G., Cortese G., Monteleone A., Manganaro A. (2015) - Organic carbon in the brackish environments of the Oriented Natural Reserve of Capo Peloro (Sicily, Italy). 2nd Young Natural Scientists' Meeting, Parigi 4-6 febbraio 2015. doi: 10.13140/2.1.2744.6563.
- Monteleone A., Capillo G., Sanfilippo M., Manganaro A. (2015) - Effects of temperature on the density of *Gracilaria gracilis* in the salted pond of Ganzirri (NE Sicily): Global changes? 2nd Young Natural Scientists' Meeting, Parigi 4-6 febbraio 2015. DOI: 10.13140/2.1.2482.5123.
- Capillo G., Lauriano E.R. Sanfilippo M., Icardo J., Zaccone G. (2015) - Neurotransmitter localization in the airway putative oxygen –sensitive chemoreceptor cells of air breathing fishes with particular reference to nitric oxide. 2nd Young Natural Scientists' Meeting, Parigi 4-6 febbraio 2015. DOI: 10.13140/2.1.5103.9522.
- Albano M., Capillo G., Cortese G., Monteleone A., Palato S., Sanfilippo M., Manganaro A. (2014) - Culture of *Gracilaria gracilis* for Agar extraction (food uses) and aquaculture wastewater treatment. LET'S Conference (Leading Enabling Technologies for Societal Challenges), Bologna 29 settembre-1 ottobre 2014. DOI: 10.13140/2.1.1208.5768.