

Anna OCCHIPINTI

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ACADEMIC POSITIONS

2000-present: FULL PROFESSOR of ECOLOGY, till 2004 Dep. of Genetics and Microbiology, till 2010 Dep. of “Ecologia del Territorio” and since 2011 Dep. of Earth and Environmental Sciences, University of Pavia, Italy.

2013-2019: Member of the MARES International Joint Doctoral Programme on Marine Ecosystem Health & Conservation funded through Erasmus Mundus.

1997-2000: ASSOCIATE PROFESSOR, Ecology section, Dep. of Genetics and Microbiology, University of Pavia, Italy.

1994-1997: ASSOCIATE PROFESSOR, Dep. of Environmental Sciences, University Milano Bicocca, Italy.

1992-1994: ASSOCIATE PROFESSOR, Dep. of Environmental Sciences, University Ca’ Foscari, Venice, Italy.

1977-1992: RESEARCHER, Institute of Ecology and Dep. of Genetics and Microbiology, University of Pavia, Italy.

ACADEMIC TASKS

2015-2018: Coordinator of the Quality Assurance Committee of the University of Pavia.

2011-2015: Deputy Director of the Department of Earth and Environmental Sciences.

2008-2010: Director of the Department of “Ecologia del Territorio”.

2008-present: Coordinator of the curriculum “Environmental Biology and Biodiversity” for Graduate Degree in Biological Sciences and for Master Degree in “Experimental and Applied Biology”.

EDUCATION

1996 Doctor in Biology cum laude, University of Pavia, Italy.

1992 High school diploma in classical studies, Liceo Classico Statale G. Carducci, Milan, Italy.

HONORS and AWARDS

2018: Invited expert at the EASIN Horizon Scanning Workshop on marine Alien Species in the European Seas organized by Joint Research Center of the European Commission, ISPRA (Italy), 4-5 October 2018.

2018: Invited to the joint initiative of the EU COST project MarCons (<http://www.marcons-cost.eu/>) and the ANR project PAVIS (<http://ecomers.unice.fr/index.php/research/en-cours/87-pavis-assessing-the-relationships-between-marine-protected-areas-and-invasive-species>): “Mitigation of biological invasions’ impacts in the Mediterranean Sea: from theory to practice”, Vienna (Austria), 27-28 March 2018.

2016: Invited speaker CISBA Conference “Presente e future della biologia negli ambienti acquatici”, Cervia (Ravenna, Italy), 29 November – 1 December 2016.

2016: Invited speaker at EuroMarine Workshop “Management of bioinvasions in the Mediterranean Sea”, Ischia (Naples, Italy), 4-5 May 2016.

2016: Invited speaker at Mares Conference, Olhão (Pt), 1-5 February 2016.

2015: Invited speaker at the University of Azores, Ponte Delgada (Pt) Symposium “Marine non-indigenous species”, 18 February 2015.

2014: Invited speaker at “Wadden Sea Research -13th Symposium Waddenacademie” Leeuwarden (NL) 11-12 December 2014.

2010: List of most cited authors in the 2005-2009 period from Elsevier magazines.

2009: Invited speaker at the 6th International Bioinvasions Conference, Portland (OR), 24-28 August 2009.

2008: The paper “Global change and marine communities: Alien species and climate change” awarded as best paper of the year by Marine Pollution Bulletin.

2008: Invited to organize a Symposium on “Marine Bioinvasions and ecosystem functioning” with Prof. S. Olenin, Klaipeda University (Lithuania) 1st WCMB (World Conference On Marine Biodiversity) 11-15 November 2008, Valencia (Spain).

BOOKS

Editor of the Italian Edition of the university textbook of T.M. Smith & R.L. Smith “Elements of Ecology” Pearson Publishing (1st edition 2009, 2nd edition 2013, 3rd edition 2017).

TEACHING EXPERIENCE

2000-present: Courses on Ecology, Marine and Freshwater Ecology, University of Pavia

2013-present: Doctorate in Earth and Environmental Sciences, University of Pavia.

2011-present: Doctoral Committee of Ecology and Environmental Sciences” University of Klaipėda (Lithuania)

2000-2012: Doctorate in “Ecologia del Territorio e Geobotanica”, University of Pavia

2006-2009: Doctorate in Ecology, University of Parma (Italy)

2019: International Summer School “Monitoring marine alien species in ports with the SERC protocol”, University of Pavia, 23-27 September 2019.

2012: Teacher of Master course “STRIVE: Strategie e metodi per la gestione delle specie alloctone invasive” University of Florence, 7-30 May 2012.

2011: International Summer School in Experimental Marine Ecology and Geobotany, Bergeggi (SV), 12-22 September 2011.

2009: Teacher of XXI Cursos europeos de l’Universidad del País Vasco e VII Curso de Verano de Investigación Marina de AZTI-Tecnalia “Invasiones biológicas en el medio marino, en un contexto de cambio climático” 13-15 July 2009, San Sebastian (Spain).

2008: Teacher of the International “Mediterranean Training Course on the Management of Marine and Coastal Invasive Species” (Sharm El-Sheikh, 3-6 February 2008), United Nations Environment Programme, Mediterranean Action Plan, Regional Activity Centre for Specially Protected Areas (RAC/SPA), Tunis.

MENTORING

2012-2019: 18 Undergraduate students; 13 Master students; 6 PhD students.

PEER REVIEW

Reviewer of the following journals: *Ambio*, *Aquatic Biology*, *Aquatic Invasions*, *Biological Invasions*, *Cahier de Biologie Marine*, *Climatic Change*, *Diversity and Distribution*, *Estuarine and Coastal Shelf Sciences*, *Frontiers in Plant Science*, *Integrative Zoology*, *Italian Journal of Zoology*, *Journal of Sea Research*, *Journal of the Marine Biological Association (UK)*, *ICES Journal of Marine Science*, *Marine Pollution Bulletin*, *Management of Biological Invasions*, *Marine Biodiversity*, *Marine Biodiversity Records*, *Marine Biology*, *Marine Ecology*, *Mediterranean Marine Science*, *Scientia Marina*.

Member of the Editorial Board: *Transitional Water Bulletin* and *Advances in Oceanography and Limnology*, *Biologia Marina Mediterranea*.

COMMISSION OF TRUST

2012 – 2018: Smithsonian Environmental Research Center, USA; United States-Israel Bi-national Science Foundation; Poland State Committee for the Scientific Research; Austrian Science Foundation.

SCIENTIFIC RESEARCHES AND PROFESSIONAL SERVICES

2018 – 2021: External Scientific Advisor of the Interreg Europe Project INVALIDIS (Protecting European Biodiversity from Invasive Alien Species- <https://www.interregeurope.eu/invalidis/>) appointed by FLA (Fondazione Lombardia per l'Ambiente, www.flanet.org), the Italian partner of the Project.

2018: Participation as expert to the "Horizon Scanning Workshop – Predicting future invasions in EU Seas" organized by the EASIN team of the European Commission Joint Research Center of Ispra (Italy).

2018-2020: Coordinator of Italian Working Group on the Prioritization Exercise of Marine Alien Species, commissioned by ISPRA (Italian Institute for Environmental Protection and Research) to the Italian Society of Marine Biology (SIBM) in the framework of the EU Regulation 1143/2014.

2014-2017: Committee of External Advisers of CIGESMED (Coralligenous based Indicators to evaluate and monitor the "Good Environmental Status" of the Mediterranean coastal waters) a SeasEra project (E.U. FP7 ERA-NET).

2011-2015: Partner of the VECTORS "Vectors of Change in European Marine Ecosystems and their Environmental and Socio-Economic Impacts" EU 7th FP (coord. Melanie Austin) European Marine Ecosystems and their Environmental and Socio-Economic Impacts, Role: Task leader of the WP 2.1.4 "Data analysis to test the role of aquaculture as a vector for invasions".

2009-2015 Member, Board of the Italian Marine Biology Society (SIBM).

2009-2015: Member of the Marine Conservation Sub-Committee (MCSC) of the Species Survival Committee of IUCN to represent the ISSG.

2009-2010: Nominated as one of the 12 experts of the "Alien Species descriptor Task Group" within the JRC/ICES activity in charge of "Developing recommendations on criteria and standards for determining Good Environmental Status (GES) of the European marine waters" as requested by the Marine Strategy Directive (2008/56/EC).

2008-present: Member of the "Exotic Species Aquaculture Committee" appointed by the Decree 339/2008 of the Ministry of Agriculture, Food and Forestry Policies for supporting the Ministry in relation to the implementation of (EU) Regulations 708/2007, 506/2008 and 535/2008 concerning use of alien and locally absent species in aquaculture.

2007-2008: Expert at European Commission General Directorate for Fisheries and Maritime Affairs: "Implementing rules for Council Regulation 708/2007 on the use of alien and locally absent species in aquaculture".

2006-2008: Partner of the IMPASSE EU 6th Framework Programme (coord. Ian Cowx) "Environmental impacts of invasive alien species in aquaculture" Role: task leader in the Deliverable 1.3 "Analysis of drivers of the use of introduced species and dispersal mechanisms from aquaculture related activities".

2001-present: Member of Invasive Species Specialist Group (ISSG) of the International Union for Conservation of Nature (IUCN).

For 2009-2012 and 2013-2017: member of the Marine Conservation Sub-Committee (MCSC) of the Species Survival Committee of IUCN to represent the ISSG.

2000-present: Invited member, Working Group on Introduction and Transfer of Marine Organisms (WGITMO) International Council for the Exploration of the Sea (ICES) attended every year presenting the National Report for Italy.

1999-present: Coordinator of the Alien Species Group of the Italian Society of Marine Biology (SIBM).

CONTRIBUTION TO SCIENCE AND PUBLICATIONS

I started my career working on hard bottom macrobenthos in lagoon environments, with special emphasis on Bryozoans, later I considered marine benthic communities and alien species. My research agenda is based on a sound taxonomic knowledge as a prerequisite for meaningful ecological investigations and for the subsequent applications to management and control of man-induced changes in the coastal marine and lagoon environments. These changes include both pollution and climate change and the so-called biological pollution caused by the introduction of non-native species in the environment. My main research topics are listed below, following the development of my career interests:

Structure and dynamics of benthic communities. Hard and soft bottom benthos in coastal ecosystems is undergoing changes in species composition, abundance and diversity. Long term dynamics of aquatic biological communities have been studied in relation to abiotic ecosystem conditions, taking into account their seasonal variability.

Biological indicators of ecological state: Water quality improvement is one of the targets of current European environmental policy. Stirred by the Water Framework Directive and the Marine Strategy Directive, research on the classification of GES based on the structure of benthic biological communities has been carried out focusing on the Italian situation in comparison with Europe.

Introduced species and bio-invasions. The number of marine introductions in new biogeographical regions is steadily growing. It has raised a heavy concern in the community of environmental scientists, seeking to understand the causes and consequences of the biogeographic revolution currently taking place. The Mediterranean Sea is a hotspot for such events, and our analysis of records of alien species introductions in time and space have contributed to the advancement of knowledge based on investigations in Italy.

Management of biological invasions by alien species. A growing number of national and international measures is being taken to limit the deleterious effects of alien species introductions in coastal waters. Supporting the policy decisions with sound data on the early detection, pathways of introductions and interactions of introduced species is a daunting task. Active collaboration with international entities and scientific organizations have facilitated the production of applied research papers dealing with risk assessment, and methodologies to control biological invasions.

Global change: climatic change and alien species. The biogeographic revolution taking place with alarming speed is just an aspect of the global change, coupled with climate-driven phenomena that are becoming evident in the oceans. The mutual implications of introductions and sea warming have been reviewed by a few papers.

<https://scholar.google.it/citations?user=JUqWFH0AAAAJ&hl=it&oi=ao>

https://www.researchgate.net/profile/Anna_Occhipinti

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