

Luigi Musco

Associate Professor of Zoology

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Scientific interests

LM research interest deals with biology and marine ecology particularly focused on taxonomy, biogeography and ecology of marine invertebrates. Protection of biodiversity should rely on a deep knowledge of both organisms' diversity and, intra- and interspecific relationships determining ecosystem functioning. In this context taxonomy is crucial since an in-deep knowledge of the species and their identity can allow the understanding of diversity patterns and, consequently, ecosystem functioning. Particularly, Annelida are the focus of large part of LM research dealing with taxonomy (5 new species to the science), faunal analyses, biogeography, reproductive biology.

Education

2007 PhD in Fundamental Ecology (University of Salento, excellent)

2002 degree in Biological Sciences (University of Salento, summa cum laude)

Professional Experience

Since December 2020 Associate Professor of Zoology, University of Salento (Lecce).

October 2020 – December 2020 Senior Researcher at SZN.

June 2016 – October 2020 Researcher (Marine Biodiversity Conservation) at SZN.

2014 - 2016 Researcher (Marine Ecology and Biology) at CNR

2012-2013 Senior Post-doc research grant at the CNR (National Research Council).

2009-2010 Post-doc research grant at the DiSTeBA (University of Salento)

2003- 2007 Research grants at the CoNISMa (Rome)

Awards

2020: the paper "Protocooperation among small polyps allows the coral *Astroides calycularis* to prey on large jellyfish" (Musco et al. 2018) wins the "Top Downloaded Paper" award by the journal Ecology

2019: Certificate of scientific merit awarded by the Municipality of Galatone (Italy)

2019: Winner of the "Terre di Campania" award

2018: Winner of the Anton Dohrn Best Researcher Award 2018

2018: Qualified Associate Professor of Ecology

2014: Qualified Associate Professor of Zoology

2010: Member of the Scientific committee of the 10th International Polychaete Conference

Top Reviewer Award to Luigi Musco in recognition of outstanding contributions to the journal Estuarine Coastal & Shelf Science"

Tutorial and Teaching activities

LM successful supervised Eugenia Schimmenti (01/2014 – 09/2017, University of Palermo). At present, co-supervisor of 4 PhD candidates (Silvia Filogna -Scuola Superiore Sant'Anna di Pisa, Erika Fabbrizzi- University Federico II of Naples, Chiara Silvestrin - Polytechnic University of Marche, Raffaele Panzuto - Tuscia University of Viterbo). Internal/external Supervisor of 10 MSc and 14 undergraduate students' theses, and 2 master students. Advisor of a post-doc researcher and 2 research fellows. Member of the Advisory Board of the PhD course of the Stazione Zoologica Anton Dohrn (2016-2020).

Seminar for the PhD Course in Biology at the Federico II University of Naples. 2020. - Teacher for the 1st International Summer School on Marine ecotoxicology, (SSME1), 2019 Stazione Zoologica Anton Dohrn/Ordine Nazionale dei Biologi. - La Sapienza University, Rome (2017-2020). Two seminars for the Master degree in "Monitoring and environmental rehabilitation", Prof. Fausto Manes. - Polytechnic University of Marche, 2017/2018, 2 seminars for the Degree in Marine Biology, Master degree in marine Biology and IMBRSea Master. - Institut national des études territoriales (INET) de Strasbourg, 2018. Seminar for the students. - University of Palermo 2014/2015, Integrative didactic activity: Marine Zoology course, Degree in Biological Sciences. Prof. Sabrina Lo Brutto. - Seminar "Marine Biogeography" course of Biogeography, Master degree in Natural Sciences, 2013 University of Palermo, Prof Federico Marrone

External funding

- Principal Investigator of ABBACO funded by MIUR (budget 3.700.000 €)
- "Blue Biotechnologies for restoring marine ecosystems of the contaminated Site of National Interest (SIN) ex Montedison (Falconara M.ma) – BIOBLUTECH. Fondazione CARIVERONA
- AFRIMED. Implementation of the European Maritime and Fisheries Fund Work Programme 2017 Action 1.2.1.12 - Sustainable Blue Economy S4- Restoring marine ecosystems in the Med.
- Progetto Premiale EARTH CRUISERS "EARTH's CRUst Imagery for investigating SEismicity, volcanism and marine natural Resources in the Sicilian offshore"
- CLUSTER-ITEM
- FEAMP Campania

Participation in other projects

- PRIN 2010-2011 - Biocostruzioni costiere: struttura, funzione, e gestione.
- RITMARE. Preparazione di un database per implementare modelli trofodinamici nello Stretto di Sicilia Progetto RITMARE, MIUR. SP2
- FIRB 2012. "Unveiling hidden relationships between biodiversity and ecosystem functioning in Mediterranean rocky reefs HI-BEF project"
- Caulerpa. Esecuzione di ricerche e studi degli effetti dell'invasione di caulerpe aliene sulle biocenosi costiere. Convenzione N. 364.174 CNR IAMC - ARPA Sicilia
- ISRAELE CMCC. Accordo di Programma per attività di ricerca internazionale nell'ambito della cooperazione Italia-Israele su ambiente ricerca e sviluppo.
- "ACTIBIOMAR" Estrazione di principi attivi da biomasse marine e loro potenziale utilizzazione in farmaceutica e dietetica. Accordo di Programma Quadro in Materia di ricerca Scientifica nella Regione Puglia – Progetti strategici
- MATTM 4 AMP – ECOSISTEMI MARINI
- REPORT – Riduzione dell'epibiosi attraverso la policoltura di ostriche e ricci nei mari di Taranto. Progetto Esplorativo PE_054
- MarBEF - Marine Biodiversity and Ecosystem Functioning EU Network of Excellence
- FIRB RS BOERO (Biodiversità). Biodiversità ed organizzazione delle comunità di differenti contesti ambientali
- ICRAM "Identificazione e distribuzione nei mari italiani di specie non indigene"

Management and Organization

Scientific responsible for the research agreements (2017) among SZN and CNR, ISS; INGV, ENEA, University Federico II of Naples, CoNISMa, University of Campania Vanvitelli, Polytechnic University of Marche, Parthenope University of Naples. Responsible for the agreement (2017) between SZN and INVITALIA for common actions aimed at the rehabilitation of the Bagnoli area. Responsible for the research agreement between CNR and Area Marina Protetta del Plemmirio (2013).

Editorial and peer review activities

Guest Editor of the Special Issue "Industrial Impact at Sea" (Marine Environmental Research),
Guest Editor of the Special Issue "Marine Biodiversity in the Anthropocene" (Journal of Marine Science and Engineering, section Marine Biology) and Associated Editor of JMSE.
Reviewer for 24 peer reviewed ISI Journals.
External evaluator of a Consolidator Grant for the ERC panel "Evolutionary, Population, and Environmental Biology"

External collaborations

LM directly collaborates with Researcher from 8 Italian Universities, 5 Research Institutions. The international network includes researchers from USA, UK, Mexico, Turkey, Egypt, Sweden, Argentina, Greece, Spain.

Member of scientific Societies

- "Marine Organisms Taxonomy" MOTax
- "Society for the Management of Electronic Biodiversity Data" SMEBD (www.smebd.eu)

Symposia and conferences

LM participated to 27 conferences. Awarded with the best poster award at the 47° Congresso della SIBM, Torino, 2016. Member of the organizing and scientific committees of the 10th "International Polychaete Conference". Member of the organizing committee of the conference "Proteggere, Valorizzare, Recuperare, Esplorare il mare" ProVaRE. Università Federico II di Napoli, Stazione Zoologica Anton Dohrn. Stati Generali del Mare 2017

Outreach and dissemination

LM's research was reported by BBC, SciMag, The National Geographic, The New York Times, LaVanguardia, Eurekalert, YahooNews, The Telegraph, The Economist among others).

Interviewed by the Italian Television RAI (Linea Blu, Linea Verde, Rai 3 Puliamo il Mondo). Interviews for the Italian newspapers/agencies La Repubblica, Corriere della Sera, Il Mattino, Ansa, Il Sole 24 ore, Il Manifesto, SkyTg24, GreenReport and several local/regional newspapers).

LM participated as a speaker to several dissemination events such as Pint of Science Naples 2019, Naples Shipping Week 2018.

Patents

Alagna A, Badalamenti F, Musco L. Supporting structure and method of culturing and PLANTing of seagrass units grown from SEEDS (PLANTSEEDS). (n 10202000009046, 27/04/2020)