

## Alfonso Siciliano, Ph.D.

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### EDUCATION

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- 2018:** Ph.D. in Marine Ecology, School of Biological Sciences, Marine Ecology Research Group, University of Canterbury, New Zealand.  
Thesis: *Testing when and how habitat cascades control biodiversity of marine benthic ecosystems.*
- 2012:** M.Sc. with honours in Biology and Ecology of Marine and Coastal Environment, University of Study of Messina, Italy.  
Thesis: *Photo-quadrats technique and use of CPCe software for the evaluation of the impact of recreational diving on the macroalgae coverage of "Zenobia" shipwreck (Cyprus - Mediterranean Sea).*
- 2009:** B.Sc. in Biological Sciences, University of Study of Catania, Italy.  
Thesis: *Parablennius sanguinolentus (Pallas, 1814): an example of Teleost Blenniidae bioindicator.*

### WORK EXPERIENCE

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- 2018 - to date: Senior Fishery Ranger at 'Taupo Fishery', Department of Conservation, New Zealand.**  
Description: Fishery management; Freshwater ecological research; Native and non-native fish monitoring; Data analysis and reporting; Policies writing and review.  
Accountabilities: Providing technical advice and expertise; Delivering scientific research; Coordination of technical projects and monitoring programs; Delivering the biodiversity work plan, promoting and supporting very high standards of quality; Supporting and promoting excellent standards of Health, Safety and Wellbeing; Training and supervising the team in delivering the work plan and monitoring performances; Yearly and monthly maintenance plan and business plan organization and review; Influencing, building and maintaining collaborative relationships; Presenting data for a technical and not technical audiences; Compliance.
- 2012 - 2014: Technical Advisor and Project Manager at 'Eco Divers - Centre of Underwater Scientific Activities', Italy.**  
Description: Ecological research based on underwater studies, benthic communities, artificial reefs, Anthropogenic Impact Assessment; Coordinator of scientific projects and internships in collaboration with Universities and MPAs.  
Accountabilities: Providing technical advice and expertise; Delivering scientific research; Coordinating technical projects and monitoring programs; Delivering the work plan; Training and supervising staff and monitoring performances; Influencing, building and maintaining collaborative relationships; Presenting data for a technical and not technical audiences.
- 2011: Marine biologist at 'AP Marine Environmental Consultancy Ltd.', Cyprus.**  
Delivering ecological research based on Anthropogenic Impact Assessments, shipwrecks' ecology, artificial reefs and species interactions in benthic communities.
- 2009: Biologist at 'Department of Biological Sciences', University of Study of Catania, Italy.**  
Delivering ecological research based on Anthropogenic Impact Assessments and marine ecotoxicology, analysis of biomarkers and bioindicators.

### RECENT TEACHING AND MENTORING

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- 2020:** Mentor (Luke Poulsen - Drone surveys), Kaitiaki Whenua Trainee Ranger, Nelson Marlborough Institute of Technology.
- 2017:** Laboratory demonstrator ('Habitat formers' effects on estuarine biodiversity'), University of Canterbury, New Zealand.
- 2017:** M.Sc. student mentor (L. Mondardini), University of Canterbury, New Zealand.
- 2017:** B.Sc. student mentor (N. Ligtenbarg - Project: 'Testing the role of primary and secondary habitat-formers in shaping habitat cascades in a soft-bottom estuary'), University of Canterbury, New Zealand, in association with Has University Den Bosch, Netherlands.
- 2016:** Laboratory demonstrator ('Biodiversity in soft-bottom estuaries' ecosystems'), University of Canterbury, New Zealand.
- 2014:** M.Sc. internship student mentor (S. Cunsolo - Scientific diving), University of Study of Catania in association with Eco Divers - Centre of Underwater Scientific Activities, Italy.

**2013:** B.Sc. internship-thesis student mentor (G. Provenzani - Thesis: *'Ecological assessment of the quality of the Isola Bella's Marine Protected Area (Sicily, Italy)'*), Alma Mater Studiorum - University of Bologna in association with Eco Divers - Centre of Underwater Scientific Activities, Italy.

## **TECHNICAL SKILLS**

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### **Ecology**

- Species interactions, meta-community, ecosystem functioning, population dynamics;
- Habitat assessment, monitoring, conservation and restoration;
- Artificial habitats and reefs, shipwreck ecology;
- Experimental designs, multi-factorial analysis and quantitative ecology;
- Benthic studies in canopy-forming seaweeds-dominated systems, rocky shores, seagrasses beds and soft-bottom estuaries;
- Macroinvertebrate taxonomy, stereo and compound microscopes;
- Biological underwater sampling and underwater video-photographic techniques;
- Fractals and morphometric analysis, 3D modelling and printing, Image analysis and processing;
- Environmental/Anthropogenic Impact Assessment: Analysis of bioindicators/biomarkers and matrices; Cyto/histological and molecular analysis for ecotoxicological assessment;
- Fishery management, legislation, law enforcement and compliance;
- Freshwater fish biology, native and non-native fish monitoring;
- Electric-fishing; Echo-sounding; Drone surveys;
- VAKI RiverWatcher scanner monitoring and morphometric studies.

### **Informatic Skills**

- Advanced knowledge of Windows OS, MS Office, Internet and Mail;
- Statistical packages: PRIMER v6, PERMANOVA+, PAST, Minitab, SigmaPlot;
- GIS: Quantum GIS;
- Work management and planning: MyPM, SAP, AMIS, Risk Manager;
- Image/video and 3D modelling: CPCe, ImageJ, Photoshop, Adobe Premiere, Pinnacle, Autodesk Memento.

## **PROJECT MANAGEMENT SKILLS**

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- **Technical advisory:** Provide technical advice and expertise to the Manager, internal/external team, and partners; Propose, design, plan, coordinate and undertake research projects; Development and management of reviews, reports, Standard Operating Procedures, Operating and Safety Plans; Development and management of large databases; Analyse, interpret, write up and communicate findings to scientific and not scientific public;
- **Work management:** Analyse and monitor the capacity and delivery of work; Task assignment, team leader nomination, allocation of assets and budget; Weekly, monthly, annual scheduling plans and monitoring of the performances; Identifying critical issues and risks and recommending solutions to ensure they are effectively raised and addressed; Monitor and review expenditure; Ensuring the highest standards of quality are achieved in all tasks; Ensuring any work is compliant with consents and permissions, SOPs, Risk Management, Health&Safety; Support the building of the team's skills and competencies;
- **Collaboration:** Communicating effectively within the team, across other teams and externally; Seek, build and maintain collaborative relationships with partners and stakeholders.

## **OTHER SKILLS AND COMPETENCIES**

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### **Field work**

- Warrant Officer toward the Conservation Act 1987, Department of Conservation, New Zealand;
- Basic Life Support: First Aid, CPR, AED habilitation, oxygen provider; PLBs and EPIRBs; River crossing and self-rescue in remote locations;
- 4WD in off-road environment and UBCO dual electric drive motor bike;
- Drones - Advanced Remote Pilot Certificate, Part 102, Civil Aviation Authority of New Zealand;
- Electric Fishing Machine Operator.

### Boating and Diving Skills

- Scientific Diving, Occupational Diving Certificate of Competency, Worksafe NZ;
- Boat Master; MF, HF, VHF Marine Radio Operator and EPIRB, Maritime Restrictive Radio Operator;
- Dive master CMAS; III level Apnea Academy;
- Nitrox EAN 40%; Full Face Mask operator; excellent underwater video and photographic skills ([www.alfonsosiciliano.com](http://www.alfonsosiciliano.com)).

### Languages

- Italian (native), English (fluent), Spanish (fluent).

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### RECENT PUBLICATIONS

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- Thomsen M.S., Metcalfe I., **Siciliano A.**, South P.M., Gerrity S., Alestra T., Schiel D.R., 2020, “*Earthquake-driven destruction of an intertidal habitat cascade*”, Aquatic Botany.
- Siciliano A.**, Thomsen M.S., Schiel D.R., 2019, “*Effects of local anthropogenic stressors on an habitat cascade in a estuarine seagrass system*”, Marine and Freshwater Research.
- Thomsen M.S., Hildebrand T., South P.M., Foster T., **Siciliano A.**, Oldach E., Schiel D.R., 2016, “*A sixth-level habitat cascade increases biodiversity in an intertidal estuary*”, Ecology and Evolution.
- Siciliano A.**, Jimenez C., Petrou A., 2016, “*Recreational diving and its effects on the macroalgal communities of the unintentional artificial reef Zenobia shipwreck (Cyprus)*”, Journal of Oceanography and Marine Research.
- Siciliano A.**, Thomsen M.S., Schiel D.R., **submitted to Journal of Experimental Marine Biology and Ecology**, “*Are long habitat-formation cascades common? - A test with an estuarine 4-level interaction chain*”.

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### RECENT CONFERENCE PAPERS

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- Siciliano A.**, 2018. “*Implementing a VAKI River-watcher fish counter in the Taupo Fishery*”. Tongariro Power Scheme Annual Consultative Hui. Genesis Tokaanu Power Station, New Zealand, 5 December.
- Siciliano A.**, Thomsen M.S., Schiel D.R., 2017. “*Host variety enhances diversity: the role of multiple secondary habitat-forming seaweeds in facilitating estuarine invertebrates' communities*”. New Zealand Marine Science Society. University of Canterbury, New Zealand, 4-7 July.
- Thomsen M.S., Metcalfe I., **Siciliano A.**, Alestra T., Lilley S., Gerrity S., Schiel D.R., 2017. “*Habitat cascades destroyed in the Kaikoura earthquake*”. New Zealand Marine Science Society. University of Canterbury, New Zealand, 4-7 July.
- Siciliano A.**, Thomsen M.S., Schiel D.R., 2016. “*Effects of seaweeds, nutrients and sedimentation on seagrass and seagrass-associated fauna*”. Annual Biology Conference. University of Canterbury, New Zealand, 20 October.
- Siciliano A.**, Thomsen M.S., Schiel D.R., 2016. “*Variability in habitat cascades across sites, environmental conditions, host and epiphyte species and underpinning mechanistic test-factors*”. Australian Marine Science Association - New Zealand Marine Science Society. Victoria University of Wellington, New Zealand, 4-7 July.
- Siciliano A.**, Thomsen M.S., Schiel D.R., 2016. “*Epiphytism as key driver of biodiversity in canopy-forming seaweeds-dominated systems*”. 11th International Temperate Reefs Symposium. University of Pisa, Italy, 26-30 June.

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### OTHER ACHIEVEMENTS

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- 2017:** BioSoc photo-competition 2017, University of Canterbury (New Zealand).  
Winner of 'Best underwater picture' category ([www.alfonsosiciliano.com](http://www.alfonsosiciliano.com)).
- 2016:** BioSoc photo-competition 2016, University of Canterbury (New Zealand).  
Winner of 'Laboratory', 'Videos' and 'Others' categories ([www.alfonsosiciliano.com](http://www.alfonsosiciliano.com)).
- 2014 - 2017:** Royal Society of New Zealand, Marsden Fund project (13-UOC-106, 20,000 NZ\$).
- 2013:** Video-competition “*Live the Sea*”, Auxiliary Coast Guard (Italy).  
Video-documentary: “*The simplicity of life...*” ([www.alfonsosiciliano.com](http://www.alfonsosiciliano.com)).