### Francesco Ferretti

Department of Fish and Wildlife Conservation • 310 West Campus Drive, Cheatham Hall, Room 106E • Blacksburg, Virginia 24060 Phone: +1 (540) 231 2893 • Fax: +1 (540) 231-7580 • E-Mail: ferretti@vt.edu • Web: https://fishwild.vt.edu/faculty/ferretti.html

### **Education**

• Ph.D. in Marine Ecology, Dalhousie University, Halifax, NS, Canada. Supervisors: Dr. Ransom Myers, Dr. Heike Lotze, and Dr. Andrew Rosenberg.

2010

• University Laurea degree (equivalent of Msc) in Marine Biology, *summa cum laude*, Polytechnic University of Marche, Ancona, Italy. Supervisors: Dr. Giorgio Bayestrello, Dr. Marino Vacchi and Dr. Simona Clo'.

2003

# Professional experience

#### **Current Position**

 Assistant Professor, Department of Fish and Wildlife Conservation, Virginia Tech

From September 2019

Expanding a marine program in fisheries management and conservation.

#### Academic Positions

• Research Associate, Hopkins Marine Station, Stanford University

October 2016 – August 2019

Working on ecological function and management of very large marine protected areas, analyses of telemetry data and stock assessment of sharks and other large marine predators, and on innovative ways to detect and combat illegal fishing in marine mega reserves and in the high seas.

• Post-doctoral Fellow, Hopkins Marine Station, Stanford University

July 2015 – September 2016

Stock assessment of reef shark populations for developing anti-poaching satellite- and radio-tagging technologies to aid monitoring and enforcement in remote large marine protected areas. *Advisor*: Dr. Barbara Block (Stanford University).

• Post-doctoral Fellow, Hopkins Marine Station, Stanford University

September 2011 – 2015

Reconstructing baselines of structure and population levels of shark assemblages in natural ecosystems, quantifying the magnitude of change that occurred because of human perturbation, and identifying patterns of change. *Advisor:* Dr. Fiorenza Micheli (Stanford University).

• Post-doctoral Fellow, Dalhousie University

January 2011 - March 2011

Working on global shark abundance baselines. *Advisors:* Dr. Heike Lotze and Dr. Boris Worm (*Dalhousie University*)

### Consultancy and Technical Advising Positions

### • Consultant for the European Commission – JRC

December 2017 - January 2018

Data exploration and analysis of large trawl survey databases and commercial catch and effort electronic archives.

• Consultant for NMFS - Pacific Islands Fisheries Science Center October 2011

Review of shark predation mitigation as a tool for conservation of the Hawaiian monk seal

### • Shark Specialist for the IUCN.

## September 2003 - Present

Providing technical advice on elasmobranchs' conservation status; contributing to reviews of draft SSC technical guidelines and CITES listing proposals; providing advice and materials for species conservation programs and workshops in the Mediterranean and North East Atlantic; ensuring that Red List Assessments of all covered species are accurate and up-to-date.

• Biostatistician, EVOMED project.

August 2009 - August 2010

Analysis of time series of catch per unit effort from fishery independent data. *Project director*: Dr. Paolo Sartor, CIBM, 4, Viale Nazario Sauro, 57128 Livorno (Italy)

# Research Assistantships

### • Research Assistant, Pew Global Shark Assessment.

August 2003 - December 2003

Data gathering analysis and presentation of results. Supervisor: Dr. Ransom Myers (Dalhousie University)

• Internship, Dalhousie University.

April 2003 - July 2003

Training in statistical modeling, data gathering, analysis and presentation of results within the BIODAQUA project. *Supervisor*: Dr. Ransom Myers (Dalhousie University)

# **Teaching Experience**

• **Co-instructor** - Scientific Computing for Ecologists, Biologists and Environmental Scientists BIOS 248. Hopkins Marine Station, Stanford University.

October 2015

• Instructor - course targeted to international PhD students, postdocs and researchers: "An introduction to Generalised Linear Models and extensions using R". Department of Environmental Sciences, University of Bologna. June 2014

• Instructor, First Training Event within the Monitoring of Mediterranean Marine Protected Areas (MMMPA) project - Principles of experimental design applied to marine protected areas management. Marine protected area of Tavolara and Punta Coda Cavallo, Olbia, Italy

September - October 2012

• Co-instructor, Synthesis in Ecology 275 H, Hopkins Marine Station, Stanford University January - April 2012

Teaching Assistant, Analysis of Biological Data BIOL 4062-5062
 Dalhousie University

January - April 2007

• Teaching Assistant, Introductory Ecology BIOL 2060, Dalhousie University September - December 2006

• **Teaching Assistant**, Dalhousie Integrated Science Programme (DISP), Dalhousie University

December 2005 - January 2006

# **Supervising Experience**

PhD Students

Stefano Moro (PhD in Ecology, University La Sapienza, Rome, Italy, 2018 - present), Zac Yung-Chun Liu (Stanford University, Geospatial Engeneering, 2018 - present), Filippo Bargnesi (Marine Ecology, Polytechnic University of Marche, Italy, 2016 - present); Rodrigo Barreto (Marine Biology, University of Recife, Brazil, 2013 - 2015); Camilla Novaglio (Quantitative Marine Science, University of Tasmania, Australia, 2013 - 2016); Azzurra Bastari (Marine Ecology, Polytechnic University of Marche, Italy, 2013 - 2016)

## Honor and Master Students

Beatrice Pellegrino (MSc Biology, University of Pisa, Italy, 2019-2021), Caterina Bergonzini (Msc Biology, University of Bologna, Italy, 2018 - 2021), Emma Gee (MSc Biology, Stanford University, 2018 - 2019), Stefano Moro (MSc in Biology, University La Sapienza, Rome, Italy, 2014 - 2017); Alexandria Blackwell (CSUMB, MSc Biology, Summer 2015); Annie Adelson (BSc Biology, Stanford University, 2012 - 2015); Emanuel Mazzilli (MEng Computer Engineering, University of Reggio Emilia, Italy, Spring – Summer 2013); Jacopo Beccacece (BSc Marine Ecology, Polytechnic University of Marche, Italy, 2012 - 2013); Gregory Britten (BSc Biology and Statistics, Dalhousie University, 2010 - 2011)

#### <u>Undergraduate Interns</u>

Gregory Weaver (Computer Science, Stanford University, Summer 2017 and 2018), Zeke Tuszynski (UCSB, Biology, Summer 2018), Edgar Sandoval, Daniel Diaz, Brian De Anda, and Arturo Lopez (CSUMB, Computer Science, September 2014 – May 2015); Mariela Ceja, Elias Ramirez, Alcides Sorto, Adilene Costante, Brayanne Reyes Ron (Computer Science, CSUMB, September - December 2014); Parker Phillips (Statistics and Computer Science, Stanford University, Summer 2013); Lauren Daly (UC Berkley, Communication Science, 2013); Andy Alvarez (CSUMB, Computer Science, summer 2103); Owen O'Neal, Erin Bauman, and Alex Alifimoff (Stanford University, Summer 2013)

### **Skills and Competencies**

Languages: Italian (mother tongue), English (fluent), working knowledge of Spanish and French.

Computer: Excellent computer literacy. Able to work in DOS, Windows, Mac OS X, and Unix/Linux operating systems. Knowledge of the whole suite of Microsoft Office programs. Able to program with different statistical (R, S-plus, SAS, Systat, Win/OpenBUGS, JAGS, Stan), mathematical (Matlab, Maple), geographic data processing (Generic Mapping Tools, ArcGIS, Google Earth Engine), database management (SQL within MySQL, PostgreSQL, Google BigQuery, and MS Access), editing (LATEX, Pandoc, RMarkdown), version control systems (git), web site compiling (HTML, CSS, PHP, Drupal, Javascript, Wordpress, Markdown, Jekyll), and general purpose programming languages (Bash, Perl, Awk, Python).

**Technical:** Broad experience in biometrics and data science. Proficient in statistical modeling both in a hypothesis testing and Bayesian frameworks. Able to compile, manipulate, integrate and analyze large datasets, and developing analytical approaches for estimating abundance and distribution of animal populations from multiple sources of data. Extensive experience in analyzing unbalanced datasets with a substantial portion of missing information, over-dispersed data, and cases of zero inflation. Broad experience in research synthesis and pseudo-experimental approaches (i.e. identifying natural experiments from exploited or perturbed ecosystems).

#### **Publications**

- Ferretti, F., Jacoby, D., White, T., Dent, F., Micheli, F., Rosenberg, A., Crowder, L., Block, B. Shark Fin Trade Bans and Sustainable Shark Fisheries. *In revision* for **Nature.**
- Curnick, D., **Ferretti, F.**, Koldewey, H., Jones, K., Kemp, K., Collen, Ben. The impact of a large marine protected area on pelagic tuna species and associated fisheries. *In Revision* for **Frontiers of Marine Science.**
- Barreto, R.\*, Lessa, R., Mancini, P., Santander, J., Kotas, F., Gallager, A., Andrade, H., **Ferretti, F**. and Boris Worm. Life history, demography, and conservation concerns for South Atlantic pelagic sharks. *In Revision* for **Conservation Biology**.
- Britten, G. L.\*, Ferretti, F., Garcia, V., & Worm, B. Correlates of extinction risk in sharks. *In Revision* for Methods in Ecology and Evolution.
- Jacoby, D., Ferretti, F., Freeman, R., Carlisle, A., Chapple, T., Curnick, D., Dale, J., Schallert, R., Tickler, D., and Block, B. Movement networks predict predator dynamics in remote coral reef ecosystems. *In Revision* for **Journal of Applied Ecology.**
- Bargnesi F. \*, Gridelli, S., Cerrano, C., and **Ferretti, F.** Reconstructing the history and ecology of the sand tiger shark (*Carcharias taurus*) in the Mediterranean Sea. *In Review* at **Aquatic Conservation:**Marine and Freshwater Ecosystems.
- Leone, A., Puncher, G.N., **Ferretti, F** et al. Origin of the Mediterranean Great White Shark population. *In Review at* **Journal of Biogeography.**
- Moro\*, S., Jona-Lasinio, G., Block, B., Micheli, F., De Leo, G., Bottaro, M., Scacco, U., Serena, F. and **Ferretti, F.** Patterns of abundance and distribution of the white shark in the Mediterranean Sea. *In Review at* **Fish and Fisheries**.
- Bargnesi\*, F., Lucrezi, S. and **Ferretti, F. 2019.** Opportunities from citizen science for shark conservation, with a focus on the Mediterranean Sea. *Accepted* in **European Journal of Zoology.**
- Dunn, D., Harrison, A., Curtice, C., Ferretti, F. et al. 2019. Global ocean governance requires actionable knowledge on migratory connectivity. Proceedings of the Royal Society of London, B. <a href="https://doi.org/10.1098/rspb.2019.1472">https://doi.org/10.1098/rspb.2019.1472</a>
- Novaglio, C.\*, A.D.M. Smith, S. Frusher, **F. Ferretti**. **2019.** Identifying historical changes at the onset of exploitation to improve understanding of fishing impacts. *Accepted in* **Aquatic Conservation:**Marine and Freshwater Ecosystems.
- Queiroz, N., Humphries, N.E., Couto, A., Vedor, M., Da Costa, I., Sequeira, A.M.M., Mucientes, G., Santos, A.M., Ferretti, F. et al. 2019. Global spatial risk assessment of sharks under the footprint of fisheries. Nature. https://doi.org/10.1038/s41586-019-1444-4
- Carlisle, A., Dale, J, Ferretti, F., Tickler, D., Curnick, D., Chapple, T., Schaller, R., Castleton, M. and Block, B. 2019. Managing for uncertainty: Using telemetry to assess the conservation role of Large MPAs for mobile fishes. Frontiers in Marine Sciences.
- Jorgensen, S. J., Anderson, S., **Ferretti, F.,** Tietz, J., Chapple, T., Kanive, P., Bradley, R., Moxley, J. and Block, B. A. **2019**. Killer whales redistribute white shark foraging pressure on elephant seals. **Sci. Rep.,** 9, 6153.
- White, T., Ferretti, F., Kroodsma, D., Hazen, E., Carlisle, A., Scales, K., Bogard, S. and Block, B. 2019. Predicted hotspots of overlap between highly migratory fishesand industrial fishing fleets in the Northeast Pacific. Science Advances, 5 (3), eaau3761.

- Kroodsma, D., Mayorga, J., Hochberg, T., Miller, N.A., Boerder, K., **Ferretti**, F., Wilson, A., Bergman, B., White, T.D., Block, B.A., Woods, P., Sullivan, B., Costello, C., and Worm, B. **2018**. Response to Comment on "Tracking the global footprint of fisheries". **Science**, 361 (6404), eaat7789.
- Elahi, R., Ferretti, F., Bastari, A.\*, Cerrano, C., Colloca, F., Kowalik, J., Ruckelshaus, M., Struck, A. and Micheli, F. 2018. Leveraging vessel traffic data and a temporary fishing closure to inform marine management. Frontiers in Ecology and the Environment. https://doi.org/10.1002/fee.1936
- Novaglio, C.\*, Smith, A.D.M., Frusher, S. Ferretti, F., Klaer, N., Fulton, E.A. **2018**. Fishery development and exploitation in South East Australia. Frontiers in Marine Sciences, *5*, 145. https://doi.org/10.3389/fmars.2018.00145
- **Ferretti F**, Curnick D., Liu, K., Romanov E and Block B.A. **2018**. Shark baselines and the conservation role of remote coral reef ecosystems. **Science Advances**, 4: eaaq0333. https://doi.org/10.1126/sciadv.aaq0333
- Kroodsma, D., Mayorga, J., Hochberg, T., Miller, N.A., Boerder, K., **Ferretti**, F., Wilson, A., Bergman, B., White, T.D., Block, B.A., Woods, P., Sullivan, B., Costello, C., and Worm, B. **2018**. Tracking the Global Footrpint of Fisheries. **Science**, 359 (6378), 904–908. https://doi.org/10.1126/science.aao5646
- Bastari, A.\*, Pica, D., Ferretti, F., Micheli, M. and Cerrano, C. 2018. Sea pens in the Mediterranean Sea: diversity distribution and opportunities for ecosystem recovery. ICES J. Mar. Sci., fsy010, https://doi.org/10.1093/icesjms/fsy010
- Bastari, A.\*, Beccacece, J.\*, **Ferretti, F.**, Micheli, F. and Cerrano, C. **2017**. Local ecological knowledge reveals temporal trends of benthic invertebrates of the Adriatic Sea. **Frontiers in Marine Science**, 4: 157. https://doi.org/10.3389/fmars.2017.00157
- O'Leary J.K, Micheli, F., Airoldi, L., Boch, C., De Leo, G., Elahi, R., Ferretti, F., Graham, N.A.J., Litvin, S.Y., Low, N.H., Lumis, S., Nickols, K.J. and Wong, J. Resilience of marine ecosystems to climatic disturbances. **2017**. Resilience of marine ecosystems to climatic disturbances. **Bioscience**, 67 (3): 208-220. DOI: 10.1093/biosci/biw161
- Novaglio, C.\*, Ferretti, F., Smith, T. and Frusher, S. 2016. Species-area relationships as indicators of human impact on fish communities. Diversity and Distribution. DOI: 10.1111/ddi.12482
- Bastari, A.\*, Micheli, F., **Ferretti, F.**, Pusceddu, A. and Cerrano, C. **2016**. Large marine protected areas (LMPAs) in the Mediterranean Sea: the opportunity for the Adriatic Sea. **Marine Policy**, 68: 165–177.
- Ferretti, F., Morey, G., Seret, B., Sprem, J.S. & Micheli, F. 2016. Falling through the cracks: the fading history of a large iconic predator. Fish and Fisheries, 7(3), 875–889. DOI: 10.1111/faf.12108
- Barreto, R.\*, Ferretti, F, Flemming, J., Amorim, A., Andrade, H., Worm, B., and Lessa, R. 2016. Trends in the exploitation of South Atlantic shark populations. Conservation Biology, 30(4), 792–804. DOI: 10.1111/cobi.12663
- Campana, S. and Ferretti, F. 2016. Chapter 40. Sharks and other elasmobranchs. In: *The First Global Integrated Marine Assessment. World Ocean Assessment I.* United Nations.
- Ferretti F., Jorgensen, S., Chapple, T., De Leo, G. and Micheli, F. Reconciling predator conservation with public safety. **2015. Frontiers in Ecology and the Environment,** 13(8), 412–417. DOI: 10.1890/150109
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- Britten, G. L.\*, Dowd, M., Minto, C., Ferretti, F., Boero, F. & Lotze, H. K. 2014. Predator decline leads to decreased stability in a coastal fish community. Ecology Letters, 17 (12): 1518-1525.
- Ferretti, F., Crowder, L. & Micheli, F. 2014. Using Disparate Datasets to Reconstruct Historical Baselines of Animal Populations, in *Marine Historical Ecology in Conservation: Applying the Past to Manage for the Future.* (Kitinger, Gedan, Blight and McClenachan eds). University of California Press, Oakland, California; 63-85.
- Ferretti F. 2014. Geographical distribution and status. 7.2.1 Mediterranean Sea. In Sawfish: A Global Strategy for Conservation, Harrison LH, Dulvy NK (eds). IUCN Shark Specialist Group: Vancouver, Canada; 50-51.
- Micheli, F., B. S. Halpern, S. Walbridge, S. Ciriaco, **F. Ferretti**, S. Fraschetti, R. Lewison, L. Njakaer, and A. Rosenberg. **2013** Cumulative human impacts on Mediterranean and Black Sea marine ecosystems: assessing current pressures and opportunities. **PLoS ONE**, 8(12): e79889. doi:10.1371/journal.pone.0079889
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- Anderson, S.C, R. G. Farmer, F. Ferretti, A. L. Houde & J. A. Hutchings. 2011. Correlates of Vertebrate Extinction Risk in Canada. BioScience, 61: 538-549.
- Ferretti, F., B. Worm, G. Britten\*, M. Heithaus and H. Lotze. **2010**. Patterns of shark decline and ecosystem consequences in the ocean. **Ecology Letters**, 13: 1055-1071.
- Romeo T., F. Ferretti, P. Consoli and F. Andaloro. 2009. Assessment of the Mediterranean swordfish based on the Italian harpoon fishery data. ICES CM 2008/K:16, 1-14.
- Ferretti, F., R.A. Myers, F. Serena and H.K. Lotze. 2008. Loss of large predatory sharks from the Mediterranean Sea. Conservation Biology, 22(4): 952-964.
- Serena F. et al. **2008**. Field identification guide to the Rays of the Mediterranean Sea. Guidelines for data collection and analysis. Societa' Italiana di Biologia Marina, comitato nekton e pesca, Gruppo Nazionale Risorse Demersali, Mediterranean Trawl Surveys. Livorno, Italy, (in Italian).
- **Ferretti F.** and R.A. Myers. **2006**. By-Catch of sharks in the Mediterranean Sea: available mitigation tools. In: *Proceedings of the Workshop on the Mediterranean Cartilaginous Fish with emphasis on Southern and Eastern Mediterranean*, Istanbul, Turkey. 158-169.
- Ferretti F., R.A. Myers, P. Sartor and F. Serena. **2005**. Long Term Dynamics of the Chondrichthyan Fish Community in the Upper Tyrrhenian Sea. **ICES CM 2005/N:25**, 1-25.

- Ferretti, F. 2018. Quality Evaluation of DCF Data for Data Limited Information. Report for the Joint Research Center and the Scientific, Technical and Economic Committee for Fisheries of the European Commission. Pacific Grove, CA; 851 pp.
- Senni, D., Bastari\*, A., Cerrano, C., Micheli, F. & Ferretti, F. 2018. Deep water essential fish habitats and sensitive habitats in the South Adriatic. Proposal for GFCM fisheries restricted areas (FRAs) in the Mediterranean and Black Sea. March, 31 2018, MEDREACT, Rome; 41 pp.
- Senni, D., Bastari\*, A., Cerrano, C., Micheli, F., Ferretti, F., & Elahi, R. 2017. Essential Fish Habitats in the Central Adriatic Jabuka/Pomo Pit. Proposal for GFCM fisheries restricted areas (FRAs) in the Mediterranean and Black Sea. March, 31 2017, MEDREACT, Rome; 41 pp.
- Cerrano, C., Bakran-Petricioli, T., Bastari, A.\*, Fraschetti, S., Huete-Stauffer, C., Ferretti, F., Micheli, F., Ponti, M., Pusceddu, A., & Valisano, L. 2016. Adriatic Sea: Description of the ecology and identification of the areas that may deserve to be protected. Cebrian, D. & Requena, S. (eds.), RAC/SPA, Tunis; 92 pp.
- Chapple, T.K., Carlisle, A., Ferretti, F., Gardner, L., Dale, J., Schaller, R.J., Tickler, D., & Block, B.A. **2016**. *BIOT Animal Tracking & Monitoring Research Expedition*. Final Report to the Bertarelli Foundation. March and April 2016, Pacific Grove, CA.
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- Ferretti, F., Morey, G, Serena, F., Mancusi, C., Fowler, S.L., Dipper, F. & Ellis, J. 2015. Squatina squatina. The IUCN Red List of Threatened Species 2015: e.T39332A48933059. http://dx.doi.org/10.2305/IUCN.UK.2015-1.RLTS.T39332A48933059.en
- Ferretti, F., Morey, G, Serena, F., Mancusi, C., Coelho, R.P., Seisay, M., Litvinov, F. & Buscher, E. 2015. Squatina oculata. The IUCN Red List of Threatened Species 2015: e.T61418A48957418.
- Ferretti, F., Soldo, A., Walls, R., Casper, B., Domingo, A., Gaibor, N., Heupel, M.R., Kotas, J., Lamónaca, A., Smith, W.D., Stevens, J., Vooren, C.M. & Pérez-Jiménez, J. 2015. Sphyrna zygaena. The IUCN Red List of Threatened Species 2015: e.T39388A48930610.
- Ferretti, F., Walls, R.H.L., Soldo, A., Baum, J.K., Clarke, S.C., Domingo, A., Ducrocq, M., Gaibor, N., Graham, R., Jorgensen, S., Kotas, J., Medina, E., Martinez-Ortiz, J., Morales, M., Navarro, S., Ruiz, C., Smith, W., Valenti, S., Vooren, C.M., Pérez-Jiménez, J., Lamónaca, A. & Monzini Taccone di Sitizano, J. 2015. Sphyrna lewini. The IUCN Red List of Threatened Species 2015: e.T39385A48929458.
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- Ferretti, F., Notarbartolo di Sciara, G., Serena, F. & Ducrocq, M. 2015. Rhinoptera marginata. The IUCN Red List of Threatened Species 2015: e.T161463A48939205.
- Ferretti, F. & White, W.T. 2015. Neotrygon ningalooensis. The IUCN Red List of Threatened Species 2015: e.T195463A68636829.
- Ferretti, F. and Buscher, E. 2015. Echinorhinus brucus. The IUCN Red List of Threatened Species 2015: e.T41801A48909148.
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- Sims, D., Fowler, S.L., Ferretti, F. & Stevens, J.D. 2015. Prionace glauca. The IUCN Red List of Threatened Species 2015: e.T39381A48924261.
- Rosenberg, A., Micheli, F., Sala, E., Osio, G., Ferretti, F., Guidetti, P., Fraschetti, S. and Mangialajo, L. **2011**. Recovery Scenarios for the Northwestern Mediterranean Marine Ecosystem: motivating policy action on an ecosystem basis. **Oak Final Report**.
- Ferretti, F. 2011. Peer review report of shark mitigation as a tool for conservation of the Hawaiian Monk Seal. Independent Peer Review Completed for the Center for Independent Experts (CIE)
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#### Policy and Public Outreach

- Rollison, D., Shouse, B., Barreto, R.\*, and **Ferretti, F**. **2016**. Decline in Pelagic South Atlantic Sharks Documented for the First Time. Lenfest Ocean Program Fact Sheet. Washington DC.
- Britten, G. L.\*, Dowd, M., Minto, C., Ferretti, F., Boero, F. and Lotze, H. K. 2014. Loss of Predators Can Destabilize Marine Communities. Lenfest Ocean Program Fact Sheet. Washington DC.
- Daly, L.\* and Ferretti, F. 2013. How large-scale protection zones could benefit sharks and rays in the Mediterranean. Shark Focus 46: 14-15.
- Ferretti, F., B. Worm, G. Britten\*, M. Heithaus and H. Lotze. 2010. Global consequences of shark declines. Lenfest Ocean Program Research Series. Washington DC.
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#### **Software and Data**

Novaglio, C.\*, Smith, A.D.M., Frusher, S., Ferretti, F. and Klaer, N. 2015. Bottom trawl surveys: catch and effort data for South East Australia between 1898 and 1996. MarLIN database. Available at

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- **Ferretti, F.**, De Anda, B.\*, and Diaz, D.\* 2015. SharkPulse 2.0 application software for Android OS. <a href="https://play.google.com/store/apps/details?id=edu.stanford.baseline.sharkpulse2&hl=en">https://play.google.com/store/apps/details?id=edu.stanford.baseline.sharkpulse2&hl=en</a>
- **Ferretti, F.** and Mazzilli, E.\* 2013. SharkPulse 1.1. Mobile application software for Android OS. <a href="https://play.google.com/store/apps/details?id=edu.stanford.baseline.sharkpulse">https://play.google.com/store/apps/details?id=edu.stanford.baseline.sharkpulse</a>
- **Ferretti, F.** and Alvarez, A.\* 2013. SharkPulse v1.1. Mobile application software for iOS (iPhone). https://itunes.apple.com/us/app/sharkpulse-v1.1/id673243556?mt=8

#### **Seminars and Conference Talks**

- Ferretti, F. Big Data, Satellite Technology and Research Synthesis for Ocean Conservation. Virginia Tech, Research Seminar. 3 December 2018, Blacksburg, VA. Invited
- Ferretti, F. Historical Ecology for Fisheries Management and Conservation. Virginia Tech, Teaching Seminar. 4 December 2018, Blacksburg, VA. Invited
- Bargnesi, F.\*, Moro, S.\*, Gridelli, S., and **Ferretti F**. A new global platform for collecting data on sharks for conservation assessments in the Mediterranean Sea. 1<sup>st</sup> International Scuba Diving Sustainability Workshop. 19-21 October 2018, Galata Museum, Genova, Italy.
- Bargnesi, F.\*, Cerrano, C., Serena, F., Gridelli, S., Moro, S.\*, and **Ferretti F**. New opportunities from Citizen Science for conservation assessments of the Mediterranean shark populations. 53<sup>rd</sup> European Marine Biology Symposium, 17-21 September 2018, Oostende, Belgium.
- Ferretti, F. Shark baselines and the conservation role of remote coral reef ecosystems. Bertarelli Foundation Marine Science Symposium 2018. Royal Geographic Society, 11 September 2018, London, UK. Invited
- Ferretti, F. and Block, B. Panel discussion on the creation of high-seas world heritage areas. High Seas International Conference, 27-28 June 2018, Nausicaa Aquarium, Boulogne Sur Mer, France. **Invited.**
- Jacoby, D. Ferretti, F. et al. Movement networks predict the dynamics and vulnerability of reef predators. Sharks International 2018, 3-8 June 2018, João Pessoa, Brazil.
- Barreto, R.\*, Lessa, R., Marcante, F., Santander, J., Mancini, P., Kotas, J., Galagher A., Ferretti, F. and Worm, B. Life history, demography, and conservation concerns for South Atlantic pelagic sharks. Sharks International 2018, 3-8 June 2018, João Pessoa, Brazil.
- Pfleger, M. and Ferretti, F. The science, politics and policies behind fin trade bans in the United States. Sharks International 2018, 3-8 June 2018, João Pessoa, Brazil.
- Ferretti, F. From Data Deficient to Big Data in Shark Conservation. 2018. Public event hoisted by the High Seas Initiative: The High Seas Live from the White Shark Café. May 15<sup>th</sup> 2018, The Smithsonian Institutution, Washington DC. **Invited**.
- Ferretti, F. Big Data, Satellite Technology and Research Synthesis for Ocean Conservation. Biological Science Department Seminar. California Polytechnic State University, 27 April 2018, San Luis Obispo. Invited.
- Ferretti, F. Yes we can, even in the Mediterranean Sea! Public talk on the conservation status and recovery options for the Adriatic Sea. Cattolica Aquarium, 5 January 2018, Cattolica, Italy. **Invited.**

- Ferretti, F. The Palau Shark Census. Public event on the world's first shark sanctuary. Arnoldi Studio, 2 December 2017, Venice Beach, Los Angeles, CA. **Invited.**
- Ferretti, F. Big Data, Satellite Technology and Research Synthesis for Ocean Conservation. Workshop on Technology and Small scale Fisheries. Center for Ocean Solutions, Stanford University, 20 November 2017, Stanford, CA. Invited.
- Ferretti, F. Big Data, Satellite Technology and Research Synthesis for Ocean Conservation. Meeting of the Minds Bay Area 2017. Global Fishing Watch, 15-22 September 2017, Oakland, CA. **Invited**.
- Bastari, A.\*, Pica, D., Beccacece, J.\*, Gnetti,, V., Ferretti, F., Micheli, F., Senni, D., Cerrano, C. Habitat suitability models and fishers perception as tools for supporting the conservation of vulnerable marine ecosystems (VMEs) in the central Adriatic Sea. Second Joint Meeting of Société Zoologique de France and Unione Zoologica Italiana, 18-23 September 2017, Torino, Italy.
- Ferretti, F. From Data Deficient to Big Data in Shark Conservation. 2017 Marine GIS User Group Meeting. May 24th, Hopkins Marine Station of Stanford University, Pacific Grove, CA. **Invited**.
- Ferretti, F. Big Data, Satellite Technology and Research Synthesis for Ocean Conservation. Palau Shark Week 2017, 11 March 2017, Koror, Palau. **Invited**.
- Block, B., Ferretti, F., White, T., De Leo, G., Hazen, E., Bograd, S. Assessing Anthropogenic Impacts on Tunas, Sharks and Billfishes with Direct Observations of Human Fishers on the High Seas. American Geophysical Union Fall Meeting. 12-16 December 2016, San Francisco, CA.
- Jacoby, D.M.P., Ferretti, F., Tickler, D., Carlisle, A.B. and Block, B. Vulnerability of reef-associated sharks connecting the world's largest marine protected area. European Elasmobranch Association Annual Conference, 28 30 October 2016, Bristol UK.
- O'Leary, J., Micheli, F., Airoldi, L., Boch, C., De Leo, G., Elahi, R., Ferretti, F., and Graham, N. Bright Spots in the Resilience of Marine Ecosystems to Climatic Disturbances. International Marine Conservation Congress. 30 July 3 August 2016, St. John's, Newfoundland and Labrador, Canada.
- Ferretti, F., Curnick, D., Block, B. Characterizing shark fishing in the Chagos archipelago and implications for reconstructing community baselines. International Marine conservation Congress. 30 July 3 August 2016, St. John's, Newfoundland and Labrador, Canada.
- Curnick, DC; Ferretti, F; Koldewey, HJ; Jones, KE; Kemp, K; Collen, B. Early evidence from the Chagos marine reserve sets baselines for tuna protection. International Marine conservation Congress. 30 July 3 August 2016, St. John's, Newfoundland and Labrador, Canada.
- Ferretti, F. From Data Deficient to Big Data in Shark Conservation. Monterey Bay Aquarium Research Institute Seminar Series. 13th July 2016, Monterey Bay Aquarium research Institute, Moss Landing, CA. Invited.
- Leone, A., Puncher, G.N., Ferretti, F. Sperone, E., et al. Mediterranean Jaws: Origin of the Mediterranean Population of Great White Shark, Carcharodon carcharias, Inferred from aDNA variation. Joint Meeting Of Ichthyologists and Herpetologists. 6-10 July 2016, New Orleans, LA.
- Ferretti, F. and Barreto, R. Shark decline in the South Atlantic. Lenfest Ocean Program Webinar. June 20th 2016. <a href="https://pewcharitabletrusts.webex.com">https://pewcharitabletrusts.webex.com</a>. <a href="https://pewcharitabletrusts.webex.com">Invited</a>.
- Ferretti, F. Ocean use and shark conservation: conflicts and opportunities. Monterey Bay Aquarium Lunchtime Seminar. Monterey Bay Aquarium, 10th February 2016, Monterey, CA. **Invited.**
- Ferretti, F. Ocean use and shark conservation: conflicts and opportunities. Guest Lecture in Marine Ecology Course. Hopkins Marine Station of Stanford University, 9th February 2016, Pacific Grove, CA. Invited.
- Ferretti, F. Animal tracking and stock assessment to detect illegal fishing in mega reserves. Hopkins Marine Station First Annual Postdoctoral Science Symposium. Boatworks Auditorium, Hopkins Marine Station of Stanford University, 29 January 2016, Pacific Grove, CA.

- Ferretti, F. Data Science for Conservation. Seminar talk. Center for Ocean Solutions, Stanford University. 17 September 2015, Monterey, Ca. Invited.
- Ferretti, F. Data Science for Conservation. Seminar talk. Center for Ocean Solutions, Stanford University. 10 September 2015, Stanford, Ca. **Invited.**
- Ferretti, F., Jorgensen, S., Chapple, T., De Leo, G., & Micheli, F. Modeling shark attack data to infer patterns of shark abundance: a case study on the California white shark population. 49<sup>th</sup> annual meeting of the American Fishery Society, California-Nevada chapter. 8-10 April 2015, Santa Cruz, Ca.
- Ferretti, F. Localizing sharkPulse for international users. Middlebury Institute of International Studies, 10 March 2015, Monterey, CA. Invited.
- Ferretti, F. Unconventional data for shark conservation. Departmental Seminar for the Applied Marine and Watershed Science Seminar Series. California State University of Monterey Bay, 2 March 2015, Seaside, CA. Invited.
- Ferretti, F. Conservation for data deficient species. Guest Lecture in Marine Conservation Biology Course. California State University of Monterey Bay, 9 February 2015, Seaside, CA. **Invited**.
- Novaglio, C. \*, Ferretti, F., Smith, T., Frusher, S. Species-area relationships as indicators of human impact on fish communities. Ecological Society of America annual meeting, 10-15 August 2014, Sacramento, USA.
- Ferretti, F., Jorgensen, S., Chapple, T., De Leo, G., & Micheli, F. Modeling shark attack data to infer patterns of shark abundance: a case study on the California white shark population. Sharks International 2014, 2-6 June 2014, Durban, South Africa.
- Ferretti, F. A multi decadal natural experiment on large marine protected areas. Kick-off meeting for the Adriatic Ecosystem Recovery Project (AMER). Polytechnic University of Marche, 17<sup>th</sup> December 2013. Ancona, Italy.
- Ferretti, F. Morey, G. Seret, B., Sprem, J. & Micheli, F. Sawfish in the Mediterranean Sea: vagrant species or case of regional extinction. 17th European Elasmobranch Association Meeting. 1-3 November 2013, Plymouth, UK.
- Ferretti, F. Reconstructing Shark Baselines in the Ocean. Explorer Society. Canada Chapter. Victoria, 29 May 2013. **Invited.**
- Ferretti, F. Reconstructing Shark Baselines in the Ocean. Polytechnic University of Marche. 13 December 2012, Ancona, Italy. **Invited.**
- Ferretti, F. Priorities for elasmobranch research in the Mediterranean Sea. Panel of experts on the EU-MSFD and the role of the cartilaginous fishes. European Elasmobranch Association Meeting. Milan, 22-25 November, 2012. **Invited.**
- James, K. & Ferretti, F. & Moore, J. & Lewison, R. & Curtis, K.A. & Dillingham, P. (2012). Global Chondrichthyan Catch and Bycatch: Status and Sustainability. World Congress of Herpetology, Vancouver, Canada, August 8 14, 2012, Book of Abstracts: 342
- Ferretti, F. Morey, G. Seret, B. Harrison & L. Micheli, F. Sawfish in the Mediterranean Sea: vagrant species or case of regional extinction. Global Sawfish Conservation Strategy Workshop. IUCN Shark specialist Group. 21-24 May 2012. Zoological Society of London, UK. **Invited.**
- Ferretti, F. The shark CPUE database: reconstructing baselines of abundance and community change. By-catch Risk Assessment Workshop. 6 8 March, 2012. Southwest Fisheries Science Center (NOAA) in La Jolla, California
- Ferretti, F. Reconstructing shark baselines in the ocean. Stanford University Shark Week. Stanford Coastal Society and Center for Ocean Solution. 6-10 February 2012. Stanford, California. **Invited.**
- Ferretti, F. Osio, G., Jenkins, C. Rosenberg, A. and Lotze, H. Long-term ecological change in the elasmobranch community of the Adriatic Sea. Workshop on Stock Assessment of Selected Species of Elasmobranchs in the GFCM area; FAO, General Fishery commission for the Mediterranean and European Commission; 12-16 December 2011; Brussels, Belgium. Invited.
- Ferretti, F. Mediterranean shark conservation assessments: using analyses of historical data to shape concrete conservation actions. International Marine Conservation Congress 2, Symposium: Integrating Marine Historical Ecology into Conservation and Management: Using the Past to Manage for the Future. 14–19 May 2011, Victoria (Canada).
- Ferretti, F. Where Have All the Big Sharks Gone? Panel discussion on shark populations, fishing and

- finning. Center for the Future of the Oceans (CFFO). 21 April 2011, Monterey, California (USA). Invited.
- Ferretti, F. Global Shark Declines and Why It Matters. COMPASS policy briefing: Healthy Predators, Healthy Ocean: Ecosystem roles of sharks and other predators. California Chamber of Commerce. 4 April 2011, Sacramento, California (USA). Invited.
- P. Sartor, J. Cartes, D. Damalas, F. Ferretti, S. Kavadas, C. Osio, C. Maravelias, F. Maynou: Changes in demersal species composition and size over the past 50 years in the Mediterranean. Ocean Past III. 18-20th November 2010, Dublin (Ireland).
- Ferretti, F., C. G. Osio, C. Jenkins, A. A. Rosenberg, & H. K. Lotze. Long-term changes in the Adriatic demersal elasmobranch community in response to prolonged human disturbance. 14th EEA Scientific Conference 10-13th November 2010, Galway (Ireland).
- Ferretti, F., B. Worm, G. L. Britten, M. R. Heithaus and H.K. Lotze. The role of sharks in marine ecosystems: insights from a global overview of changes in abundance and ecosystem consequences. Sharks International, 6-11 June 2010, Cairns (Australia).
- Ferretti, F. Ecological change in meso-predator community in response to prolonged human disturbance: an example of methodological approach. EVOMED workshop, 1-5 March 2010, Barcelona (Spain).
- Ferretti, F. Analysis of projected Adriatic fishing effort from aggregated official statistisics and observer data. Workshop on analytical strategies for the "OAK Recovery Scenarios for the Northwestern Mediterranean Marine Ecosystem: motivating policy action on an ecosystem basis" project. 1-5 February 2010, Consevation International, Washington, DC (USA).
- Ferretti, F., G.C. Osio, A.A. Rosenberg, & H.K. Lotze. 2009. The History of elasmobranch exploitation in the Mediterranean Sea: patterns of change and emerging consequences. Oceans Past II, 26-28 February 2009, Vancouver, British Columbia (Canada).
- Osio, G.C. & F. Ferretti. 2009. Can we incorporate historical landings and CPUE's into modern stock assessment? A comparative case in Italy and Spain. Oceans Past II, 26-28 February 2009, Vancouver, British Columbia (Canada).
- Ferretti, F. Once upon a time there were sharks in the Mediterranean Sea. Sustainable Fisheries Management Workshop. 9-12 December 2008, Barcelona (Spain). **Invited.**
- Romeo, T., F. Ferretti (speaker), P. Consoli, S. Canese & F. Andaloro. Assessment of the Mediterranean swordfish based on the Italian harpoon fishery data. ICES Annual Science Conference, theme session on Small-scale and recreational fisheries surveys, assessment, and management (K), 22–26 September 2008, Halifax, Nova Scotia (Canada)
- Ferretti, F. Assessment of the Mediterranean swordfish based on the Italian harpoon fishery data. HMAP-FMAP Workshop, 2-4 October 2008, Dalhousie University, Halifax, Nova Scotia (Canada).
- Osio, G. C. and Ferretti, F. Historical fisheries data in the Mediterranean Sea. ICES workshop on historical data on fisheries and fish (WKHIST), 1115 August 2008, ICES Headquarters, Copenhagen.
- Ferretti, F. Losing large predatory sharks from the Mediteranean Sea. Lenfest Ocean Program Press Conference, 11 June 2008, Rome (Italy).
- McClenachan, L., F. Ferretti, H.K. Lotze, B. MacKenzie & G.C. Osio. 2008. Ecosystems in Search of Recovery: The Caribbean, Mediterranean, and Baltic Seas. AAAS Annual Meeting, 14-18 February 2008, Boston (USA).
- Baum (speaker), J.K., L. Lucifora (speaker) & F. Ferretti (speaker). The Global Shark Assessment. Scientific and conservation achievements to date and forthcoming contributions. Pew Conference series on supported shark research, 27 November 2007. Dalhousie University, Halifax, Nova Scotia (Canada).
- Osio G.C. & F. Ferretti. Modelling the historical trends of the Adriatic Sea demersal assemblages as a basis for ecosystem recovery. ECEM Conference, 27-30 November 2007, Trieste (Italy).
- Ferretti, F., R.A. Myers, G.C. Osio, H.K. Lotze & A.A. Rosenberg. 2007. The Mediterranean Sea: a case study to explain the ecological role of elasmobranchs in the marine ecosystem. Joint Italian Association of Oceanography and Limnology (AIOL) Italian Ecological Society (SItE) meeting, 17-20 September 2007, Ancona (Italy). **Invited**.
- Ferretti, F. Long term analyses of demersal fish communities in the Adriatic Sea from multiple scientific

- surveys. Workshop on Statistical Methods for Marine Ecological Data. 7-8 June 2007, Dalhousie University, Halifax, Nova Scotia (Canada).
- Ferretti, F. 2007. Status of Mediterranean elasmobranchs: a preliminary overview. WWF-Italia, 3 January 2007, Rome (Italy).
- Ferretti F. By-catch of sharks in the Mediterranean: mitigation tools. Workshop on the Mediterranean Cartilaginous Fish with emphasis on Southern and Eastern Mediterranean, 14-16 October 2005, Istanbul (Turkey). **Invited.**
- Ferretti F., R.A. Myers, P. Sartor & F. Serena. Long Term Dynamics of the Chondrichthyan Fish Community in the Upper Tyrrhenian Sea. ICES Annual Science Conference, theme session on elasmobranch fisheries science (N), 20-24 September 2005, Aberdeen, Scotland (U.K)
- Lucifora L., F. Ferretti & R. A. Myers. Shark management: the Good, the Bad and the Ugly. Mote Marine Laboratory Symposium, 9-11 November 2004, Sarasota, Florida (U.S.A).
- Ricard D., R.A. Myers, L. Lucifora, F. Ferretti & A. Porter. Integrating the OBIS schema into the information system that supports the Pew Global Shark Assessment. Ocean Biodiversity Informatics International Conference on Marine Biodiversity Data Management, 29 November 1 December 2004, Hamburg (Germany).

#### **Posters**

- Gee, E.\*, Romanov, E., Block, B. and Ferretti, F. 2018. Reconstructing Indian Ocean shark baselines using an historical longline survey. **Bertarelli Foundation Marine Science Symposium 2018**. 11 September 2018, London, UK.
- Ferretti, F., Chesi, S., Weaver, G., De Leo, G. and Block, B. 2018. Protecting Large Marine Reserves with Drone Swarms. **Bertarelli Foundation Marine Science Symposium 2018**. 11 September 2018, London, UK.
- Jorgensen, S.J., Anderson, S.D., Chapple, T.K., Ferretti, F., Kanive, P.E., Tietz, J., and Block, B.A. Cryptic ecology of top ocean predators revealed: tracking rare interactions between white sharks and killer whales. **The 6**<sup>th</sup> **International Bio-logging Science Symposium**. 24–29 September 2017, Kostanz, Germany.
- Bargnesi, F. \*, Canini, S., Cerrano, C., Gridelli, S., Leone, A. and Ferretti, F. SharkPulse Italia: monitoring sharks through social media and a dedicated app. VIII Convegno Nazional della Ricerca nei Parchi, 28 September 1 October 2017, Parco Natura Viva, Bussolengo (VR), Italy.
- Leone, A. Carlisle, A., Serena, F., Leeney, R., Litvin, S.Y, & Ferretti, F. Restoring the history of sawfish in the Mediterranean from museum exhibits. Annual Conference of the Italian Association of Scientific Museums (ANMS). 12 October 2014, Livorno, Italy.
- Adelson, A.\*, Ferretti, F. & Micheli, G. Changing abundances of white sharks (*Carcharodon carcharias*) in the Mediterranean Sea. World Congress of Herpetology, **August 8 14, 2012**, Vancouver, Canada.
- Barreto, R. R.\*, Ferretti, F., Flemming, J., Andrade, H., Amorim, A., Santana, F., Worm, B., and Lessa, R. Inferring sharks population's trends in the South Atlantic Ocean (SAO). **Sharks International 2014**, 2-6 June 2014, Durban, South Africa (Poster presentation).
- Mancusi, C. et al. MEDLEM Database, A data collection on large cartilaginous fishes in the Mediterranean basin. **Sharks International 2014**, 2-6 June 2014, Durban, South Africa (poster).
- Ferretti, F., Jorgensen, S., Chapple, T., De Leo, G. & Micheli, F. Modeling shark attacks off the Coast of California to infer trends in abundance of the local great white shark population. Stanford Woods Institute for the Environment. Community Retreat. **April 4–6 2013**. Aptos, California. (Poster presentation.)
- Ferretti, F. Reconstructing Shark Baselines in the Ocean. Hopkins Marine Station Open House, 29 October 2011, Pacific Grove, California. (Poster presentation.)

## Policy, Communication and Outreach Experience

 Received formal communication training at the <u>COMPASS</u> Communications Training Workshop for the Ecosystem-Based Management Forum for Early Career Scientists (Porthsmouth, NH, 12-14 December 2007).

- Given interviews to international press agencies, newspapers, radio and television stations including the BBC, The New York Times, The Times, Washington post, and Le Monde.
- Collaborated with Lenfest Ocean Program and Communications INC of London to prepare a press conference for the paper Conserv. Biol. 22(4): 952-964 about the status of sharks in the Mediterranean Sea. Rome, 7-11 June 2008.
- · Collaborated with COMPASS and the Monterey Bay Aquarium in briefing and communicating to Senators and Assembly members of the State of California about the global state of sharks for the discussion of the shark fin trade bill of California, AB376.

# Projec

Projects	
• Global Ocean Conservation Priorities (PI: Sala, E. – National Geographics)	2018 - 2021
• Migratory Connectivity in the Ocean (PI: Halpin, P. – Duke University)	2018 - 2020
<ul> <li>Protecting vulnerable marine ecosystems beyond national jurisdiction in the Adriatic Sea (PI: Senni, D MedReact)</li> </ul>	2016 - 2019
Global Fishing Watch Initiative (PI: Block, B.)	2016 - 2020
<ul> <li>Bertarelli Foundation Marine Program in the Chagos Archipelago (Principal Investigator)</li> </ul>	2015 - 2020
• Fast-tag Project (PI: Block, B.)	2015 - 2020
• Using large MPAs to recover highly productive marine ecosystems and the services: the Adriatic Sea (PI: Micheli, F., Naylor, R. and Ruckelshaus, M.)	2015 - 2018
<ul> <li>Palmyra Coral Recruitment Project (PI: McCauley, D. and Micheli F.)</li> </ul>	2013 - 2016
• Palmyra connectivity Project (PI: Micheli, F. and De Leo, G.)	2013 - 2016
Adriatic Marine Ecosystem Recovery (Principal Investigator)	2013 - 2016
<ul> <li>Lenfest Global Shark Baseline Project (Principal Investigator)</li> </ul>	2011 - 2015
<ul> <li>Lenfest Mediterranean Shark Assessment (Principal Investigator)</li> </ul>	2007 - 2010
• Pew Global Shark Assessment (PI: Myers, R.A.)	2003 - 2007
• Future of Marine Animal Populations (FMAP) of the Census of Marine Life (COML) (PI: Myers, R.A., Lotze, H.K. and Worm, B.)	2004 - 2011
<ul> <li>History of Marine Animal Populations (HMAP) of the COML (PI: Lotze, H.K. and Rosenberg, A.A.)</li> </ul>	2004 - 2010
<ul> <li>OAK Mediterranean recovery scenarios project (PI: Rosenberg, A.A., Micheli, F. and Sala, E.)</li> </ul>	2007 - 2010
• The 20th Century evolution of Mediterranean exploited demersal resources under increasing fishing disturbance and environmental change (EVOMED) (PI: Sartor, P.)	2009 - 2010
Fellowships, Scholarships and Research Grants	
<ul> <li>Research Grant Moore Foundation (1,900,000 USD, co-written with B. Block; FAST tag project)</li> </ul>	2018 - 2020
<ul> <li>Research Grant Bertarelli Foundation (2,000,000 USD, co-written with B. Block; Chagos Archipelago Project)</li> </ul>	2018 - 2021
P 1 C 4 B 4 11 F 14 4 (are one HCD 14)	2017 2012

2015 - 2016

2018 - 2019

2017 - 2018

• Research Grant Bertarelli Foundation (250,000 USD, co-written

• Research Grant Rishani Marine Conservation Fund (700,000

• Research Grant Schmidt Technology Partners (200,000 USD, co-

USD, co-written with B. Block; FAST Tag Project)

with B. Block; FAST Tag Project)

written with B. Block; FAST tag project)

- Research Grant Polytechnic University of Marche (250,000 EUR; December 2013 December 2016 AMER Project)
- Stanford University VPUE program (5,600 USD; Global Shark Baselines Project)

June 2013

• Stanford University VPUE program (11,200 USD; Global Shark Baselines Project)

June 2012

• Research grant from Lenfest Ocean Program (300,000 USD; Global Shark Baselines Project)

August 2011- June 2015

- Fellowship from Lenfest Ocean Program (100,00 USD; Mediterranean Shark Assessment Project)
- September 2007-December 2010
- Dalhousie University Patrick F. Lett Bursary (7,500 CAN)
- May 2007 August 2007
- Faculty of Graduate Studies and Research Grant Scholarships, Dalhousie University (20,000 CAN per year)
- September 2006 August 2007
- Faculty of Graduate Studies and Research Grant Scholarships, Dalhousie University (27,500 CAN per year)
- September 2004 August 2006
- Faculty Research Grant Scholarship Dalhousie University (18,000 CAN)
- January 2004 August 2005
- Biodaqua Scholarship Polytechnic University of Marche (3,000 EUR)

April 2003 – July 2003

#### Referee services

Acta Adriatica, Advances in Oceanography and Limnology, Aquatic Living Resources, Biological Conservation, Cahiers De Biologie Marine, Conservation Biology, Conservation Letters, Current Biology, Deep Sea Research, Ecology Letters, Ecological Modelling, Endangered Species Research, Estuaries and Coasts, Fish and Fisheries, Fisheries Research, Frontiers in Marine Science, Global Ecology and Biogeography, Global Ecology and Conservation, Journal of Natural History, Journal of the Marine Biological Association of the United Kingdom, Marine and Freshwater Research, Marine Biodiversity, Marine Biodiversity Records, Marine Environmental Research, Marine Ecology Progress Series, Nature Communications, Pan-American Journal of Aquatic Sciences, PLoS One, Proceedings of the Royal Society B, Reviews in Fish Biology and Fisheries, Science Advances, Trends in Ecology and Evolution.

#### References

Barbara Block, Ph.D., Charles & Elizabeth Prothro Professor in Marine Sciences, Hopkins Marine Station of Stanford University, Pacific Grove, CA 93950, USA Phone: + 1 831 655 6236 Fax: +1 831 375-0793 e-mail: <a href="mailto:bblock@stanford.edu">bblock@stanford.edu</a> web: <a href="http://hopkinsmarinestation.stanford.edu/barbara-block">http://hopkinsmarinestation.stanford.edu/barbara-block</a>

Fiorenza Micheli, Ph.D., David and Lucile Packard Professor of Marine Science and Co-Director, Center for Ocean Solutions, Hopkins Marine Station of Stanford University Pacific Grove, CA 93950, USA Phone: +1 831 655-6250 Fax: +1 831 375-0793 e-mail: <a href="micheli@stanford.edu/micheli.stanford.edu/mi

Andrew A. Rosenberg, Ph.D., director of the Center for Science and Democracy at the Union of Concerned Scientists, Two Brattle Sq. Cambridge, MA 02138-3780 Phone +1 202-331-5458 e-mail: arosenberg@ucsusa.org

Giulio De Leo, Ph.D., Professor Hopkins Marine Station of Stanford University Pacific Grove, CA 93950, USA Phone: +1 831 655-6202 Fax: +1 831 375-0793 e-mail: <a href="mailto:deleo@stanford.edu/web:">deleo@stanford.edu/web:</a> <a href="https://sites.stanford.edu/deleolab/">https://sites.stanford.edu/deleolab/</a>

Trevor Hastie, Ph.D., The John A. Overdeck Professor of Statistics and Professor of Biomedical Data Science. Department of Statistics, Sequoia Hall, 390 Serra Mall, Stanford University, Stanford, CA 94305-4020. Phone: +1 650 725-2231 Fax: +1 650 725-8977 e-mail: hastie@stanford.edu Web: <a href="http://www.stanford.edu/~hastie">http://www.stanford.edu/~hastie</a>

Heike K. Lotze, Ph.D., Canada Research Chair in Marine Renewable Resources Department of Biology, Dalhousie University 1355 Oxford Street, Halifax, NS, B3H 4J1, Canada Phone: +1 902 494 3406 e-mail: hlotze@dal.ca Web: http://lotzelab.biology.dal.ca

Boris Worm, Ph.D., Professor Department of Biology, Dalhousie University 1355 Oxford St., Halifax, NS, B3H 4J1, Canada Phone: +1 902 494 2478 Fax: +1 902 494 3736 E-mail bworm@dal.ca Web http://wormlab.biology.dal.ca