

Sonia Bejarano (PhD)

Reef Systems Workgroup Leader, Ecology Department

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Education

- 2010 PhD. Biological Sciences · University of Exeter, United Kingdom.
- 2001 B.Sc. (Hons) Marine Biology · Universidad Jorge Tadeo Lozano, Colombia.

Awards and distinctions

- 2008 Postdoctoral Fellowship (~102,000 EUR) Khaled bin Sultan Living Oceans Foundation.
- 2005 Doctoral Scholarship (~80,300 EUR) Coral Reef Targeted Research and Capacity Building for Management Project - World Bank.
- 2004 Packard Foundation travel award to attend the 10th International Coral Reef Symposium Okinawa (~2700 EUR).

Work Experience

- 10.2017 – present **Reef Systems Workgroup Leader** · Leibniz Centre for Tropical Marine Research, Bremen. Germany.
- 05. 2014 – 09. 2017 **Postdoctoral researcher** at the Ecology Department · Leibniz Centre for Tropical Marine Research, Bremen. Germany.
- 02. 2014 – 04. 2014 **Coral reef data analysis consultant** · Cayman Islands Government Department of Environment, Grand Cayman, Cayman Islands.
- 04. 2013 – 01. 2014 **Lead coral reef scientist** · Little Cayman Research Centre, Central Caribbean Marine Institute, Little Cayman. Cayman Islands.
- 03. 2010 – 03. 2013 **Postdoctoral researcher** at the Marine Spatial Ecology Lab, University of Queensland, Brisbane. Australia.
- 01. 2001 – 05. 2005 **Research Scientist** in the National Reef Monitoring System, Institute for Marine and Coastal Research (INVEMAR), Santa Marta, Colombia.

Research Grants and Proposals

- 2019 ZMT call for core-budget funding. Back and Fore: Flying drones over back reef lagoons to infer provision of two key ecosystem services - FlyBack (120,000 EUR).
- 2018 ZMT call for core-budget funding. Climatic drivers of reef fish functional diversity in the Tropical Eastern Pacific - CLIFTEP (115,896 EUR).
- 2018 BiodivERsA-Belmont Forum call on Scenarios of Biodiversity and Ecosystem services (Research Grant). The futures of reef services in the Anthropocene - REEF FUTURES (281,350 EUR) (co-authored with Professor David Mouillot).
- 2018 DFG (International Scientific Events) 3rd International Year of the Reef – CAPTURE: Capturing Europe’s Passion for our World’s coral reefs, an open-door scientific colloquium (7800 EUR) (authored).
- 2013 Guy Harvey Ocean Foundation Research Grant (37,000 EUR) (substantial contribution to proposal awarded to Kathryn Lohr and Dr. Carrie Manfrino).
- 2008 US National Fish and Wildlife Foundation Grant (81,000 EUR) (co-authored grant proposal awarded to Professor Peter J. Mumby).
- 2004 Conservation International Research Grant for Endangered Species Research in Colombia (1000 EUR) (authored).

Publications

View citation report: <http://www.researcherid.com/rid/S-7784-2016>

- Prinz N, Story R, Lyon S, Ferse SCA and **S Bejarano** (2020) To feed or not to feed? Coral reef fish responses to artificial feeding and stakeholder perceptions in the Aitutaki Lagoon, Cook Islands. *Frontiers of Marine Science, Marine Conservation and Sustainability* (doi: 10.3389/fmars.2020.00145)
- Bejarano S**, Pardede S, Campbell SJ, Hoey AS and SCA Ferse (2019) Herbivorous fish rise as a destructive fishing practice falls in an Indonesian Natural Park, *Ecological Applications* 29(8) e01981.
- Roff G, **Bejarano S**, Priest M, Marshall A, Chollett I, Steneck RS, Doropoulos C, Golbuu Y and PJ Mumby (2019) Seascapes as drivers of coral reef ecosystem function, *Ecological Monographs*. 89: e01336.
- Ford A, **Bejarano S**, Nugues M, Viser PM, Albert S and SCA Ferse (2018) Reefs under siege – the rise, putative drivers and consequences of benthic cyanobacterial mats. *Frontiers in Marine Science* 5:18.
- Gauff R, **Bejarano S**, Madduppa HH, Subhan B, Dugeny EMA, Perdana YA and SCA Ferse (2018) Influence of predation risk on the sheltering behaviour of the coral dwelling damselfish *Pomacentrus moluccensis*. *Environmental Biology of Fishes*. 101:639-651.
- Ford AK, Eich A, McAndrews RS, Mangubhai S, Nugues MM, **Bejarano S**, Moore BR, Rico C, Wild C and SCA Ferse (2018) Evaluation of coral reef management effectiveness using conventional versus resilience-based metrics. *Ecological Indicators* 85: 308-317
- Peiffer F, **Bejarano S**, Palavicini de Witte G and C Wild (2017) Ongoing removals of invasive lionfish in Honduras and their effect on native Caribbean prey fishes. *Peer J* 5:e3818.
- Bejarano S**, Jouffray JB, Chollett I, Allen R, Roff G, Marshall A, Steneck R, Ferse SCA and PJ Mumby (2017) The shape of success in a turbulent world: Wave exposure filtering of coral reef herbivory. *Functional Ecology* 31: 1312-1324.
- Casella E, Rovere A, Harris D, Ferse SCA, **Bejarano S** and V Parravicini (2017) Mapping coral reefs using drones and structure from motion photogrammetry techniques. *Coral Reefs* 36: 269-275.
- Ford AK, **Bejarano S**, Marshall A and PJ Mumby (2016) Linking the biology and ecology of key herbivorous unicornfish to fisheries management in the Pacific. *Aquatic Conservation: Marine and Freshwater Ecosystems* 26: 790-805.
- Hedley JD, Roelfsema CM, Chollett I, Harborne AR, Heron SF, Weeks S, Skirving WJ, Strong AE, Eakin CM, Christensen TRL, Ticzon V, **Bejarano S** and PJ Mumby (2016) Remote sensing of coral reefs for monitoring and management: A review. *Remote Sensing* 8(2): 118.
- Lohr K, **Bejarano S**, Lirman D, Schopmeyer S and C Manfrino (2015) Optimizing the productivity of a coral nursery focused on staghorn coral *Acropora cervicornis*. *Endangered Species Research* 27: 247-250.
- Bejarano S**, Lohr K, Hamilton S and C Manfrino (2015) Relationships of invasive lionfish with topographic complexity, groupers, and native prey fishes in Little Cayman. *Marine Biology* 162: 253-266.
- Roff G, **Bejarano S**, Roff G, Bozec, YM, Nugues M, Steneck RS and PJ Mumby (2014) Porites and the Phoenix effect: unprecedented recovery after a mass coral bleaching event at Rangiroa Atoll, French Polynesia. *Marine Biology* 161: 1385-1393.
- Bejarano S**, Golbuu Y and PJ Mumby (2013) Changes in the herbivore spear-fishery associated with the grouper closure in Palau. *Animal Conservation* 17 (2):133-143.
- Bejarano S**, Golbuu Y, T Sapolu and Mumby PJ (2013) Ecological risk and the exploitation of herbivorous fish in Micronesia. *Marine Ecology Progress Series* 482: 197-215.

- Mumby PJ, **Bejarano S**, Golbuu Y, Steneck RS, Arnold SN, van Woesik R and A Friedlander (2013) Empirical relationships among resilience indicators on Micronesian Reefs. *Coral Reefs* 32:213-226.
- Bozec YM, Yakob L, **Bejarano S** and PJ Mumby (2012) Reciprocal facilitation and non-linearity maintain habitat engineering on coral reefs. *Oikos* 122(3): 428-440.
- Ticzon V, Mumby PJ, Samaniego B, **Bejarano S** and L David (2012) Microhabitat use of juvenile coral reef fish in Palau. *Environmental Biology of Fishes* 95(3): 355-370.
- Bejarano S**, Mumby PJ and I Sotheran (2011) Predicting the structural complexity of reefs and fish abundance using remote sensing (RoxAnn). *Marine Biology* 158:489-504.
- Bejarano S**, Mumby PJ, Hedley J and I Sotheran (2010) Combining optical and acoustic data to enhance the accuracy of coral reef habitat maps. *Remote Sensing of Environment* 114: 2768-2778.
- Rodriguez-Ramirez A, Reyes-Nivia MC, Zea S, Navas-Camacho R, Garzón-Ferreira J, **Bejarano S**, Herron P and C Orozco (2010) Recent dynamics and condition of coral reefs in the Colombian Caribbean. *Revista de Biología Tropical* 58 (Suppl 1): 107-131.
- Gil-Agudelo D, Navas-Camacho R, Rodriguez-Ramirez A, Reyes – Nivia MC, **Bejarano S**, Garzón-Ferreira J and G Smith (2009) Coral diseases and their research in Colombian coral reefs. *Boletín de Investigaciones Marinas y Costeras INVEMAR* 38(2): 189-224.
- Manrique-Rodriguez N, **Bejarano S** and J Garzón-Ferreira (2006) Growth of the gorgonian seafan *Gorgonia ventalina* (Linnaeus, 1758) (Cnidaria: Gorgoniidae) in Santa Marta, Colombian Caribbean. *Boletín de Investigaciones Marinas y Costeras INVEMAR* 35: 77-90.
- Bejarano S**, Zea S, and JM Diaz (2004) Sponges and other microhabitats for ophiuroids on coral reefs of the San Bernardo Archipelago *Boletín de Investigaciones Marinas y Costeras INVEMAR* 38(2): 189-224.

Teaching

- 2017-present *Course coordinator* · Experimental Design and Statistics using R (UniBremen, ISATEC MA Course).
- 2017-2018 *Lecturer* · Introduction to Functional Ecology (UniBremen, ISATEC MA Course).
- 2017 *Guest Lecturer* · Introduction to the study of coral reef fishes (Sam Ratulangi University, Indonesia).
- 2006 *Teaching assistant* · Marine Ecology Field course (University of Exeter, UK).
- 2005-2006 *Teaching assistant* in laboratory sessions in the Faculty of Biological Sciences (University of Exeter, UK).

Supervisor/Committee member

Supervisor Pia Lewin (MA current), Vincent Ripke (MA current), Madeleine Stewart (MA current), Kimberly Shaw (MA current), Sara Ousley (MA, current), Kevin Dietz (MA, 2019), Anna Feuring (MA, 2018), Valeska Diemel (MA, 2018), Hannah von Hammerstein (MA, 2019).

Co-supervisor Natalie Prinz (MA, 2017), Robin Gauff (MA, 2016), Élyne Dugény (MA, 2016), Ryan McAndrews (MA, 2016), Friederike Peiffer (MA, 2015), Nelson Manrique (BSc. Hons, 2004).

PhD Panel member Florian Hielr, Carolin Müller, Benjamin Post, Alonso del Solar.

Professional activities

Co-Editor Research Topic (Frontiers in Marine Science, 2017-present), Research Topic (Diversity, 2019-).

Peer reviewer S Scientific Reports, Ecology and Society, Coral Reefs, Marine Biology, PLOS One, Marine Pollution Bulletin, Marine Biodiversity, Ecology and Evolution, Marine Ecology Progress Series, PeerJ, Hydrobiologia Frontiers in Marine Science, Journal of Applied Ichthyology, Science of the Total Environment, EarthWatch.

Oral presentations

- 2017 Oral Presentation · *The shape of success in a turbulent world: Wave exposure filtering of coral reef herbivory*, 3rd Workshop on trait-based approaches to ocean life, Norway.
- 2016 Oral Presentation (Invited) · *A management-induced positive trajectory of coral reef fish herbivory on Indonesian reefs*. Wildlife Conservation Society (WCS) Bogor, Indonesia.
- 2016 Oral Presentation · *The shape of success in a turbulent world: Wave exposure filtering of coral reef herbivory*, 13th International Coral Reef Symposium Honolulu, Hawaii.
- 2014 Oral presentation · *Wave energy as a bidirectional force structuring herbivorous fish communities* · Reef Conservation UK, London, UK.
- 2012 Oral presentation · *Ecological risk and the exploitation of herbivorous reef fish in Micronesia* · 12th International Coral Reef Symposium Cairns, Australia.
- 2008 Oral presentation · *Combining optical and acoustic data to enhance the detection of Caribbean forereef habitats* · Remote Sensing and Photogrammetric Society Conference Falmouth, UK.
- 2008 Oral presentation · *Predicting grazing intensity on Micronesian coral reefs* · 11th International Coral Reef Symposium Fort Lauderdale, Florida.
- 2007 Oral presentation · *Predicting grazing intensity on Micronesian coral reefs* · 10th Reef Conservation UK London, UK.

Professional competencies

Diving, safety, and boating

European Scientific Diver – DGUV (since 2015), Certified as Scientific Diver by the Australian Diver Accreditation Scheme (ADAS) (2011), Queensland Recreational Marine Drivers licence (2011), PADI Advanced Open Water (2006), Rescue Diver (2006), Open Water Diver (1997), Workplace First Aid (renewed yearly since 2010), Advanced Resuscitation - Oxygen Administration/AED (renewed yearly since 2010), 3000+ dives in tropical environments.

Selected courses and training

- 2018 Survivor's guide to Stable Isotope Ecology. Sicily Centre for International Education (SCIE), Sicily, Italy.
- 2013 Data exploration, linear regression, GLM & GAM in R. Highland Statistics, Edmonton, Canada.
- 2006 Graduate course on Environmental Remote Sensing, University of Waterloo, Canada.
- 2006 Graduate course on Geographic Information Systems, University of Waterloo, Canada.
- 2001 Course-workshop on island-based socioecological systems. National University of Colombia.
- 2000 Graduate course on Phylogenetic systematics. University of Antioquia, Colombia.

Languages

Spanish (Mother Tongue) · English · (Second language) · German (Basic knowledge).