

Florencia Cerutti, PhD
Marine science and conservation

Current address: Puerto Ayora, Santa Cruz, Galapagos, Ecuador

Email: florenciacp@gmail.com

Website: <http://ceruttimarbiol.com/>

Twitter: TheFloRay

Linkedin and Academia: Florencia Cerutti

ResearchGate: Florencia Cerutti-Pereyra

ORCID: <https://orcid.org/0000-0001-9471-516X>

EXPERTISE

My primary research interest is using multidisciplinary approaches to produce key information to guide the management of rays and sharks. I work in marine protected areas using a wide range of tools to understand habitat use, movement patterns, migration pathways, and interconnectivity of sharks and rays to comprehend how the boundaries and management of a protected area may affect their populations. I work with the interaction of megafauna with fisheries aiming to understand how these animals fit within the ecosystem and how vulnerable they may be to human-made threats. I believe that establishing collaborations and communicating science to the community through outreach and education programs is a key for better conservation. I have led research projects and used passive monitoring, stable isotopes, video analysis (BRUVs, DOVs), genetic barcoding, citizen science, fisheries and vulnerability assessments in various countries to improve science and conservation of these amazing group of marine animals.

EDUCATION

Ph.D. Marine Ecology, Charles Darwin University/Australian Institute of Marine Science, Darwin, Australia. 2013.

Thesis: Spatial ecology, genetic barcoding, and vulnerability of tropical Indo-West Pacific batoids, with a focus on Australian species.

Supervisors: Mark Meekan, Chris Austin, Kareyn Edyvane, Peter Kyne

Marine Biology- Science Degree, Universidad Autónoma de Baja California Sur. La Paz, B.C.S. México. 2004.

Thesis: Trophic ecology and behavior of devil rays in the Gulf of California using stable isotope techniques. (CICIMAR-IPN).

Supervisor: Felipe Galván

CURRENT POSITION

Marine ecologist at Ecology of Sharks Project. Charles Darwin Foundation for the Galapagos Islands. Puerto Ayora, Galapagos, Ecuador.

Analysis of bycatch in artisanal longline fishery within the Galapagos Marine Reserve to understand its impacts on protected megafauna. Assessment of the vulnerability of chondrichthyan fish to the threat of climate change in the Tropical Eastern Pacific. Analysis of Diver-Operated Video Surveys (DOVS) to assess effects of MPAs on sharks and the fish assemblage. Undertaking video surveys (DOVS) using SCUBA diving. Catching/tagging sharks. Coordinating field work for BRUVS, DOVS, tissue sampling and tagging of sharks and mantas. Grant, papers and report writing. Administrative tasks. Selection and supervision of volunteers. Logistics for international workshops. Technical advice for education and outreach materials. Speaker at Sharks Ambassadors Education Program aimed at high-school students and visitors on board.

PROFESSIONAL EXPERIENCE

Principal scientist. Blue Core A.C. Playa del Carmen, Quintana Roo, México. 2015- 2017.

Project coordinator to assess the impact of tourism on coral reefs in the marine park Arrecifes de Puerto Morelos. Project coordinator of spotted eagle ray research in the Mexican Caribbean and citizen science projects. Coral reef health surveys (fish-ID) using AGGRA method with Healthy Reefs Initiative Mexico. Coordination of teams, timelines, and field work. Capacity building. Grant and paper writing. Scientist on board with dive companies to educate about sharks, rays, and the marine environment. Speaker at 15 community conferences for throughout the Mexican Caribbean. Sharks and rays two-day courses as visitor scientist for GVI highschool summer camp.

Marine scientist. Colectividad Razonatura, A. C. Playa del Carmen, Quintana Roo, México. 2016- 2017.

Developing protocols for assessing the impact of spiny lobster fisheries (casitas) on the environment in two marine protected areas of Q. Roo with sound participation of stakeholders. Environmental education of marine biology to primary schools in remote locations of the Mexican Caribbean.

Field assistant. Coastal seaweed visual surveys to assess coastal pollution. Universidad de Quintana Roo, Chetumal, Quintana Roo, México. 2014.

Visual surveys of seaweed meadows in shallow coastal environments of Majahual, Q. Roo.

Marine scientist. Conservation International Indonesia. Raja Ampat, West Papua, Indonesia. 2013.

Development of protocols for monitoring reef elasmobranchs in a network of marine protected areas. Production of baseline for the first Shark Sanctuary in Indonesia through an assessment of reef elasmobranch assemblages. Assessment of marine protected areas effectiveness for populations of elasmobranchs using BRUVS. Identification of key areas of aggregations of manta rays in Raja Ampat to implement monitoring in collaboration with the Indonesian Manta Project. Coordination of a multidisciplinary team to undertake field work. Capacity building of staff. Coordination of international science workshop to discuss biological monitoring strategies and needs across marine protected areas.

Marine biologist and PhD candidate. Charles Darwin University and Australian Institute of Marine Science. Darwin, Australia. 2007-2012.

Management of a five-year long project including administration, budgeting, permits, grant proposals and field work. Catching, sampling, tagging (internal & external) elasmobranchs. Using passive acoustic monitoring to identify a nursery areas for juvenile rays in a marine park, determine movement patterns and habitat use of juvenile and adult rays within and around the marine park. Visual surveys of reef elasmobranchs using transects. DNA barcoding for identification of rays. Assessment of the vulnerability (ERA) of 16 species tropical rays to the risk of fishing and habitat degradation, and of research gaps and priorities for better management and conservation of tropical rays in the Indo-West Pacific. Coordination of multi-cultural teams and activities during field work in remote locations.

Research assistant. Arafura Timor Research Facility. Charles Darwin University and Australian Institute of Marine Science. Darwin, Australia. 2006-2012.

Population genetics and phylogeny lab work. Measuring and identifying sawfish from collections. Photo identification data management for population structure of whale sharks and manta rays at Ningaloo Reef. Coordination of field work with international volunteers in remote locations. External tagging, photographing, and sampling of manta rays and whale sharks while snorkeling. Sediment sampling using a sediment grab. Tagging and nest surveying of marine turtles on nesting beaches at Sir Eduard Pellew Island Group turtle camp.

Field assistant for Sharks and Rays Ecology Project in the Gulf of California. Laboratory of Fish Ecology, CICIMAR-IPN. La Paz, B.C.S., México. 2001-2005.

Sampling organs, tissue, and vertebrae from fisheries landings. Coordinating field work. Stable isotope laboratory work for trophic ecology.

EDUCATION and OUTREACH

Environmental writer at The Playa Times. Playa del Carmen, Quintana Roo México. 2016-2018.

Informative articles in English on trendy topics related to conservation, science and environment for a non-expert audience. <http://www.theplayatimes.com/author/florencia-cerutti/>

Environment education consultant. Manatus México, S. A. de C.V. Puerto Morelos, Quintana Roo, México. 2016-2017.

Developing short-courses on environment and marine biology for recreational divers and guides for a better understanding and protection of coral reefs and marine ecosystems of the Riviera Maya.

English teacher at Centro Universitario Inglés. Quintana Roo, México. 2015-2016.

Intermediate English language (B1) classes to university students.

Invited scientist. Mote Marine Laboratory. Florida, USA. 2015.

Highschool marine science summer program: The life of a marine biologist. Seminar: Spatial ecology, genetic barcoding, and vulnerability of tropical Indo-West Pacific batoids, with a focus on Australian species.

Environment blogger at Eco-Tours Adventures. Playa del Carmen, Quintana Roo, México. 2015.

Informative blogs for a non-expert audience in English and Spanish on trendy marine conservation topics in the Mexican Caribbean region. <http://www.ecotoursadventure.com/blog/>

Science tutor. Northern Territory Medical Program Flinders University. Darwin, Australia. 2011- 2012.

Development of biology, anatomy, and physiology topic content for FUELS medical program. Medical students training.

Science tutor and Lab demonstrator. School of Environmental and Life Sciences, Charles Darwin University. Darwin, Australia. 2008-2012.

Tutoring and assisting lab work for science undergraduate units: Anatomy and Physiology, Life of Cells, Medicinal Chemistry, Chemical Concepts, Design and Analysis of Biological Studies, Ecology of Plants, Introductory Marine Science, basic scientific methods and scientific thinking.

Marine biologist on board. Ningaloo Reef Dreaming. Exmouth, Australia. 2008

Liaison with SCUBA dive operators to promote collaboration among dive operators, community, and researchers for manta research and conservation. Talks on marine biology for tourists on board.

PUBLICATIONS

Cerutti-Pereyra, F., López-I., Sánchez-Rivera, G., Arvizu, X., Francisco-Ramos, V., Adame T., García-Carrillo, I. *In prep.* Impact of SCUBA divers on the coral reefs of a national park in the Mexican Caribbean. *Journal of Sustainable Tourism.*

Salinas-de-León, P., Marín Jarrín, J., **Cerutti, F.,** Buglass, S., Bucaram, S., Cheung, W., Hickey, V., Medina, M., Pauly, D., Orellana, D., Ostregard, R., Stock, C., Witman, J., Worm, B. Jiménez-Uzategui, G., Keith, I., Martí-Puig, P., Bermudez, J., Andrade, S., Arnés-Urgellés, C., De la Hoz, C. Moya, A. *In prep.* Evolution of the Galapagos in the Anthropocene. *Science*

Cerutti, F., Moity, N., Dureuil, M., Ramírez-González, J, Marín-Jarrín, J, Reyes, H, Budd, K., Salinas-de-León, P. *Submitted.* The effects of experimental longline fishing on marine megafauna of the Galapagos Marine Reserve, a UNESCO World Heritage site. *Marine and Coastal Management.*

Cerutti-Pereyra, F. Bassos-Hull, K., Arvizu, X., García-Carrillo, I. In print. Ciencia ciudadana apoyando la investigación y conservación de rayas águila en el caribe mexicano. *Revista Ecofronteras-ECOSUR.*

Cerutti-Pereyra, F. Yanez, A.B., Ebert, D., Arnes-Urgelles, C. Salinas-de-Leon, P. 2018. New record and range extension of the deepsea skate, *Bathyraja abyssicola*, in the Galapagos Islands. Journal of Ocean Science Foundation, 30, 85–89. <http://doi.org/10.5281/zenodo.1400761>

Salinas-de-León, P., Philips, B., Ebert, D., Shivji, M., **Cerutti-Pereyra, F.**, Ruck, C., Fisher, C., Marsh, L. 2018. Deep-sea hydrothermal vents as natural egg-case incubators at the Galapagos Rift. Scientific Reports: 8.

Cerutti-Pereyra, F. Bassos-Hull, K., Arvizu, X., Wilkinson, K., García-Carrillo, I., Perez-Jimenez, J., Heuter, R. 2017. First insight into spotted eagle ray (*Aetobatus narinari*) aggregations in the Mexican Caribbean using photo-ID. Environmental Biology of Fishes. <https://doi.org/10.1007/s10641-017-0694-y>

Cerutti-Pereyra, F., Thums, M., Austin, C., Bradshaw, C., Stevens, J., Babcock, R., Pillans, R., and Meekan, M. 2013. Restricted movements of juvenile rays in the lagoon of Ningaloo Reef, Western Australia - evidence for the existence of a nursery. Environmental Biology of Fishes. 97:371-383

Cerutti-Pereyra, F., M. G. Meekan, N.-W. V. Wei, O. O'Shea, C. J. A. Bradshaw, and C. M. Austin. 2012. Identification of Rays through DNA Barcoding: An Application for Ecologists. PLoS ONE 7:e36479.

REPORTS

Cerutti, F. and A. Moya. 2018. Protocol for diver-operated video analysis. Ecology of Sharks Project. Charles Darwin Foundation. 23 p.

Cerutti-Pereyra, F. 2016. Proyecto de investigación y conservación de la raya águila (*Aetobatus narinari*) en el caribe mexicano- estudio de foto identificación. Blue Core A. C., Q. Roo, México. Reporte 1: 2015-2016

Cerutti, F. 2013. Monitoring elasmobranchs at Raja Ampat & monitoring program support report. Final report to Conservation International. 122p.

Cerutti-Pereyra, F. 2011. Ecological and genetic connectivity of rays at Ningaloo Reef. Ningaloo research. CSIRO Ningaloo Collaboration Cluster, WAMSI, and AIMS.

Cerutti, F. 2011. Project 3.9: Nursery ground and movement patterns for tropical rays at Ningaloo Reef, W.A. In Simpson, C and Waples, K. (eds). Summary Report Node 3: Ningaloo Marine Park Research Program. Final report submitted to the Western Australian Marine Science Institution. Department of Environment and Conservation, Perth. <http://ningaloo-atlas.org.au/sites/default/files/article/510/wamsi-3-final-synthesis-report.pdf>

Cerutti, F. 2011. Project 3.9: DNA barcoding of rays at Ningaloo Reef. In Simpson, C and Waples, K. (eds). Summary Report Node 3: Ningaloo Marine Park Research Program. Final report submitted to the Western Australian Marine Science Institution. Department of Environment and Conservation, Perth. <http://ningaloo-atlas.org.au/sites/default/files/article/510/wamsi-3-final-synthesis-report.pdf>

CONFERENCE TALKS

Sharks International. Joao Pessoa, Brazil (2018). Paper presentation: The effects of experimental longline fishing on marine megafauna of the Galapagos Marine Reserve, a UNESCO World Heritage site.

ECOCIEC. Cayo Coco, Cuba (2016). Paper presentation: First insight into the aggregations of spotted eagle rays *Aetobatus narinari* in the Mexican Caribbean.

Oceania Chondrichthyan Society (OCS). Gold Coast, Australia (2011). Paper presentation: DNA Barcoding of rays at Ningaloo reef, an application for ecologists.

Sharks international. Carins, Australia, (2010). Paper presentation: Movement patterns of rays at Ningaloo Reef, WA.

Segundo Simposium Internacional de Tiburones y Rayas. Mexico City, México, (2006). Poster presentation: Stable isotopes in mobula rays.

Primer Simposium Internacional de Tiburones y Rayas. México. Mexico City, (2004). Poster presentation: Reproduction of mobulid rays.

COURSES and WORKSHOPS

R software. Charles Darwin Foundation. Galapagos, Ecuador. 2018.

Multivariate analysis to study community ecology and its applications to elasmobranchs. Squalus Foundation, Sharks International Short courses. Joao Pessoa, Brazil. 2018.

First aid provider. Ecuadorian Red Cross. Puerto Ayora, Santa Cruz, Galapagos, Ecuador. 2017.

Atlantic and Gulf Rapid Reef Assessment (AGRRA) Reef fish ID certification. Healthy Reefs Initiative. 2016.

Sharks! Global biodiversity, biology, and conservation. Online courses at University of Queensland (UQx). Australia. 2016.

Community journalism. Online course. Cardiff University. England. 2016.

Data to insight. Online course. University of Auckland. New Zealand. 2015.

Managing people. Online course. Henley Business School Future Learn, University of Reading. England. 2015.

Fundraising: How to connect with Donors. Online course. Philanthropy University. Berkeley Haas School of Business, University of California Berkeley. USA. 2015.

Tropics101x. Tropical Coastal Ecosystem. Online course. University of Queensland (UQx). Australia. 2015.

Contemporary Issues in Ocean Governance. Online course. University of Wollongong. Australia. 2015.

Spotted Eagle Ray trilateral workshop- tagging, photo-identification analysis, diet preferences. Mote Marine Laboratory. Florida, USA. 2015.

Spotted Eagle Ray workshop- fisheries, age and growth, and diet preferences. El Colegio de la Frontera Sur (ECOSUR). Campeche, México. 2015.

Writing and presentation skills for science, project management, time management for early-career scientists. Charles Darwin University. Australia. 2011.

Translate research into appropriate and relevant conservation and management workshop. Oceania Chondrichthyan Society conference. Australia. 2011.

Advanced Endnote, Microsoft Word and Microsoft Excel for thesis writing and large data management. Charles Darwin University. Australia. 2010.

R software. Charles Darwin University. Australia. 2009.

Shark tagging workshop. Australian Institute of Marine Science/ Northern Territory Fisheries Department. Charles Darwin University. Australia. 2008.

The Biology of Cartilaginous Fish. Centro Interdisciplinario de Ciencias Marinas, Mote Marine Laboratory and Universidad of California. México.2004.

Stable Isotope workshop. Centro Interdisciplinario de Ciencias Marinas and Interamerican Tropical Tuna Comission. México. 2004.

OTHER SKILLS and QUALIFICATIONS

Fish ID, AGRRA healthy reefs certification. HRI

GIS, ArcMap and Spatial Analyst Tools.

Tagging and handling, marine megafauna. AIMS/CDU/NRETAS, Australia.

Bird tagging, Victoria University of Wellington, New Zealand

Rescue Diver, NAUI.

Oxygen Provider, DAN

Red Cross Senior First Aid Provider & CPR, Ecuadorian, Mexican and Australian Red Cross.

Outdoors leadership with sea kayak techniques, National Outdoor Leadership School (NOLS).

FOREIGN LANGUAGES

English fluent, professional level.

Spanish fluent, professional level.

Indonesian, Italian, French, basic level.

REFERENCES

José Marín Jarrín

Assistant Professor

Fisheries Biology Department

Humboldt State University

P: 707-826-3951

E: jose.marinjarrin@humboldt.edu

Collaborating Scientist

Charles Darwin Research Station

Charles Darwin Foundation

Puerto Ayora, Galapagos, Ecuador

E: jose.marin@fcdarwin.org.ec

Kim Bassos-Hull

Senior Marine Scientist

Mote Marine Laboratory

Sarasota, Florida, USA

P: +1 941 5445625

E: kbhull@mote.org

Ximena Arvizu

Scientist

Blue Core A.C.

Playa del Carmen, Q. Roo. México

P: +52 (1) 9841691513

E: e4.ximena@gmail.com

Mauricio Hoyos

Director- Scientist

Pelagios-Kakunja A.C.

La Paz, B.C.S, México

P: +52 612 122 6001

E: amuakua@gmail.com