

Curriculum Vitae: CAMILO MORA

Date of birth: 1 March 1975
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EDUCATION

2001–2004 Ph.D. in Biology
Dissertation: Importance of Dispersal in Reef Fishes
Supervisor: Prof. Peter Sale
Location: University of Windsor (Canada)

1993–1999 B.Sc. in Marine Biology
Thesis: Effect of Competition on Reef Fish Populations
Supervisor: Prof. Fernando Zapata
Location: Universidad del Valle (Colombia)

Languages: English and Spanish

EMPLOYMENT

2011–Present Assistant Professor University of Hawaii at Manoa

2005–2010 Post-doctoral fellow and researcher for the Future of Marine Animal Populations project (www.fmap.ca), a core project of the Census of Marine Life. During my work on the project above, I was hosted at three different institutions: Dalhousie University (2008–2010 post-doctoral fellow, and part-time faculty), SCRIPPS Institution of Oceanography, University of California San Diego (2006–2008 as post-doctoral fellow and lecturer) and University of Auckland (2005 as post-doctoral fellow).

COURSES TAUGHT

Biogeography

This course describes global scale patterns on species richness, body size and abundance and their underlying mechanisms. This course is ranked in the top tier by students at University of Hawaii: <http://www.hawaii.edu/ecafe/>

Conservation Biology

This course describes current global changes in marine and terrestrial biodiversity, their causes, and conservation strategies. The course also highlights linkages among social, economic and ecological systems and the role of scientific outreach. This course is ranked in the top tier by students at University of Hawaii: <http://www.hawaii.edu/ecafe/>

Macroecology methods

This course provides a full-on experience into the scientific method for developing macroecological research: collecting, analyzing, writing and publishing. The course focuses on questions that can be answered with available databases and includes teaching several software packages such as R, ArcGIS, Visual Basic, MySQL and others. The course strives to have the class report submitted for publication in a peer-review journal. The 2013 spring class report was published as a *Research Article* in *Nature* and the 2013 fall class report is currently in review in *Nature*.

EDITORIAL BOARD MEMBER:

Marine Biodiversity (Springer-Verlag)

REVIEWER FOR:

Nature, Science, PLoS Biology, Nature Climate Change, Climate Change, National Geographic, Ecology, American Naturalist, Ecology Letters, Oikos, Diversity and Distributions, Bulletin of Marine Science, Behavior, Biological Conservation, Conservation Biology, Conservation Letters, Journal of Biogeography, Global Ecology and Biogeography, Global Change Biology, Coral Reefs, Marine Biology, Molecular Ecology, Marine Ecology Progress Series, Environmental Biology of Fishes, Caribbean Journal of Science and Journal of the Marine Biological Association of the United Kingdom.

PUBLICATIONS

[In press or in review](#)

48. **Mora C** (solo editor) *Ecology of Fishes on Coral Reefs*. University of Cambridge Press. This is a general ecology book on topics related to the ecology, biogeography, and conservation of fishes on coral reefs. The book includes 35 chapters by leading experts in the field and it is expected for publication by the end of 2014.
47. **Mora C**, Graham N, Nyström M (in press) Why are coral reefs diverse but not so resilient to human stressors?. In Mora (ed) *Ecology of Fishes on Coral Reefs*. University of Cambridge Press.
46. **Mora C** (in press) Patterns and processes in reef fish richness. In Mora (ed) *Ecology of Fishes on Coral Reefs*. University of Cambridge Press.
45. **Mora C** (in press) Functional ecosystems require easing ultimate burdens. In Mora (ed) *Ecology of Fishes on Coral Reefs*. University of Cambridge Press.
44. **Mora C** (in press) Limited functional redundancy and lack of resilience in coral reefs to human stressors. In Belgrano, Woodward G, Jacob U (eds) *Aquatic Functional Biodiversity: an Eco-evolutionary Approach*. Elsevier
43. **Mora C**, Caldwell I, Sziklay J, Fisher M, Genco B, Venegas R, Johnson D, Gerlt B, Prasad S (in review) Disappearing suitable days for plant growth under projected climate change. *Nature*
42. **Mora C**, Longman RJ, Frazier AG, Kaiser LR, Dacks RS, Walton MM, Tong EJ, Fernandez-Silva I, Stender YO, Anderson JM, Sanchez JJ, Ambrosino CM, Giuseffi LM, Giambelluca TW (in review) Overconfidence in the time of emergence of unprecedented climates. *Nature*
41. **Mora C**, Danovaro R, Loreau M (in review) A theoretical explanation for contrasting biodiversity-ecosystem functioning relationships in experimental and natural ecosystems. *Oikos*.
40. Leung T, **Mora C**, Rohde K (in press) Patterns of diversity and distribution of aquatic invertebrates and their parasites. In Morand S, Krasnov B, Littlewood T (eds) *Parasite Diversity and Diversification - Evolutionary Ecology Meets Phylogenetics*. University of Cambridge Press.

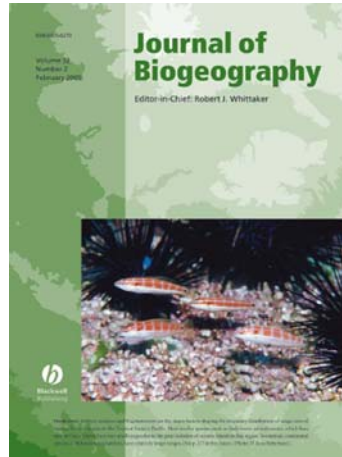
[Published](#)

39. **Mora C** (2014) Revisiting the effects of population growth: a fundamental but fading issue in modern scientific, public and political circles. *Ecology and Society* 19, 38.
38. **Mora C**, Frazier AG, Tong EJ, Longman RJ, Kaiser LR, Dacks RS, Walton MM, Fernandez-Silva I, Stender YO, Anderson JM, Sanchez JJ, Ambrosino CM, Giuseffi LM, Giambelluca TW (2013) The projected timing of climate departure from recent variability. *Nature* 502, 183-187. A "Must read" article according to Faculty of 1000. (Cites: 10)

37. **Mora C**, Rollo A, Amaro T, Baco AR, Billett D, Bopp L, Chen Q, Collier M, Danovaro R, Gooday AJ, Grube BM, Halloran PR, Ingels J, Jones DOB, Levin LA, Nakano H, Norling K, Ramirez-Llodra E, Ruhl HA, Smith CR, Sweetman AK, Thurber AR, Tjiputra JF, Usseglio P, Watling L, Wei CL, Wu T, Yasuhara M (2013) Biotic and human vulnerability to projected changes in ocean biogeochemistry over the 21st century. *PLoS Biology* 11:e1001682 (Cites: 3)
36. **Mora C**, Rollo A, Tittensor (2013) Which is faster: taxonomy or extinction? *Science* 341, 237.
35. **Mora C**, Zapata F (2013) Anthropogenic footprints on biodiversity. In Klaus R (ed) *The Balance of Nature and Human Impact*. University of Cambridge Press. p 239-258.
34. **Mora C** (2012) Global correlations in tropical tree species richness and abundance reject neutrality. *Science* 336: 1639 (Cites: 1)
33. **Mora C**, Tittensor DP, Adl S, Simpson AGB, Worm B (2011) How many species are there on Earth and in the Ocean?. *PLoS Biology* 9: e1001127. A "Must read" article according to Faculty of 1000 (Cites: 310)
32. **Mora C**, Sale P (2011) Ongoing global biodiversity loss and the need to move beyond protected areas: A review of the technical and practical shortcoming of protected areas on land and sea. *Marine Ecology Progress Series* 434, 251-266 (Cites: 63)
31. **Mora C**, Aburto-Oropeza O, Ayala A, Ayotte PM, Banks S, Bauman AG, Beger M, Bessudo S, Booth DJ, Brokovich E, Brooks A, Chabanet P, Cinner J, Cortés J, Cupul Magaña A, DeMartini E, Edgar GJ, Feary DA, Ferse SCA, Friedlander A, Gaston KJ, Gough C, Graham NAJ, Green A, Guzman H, Kulbicki M, Letourneur Y, López Pérez A, Loya Y, Martínez C, Mascareñas-Osorio I, Morove T, Nadon MO, Nakamura Y, Paredes G, Polunin N, Pratchett MS, Reyes Bonilla H, Rivera F, Sala E, Sandin S, Soler G, Stuart-Smith R, Tessier E, Tupper M, Usseglio P, Vigliola L, Wantiez L, Williams I, Wilson SK, Zapata FA. (2011) Global human footprint on the linkage between diversity and ecosystem functioning in reef fishes. *PLoS Biology* 9: e1000606. A "Must read" article according to Faculty of 1000. (Cites: 47)
30. **Mora C**, Treml E, Robert J, Crosby K, Roy D, Tittensor DP. (2011) High connectivity among habitats precludes the relationship between dispersal and range size in tropical reef fishes. *Ecography* 35, 89-96 (Cites: 28)
29. **Mora C**. (2011) Pueden las áreas protegidas del mundo revertir la pérdida de la biodiversidad? La respuesta rápida es NO! In Madrinan S, Sanchez JA (eds). *Biodiversidad*, Universidad de Los Andes Press.
28. **Mora C**. (2011) Effectiveness of the global network of marine protected areas. In Claudet J (ed) *Marine Protected Areas: A multidisciplinary approach*. University of Cambridge Press. p 334-346.
27. Tittensor D, **Mora C**, Jetz W, Lotze HK, Ricard D, vanden Berghe E, Worm B. (2010) Global patterns and predictors of marine biodiversity across taxa. *Nature* 466, 1098-1101. A "Recommended" article according to Faculty of 1000 (Cites: 197)
26. Ward-Paige C, **Mora C**, Lotze H, McClenachan L. (2010) Large-scale absence of sharks on reefs in the Greater-Caribbean: A footprint of human population impacts. *PLoSOne* 5, e11968 (Cites: 50)
25. Wielgus J, Balmford A, Lewis T, **Mora C**, Gerber L (2010) Coral reef quality and recreation fees in marine protected areas. *Conservation Letters* 3, 38-44 (Cites: 4)
24. Cordes EE, Cunha MR, Galeron J, **Mora C**, Roy K, Sibuet M, Van Gaever S, Vanreusel A, Levin L (2010) The influence of geological, geochemical, and biogenic habitat heterogeneity on seep biodiversity. *Marine Ecology* 31, 51-65 (Cites: 43)
23. **Mora C**. (2010) The effects of climate change on marine biodiversity. *Journal of the Marine Biological Association* 11, 22-23.

Journal covers

22. **Mora C**, Myers R, Pitcher T, Zeller D, Watson G, Sumila R, Gaston K, Worm B (2009) Management effectiveness of the world's marine fisheries. *PLoS Biology* 7, e1000131 (Cites: 133)



21. **Mora C**. (2009) Degradation of Caribbean coral reefs: focusing on proximal rather than ultimate factors. Reply to Rogers. *Proceedings of the Royal Society of London B*. 276, 199-200 (Cites: 5)

20. **Mora C**. (2008) A clear human footprint in the coral reefs of the Caribbean. *Proceedings of the Royal Society of London B*. 275, 767-773 (Cites: 162)



19. **Mora C**, Tittensor D, Myers RA (2008) The completeness of taxonomic inventories for describing the global diversity and distribution of marine fishes. *Proceedings of the Royal Society of London B*. 275, 149-155 (Cites: 69)

18. **Mora C**, Metzker R, Rollo A, Myers RA (2007) Experimental simulations about the effects of habitat fragmentation and overexploitation on populations facing environmental warming. *Proceedings of the Royal Society of London B*. 274, 1023-1028. A "Must read" article according to Faculty of 1000 (Cites: 50)

17. Lubchenco J, Gaines S, Warner R, Palumbi S, Airame S....**Mora C**...(2007) The science of marine reserves booklet. Second edition. Pisco, California.
16. **Mora C**, Andréfouët S, Kranenburg S, Rollo A, Costello M, Veron J, Gaston KJ, Myers RA (2006) How protected are coral reefs? *Science* 314, 757-760 (Cites: 4)
15. **Mora C**, Andréfouët S, Costello M, Kranenburg S, Rollo A, Veron J, Gaston KJ, Myers RA (2006) Coral reefs and the global network of Marine Protected Areas. *Science* 312, 1750-1751 (Cites: 242)
14. **Mora C**, Maya MF (2006) Effect of the rate of temperature increase of the dynamic method on the heat tolerance of fishes. *Journal of Thermal Biology* 31, 337-341 (Cites: 28)
13. **Mora C**, Robertson D (2005) Causes of latitudinal gradients in species richness: a test with fishes of the Tropical Eastern Pacific. *Ecology* 86, 1771-1792 (Cites: 69)
12. Hogan D, **Mora C** (2005) Experimental assessment of the importance of swimming and drifting to the displacement of reef fish larvae. *Marine Biology* 147, 1213-1220 (Cites: 18)
11. **Mora C**, Robertson D (2005) Factors shaping the ranges size frequency distribution of fishes in the Tropical Eastern Pacific. *Journal of Biogeography* 32, 277-286 (Cites: 29)
10. **Mora C** (2004) The importance of dispersal in coral reef fishes. Ph.D. Dissertation.

9. Ospina AF, **Mora C** (2004) Effect of body size on the thermal tolerance of reef fishes. *Environmental Biology of Fishes* 70, 339-343 (Cites: 22)
8. **Mora C**, Chittaro P, Sale PF, Kritzer J, Ludsin S (2003) Patterns and processes in reef fish diversity. *Nature* 421, 933-936 (Cites: 196)
7. **Mora C**, Sale PF (2002) Are populations of coral reef fishes open or closed? *Trends in Ecology and Evolution* 17, 422-428. In a year-by-year basis, this paper was ranked by ISI as one of the 20 most cited papers in coral reef ecology (Cites: 228)
6. **Mora C**, Ospina AF (2002) Experimental effects of cold, La Nina temperatures in the survival of reef fishes from Gorgona Island (Eastern Pacific Ocean). *Marine Biology* 141, 789-793 (Cites: 21)
5. **Mora C**, Zapata F (2002) Effects of a predatory fish on the abundance and body size of early post-settled reef fishes from Gorgona Island (Eastern Pacific). *Proceedings of the 9th international Coral Reef Symposium, Bali, Indonesia*. 1, 475-480 (Cites: 1)
4. **Mora C**, Ospina F. (2001) Tolerance to high temperatures and potential impact of sea warming on reef fishes of Gorgona Island (tropical eastern Pacific). *Marine Biology* 139, 765-769 (Cites: 58)
3. **Mora C**, Francisco V, Zapata F. (2001) Dispersal of juvenile and adult reef fishes associated with floating objects and their recruitment into Gorgona Island. *Bulletin of Marine Science* 68, 557-561 (Cites: 9)
2. **Mora C**. (2001) Dispersal of reef fishes by rafting. *Reef Encounter* 29, 16-17 (Cites: 9)
1. **Mora C**, Jimenez J, Zapata F (2000) *Pontinus clemensi* (Pisces: Scorpaenidae) at Malpelo island, Colombia. New specimen and geographic range extension. *Bulletin of Marine and Coastal research* 29, 85-88. (Cites: 2)

FUNDING

Foundation Republic Bank for project "Thermal tolerance of fishes" (\$15,000)

SeaGrant Hawaii Initiation Grant for project "Climate change impact on marine biodiversity" (\$10,000)

SeaGrant Hawaii Biennium Grant for project "Climate change impact on global agriculture" (~\$100,000)

RESEARCH IMPACT

According to Google scholar, as of February 11, 2014, my publications accumulated 2,167 citations, with an *h-index* of 21 and *i-10-index* of 24, since my first publication as an undergrad in 2000. Seven publications have been in *Science* and *Nature* and four in *PLoS Biology*. The paper on the number of species on Earth has remained for two years in a row as one the "most watched" articles of *PLoS Biology* and was ranked by Discover Magazine as one of the top one hundred science stories of 2011. The paper in *Nature* about the Timing of climate change is among the top 13 most watched papers in Nature. Four publications have been emphasized by Faculty of 1000 and three have been commented on in Nature and Science.

MEDIA OUTREACH

I consider that a considerable responsibility of modern scientists is the communication of research findings to the general public as this should in part help leverage political will and increase public awareness. As such, I have placed an effort to ensure that all of my publications with public and conservation implications are presented to the general public using press releases and talking to interested reporters. This has led to several news stories in National Geographic (3 stories), The Huffingtonpost (2), The New York Times (2), Wall Street Journal (2), Washington Post (2), Discover Magazine, Popular Science, Time, The Economist, CNN, Fox News, Science, Nature, and others. For complete list visit: <http://www.soc.hawaii.edu/mora/OnTheNews.html>

CONFERENCE PRESENTATIONS

- Mora C (2013) The timing of climate change. JIMAR symposium. Honolulu, Hawaii.
- Mora C (2011) Human footprint on the world's ecosystems. Population Institute, Washington DC.
- Mora C (2011) Perdida mundial de la diversidad y sus causas. 1st International Conference on Sustainable development. Universidad Nacional de Colombia.
- Mora C (2011) Global biodiversity loss unstoppable with current conservation practices. 9th international Symposium of Science. Instituto Tecnológico de Chetumal, Mexico.
- Mora C (2008) Effectiveness of the world's coral reef Marine Protected Areas. 11th international Coral Reef Symposium. Fort Lauderdale, USA.
- Mora C (2006) Global scale patterns, processes, and conservation of biodiversity. Coral Reef Ecosystem Biodiversity Forum. Noumea, New Caledonia (Invited speaker)
- Mora C (2005) Patterns, processes, threats and conservation of coral reef biodiversity. 1st Diversitas conference, Oaxaca, Mexico (Invited talk)
- Mora C, Robertson D (2004) Causes of latitudinal gradients in species richness: a test with shorefishes in the Tropical Eastern Pacific. 10th international Coral Reef Symposium. Okinawa, Japan.
- Mora C, Chittaro P, Sale P, Kritzer J, Ludsins S (2004) Determinants of diversity patterns in coral reef fishes. ASLO/TOS Ocean Research Conference. Honolulu, Hawaii (Invited talk)
- Mora C, Chittaro P, Sale P (2002) Do assembly rules determine the structure of reef fish assemblages in the Indian and Pacific Oceans? 21st Marine Benthic Ecology Meeting. Orlando, Florida.
- Mora C, Francisco V, Zapata F (2000) Long distance dispersal of reef fishes associated with floating objects. 9th international Coral Reef Symposium. Bali, Indonesia.
- Mora C, Zapata F, (2000) Effect of a site-attached predatory fish on recruitment of reef fishes at Gorgona Island (Eastern Pacific). 9th international Coral Reef Symposium. Bali, Indonesia.
- Mora C, Ospina F (2000) Reef fish tolerance to high temperatures at Gorgona Island, Colombia. Relationship with El Niño. Beyond El Niño: A conference on Pacific climate variability and marine ecosystem impacts, from the tropics to the Arctic. La Jolla, California.
- Mora C, Lozano S (1998) Spatial variation of the bioerosion in a rocky cliff of Isla Palma (Malaga Bay, Colombian Pacific). XI National Seminar of Science, Policy and Technologies of the sea. Bogotá, Colombia.
- Mora C, Zapata F (1998) Effect of *Cirrytichys oxycephalus* on the recruitment of Gorgona reef fishes. XI National Seminar of Science, Policy and Technologies of the sea. Bogotá, Colombia.
- Mora C (1998) Effect of some environmental factors on distribution patterns of mangrove algae. XI National Seminar of Science, Policy and Technologies of the sea. Bogotá, Colombia.

INVITED LECTURES AT:

James Cook University, Oceanography Department University of Hawaii, Zoology Department University of Hawaii, Hawaii Institute of Marine Biology, Population Media Center, Instituto Tecnológico de Chetumal, Universidad Nacional de Colombia, Rutgers University, SCRIPPS Institution of Oceanography at University of California San Diego, International Ocean Institute, Dalhousie University, University of Miami, Universidad del Valle Colombia, CINVESTAV Mexico.

AWARDS AND DISTINCTIONS

- 2011 Research paper selected by Discovery Magazine as one of top 100 science stories of 2011
- 2007 Included in the 2007 edition of Who's Who in the World; "a selection of the world leaders in every significant field of endeavor".

- 2004 University of Windsor Chris Wysiekierski memorial scholarship for excellence in graduate environmental research
- 1995 Universidad del Valle Scholarship for third best undergraduate student
- 1994 Universidad del Valle Scholarship for second best undergraduate student

ACADEMIC REFERENCES

Professor Emeritus Peter F. Sale

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Phone: (705) 764-3359, Fax (705) 764-3360, E-mail: sale@uwindsor.ca

Professor Jeremy B.C. Jackson: Scripps Institution of Oceanography, University of California San Diego, 8750 Biological Grade, 92037-0202, La Jolla, California, United States. Phone: (858) 822-2432, Fax (858) 822-1267, E-mail: jbjackson@ucsd.edu

Professor Boris Worm: Department of Biology, Dalhousie University, 1355 Oxford St., B3H 4J1, Halifax, Nova Scotia, Canada., Phone: (902) 494-2478, Fax (902) 494-3736, E-mail: bworm@dal.ca

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