

OSCAR PUEBLA

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CONTACT

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APPOINTMENTS & AFFILIATIONS

2024 – present	Program Area Leader (<i>Coastal Resources</i>) Leibniz Centre for Tropical Marine Research (ZMT, Bremen, Germany)
2019 – present	Group Leader & Professor (<i>Fish Ecology and Evolution</i>) Leibniz Centre for Tropical Marine Research (ZMT) Institute for Chemistry and Biology of the Marine Environment (ICBM), University of Oldenburg (Germany)
2015 – present	Research Associate Smithsonian Tropical Research Institute (Panama)
2016 – present	Guest Instructor (<i>Biology and Ecology of Fishes</i>) Three Seas Program, Northeastern University (Boston, USA)
2014 – 2019	Group Leader & Junior Professor (<i>Marine Speciation</i>) GEOMAR Helmholtz Centre for Ocean Research Kiel (Germany) University of Kiel (Germany)
2012 – 2014	Associate Scientist Smithsonian Tropical Research Institute
2009 – 2012	Postdoctoral Fellow Smithsonian Tropical Research Institute

EDUCATION

2003 – 2009	PhD in Biology (Neotropical Environment) McGill University (Montreal, Canada) Thesis: Molecular ecology and evolution in <i>Hypoplectrus</i> coral reef fishes
2000 – 2003	MSc in Oceanography , with distinction Department of Fisheries and Oceans Canada & University of Quebec (Canada) Thesis: Population genetic structure of the snow crab (<i>Chionoecetes opilio</i>)
1996 – 2000	BSc in Biology University of Lausanne (Switzerland) Specialisation in population biology, zoology, and marine biology

LANGUAGES

French	First language, fluent written and spoken
Spanish	Second language, fluent written and spoken
English	Third language, fluent written and spoken
German	Basic knowledge

SELECTED PUBLICATIONS

47 peer-reviewed contributions, 1680 citations, h-index 21 (Google Scholar). Group members underlined.

- Abdelghany S, Helmkamp M, Schechter, Veseli IA, Leray M, Eren AM, **Puebla O** (*accepted*) Proteobacteria with chemosynthetic potential are highly prevalent in the gills of *Hypoplectrus* reef fishes. *PLOS Genetics*.
- Helmkamp M, Coulmance F, Heckwolf MJ, [...], McMillan WO, **Puebla O** (2025) Radiation with reproductive isolation in the near-absence of phylogenetic signal. *Science Advances* 11, eadt0973
- Puebla O**, Aguilar-Perera A, Helmkamp M, Robertson DR, Estapé CJ, Estapé AM, Domínguez-Domínguez O (2025). *Hypoplectrus espinosai* sp. nov. (Teleostei: Serranidae), a new hamlet on coral reefs in the southwestern Gulf of Mexico. *Zootaxa* 5618, 509–524
- Coulmance F, Akkaynak D, Le Poul Y, Höppner MP, McMillan WO, **Puebla O** (2024) Phenotypic and genomic dissection of color pattern variation in a reef fish radiation. *Molecular Ecology* 33, e17047
- Hench K, Helmkamp M, McMillan WO, **Puebla O** (2022) Rapid radiation in a highly diverse marine environment. *Proceedings of the National Academy of Sciences of the USA* 119, e2020457119
- Puebla O**, Coulmance F, Estapé CJ, Estapé AM, Robertson DRR (2022) A review of 263 years of taxonomic research on *Hypoplectrus* (Perciformes: Serranidae), with a redescription of *Hypoplectrus affinis* (Poey, 1861). *Zootaxa* 5093, 101–141
- Peña J, Nöldeke G, **Puebla O** (2020) The evolution of egg trading in simultaneous hermaphrodites. *The American Naturalist* 195, 524–533
- Hench K, Vargas M, Höppner MP, McMillan WO, **Puebla O** (2019) Inter-chromosomal coupling between vision and pigmentation genes during genomic divergence. *Nature Ecology & Evolution* 3, 657–667
- Puebla O**, Picq S, Lesser JS, Moran B (2018) Social-trap or mimicry? An empirical evaluation of the *H. unicolor* – *C. capistratus* association in Bocas del Toro, Panama. *Coral Reefs* 37, 1127–1137
- Theodosiou L, McMillan WO, **Puebla O** (2016) Recombination in the eggs and sperm in a simultaneously hermaphroditic vertebrate. *Proceedings of the Royal Society B* 283, 20161821
- Puebla O**, Bermingham E, McMillan WO (2012) On the spatial scale of dispersal in coral reef fishes. *Molecular Ecology* 21, 5675–5688
- Puebla O**, Bermingham E, Guichard F (2012) Pairing dynamics and the origin of species. *Proceedings of the Royal Society B* 279, 1085–1092
- Puebla O** (2009) Ecological speciation in marine v. freshwater fishes. *J. Fish Biol.* 75, 960–996
- Puebla O**, Bermingham E, Guichard F, Whiteman E (2007) Colour pattern as a single trait driving speciation in *Hypoplectrus* coral reef fishes? *Proceedings of the Royal Society B* 274, 1265–1271

SELECTED AWARDS AND COMPETITIVE GRANTS

2022	Research grant (PI)	DFG	264,237 EUR
2022	Research Cooperation grant (co-PI)	Lower Saxony & VW Foundation	300,000 EUR
2020	Research grant (PI)	DFG	163,950 EUR
2017	BiodivERsA (co-PI)	EU through DLR/BMBF	378,880 EUR
2016	The Future Ocean cluster grant (PI)	The Future Ocean	60,701 EUR
2016	SIBG – GGI grant (co-PI*)	Smithsonian Institution	49,555 USD
2016	Technology Seed Funding grant (PI)	GEOMAR	8,000 EUR
2015	Research grant (PI)	DFG	221,400 EUR
2015	The Future Ocean cluster grant (PI)	The Future Ocean	73,947 EUR
2013	Competitive Grants Program for Science (PI)	Smithsonian Institution	78,347 USD
2012	Scholarly Studies Program (co-PI*)	Smithsonian Institution	67,928 USD
2010	Research and Exploration grant (PI)	National Geographic Society	17,500 USD
2009	Postdoctoral fellowship	Marine Science Network	100,000 USD
2003 – 2007	McGill graduate & Levinson fellowships	McGill University - STRI	27,000 CAD
2000	Paul Blanc grant	Société Académique Vaudoise	15,000 CHF

*Principal writer (not eligible to be PI on these grants)

EDITORIAL AND REVIEWER EXPERIENCE

2014 – present	Associate & Advisory Editor for <i>Marine Biology</i> and <i>Environmental Biology of Fishes</i> , respectively (75 and 12 assignments with final disposition, respectively)
2008 – present	Reviewer for publications (101x) <i>PNAS</i> , <i>Nat Ecol Evol</i> , <i>Nat Comm</i> , <i>Sci Adv</i> (5x), <i>Curr Biol</i> , <i>TREE</i> , <i>Proc Roy Soc B</i> , <i>Mol Ecol</i> (23x), <i>Evolution</i> , <i>Evol Appl</i> , <i>Am Nat</i> , <i>Genomics</i> , <i>BMC genomics</i> , <i>BMC Evol Biol</i> , <i>Heredity</i> , <i>Bioinformatics</i> , <i>Mol Ecol Res</i> , <i>Methods Ecol Evol</i> , <i>Ecol Evol</i> , <i>eDNA</i> , <i>Coral Reefs</i> , <i>MEPS</i> , <i>Mar Biol</i> , <i>J Mar Biol</i> , <i>Mar Env Res</i> , <i>Deep-Sea Res Part I</i> , <i>J Fish Biol</i> , <i>Rev Fish Biol Fish</i> , <i>Env Biol Fishes</i> , <i>J Appl Ichth</i> , <i>J Oc Sci Found</i> , <i>Behav Ecol</i> , <i>Ethol</i> , <i>Eco Appl</i> , <i>Oecologia</i> , <i>J Anim Ecol</i> , <i>Biol Inv</i> , <i>Diversity</i> , <i>Syst Biodiv</i> , <i>Glob Ecol Biogeo</i> , <i>J Biogeo</i> , <i>Sci Rep</i> , <i>R Soc Open Sci</i> , <i>PeerJ</i> , <i>PLoS ONE</i> , ...
2011 – present	Reviewer for research proposals (22x) European Research Council (2x), national science foundations (USA, Germany, Switzerland, Austria, France, Netherlands, Iceland, ...), <i>Smithsonian Institution</i> , <i>German Exchange Program</i> , <i>German Israeli Foundation for Research and Development</i> , <i>ΣΔΕ Graduate Women in Science</i> , ...
2015 – present	Reviewer for PhD theses (15x) <i>James Cook University</i> , <i>Manchester Metropolitan University</i> , <i>Université de Montpellier</i> , <i>Université Grenoble Alpes</i> , <i>University of New Brunswick</i> , <i>University of Kiel</i> , <i>Universidad de Los Andes</i> , ...

SELECTED TEACHING EXPERIENCE

2021 – present	Marine Ecological Genetics Lectures, seminars and supervised research, including since 2022 a computer practical led by Dr. Martin Helmkamp. Summer semester (BSc and MSc Marine Environmental Sciences, University of Oldenburg)
2020 – present	Marine Ecology Lectures and seminars, winter semester (BSc and MSc Marine Environmental Sciences, University of Oldenburg)
2016 – present	Biology and Ecology of Fishes Two-weeks intensive field course in Bocas del Toro, Panama. Winter semester (Three Seas Program, Northeastern University)
2015 – 2019	Marine Population Genomics Lectures, seminars and supervised research. Summer semester (MSc Biological Oceanography, GEOMAR / University of Kiel)
2014 – 2019	Practical course in Oceanography One-week molecular lab practical, winter semester (MSc Biological Oceanography, GEOMAR / University of Kiel)
2013 – 2016	Integrative Tropical Biology Three-week IGERT field course for graduate students from the universities of Illinois at Urbana-Champaign, Arizona State and McGill. Coordinator (2013 – 2014) and co-teacher (2013 – 2016) (STRI, Panama)
2010 – 2012	Population Genetics Invited lecturer for undergraduate and graduate students, including lectures and computer laboratories (University of Panama)
2003 – 2008	Teaching Assistant <i>Ecology</i> (2003), <i>Ecological Dynamics</i> (2004, 2005, 2006), <i>Introduction to Ecology and Evolution</i> (2007), <i>Basic Genetics</i> (2008), <i>Research in Panama</i> (2005), <i>Social Change in Panama</i> (2007) (McGill University, Montreal)

SELECTED STUDENTS, POSTDOCTORAL FELLOWS AND SCIENTISTS SUPERVISED

Martin Helmkamp	Senior Scientist	ZMT	2019 – present
Melanie Heckwolf	Postdoctoral fellow	ZMT	2021 – 2024
Jorge Peña	Postdoctoral fellow	GEOMAR	2016 – 2017
Floriane Coulmance	PhD	ZMT & Oldenburg University	2020 – 2025
Kosmas Hench	MSc & PhD	GEOMAR & Kiel University	2015 – 2020
Sophie Picq	PhD	GEOMAR & Kiel University	2014 – 2017
Cameron Walsh	MSc	Erasmus Mundus (MEME)	2019
Benjamin Moran	BSc	Northeastern University	2018

SELECTED PRESENTATIONS

- Puebla O** (2023) Biodiversity science at the core of monitoring, management, sustainable use and protection of marine tropical resources. Keynote speaker. *Int. Conf. Mar. Science*, Cartagena, Colombia.
- Coulmance F, Akkaynak F, Le Poul Y, McMillan WO, **Puebla O** (2022) Fine-mapping of colour pattern variation in the Caribbean hamlets provides insights into the genomic bases of phenotypic diversification. Contributed talk. *International Coral Reef Symposium*, Bremen, Germany
- Hench K, Vargas M, Höppner MP, McMillan WO, **Puebla O** (2019) Inter-chromosomal coupling between vision and pigmentation genes during genomic divergence. Contributed talk. *European Society for Evolutionary Biology*, Turku, Finland
- Hench K, McMillan WO, **Puebla O** (2017) Genomic Islands in the Caribbean Sea. Contributed poster. *Gordon Speciation Conference*, Lucca, Italy
- Hench K, Picq S, Theodosiou L, McMillan WO, **Puebla O** (2016) Speciation and local adaptation in coral reef fishes (*Hypoplectrus* spp). Contributed talk. *FSBI Annual Symposium*, Bangor, UK
- Puebla O** (2016) Mutual mate choice, sexual selection and speciation. Contributed talk. *Simultaneously Hermaphroditic Organisms Workshop*, Bielefeld, Germany
- Puebla O**, Picq S, McMillan WO, Bermingham E (2015) Mutual mate choice and speciation. Contributed poster and flash talk. Poster award. *Gordon Speciation Conference*, Ventura, California
- Puebla O**, McMillan WO, Bermingham E (2014) Genomic atolls of divergence in *Hypoplectrus* coral reef fishes. Contributed talk. *Evolution Joint Meeting*, Raleigh, North Carolina
- Puebla O**, Bermingham E, Guichard F (2011) Pairing dynamics and the origin of species. Contributed talk. *Society for Integrative & Comparative Biology*, Salt Lake City, Utah
- Puebla O**, Bermingham E, Guichard F (2008) Genetic signature of the spatial scale of dispersal mediated by coral reef fish larvae. Contributed talk. *Joint Ocean Sciences Meeting*, Orlando, Florida

SELECTED SEMINARS

	Date (inviter)
University of Lausanne (Dpt. of Computational Biology), Switzerland	Nov 2023 (Salamini)
Okinawa Institute of Science and Technology (OIST-MEEDU), Japan	Aug 2023 (Laudet)
University of Virginia (Department of Biology), USA	Aug 2023 (Parichy)
Auburn University (Department of Biological Sciences), USA	Sept 2021 (Bernal)
Smithsonian Tropical Research Institute, Panama, Panama	Feb 2020 (STRI)
Carl von Ossietzky University of Oldenburg, Oldenburg, Germany	Jan 2018 (Gerlach)
National Center for Scientific Research (CNRS), Montpellier, France	June 2017 (Bierne)
University of Haifa (Biology Department) & IUI (Eilat), Israel	Nov 2016 (Treibitz)
U. of Oslo (Centre for Ecological and Evolutionary Synthesis), Norway	Nov 2016 (Jentoft)
University of Basel (Biology Department), Switzerland	Nov 2015 (Salzburger)
University of Tübingen (Biology Department), Germany	Nov 2015 (Michiels)
Sven Lovén Centre for Marine Sciences in Tjärnö (U. Gothenburg), Sweden	June 2015 (de Wit)
University of Bern (Biology Department) & Eawag, Switzerland	March 2015 (Seehausen)

FIELDWORK

Certified German Scientific Diver and Dive Mission Leader, **830** logged scientific dives

2004 – 2025 (13x)	Bocas del Toro Research Station, Panama
2004, 2005, 2009, 2010, 2017	Carrie Bow Cay Field Station, Belize
2017	Keys Marine Laboratory, Florida
2017	Maguayes Island Marine Laboratories, Puerto Rico
2010	Research cruise on S/V <i>Legacy</i> (Chief Scientist), Belize
2006	Research cruise on R/V <i>Urraca</i> (Chief Scientist), Honduras
2005	Research cruise on R/V <i>Urraca</i> (Chief Scientist), Guna Yala (Panama)
2005	Bellairs Research Institute, Barbados