Dr. Michael P. Doane

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# Professional Experience

**Research Fellow** Flinders University (Level B Academic) January 2023 - Present

**Research Associate** Flinders University (Level A Academic) January 2021 – Dec 2022

**Research Associate** Sydney Institute of Marine Sciences Dec 2018 – Dec 2020

**Research Assistant** San Diego State UniversityMay 2018 – Dec 2018

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# Education

**PhD** San Diego State University/ University of California - Davis May 2018

Ph. D in Ecology

 Advisor: Elizabeth Dinsdale

**MS** San Diego State University May 2014

 Master of Science in Biology

 Advisor: Elizbeth Dinsdale

**BS** University of Illinois at Urbana-Champaign May 2010

 Integrative Biology

# Grants, Honors and awards

2023 In-Kind support Org.one/Oxford Nanopore

 *Genome sequencing of the endangered eastern grey nurse shark*

 40,000 AUD

2022 C, Huveneers; **M Doane**; L Dinsdale.

*Comparing fish assemblages using BRUVS and eDNA*

Department for Environment and Water, Parks Australia

$35,000 AUD

2022 Consulting work with National Geographic

$4,000 AUD

2018 – 2020 E. Dinsdale (Chief Investigator A); **M. Doane** (Chief Investigator B)

 *Investigating the skin microbiome of whale sharks globally*

Private donation

$100,000 USD

2016 – 2017 E. Dinsdale (Chief Investigator A); **M. Doane** (Chief Investigator B)

 *Investigating the skin microbiome of whale sharks globally*

Private donation

$100,000 USD

COAST Student Travel Grant ($500)

2015 – 2016 COAST Student Travel Grant ($500)

 Jordan D. Colvin Memorial Scholarship ($1,000)

2013 – 2014 Harold and June Memorial Scholarship ($1,000)

 Roche Life Sciences In-Kind funding ($3,000)

 Roche Life Sciences Travel Award ($1,000)

# Teaching Experience

2024 Course Coordinator – Biology 3702 Marine and Freshwater Biology, Flinders Uni

2023 Assistant course coordinator – STEM 7002 International experience topic, Flinders Uni

2021 Assistant course coordinator - Bio 3800 Research Projects in Mar. Sci., Flinders Uni

2017 – 2018 Teaching Associate - Bio 212 Human Anatomy, San Diego State Uni

 Assistant Instructor – Bio 562 Ecological Metagenomics, San Diego State Uni

2016 – 2017 Teaching Associate – Bio 212 Human Anatomy, San Diego State Uni

 Assistant Instructor – Bio 562 Ecological Metagenomics, San Diego State Uni

2015 – 2016 Teaching Associate – Bio 212 Human Anatomy, San Diego State Uni

2014 – 2015 Teaching Volunteer – Kids Into Discovering Science Program (KIDS), University of California, Davis

2013 – 2014 Research Associate III – Dinsdale Lab, San Diego State University

2012 – 2013 Teaching Associate – Bio 212 Human Anatomy, San Diego State Uni

# Publications – Google scholar H-factor: 14 (Nov, 2024)

Berry, C., Emily Lester, **Michael P. Doane**, Luciana C. Ferreira, Michele Thums, Adrian C. Gleiss, and Mark G. Meekan. Love bites? Pre-copulatory behaviours of whale sharks (*Rhincodon typus*) at Ningaloo Reef, Western Australia. Frontiers in Marine Science. DOI: 10.3389/fmars.2024.1507072

Burns, E., Vijini Mallawwarachchi, Thomas M. Clarke, Belinda Martin, Joseph D. DiBattista, Jamie Hicks, Danny Brock, Elizabeth A. Dinsdale, Charlie Huveneers, **Michael P. Doane**. Complementary non-invasive fish monitoring distinguishes depth-dependent fish communities. Environmental DNA. DOI: 10.1002/edn3.70050

Martin, B, **M.P. Doane**, J. Henkens, J.A.T. Morgan, L. Inglis, V.M. Peddemors, E.A. Dinsdale, C. Huveneers, L. Meyer. Who bit the boat? New DNA collection and genomic methods enable species identification in suspected shark-related incidents. Journal of Forensic Science: Genetics. DOI: 10.1016/j.fsigen.2024.103087

Liddicoat, C., R.A. Edwards, M. Roach, J.M. Robinson, A.D. Barnes, J. Brame, A. Heintz-Buschart, T.R. Cavagnaro, E.A. Dinsdale, **M.P. Doane**, N. Eisenhauer, G. Mitchell, B. Rai, S. Ramesh, K.J. Wallace, M.F. Breed. Bioenergetic mapping of ‘healthy microbiomes’ via compound processing potential imprinted in gut and soil metagenomes. Science of the Total Environment. DOI: 10.1016/j.scitotenv.2024.173543

Liddicoat, C., R.A. Edwards, M. Roach, J.M. Robinson, K.J. Wallace, A.D. Barnes, J. Brame, A. Heintz-Buschart, T.R. Cavagnaro, E.A. Dinsdale, **M.P. Doane**, N. Eisenhauer, G. Mitchell, B. Rai, S. Ramesh, M.F. Breed. Bioenergetic mapping of ‘healthy microbiomes’ via compound processing potential imprinted in gut and soil metagenomes. bioRxiv. DOI: 10.1101/2023.11.05.565728

Jackel, B., R. Baring, **M.P. Doane,** J. Henkens, B. Martin, K. Rough, L. Meyer. *Taningia danae* is a predatory Southern Ocean squid and nutrient reservoir linking deep-sea and shelf-slope environments (with notes on *Chiroteuthis* aff. *veranii*). Frontiers in Marine Science.DOI: 10.3389/fmars.2023.1254461

**Doane, M. P.,** Reed, M. B., McKerral, J., Farias Oliveira Lima, L., Morris, M., Goodman, A. Z., Johri, S., Papudeshi, B., Dillon, T., Turnlund, A. C., Peterson, M., Mora, M., de la Parra Venegas, R., Pillans, R., Rohner, C. A., Pierce, S. J., Legaspi, C. G., Araujo, G., Ramirez-Macias, D., Edwards, R.A., Dinsdale, E. A. (2023). Emergent community architecture despite distinct diversity in the global whale shark (*Rhincodon typus*) epidermal microbiome. Scientific Reports. DOI: 10.1038/s41598-023-39184-5

**Doane, M.P.,** M. Ostrowski, M. Brown, A. Bramucci, L. Bodrossy, J. van de Kamp, A. Bissett, P. Steinberg, M. Doblin, J. Seymour. Defining marine bacterioplankton community assembly rules by contrasting importance of environmental determinants and biotic interactions. Environmental Microbiology. DOI: 10.1111/1462-2920.16341

Goodman, A.Z., B. Papudeshi, **M. Doane,** M. Mora, E. Kerr, M. Torres, J. N. Moffatt, L. Lima, A. P. Nosal, E. Dinsdale. 2022. Epidermal microbiomes of leopard sharks (*Triakis semifasciata*) are consistent across captive and wild environments. MDPI Microorganisms. DOI: 10.3390/microorganisms10102081.

**Doane, M.P.**, C. Johnson, S. Johri, E.N. Kerr, M.M. Morris, R. Disantiago, A.C. Turnlund, A. Goodman, M. Mora, L.F.O. Lima, A.P. Nosal, E.A. Dinsdale. 2022. The epidermal microbiome within an aggregation of leopard sharks (*Triakis semifasciata*) has taxonomic flexibility with gene function stability across three time-points. Microbial Ecology. DOI: 10.1007/s00248-022-01969-y

Perry, C.T., **M.P. Doane**, et al., 2021. Elasmobranch microbiomes: emerging patterns and implications for host health and ecology. Animal Microbiomes. DOI: 10.1186/s42523-021-00121-4

Johri, S., **M.P.Doane**, et al., 2021. Reducing Data Deficiencies: Preliminary Elasmobranch Fisheries Surveys in India, Identify Range Extensions and Large Proportions of Female and Juvenile Landings. Frontiers in Marine Science. DOI: 10.3389/fmars.2021.619695

DeCastro, M.E., **M.P. Doane**, E.A. Dinsdale, E. Rodriguez-Belmonte, M.I.G. Siso. 2021. Exploring the taxonomical and functional profile of As Burgas hot spring focusing on thermostable B-galactosidases. Scientific Reports. DOI: 10.1038/s41598-020-80489-6

**Doane, M.P.**, John Matthew Haggerty, Cleanto Rodrigo da Silva Lopes, Peter Yates, Rob Edwards, Elizabeth Dinsdale, Fabyano Alvares Cardoso Lopes, Thiago Bruce. 2020. Latitude and chlorophyll a density drive the distribution of carbohydrate‐active enzymes in the planktonic microbial fraction of the epipelagic zone. Environmental Microbiology Reports. DOI: 10.1111/1758-2229.12865.

**Doane, M.P.**, et al. 2020. The skin microbiome of elasmobranchs follows phylosymbiosis, but in teleost fishes, the microbiomes converge. Microbiome. DOI: 10.1186/s40168-020-00840-x

Johri S., S.R. Fellows, J. Solanki, A. Busch, I. Livingston, M. Fernanda Mora, A. Tiwari, V.A. Cantu, A. Goodman, M.M. Morris, **M.P. Doane**, R.A. Edwards, E.A. Dinsdale. 2020. Mitochondrial genome to aid species delimitation and effective conservation of the Sharpnose Guitarfish (*Glaucostegus granulatus*). Meta Gene. DOI: 10.1016/j.mgene.2020.100648

Silveira, C.B., F.H. Coutinho, G.S. Cavalcanti, S. Benler, **M.P. Doane**, E.A. Dinsdale, R.A. Edwards, R.B. Francini-Filho, C.C. Thompson, A. Luque, F.L. Rohwer, F. Thompson. 2020. Genomic and ecological attributes of marine bacteriophages encoding bacterial virulence genes. BMC Genomics. DOI: 10.1186/s12864-020-6523-2

Johri, S., S. Fellows, J. Solanki, A. Busch, I. Livingston, M.F. Mora, A. Tiwari, A. Goodman, A. Cantu, **M.P. Doane**, M. Morris, R.A. Edwards, E.A. Dinsdale. 2019. Genomics to aid species delimitation and effective conservation of the Sharpnose Guitarfish (*Glaucostegus granulatus*). BioRxiv, 767186

Johri, S., **M.P. Doane**, L. Allen, and E.A. Dinsdale. 2019. Taking Advantage of the Genomic Revolution for Monitoring and Conservation of Chondrichthyan Populations. Diversity. DOI: 10.3390/d11040049

Edwards, R.A., **M.P. Doane** et al. 2019. Global phylogeography and ancient evolution of the widespread human gut virus crAssphage. Nature Microbiology. DOI: 10.1038/s41564-019-0494-6

Cavalcanti, G., P. Shukla, M. M. Morris, B. Ribeiro, M. Foley, **M. P. Doane**, C. C. Thompson, M. S. Edwards, E. A. Dinsdale, and F. L. Thompson. 2018. Rhodoliths holobionts in a changing ocean: host-microbes interactions mediate coralline algae resilience under ocean acidification. BMC Genomics. DOI: 10.1186/s12864-018-5064-4

Minich, J., M.M. Morris, M. Brown, **M.P. Doane**, M.S. Edwards, T.P. Michael, and E.A. Dinsdale. 2018. Elevated temperature drives kelp microbiome dysbiosis, while elevated carbon dioxide induces water microbiome disruption. PLOS One. DOI: 10.1371/journal.pone.0192772

**Doane, M.P**., D. Kacev, S. Harrington, K. Levi, D. Pande, A. Vega, and E.A. Dinsdale. 2018. Complete mitochondrial recovery using shot-gun sequencing of the Common thresher shark (*Alopias vulpinus*). Meta Gene. DOI: 10.1016/j.mgene.2017.10.003

Papudeshi, B., J.M. Haggerty, **M.P.** **Doane**, M.M. Morris, K. Walsh, D.T. Beattie, D. Pande, P. Zaeri, G. Gueiros, R.A. Edwards, and E.A. Dinsdale. 2017. Optimizing and evaluating the reconstruction of microbial population genomes from metagenomes. BMC Genomics. DOI: 10.1186/s12864-017-4294-1

Walsh, K., J.M. Haggerty, **M.P.** **Doane,** J.J. Hansen, M.M. Morris, A.P. Moreira, L. de Oliveira, L. Leomil, G. Garcia, F.L. Thompson, and E.A. Dinsdale. 2017 Aura-biomes are present in the water layer above coral reef benthic macro-organisms. PeerJ. DOI: 10.7717/peerj.3666

**Doane, M. P**., J.M. Haggerty, D. Kacev, B. Papudeshi, and E.A. Dinsdale. 2017. The skin microbiome of the Common thresher shark (*Alopias vulpinus*) has low taxonomic and potential metabolic β‐diversity. Environmental Microbiology Reports. DOI: 10.1111/1758-2229.12537

# Manuscripts in review

Goodman, A.Z., B. Papudeshi, M.F. Mora, E.N. Kerr, M. Torres, J.N. Moffatt, L.F.O. Lima, I. Niesman, I.Y. Moreno. **M.P. Doane,** E.A. Dinsdale. Elasmobranchs exhibit species-specific epidermal microbiomes guided by denticle topography. Applied and Environmental Microbiology. *In Review*.

Morris, M.M., **M.P. Doane**, J.M. Haggerty, B. Papudeshi, D.P. Pande, M.F. Mora, M.H. Peterson, A.C. Turnland, I.Y. Moreno, G.S. Cavalcanti, R.A. Edwards, M.S. Edwards, E.A. Dinsdale. Microbiome warfare: The potential of microbes associated with invasive alga *Sargassum horneri* to interact with native kelp. Biological Invasion. *In Review.*

Haggerty, J.M., B. Papudeshi, A. Vega, M.M. Morris, **M.P. Doane**, H. Norman and E.A. Dinsdale. Bacterial succession during tissue decomposition of marine foundation species, *Macrocystis pyrifera.* Applied and Environmental Microbiology. *In Review.*

# manuscripts in preparation

**Doane, M.**P**.**, M. Ostrowski, M. Doblin, M. Brown, P. Steinberg, and J. Seymour. Defining bacterioplankton indicators for heat-wave events**.** *In Preparation.*

# Manuscript reviewer

**Associate editor** – Animal Microbiome

**Review editor** – Frontiers in Ecology and Evolution

**Invited Reviewer**: Journal of Forensic Science International: Genetics, Frontiers in Marine Biology, Frontiers in Ecology and Evolution, Environmental DNA; Frontiers in Microbiology, Endangered Species, PeerJ, Molecular Ecology, Scientific Reports, Journal of Natural History

# Conference presentations

**Doane, M.P.** Temporal self-organisation in tiger shark skin microbiomes despite fluctuations in diversity structure. August 2024. **Oral presentation** at the International Society for Microbial Ecology conference in Cape Town, South Africa.

**Doane, M.P.** Temporal self-organisation in tiger shark skin microbiomes despite fluctuations in diversity structure. June 2024. Oral presentation at the Australian Microbiology Society conference in Brisbane, QLD, Australia

**Doane, M.P.** Genome sequencing of the endangered eastern grey nurse shark (*Carcharhinus taurus*): a case study demonstrating the real-time sequencing of a complex genome using Oxford Nanopore long-read sequencing. July 2023. **Live sequencing demonstration and Oral presentation** at the International Congress of Genetics in Melbourne, Australia.

**Doane, M.P, et al.** Emergent community architecture despite distinct diversity in the global whale shark epidermal microbiome**.** August 2022. **Poster presentation at** International Society of Microbial Ecology in Lausanne, Switzerland.

**Doane, M.P, et al.** Emergent community architecture despite distinct diversity in the global whale shark epidermal microbiome**.** July 2022. **Oral presentation at the** Australian Microbiology Society conference in Sydney, NSW, Australia.

**Doane, M.P**., A. Turnlund, A. Goodman, C. Rohner, C. Legaspi, D. Ramirez, G. Araujo, M.F. Mora, M. Morris, M. Peterson, R. de la Parra, S. Pierce, R. Pillans, T. Dillon, E.A. Dinsdale. March 2021. **Invited Speaker** at FAME Microbiome meetings in Adelaide, SA, Australia

**Doane, M.P.,** A. Turnland, A. Goodman, C. Rohner, C. Legaspi, D. Ramirez, G. Araujo, M.F. Mora, M. Morris, M. Peterson, R. de la Parra, S. Pierce, R. Pillans, T. Dillon, E.A. Dinsdale. February 2021. Diversity of the skin microbiome from whale sharks around the world. **Invited Speaker** at the South Australian Genomics Centers seminar in Adelaide, SA, Australia

**Doane, M.P.**, A. Turnland, A. Goodman, C. Rohner, C. Legaspi, D. Ramirez, G. Araujo, M.F. Mora, M. Morris, M. Peterson, R. de la Parra, S. Pierce, R. Pillans, T. Dillon, E.A. Dinsdale. May 2019. The whale shark skin microbiome reveals sub-population discrimination and possible environmental threats. **Oral presentation** at Whale Shark International conference in Exmouth, WA, Australia.

**Doane, M.P.**, J.M. Haggerty, B. Papudeshi, D. Kacev, and E.A. Dinsdale. August 2016. Shark skin surface features produce a microbiome with low taxonomic and metabolic β-diversity. **Poster presentation** at the International Society for Microbial Ecology’s (ISME) 16th International Symposium on Microbial Ecology in Montreal, Canada.

**Doane, M.P.**, and E.A. Dinsdale. July 2015. Revealing a physiological role of shark skin through microbial community analysis. [Abstract]. **Oral presentation** at the Joint Meeting of Ichthyology and Herpetology Conference in Reno, Nevada.

**Doane, M.P.**, A.M. Friedlander, A. Nosal, D. Rameriz, and E.A. Dinsdale. November 2014. Shark Microbiome: Adding to the curious nature of sharks. **Oral presentation** at the Western Society of Naturalist meeting in Tacoma, Washington.

**Doane, M.P.**, A.M. Friedlander, F. Rohwer, and E.A. Dinsdale. June 2014. Shark Microbiome: Adding to the curious nature of sharks. **Poster presentation** at Sharks International in Durban, South Africa.

**Doane, M.P.**, A.M. Friedlander, F. Rohwer, and E.A. Dinsdale. May 2013. High variability and low site-specific microbial communities occur on Blacktip Reef sharks (*Carcharhinus melanopterus*) in the Southern Line Islands. **Poster presentation** at the American Society of Microbiology meeting Denver, Colorado.

**Doane, M.P.,** J.M. Haggerty, D. Kacev, B. Papudeshi, and E.A. Dinsdale. February 2013**.** Structural mechanism of microbial communities on the skin surface of sharks across marine habitats. **Invited Speaker** at NOAA Southwest Fisheries Division in San Diego, CA.

**Doane, M.P.**, A.M. Friedlander, F. Rohwer, and E.A. Dinsdale. February 2013. High variability and low site-specific microbial communities occur on Blacktip Reef sharks (*Carcharhinus melanopterus*) in the Southern Line Islands. **Poster presentation** at the Advances in Genome Biology and Technology Conference in Marco Island, Florida.

# Campus Presentations

**Doane, M.P.** From community dynamics to mutualistic network architecture in complex microbiomes. November 2024. Oral presentation at the monthly Flinders Ecology, Evolution, and Environment seminar series.

**Doane, M.P.** Molecular ecology to examine marine communities: From microbes to fish. September 2023. **Oral presentation** as invited speaker for the South Australian chapter of the Australian Marine Science Association meeting in Adelaide, Australia.

**Doane, M.P.**, J.M. Haggerty, B. Papudeshi, and E.A. Dinsdale. March 2017. Skin microbiome of sharks driven by shark biology. **Oral presentation** as a guest speaker at the Marine Science Open House in San Diego, California.

**Doane, M.P.**, J.M. Haggerty, B. Papudeshi, and E.A. Dinsdale. March 2017. Skin microbiome of sharks driven by shark biology. **Oral presentation** at the Student Research Symposium at San Diego State University.

**Doane, M.P.**, D. Kacev, B. Papudeshi and E.A. Dinsdale. March 2016. Distinct and stable microbiome structure from the Common thresher shark (*Alopias vulpinus*). **Oral presentation** at the Student Research Symposium at San Diego State University.

**Doane, M.P.**, A.M.Friedlander, F. Rohwer, and E.A. Dinsdale. March 2014. Shark Microbiome: Adding to the curious nature of sharks. **Poster presentation** at the Student Research symposium at San Diego State University.

**Doane M.P.**, A.M. Friedlander, F. Rohwer, and E.A. Dinsdale. March 2013. High variability and low site-specific microbial communities occur on Blacktip Reef sharks (*Carcharhinus melanopterus*) in the Southern Line Islands. **Poster presentation** at the Student Research Symposium at San Diego State University.

# Graduate Student mentoring

PhD Students

2022 **Emma Kerr**: Microbiome dynamics of elasmobranchs from the South Australian region

Honours Students

2022 **Ewan Burns**: Depths-specific fish communities detected using BRUVS and eDNA – H2A

2023 **Bethany Jackel**: Exploring the trophic ecology of deep-sea squids *Taningia danae* and *Chiroteuthis* aff. *Veranii* – H1

**Lucinda Grey**: Detecting platypus in remote regions using qPCR – H1

**Kiarna Taylor**: Comparison of the microbiomes from Port Jackson sharks (*Heterodontus portusjacksoni*) at two body site – H1

# Invited Lectures

2020 Topics in Australian Marine Sciences Lecture

 *Microbial community ecology: From pelagic microbial diversity to whale sharks*

2017 Natural History Club Invited Speaker

 *Whale sharks and their microbial coat*

2016 Bio 354 Marine Biology Class

*Microbial and viral life in the seas*

# Workshops

Mar 2024 Co-hosted workshop: Tools of the trade: Trophic ecology of sharks – *Oceanic Chondrichthyes Society – Geelong, Victoria, Australia* (attended by 47 people)

Nov 2023 Developed and led: Genomics and eDNA for enhanced ecological understanding of white sharks: *White Sharks Global – Port Lincoln, South Australia, Australia* (attended by 50 people)

July 2022 Metagenomics and bioinformatic workshop series (attended by 50 people)

 *Flinders University*

Oct 2021 Environmental Metagenomics and bioinformatic workshop series (attended by 50 people)

 *Flinders University*

Feb 2021 Metagenomics and bioinformatic workshop series (attended by 50 people)

 *South Australian Genomic Center*

Jun 2015 Metagenomics and Viromics Workship

 *With Dr. Robert Edwards and Dr. Elizabeth Dinsdale at San Diego State University*

Apr 2014 US-Indonesia Workshop on Biodiversity, Metagenomics, and Bioinformatics

 *Diponegoro University in Semarang, Indonesia*

Apr 2013 Design and Analysis of Ecological Experiments

 *with Dr. Gee Chapman and Dr. Tony Underwood at San Diego State University*

Nov 2012 Ecological Bioinformatics

 *Universidade Federal do Rio de Janeiro, Brazil*

# Community Involvement and outreach

2023 Flinders University Marine Science Day as part of Science Week

2019-2020 Sydney Institute of Marine Science – Ocean Science Day

2019 Volvo Ocean Lovers Festival Educator – Bondi, New South Wales, Australia

2014-2017 SDSU Coastal and Marine Institution Laboratory Annual Marine Science Day Educator

2014-2015 Kids into Discovering Science Program Volunteer

2013-2014 SDSU Coastal and Marine Institution Laboratory Annual Marine Science Day Educator

# Scientific expedition

2024 May; Ningaloo Reef Exmouth, Australia

Expedition in collaboration with the University Western Australia and Minderoo Foundation to collect microbial samples from whale sharks and the marine environment.

July; Penzance, UK

Collaboration with MARECO collecting microbial and genetic samples to determine the microbial and genetic structure of blue sharks in the north Atlantic ocean.

2023 May; Ningaloo Reef in Exmouth, Australia

Expedition in collaboration with Australian Institute of Marine Science (AIMS) to collect microbial samples from whale sharks and the marine environment

2022 February; Norfolk Island, Australia

 Expedition to collect microbial samples from several shark species

2021 February; Norfolk Island, Australia

 Expedition to collect microbial samples from several shark species

 July; Neptune Island, Australia

 Organized and collected water column microbials communities

 July; Research cruise: Tasmania – Norfolk Island – Cairns; Australia

 Assisted with oceanographic seafloor data collection and water samples for eDNA surveys

 November; Neptune Island, Australia

 Organized and collected water column microbials communities

2018 July; Oslob, Philippines

 *Will collect microbial samples from the skin surface of whale sharks*

June; Exmouth, Australia

 *Collected microbial samples from the skin surface of whale sharks*

2017 February; La Paz, Mexico

 *Collected microbial samples from the skin surface of whale sharks*

 April; Gujarat, India

 *Met and discussed collaborations to develop a whale shark health monitoring program*

July; Cancun, Mexico

 *Collected microbial samples from the skin surface of whale sharks*

November; Mafia Island, Tanzania

*Collected microbial samples from the skin surface of whale sharks*

2016 March; Wrigley Marine Station; Catalina Island, CA

*Collected and processed seawater samples for microbial analysis*

2014 April; Wrigley Marine Station; Catalina Island, CA

 *Collected and processed seawater samples for microbial analysis*

 May - August; Abrolhos Bank Archipelago; Bahia, Brazil

*Collected and processed seawater samples for microbial analysis; investigated the relationship between benthic cover and microbial life in water column.*

2013 February; La Paz, Mexico

 *Collected microbial samples from the skin surface of whale sharks (Rhincodon typus)*

March; Wrigley Marine Station; Catalina Island, CA

 *Collected and processed seawater samples for microbial analysis*

September; NOAA Southwest Fisheries annual thresher shark survey

*Assisted with the capture of common thresher sharks (Alopias vulpinus); collected microbial samples from the skin surface*

2011 Sept – Dec; Carmabi Research Station; Willemstad, Curacao

 *Assisted PhD students from Bremen University with diving related field research*

2009 May – July; Belize Marine TREC; San Pedro, Belize

 *Taught coral reef ecology in the field and assisted with reef monitoring programs*

# Collaborations

* Deakin University; Dr. Dan Ierodiaconou

*eDNA survey of the Norfolk Island Marine Park*

* Dept of Env. and Wildlife; Jaime Hicks and Danny Brock

*eDNA survey of Great Australian Bight*

* Darwin University; Dr. Peter Kyne

*Sawfish microbiomes during the monsoonal season in the Northern Territory*

* Whale Shark Mexico; Dr. Deni Ramirez; Based in La Paz, Mexico

*Global whale shark microbiome initiative*

* Marine Megafauna Foundation; Dr. Simon Pierce and Dr. Chris Rohner; Based in Mozambique and Tanzania

*Global whale shark microbiome initiative*

* Commonwealth Scientific and Industrial Research Organization; Dr. Richard Pillans

*Global whale shark microbiome initiative*

* Large Marine Vertebrate Research Institute Philippines; Dr. Gonzalo Araujo; Based Cebu, Philippines

*Global whale shark microbiome initiative*

# Professional membership

* Joint Academic Microbiology Seminars (JAMS); Co-coordinator of Adelaide branch
* Australian Genomic Technology Association (Active)
* American Society of Microbiology (Active)
* Australian Society of Microbiology (Active)
* American Elasmobranch Society (Active)
* International Society of Microbial Ecology (Active)
* Marine Ecology Biology Student Association
* Natural History Club of San Diego State University
* San Diego Coral Club
* San Diego Microbiology Group
* Western Society of Naturalist

# Credentials

Scientific diver Certified 2013; +400 dives

 Master Divers NAUI certified

*Dives accumulated since 2010; temperate and tropical locations in all weather conditions*

First Aid/CPR Active

# References

**Dr. Justin Seymour**

Professor

Climate Change Cluster, University of Technology, Sydney

Building 4, 745 Harris St., Chippendate, NSW 2007

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**Dr. Elizabeth Dinsdale**

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**Dr. Rob Edwards**

Associate Professor

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**Dr. Matthew S. Edwards**

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