
MICHELLE CAPUTO, PH.D.

Marine biologist and conservation ecologist

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Department of Zoology and Entomology
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Education

Doctor of Philosophy, Marine Mammal Ecology – 2019

Rhodes University, Grahamstown, EC, South Africa

Thesis title “Occurrence, feeding ecology, and population structure of two dolphin species, *Tursiops aduncus* and *Delphinus delphis*, off the Wild Coast of South Africa”

Master of Science, Biology – 2013

Memorial University of Newfoundland, St. John’s, Newfoundland, Canada

Thesis title “Migratory behaviour of brook trout (*Salvelinus fontinalis*) in Gros Morne National Park, NL, and potential interactions with recreational fisheries”

Bachelor of Science with Honours, Environmental Science – 2008

Carleton University, Ottawa, Ontario, Canada

Thesis title “Long-term effects of surgically implanted telemetry tags on the nutritional physiology and condition of wild freshwater fish”

Relevant Work Experience

Post-Doctoral Research Fellow - Present

Rhodes University, Port Elizabeth, EC, South Africa and Florida International University, Miami, Florida, USA

Conducting research on subtropical cetaceans and other apex predators from several study sites globally, primarily focused on population and trophic ecology. This includes securing funding applications, data collection and analysis, and manuscript writing. My research focuses on a subtropical and tropical locations including Madagascar, Mozambique, the Gulf of Mexico, the Caribbean, and Hawaii. I also supervise a Master’s student. My main research project is investigating the abundance, habitat preferences, and conservation issues of endangered humpback dolphins (*Sousa plumbea*) in Nosy Be, Madagascar (supervisor: Dr. Jeremy Kiszka, Florida International University), including determining population size in this region and the feeding ecology of this species and how they overlap with artisanal fisheries.

Madagascar Field Course Supervisor - Present

Florida International University, Miami, Florida, USA

Supervising students in a marine field course to Nosy Be, Madagascar. Including instructing them in the use of photographic identification methods, habitat assessments, and general data collection/analysis methods.

Student Mentor, Department of Oceanography – 2015-2018

Nelson Mandela University, Port Elizabeth, EC, South Africa

Mentored undergraduate and graduate students in marine mammal ecology, including photographic identification methods, biochemical methods, and field-research methods, proofreading their thesis proposals and reports, taught general laboratory and field techniques.

National Resource and Land Management, Greenbelt Biologist — 2011-2013

National Capital Commission of Canada, Ottawa, ON, Canada

Developed a stream assessment framework for the National Capital Commission of Canada Greenbelt, led and completed biodiversity assessment of the Greenbelt, consulted on development proposals from an environmental perspective and writing terms of reference for projects, supervised undergraduate student biological research, and dissemination of research results to staff, stakeholders, and community groups.

Canadian International Development Agency Intern, Government of Canada — 2010-2011

Nelson Mandela University, Port Elizabeth, EC, South Africa

Research assistant to the laboratory of Prof. Janine Adams in estuarine ecology and Dr. Stephanie Plön in marine mammal ecology, including conducting field and laboratory research, reviewing environmental assessments for wetlands, proposal writing for estuarine projects, conducting field research on marine mammal abundance in Algoa Bay, and training of local rangers in rural communities regarding marine mammal identification methods.

Graduate Research Assistant and Teaching Assistant, Department of Biology — 2008-2010

Memorial University of Newfoundland, St. John's, NL, Canada

Assisting in the study of Arctic charr populations in Newfoundland with the "Save Our Charr" society, including removal, ablation, and analysis of otolith data, and conducting and analysis of fishermen survey data. Assistant teaching position, supervising student progress and assisting in the teaching of ecology, including courses on marine mammal ecology, vertebrate biology, and biological field sampling methods.

Fisheries Assistant, City of Ottawa — 2008

City of Ottawa, Ottawa, ON, Canada

Collection and analysis of data regarding watershed health in the City of Ottawa, including data from electrofishing, sediment sampling, collection and identification of macro-invertebrates, water quality testing, and boat-based surveys.

Research Assistant, Department of Environmental Science — 2006-2008

Carleton University, Ottawa, ON, Canada

Research assistant to the laboratory of Dr. Steven Cooke in fish ecology and conservation physiology, assisting with field and laboratory analyses for a variety of research projects, including implanting acoustic transmitters, blood and tissue sampling and analysis, dissections, steroid injections, behavioural observations, etc.

Skills

- Experimental design, field and laboratory
- Photographic identification methods, including photography and processing
- Remote biopsy techniques, including sample collection and processing
- Stable isotope analysis (laboratory and data analysis)
- Assisted in over 50 marine mammal necropsies of both bycaught and stranded animals
- Fieldwork experience in harsh, remote conditions
- Teaching and evaluation for undergraduate courses and graduate research
- Science communication and community engagement
- Languages: English (fluent), French (proficient)
- Written scientific communication
- Computing: iOS, Windows, Office, GIS, R, Adobe Acrobat, and Illustrator

Peer-Reviewed Publications

Publications and Reports (published)

Caputo, M., Elwen, S., Gridley, T., Kohler, S.A., Roux, J-P., Froneman, P.W., Kiszka, J.J. 2021. Dietary plasticity of two coastal delphinids in the Benguela upwelling ecosystem. *Marine Ecological Progress Series*, accepted.

Kiszka, J., Caputo, M., Méndez-Fernandez Paula, Fielding Russell. 2021. Feeding ecology of elusive Caribbean killer whales inferred from Bayesian stable isotopes mixing models and whalers' ecological knowledge. *Frontiers in Marine Science*, 8: 648421.

Caputo, M., Bouveroux, T., Froneman, P.W., Shaanika, T., and Plön, S. 2021. Occurrence of Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) off the Wild Coast of South Africa using photographic identification. *Marine Mammal Science*, 37:220-234

Caputo, M., Froneman, P.W., Plön, S. Common dolphin (*Delphinus delphis*) occurrence off the Wild Coast, South Africa. 2020. *African Journal of Marine Science*, 42(4): 439-448.

Braulik, G., Atkins, S., Bouveroux, T., Caputo, M., etc. 2020. Development of Flukebook automated photo-ID matching capability for the Indian Ocean humpback dolphin, *Sousa plumbea*. *Report to the International Whaling Commission*, SC/68B/SM/05rev1.

Bouveroux, T., Caputo, M., Froneman, P.W. and Plön, S. 2018. Largest reported groups for the Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) found in Algoa Bay, South Africa: Trends and potential drivers. *Marine Mammal Science*, 34(3): 645-665.

Caputo, M., Rubenstein, D., Froneman, P.W. and Bouveroux, T. 2017. Striping patterns may not influence social interactions and mating in zebra: Observations from melanic zebra in South Africa. *African Journal of Ecology*, 56: 428-431.

Caputo, M., Froneman, P.W., du Preez, D., Thompson, G., and Plön, S. 2017. Long-term trends in cetacean occurrence during the annual sardine run off the Wild Coast, South Africa. *African Journal of Marine Science*, 39(1): 83-94.

Caputo, M., O'Connor, C.M., Hasler, C.T., Hanson, K.C., and Cooke, S.J. 2009. Long-term effect of surgically implanted tags on the nutritional physiology and condition of wild freshwater fish. *Diseases of Aquatic Organisms*, 84: 35-41.

Publications in preparation

Caputo, M., Kiszka, J., Andrianarivelo, N., Paz, V., and Cerchio, S. Ecological roles of coastal dolphins within an odontocete community in a tropical marine ecosystem off north-western Madagascar.

Kiszka, J., Caputo, M., Martinez, A., Heithaus, M.R., and Garrisson, L. Foraging ecology of endangered Gulf of Mexico Bryde's whales (*Balaenoptera edeni*).

Caputo, M., Samara, Y., Heithaus, M.R., Martinez, A., Garrisson, L., and Kiszka, J. Resource partitioning and fine-scale population structure of delphinids in the northeastern Gulf of Mexico inferred from stable isotopes.

Caputo, M., Matich, P., Mourier, J., Heithaus, M., and Kiszka, J. Factors affecting the trophic interactions of sharks in a coral reef ecosystem in Moorea (French Polynesia).

Caputo, M., Plön, S., Bouveroux, T., Kiszka, J.J., Van der Bank, M., Cliff, G., and Froneman, P.W. Population structuring of *Tursiops aduncus* and *Delphinus delphis* off the Wild Coast of South Africa, inferred using stable isotope analysis.

Conference and Symposia Presentations

Caputo, M., Bouveroux, T., Froneman, P.W., Shaanika, T., and Plön, S. The importance of the Wild Coast of South Africa for Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) using photographic identification. World Marine Mammal Conference, Barcelona, Spain, poster presentation.

Caputo, M., Plön, S., Bouveroux, T., Van der Bank, M., Cliff, G., and Froneman, P.W. 2018. Foraging ecology of *Tursiops aduncus* and *Delphinus delphis* off the Wild Coast of South Africa, inferred using stable isotope analysis. *African Marine Mammal Colloquium*, Port Elizabeth, South Africa, oral presentation.

Caputo, M., Froneman, P.W., du Preez, D., Thompson, G., and Plön, S. 2017. Long-term trends in cetacean occurrence during the annual sardine run off the Wild Coast, South Africa. *South African Marine Science Symposium*, Port Elizabeth, South Africa, oral presentation.

Caputo, M., Froneman, P.W., Bouveroux, T., Venter, J., and Plön, S. 2015. Into the wild: Evidence for year-round presence of delphinids off the Wild Coast, South Africa. *21st Biennial Society of Marine Mammalogy Conference*, San Francisco, USA, poster presentation.

Caputo, M., du Preez, D., Froneman, P.W., and Plön, S. 2015. Occurrence of delphinids along the Wild Coast, South Africa, during the annual sardine run based on aerial surveys. *CoastGIS Conference*, Cape Town, South Africa, oral presentation.

Caputo, M., Knight, T., and Fleming, I. 2010. The migratory behaviour of brook trout (*Salvelinus fontinalis*) in Gros Morne National Park, Newfoundland. *Ecological and Evolutionary Ethology of Fishes*, Vancouver, Canada, oral presentation.

Caputo, M., O'Connor, C.M, Hasler, C.T., Hanson, K.C., and Cooke, S.J. 2009. The long-term effects of surgically implanted acoustic transmitters on wild freshwater fish physiological nutrition. *Memorial University's Biology Graduate Student Symposium*, St. John's, Canada, oral presentation.

Awards

National Research Foundation of South Africa Post-Doctoral Scholarship – 2022-2023

Awarded by the South African Research Chair in Marine Ecology (R210000)

David Henderson Inspirational Journal Grant, IMARest – 2020

Awarded based on academic achievement, leadership, research potential, and relevance to the memory of David Henderson (£5000)

Western Indian Ocean Marine Science Association Travel Award – 2019

Awarded to allow travel to the Society for Marine Mammalogy World Marine Mammal Conference in Barcelona, Spain (\$854 US dollars)

Rhodes University Post-Doctoral Fellowship – 2019-2021

Awarded based on academic achievement, leadership, and research potential (R200000)

National Research Foundation of South Africa Innovation Doctoral Scholarship Extension – 2017-2018

Awarded based on academic achievement, leadership, and research potential (R110000)

National Research Foundation of South Africa Innovation Doctoral Scholarship Extension – 2017-2018

Awarded based on academic achievement, leadership, and research potential (R100000)

Society for Marine Mammalogy Student Travel Grant

Awarded to allow travel to attend the Society for Marine Mammalogy Biennial Conference in San Francisco, USA (\$1000 US dollars)

National Research Foundation of South Africa Travel Bursary

Awarded to allow travel to attend the Society for Marine Mammalogy Biennial Conference in San Francisco, USA (R17687 ZAR)

Community-University Research for Recovery Alliance Travel Grant – 2008

Awarded to allow travel to attend the Ecological and Evolutionary Ethology of Fishes Conference in Vancouver, BC, Canada (\$2000 Canadian dollars)

Community-University Research for Recovery Alliance Graduate Bursary – 2008-2010

Awarded based on academic achievement, leadership and research potential (\$17000/year CAD)

Carleton University Entrance Scholarship – 2004-2008

Awarded based on academic achievement and leadership (\$8000/year CAD)

Professional Membership

Member of the Western Indian Ocean Marine Science Association - present

Member of the WIOMSA Network for Women in Marine Science - present

Member of the Society for Marine Mammalogy - 2014-present

Member of the Society for Conservation Biology - 2014-present

Academic References

Prof. Jeremy Kiszka

Marine Conservation Ecology lab

Department of Biological Sciences

Coastlines and Oceans Division

Institute of Environment

Florida International University

Miami, FL, USA

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Prof. William Froneman

Department of Zoology and Entomology

Rhodes University

Grahamstown, EC, South Africa

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Dr. Thibaut Bouveroux

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