CV of LYNE MORISSETTE

Ph.D. Marine Ecology

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Profile

CEO of M - Expertise Marine, Dr. Lyne Morissette is an ecologist specialized in marine mammals and ecosystem functioning who uses an integrated approach to study the structure and function of ecosystems in an effort to ensure the conservation and sustainability of resources. She holds a Ph.D from the the Fisheries Centre at the University of British Columbia and has completed two postdocs: one in conservation biology at the Arizona State University and another in theoretical ecology with Canada's research chair in biodiversity at the University of Guelph. She has a world-renowned expertise in ecosystem ecology, conservation and biodiversity, and published her work in the most prestigious journals such as *Science* and *Nature*. For the last 22 years, she led many projects consulting assignments in environmental mediation, marine sciences and integrated approach to marine systems at different governance level: consulting for SMEs, municipal stakeholders, NGOs, coastal communities, fishermen associations, provincial and federal governments, all the way to leading international projects involving several countries at the EU. She is fluent in French and English and is based in Sainte-Luce-sur-Mer, QC.

Academic training

Université de Montréal — B.Sc. Sciences biologiques, 1998 Specialized in Ecology & Environment

Université du Québec à Rimouski — M.Sc. Wildlife management, 2001

<u>Supervisors</u>: Mike Hammill (DFO) & Claude Lassus (UQAR); <u>Research topics</u>: Ecosystem ecology, predation, indirect effects in marine foodwebs, modelling.

University of British Columbia, Fisheries Centre — Ph.D. Zoology, specialized in marine ecology & ecosystem modelling, 2007

<u>Supervisors</u>: Daniel Pauly (UBC) & Martin Castonguay (DFO); <u>Research topics</u>: Ecosystem ecology, policy, conservation, modelling, predation, cumulative effects, fisheries, resilience, marine mammals.

Postdocs

Arizona State University - Lab of Dr. Leah Gerber, Ecology, conservation and marine mammals, 2007-2009 Research topics: Conservation, ecosystem modelling, cetaceans, indirect and cumulative effects in marine ecosystems.

University of Guelph - Lab of Dr. Kevin McCann, Canadian research chair in biodiversity, 2009-2010 Research topics: Community ecology, cumulative effects, resilience, modelling, theoretical ecology.

Pertinent experience in research & project coordination

Institut des sciences de la mer de Rimouski 2018 -

Associate professor, marine mammals, fisheries, marine shipping environmental mediation.

Regroupement des Pêcheurs Professionnels du Sud de la Gaspésie (RPPSG) 2019-2020

Leader of a sustainable development project including marine mammal surveys and socioeconomic analyses.

Maritime Fishermen Union - NARW coexistence project 2018-2022

Expert in marine mammal and fisheries for a project on species at risk in the southern Gulf of St. Lawrence.

Acadian Crabbers Association - Reducing risks of entanglement in crab fishing gear for the North Atlantic Right Whale 2017-2021

Co-Pl of a project funded by DFO's Atlantic Fisheries Fund. Leading 15 initiatives of research and development of crab fishing gear for reducing risks of entanglements for NARW in crab fishing gear.

Société de Développement Économique du Saint-Laurent (SODES) 2017- present

Maritime Information Bureau - consulting expert on marine mammal ecology in the context of marine shipping.

Fishers Helping Whales 2017- present

Project leader, working with 12 fishermen associations in 5 provinces in Eastern Canada.

Ropeless Consortium 2018- present

Board of directors - a consortium involving public and private sectors of fisheries in Canada and USA.

Canada C3 Expedition 2017

Chief scientist - leading 23 research projects on marine life, oceanography, and Canadian marine biodiversity from our 3 oceans: Atlantic, Arctic and Pacific.

M - expertise marine 2013-present

Founder and CEO

ÉcoMaris 2013-present

Lead scientist & scientific project manager - ocean conservation, marine shipping.

VARD Marine & WWF Canada 2015-2016

Consultant, marine mammals & ecosystems experts. Impact study on climate change and marine shipping in the Canadian Arctic.

MSES 2015-2016

Consultant for independent technical / scientific reviews of an environmental and socio-economic assessment (expert for the Marine Environment components) for a pipeline project.

Maritime Innovation 2014

Project manager, project on environmental restauration of acoustic environment for beluga in areas of intensive use. Report for Parks Canada & Saguenay St. Lawrence Marine Park.

MAREFRAME project 2012-2017

Marine mammal expert, responsible of ecosystem modelling and interactions with industries. EU project involving 37 partners from 18 countries.

Institut des sciences de la mer de Rimouski (UQAR-ISMER) 2010-2012

Co-founder and research scientist, UNESCO chair in Integrated Analysis of Marine Systems

Department of Fisheries and Oceans Canada - Comparative Dynamics of Exploited Ecosystems in the Northwest Atlantic (CDEENA) project 1999-2003 Biologist, modelling, marine ecosystem functioning, fisheries and marine mammals

Publications

Author of a dozen private expert reports on marine mammals, and more than 80 primary publications on the ecology of ecosystems and marine mammals, including the relevant articles (in the last 10 years):

- 1. Myers, A.J., Moore, M.J., Baumgartner, M.F., Brillant, S.W., Katona, S.K., Knowlton, A.R., **Morissette, L.**, Pettis, H.M., Shester, G., and Werner, T.B. (2019) Ropeless fishing to prevent large whale entanglements: Ropeless Consortium report. Marine Policy 107. https://doi.org/10.1016/j.marpol.2019.103587.
- 2. Jacquet, C., Moritz, C., Morissette, L., Legagneux, P., Archambault, P. and Gravel, D. 2016. No complexity-stability relationship in natural ecosystems. Nature communications.
- 3. Roman, J., Estes, J., Morissette, L., Smith, C., Costa, D., McCarthy, J., Nation, J.B., Nicol, S., Pershing, A., and Smetacek, V.(2014). Whales as ecosystem engineers. Frontiers in Ecology and environment: 12: 377–385.
- 4. Heymans, J.J., Coll, M., Libralato, S., **Morissette, L.**, and Christensen, V. (2014) Global patterns in ecological indicators of marine food webs: a modelling approach. PLoS-ONE DOI: 10.1371/journal.pone.0095845.
- 5. **Morissette, L.** and Brodie, P. (2014) Assessing the trophic impacts of marine mammals: how much data is enough? Marine Mammal Science available online, DOI: 10.1111/mms.12118.
- 6. **Morissette, L.** Christensen, V. and Pauly, D. (2012) Marine mammals impacts in exploited ecosystems: would large scale cullings benefit the fisheries? PLoS ONE 7(9): e43966. doi:10.1371/journal.pone.0043966.
- 7. Legagneux, P., Gauthier, G., Berteaux, D., Bêty, J., Cadieux, M-C., Bilodeau, F., Bolduc, E., McKinnon, L., Tarroux, A., Therrien, J.-F., **Morissette, L.** and Krebs, C.J. (2012) Disentangling trophic relationships in a high arctic tundra ecosystem through food web modeling. Ecology. 93(7):1707-1716. *F1000 Prime Recommended*.
- 8. **Morissette, L.**, Kaschner, K., and Gerber, L.R. (2010) 'Whales eat fish'? Demystifying the myth in the Caribbean marine ecosystem. Fish and Fisheries 11(4): 388-404.
- 9. Morissette, L., Kaschner, K., and Gerber, L.R. (2010) Ecosystem models clarify the trophic role of whales off Northwest Africa. Marine Ecology Progress Series 404: 289-302.