

Jeff C. Clements, PhD

Research Scientist II

Fisheries and Oceans Canada, Gulf Fisheries Centre
343 Université Avenue, PO Box 5030, Moncton, NB E1C 9B6, Canada
jeffery.clements@dfo-mpo.gc.ca, +1 (506) 866-6655
Bluesky: [@biolumiJEFFence.bsky.social](https://bsky.social/@biolumiJEFFence)
[Google Scholar](#) – [ORCID](#) – [ResearchGate](#)
jclementsphd.ca

Education

- 2016 **Ph.D. – University of New Brunswick Saint John**
Department of Biological Sciences
Thesis title: “Influence of sediment acidification on burrowing behaviour, post-settlement dispersal, and recruitment of juvenile soft-shell clams (*Mya arenaria*)”
Supervisor: Dr. Heather L. Hunt
- 2011 **B.Sc. (honours) – Cape Breton University**
Department of Biology
Thesis title: “Feeding Ecology of the Northern Moonshell (*Euspira heros*) (Gastropoda: Naticidae) in Cape Breton, Nova Scotia”
Supervisor: Dr. Timothy A. Rawlings

Professional appointments

- 2024 – present **Research Scientist**
Fisheries and Oceans Canada, Gulf Region
December 2024 – Present
- 2023 – present **Adjunct Professor**
University of New Brunswick, Saint John
June 2023 – present
- 2022 – 2024 **Aquatic Science Biologist II**
Fisheries and Oceans Canada, Gulf Region
May 2022 – December 2024
- 2019 – 2022 **Research Scientist (NRC postdoctoral fellow)**
Fisheries and Oceans Canada, Gulf Region
November 2019 – May 2022
- 2018 – 2019 **Marie Skłodowska-Curie Postdoctoral Fellow**
Norwegian University of Science and Technology
August 2018 – November 2019
- 2017 – 2018 **NSERC Visiting Postdoctoral Fellow**
Fisheries and Oceans Canada, Gulf Region
June 2017 – June 2018
- 2016 – 2017 **Postdoctoral Fellow**
Atlantic Veterinary College, University of Prince Edward Island
October 2016 – June 2017
- Aquatic Science Biologist (contract)**
Fisheries and Oceans Canada, Gulf Region
June 2016 – October 2016

Research grants

12 grants awarded, totaling CA\$1,551,967

- 2025 **Fisheries and Oceans Canada CSRF**
CAD \$259,425
Can MSX infections in eastern oysters be predicted from eDNA of its causative agent, *Haplosporidium nelsoni*, in the water and/or from oyster behaviour?
Advisor with D. Ditlecadet [lead], L. Comeau [co-lead]
- 2024 **Fisheries and Oceans Canada CSRF**
CAD \$157,362
Testing the use of siphon hole morphometrics as an efficient, non-invasive tool for population assessments of infaunal clams
Lead-PI with B. Gianasi (DFO Quebec), S. Dudas (DFO Pacific), R. Angus, T. Bernard
- Fisheries and Oceans Canada FSCP**
CAD \$64,800
Informing commercial and recreational clam fisheries management: Determining the fate of discarded sub-legal clams, and deriving size-fecundity relationships, for soft shell clams (*Mya arenaria*) in the Gulf Region
Lead-PI with R. Sonier, S. Harrison, M. Roussel, A. Nadeau
- 2022 **NSERC Alliance**
CAD \$397,000
Alkalinity addition to coastal waters in conjunction with green hydrogen generation: Chemical and biological impacts and verification of CO₂ uptake
Co-PI with D. Wallace, R. Musgrave, H. MacIntyre, A. Dickson, U. Riebesell, F. Melzner, L. Comeau, A. Mallet, R. Filguiera, G. Rau
- 2021 **Fisheries and Oceans Canada ACRDP**
CAD \$233,280
Overwintering survival in juvenile oysters: Understanding the role of energetic physiology for *Crassostrea virginica* seed
Lead-PI with L. Comeau, C. Carver, R. Tremblay, M. Mallet, A. Mallet
- Fisheries and Oceans Canada ACRDP**
CAD \$30,080
Cultivated oysters as sentinels of water quality: An autonomous alert system
Co-PI with L. Comeau [lead], L. Lanteigne, J. Babarro, R. Filgueira, R. Haché, M. Coffin, L. Poirier
- 2020 **Fisheries and Oceans Canada FSCP**
CAD \$45,000
Desilting wild Eastern oyster (*Crassostrea virginica*) beds: effects on recruitment
Co-PI with L. Poirier [lead], R. Sonier, J. Davidson, M. Coffin, J. Gunn-McQuillan, L. Comeau
- 2018 **University of Gothenburg KVA**
CAD \$10,000
Transgenerational effects of global change on marine invertebrates
Lead PI with F. Jutfelt, S. Dupont
- European Marine Biological Resource Centre ASSEMBLE+**
CAD \$10,000
Transgenerational effects of global change on marine invertebrates
Lead PI with F. Jutfelt, S. Dupont

- 2017 **Fisheries and Oceans Canada ASEC**
 CAD \$100,000
 Interactions between oyster farming and the productivity of wild oyster beds
 Co-PI with L. Comeau [lead], J. Davidson, J. Davidson, M. Ouelette
- Fisheries and Oceans Canada ACRDP**
 CAD \$229,020
 Oyster aquaculture in an acidifying ocean: Effects of ocean acidification on Eastern Oysters (*Crassostrea virginica*) and the mitigation potential of seagrass (*Zostera marina*)
 Lead PI with L. Comeau, C. Carver, E. Mayrand, S. Plante, A. Mallet
- 2016 **Fisheries and Oceans Canada ACCASP**
 CAD \$16,000
 Oysters on the edge: ocean acidification effects on adult eastern oyster behaviour in the context of coastal variability
 Co-PI with L. Comeau [lead], J. Davidson, J. Davidson, M. Ouelette

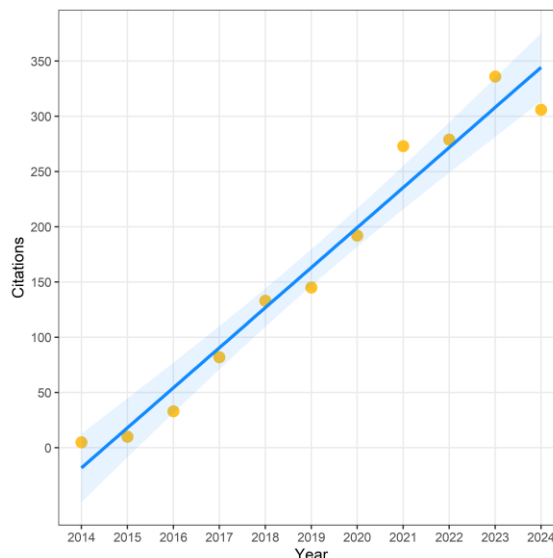
Publications

66 articles in 40 primary journals; 3 book chapters; 1 manuscript under review

Google Scholar citations = 1914 | h-index = 25 | i10-index = 43

* Undergraduate student advisee † Graduate student advisee

- 2025
69. Andreassen A, **Clements JC**, Morgan R, Spatafora D, Metz M, Åsheim E, Pélabon C, Jutfelt F. Evolution of warming tolerance alters physiology and life history traits in zebrafish. *Nature Climate Change*. In press.
68. **Clements JC**. Dynamic shifts and a drastic decline in reported landings for the southern Gulf of St. Lawrence commercial clam fishery over the past two decades. *FACETS*. In press.
67. Clark TD, **Clements JC**, Jutfelt F, Sundin J. Chapter 5: Ocean Acidification. In: Behavioural Responses to a Changing World (B Wong, U Candolin, eds.). *Oxford University Press*. pp 72-96.
66. Cooke SJC, Birnie-Gauvin K, Madliger C, Suski CD, Eliason E, Jefferies K, **Clements JC**, Lennox R. The toolbox for mechanistic understanding of conservation problems facing marine wildlife. In: Marine Ecology: An Ecosystemic View of Anthropogenic Impacts, Volume 2 (JM Molina, GE Blasina, eds.). *CRC Press*. In press (available April 2025).
- 2024
65. **Clements JC**, **Harrison S†**, Hunt J, Brennan I, Hunt HL, Sonier R. Can siphon hole morphometrics be used for population assessments of intertidal soft-shell clams, *Mya arenaria*? *Estuar. Coasts*. 47: 2423-2438.
64. Cooke SJC, Young N, Pieman K, Roche DG, **Clements JC**, Kadykalo A, Provencher J, Raghavan R, DeRosa M, Lennox R, Robinson Fayek A, Cristescu M, Murray S, Quinn J, Cobey K, Browman H. A harm reduction approach to improving peer review by acknowledging its imperfections. *FACETS*. 9: 1-14.



2023

63. **Clements JC**, Hunt HL. Chapter 13: Effects of ocean warming and acidification on soft-shell clams. *In: The soft-shell clam *Mya arenaria*: biology, fisheries, and mariculture* (V. Kennedy, B. Beal, eds.), *American Fisheries Society*. Bethesda, MD. pp. 365-382.
62. Durier G, Comeau L, Babarro J, Starr M, **Clements JC**, Tremblay R. Impact of the toxic dinoflagellate *Alexandrium catenella* on the valve behaviour of blue mussels (*Mytilus edulis*): A comparison between two populations with contrasting histories of PST exposure. *Coasts*. 3: 426-433.
61. Comeau LA, Guyondet T, Drolet D, Sonier R, **Clements JC**, Tremblay R, Filgueira R. Revisiting ecological carrying capacity indices for bivalve culture. *Aquaculture* 577: 739911.
60. Ledoux T†, **Clements JC**, Maillet M, Gallant D, Sonier R, Miron G. Reproductive ecology of the soft-shell clam (*Mya arenaria*) in Kouchibouguac National Park, New Brunswick, Canada: Assessing size-at-maturity and spawning time to inform fisheries management. *Fish. Res.* 65: 106759.
59. Ledoux T†, **Clements JC**, Gallant D, Sonier R, Miron G. Burrowing behaviour of soft-shell clams (*Mya arenaria*) following recreational fishing. *J. Exp. Mar. Biol. Ecol.* 565: 151916.
58. Ledoux T*, **Clements JC**, Comeau LA, Cervello G, Tremblay R, Olivier F, Chauvaud L, Bernier RY, Lamarre S. Effects of anthropogenic sounds on the behavior and physiology of the Eastern oyster (*Crassostrea virginica*). *Front. Mar. Sci.* 10: 1104526.
57. **Clements JC**, Sundin J, Clark TD, Jutfelt F. Extreme original data yield extreme decline effects. *PLOS Biol.* 21: e3001996.

2022

56. Durier G, Nadalini J-B, Comeau L, Starr M, Michaud S, Tran D, St-Louis R, Babarro J, **Clements JC**, Tremblay R. Use of valvometry as an alert tool to signal the presence of toxic algae *Alexandrium catenella* by *Mytilus edulis*. *Front. Mar. Sci.* 9:987872.
55. **Clements JC**, George MN. Ocean acidification and bivalve byssus: explaining variable responses using meta-analysis. *Mar. Ecol. Prog. Ser.* 694 89-103.
54. Deb S, Guyondet T, Coffin MRS, Barrell J, Comeau LA, **Clements JC**. Effect of inlet morphodynamics on estuarine circulation and implications for sustainable oyster aquaculture. *Estuar. Coast. Shelf Sci.* 269: 107816.
53. **Clements JC**, Clark TC, Sundin J, Jutfelt F. Meta-analysis reveals an extreme “decline effect” in the impacts of ocean acidification on fish behaviour. *PLoS Biol.* 20: e3001511.
52. Roche D, Raby GD, Norin T, Ern R, Scheuffle H, Skeeles M, Morgan R, Andreassen AH, **Clements JC**, Jutfelt F, Clark TD, Binning SA. Paths towards a greater consensus building in experimental biology. *J. Exp. Biol.* 225: jeb243559

2021

51. Poirier LA, **Clements JC**, Millar RB, Sonier R, Niles M. Size selectivity of the scallop fishery in the southern Gulf of St. Lawrence: effects of ring size and washer type. *Fish. Res.* 243: 106103.
50. Poirier LA, **Clements JC**, Coffin MRS, Craig T, Davidson J, Miron G, Davidson JDP, Hill J, Comeau LA. Siltation negatively affects settlement and gaping behaviour in eastern oysters. *Mar. Environ. Res.* 170: 105432.
49. Coffin MRS, **Clements JC**, Comeau LA, Guyondet T, Maillet M, Steeves L, Winterburn K, Babarro JMF, Mallet MA, Haché R, Deb S, Filgueira R. The killer within: Endogenous bacteria accelerate oyster mortality during sustained anoxia. *Limnol. Oceanogr.* 66: 2885-2900.
48. **Clements JC**, Dupont S, Jutfelt F. “Urchin pinning”: behavioural observations reveal how hungry urchins actively prey upon their sea star predators. *Ethology* 127: 484-489.
47. **Clements JC**, Leblanc A, Coomber C, Comeau L. Comparative evidence for harvesting-driven enhancement of clam beds in northeastern New Brunswick, Canada. *Reg. Stud. Mar. Sci.* 43: 101690.
46. **Clements JC**, Ramesh K, Nysveen J, Dupont S, Jutfelt F. Seawater temperature, but not pH, affects startle response behaviour in a wide-ranging marine bivalve. *Anim. Behav.* 173: 191-205.
45. Gerwing TG, Gerwing AMA, Avery-Gomm S, Choi C-Y, **Clements JC**, Rash J.A Re-evaluation of solutions to the problem of unprofessionalism in peer review. *Res. Integr. Peer Rev.* 6: 4.

44. Lowes H*, Snihur K, Alessi D, Clements JC, Blewett T. Group versus individual exposure: Do methodological decisions in aquatic toxicology alter experimental results? *Sci. Tot. Environ.* 764: 144288.

2020

43. Gerwing TG, Davies M, Clements JC, Flores A-M, Thomson H, Nelson K, Kushneryk K, Brouard-John E, Harvey B, Plate E. Do you want to breach an embankment? Synthesis of the literature and practical considerations for breaching of tidally influenced causeways and dikes. *Estuar. Coast. Shelf Sci.* 245: 107024
42. Clements JC. Don't be a prig in peer review. *Nature* 585: 472
41. Clements JC. Is the reproducibility crisis fuelling poor mental health in science? *Nature* 582: 300
40. Clements JC, Poirier LA, Perez FF, Comeau LA, Babarro J. Behavioural responses to predators in Mediterranean mussels (*Mytilus galloprovincialis*) are unaffected by elevated $p\text{CO}_2$. *Mar. Environ. Res.* 161: 105148
39. Gerwing TG, Gerwing AMA, Avery-Gomm S, Choi C-Y, Clements JC, Rash J.A Quantifying professionalism in peer review. *Res. Integr. Peer Rev.* 5: 9
38. Clements JC, Carver CE, Mallet M, Comeau LA, Mallet AL. Low pH influences eastern oyster reproductive development and larval survival but with no transgenerational linkages. *ICES J. Mar. Sci.* fsaa089
37. Poirier L, Clements JC, Sonier R, Lanteigne L, Nadeau A, Comeau L. Testing the efficacy of a novel technique for enhancing shell strength and thickness in on-bottom cultured Eastern oysters (*Crassostrea virginica*). *Aquacult. Eng.* 90: 102101
36. Clements JC, Daigle R, Froehlich H. Low citation rates are not sufficient to conclude no harm from predatory journals. *Science* (eLetter)
<https://science.sciencemag.org/content/367/6474/129/tab-e-letters>
35. Clements JC, Schagerström E, Dupont S, Jutfelt F, Ramesh K. Roll, right, repeat: short-term repeatability in the self-righting behaviour of a cold-water sea cucumber. *J. Mar. Biol. Assoc. UK.* 100: 115-120

2019

34. Clements JC, Comeau LA. Behavioural defenses of shellfish prey under ocean acidification. *J. Shellfish Res.* 38: 725-742
33. Clements JC, Comeau LA. Use of an emerging technology to detect ocean acidification effects on shellfish behaviour. *J. Shellfish Res.* 38: 811-818
32. Gu H, Shang Y, Clements JC, Dupont S, Wang T, Wei S, Wang X, Chan J, Huang W, Hu M, Wang Y. Hypoxia aggravates the effects of ocean acidification on the physiological energetics of the blue mussel *Mytilus edulis*. *Mar. Poll. Bull.* 149: 110538
31. Carroll J, Clements JC. Scaredy-oysters: in situ documentation of an oyster behavioral response to predators. *Southeast. Nat.* 18: N21-N26
30. Klompmaker AA, Kelley PH, Chattopadhyay D, Clements JC, Huntley JW, Kowalewski M. Predation in the marine fossil record: studies, data, recognition, environmental factors, and behavior. *Earth Sci. Rev.* 194: 472-520.
29. Kong H, Clements JC, Dupont S, Wang T, Huang X, Shang Y, Liu L, Huang W, Hu M, Wang Y. Seawater acidification and temperature modulate anti-predator defenses in two co-existing *Mytilus* species. *Mar. Poll. Bull.* 145: 118-125
28. Kong H, Jiang X, Clements JC, Wang T, Huang X, Shang Y, Chen J, Hu M, Wang Y. 2019. Transgenerational effects of short-term exposure to acidification and hypoxia on early developmental traits of the mussel *Mytilus edulis*. *Mar. Environ. Res.* 145: 73-80
27. Clements JC, Comeau, LA. Nitrogen removal potential of shellfish aquaculture harvests in eastern Canada: a comparison of culture methods. *Aquac. Rep.* 13: 100183.
26. Poirier L, Clements JC, Davidson JDP, Miron G, Davidson J, Comeau L. Sink before you settle: settlement behaviour of Eastern oyster (*Crassostrea virginica*) larvae on artificial spat collectors and natural substrate. *Aquacult. Rep.* 13: 100181

2018

25. Clements JC, Coffin MRS, Lavaud R, Guyondet T, Comeau LA. Ocean acidification and molluscan shell taphonomy: can elevated seawater $p\text{CO}_2$ influence taphonomy in a naticid predator-prey system? *Paleogeogr, Paleoclimatol, Paleoecol.* 507: 145-154
24. Clements JC, Darrow ES. Eating in an acidifying ocean: a quantitative review of elevated CO_2 effects on the feeding rates of calcifying marine invertebrates. *Hydrobiologia.* 820:1-21

23. **Clements JC**, Comeau LA, Carver CE, Mayrand E, Plante S, Mallet A. Short-term exposure to elevated $p\text{CO}_2$ does not affect the valve gaping response of adult eastern oysters, *Crassostrea virginica*, to acute heat shock under an *ad libitum* feeding regime. *J. Exp. Mar. Biol. Ecol.* 506: 9-17
 22. **Clements JC**, Davidson JDP, Gunn McQuillan J, Comeau LA. Increased mortality of harvested eastern oysters (*Crassostrea virginica*) is associated with air exposure and temperature during a spring fishery in Atlantic Canada. *Fish. Res.* 206: 27-34
 21. **Clements JC**, Daigle RM, Froehlich HE. Predator in the pool? A quantitative evaluation of non-indexed open access journals in aquaculture research. *Front. Mar. Sci.* 5: 106
 20. **Clements JC**, Bourque D, McLaughlin J, Stephenson M, Comeau L. Wanted dead or alive: *Polydora websteri* recruit on both live oysters and empty shells of the eastern oyster, *Crassostrea virginica*. *J. Fish. Diseases.* 41: 855-858
 19. **Clements JC**, Hicks C, Tremblay R, Comeau LA. Elevated seawater temperature, not CO_2 negatively affects post-spawning mussels (*Mytilus edulis*) under food limitation. *Con. Physiol.* 6: cox078
 18. **Clements JC**, Hunt HL. Testing for sediment acidification effects on within-season variability in juvenile soft-shell clam (*Mya arenaria*) abundance on the northern shore of the Bay of Fundy. *Estuar. Coasts* 41: 471-183
- 2017
17. **Clements JC**, **Bishop MM***, Hunt HL. Elevated temperature has adverse effects on GABA-mediated adaptive behaviour to sediment acidification in a wide-ranging marine bivalve. *Mar. Biol.* 164: 56
 16. **Clements JC**, Hunt HL. Effects of CO_2 -driven sediment acidification on infaunal marine bivalves: a synthesis. *Mar. Poll. Bull.* 117: 6-16
 15. **Clements JC**, Bourque D, McLaughlin J, Stephenson M, Comeau L. Extreme Ocean acidification reduces the susceptibility of eastern oyster shells to a polydorid parasite. *J. Fish Diseases.* 40: 1573-1585
 14. **Clements JC**, Bourque D, McLaughlin J, Stephenson M, Comeau L. Siltation increases the susceptibility of surface-cultured eastern oysters (*Crassostrea virginica*) to parasitism by the mudworm *Polydora websteri*. *Aquacult. Res.* 48: 4707-4717
 13. **Clements JC**, McCorquodale DB, Doucet BA, Ogden JB. The Dusky Cockroach in the Canadian Maritimes: establishment, persistence, and ecology. *J. Acad. Entomol. Soc.* 13: 21-27
 12. Ferguson LF, Davidson JDP, Landry T, **Clements JC**, Therriault TW. *Didemnum vexillum*: Invasion potential via harvesting and processing of the Pacific oyster (*Crassostrea gigas*) in British Columbia, Canada. *Manag. Biol. Invasion.* 8: 553-558
 11. **Clements JC**. Open access articles receive more citations in hybrid marine ecology journals. *FACETS.* 2: 1-14
- 2016
10. **Clements JC**, **Woodard KW***, Hunt HL. Porewater acidification alters the burrowing behaviour and post-settlement dispersal of juvenile soft-shell clams (*Mya arenaria*). *J. Exp. Mar. Biol. Ecol.* 447: 103-111
 9. **Clements JC**, Chopin T. Ocean acidification and marine aquaculture in North America: potential impacts and mitigation strategies. *Rev. Aquacult.* 9: 326-341
- 2015
8. **Clements JC**, Hunt HL. Marine animal behavior in a high- CO_2 ocean. *Mar. Ecol. Prog. Ser.* 536: 259-279
 7. **Clements JC**. Using Facebook to enhance independent student engagement: a case study with first-year undergraduates. *Higher Educ. Stud.* 5: 131-146
- 2014
6. **Clements JC**, Rawlings TA. Ontogenetic shifts in the predatory habits of the northern moonsnail (*Lunatia heros*) on the northwestern Atlantic coast. *J. Shellfish Res.* 33: 755-768
 5. Ghasemi F, **Clements JC**, Taheri M, Rostami A. Changes in quantitative distribution of Caspian Sea polychaetes: prolific fauna formed by non-indigenous species. *J. Great Lakes Res.* 40: 692-698
 4. **Clements JC**, Hunt HL. Influence of sediment acidification and water flow on sediment acceptance and dispersal of juvenile soft-shell clams (*Mya arenaria* L.). *J. Exp. Mar. Biol. Ecol.* 453:62-69

- 2013
3. **Clements JC**, Ellsworth-Power M, Rawlings T. Diet breadth of the northern moonsnail (*Lunatia heros*) on the northwestern Atlantic coast. *Am. Mal. Bull.* 31: 331-336
 2. **Clements JC**, Doucet DA, McCorquodale DB. Establishment of a European cockroach, *Ectobius lapponicus* (L.) (Dictyoptera: Blattellidae), in the Maritime Provinces of eastern Canada. *J. Acad. Entomol. Soc.* 9: 4-7
- 2012
1. **Clements JC**. First record of the Fiery Skipper, *Hylephila phyleus* Drury (Lepidoptera: Hesperiidae) from New Brunswick, Canada. *J. Acad. Entomol. Soc.* 8:55-60
- In review
1. **Clements JC**, Harrison S, Roussel M, Hunt J, Power B-L, Sonier R. Human activity during an extreme heatwave increases alters predator-prey activity and increases indirect fishing mortality in a ubiquitous nearshore system. *Communications Biology*. COMMSBIO-24-6984-T (Revision submitted)

Government / industry reports and publications

- 2024
9. Niles M, Harbicht A, Barrell J, Clements JC, Sonier R. Scallop fishery assessment of the southern Gulf of St. Lawrence to 2023: commercial fishery and survey data. *Canadian Science Advisory Secretariat Research Document* 2024/076. https://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2024/2024_076-eng.html
 8. Rondeau A, Goff-Beaton AD, Harbicht A, Anderson B, Moore B, Ricard D, Fillion D, Augustine E, Lawler E, White J, Clements JC, Barrell J, McDermid J, Lowe K, Carroll L, Bennett L, Ferguson L, Landry L, Ouellette M, Morency M, Robertson M, Giffin M, Roy M, Niles M, Legacé N, McDonald R, MacDonald R, Sonier R, Barlow R, Thomas T. Southern Gulf of St. Lawrence, NAFO Division 4T, sea scallop (*Placopecten magellanicus*) stock assessment to 2023. *Canadian Science Advisory Secretariat Science Advisory Report* 2024/037. https://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2024/2024_037-eng.html
- 2023
7. Barrell J, Arsenault T, Clements JC, Coffin MRS, Comeau S, Dickson E, Ditlecadet D, Guyondet T, Knysh K, Mills C, Moriyasu M, Niles M, Ouellette M, Rolland N, Roy M, Sonier R. Spatial overlap and likely effects of shellfish aquaculture on eelgrass (*Zostera marina*) in the southern Gulf of St. Lawrence. *Canadian Science Advisory Secretariat Science Response* 2023/034. https://www.dfo-mpo.gc.ca/csas-sccs/Publications/ScR-RS/2023/2023_034-eng.html
- 2021
6. Coffin MRS, Poirier LA, Clements JC, Dickson E, Guyondet T, van den Heuvel MR. Dissolved oxygen as a Marine Environmental Quality (MEQ) measure in upper estuaries of the southern Gulf of St. Lawrence: Implications for nutrient management and eelgrass (*Zostera marina*) coverage. *Canadian Science Advisory Secretariat Research Document* 2021/056. https://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2021/2021_056-eng.html
- 2018
5. Clements JC, Faille G, Gregory R, Joseph V, Kenchington E, Krumhansel K, Longtin C, Maillet M, Wareham-Hayes VE, Wong M. Habitat, coastal, and significant benthic areas. In: Bernier RY, Jamieson RE, Moore AM (eds.) Proceedings of the State of the Ocean: Atlantic - Synthesis Workshop. *Canadian Technical Report of Fisheries and Aquatic Science* 3167. <https://www.dfo-mpo.gc.ca/oceans/publications/soto-rceo/2018/atlantic-synthesis-atlantique-synthese/index-eng.html>
 4. Clements JC, Bourque D, Stephenson M, Comeau LA. Understanding the distribution of a nemertean predator, *Cerabratulus lacteus*, in clam flats: implications for control measures. *Fisheries and Oceans Canada ACRDP Final Report*, Project #G-14-01-001
 3. Clements JC. Born to be wild? Fisheries and Oceans Canada – Atlantic Science Enterprise Centre Blog. <http://www.dfo-mpo.gc.ca/science/sec-ces/atlantic-atlantique/blog/2018-02-18/index-eng.html>
- 2017
2. Clements JC, LeBlanc A, Comeau LA. Fisheries and Oceans Canada ACRDP Final Report. The effects of a hydraulic dredge and adding shells on the environment and soft-shell clam population dynamics. *Fisheries and Oceans Canada ACRDP Final Report*, Project #15-2-G-02

1. Clements JC, Bourque D, Stephenson M, Comeau LA. Investigating *Polydora* outbreak in New Brunswick off bottom cultured oysters. *Fisheries and Oceans Canada ACRDP Final Report*, Project #G-14-01-002

Other online publications

- | | |
|------|---|
| 2020 | 6. Clements JC. Don't let big names and impressive stories influence your peer review. <i>Nature Index</i> https://go.nature.com/2RnByKV |
| 2018 | 5. Clements JC. Reader beware of predatory scientific aquaculture literature. <i>Global Aquaculture Alliance</i> . https://www.aquaculturealliance.org/advocate/reader-beware-of-predatory-scientific-aquaculture-literature/ |
| 2017 | 4. Clements JC, Rabaiotti D. Surviving the question period. <i>ASBMB Today</i> . 16:30-31 3. Clements JC. Conflict of Pinterest: Is social media a conflict of interest source in academic peer review? <i>The CSP Blog</i> . http://blog.cdnsiencepub.com/conflict-of-pinterest-is-social-media-a-conflict-of-interest-source-in-academic-peer-review/ 2. Clements JC. Open up! On the benefits of open access publishing. <i>The CSP Blog</i> . http://blog.cdnsiencepub.com/open-up-on-the-benefits-of-open-access-publishing/ |
| 2015 | 1. Clements JC. Using social media as a classroom learning platform. <i>UNBSJ Teaching Matters Newsletter</i> . Spring 2015:11-12 |

Policy application

52 policy citations across in 39 separate policy documents of regional, national and international applicability, including reports from the IPCC, UN, and FAO. Member of two international working groups (ICES, DFO-NOAA).

- | | |
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| 2025 | <p>National/International: DFO National Lead on the ICES Benthos Ecology Working Group (BEWG) (2024-present)</p> <p>National/International: DFO Gulf regional representative on the DFO-NOAA Ocean Acidification Research, Experimentation and Modelling Working Group (2024-present)</p> <p>Regional: Presentation of work regarding ecological shifts and increased indirect fishing mortality of clams during hot weather to ecologists, managers, and Indigenous Guardians at Kouchibouguac National Park led to the consideration of changes in the timing of soft-shell clam monitoring activities (scientific surveys) and the recreational clam fishery within park bounds such that recreational fishing would be prohibited during days where air temperatures exceed 30°C.</p> <p>Regional: Presentation of work regarding ecological shifts and increased indirect fishing mortality of clams during hot weather to the <u>NB Clam Advisory Committee</u> and the <u>PEI Clam Advisory Committee</u> led to discussions and the consideration of changes to the fishing season in each province to avoid periods where air temperatures often exceed 30°C (i.e., July)</p> |
| 2024 | <p>Regional: Provided direct advice regarding oyster and quahog relay fishery seasons in relation to seasonal water temperatures to DFO resource managers in Gulf NS for fishery season decision making purposes. This led to a direct management change in the timing of the oyster fishing season for Gulf Nova Scotia.</p> |
| 2023 | <p>Regional: Co-author of <u>Canadian Science Advisory Secretariat</u> titled, “<i>Spatial overlap and likely effects of shellfish aquaculture on eelgrass (Zostera marina) in the southern Gulf of St. Lawrence</i>” held on March 30, 2023. CSAS Science Response 2023/034 Link</p> |

- 2021 **National:** Co-author of Canadian Science Advisory Secretariat titled, “*Dissolved oxygen as a Marine Environmental Quality (MEQ) measure in upper estuaries of the southern Gulf of St. Lawrence: Implications for nutrient management and eelgrass (Zostera marina) coverage*” [Link](#)
- 2018 **Regional:** Co-author of chapter in the 2018 Atlantic State of the Oceans Report titled, “Habitat, Coastal, and Significant Benthic Areas” [Link](#)
- Regional:** Presentation of work regarding oyster air exposure and summer mortality to the PEI Oyster Advisory Committee led to consideration of changes to the fishing season and direct managerial decision to not change the dates of the season

Conference presentations

* Award-winning † Cancelled due to COVID-19

- 2025 32. Clements JC. Dynamic shifts and a drastic decline in reported landings for the southern Gulf of St. Lawrence commercial clam fishery over the past two decades. **Aquaculture 2025**. New Orleans, USA
 31. Clements JC, Harrison S, Roussel M, Hunt J, Power B-L, Sonier R. Clam fishing during extreme summer heatwaves alters predator-prey activity and increases indirect fishing mortality. **Aquaculture 2025**. New Orleans, USA
- 2024 30. Clements JC, Coffin MRS, Poirier LA, Nadeau A, Bernard T Davidson J,. Community ecology of artificial oyster reefs used as an alternative restoration approach in a fragmenting eelgrass landscape. **Joint Meeting of Atlantic Canada Coastal and Estuarine Science Society and the Bay of Fundy Ecosystem Partnership**. St. Andrews, NB
 29. Clements JC, Harrison S, Hunt J, Brennan I, Hunt HL, Sonier R. Can siphon hole morphometrics be used for population assessments of intertidal soft-shell clams *Mya arenaria*?. **Joint Meeting of Atlantic Canada Coastal and Estuarine Science Society and the Bay of Fundy Ecosystem Partnership**. St. Andrews, NB
- 2023 28. Clements JC, Poirier LA, Davidson J, Bernard T, Coffin MRS. Assessing the effectiveness of concrete blocks as artificial oyster habitat for restoration in a shallow PEI bay. **Meeting of the Atlantic Canadian Coastal and Estuarine Science Society**. Shippagan, NB
 27. Clements JC, Daigle R, Froehlich H. Predator in the pool? Do predatory publishers pose a threat to aquaculture research?. **Meeting of the Atlantic Canadian Coastal and Estuarine Science Society**. Shippagan, NB
 26. Clements JC, George MN. Ocean acidification and bivalve byssus: explaining variable responses using meta-analysis. **115th Annual Meeting of the National Shellfisheries Association**. Baltimore, MD
 25. Clements JC, Ramesh K, Nysveen J, Dupont S, Jutfelt F, Hicks C, Tremblay R, Comeau L. Mussels in hot water: the behavioural ecology of temperate mussels under ocean warming and acidification. **115th Annual Meeting of the National Shellfisheries Association**. Baltimore, MD
 24. Clements JC, Ramesh K, Nysveen J, Dupont S, Jutfelt F, Hicks C, Tremblay R, Comeau L. Mussels in hot water: the behavioural ecology of temperate mussels under ocean warming and acidification. **Joint Meeting of Atlantic Canada Coastal and Estuarine Science Society and the Bay of Fundy Ecosystem Partnership**. Truro, NS
- 2020 †23. Clements JC, Carver C, Mallet M, Comeau L, Mallet AL. Intergenerational effects of low pH exposure on eastern oysters (*Crassostrea virginica*) in the context of an Atlantic Canadian hatchery. **Joint Meeting of Aquaculture Canada and the World Aquaculture Society**. St. John's, NL
 †22. Clements JC, Hicks C, Tremblay R, Comeau LA. Mussels in hot water: elevated seawater temperature but not pCO_2 negatively affects adult mussels. **Joint Meeting of Aquaculture Canada and the World Aquaculture Society**. St. John's, NL

- 2019 21. Clements JC, Sundin J, Clark TD, Jutfelt J. The decline effect in ocean acidification ecology. Society for Experimental Biology (SEB). Seville, Spain
- 2018 20. Clements JC. Behavioural ecology in a naturally-acidic environment: the curious case of the soft-shell clam. NTNU Physiology Lunch. Trondheim, NO
19. Clements JC, Sundin J, Clark TD, Jutfelt F. Does ocean acidification really affect fish behaviour? CBD Blue Lunch Series. Trondheim, NO
- 2017 18. Clements JC, McCorquodale DB, Doucet BA, Ogden JB. The Dusky Cockroach in the Canadian Maritimes: establishment, persistence, and ecology. Meeting of the Acadian Entomological Society. Charlottetown, PEI
17. Clements JC, Comeau LA, Carver CE, Mayrand E, Plante S, Mallet AL. Oysters on the edge: ocean acidification effects on adult eastern oyster behaviour in the context of coastal variability. Meeting of the Atlantic Canadian Coastal and Estuarine Science Society. Montreal, QC
- 2016 16. Clements JC. Benthic behavior in a high CO₂ world. St. Andrews Biological Station Benthic Workshop. St Andrews, NB
- 2015 15. Clements JC, Hunt HH. Clams on acid: experimental effects of sediment acidification and elevated temperature on juvenile soft-shell clam burrowing. Coastal and Estuarine Research Federation Biennial Meeting. Portland, OR
14. Clements JC, Hunt HH. Impacts of porewater acidification on recruitment and size of juvenile soft-shell clams in the Bay of Fundy. Meeting of the Atlantic Canadian Coastal and Estuarine Science Society. St. Andrews, NB
*13. Clements JC, Woodard KW, Hunt HH. Clams on acid: experimental effects of sediment acidification on burrowing behaviour and dispersal of juvenile soft-shell clams. 107th National Shellfisheries Association meeting. Monterey, CA
- 2014 12. Clements JC, Hunt HH. Clams on acid: experimental effects of sediment acidification on burrowing behaviour and dispersal of juvenile soft-shell clams (*Mya arenaria*). St. Andrews Biological Station Benthic Workshop. St Andrews, NB
*11. Clements JC, Hunt HH. Commercial gelatin as a tool for carbonate geochemistry stabilization in marine soft sediments and its application for benthic ecology. Meeting of the Atlantic Canadian Coastal and Estuarine Science Society. Halifax, NS
*10. Clements JC, Hunt HH. Clams on acid: experimental effects of sediment acidification on burrowing behaviour and dispersal of juvenile soft-shell clams (*Mya arenaria*). Meeting of the Atlantic Canadian Coastal and Estuarine Science Society. Halifax, NS
9. Clements JC, Hunt HH. Clams on acid: experimental effects of sediment acidification on burrowing behaviour and dispersal of juvenile soft-shell clams (*Mya arenaria*). UNB Graduate Research Conference. Fredericton, NB
- 2013 8. Clements JC, Hunt HH. Influence of sedimentary aragonite saturation state ($\Omega_{\text{aragonite}}$) on sediment acceptance and dispersal of juvenile soft-shell clams (*Mya arenaria* L.). Coastal and Estuarine Research Federation Biennial Meeting. San Diego, CA
7. Clements JC, Hunt HH. Influence of surface-sediment pH and $\Omega_{\text{aragonite}}$ on sediment acceptance and dispersal of juvenile soft-shell clams (*Mya arenaria*). Meeting of the Atlantic Canadian Coastal and Estuarine Science Society. Lawrencetown, NS
6. Clements JC, Hunt HH. Influence of surface-sediment pH and $\Omega_{\text{aragonite}}$ on sediment acceptance and dispersal of juvenile soft-shell clams (*Mya arenaria*). UNB Graduate Research Conference. Fredericton, NB
- 2012 *5. Clements JC, Hunt HH. Influence of surface sediment pH and carbonate saturation state on soft-shell clam (*Mya arenaria*) recruitment in the Bay of Fundy. Meeting of the Atlantic Canadian Coastal and Estuarine Science Society. Halifax, NS
- 2011 *4. Clements JC, Rawlings TA. Feeding ecology of the northern moon snail (*Euspira heros*) (Gastropoda: Naticidae) in Cape Breton, Nova Scotia. CBU Student Undergraduate Research Forum. Sydney, NS

*3. Clements JC, Rawlings TA. Feeding ecology of the northern moon snail (*Euspira heros*) (Gastropoda: Naticidae) in Cape Breton, Nova Scotia. Atlantic Undergraduate Biology conference. Halifax, NS

2009 *1. Clements JC, Bouman OT. Whole-plant plasticity of balsam fir and paper birch on extreme sites in eastern Cape Breton. CBU Student Undergraduate Research Forum. Sydney, NS

Invited seminars

| * <i>Virtual</i> | ** <i>Cancelled due to COVID-19</i> | † <i>Declined</i> |
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| 2025 | *25. Keep clam and carry on: Applied ecology to inform clam fisheries management in eastern Canada. Rutgers University Ecology and Evolution Seminar Series. New Jersey, USA | |
| 2024 | 24. Clam fishing during extreme summer heatwaves alters ecosystem function and increases indirect fishing mortality via shifts in predator-prey dynamics DFO Gulf Seminar Series. Moncton, NB | |
| 2022 | †23. Professionalism in scientific peer review. Behaviour 2023. Bielefeld, Germany | |
| 2021 | *21. A personal tale of mental health in academia. Reaching Higher Conference. Fredericton, NB *20. Mussels in hot water: the behavioural ecology of temperate mussels under ocean warming and acidification. WasserCluster Lunz Seminar Series. Austria *19. Ocean acidification and fish behaviour: impending doom or false alarms? Science Atlantic – Atlantic Undergraduate Biology, Aquaculture and Fisheries Conference (Plenary). Sydney, NS *18. Ocean acidification and fish behaviour: impending doom or false alarms? University of Calgary EEB Seminar Series. Calgary, AB | |
| 2020 | *17. Ocean acidification and fish behaviour: doom and gloom or false alarms? St. FX Undergraduate Research Seminar. Antigonish, NS *16. To dig or not to dig: marine bivalve behaviour under high CO ₂ . VIMS College of William and Mary Seminar Series. Gloucester Point, VA **15. What have we learned over a decade of research on ocean acidification and fish behaviour? Science Atlantic – Atlantic Undergraduate Biology, Aquaculture and Fisheries Conference (Plenary). Sydney, NS 14. Four “simple” steps to get where you’re going. Reaching Higher Conference. Fredericton, NB 13. Ocean acidification and fish behaviour: impending doom or false alarms? DFO Gulf Seminar Series. Moncton, NB | |
| 2019 | 12. Ocean acidification and fish behaviour: impending doom or false alarms? Acadia University Seminar Series. Wolfville, NS 11. The 'decline effect' characterizes a decade of ocean acidification research on fish behaviour. UNB Saint John Graduate Seminar Series. Saint John, NB 10. To dig or not to dig: marine bivalve behaviour under high CO ₂ . Mount Allison University (faculty interview). Sackville, NB 9. To dig or not to dig: marine bivalve behaviour under high CO ₂ . Texas A&M University Corpus Christi (faculty interview). Corpus Christi, TX 8. To dig or not to dig: marine bivalve behaviour under high CO ₂ . Auburn University (faculty interview). Auburn, AL | |
| 2018 | 7. Predator in the pool: predatory publishing in aquaculture research. DFO Gulf Seminar Series. Moncton, NB | |

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| 2017 | <p>6. Marine animal behavior in a high CO₂ world. Cape Breton University Undergraduate Seminar. Sydney, NS</p> <p>5. Oysters on the edge: Ocean acidification effects on adult oysters in the context of coastal variability. DFO Gulf Seminar Series. Moncton, NB</p> <p>4. Marine animal behavior in a high CO₂ world. University of Prince Edward Island Seminar Series. Charlottetown, PE</p> <p>3. Marine animal behavior in a high CO₂ world. Université de Moncton Seminar Series. Moncton, NB</p> |
| 2016 | <p>2. Marine animal behavior in a high CO₂ world. St. Francis Xavier University Seminar Series. Antigonish, NS</p> |
| 2014 | <p>1. Social media and research: The use of social media in academia and Altmetric application. UNB Bailiwick. Saint John, NB</p> |

Industry and government presentations

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| 2025 | <p>14. Oyster population uncertainties in a time of disease and the role of conservation. PEI Oyster Advisory Meeting. Charlottetown, PE</p> <p>13. Clam fishing during extreme summer heatwaves alters ecosystem function and increases indirect fishing mortality via shifts in predator-prey dynamics PEI Clam Advisory Meeting. Charlottetown, PE</p> <p>12. Clam fishing during extreme summer heatwaves alters ecosystem function and increases indirect fishing mortality via shifts in predator-prey dynamics New Brunswick Shellfish Working Group Meeting. Virtual.</p> <p>11. Clam fishing during extreme summer heatwaves alters ecosystem function and increases indirect fishing mortality via shifts in predator-prey dynamics New Brunswick Clam Advisory Meeting. Miramichi, NB</p> |
| 2024 | <p>10. Resurrecting soft-shell clam fisheries research at DFO Gulf. PEI Shellfish Association AGM. Summerside, PE</p> |
| 2023 | <p>9. Climate change and shellfish aquaculture in Atlantic Canada: Effects of ocean warming and acidification on PEI mussels and NB oysters. PEI Aquaculture Association AGM. Charlottetown, PE</p> <p>8. Oyster research update: 2022-2023. New Brunswick Oyster Advisory Meeting. Charlottetown, PE</p> <p>7. Soft-shell clam research update: 2022-2023. PEI Shellfish Association Clam Advisory Meeting. Charlottetown, PE</p> |
| 2022 | <p>6. Clam restoration techniques and their effectiveness. PEI Shellfish Association Annual General Meeting. Charlottetown, PE</p> |
| 2018 | <p>5. Impacts of elevated seawater temperature and pCO₂ on PEI mussels. PEI Aquaculture Alliance Annual General Meeting. Charlottetown, PE</p> <p>4. Settlement of larval oysters (<i>Crassostrea virginica</i>) on natural versus man-made substrates. Atlantic Science Enterprise Workshop: Interactions between wild oyster beds and cultured oyster farms. Charlottetown, PE</p> <p>3. Comparing effects of air exposure on mortality of PEI oysters (<i>Crassostrea virginica</i>) between June and July. PEI Oyster Advisory Committee. Charlottetown, PE</p> |
| 2017 | <p>2. Habitats / coastal and significant areas: Status and trends summary. DFO State of the Ocean, Atlantic Region Workshop. Moncton, NB</p> |
| 2014 | <p>1. Experimental effects of sediment acidification on juvenile soft-shell clams: Implications for Atlantic shellfisheries. Atlantic Canada Fish Farmers Association Workshop. St. Andrews, NB</p> |

HQP supervision

Undergraduate student

Graduate student

Postdoctoral

Professional staff

Current

Mount Allison University

[William Chapman](#), 2024-present

BSc honours student (co-supervised with J. Kurek, C. Richards)

University of New Brunswick, Saint John

[Brooke-Lyn Power](#), 2024-present

MSc student (co-supervised with H. Hunt)

University of New Brunswick, Saint John

[Sarah Harrison](#), 2023-present

MSc student (co-supervised with H. Hunt)

DFO Gulf

[Shannon Douthright](#), 2024-present

Aquatic Science Technician

Former

Université du Québec à Rimouski

[Dr. Guillaume Bridier](#), 2022-2024

Postdoctoral fellow (co-supervised with R. Tremblay and L. Comeau)

Université de Moncton

[Tamara Ledoux](#), 2020-2023

MSc student (co-supervised with G. Miron and R. Sonier)

DFO Gulf

[Claire Carver](#), 2022-2023

Aquatic Science Technician

University of Alberta

[Hannah Lowes](#), 2019

BSc honours student (co-supervised with T. Blewett)

Current position: MSc candidate, University of Alberta (recently defended)

University of New Brunswick, Saint John

[Melanie Bishop](#), 2015

BSc honours student (co-supervised with H. Hunt)

Current position: Physiotherapist, Northside Physiotherapy Clinic - pt Health

University of New Brunswick, Saint John

[Krystal Woodard](#), 2014

BSc honours student (co-supervised with H. Hunt)

Current position: Aquatic Science Technician, Fisheries and Oceans Canada
Winnipeg (Freshwater Institute)

Additional teaching and supervisory experience

2023

Guest lecture

University of New Brunswick Saint John

History and Development of Aquaculture (Topic: climate change and shellfish aquaculture in Atlantic Canada)

Virtual guest lecture

Algoma University

Aquatic Biology (Topic: climate change effects on mussels in Atlantic Canada)

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| 2022 | <p>Guest lecture University of New Brunswick Saint John Marine Semester (Topic: climate change and shellfish aquaculture in Atlantic Canada)</p> <p>Workshop instructor Joint Meeting of Atlantic Canada Coastal and Estuarine Science Society and the Bay of Fundy Ecosystem Partnership. "Introduction to systematic reviews and meta-analyses"</p> |
| 2021 | <p>Workshop instructor Memorial University of Newfoundland "Meta-analysis 101: Grasping the basics of evidence synthesis using R" Workshop hosted by MUN BGSA and OSGSA</p> <p>Virtual guest lecture University of New Brunswick Saint John History and Development of Aquaculture (Topic: climate change and shellfish aquaculture in Atlantic Canada)</p> |
| 2020 | <p>PhD proposal examining committee member University of New Brunswick Saint John PhD candidate: Samantha McGarrigle</p> <p>Virtual guest lecture University of New Brunswick Saint John Marine Semester (Topic: Ocean acidification)</p> |
| 2018 | <p>PhD external work placement supervisor University of Prince Edward Island PhD candidate: Paula Tummon-Flynn</p> <p>MSc examining committee member Dalhousie University MSc candidate: Ian Sewell</p> |
| 2017 | <p>Contract academic instructor University of New Brunswick Saint John BIOL 4445: Marine Behavioural Ecology</p> <p>MSc examining committee member Université de Moncton MSc candidate: Roxanne Saulnier</p> |
| 2016 | <p>Contract academic instructor University of New Brunswick Saint John BIOL 4445: Marine Behavioural Ecology</p> <p>Teaching assistant orientation leader University of New Brunswick Saint John</p> |
| 2015 | <p>Contract academic instructor University of New Brunswick Saint John BIOL 1202: Introduction to Marine Science</p> <p>Guest lectures University of New Brunswick Saint John BIOL 4861: Advanced Environmental Biology (Topic: Ocean acidification) BIOL 3625: Structure and Function of Marine Invertebrates (Topic: Molluscs) BIOL 6913: Research Methods (Topic: Social media use) BIOL 3165: Marine Ecology (Topic: Ocean acidification)</p> |

Experimental teaching

University of New Brunswick Saint John

Empirical study re. engaging students with social media in BIOL 1202

Noteworthy products of the research:

- Selected as 1 of 14 “Disruptive Innovators” at UNB (<https://bit.ly/2ElezeU>)
- Three research seminars
- Two publications

2014

Contract academic instructor

University of New Brunswick Saint John

BIOL 2125: Introductory Botany

Guest lectures

University of New Brunswick Saint John

BIOL 1202: Introduction to Marine Science (Topic: Ocean acidification)

BIOL 3541: Plant Ecology (Topic: Statistics)

BIOL 3625: Structure and Function of Marine Invertebrates (Topic: Molluscs)

BIOL 2125: Introductory Botany (Topic: Scientific writing)

Kate Frego Teaching Mentorship Program

University of New Brunswick Saint John

Mentee of Dr. Emin Civi

Teaching assistant orientation leader

University of New Brunswick Saint John

2013

Teaching assistant

University of New Brunswick Saint John

Guest lecture

University of New Brunswick Saint John

BIOL 3165: Marine Ecology (Topic: Soft sediment habitats)

2012

Teaching assistant

University of New Brunswick Saint John

Guest lecture

University of New Brunswick Saint John

BIOL 3625: Structure and Function of Marine Invertebrates (Topic: Malacology)

2011

Teaching assistant

University of New Brunswick Saint John

Guest lecture

Cape Breton University

NATSCI 120: Natural Science (Topic: Gastropod ecology)

2010

Teaching assistant

Cape Breton University

Scholarships and fellowships

2017

Marie Skłodowska-Curie Individual Postdoctoral Fellowship

Norwegian University of Science and Technology

CAD \$276,358 for 2 years

2016

NSERC Visiting Postdoctoral Fellowship

Fisheries and Oceans Canada

CAD \$151,509 for 3 years

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| | Marguerite & Murray Vaughan Scholarship University of New Brunswick Saint John CAD \$18,000 accrued over for 4 years |
| 2015 | NBIF Scholarship University of New Brunswick Saint John CAD \$6,000 for 1 year |
| 2006 | Cape Breton University Entrance Scholarship Cape Breton University CAD \$2,000 |
| | Royal Canadian Legion National Scholarship Cape Breton University CAD \$1,000 |
| | Jason Simmons Memorial Scholarship Cape Breton University CAD \$500 |
| | McDonald's Scholarship Cape Breton University CAD \$500 |

Awards

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| 2025 | 2024 Spokesperson of the Year Award Fisheries and Oceans Canada Moncton, NB, Canada |
| 2015 | Thurlow C. Nelson Award National Shellfisheries Association (NSA) Meeting Monterey, CA, USA |
| 2014 | Best Oral Presentation Award Atlantic Canada Coastal and Estuarine Science Society Meeting Halifax, NS, Canada |
| | Runner-up Poster Presentation Award Atlantic Canada Coastal and Estuarine Science Society Meeting Halifax, NS, Canada |
| 2012 | Best Oral Presentation Award Atlantic Canada Coastal and Estuarine Science Society Meeting Halifax, NS, Canada |
| 2011 | Cape Breton University Book Award Cape Breton University Sydney, NS, Canada |
| | Best Oral Presentation Award Cape Breton University Student Undergraduate Research Forum Sydney, NS, Canada |
| | NSERC Student Undergraduate Best Oral Presentation Award Atlantic Undergraduate Biology Conference Halifax, NS, Canada |

- 2010 **Best Oral Presentation Award**
Cape Breton University Student Undergraduate Research Forum
Sydney, NS, Canada
- 2006 **Dr. Donald Ferguson Memorial Award**
Glance Bay High School
Glance Bay, NS, Canada

Academic service and recognition

- 2024 **Editor-in-Chief candidate**
Estuaries & Coasts (peer-reviewed journal)
One of four final candidates considered for Co-Editor-in-Chief
- Subject editor**
FACETS (2020 – present; peer-reviewed journal)
- Editor**
DFO Gulf Publications (2020 – present)
CERF Coastal & Estuarine Science News (2015 – present)
- International Working Group member**
ICES Benthos Ecology Working Group (BEWG)
DFO National Lead
- International Working Group member**
DFO-NOAA Ocean Acidification Research, Experimentation and Modelling
Working Group
Regional Representative, DFO Gulf
- President**
Atlantic Canada Coastal and Estuarine Science Society (2021 – present)
- PhD dissertation committee member**
Sophia Piper
Rutgers University, Department of Ecology and Evolution
Supervisor: Dr. Daphne Munroe
- Committee member**
Regional Science Culture Committee
DFO Gulf
- Affiliate Society Presidents Committee
Coastal and Estuarine Research Federation
- Peer reviewer**
Peer reviewer for more than **100 primary manuscripts** for **50+ journals**
Peer reviewer for more than **200 grant proposals** for **4 funding agencies**
Member – New Brunswick Innovation Foundation Network of Peer Reviewers
(2020–present)
- 2020 **Committee member**
Local Organizing Committee
2021 American Malacological Society Meeting
Sydney, NS

2018 **Committee member**
 Local Organizing Committee
 2019 Canadian Society for Ecology and Evolution Meeting
 Fredericton, NB

Outreach & Development Committee
 Coastal and Estuarine Research Federation
 Leader of CERF social media team

2017 **Committee member**
 Outreach & Development Committee
 Coastal and Estuarine Research Federation
 Leader of CERF social media team

2016 **Committee member**
 Outreach & Development Committee
 Coastal and Estuarine Research Federation
 Leader of CERF social media team

2015 **Committee member**
 Scientific Advisory Committee
 LemonSea Project

Local Organizing Committee
 2015 Atlantic Canadian Coastal and Estuarine Science Society Meeting
 St. Andrews, NB

Outreach & Development Committee
 Coastal and Estuarine Research Federation
 Member of CERF social media team

Various university committees
 University of New Brunswick Saint John
 Review Committee for the Registrar
 Program Review Committee
 Information. Services & Systems

2014 **President**
 Graduate Student Association
 University of New Brunswick Saint John

Committee member
 Outreach & Development Committee
 Coastal and Estuarine Research Federation

Committee member
 Various university committees
 University of New Brunswick Saint John
 Teaching Excellence & Policy
 Search for Acting Dean of the Faculty of SASE
 Review Committee for the Registrar
 Information. Services & Systems
 Graduate Research Seminar Feedback Committee

2013 **President**
 Graduate Student Association
 University of New Brunswick Saint John

Committee member

Various university committees
 University of New Brunswick Saint John
 Teaching Excellence & Policy
 Search for Acting Dean of the Faculty of SASE
 Program Review Committee
 Graduate Research Seminar Feedback Committee

2012

President

UNBSJ Graduate Student Association
 University of New Brunswick Saint John

Committee member

Various university committees
 University of New Brunswick Saint John
 Program Review Committee

2011

Vice president

Graduate Student Association
 University of New Brunswick Saint John

2010

Committee member

Various university committees
 Cape Breton University
 Department of Biology Senate
 Biology Undergraduate Research Committee

Formal training, workshops, and webinars

2024

The Fundamentals of OCAP®

First Nations Information Governance Centre
 Completed formal training online

Cultural Humility for Inclusive Leadership

Coastal and Estuarine Research Federation
 Instructor: Shani Dellimore Barrax

2016

Marine evolution under climate change

University of Gothenburg
 Instructors: Dr. Sam Dupont and Dr. Piero Calosi

2020

Ecosystem approach to fisheries management

Fisheries and Oceans Canada
 Instructor: Dr. Pierre Pepin

2015

Spatial statistics: from descriptive to inferential methods

Meeting of the Atlantic Canadian Coastal and Estuarine Science Society
 Instructor: Dr. Marie-Josée Fortin

Climate change and aquaculture in Canada: Atlantic workshop

NSERC partnership workshop with St. Andrews Biological Station
 Instructor: Dr. Gregor Reid

2012

Designing writing assignments that teach

Cape Breton University
 Instructor: Dr. Jan Pechenik

Guiding student revision without killing ourselves in the process

Cape Breton University

Instructor: Dr. Jan Pechenik

Webinars

2016 **Our ocean in a high CO₂ world: The latest in science & communication**

SOARCE Webinar Series

National Oceanic and Atmospheric Administration

2014 **Bringing OA research to the classroom**

SOARCE Webinar Series

National Oceanic and Atmospheric Administration

Communicating OA around the world

SOARCE Webinar Series

National Oceanic and Atmospheric Administration

From science to communication

SOARCE Webinar Series

National Oceanic and Atmospheric Administration

Science communication and public outreach

2024 **Radio series**
CBC Radio Information Morning
Conducted a series of interviews regarding animals found on the beaches of PEI with six different CBC Morning shows in Newfoundland, Nova Scotia, and New Brunswick

2023 **Radio series**
CBC Radio Island Morning
Conducted a series of five interviews with CBC Island Morning regarding animals found on the beaches of PEI

2019 **Public outreach demonstrations**
Kristineberg Marine Research Centre
Västerhavsveckan, West Coast Week (Topic: bivalve ecosystem services)
Fiskebäckskil, Sweden

2018 **Webinar**
NOAA – Northeast Coastal Acidification Network
Beyond dissolution: sediment acidification effects on bivalves and their ecological consequences

2017 **Webinar**
Coastal and Estuarine Research Federation
Social media and science: navigating science communication in a hyper connected world

2016 **Public seminar**
Moncton Naturalists' Club
Ocean acidification: The other CO₂ problem
Moncton, NB

2015 **Public seminar**
Sussex Naturalists' Club
Ocean acidification: The other CO₂ problem
Sussex, NB

Conference workshop

Biennial Meeting of the Coastal and Estuarine Research Federation

Title: Social media and science

Portland, OR

Educational outreach

Fundy Regional Science Fair

Shad Valley

Saint John, NB

2014

Public outreach: Letters to the editor (newspaper)

Cape Breton Post

Toon reinforced climate change misconceptions

Times & Transcript

News media biased against UNB profs

Educational outreach

Fundy Regional Science Fair

Shad Valley

Saint John, NB

Public seminar

Saint John Naturalists' Club

Ocean acidification: The other CO₂ problem

Saint John, NB

Volunteer

Let's Talk Science University of New Brunswick Saint John

Saint John, NB

2013

Educational outreach

Shad Valley

Saint John, NB

Volunteer

Let's Talk Science, University of New Brunswick Saint John

Saint John, NB

Event organizer

Stand Up for Science

Fredericton, NB

In the news

2024

Radio-Canada [Link](#)

Le port de Charlottetown grouille déjà de méduses

CBC [Link](#)

'They're everywhere': A large swarm of jellyfish is attracting attention in Charlottetown

CBC [Link](#)

How's the water in Charlottetown Harbour? It's already warm — and swarming with jellyfish

2023

CBC [Link](#)

Hermit crabs: The social animal that will help its peers come out of their shells (by force)

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| | <p>CBC Link 'Boring,' 'damn ugly,' 'pretty gross': These are words that describe the lugworm</p> <p>CBC Link Mermaid coins or sea biscuits: Here's the scoop on sand dollars</p> <p>CBC Link Cannibalistic mollusk: The secret life of the northern moon snail</p> <p>CBC Link They don't sting, but sea gooseberries are tough little critters</p> |
| 2022 | <p>Phys.org Link Sharp decline in reported severity of ocean acidification impacts on fish behaviour</p> <p>Science Magazine Link Sharp decline in reported severity of ocean acidification impacts on fish behaviour</p> <p>LabRoots Link Reports of severe ocean acidity and its effects on fish have declined</p> |
| 2021 | <p>CBC Quirks and Quarks Link Normally herbivorous sea urchins turn the tables on a predatory sun star</p> <p>ScienceNews Link Urchin mobs team up to butcher sea stars that prey on them</p> <p>Popular Mechanics (in Russian) Link How sea urchins team up to kill starfish</p> <p>Naked Science (in Russian) Link For the first time, biologists observed the "schooling" of sea urchins</p> <p>Havnet.nu (in Swedish) Link Sea urchins in collective attack</p> <p>Science Link Does ocean acidification alter fish behavior? Fraud allegations create a sea of doubt</p> <p>Phys.org Link Studies find that higher temperatures have an adverse effect on mussels</p> |
| 2020 | <p>Hatchery International Link Canadian Maritime oysters show resilience to ocean acidification: study</p> <p>The Fish Site Link East coast oysters show resilience to ocean acidification</p> |
| 2019 | <p>The Fish Site Link Can shellfish aquaculture save coastal bays?</p> <p>Aquaculture North America Link The power of aquaculture</p> |
| 2018 | <p>Aquaculture North America Link Questionable research papers could pose threat to aquaculture</p> <p>The Fish Site Link Infernal journals and how to spot them</p> <p>SciDev Net Link Acidified oceans may affect fish populations — study</p> |

2017

UNB Alumni Magazine [Link](#)

Marine biology at UNB Saint John: Unlocking the mysteries of the Bay of Fundy

Telegraph Journal [Link](#) currently unavailable

UNBSJ alumnus receives prestigious research grant

UNB News [Link](#)

UNB alumnus awarded prestigious Marie Curie Fellowship from European Union

LiveScience [Link](#)

#DoesItFart: Database answers your burning questions about animal gas

Popular Science [Link](#)

#DoesItFart is the burning science question you never knew you had

2015

Portland Press Herald [Link](#)

Shellfish can't keep up with shifting ocean chemistry

2014

CBC News [Link](#)

Research links clam behaviour to climate change
