

Marie-Josée Fortin, Ph.D., F.R.S.C.

*Curriculum Vitae*

**BIOGRAPHICAL INFORMATION**

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**DEGREES**

1992-94 Postdoctoral Fellow. Département de Biologie and Centre d'études nordiques, Université Laval.  
Supervisor: Dr. Serge Payette  
1992 PhD *Detection of ecotones: definition and scaling factors*. Department of Ecology and Evolution, State University of New York at Stony Brook, USA. Advisor: Dr. Robert R. Sokal  
1986 MSc *Analyse spatiale de la répartition des phénomènes écologiques: Méthodes d'analyse spatiale, théorie de l'échantillonnage*. Département de Sciences biologiques, Université de Montréal.  
Advisor: Dr. Pierre Legendre  
1983 BSc Département de Sciences biologiques, Université de Montréal

**POSITIONS**

2006- Full Professor, Department of Ecology and Evolutionary Biology, University of Toronto  
2001-06 Associate Professor (tenured January 2001), Department of Zoology, University of Toronto  
2000-01 Associate Professor, School of Resources and Environmental Management, Simon Fraser University  
2000 Associate Professor (tenured June 1 2000), Département de Géographie, Université de Montréal  
1997-00 Assistant Professor, Département de Géographie, Université de Montréal  
1994-97 Assistant Professor, Département de Biologie, Université de Sherbrooke  
1985 Lecturer of undergraduate course *Biométrie*, Département de Sciences biologiques, U. de Montréal

**Appointments**

2017- NSERC Strategic Network Lake Pulse Theme-3 Leader  
2016-17 NSERC CREATE Enviro Implementation Committee Member  
2016- Cross Appointment, Department of Statistics, University of Toronto  
2005- Cross Appointment, Department of Geography, University of Toronto  
2002- Cross Appointment, Faculty of Forestry, University of Toronto  
2002-05 Summer School Program Director for GEOIDE (NSERC-NCE: Geomatics for Informed Decisions Centre of Excellence Network)  
2001-02 Associate Scientific Director for GEOIDE Network (NSERC-NCE: Geomatics for Informed Decisions Centre of Excellence Network)  
1998-03 Environment and Marine Thrust Leader for GEOIDE Network (NSERC-NCE: Geomatics for Informed Decisions Centre of Excellence Network)  
1994 Visiting Researcher, Department of Ecology and Evolutionary Biology, University of Connecticut  
1993 Cary Summer Research Fellow Cary Institute of Ecosystem Studies, New York

**HONOURS**

**Distinctions**

2017 Distinguished Visiting Professor Fellow: Swiss Federal Institute for Forest, Snow & Landscape Research (Zurich, Switzerland)  
2016 Fellow of the Royal Society of Canada  
2016-23 Tier 1 - Canada Research Chair in Spatial Ecology  
2012-15 Distinguished Visiting Professor Fellowship, Science without Borders (CNPq) at INPA (Manaus, Brazil) [One month/per year for three years]  
2015 Award for Outstanding Scientific Achievements from *International Association for Landscape Ecology*  
2014 2014 Highly Cited Researchers in Environment/Ecology from Thomson Reuters  
2013 Distinguished Landscape Ecologist Award from the *US Chapter of the International Association for Landscape Ecology*

**Awards**

- 2019 CSEE President's Award  
 2016, 2017, 2018 Dean's Excellence Award, Faculty Arts and Science, University of Toronto  
 2012, 2013, 2014 Dean's Excellence Award, Faculty Arts and Science, University of Toronto  
 2009, 2010 Dean's Excellence Award, Faculty Arts and Science, University of Toronto  
 2002, 2003, 2004, 2005, 2006 Dean's Excellence Award, Faculty Arts and Science, University of Toronto  
 2002-2007 Premier's Research Excellence Award, Ontario (PREA)  
 2001 Women in Geomatics Mentor Award. GEOIDE 3<sup>rd</sup> Annual Meeting, Fredericton

**Scholarships and Fellowships**

- 2017 Visiting Professor Fellowship (Swiss Federal Institute for Forest, Snow & Landscape Research)  
 1993 Cary Summer Research Fellowship in Ecology. The New York Botanical Garden, Institute of Ecosystem Studies, New York. Scientific sponsor: Dr. Charles Canham  
 1992-94 FCAR Postdoctoral Fellowship, Département de Biologie, Centre d'études nordiques, Université Laval. Advisor: Dr. Serge Payette  
 1991 Sigma Xi Travel Award, The Scientific Research Society  
 1989-90 Grant-in-Aid of Research from Sigma Xi, The Scientific Research Society  
 1986-89 Postgraduate Scholarship from NSERC (PhD)  
 1987 France-Québec Visiting Fellowship, Laboratoire d'Hydrobiologie Marine, Dr. Michel Amanieu, Montpellier, France (2 months)  
 1985 France-Québec Visiting Fellowship, Laboratoire d'Hydrobiologie Marine, Dr. Michel Amanieu, Montpellier, France (4 months)  
 1984-85 Postgraduate Scholarship from NSERC (Master)

**Appointments to Distinguished Councils**

- 2018- Member of the advisory board for the Quebec Centre for Biodiversity Science (McGill U)  
 2015- The United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC) Connectivity Conservation committee member  
 2015- Ontario Reptile and Amphibian Research Subcommittee member  
 2011 Canadian Parks and Wilderness Society (CPAWS): Scientific committee member for the establishment of guidelines for Marine Protected Areas in Canada  
 2008-10 Ontario Biodiversity Science Forum. Scientific committee member  
 2007-08 NSERC Discovery Accelerator Supplement Life Science Selection Committee (DAS 1070)  
 2007-08 Scientific Advisory Group for Woodland Caribou Critical Habitat, Environment Canada  
 2001-04 NSERC Evolution and Ecology Grant Selection Committee (GSC 18)

**Member of Research Centers**

- 2018- Member of the Centre for Urban Environments, University of Toronto at Mississauga  
 2006- Associate Research Member of the Centre d'étude de la forêt (CEF), UQAM  
 2000-06 Associate Research Member of the Groupe de Recherche en Écologie Forestière interuniversitaire (GREFi), UQAM  
 1995-06 Regular Research Member of the Centre de Recherche en Biologie Forestière (CRBF), Université Laval

**PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

Canadian Society of Ecology and Evolution (CSEE), Ecological Society of America (ESA)  
 Society of Conservation Biology (SCB), US-International Association of Landscape Ecology (US-IALE)

**RESEARCH IMPACT, PRESS, KNOWLEDGE OUTREACH (selection of last 8 years)**

- 2016 I was interviewed by The Varsity – Science. Eight U of T science faculty join Royal Society of Canada as fellows. Honour recognizes accomplishments of U of T researchers.  
<http://thevarsity.ca/2016/09/25/eight-u-of-t-science-faculty-join-royal-society-of-canada-as-fellows/>  
 2016 I was interviewed (video: <https://www.youtube.com/watch?v=OsGraznQa3E>) by Methods in Ecology & Evolution to talk about my career and specifically about state-transition spatially explicit modeling.  
 2016 In Edge et al. (2016), we demonstrated that amphibian metamorphosis is a valuable model system for studying the effects of environmental change. Edge et al. (2016) was selected as the *Oikos Editor's Choice*.

- 2014 In Saura et al. (2014), we proposed a novel generalized connectivity model that combines both species dispersal abilities and demography data. Saura et al. (2014) was selected as the *Journal of Applied Ecology Editor's Choice*. Then the research presented in Saura et al. (2014) was featured in *Conservation Corridor* website, and the news of the *Science for Environmental Policy* service of the *European Commission*.
- 2013 In Ruppert et al. (2013), we showed evidence that the removal of sharks by fishing has implications for both natural and anthropogenic disturbances involving the loss of corals, as herbivores are critical to the progress and outcome of coral recovery. Ruppert et al. (2013) was featured by the media: CBC Quirks and Quarks; CBC Radio Canada International University of Toronto; The Australian (Newspaper); The Guardian; The Conversation Op-Ed; Australian Broadcasting Corporation (ABC) Radio; The Economist; NPR Academic Minute; and Asia Research News 2014.
- 2013 My research on boundary detection was featured in documentary "The Land Between" (DVD Fall 2012; showed on TVO March 2013). Fortin and Polakowska (former Master's student) were interviewed.
- 2011 In McCauley et al. (2011), we demonstrated that stress responses induced by exposure to predator cues (here caged fish) increase the vulnerability of prey (dragonfly) to other mortality factors, and that mere exposure to predators can result in significant increases in mortality. McCauley et al. (2011) was recommended as a *Must Read* by Faculty1000 and was featured by the media: Nature Highlight; CBC Radio Quirks and Quarks; Discovery Channel Canada; University of Toronto; Toronto Sun; *Naturaleza* magazine; Gawker; Science Daily; CBC News; and AAAS Radio.

#### **Student Presentation Awards**

- 2019 Prater M, A Grenier, M-J Fortin. How do Marine Protected Areas Influence Diversity in Coral Reef Fish Communities? [Honorable Mention for Poster in Biodiversity and morphology. Department Ecology & Evolutionary Biology]
- 2018 Brookson C, M-J Fortin. How climate and land use patterns affect beta diversity of breeding birds in southern Ontario [Honorable Mention for Poster in Conservation & Ecology. Department Ecology & Evolutionary Biology]
- 2017 Brice M-H, P Legendre, M-J Fortin. Avancée de la forêt tempérée en territoire boréal: indices des changements climatiques sur les écosystèmes forestiers. Écovég13: Congrès International Francophone en Écologie Végétale. Forêt Montmorency, Québec. [Best oral presentation]
- 2017 Turner R, M-J Fortin, C Edge. Effects of urbanization on fish community distribution in the Rouge Watershed. Ontario Ecology Ehtology and Evolution Colloquium. Queens University. [1<sup>st</sup> Place Poster Award]
- 2016 Eger AM, JMR Curtis, M-J Fortin, IM Côté, F Guichard. Transferability and scalability of species distribution models: a test with sedentary marine invertebrates. 39th Annual Pacific Estuarine Research Symposium. [Heinle Award for best graduate presentation]
- 2016 Dolezal A, M-J Fortin. Modelling habitat connectivity and future distribution for the monarch butterfly among protected areas [Honorable Mention for Poster in Conservation & Ecology. Department Ecology & Evolutionary Biology]
- 2015 International Journal of Molecular Science's Best Research Paper Award for Safner T, MP Miller, BH McRae, M-J Fortin, S Manel. 2011. Comparison of Bayesian Clustering and Edge Detection Methods for Inferring Boundaries in Landscape Genetics. *Int. J. Mol. Sci.* 12: 865-889.
- 2014 Mui A, Y He, M-J Fortin, B Johnson. Modeling seasonal landscape connectivity for turtles in a fragmented landscape. US-IALE, Anchorage (Alaska). [Best Student Presentation Award for Oral Presentation]
- 2008 Rayfield B, M-J Fortin, A Fall. Identifying potential movement pathways in fragmented landscapes: incorporating uncertainty in landscape resistance US-IALE, Madison. [Best Student Presentation Award for Oral Presentation]
- 2006 James P, M-J Fortin, A Fall. Simulating the effects of shifting harvest regimes on forest landscape pattern. US-IALE, San Diego. [Best Student Presentation Award for Oral Presentation]
- 2005 Lamon S, Second Prize of the Ecology ZOO498 Poster Projects.
- 2001 Jordan G, M-J Fortin, E Heyerdahl, K Lertzman, S Karpuk. Boundary Persistence in Natural Fire Regimes: The Influence of Topographic Discontinuities. GEOIDE 3<sup>rd</sup> Annual Meeting, Fredericton. [Best Student Poster]

**Executive Committees**

- 2016-18 Canadian Society of Ecology and Evolution: University of Toronto local member
- 2011-12 Royal Ontario Museum -Schad Conservation grant selection committee
- 2006-07 Canadian Society of Ecology and Evolution: Council member
- 2000-02 Ecological Society of America's Cooper Award committee
- 1999-01 Elected Vice-chair of the Statistical Ecology Section of the Ecological Society of America (ESA)
- 1995-97 US-International Association of Landscape Ecology Councilor-at-large
- 1997 Internal jury member for evaluating CORPAQ grants
- 1993-94 Secretary of the North American Section of International Association for Vegetation Science

**Editorial Services**

- 2019- Editorial board of *Oecologia*
- 2016- Editorial board of *Journal of Applied Ecology*
- 2015- Editorial board of *Global Ecology & Biogeography*
- 2015-19 Editorial board of *Current Landscape Ecology Reports*
- 2012- Editorial board of *Spatial Statistics*
- 2007-13 Assistant editor for *Theoretical Ecology*
- 2005-13 Subject editor for *Ecology and Ecology Monographs*
- 2003-08 Editorial board of *Ecosystems*
- 2000-02 Editorial board of International Association of Landscape Ecology Series; *Cambridge U Press*
- 1999-00 Assistant Editor for *Ecology Letters*
- 1999 Associate Editor for *Journal of Agricultural, Biological and Environmental Sciences*
- 1998-02 Subject Editor for *Landscape Ecology*
- 1996-02 Assistant Editor for *Ecoscience*
- 1994-98 Book Review Editor for *Ecoscience*

**Organizer**

- 2018 *Conservation Science, Policy, & Practice: Connecting the Urban to the Wild*. The North American Congress for Conservation Biology (NACCB) [July 21 to 26, 2018] Toronto [Co-Organizers: J Hogberg, M-J Fortin; Local Host: M-J Fortin]
- 2018 *Freshwater connectivity in an era of global change*. Plenary, NACCB 2018, Toronto [Organizer and Moderator: M-J Fortin]
- 2018 *Theory and practice of climate adaptation strategies for conservation: strategies, challenges, and opportunities from academics and practitioners*. Symposium, NACCB 2018, Toronto [Co-Organizers: Naujokaitis-Lewis I, D'Aloia CC, Fortin M-J]
- 2018 *Workshop An introduction to HEXSIM demography and genetics*. NACCB 2018, Toronto [Co-Organizers: Schumaker N, Fortin M-J, Snyder M]
- 2018 *Canadian aquatic ecosystems under threat: A meta-ecosystem approach to the protection of aquatic diversity and ecosystem services*. Working Group funded by the Canadian Institute of Ecology and Evolution (CIEE), University of Toronto [Organizers: Harvery E, M-J Fortin]
- 2017 *The past, present and future of our urban environment*. Center for Urban Environments-CUE Symposium, UTM [Organizers: M Johnson, C Ritcher, M-J Fortin]
- 2017 *Aquatic ecosystem services in a changing world*. Symposium at ESA Portland, OR [Organizers: M-J Fortin, P Peres-Neto, S Tomscha]
- 2017 *Canadian protected areas in a changing climate: Across-ecosystem approach*. Symposium at CSEE 2017 Victoria, BC [Organizers: M-J Fortin, C D'Aloia, I Naujokaitis-Lewis]
- 2016 *Canadian protected areas in a changing climate: A cross-ecosystem approach to designing effective networks of protected areas*. Working Group funded by the Canadian Institute of Ecology and Evolution (CIEE), University of Toronto [Organizers: D'Aloia C, I Naujokaitis-Lewis, M-J Fortin]
- 2015 *Marine connectivity studies: A path for biodiversity conservation?* 27<sup>th</sup> International Congress for Conservation Biology (ICCB) - 4<sup>th</sup> European Congress for Conservation Biology, Montpellier, France [Organizers: C Lett, C Fauvelot, S Manel, M-J Fortin]
- 2010 *Network theory to conserve and reconnect forested landscapes Symposium*, International Union of Forest Research Organizations (IUFRO)-International Association of Landscape Ecology (IALE) Forest Landscapes and Global Change, New Frontiers in Management, Conservation and Restoration. Bragança, Portugal. [Organizers: M-J Fortin, S Saura]

- 2009 *Spatial Ecology: An integrating framework to study species response to global change*. Symposium. Latin American IALE Conference, Landscape Ecology in Latin America: Challenges and Perspectives. Campos do Jordao, São Paulo, Brazil
- 2006 Co-organizer of GIS Workshop 2007, Innsbruck, Austria
- 2005 *Spatial statistics at multiple scales* Special Session, International Association for Ecology (INTECOL)-Ecological Society of America (ESA), Montréal, Québec [Organizers: P Legendre, M-J Fortin]
- 2005 *Forest modeling at multiple scales: Issues and solutions* Symposium. 5<sup>th</sup> North American Forest Ecology Workshop (NAFEW), Aylmer, Québec [Organizers: M-J Fortin, A Fall, C Peng]
- 2005 Geomatics for Informed Decisions-Centre of Excellence Network Summer School, Université Laval
- 2004 Geomatics for Informed Decisions-Centre of Excellence Network Summer School, Carleton University
- 2003 18<sup>th</sup> Annual Meeting of the US Chapter of the International Association for Landscape Ecology *Beyond borders – Linking landscapes*. The Banff Centre, Alberta. 2-6 April 2003 (280 delegates) [Local Host and Program Chair]
- 2003 Geomatics for Informed Decisions-Centre of Excellence Network Summer School, University of Victoria
- 2002 Geomatics for Informed Decisions-Centre of Excellence Network Summer School, University of Toronto at Scarborough
- 1999 *Spatial statistics for species geographical range analysis* Symposium, Ecological Society of America, Spokane, USA
- 1998 *Randomization tests in ecology* Symposium, International Association for Ecology (INTECOL), Florence, Italy
- 1996 *Permutation tests in ecology: How should we test ecological hypotheses?* Symposium, Ecological Society of America, Providence, USA
- 1994 *Statistical sampling design of aquatic network ecosystems at multiple scales* Workshop, Center for Analysis of Environmental Change, Oregon State University, Corvallis, USA [Organizers: GA Bradshaw, M-J Fortin, LL Conquest]

#### External reviewer of programs

- 2018 External review of the undergraduate program of the Department of Biology, University of Ottawa
- 2016 External review of the Faculty of Forestry of Université Laval: two undergraduate programs and two graduate programs (MSc; PhD)

### **SCHOLARLY AND PROFESSIONAL WORK**

#### **Books**

1. Fletcher R, M-J Fortin. 2019. *Spatial Ecology and Conservation Modeling: Applications with R*. Springer
2. Dale MRT, M-J Fortin. 2014. *Spatial Analysis: A Guide for Ecologists*. 2<sup>nd</sup> edition. Cambridge U Press
3. Fortin M-J, MRT Dale. 2014. *Spatial Analysis: A Guide for Ecologists*. Cambridge University Press. (translation: X Yang). Higher Education Press, Beijing (Published September 9, 2014; Pp. 304)
4. Fortin M-J, MRT Dale. 2005. *Spatial Analysis: A Guide for Ecologists*. Cambridge University Press

#### **REFEREED PUBLICATIONS**

Names underlined are my trainees (graduate students, postdoct fellows or interns)

1. Albouy C, P Archambault, W Appeltans, MB Araújo, K Cazelles, AR Cirtwill, M-J Fortin, SJ Leroux, L Pellissier, T Poisot, DB Stouffer, S Wood, D Gravel. The marine fish food web is globally connected. *Nature in Ecology and Evolution*
2. Darling ES, TR McClanahan, J Maina, G Gurney, NAJ Graham, F Januchowski-Hartley, JE Cinner, C Mora, CC Hicks, E Maire, M Puotinen, WJ Skirving,, M Adjeroud, G Ahmadi, R Arthur, AG Bauman, M Beger, M Berumen, L Bigot, J Bouwmeester, A Brenier, T Bridge, E Brown, SJ Campbell, S Cannon, B Cauvin, C Allen Chen, J Claudet, V Denis, S Donner, E Estradivari, N Fadli, DA Feary, D Fenner, H Fox, EC Franklin, A Friedlander, J Gilmour, C Goiran, J Guest, J-PA Hobbs, AS Hoey, P Houk, S Johnson, S Jupiter, M Kayal,, C-Y Kuo, J Lamb, MAC Lee, J Low, N Muthiga, E Muttaqin, Y Nand, KL Nash, O Nedlic, JM Pandolfi, S Pardede, L Penin, L Ribas-Deulofeu, Z Richards, TE Roberts, KS Rodgers, CD Mohd Safuan, E Sala, G Shedrawi, TM Sin, P Smallhorn-West, JE Smith, B Sommer, PD Steinberg, M Sutthacheep, CHJ Tan, GJ Williams, S Wilson, T Yeemin, JF Bruno, M-J Fortin, M Krkosek, D Mouillot. Social-environmental drivers inform strategic management of coral reefs in the Anthropocene. *Nature in Ecology & Evolution*

3. [Brice M-H](#), K, Cazelles, P Legendre, M-J Fortin. Disturbances amplify tree community responses to climate change in the temperate-boreal ecotone. *Global Ecology Biogeography*
4. Billerman SM, BR Jesmer, [AG Watts](#), PE Schlichting, M-J Fortin, WC Funk, P Hapeman, E Muths, MA Murphy. Testing theoretical metapopulation conditions with genotypic data from boreal chorus frogs. *Canadian Journal of Zoology*
5. [Terrail R](#), Dupuis S, Danneyrolles V, Fortin M-J, Boucher Y, Arseneault D. Reorganization of tree assemblages over the last century in the northern hardwoods of eastern Canada. *Applied Vegetation Science*
6. [Aquilué N](#), Fortin M-J, Messier C, Brotons L. The potential of agricultural conversion to shape forest fire regimes in Mediterranean landscapes. *Ecosystems*
7. Lesneski KC, [D'Aloia CC](#), Fortin M-J, Buston PM. 2019. Disentangling the spatial distributions of a sponge-dwelling fish and its host sponge. *Marine Biology*, 166(5):66
8. Martínez-Minaya J, Conesa D, Fortin M-J, Alonso-Blanco C, Picó X, Marcer A. 2019. A hierarchical Bayesian Beta regression approach to study the effects of geographic genetic structure and spatial autocorrelation on species distribution range shifts. *Molecular Ecology Resources*, 19:923-943
9. Peterson E, Hanks E, Hooten M, Ver Hoef J, Fortin M-J. 2019. Spatially-structured statistical network models for landscape genetics. *Ecological Monographs*, 89 (2):e01355
10. De Cáceres M, Coll L, Legendre P, Allen R, Wiser S, Fortin M-J, Condit R, Hubbell S. 2019. Trajectory analysis in community ecology. *Ecological Monographs*, 89 (2):e01350
11. Nathan LR, N Mamoozadeh, HR Tumas, S Gunselman, K Klass, A Metcalfe, C Edge, L Waits, P Spruell, E Lowery, E Connor, A Bearlin, M-J Fortin, E Landguth. 2019. A spatially-explicit, individual-based demogenetic simulation framework for evaluating hybridization dynamics. *Ecological Modelling*, 401:40-51
12. Messier C, J Bauhus, F Doyon, F Maure, R Sousa-Silva, P Nolet, M Mina, [N Aquilué](#), M-J Fortin, K Puettmann. 2019. The functional complex network approach to foster forest resilience to global change. *Forest Ecosystems*, 6:21
13. Šimová P, V Moudrý, J Komárek, K Hrach, M-J Fortin. 2019. Fine scale waterbody data improve prediction of waterbird occurrence despite coarse species data. *Ecography*, 42:511-520
14. Bani R, M-J Fortin, R Daigle, F Guichard. 2019. Dispersal traits interact with dynamic connectivity to affect metapopulation growth and stability. *Theoretical Ecology*, 12:111-127
15. Rivkin LR, Santangelo J, Alberti M, Aronson M, de Keyser C, Diamond S, Fortin M-J, Frazee L, Gorton A, Hendry A, Liu Y, Losos J, MacIvor S, Martin R, McDonnell M, Miles L, Munshi-South J, Ness R, Newman A, Stothart M, Theodorou P, Thompson K, Verrelli B, Whitehead A, Winchell K, Johnson M. 2019. A roadmap for urban evolutionary ecology. *Evolutionary Applications*, 12:384-398
16. [D'Aloia CC](#), I Naujokaitis-Lewis, [C Blackford](#), C Chu, J Curtis, E Darling, F Guichard, SJ Leroux, [AC Martensen](#), B Rayfield, J Sunday, [A Xuereb](#), M-J Fortin. 2019. Coupled networks of permanent protected areas and dynamic conservation areas for biodiversity conservation under climate change. *Frontiers in Ecology and Evolution*, 7:27
17. Bastin L, N Gorelick, S Saura, M-J Fortin, G Dubois, B Bertzky, J-F Pekel. 2019. Inland surface waters in protected areas globally: current coverage and 30-year trends. *PLoS ONE*, 14(1), p.e0210496
18. Delmas E, M Besson, [M-H Brice](#), L Burkle; G Dalla Riv, M-J Fortin, D Gravel, P Guimaraes, D Hembry, E Newman, J Olesen, M Pires, J Yeakel, T Poisot. 2019. Analyzing ecological networks of species interactions. *Biological Reviews*, 94:16-36

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19. [D'Aloia C](#), [Xuereb A](#), Fortin M-J, Bogdanowicz S, Buston P. 2018. Limited dispersal explains the spatial distribution of siblings in a reef fish population. *Marine Ecology Progress Series*, 607:143-154
20. [Xuereb A](#), CM Kimber, JMR Curtis, L Bernatchez, M-J Fortin. 2018. Putatively adaptive genetic variation in the giant California sea cucumber (*Parastichopus californicus*) as revealed by environmental association analysis of RADseq data. *Molecular Ecology*, 27:5035-5048
21. Robert L-E, Sturtevant BR, Cooke BJ, James PMA, Fortin M-J, Townsend PA, Wolter PT, Kneeshaw D. 2018. Landscape host abundance and configuration regulate periodic outbreak behavior in spruce budworm (*Choristoneura fumiferana* Clem.). *Ecography*, 41:1556-1571
22. [Watts AG](#), S Saura, C Jardine, P Leighton, L Werden, M-J Fortin. 2018. Host functional connectivity and the spread potential of Lyme disease. *Landscape Ecology*, 33:1925-1938
23. Bauman D, M-J Fortin, T Drouet, S Dray. 2018. Optimizing the choice of a spatial weighting matrix in eigenvector-based methods. *Ecology*, 99:2159-66
24. [Chin ATM](#), J Linke, M Boudreau, M-H Thériault, SC Courtenay, R Cormier, M-J Fortin. 2018. Beta diversity changes in estuarine fish communities due to environmental change. *Marine Ecology Progress Series*, 603:161-173

25. Dalongeville A, M Andrello, D Mouillot, S Lobreaux, M-J Fortin, F Lasram, J Belmaker, D Rocklin, S Manel. 2018. Geographic isolation and larval dispersal shape seascape genetic patterns differently according to spatial scale. *Evolutionary Applications*, 11:1437-1447
26. Draheim HM, JA Moore, M-J Fortin, KT Scribner. 2018. Beyond the snapshot: Landscape genetic analysis of time series data reveal responses of American black bears to landscape change. *Evolutionary Applications*, 11:1219-1230
27. Daniel CJ, BM Sleeter, L Frid, M-J Fortin. 2018. Integrating continuous stocks and flows into state-and-transition simulation models of landscape change. *Methods in Ecology and Evolution*, 9:1133-1143
28. Xuereb A, L Benestan, E Normandeau, JM Curtis, RM Daigle, L Bernatchez, M-J Fortin. 2018. Asymmetric oceanographic processes mediate connectivity and population genetic structure, as revealed by RADseq, in a highly dispersive marine invertebrate (*Parastichopus californicus*). *Molecular Ecology*, 27:2347-2364
29. Gaggiotti O, Chao A, Peres-Neto P, Chiu Chun-Huo, Edwards C, Fortin M-J, Jost L, Richards C, Selkoe K. 2018. Diversity from genes to ecosystems: A unifying framework to study variation across biological metrics and scales. *Evolutionary Applications*, 11:1176-1193
30. Ver Hoef J, Peterson E, Hooten M, Hanks E, Fortin M-J. 2018. Spatial autoregressive models for statistical inference from ecological data. *Ecological Monographs*, 88:36-59
31. Ruppert JLW, L Vigliola, M Kulbucki, P Labrosse, M-J Fortin, MG Meekan. 2018. Human activities as a driver of spatial variation in the trophic structure of fish communities on Pacific coral reefs. *Global Change Biology*, 24:e67-e76
32. Watt GA, RA Fleming, SM Smith, M-J Fortin. 2018. Spruce Budworm (*Choristoneura fumiferana* Clem.) Defoliation Promotes Vertical Fuel Continuity in Ontario's Boreal Mixedwood Forest. *Forests*, 9(5), 256; <https://doi.org/10.3390/f9050256>
33. Marcer A, DS Vidigal, PMA James, M-J Fortin, B Méndez-Vigo, WM Hilhorst, L Bentsink, C Alonso-Blanco, FX Picó. 2018. Temperature fine-tunes Mediterranean *Arabidopsis thaliana* life-cycle phenology geographically. *Plant Biology*, 20:148-156 [**Highly Cited Paper**]

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34. D'Aloia CC, RM Daigle, IM Côté, JMR Curtis, F Guichard, M-J Fortin. 2017. A multiple-species framework for integrating movement processes across life stages into the design of marine protected areas. *Biological Conservation*, 216:93-100
35. Martensen CA, S Saura, M-J Fortin. 2017. Spatio-temporal connectivity: Assessing the amount of reachable habitat in dynamic landscapes. *Methods in Ecology and Evolution*, 8:1253-1264
36. Dosen J, M-J Fortin, BE Raboy. 2017. Restoration Strategies to Improve Connectivity for Golden-Headed Lion Tamarins (*Leontopithecus chrysomelas*) in the Bahian Atlantic Forest, Brazil. *International Journal of Primatology*, 38:962-983
37. Poisot T, C Guévenoux-Julien, M-J Fortin, D Gravel, P Legendre. 2017. Hosts, parasites, and their interactions respond to different climatic variables. *Global Ecology and Biogeography*, 26:942-951
38. Pedersen EJ, PL Thompson, AR Ball, M-J Fortin, TC Gouhier, H Link, C Moritz, H Nenzen, RRE Stanley, ZE Taranu, A Gonzalez, F Guichard, P Pepin. 2017. Signatures of the collapse and incipient recovery of an overexploited marine ecosystem. *Royal Society Open Science*, 4:170215  
**Media coverage:** <http://www.ledevoir.com/environnement/actualites-sur-l-environnement/502777/le-difficile-retour-de-la-morue>
39. Daniel C, MT Ter-Mikaelian, BM Wotton, B Rayfield, M-J Fortin. 2017. Incorporating uncertainty into forest management planning: timber harvest, wildfire and climate change in the boreal forest. *Forest and Ecology Management*, 400:542-554
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