

# Monica Granados, PhD

Open science and data policy advisor, data scientist

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Qualified in the Recruitment of Policy Leaders Pool until December 2023

## Professional History

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2018-Present Policy Advisor, Communication and Open Science Section, *Environment and Climate Change Canada*

- Represent Canada as part of the Canadian delegation to the G7 Open Science Working Group
- Represent Canada as part of the Canadian delegation for UNESCO open science negotiations
- Provide subject matter expertise on open science and open data
- Plan and facilitate internal and public engagement activities on open science
- Prepare summary reports with recommendations on engagement activities
- Research and analyze data measuring Canada's performance on implementing open science
- Prepare briefing notes and presentations on open science in the Federal government
- Design infographics for the branch and directorate
- Mitacs Canadian Science Policy Fellow 2018-2020

2017-Present Leadership Team, *PREreview*

- Develop innovations in the scholarly communication space such as a platform to review preprints
- Lead the live preprint journal club initiative – an online meeting platform to collaboratively review preprints
- Co-lead the development of the PREreview platform to facilitate open peer review
- Deliver international presentations on increasing diversity in peer review

2016-Present Scientific data scientist consultant, *Various federal and municipal departments*

- Organize and compile multi-year data sets
- Write code using the R statistical program language to assess trends and compute metrics
- Create reproducible reports with text and figures in R Markdown
- Build Dashboards for managers and decision makers using R Shiny

2016- 2018 Postdoctoral fellow, *University of Guelph and Wildlife Conservation Society Canada*  
Highlights: Developed early warning indicator tools for freshwater monitoring in Ontario's Far North, developed mobile app to facilitate access to fish consumption guidelines

## Education

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2010-2016 PhD, Department of Biology, *McGill University*  
2008-2010 MSc, Department of Ecology and Evolutionary Biology, *University of Toronto*  
2001-2006 HBSc, Department of Zoology, *University of Toronto*

## Publications

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10. Roche DM, Granados, M, Austin, CC, Wilson, S, Mitchell, GM, Smith, PA, Cooke, SJ and Bennett, JR. 2020. Open government data and environmental science: A Federal Canadian perspective. *FACETS*. 5: 942–962.
9. Granados, M, Pagnucco, KS and A Ricciardi. 2019. Consequences of consumer origin and omnivory on stability in experimental food web modules. *Freshwater Biology*. 10: 1867-1874.
8. McCann, KS, Bartley, TJ, Granados, M, Guzzo, MM, Tunney, TD, Cazelles, K and BC McMeans. Nature rewires in a changing world. 2019. *Nature Ecology and Evolution*. 3, pages 345–354.
7. Granados, M, Altshuler, I, Plourde, S and GF Fussman. 2017. Size and variation in individual growth rates among food web modules. *Ecosphere*. 8: e01862
6. Granados, M, Duffy, S, McKindsey, CW and GF Fussmann. 2017. Stabilizing mechanisms in a food web with an introduced omnivore. *Ecology and Evolution*. 7: 5016–5025
5. Cherif, M, Granados, M, Duffy, S, Robert, P, Paquin, B, Mohit, V, McKindsey, C, Archambault, P, Myrand, B, Lovejoy, C, Tremblay, R, Plourde, S and GF Fussmann. 2015. Potential for local fertilization: A benthocosm test of long-term and short-term effects of mussel excretion on the plankton. *PLoS ONE*. 11: e0156411
4. Pedersen, EJ, Marleau, JN, Granados, M, Moeller, HV and F Guichard. 2016. Non-hierarchical movement promotes stability and resilience in a tri-trophic metacommunity. *American Naturalist*. 187: E116-128. Recommended by the Faculty of 1000
3. Low-Décarie, E, Chivers, C and M Granados. 2014. Rising complexity and falling explanatory power in ecology. *Frontiers in Ecology and the Environment* 12: 412-418. Profiled in Science Magazine's Science Insider
2. Granados, M, Mandrak, NE and DA Jackson. 2014. Synthesizing reference conditions for highly degraded areas through best professional judgment. *Journal of Great Lakes Research*. 40 (S2): 37-42.
1. Granados, M, St John, M and R Portiss. 2012. Generating heterogeneity: Fish hooks induce community change. *Ecological Restoration* 30: 15-18.

## Grants and Fellowships

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Wellcome Trust Open Research Discretionary Award (2020), Frictionless Data Reproducible Research Fellowship (2019), Wellcome Trust Research Enrichment - Diversity and Inclusion (2019), Sloan Foundation Grant (2018, 2019), Wellcome Trust Open Research Fund (2018), Mitacs Canadian Science Policy Fellowship (2018), Bourse postdoctorale, Fonds de recherche du Québec nature et technologies (2017), Elevate Postdoctoral Fellowship, Mitacs-Canada (2016), Centre for Applied Mathematics in Biosciences and Medicine Fellowship (2013), Quebec Center for Biodiversity Science Excellence Award (2012)

## Awards and Honors

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Dr. Roberta Bondar STEM Career Development Program (2021), Emerging Scholar Open Scholarship Award Honorable Mention (2019), OpenCon scholarship (2018), Mozilla Open Science Lab Open Science Lead (2016), McGill Biology Department student seminar speaker (2015), Innocentive Visualizing Nutrients Challenge Runner-up (2015), Ecological Society of America EcoService Award (2012), BIO150 Outstanding Teaching Assistant Award (2008)

## Teaching

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2016-Present Open science and reproducibility workshops - Quebec Center for Biodiversity Science, R Ladies, Environment and Climate Change Canada, Government of Canada  
2016-Present Improvisation for science communication - WCS Canada, BES CREATE Program, Environment Canada, Girls for Innovation - Research, Leadership & Science Camp  
2014-2017 Data analysis/visualization workshop designer and presenter - Quebec Centre for Biodiversity Science  
2012-2013 First-year biology laboratory developer - McGill University  
2010-2015 Teaching assistant biology, ecology and evolution - McGill University  
2008-2010 Teaching assistant biology, ecology- University of Toronto

## Outreach

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Symposium Board Committee, *SCWIST Symposium for Young Scientists* (2021), Advisory Committee, *IAI Science and Technology Policy Fellowship Program* (2019-Present), Board of Directors, *Canadian Open Data Society* (2019-Present), Science Communicator, *Skype a Scientist* (2017-Present), Science Communicator, *Idea Mosaic* (2017-Present), Mentor, *Mozilla Open Science Lab* (2017 -2019), Open Science officer, *Ecological Society of America* (2016-2019), Open Lead, *Mozilla Open Science Lab* (2016-2017); Mentor, *Letters to a pre-scientist* (2015-Present); Founder, *descienceblog.tumblr.com* (2015-Present); Organizer, *QCBS Research Derby* (2015-2016); Organizer, *Data for Good Montreal* (2014-2015); Workshop designer, *Action Potential Lab* (2014-2018); Badging program co-developer, *National Center for Ecological Analysis and Synthesis* (2014); Graphic designer, *Eco-quartier NDG* (2014); Science consultant; *Éclairs de sciences* (2013-2014), Statistics consultant; *Ontario Streams* (2010-2013); Biologist, *Citizen Scientists* (2008-2009); Presenter, *Toronto Region Conservation Authority* (2008-2010); Student ambassador, *Toronto Zoo* (2008)

## Media

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"Exploring by the Seat of Your Pants – Becoming Junior Scientists." February 2021.

<https://tinyurl.com/9mh9ebze>

"Science Disrupt: Innovator Stories – Episode 3" Science Disrupt Podcast. June 2019.

<https://tinyurl.com/y2h9kfy5>

"Working in the open and using it to do public good" Colper Science Podcast. July 2017.

<https://tinyurl.com/ybzacgma>

"Citizen science." Discover Magazine. October 2014. <https://tinyurl.com/y7h4omqv>

"How do Zebras get their stripes?" mental\_floss. October 2012. <https://tinyurl.com/ya62lfxd>

## **Workshops and Presentations**

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*Competitive selection workshops:* Best of Banff Science Communications Program (2021), SPE Science Diplomacy Workshop (2018), Science Outside the Lab North (2017), Mozilla Working in the Open Workshop (2017), National Institute for Mathematical and Biological Synthesis Current Issues in Ecological Statistics Workshop (2015), Ecological Society of America Earth Stewardship Initiative Fellow (2014), National Center for Ecological Synthesis and Analysis Open Science for Synthesis (2014), Mathematical Biosciences Institute Summer Graduate Program (2011)

*Invited lectures:* Environment and Climate Change Canada (2020), Canadian Institute of Ecology and Evolutionary Biology (2020), University of Delaware (2018), McGill University (2015), Carlton University (2011), Toronto Science Policy Network (2021).

*Guest lectures:* Introduction to aquatic environments, University of Guelph (2017), Advances in aquatic ecology, McGill University (2015)

*Oral and/or poster presentations contributed:* North American Congress for Conservation Biology (2018), Ecological Society of America (2012, 2014, 2017), Conference on Great Lakes Research (2009, 2010), Canadian Society for Ecology and Evolution (2010, 2014), CSV Conf (2020), Carpentry Con (2020), Centre for Journology Speaker Series (2021), Treasury Board Secretariat Experimentation Works (2021), Toronto Science Policy Network (2021).

## **Security clearance**

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Government of Canada Secret Security clearance valid until January 2029