

Andrew N. Kadykalo

Ph.D. Candidate



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UNIVERSITY EDUCATION

Carleton University:	Ph.D. in Biology (supervisors: Steven J. Cooke, Nathan Young) Thesis: Evaluating Evidence-Informed Decision-Making in British Columbia Fisheries and Wildlife Management and Conservation Courses: Advances in Conservation Biology, Biostatistics	2017- 21
University of Ottawa:	M.Sc. in Environmental Sustainability (supervisor: C. Scott Findlay) Major Research Paper: <u>Agricultural Best Management Practices: Tradeoffs and Synergies between Crop Yield and Ecosystem Services</u> Courses: Environmental Science, Professional Skills for Sustainability, Environmental Law, Environmental Policy, Environmental Economics	2016-17
	M.Sc. in Biology (supervisor: C. Scott Findlay) Thesis: <u>Evaluating and predicting ecosystem services</u> Courses: Mathematical Modelling for Ecology and Evolution, Biostatistics	2010-13
Trent University:	B.B.A. in Business Administration, Biology Minor <i>Graduated on Dean's Honour Roll, Graduated on President's List</i> Relevant Courses: Ecology, Genetics, Evolution, Herpetology, Cell Biology, Desert Ecology, Biology of Marine Mammals, Methods of Biological Inquiry, The Third Sector, Calculus, Probability, Statistics	2005-09

PROFESSIONAL EXPERIENCE (for more details see my [LinkedIn profile](#))

Research Associate (Freshwater Biodiversity Toolkit) Canadian Centre for Evidence-Based Conservation, Ottawa	Aug 2020-pres
Research Assistant (Natural Capital & Productivity) Smart Prosperity Institute, Ottawa	Mar-Aug 2017
National Wetland Conservation Fund, Program Advisor Environment and Climate Change Canada, Ottawa	Feb-Aug 2016
Wildlife Biologist (Caribou Habitat Restoration) TERA a CH2M HILL Energy Canada Ltd. company, Calgary	Oct 2014-Oct 2015
Research Assistant (Ecosystem Services) Environment Canada, Ottawa	Oct 2013-Jun 2014
Environment Consultant Intern (Great Lakes Phosphorus Project) Intersol Group, Ottawa	Jan-Jul 2013
Snow School Supervisor Brimacombe Snow School, Orono	Jan 2008-Apr 2010
Marketing Director Gamiing Nature Centre, Lindsay	Apr-Oct 2009

PUBLICATIONS AND CONTRIBUTIONS

Peer-reviewed Publications (OA=Open access)

1. Young N, **Kadykalo AN**, Beaudoin C, Hackenburg DM, Cooke SJ. (2021). Is the Anthropause a useful symbol and metaphor for raising environmental awareness and promoting reform? *Environmental Conservation* 00: 1-4. <https://doi.org/10.1017/S0376892921000254> (OA)
2. **Kadykalo AN**, Buxton RT, Morrison P, Anderson CM, Bickerton H, Francis CM, Smith AC, Fahrig L. (2021). Bridging Research and Practice in Conservation. *Conservation Biology* 00: 1-13. <https://doi.org/10.1111/cobi.13732> (OA)
3. **Kadykalo AN**, Kelly LA, Berberi A, Reid JL, Findlay CS. (2021). Research effort devoted to regulating and supporting ecosystem services by environmental scientists and economists. *PLoS ONE* 16(5):e0252463. <https://doi.org/10.1371/journal.pone.0252463> (OA)
Preparation and sharing of "open" data that is ready for use by others. <https://doi.org/10.5683/SP2/JP1IMV>
4. Howarth A, Jeanson AL, Abrams AEI, Beaudoin C, Mistry I, Berberi A, Young N, Nguyen VM, Landsman SJ, **Kadykalo AN**, Danylchuk AJ, Cooke SJ. (2021). COVID-19 restriction and recreational fisheries in Ontario, Canada: Preliminary insights from an online angler survey. *Fisheries Research* 240:105961. <https://doi.org/10.1016/j.fishres.2021.105961>
5. **Kadykalo AN**, Cooke SJ, Young N. (2021). The Role of Western-based Scientific, Indigenous, and Local Knowledge in Wildlife Management and Conservation. *People and Nature* 3(3): 610-626. <https://doi.org/10.1002/pan3.10194> (OA)
6. **Kadykalo AN**, Haddaway NR, Rytwinski T, Cooke SJ. (2021). Ten principles for generating accessible and useable COVID-19 environmental science and a fit-for-purpose evidence base. *Ecological Solutions and Evidence* 2(1):e12041. <https://doi.org/10.1002/2688-8319.12041> (OA)
7. Jarvis RM, Borrelle SB, Forsdick NJ, Pérez-Hämmerle K-V, Dubois NS, Griffin SR, ... **Kadykalo AN**, et al. (2020). Navigating spaces between conservation research and practice: Are we making progress? *Ecological Solutions and Evidence* 1:e12028. <https://doi.org/10.1002/2688-8319.12028> (OA)
8. Balvanera P, Jacobs S, Nagendra H, O'Farrell P, Bridgewater P, Crouzat E, ... **Kadykalo AN**, et al. (2020). The science-policy interface on ecosystems and people: challenges and opportunities. *Ecosystems and People* 16(1): 345-353. <https://doi.org/10.1080/26395916.2020.1819426> (OA)
9. **Kadykalo AN**, Cooke SJ, Young N. (2020). Conservation genomics from a practitioner lens: Evaluating the research-implementation gap in a managed freshwater fishery. *Biological Conservation* 241:108350. <https://doi.org/10.1016/j.biocon.2019.108350>
10. Jeanson AL, Soroye P, **Kadykalo AN**, Ward TD, Paquette E, Abrams AEI, et al. (2019). Twenty actions for a 'Good Anthropocene' – Perspectives from early career conservation professionals. *Environmental Reviews* 28(1): 99-108. <https://doi.org/10.1139/er-2019-0021> (OA)
11. **Kadykalo AN**, López-Rodriguez MD, Ainscough J, Droste N, Ryu H, Ávila-Flores G, et al. (2019). Disentangling 'ecosystem services' and 'nature's contributions to people'. *Ecosystems and People* 15(1): 269-287. <https://doi.org/10.1080/26395916.2019.1669713> (OA) (**voted Ecosyst.People. paper of the year 2019**)
12. Hackenburg, DM, Adams A, Brownson K, Borokini IT, Gladkikh TM, Herd-Hoare SC, Jolly H, **Kadykalo AN**, et al. (2019). Meaningfully engaging the next generation of ecosystem services specialists. *Ecosystem Services* 40:101041. <https://doi.org/10.1016/j.ecoser.2019.101041>
13. **Kadykalo AN**, Findlay CS. (2016). The Flow Regulation Services of Wetlands. *Ecosystem Services* 20: 91-103. <http://doi.org/10.1016/j.ecoser.2016.06.005>

Pre-prints

1. **Kadykalo AN**, Johnson KA, McFatridge S, Findlay CS. (2020). Agricultural Beneficial Management Practices: A Synthesis of Co-benefits, Tradeoffs, and Co-costs between Crop Yield and Non-provisioning Ecosystem Services. <https://doi.org/10.32942/osf.io/ycwek>

Submitted Journal Articles

1. Andrachuk M, **Kadykalo AN**, Cooke SJ, Young N, Nguyen VM. (2021). Fisheries knowledge exchange and mobilization through a network of policy and practice actors. ENVSCI-S-21-00386
2. Filyushkina A, Ryu H, **Kadykalo AN**, Murali R, Campagne CS, Washbourne C-L, et al. (2021). Engaging at the science-

policy interface as an early-career researcher: experiences and perceptions in the field of biodiversity and ecosystem services

3. Jeanson AL, **Kadykalo AN**, Cooke SJ, Young N. (2021). Caught in the Middle - Inaction and overlap in governance and decision-making for Canada's imperiled wild steelhead. ENVSCI-D-21-00875
4. **Kadykalo AN**, Beaudoin C, Hackenburg DM, Young N, Cooke SJ. (2021). Social-Ecological Systems Approaches are Essential for Understanding and Responding to the Complex Impacts of COVID-19 on People and the Environment. PSTR-D-21-00013
5. Piczak M, **Kadykalo AN**, Cooke SJ, Young N. (2021). Natural Resource Managers Use and Value Western-Based Science, but Barriers to Access Persist. EMVM-D-21-00913
6. Washbourne C-L, Murali R, Saidi N, Peter S, Pisa PF, Sarzynski T, ...**Kadykalo AN**, et al. (2021). A conceptual framework for engaging early-career researchers (ECRs) at the science-policy interface: A global view from ECRs. AMBI-S-21-00428-2

Technical Reports & White Papers

1. Ryu H, **Kadykalo AN**, Avila-Flores G, Nilsson L, Droste N, Rana S, Ramos Franco A, Gutiérrez Chacón C, Muñoz MC, López-Rodriguez MD, Vejarano Alvarez P. (2018). Young Ecosystem Services Specialists at IPBES-6: Our Experience at the IPBES-6 Plenary. April 18.
2. Preliminary Caribou Habitat Restoration Plan for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project. Filed with the National Energy Board, March 2017.
3. Preliminary Offsets Measures Plan for Nova Gas Transmission Ltd. Liege Lateral Loop 2 – Thornbury Section Pipeline and Leismer East Compressor Station Project. Filed with the National Energy Board, December 2015.
4. Preliminary Caribou Habitat Restoration Plan for Nova Gas Transmission Ltd. North Montney Mainline. Preliminary Caribou Habitat Restoration Plan. Filed with the National Energy Board, August 2015.
5. Access Management Plan for the Proposed Nova Gas Transmission Ltd. North Montney Project (Aitken Creek and Kahta Sections). Filed with the National Energy Board, May 2015.
6. Preliminary Caribou Habitat Restoration Plan for Nova Gas Transmission Ltd. Liege Lateral Loop 2 – Thornbury Section Pipeline and Leismer East Compressor Station Project. Filed with the National Energy Board, April 2015.
7. **Kadykalo AN**, Klimas M, Barker R, Doyle M. (2014). Biophysical Analysis to Support Ecosystem Service (BASES) Valuation Project. Environment Canada Internal Report. Ottawa, ON.
8. **Kadykalo AN**, Findlay CS. (2013) Estimating ecosystem services: implications for market-based instruments. Prepared as part of Sustainable Prosperity's project on Natural Capital and Productivity/Natural Resources Productivity.
9. A Collaborative Approach to Review Canadian Legislation, Policy and Programs Related to Phosphorus Loading into Lake Erie: Stakeholder Engagement Plan. Prepared for Environment Canada, March 27, 2013.

CONFERENCE PRESENTATIONS AND INVITED TALKS

1. Plenary 4: To 2030 and beyond: Insights from the 2023 Global Sustainable Development Report and SRI2021 Early Career Champions. Sustainability + Research Innovation 2021, June 15, 2021. Panel presenter.
2. Engaging with IPBES functions: Widening engagement of and with early career researchers. North, Central and South Americas and the Caribbean Region. ONet IPBES Stakeholder Days, June 4, 2021. Panel presenter.
3. Evaluating Evidence-Informed Decision-Making in British Columbia Fisheries and Wildlife Management and Conservation. The Canadian Association of Research Administrators Conference 2021, special session on The Future of Knowledge Mobilization: Research Impact Canada Engaged Scholarship Award Presentations, May 13, 2021. Dr. RIC – Research Impact Canada Network meeting, May 31, 2021. Fish Ecology and Conservation Physiology Lab Meeting on 'Conservation Governance', June 1, 2021.

4. Young Ecosystem Services Specialists at IPBES-6: Our Experience at the IPBES-6 Plenary. 1st YESS Community Forum 2021, May 6, 2021. Panel presenter.
5. Evaluating Evidence-Informed Decision-Making in British Columbia Fisheries and Wildlife Management and Conservation. Genome Canada/BC meeting of the 'Sustaining Freshwater Recreational Fisheries in a Changing Environment' project, April 1, 2021.
6. Evaluating and Predicting Pollination Services: A Global Meta-analysis of Pollinator-Dependent Crops. ACES: A Community on Ecosystem Services webinar, Dec. 14, 2020.
7. University of Ottawa Institute of the Environment - Master's of Environmental Sustainability Alumni Panel. September 6, 2019. Moderator.
8. Putting Conservation Genomics into Practice: An Examination of the Research-Implementation Space in a Recreational Fishery. International Congress for Conservation Biology, Kuala Lumpur, Malaysia, July 23, 2019.
9. Agricultural Best Management Practices in Corn-Soybean Systems: Tradeoffs and Synergies Between Crop Yield and Ecosystem Services. A Community on Ecosystem Services, Arlington VA, Dec. 6, 2018.
10. Predicting Freshwater Flow Functions of Wetlands and Possible Implications for Wetland Valuation. A Community on Ecosystem Services, Arlington VA, Dec. 5, 2018.
11. Agricultural Best Management Practices in Corn-Soybean Systems: Tradeoffs and Synergies Between Crop Yield and Ecosystem Services. North American Congress for Conservation Biology, Toronto, July 23, 2018.
12. Pollination Service Provisioning by Animal Vectors in Agroecosystems. Invited seminar presented at Environment Canada's National Wildlife Research Centre's seminar series, June 19, 2013.
13. Recognizing the Value of Nature in Environmental Sentencing: Applying the Ecosystem Services Framework Workshop. Canadian Association of Environmental Law Societies Conference, University of Ottawa, Feb. 23, 2013. Co-presenter with Martin Olszynski.
14. Conservation Biology: An ecosystem services approach. Conference on the Sciences, University of Ottawa, Sep. 6, 2012.
15. Predicting ecosystem function from ecosystem structure: implications for valuation of ecosystem services and development of policy instruments. Society for Conservation Biology Annual Conference, Auckland, New Zealand, Dec. 9, 2011.

OTHER SCIENCE COMMUNICATION

1. Conservation Genomics Gap. NatureVolve Science & Art digital magazine Issue #9, April 2021.
2. 2021 Carleton University GRADflix submission: Evidence Use in Fisheries and Wildlife Management and Conservation. GRADFlix showcase, April 2021.
3. 'Nature's contributions to people' and 'ecosystem services': a conversation with Andrew Kadykalo. Interviewed by Klara Winkler, Nature Words Blog, November 2019.
4. Working Smarter, Not Harder? Time Management in an era of 'Yes'. Nature Words Blog, October 2019.
5. Decision Makers and BC Rainbow Trout. Interview on The Blue Fish Radio Show, August 2019.
6. Wetlands and Pollinator Ecosystem Services. Skype presentation and meeting with Mrs. Egesdal's Grade 5 Class in Iowa. Skype a Scientist, November 2018.
7. Ecosystems and productivity—A different way to look at the birds and the bees. Smart Prosperity Institute. Guest Blog, August 2017.

TEACHING, MENTORING AND REVIEWING EXPERIENCE

Guest Lecturer

University of Helsinki (FOR 109)	“Disentangling ‘ecosystem services’ and ‘nature’s contributions to people’” for Ecosystem services: a comprehensive introduction to theory and applications	2020
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Lead Instructional Teaching Assistant

Carleton University	Foundations of Biology II BIOL 1104	2019
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Undergraduate Teaching Assistant

Carleton University	Foundations of Biology II BIOL 1104; Biological Methods, Analysis and Interpretation BIOL 1105*; Introduction to Ecology BIOL 2600 *Nominated for Outstanding TA Award	2017-pres
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University of Ottawa	Ecology BIO 2129, Genetics BIO 2132, Animal Form and Function BIO 2135	2010-12
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Undergraduate Student Supervisor/Mentor

University of Ottawa	Undergraduate thesis co-supervisor (Galen Boulanger)	2019-20
University of Ottawa	Conservation Biology BIO 3115 (a second-order science group project on ecosystem services for think-tank Sustainable Prosperity)	2012

Review Experience

Carleton University Assistant Professor – Biology (Conservation Science) hire	Graduate Student Committee Member	2020
University of Ottawa External Review of the proposed PhD in Environmental Sustainability	MSc Alumni External Reviewer	2019
Collaboration for Environmental Evidence Database of Evidence Reviews (CEEDER)	<u>Review College Member</u>	2018-pres
North American Congress for Conservation Biology and the International Congress for Conservation Biology	Abstract & Student Award Reviewer	2016-pres
<i>Biological Conservation, Frontiers in Environmental Science, Journal of Hydrology, Journal of Water Resources Planning and Management, North American Journal of Fisheries Management, Ecosystem Services, People & Nature</i>	Manuscript Reviewer	2016-pres
Environment Canada’s <u>Completing and Using Ecosystem Service Assessment for Decision-Making: An Interdisciplinary Toolkit for Managers and Analysts</u>	Non-Government Expert Reviewer and Contributor	2013-17

COMMUNITY AND PROFESSIONAL INVOLVEMENT

<u>ComSciConGTA 2021</u>	Participant (Aug. 13-15)	2021
Alpine Club of Canada	Member	2019-2020
Ontario Turtle Conservation Centre	<u>Turtle Taxi Driver</u>	2018-pres

A Community on Ecosystem Services (ACES) in partnership with Ecosystem Markets and ESP (Washington D.C.)	Volunteer (Registration, Moderator's Assistant) Methods for Incorporating Ecosystem Services into Decision-Making: Conceptual Models and Benefit Relevant Indicators (Dec. 3) Pollinator Workshop (Dec. 3) 'Young Ecosystem Services Specialists: Scientific Outreach and Impact Beyond Academia' Session Organizer (Dec. 6)	2018
Genome BC/Canada 'Sustaining Freshwater Recreational Fisheries in a Changing Environment' Stakeholder Workshop	Participant (University of British Columbia, Vancouver, Nov. 30)	2018
North American Congress for Conservation Biology (Toronto)	Volunteer (Registration)	2018
Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)	Observer; Head of YESS Delegation to IPBES6 in Medellín, Columbia	2017-pres
Young Ecosystem Services Specialists (YESS)	Member; Co-organizer of YESS participation at IPBES	2015-pres
Ecosystem Services Partnership (ESP)	Member	2014-pres
Alberta Society of Professional Biologists	Biologist in Training	2014-16
Friends of Gatineau Park	Volunteer	2013-14
Committee on the Status of Endangered Wildlife in Canada	Observer	2013
Children's Hospital of Eastern Ontario (CHEO)	Volunteer (CHEO Bear)	2013
Ukrainian Canadian Congress	Volunteer (National Holodomor Memorial Day)	2013
The Partnership Group for Science and Engineering	Twitter Account Manager	2013
Evolution 2012 Conference (Ottawa)	Volunteer (Registration)	2012
World Wildlife Fund-Canada	Fundraising Event Coordinator	2012
Society for Conservation Biology (SCB)	Member	2011-pres
<u>GEM Project Longitudinal Study</u>	Participant	2009-pres
Clarington Recreational Hockey League	Hockey Team Trainer	2009-10

UNIVERSITY AWARDS AND SCHOLARSHIPS

<u>Future Earth SRI 2021</u>	<u>SRI2021 Early Career Champion</u>	\$80	2021
<u>Research Impact Canada</u>	<u>RIC Engaged Scholarship Award Winner</u>	\$1500	2021
Natural Sciences and Engineering Research Council of Canada	<u>Postgraduate Scholarship-Doctoral (Wildlife Management)</u>	\$42,000	2019-21

(NSERC)

<u>A Community on Ecosystem Services</u>	<u>Graduate Student Fellowship</u>	\$1000	2019;20
Carleton University	Travel Bursary	\$700	2019
Society for Conservation Biology	Travel Award	\$400	2019
Carleton University	Admission Scholarship (supported by Genome BC/Canada)	\$86,800	2017-21
University of Ottawa	Admission Scholarship	\$15,000	2016-17
Mitacs	Accelerate Fellowship	\$11,000	2013
University of Ottawa	Dean's Scholarship	\$500	2013
Sustainable Prosperity	Research & Policy Grant	\$8,000	2010-12
University of Ottawa	Admission Scholarship	\$50,000	2009-12
University of Ottawa	Travel Award	\$550	2011
Society for Conservation Biology	Travel Award	\$500	2011

SOFTWARE Microsoft Office (Word, Excel, Access, PowerPoint, Outlook), R, SAS, S-Plus, Prism, SigmaPlot, NVivo

TRAINING Wildlife Awareness, H2S Alive, Electrical Safety, Bear Awareness Training, Avalanche Skills Training Level 1, Pleasure Craft Operator Card, Ontario Class G Driver's License, Emergency First Aid/CPR-C

INTERESTS **Travel:** Alaska, Chile, Madagascar, South Africa, Indonesia, Papua New Guinea, Antarctica
Athletics: Freestyle skiing, ice hockey, football, downhill mountain biking, hiking, yoga, tennis
Music: Playing guitar, piano and violin and writing music