

CURRICULUM VITAE

JANAÍNA DE ANDRADE SERRANO

PhD Candidate in Biology (Thesis), Biology Department, McGill University, Montreal

Expected defense: July 2026, Thesis submission: April 2026

Program officer – IUCN ASG Brazil, Key Biodiversity Areas manager (July 2021 - Current)

M.Sc in Ecology, University of Campinas (UNICAMP) 2020

B.Sc. in Biological Sciences, University of São Paulo (USP) 2016

Double major: Biological Sciences and Science Teaching 2017

Int'l Student Exchange: Newcastle University, United Kingdom 2016

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Languages: English (fluent), French (fluent), Portuguese (native), Spanish (fluent), Turkish (fluent)

BACKGROUND

I am currently completing my PhD in Ecology and Conservation at McGill University, specializing in macroecology, biodiversity monitoring, human impact on biodiversity. My research focuses on modeling of extinction risk, assessing species vulnerability to human-induced threats, specifically climate change, quantifying biodiversity documentation and strategies for improving monitoring. Beyond my academic work, I serve as Program Manager for Key Biodiversity Areas (KBAs) and the Zero Extinction Alliance (AZE) under the IUCN Amphibian Specialist Group in Brazil, coordinating the designation of conservation priorities for the most threatened species. I also contribute to indicator development for the Global Biodiversity Framework by working in collaboration with Québec's Ministry of the Environment, NGOs, and academic partners, ensuring scientific rigor in policy outcomes. I hold a Master's in Ecology from the University of Campinas (UNICAMP, Brazil), where I applied modeling techniques to study environmental and anthropogenic drivers of amphibian disease. My earlier training includes a dual bachelor's degree in Biological Sciences and Science Education from the University of São Paulo (USP) and a year abroad in Ecology and Environmental Biology at Newcastle University (UK).

EDUCATION

PhD in Ecology and Conservation Biology

2021 – 2026

McGill University, Montreal, Canada

Title: “Understanding, mapping, and monitoring biodiversity vulnerability across scales”

Mentor: Dr. Laura Pollock

Masters in Ecology

2018 – 2020

Universidade Estadual de Campinas, UNICAMP, Brazil.

Title: “Effect of amphibian species richness, the abiotic and human footprint on the incidence of the chytrid fungus in different scales in the Atlantic Forest”

Mentor: Luis Felipe Toledo (University of Campinas)

Grantee of: National Council for Scientific and Technological Development (CNPq)

Double major: BSc. Biological Sciences and Science Teaching.

2011 – 2017

Universidade de São Paulo, USP, Brazil.

Undergraduate research

Title: “Using live animals in museums: learning outcomes”

Advisor: Alessandra Fernandes Bizerra (University of São Paulo)

Int'l Student Exchange

2015 – 2016

Newcastle University, England, UK

Undergraduate research

Title: “Indicator traits of sensitivity to forest fragmentation in amphibians and reptiles of Veracruz, Mexico”

Advisor: Marion Pfeifer

PUBLICATIONS

Serrano, J., Iversen, L., & Pollock, L. J. (2025).

Traits, threats, and popularity explain extinction risk of birds globally. *Global Ecology and Biogeography*, 34(7), e70087. <https://doi.org/10.1111/geb.70087>

Hébert, K., Jousse, M., **Serrano, J.**, Karger, D. N., Blanchet, F. G., & Pollock, L. J. (2025).

Five recommendations to fill the blank space in indicators at local and short-term scales.

Biological Conservation, 302, 111007. <https://doi.org/10.1016/j.biocon.2025.111007>

Hébert, K., Acevedo, D. H., Cameron, V., Courant, S., Daguet, C., Gonzalez, A., Gravel, D., Huot, J., Jousse, M., Juhasz, C.-C., Lévesque, C., **Serrano, J.**, Simard, A., & Pollock, L.

(2025).

Selecting indicators to track progress towards the Global Biodiversity Framework: A case study of Quebec's 2030 Nature Plan. *FACETS*, 10, 1–13.

<https://doi.org/10.1139/facets-2024-0357>

Serrano, J. A., Toledo, L. F., & Sales, L. P. (2022).

Human impact modulates chytrid fungus occurrence in amphibians in the Brazilian Atlantic Forest. *Perspectives in Ecology and Conservation*, 20(3), 256–262.

<https://doi.org/10.1016/j.pecon.2022.05.002>

Currie, J., Ravoth, S. M., Marconi, V., McRae, L., Arce-Plata, M. I., Emry, S., Freeman, R., Jousse, M., Mével, G., Li, S., Cruz-Rodríguez, C. A., Hunt, D. A. G. A., Oppenheimer, P., Gill, L., **Serrano, J.**, & Deinet, S. (2026).

Navigating methodological decisions: Balancing rigor and data volume of the Canadian Living Planet Index. *FACETS*, 11, 1–14. <https://doi.org/10.1139/facets-2025-0112>

PREPRINTS

Soares, B. E., Lima, R. G. de S. F., Reemeyer, J., Bernos, T. A., Brabant, C., Gumbs, R., Mandrak, N. E., Montag, L. F. de A., Rezende, C. F., **Serrano, J.**, & Zahir, Z. (2026).

Beyond where species go: Integrating SDMs, functional traits, and the Tree of Life to anticipate climate-driven change in ecosystem functioning. *EcoEvoRxiv*. [Preprint].

<https://ecoevorxiv.org/repository/view/12728/> (Submitted to PECON).

Hébert, K., Earley, N. G., Reynolds, J. D., Srivastava, D. S., Starzomski, B. M., Tseng, M., Larocque, G., Pagé, J., Raudsepp-Hearne, C., Soroye, P., Emry, S., Hunt, D. A. G. A., Rogy, P., Brabant, C., Deedes-Vincke, S., Diaz-Corzo, M. C., Eckert, L., Eckhardt, K., Elwell, S., Kester, N. J., Lee, J. S., Morrison, S., Olu-Ayorinde, E., Trottier, L. L., Van Riel, L., Yunusov, S., Eckert, I., **Serrano, J.**, Wightman, N., Horikawa, M., Hull, R., Nagpal, L., Drapeau Picard, A.-P., Lacroix-Carignan, É., Duplessis, D., Léveillé-Bourret, É., Poulin, M.-A., Zerafa, A. B., & Pollock, L. J. (2026).

Blitz the Gap: A nation-wide effort to guide citizen science toward the needs of biodiversity science. *EcoEvoRxiv*. [Preprint]. (Submitted to FACETS).

SPECIES CONSERVATION ACTION PLANS

Lisboa, C.S.; Oswald, C.B., Machado, I.F.; **Serrano, J.A.**; Ramalho, Q.; Vaz, R.I.; Carrillo, L. & Assis, C.L. (Eds.). 2023. Strategic Conservation Plan for Amphibians - *Nyctimantis pomba* (2023-2028). Amphibian Specialist Group of Brazil, IUCN. ISBN 978-65-00-67853-6.

<https://www.iucn-amphibians.org/wp-content/uploads/2023/05/Plano-Estrategico-de-Conservacao-de-Anfibios-%E2%80%94-Nyctimantis-pomba.pdf>

Lisboa, C.S.; Oswald, C.B., Machado, I.F.; **Serrano, J.A.**; Ramalho, Q.; Vaz, R.I.; De-Bastiani, V. I. M.; Carrillo, L.; Lucas, E. M. (Eds.). 2023. Strategic Conservation Plan for Amphibians - *Pithecopus rusticus* (2023-2028). Amphibian Specialist Group of Brazil, IUCN. ISBN 978-85-64049-26-0.

<https://www.iucn-amphibians.org/wp-content/uploads/2023/11/Plano-estrategico-de-conservacao-Pithecopus-rusticus.pdf>

BOOK CHAPTERS

Ribeiro, L. P., Giacometti, D., Schmitz Boeing, G. A. N., **Serrano, J. A.**, Ruggeri, J., de Carvalho, J. E., Salla, R. F., & Brasileiro, C. A. (2026).

Mudanças climáticas e sanidade de anfíbios: Impactos e desafios para a ranicultura [Climate change and amphibian health: Impacts and challenges for frog farming]. In M. J. T.

Ranzani-Paiva, M. L. Martins, R. M. Takemoto, M. A. P. Lizama, F. H. Yamada, & G. C.

Tavares (Eds.), *Sanidade de organismos aquáticos no Antropoceno* [Aquatic organism health in the Anthropocene]. Entreat / ABRAPOA. ISBN 978-65-982302-1-0.

<https://www.abrapoa.org.br/product-page/sanidade-de-organismos-aqu%C3%A1ticos-no-antr%C3%B3poceno>

PRESENTATIONS

Serrano, J. A., Hébert, K., & Pollock, L. (2025).

Guiding biodiversity monitoring in Canada: Modeling species detection and sampling gaps from museums and citizen science data. *Canadian Society for Ecology and Evolution (CSEE)*, Sherbrooke, Canada.

Serrano, J. A. & Pollock, L. Predicting bird extinction risk using threat vulnerability, traits, and popularity. *GEOBON Conference*.

Serrano, J. A., Pollock, L., & Arcese, P. (2023). Long-term recordings of song sparrows on Mandarte Island, British Columbia – Living Data Project Internship (NSERC-funded).

Invited talk at the *Canadian Society for Ecology and Evolution (CSEE)*, Winnipeg, Canada.

Serrano, J. A., Pollock, L., & Iversen, L. (2023). Predicting bird extinction risk using vulnerability to threats, traits, and popularity. *Canadian Society for Ecology and Evolution (CSEE)*, Winnipeg, Canada.

Serrano, J. A., Pollock, L., & Iversen, L. (2022). Using threat information to predict bird extinction risk. *Ecological Society of America (ESA)*, Montréal, Canada.

Serrano, J. A., Sales, L. P., & Toledo, L. F. (2020). Importance of human impact on the distribution of chytrid fungus in the Atlantic Forest. *Herpetorama*, Vitória, Brazil.

Serrano, J. A., Sales, L. P., & Toledo, L. F. (2019). Influence of amphibian species richness on chytrid infection risk in the Brazilian Atlantic Forest. *Brazilian Herpetology Congress*, Campinas, Brazil.

Serrano, J. A., Soler, M. G., & Bizerra, A. F. (2014). The importance of using live snakes in museum activities. *International Annual Meeting of the Butantan Institute*, São Paulo, Brazil.

EVENT ORGANIZATION

GEOBON Indicators Workshop (2023) - Organizer - Workshop with researchers to analyze the temporal and geographic scale of biodiversity indicators.

Biodiversity Indicators Working Group Workshop of the Ministry of Environment, Climate Change, Wildlife and Parks of Quebec (2023) - Bringing stakeholders together to select and develop indicators for the COP 15 Global Biodiversity Framework for Quebec.

PECAN Conservation Workshops (2023-2024) - IUCN ASG Brazil - Organizer - Bringing stakeholders together to develop species conservation plans.

III Anfoco (Amphibian Conservation Congress) - IUCN Amphibian Specialist Group - ASG Brazil - Staff Committee (Brazil, 2021). Event design and development.

IX Brazilian Herpetology Congress - Staff Committee (Campinas, Brazil, 2019). Assistance in event conceptualization and development.

PROFESSIONAL EXPERIENCE

IUCN Species survival commission - Amphibian Specialist Group Brazil (July 2021 - Current) - Program officer – Threats & Key Biodiversity Areas
<https://asgbrasil.wixsite.com/asg-brasil>

Research Assistant – McGill University and University of Sherbrooke – (Fall 2023 –Winter 2024) - Identifying accurate, reliable and useful biodiversity indicators for the GBF for use at a regional (Quebec) and global scale

Research Assistant – University of British Columbia – (Summer 2022) - Data rescue project fellow sponsored by NSERC CREATE in ecology, evolution and environmental science: The Living Data Project.

Geekie, (São Paulo, SP, Brazil), Content Creator And Publisher Of Digital And Printed Science Teaching Material For Elementary School And High School (October 2019 - August 2021)

Terrarium Mini Jardins, (São Bernardo Do Campo, SP), Botanical Studio - Environmental Education Content Producer And Course Instructor (July 2017 - Present)

Newcastle University, Newcastle, United Kingdom - Intern (February 2016 - July 2016)

Biological Museum - Instituto Butantan, São Paulo - Intern In Education And Visitation Monitor (January 2014 - August 2015)

AWARDS & SCHOLARSHIPS

- Fully funded Ph.D. - McGill University - Department of Biology - CAD\$133,777
- CNPq Graduate Scholarship for Master's studies (2018-2020) - US\$11,106
- CNPq Undergraduate Science Without Borders Program SWG/UUK-2014 (2015-2016) - US\$18,911
- Association Field Service (AFS) Global Highschool Intercultural Exchange Program (From 2009 to 2010) - US\$11,448

- Fully funded COC High School Scholarship (from 2007 to 2009) - US\$21,600

VOLUNTEER WORK

Student representative for Living Data Project - CIEE

Quebec Centre for Biodiversity Science (QCBS) Student representative – McGill University

Soapbox Science volunteer (Public event of outreach for women and non binary in science) – Volunteer (2023) and Speaker (2024)

IWS (Immigrant & International Women in Science Network) Montreal City leader (August 2024-August 2025) – Organizing in-person mentoring and networking events

IWS (Immigrant & International Women in Science Network) Marketing Committee Coordinator (Canada) (August 2023-August 2024)

IWS Writer of Communication & Marketing Committee (June 2021 – August 2023)

Projeto Lontra (Otter Project), (Florianópolis, SC, Brazil) - Volunteer - Articulation with public agencies, environmental education and reception of visitors (October 2020 - Present)

Instituto Horus, (Florianópolis, SC, Brazil) - Volunteer - Contact with researchers to collect data for the invasive species database (October 2020 - Present)

ICMBio, (Chico Mendes Institute for Biodiversity Conservation), Jaú National Park, Amazonas, Brazil - Volunteer (November 2017 - December 2017)

TEACHING EXPERIENCE

Biodiversity and Ecosystems (BIOL 310): McGill University, Montreal (Graduate Teaching Assistant Winter 2022, 2023, 2024, 2025)

Methods in Biology (BIOL 206): McGill University, Montreal (Graduate Teaching Assistant Fall 2021, Fall 2024, Fall 2025 (Stats help desk)

QCBS R Workshops Developer: Workshop 7 - Linear and Generalized Linear Mixed Models (LMM and GLMM) (February 2022)

QCBS R Workshops Instructor: Workshop 2 - Data Loading and Manipulation in R (November 2021)

Animal Ecology: Institute of Biological Sciences, University of São Paulo, Brazil (Undergraduate Teaching Assistant: 2017)

Genetics and Evolution: Institute of Biological Sciences, University of São Paulo, Brazil (Undergraduate Teaching Assistant: 2013)

Philosophy of Biology: Institute of Biological Sciences, University of São Paulo, Brazil
(Undergraduate Teaching Assistant: 2013)

PARTICIPATION IN WORKING GROUPS

CIEE F2C2 Freshwater Fish Climate Change: Regina, June 2026 (Organizer). Led by Dr. Romullo Lima (University of Regina).

CIEE & Living Data Project working group: Assessing Sensitivity and Robustness of the Living Planet Index (Toronto, ON, July 2024). Led by WWF Canada and Zoological Society of London – Jessica Currie, Valentina Marconi.

SPECIALIZED SKILLS

- Quantitative analysis and statistical modeling in R, including and species distribution models (SDMs), Bayesian models, GLMs, GAMs, BRTs, hierarchical modelling, structural equation models
- Spatial analysis and GIS: proficient in R (sf, raster, sp, terra), QGIS, and ArcGIS for analyzing urban landscapes, land cover, and connectivity
- Biodiversity and ecosystem service modeling, including indicator development and multifunctionality assessments.
- Data management, reproducibility, synthesis, collaboration, version control (GitHub) and open science (Certificate in Data Management and Reproducible Research and Certificate in Synthetic and Collaborative Science from Living Data Project 2021-2024).
- Data integration and synthesis from field surveys, museum collections, remote sensing, and community science platforms (e.g., iNaturalist, GBIF)
- Cross-sector collaboration with government, NGOs, and academic teams on conservation and monitoring projects
- Field experience in tropical and temperate biomes for species monitoring and habitat assessments
- Science communication and outreach, including stakeholder workshops, policy engagement, and urban bioblitz events

REFERENCES

Laura Pollock

Assistant Professor

Department of Biology

McGill University

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[The Pollock Lab](#)

Lilian Patrícia Sales

Previously Master's co-supervisor

Post-doctoral fellow University of British Columbia Okanagan
Provincial Species Habitat Modeling Specialist (British Columbia)
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