



# Valentin Lucet

CONSERVATION SCIENTIST · RESEARCH SOFTWARE DEVELOPER

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*As a conservation scientist and ecologist, I am interested in decision-making, social-ecological systems, and evidence-based, interdisciplinary approaches. Passionate about open and reproducible science, I develop tools for researchers and managers, and teach computational methods.*

## Education

### Ph.D. in Conservation Ornithology

BUXTON LAB, CARLETON UNIVERSITY

Ottawa, ON

2025 - Present

- **Thesis:** Using causal inference and value of information approaches to reduce window collisions of migratory bird species

### M.Sc. in Landscape Ecology

GONZALEZ LAB, MCGILL UNIVERSITY

Montreal, QC

2018 - 2020

- **Thesis:** Integrating land use and land cover change simulations, stakeholder understanding of the landscape, and connectivity modelling: a case study in the Montérégie region in southern Québec
- Connectivity and landscape change modelling & Stakeholder workshop

### B.Sc. (Hons) in Biology (Maj.) & Anthropology (Min.)

GUICHARD LAB, MCGILL UNIVERSITY

Montreal, QC & Barbados

2014 - 2018

- **Thesis:** Grazing preferences of coral reefs fishes | Fieldwork with the University of the West Indies

### French Baccalaureate Diploma

GRADE: 17.5/20 - MENTION TRÈS BIEN / BAC S (SPÉ BIO)

France

2011 - 2014

## Skills

<b>Programming</b>	R (advanced) / Python, Julia, Bash, SQL, Matlab (familiar)
<b>GIS tools</b>	GDAL, GRASS, QGIS, ArcGIS (proficient) - PostGIS (familiar)
<b>Other</b>	Git & GitHub (incl. pages), HPCE (slurm), Docker, Markdown, LaTeX, Hugo
<b>Languages</b>	French (native) - English (fluent) - Spanish (basics)

## Experience

### Research Software Developer

LAURIER UNIVERSITY - STEWART WILD LAB

QC

2022 - 2025

- Processing and analysing **camera trap data** using **open source tools** and **machine learning**
- Grad student mentoring: teaching of skills for open and reproducible science

### Research Software Developer

CONCORDIA UNIVERSITY - PEDERSEN QUANTITATIVE FISHERIES ECOLOGY LAB

Montreal, QC

2021 - 2022

- Development of the **sspm** and **csdm** R packages, workshop development and delivery with DFO
- Grad student mentoring: teaching of skills for open and reproducible science

### Data Scientist

ENVIRONMENT AND CLIMATE CHANGE CANADA · LANDSCAPE SCIENCE UNIT

QC

2021

- Contributions to R packages **pfocal** and **LSTDConnect**
- Contributions to a Canada-wide connectivity analysis

## Landscape ecologist

APEX RESOURCES MANAGEMENT SOLUTIONS

QC

2020 - 2021

- Projects: carbon cycle models, epidemiological models, **STSIM** development and maintenance

## CONTRACTS & CONSULTING

### APEX Resources Management Solutions

R DEVELOPPER

QC

2019 - 2020

- Improvement and CRAN submission for the R package **Rsyncrosim**

### MELCC – Ministère de l'Environnement

REPORTER

QC

2019

- Contributions to an analysis of ecological connectivity for the Saint Lawrence Lowlands and translation to French

### MFFP – Ministère des Forêts, de la Faune et des Parcs

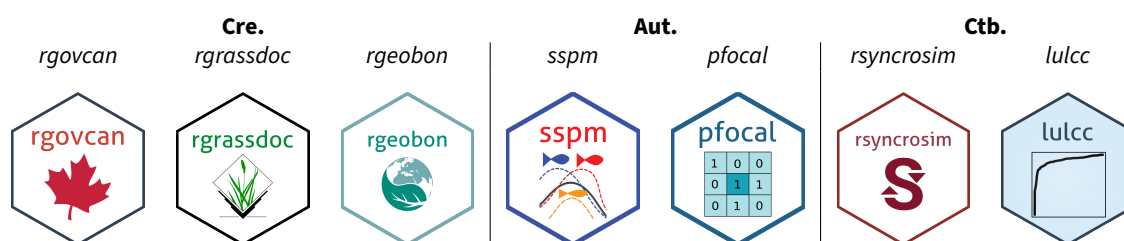
REPORTER

QC

2019

- Contributions to a report on ecological connectivity in the northwest America as part of the working group related to the 40-3 resolution

## Software



## Teaching

### WORKSHOPS

#### Version Control with RStudio and the Command Line

OFFERED AT MCGILL UNIVERSITY, CONCORDIA UNIVERSITY, MEMORIAL UNIVERSITY, WILFRID LAURIER UNIVERSITY & UNIVERSITY OF TORONTO

Online/In person

2019-2024

#### R Package Development for Research: an Introduction

OFFERED AT THE CSEE 2021 MEETING

Online

2020

#### A Very Short Introduction to Compute Canada Resources

OFFERED AT CONCORDIA UNIVERSITY

Online

2021

#### SQL for Ecologists with R and Tidyverse Equivalent

OFFERED AT CONCORDIA UNIVERSITY

Online

2021

### ASSISTANTSHIPS

2019 **Conservation Biology** Tutorials, lectures and grading

2018-19 **Animal Diversity** Labs and grading

2017-20 **Biometry** Tutoring

McGill University

McGill University

McGill University

## Honors & Awards

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2025	<b>NSERC CGS-D</b>	\$120k
2021	<b>QCBS Learning and Development Award</b>	\$150
2020	<b>QCBS Excellence Travel Award</b>	Waived (COVID-19)
2019	<b>FRQNT (Fonds de Recherche du Québec - Nature et Technologie) M.Sc. Bursary</b>	\$17,5k
2018	<b>Frank Rigler Prize in Ecology</b>	\$785
2017	<b>SURA (Student Undergraduate Research Award)</b>	\$6,725

## Volunteering

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### Redpath Museum

McGill University

FUNDRAISING AMBASSADOR

2015 - 2017

- Seeds of Change Plesiosaur project - \$13,000 raised
- Seeds of Change Cutting Edge Lectures project - \$2,850 raised

### Redpath Museum Student Society

McGill University

VP COMMUNICATIONS, VP EVENTS, VP

2015-2018

### ARCHELON (Sea Turtle Protection Society of Greece)

Crete

MORNING SURVEY VOLUNTEER FOR A TOTAL OF 5 MONTHS

2015, 2016

### Abouheif Lab

McGill University

UNDERGRADUATE VOLUNTEER

2015-2016

### WWF Quebec - Project "Ours Polaire sur Glaces Ephémères"

Montreal, QC

PUBLIC AWARENESS VOLUNTEER

2015

### McGill bird observatory

Montreal, QC

MORNING SURVEY VOLUNTEER

2014

### Editions Heloise D'Ormesson

Paris, France

INTERN - MANUSCRIPT PROOF READER

2012

## Publications

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### ARTICLES

1. Measuring the degree of "fit" within social-ecological systems to support local decision-making on flood-risk  
Hobbs, Imogen, **Valentin Lucet**, Jennifer Holzer, Julia Baird, and Gordon Hickey  
*Journal of Flood Risk Management*. 2025
2. Comparison and Parallel Implementation of Alternative Moving-Window Metrics of the Connectivity of Protected Areas Across Large Landscapes  
Hughes, Josie, **Valentin Lucet**, Griffin Barrett, Scott Moran, Micheline Manseau, Amanda E. Martin, Ilona Naujokaitis-Lewis, Jorge Octavio Negrín Dastis, and Richard Pither  
*Landscape Ecology*. 2023
3. The sspm R package: spatial surplus production models for the management of northern shrimp fisheries  
**Lucet, Valentin** and Eric Pedersen  
*JOSS - Journal of Open Source Software*. 2023

4. Integrating land use and climate change models with stakeholder priorities to evaluate habitat connectivity change: a case study in southern Québec

**Lucet, Valentin** and Andrew Gonzalez

*Landscape Ecology*, 2022

## REPORTS

1. Using Camera Traps and Computer Vision to Quantify Wildlife Diversity and Co-occurrence Where the Hudson's Bay Lowlands meets the Ontario Shield

**Lucet, Valentin**, Samantha McFarlane, Jennifer Baltzer, Cheryl A. Johnson, Eric Neilson, Philip Wiebe, Frances Stewart, and Josie Hughes

ECCC, 2025

2. Annexe-Modélisation de la connectivité de l'habitat terrestre dans les Basses-Terres du Saint-Laurent selon différents scénarios de changements climatiques et d'occupation des sols

Rayfield, Bronwyn, Guillaume Larocque, Kyle T Martins, **Valentin Lucet**, Colin Daniel, and Andrew Gonzalez

MELCC, 2021

3. Changing terrestrial habitat connectivity within the St. Lawrence Lowlands under scenarios of climate and landcover change

Rayfield, Bronwyn, Guillaume Larocque, Kyle T. Martins, **Valentin Lucet**, Colin Daniel, and Andrew Gonzalez

MELCC, 2021

4. A review of ecological connectivity analysis in the Region of Resolution 40-3

Arkilanian, Alex, Guillaume Larocque, **Valentin Lucet**, Deanna Schrock, Célia Denépoux, and Andrew Gonzalez

MFFP, 2020

## PRESENTATIONS

1. Combining camera traps, vegetation surveys, and carbon sampling to quantify ecosystem linkages where the lowlands meet the shield

Mushkegowuk Research Meeting, 2024

2. Using Camera Traps and Computer Vision to Quantify Wildlife Diversity and Co-Occurrence across Ontario's Far North

Ontario Chapter of the Wildlife Society Annual Conference, 2023

3. The sspm R package: spatial surplus production models for the management of northern shrimp fisheries

Annual Meeting of the Quebec Center for Biodiversity Science, 2021

4. Integrating land use and land cover change simulations and connectivity modeling: a case study in the Montérégie region in southern Quebec

Annual Meeting of the International Association for Landscape Ecology - North America chapter (IALE-NA), 2020

5. Intégrer des simulations de changements d'utilisation des sols et des modèles de connectivité: un exemple en Montérégie dans le sud du Québec

Annual Meeting of the Quebec Center for Biodiversity Science, 2019

6. Differences in habitat use between two parrotfish grazers modulates the resilience of Caribbean coral reefs

Annual Meeting of the Quebec Center for Biodiversity Science, 2018

7. Size-dependent variation in diet by schooling herbivorous parrotfishes

McGill University Undergraduate Research Conference (URC), 2017