Kevin Cazelles

Nationality: French

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French: Native Speaker
English: Fluent
Portugese: Conversational
German: Beginner
Chinese: Beginner

**Phd in theoretical ecology
Agricultural Engineer**

Scientific Programming

■■■■■	R	■□□□□	Java
■■■□□	C++	■■■□□	Sage
■■■□□	C	■■■□□	Bash
■■■□□	Matlab/Octave	■■■■□	Git
■■□□□	Julia	■■■■□	UNIX
■■□□□	Python		

Web and Document Preparation

■■■□□	HTML/CSS	■■■□□	Inkscape
■■□□□	Javascript	■■■■■	Microsoft Office
■■■■■	Markdown	■■■■■	LibreOffice
■■■■□	Jekyll/Hugo		
■■■■□	Latex		

🎓 Education

2012-2016 Phd Thesis. *Influence of biotic interactions on the geographic distribution of species.*
Université du Québec À Rimouski, Canada / Université de Montpellier, France (Joint PhD).
Doctor of Philosophy in Ecology (grade: Excellent)

2008–2012 Studies in Agricultural Engineering and M.Sc, Ecology and Evolution
AgroParisTech, Paris, France
Diploma of Agronomy Engineer and Master of Science in Ecology and Evolution

📈 Experience

June 2017 - McCann Lab, University of Guelph
Guelph ON, Canada
Post-doctoral fellow: working on the impact of human activities on fish communities and on building a framework that uses biotracers to create spatial fingerprints to determine the provenance of species.

Summer 2012 Laboratoire Ecologie et Evolution, Ecole Normale Supérieure
Paris, France
Research Professional, working on wavelets: statistical testing, code in C and application to time series of dengue in Southern Asia.

Early 2012 Institut des Sciences de l'Evolution, Université de Montpellier
Paris, France
Four months' training period, working on species distribution model and biotic interactions.

2011 Laboratório de Ecologia Evolutiva e Biodiversidade, Universidade Federal de Minas Gerais
Belo Horizonte, Brazil
Six months' training period, working on herbaceous plant communities in Cerrado: phenology and germination.

2009 SIMBIOS Centre, Abertay University
Dundee, United Kingdom
Six months' training period, working on modeling fungal growth dynamics in a realistic soil environment.

🏆 Grants and awards

2017	ACFAS award for the best joint PhD France-Canada (French laureate) CA$1,500
2016	Grant from the FRQNT (Fonds de Recherche du Québec Nature et Technologies) CA$20,000
2016	Excellence awards of the Quebec Centre for Biodiversity Science (QCBS) CA$1,500
2015	Award for the second best oral presentation of the QCBS annual meeting CA$150
2015–2016	Grant from the Frontenac program (mobility program for joint Phd between France and Québec) CA$6,000/year
2012–2015	Grant from the Ministry of Higher Education and Research of France €24 000/year
2012–2015	Grant from the FRQNT CA$4,000/year

👥 Teaching

2019	Université du Québec à Montréal, Montreal, Canada (2 days) *An Introduction to R*
2018	Institut de recherche en biologie végétale, Montreal, Canada (3h) *Use R as a geographic information system*
2017	Centre de la Science de la Biodiversité du Québec (CSBQ), Canada (3 days) *Instructor in a meta-analyses workshop.*
2017	University of Sherbrooke, Canada (5 days) *Instructor in the summer school "Bayesian Statistics for Ecologists".*
2016	Quebec Centre For Biodiversity Science, Canada (2 days) *Organizing a two-days event on data visualization in biodiversity science for graduate students.*
2015	Université du Québec à Rimouski, Canada (3h) *An introduction to Markov chains*
2014–2016	Université du Québec à Rimouski, Canada (16h/year) *Presenter for the QCBS R workshop series.*
2014–2015	Université du Québec à Rimouski, Canada (1 day/year) *Advanced R course on data visualization and graphics editing.*
2013–2015	Université de Monpellier, France (64h/year) *Practical course for first year undergraduates in developmental biology (TA).*
2014	Universidade Federal de Minas Gerais, Brazil (1 day) *Advanced R course on map editing.*

✏️ Articles published in peer-reviewed journal

1. Brice M., **Cazelles K**., Legendre P., Fortin M., 2019. Disturbances amplify tree community responses to climate change in the temperateboreal ecotone. *Global Ecology and Biogeography* **28**(11):1668-1681.
   https://doi.org/10.1111%2Fgeb.12971

2. Solarik K., **Cazelles K**., Messier C., Bergeron Y., Gravel D., 2019. Priority effects will impede range shifts of temperate tree species into the boreal forest. *Journal of Ecology* .
   https://doi.org/10.1111%2F1365-2745.13311

3. **Cazelles K**., Bartley T., Guzzo M., Brice M., MacDougall A., Bennett J., Esch E., Kadoya T., Kelly J., Matsuzaki S., Nilsson K., McCann K., 2019. Homogenization of freshwater lakes: Recent compositional shifts in fish communities are explained by gamefish movement and not climate change. *Global Change Biology* .
https://doi.org/10.1111%2Fgcb.14829

4. Albouy C., Archambault P., Appeltans W., Araújo M., Beauchesne D., **Cazelles K**., Cirtwill A., Fortin M., Galiana N., Leroux S., Pellissier L., Poisot T., Stouffer D., Wood S., Gravel D., 2019. The marine fish food web is globally connected. *Nature Ecology & Evolution* **3**(8):1153-1161.
https://doi.org/10.1038%2Fs41559-019-0950-y

5. **Cazelles K**., McCann K., 2019. Diversity-stability and the structure of perturbations. *Peer Community In Ecology* :100017.
https://doi.org/10.24072%2Fpci.ecology.100017

6. Bartley T., Guzzo M., **Cazelles K**., Verville A., McMeans B., McCann K., 2019. Thermal preferences drive behavioural responses but not biomass responses of predatory fishes to lake morphometry.
.
https://doi.org/10.1101%2F572925

7. Bartley T., McCann K., Bieg C., **Cazelles K**., Granados M., Guzzo M., MacDougall A., Tunney T., McMeans B., 2019. Food web rewiring in a changing world. *Nature Ecology & Evolution* **3**(3):345-354.
https://doi.org/10.1038%2Fs41559-018-0772-3

8. Geschke J., **Cazelles K**., Bartomeus I., 2018. Rcites: An r package to access the CITES species-plus database. *Journal of Open Source Software* **3**(31):1091.
https://doi.org/10.21105%2Fjoss.01091

9. Wheeler H., Berteaux D., Furgal C., **Cazelles K**., Yoccoz N., Grémillet D., 2019. Identifying key needs for the integration of socialecological outcomes in arctic wildlife monitoring. *Conservation Biology* **33**(4):861-872.
https://doi.org/10.1111%2Fcobi.13257

10. Galiana N., Lurgi M., Claramunt-López B., Fortin M., Leroux S., **Cazelles K**., Gravel D., Montoya J., 2018. The spatial scaling of species interaction networks. *Nature Ecology & Evolution* **2**(5):782-790.
https://doi.org/10.1038%2Fs41559-018-0517-3

11. MacDougall A., Harvey E., McCune J., Nilsson K., Bennett J., Firn J., Bartley T., Grace J., Kelly J., Tunney T., McMeans B., Matsuzaki S., Kadoya T., Esch E., **Cazelles K**., Lester N., McCann K., 2018. Context-dependent interactions and the regulation of species richness in freshwater fish. *Nature Communications* **9**(1).
https://doi.org/10.1038%2Fs41467-018-03419-1

12. Legagneux P., Casajus N., **Cazelles K**., Chevallier C., Chevrinais M., Guéry L., Jacquet C., Jaffré M., Naud M., Noisette F., Ropars P., Vissault S., Archambault P., Bêty J., Berteaux D., Gravel D., 2018. Our house is burning: Discrepancy in climate change vs. Biodiversity coverage in the media as compared to scientific literature. *Frontiers in Ecology and Evolution* **5**.
https://doi.org/10.3389%2Ffevo.2017.00175

13. Kopelke J., Nyman T., **Cazelles K**., Gravel D., Vissault S., Roslin T., 2017. Food-web structure of willow-galling sawflies and their natural enemies across europe. *Ecology* **98**(6):1730-1730.
https://doi.org/10.1002%2Fecy.1832

14. **Cazelles K**., Mouquet N., Mouillot D., Gravel D., 2016. On the integration of biotic interaction and environmental constraints at the biogeographical scale. *Ecography* **39**(10):921-931.
https://doi.org/10.1111%2Fecog.01714

15. **Cazelles K**., Araújo M., Mouquet N., Gravel D., 2015. A theory for species co-occurrence in interaction networks. *Theoretical Ecology* **9**(1):39-48.
https://doi.org/10.1007%2Fs12080-015-0281-9

16. Poisot T., Cirtwill A., **Cazelles K**., Gravel D., Fortin M., Stouffer D., 2015. The structure of probabilistic networks. *Methods in Ecology and Evolution* **7**(3):303-312.
https://doi.org/10.1111%2F2041-210x.12468

17. Poisot T., Cirtwill A., **Cazelles K**., Gravel D., Fortin M., Stouffer D., 2015. The structure of probabilistic networks. *Methods in Ecology and Evolution* **7**(3):303-312.
https://doi.org/10.1111%2F2041-210x.12468

18. Stradic S., Silveira F., Buisson E., **Cazelles K**., Carvalho V., Fernandes G., 2015. Diversity of germination strategies and seed dormancy in herbaceous species ofcampo rupestregrasslands. *Austral Ecology* **40**(5):537-546.
https://doi.org/10.1111%2Faec.12221

19. Cazelles B., **Cazelles K**., 2014. Major urban centers have weak influence on the timing of dengue epidemics in southeast asia. *International Journal of Infectious Diseases* **21**:217.
https://doi.org/10.1016%2Fj.ijid.2014.03.873

20. Cazelles B., **Cazelles K**., Chavez M., 2014. Wavelet analysis in ecology and epidemiology: Impact of statistical tests. *Journal of The Royal Society Interface* **11**(91):20130585.
https://doi.org/10.1098%2Frsif.2013.0585

21. **Cazelles K**., Otten W., Baveye P., Falconer R., 2013. Soil fungal dynamics: Parameterisation and sensitivity analysis of modelled physiological processes, soil architecture and carbon distribution. *Ecological Modelling* **248**:165-173.
https://doi.org/10.1016%2Fj.ecolmodel.2012.08.008

⚙ In review

1. Blanchet F., **Cazelles K**., Gravel D., 2019. Co-occurrence is not evidence of ecological interactions? *Ecology Letters*. Note: all authors contributed equally.

2. Bartley T., Guzzo M., **Cazelles K**., Verville A., McMeans B., McCann K., 2019. Thermal preferences drive behavioural responses but not biomass responses of predatory fishes to lake morphometry *Oecologia*. Note: the three first authors contributed equally.

3. Warn P. K. C., McCann K., Rooney N., **Cazelles K**., Guzzo M., 2019. Geography and morphology affect the ice duration dynamics of northern hemisphere lakes worldwide *Geophysical Research Letters*.

4. Poisot T., Gabriel B., **Cazelles K**., Dallas T., Gravel D., MacDonald A., Mercier B., Violet C., Vissault S., 2019. Environmental biases in the study of ecological networks at the planetary scale *2Bdetermined*.

🔍 Reviewer for the following peer-reviewed journals

American Naturalist, Biodiversity data journal, Canadian Journal of Fisheries and Aquatic Sciences, Diversity and Distributions, Ecography, Ecological Applications, Ecology, Ecology Letters, Entropy, Environment, Development and Sustainability, Global Ecology and Biogeography, Journal of Animal Ecology, Journal of Vegetation Science, Methods in Ecology and Evolution, Nature Ecology and Evolution, Oikos, PeerJ, Population Ecology, Proceedings of the Royal Society B, Theoretical Ecology. **Recommander for PCI ecology**.

</> Code

graphicsutils (® package) – a set of miscellenous graphical functions.
🜹 https://github.com/inSileco/graphicsutils

inSilecoMisc (® package) – a set of miscellenous functions.
🜹 inSileco/inSilecoMisc

rcites (**R** package) – an R client for the CITES Species+ API.
  ropensci/rcites ; CRAN: rcites ; DOI: 10.5281/zenodo.1490219

rmangal (**R** package) – an R client for Mangal API (Mangal is a collection of published ecological networks).
  ropensci/rmangal ; CRAN: rmangal

HomogenFishOntario (Research compendium) – Reproducible analysis pipeline for 'Cazelles et al. (2019) DOI:10.1111/gcb.14829'.
  McCannLab/HomogenFishOntario ; DOI: 10.5281/zenodo.3383237

monitoringOutcomes (Research compendium) – Reproducible analysis pipeline for 'Wheeler et al. (2019) DOI:10.1111/cobi.13257'.
  KevCaz/monitoringOutcomes ; DOI: 10.5281/zenodo.1652737

burningHouse (Research compendium) – Reproducible analysis pipeline for 'Legagneux et al. (2018) DOI:10.3389/fevo.2017.00175'.
  KevCaz/burningHouse ; DOI: 10.5281/zenodo.1134897

QCBSRworkshops (continuous integration) – Set up continuous deployment for the QCBS R workshops
  QCBSRworkshops

◀ Science popularization

1. **Cazelles K**., 2014. La Biodiversité en territoire isolée. *Accromath*. http://accromath.uqam.ca/2014/02/la-biodiversite-en-territoires-isoles/

2. Legagneux P., **Cazelles K**., Gravel D., 2019. Sommes-nous bien informés ? : écarts entre la couverture du changement climatique et de la biodiversité par les médias et la littérature scientifique. *Climatoscope*.

▦ Media

✎ **Québec Science** (2020, fr).
https://www.quebecscience.qc.ca/sciences/les-10-decouvertes-de-2019/carte-interactions-entre-poissons/

✎ **Science** (2019, en).
https://science.sciencemag.org/content/366/6472/1468.1

✎ **la Presse** (2018, fr).
http://www.lapresse.ca/environnement/climat/201803/06/01-5156225-la-biodiversite-dans-lombre-des-changements-climatiques.php

✎ **Anthropocenemagazine** (2018, en).
http://www.anthropocenemagazine.org/2018/02/biodiversity-ignored-by-press/

✎ **Greenreport** (2018, it).
http://www.greenreport.it/news/aree-protette-e-biodiversita/la-crisi-della-biodiversita-non-interessa-media/

✎ **20 minutes** (2018, fr).
https://www.20minutes.fr/planete/2234443-20180308-pourquoi-parle-bien-plus-changement-climatique-erosion-biodiversite

🎙 **RFI** (2018, fr).
http://www.rfi.fr/emission/20180218-2-chaos-climatique-financier-jouzel-larrouturou

✎ **le Devoir** (2018, fr).
http://www.ledevoir.com/societe/education/518374/les-deux-derniers-laureats-de-l-acfas-reviennent-sur-leur-experience

📢 Presentations and posters

- Conference Presentations

1. **Cazelles K**., Myles-Gonzalez E., Zemlak T., McCann K., QCBS Annual symposium, QCBS Annual symposium (2019-12-19) *Embracing the blessing of dimensionality to determine species' provenance*.

2. **Cazelles K**., Gravel D., McCann K., ESA Annual Meeting, ESA Annual Meeting (2018-08-01) *Towards an Energetic Theory of Island biogeography*.

3. **Cazelles K**., Myles-Gonzalez E., Zemlak T., McCann K., CSEE Annual Meeting, CSEE Annual Meeting (2018-07-01) *Fighgting Noise with dimensionality*.

4. **Cazelles K**., Gravel D., McCann K., Ecology Across Borders, Ecology Across Borders (2017-12-01) *Towards an Energetic Theory of Island biogeography*.

5. **Cazelles K**., Gravel D., McCann K., Ecology Across Borders, Ecology Across Borders (2017-12-01) *Do ecological interactions impact geographic distributions of species?*.

6. Vissault S., **Cazelles K**., R à Québec, R à Québec (2017-01-08) *Teaser of the alien R package*.

7. **Cazelles K**., Mouquet N., Gravel D., QCBS - Annual Symposium, QCBS - Annual Symposium (2015-12-01) *Do ecological interaction impact geographical distributions of species?*.

8. **Cazelles K**., Mouquet N., Mouillot D., Gravel D., CSEE - Annual Meeting, CSEE - Annual Meeting (2015-08-01) *Integration of ecological networks in a theoretical stochastic model of biogeography*.

9. **Cazelles K**., Mouquet N., Mouillot D., Gravel D., BES- SFE - Joint Annual Meeting, BES- SFE - Joint Annual Meeting (2014-12-01) *Integration of ecological networks in a theoretical stochastic model of biogeography*.

10. **Cazelles K**., Cazelles B., Model in Population Biology, Model in Population Biology (2012-08-01) *Wavelet Clustering, a tool to integrate spatial and temporal patterns based on their dynamical properties, application to dengue in Thailand*.

- Seminar

1. **Cazelles K**. *Do biotic interactions affect species distribution?* Université de Sherbrooke (2018-10-12).

2. **Cazelles K**. *Do biotic interactions affect species distribution?* Department of Integratove Biology, University of Guelph (2018-03-13).

3. **Cazelles K**. *Do biotic interactions affect species distribution?* Institut de recherche en biologie végétale, Montréal (2018-02-02).

4. **Cazelles K**. *Do biotic interactions affect species distribution?* Department of Ecology & Evolutionary Biology, University of Toronto. (2018-01-08).

5. **Cazelles K**. *Do biotic interactions affect species distribution?* Laboratoire d'ECologie Alpine, Université Grenoble Alpes. (2017-02-09).

- Posters

1. Vissault S. Gravel D. **Cazelles K**. Poisot T. *Mangal, a global ecological interactions database*. biodiversitynext, Leiden – The Netherlands (2018-08-01).

2. Brice M. Legendre P. **Cazelles K**. Fortin M. *Long-term forest community changes in the boreal-temperate ecotone*. ESA Annual Meeting, New-Orleans, LA, USA (2018-08-01).

3. Myles-Gonzalez E. **Cazelles K**. Zemlak T. McCann K. *Using Distributions of Biotracers to Predict Global Food Traceability*. 69th Pacific Fisheries Technologists' (PFT) conference 2018, Alaska (2018-02-01).

4. Beauchesne D. **Cazelles K**. Archambault P. Gravel D. *Predicting the spatial distribution of ecological networks*. CSEE Annual meeting, Victoria, BC, Canada (2017-08-01).

5. Legagneux P. Casajus N. **Cazelles K**. Chevallier C. Chevrinais M. Guéry L. Jacquet C. Jaffré M. Naud M. Noisette F. Ropars P. Vissault S. Archambault P. Bêty J. Berteaux D. Gravel D. *The Earth Tribune*. ArcticNet Meeting, Winnipeg, MB, Canada (2016-12-01).