

Camille LECLERC, PhD

INRAE – UMR RECOVER
Site Aix – Le Tholonet
3275 route de Cézanne – CS 40061
13182 Aix-en-Provence Cedex 5, France

✉ camille.leclerc@inrae.fr
🌐 <https://leclerccamille.wordpress.com/>
☎ (+33)4.42.66.99.65

RESEARCH INTERESTS

Macroecology ; Biogeography ; Global Changes ; Conservation Biology

EDUCATION

2017 – 2019	PhD in biology, Doctoral School n°567 Plant Sciences: from genes to ecosystems University of Paris Saclay, Orsay, France
2010 – 2012	Master's degree in ecology, biodiversity and evolution, specialized in conservation biology University of Paris Sud, Orsay, France
2007 – 2010	Bachelor's degree in ecology University of Paris Sud, Orsay, France

RESEARCH EXPERIENCES

Mar. 2020 – to present	Postdoctoral researcher at Risks, ECO-systems, Vulnerability, Environment, Resilience unit (UMR RECOVER), Aix-en-Provence. Supervised by Arnaud Sentis and Victor Frossard. <i>Food-web structure in relation to variations in the environment.</i>
Jan. 2017 – Dec. 2019 (36 months)	PhD fellow at the Ecology, Systematic, Evolution unit (UMR 8079), Orsay. <i>Insular endemic biodiversity in the face of global change.</i> Ph.D. publicly defended the 10 th of December, 2019. <i>Examination board:</i> <i>Pr. P. Leadley, Université Paris-Sud, ESE – UMR 8079, Orsay, France (President)</i> <i>Dr. V. Devictor, CNRS, ISEM – UMR 5554, Montpellier, France (Referee)</i> <i>Dr. A.S.L. Rodrigues, CNRS, CEFÉ – UMR 5175, Montpellier, France (Referee)</i> <i>Dr. F. Rigal, Université de Pau et des Pays de l'Adour, IPREM – UMR 5254, Pau, France (Examiner)</i> <i>Pr. D. Schmeller, Université Toulouse III – Paul Sabatier, ECOLAB – UMR 5245, Toulouse, France (Examiner)</i> <i>Dr. C. Bellard, CNRS, ESE – UMR 8079, Orsay, France (Advisor)</i> <i>Dr. F. Courchamp, CNRS, ESE – UMR 8079, Orsay, France (Co-advisor)</i>
Oct. 2016 – Dec. 2016 Apr. 2016 – Jul. 2016 (7 months)	Research assistant at the Ecology, Systematic, Evolution unit (UMR 8079), Orsay. Supervised by Céline Bellard and Franck Courchamp. <i>Understanding island diversity in the face of global change (setting up of the thesis research topic).</i>
Oct. 2014 – Mar. 2016 (18 months)	Civic service for SUBANTECO scientific program at Kerguelen archipelago (French Southern Territory). Supervised by David Renault.
Sept. – Sept. 2014 (13 months)	Research assistant at the Ecology, Systematic, Evolution unit (UMR 8079), Orsay. Supervised by Céline Bellard and Franck Courchamp. <i>Combined impacts of global changes on biodiversity across the United States.</i>
Oct. 2012 – Jun. 2013 (9 months)	Internship at the Ecology, Systematic, Evolution unit (UMR 8079), Orsay. Supervised by Céline Bellard and Franck Courchamp. <i>Population dynamics and conservation of the Tibetan antelope (<i>Pantholops hodgsonii</i>).</i>
Feb. 2012 – Jul. 2012 (6 months)	Internship at the Ecology, Systematic, Evolution unit (UMR 8079), Orsay. Supervised by Céline Bellard and Franck Courchamp. <i>Climate change on global biodiversity hotspots.</i>
Apr. 2011 – Jun. 2011 (3 months)	Internship at the Station for Theoretical and Experimental Ecology (UMR 5321), Moulis. Supervised by Dirk Schmeller. <i>Effects of aquatic environment and vegetation on the survival of zoospores of the chytrid fungus (<i>Batrachomyces dendrobatidis</i>).</i>
Jul. 2010 – Aug. 2010 (2 months)	Internship at the Centre of Biological Studies Chizé (UMR 7372), Chizé. Supervised by Olivier Lourdais

PUBLICATIONS

Submitted manuscripts or in preparation

- Bellard, C., Bernery, C. & **Leclerc, C.** (in rev.), Looming extinctions due to invasive species: Irreversible loss of ecological strategy and evolutionary history. *Global Change Biology*.
- Leclerc, C.**, Magneville, C. & Bellard, C. (in prep.), Multidimensional diversity approach to explore endemic mammal priorities on insular regions.
- Marino, C., **Leclerc, C.** & Bellard, C. (in prep.), Trait diversity of insular vertebrates vulnerable to biological invasion.
- Leclerc, C.**, Danis, P.-A., Reynaud, N., Frossard, V. & Sentis A. (in prep.), How spatial patterns in lake food-web structure are associated with environmental variables?
- Leclerc, C.**, Courchamp, F. & Bellard, C. (in prep.), Chapitre sur la vulnérabilité des milieux insulaires, Vulnérabilités environnementales : perspectives pluridisciplinaires (édition ouvrage à définir).

Peer-reviewed publications

- Leclerc, C.**, Courchamp, F. & Bellard, C. (2020), Future climate change vulnerability of endemic island mammals. *Nature Communications*, 11: 4943.
- Leclerc, C.**, Villéger, S., Marino, C. & Bellard, C. (2020), Global changes threaten functional and taxonomic diversity of insular species worldwide. *Diversity and Distribution*, 26 (4): 402-414.
- Leclerc, C.**, Courchamp, F. & Bellard, C. (2018), Insular threat associations within taxa worldwide. *Scientific Reports*, 8: 6393.
- Bellard, C., **Leclerc, C.**, Hoffmann, B.D. & Courchamp, F. (2016), Vulnerability to climate change and sea-level rise of the 35th biodiversity hotspot, the Forests of East Australia. *Environmental Conservation*, 43 (1): 79-89.
- Bellard, C., **Leclerc, C.**, & Courchamp, F. (2015), Combined impacts of global changes on biodiversity across the USA. *Scientific Reports*, 5: 11828.
- Bellard, C., Russell, J., Hoffmann, B.D., **Leclerc, C.** & Courchamp, F. (2015), Adapting island conservation to climate change – Response to Andréfouët et al. *Trends in Ecology & Evolution*, 30 (1): 2-3.
- González-Muñoz, N., Bellard, C., **Leclerc, C.**, Meyer, J-Y. & Courchamp, F. (2015), Assessing current and future risks of invasion by the “green cancer” *Miconia calvenscens*. *Biological Invasions*, 17 (11): 3337-3350.
- Leclerc, C.***, Bellard, C.*, Luque, G.M. & Courchamp, F. (2015), Overcoming extinction: understanding processes of recovery of the Tibetan antelope. *Ecosphere*, 6 (9): 1-14. (*equal contribution)
- Bellard, C., **Leclerc, C.** & Courchamp, F. (2014), Impact of sea level rise on the ten insular biodiversity hotspots. *Global Ecology & Biogeography*, 23 (2): 203-212.
- Bellard, C., **Leclerc, C.**, Leroy, B., Bakkeness, M., Veloz, S., Thuiller, W. & Courchamp, F. (2014), Vulnerability of Biodiversity hotspots to global change. *Global Ecology & Biogeography*, 23 (12): 1376-1386.
- Courchamp, F., Hoffmann, B.D., Russell, J., **Leclerc, C.** & Bellard, C. (2014), Climate change, sea-level rise, and conservation: keeping island biodiversity afloat. *Trends in Ecology & Evolution*, 29 (3): 127-130.
- Schmeller, D.S., Blooi, M., Martel, A., Garner, T.W.J., Fisher, M.C., Azemar, F., Clare, F.C., **Leclerc, C.**, Jäger, L., Guevara-Nieto, M., Loyau, A., & Pasmans, F. (2014), Microscopic aquatic predators strongly affect infection dynamics of a globally emerged pathogen. *Current Biology*, 24 (2): 176-180.
- Bellard, C., **Leclerc, C.** & Courchamp, F. (2013), Potential impact of sea level rise on French islands worldwide. *Nature Conservation*, 5: 75-86.

Technical reports

- Leclerc, C.**, Danis, P.-A., Reynaud, N., Frossard, V. & Sentis A. (2020). Réseaux trophiques des plans d'eau métropolitains : Reconstruction de la structure des réseaux trophiques à partir des données de suivi obtenues dans le cadre de la mise en application de la Directive Cadre sur l'Eau. *OFB/INRAE/USMB/Pôle ECLA*, 35 pages.

Book chapters

- Bellard, C., **Leclerc, C.** & Courchamp, F. (2019), Case study 4: The effects of sea-level rise on habitats and species. In T.E. Lovejoy and L. Hannah (Eds.), *Biodiversity and Climate Change*, *Yale University Press*, pp. 125-127.

Thesis

- Leclerc, C.** (2019). Biodiversité endémique insulaire face aux changements globaux : états des lieux dans un contexte de conservation. *Université Paris-Saclay*, 185 pages.

Outreach publications

Leclerc, C. (2018), Les principales conséquences du réchauffement climatique sur la biodiversité. *Cahiers de l'Atelier*, 558: 37-42.

SCIENTIFIC PRESENTATIONS

International conferences:

- Jan. 2019
(oral presentation) *9th Biennial Conference International Biogeography*, Málaga, Spain.
Leclerc, C., S. Villéger, Courchamp, F. & Bellard, C. "Global changes threaten functional and taxonomic diversity of insular species worldwide".
- Oct. 2018
(oral presentation) *SFEcologie – International Conference on Ecological Sciences*, Rennes, France.
Leclerc, C., Courchamp, F. & Bellard, C. "Insular threat associations within taxa worldwide".
- Feb. 2017
(poster) *4th Young Natural History scientists' Meeting*, Paris, France.
Leclerc, C., Courchamp, F. & Bellard, C. "Major threats that imperil insular ecosystems".
- Jul. 2014
(oral presentation) *Island Biology*, Honolulu, Hawaii.
Leclerc, C., Bellard, C. & Courchamp, F. "Impact of sea-level rise on insular ecosystems".
- Feb. 2014
(poster) *1st Young Natural History scientists' Meeting*, Paris, France.
Leclerc, C., Bellard, C., Hoffmann, B.D. & Courchamp, F. "Climate change, sea-level rise, and conservation priorities: The case of the 35th biodiversity hotspot".

National conferences:

- Nov. 2020
(oral presentation) *Day of the Pole Research & Development on Lacustrine Ecosystems (ECLA) – OFB/INRAE/USMB*, virtual event.
Leclerc, C., Danis, P.-A., Reynaud, N., Frossard, V. & Sentis A. "Reconstituer la structure des réseaux trophiques grâce aux données collectées dans le cadre de la Directive Cadre sur l'Eau".
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FURTHER QUALIFICATIONS

Languages:

French (mother tongue), English (common and scientific)

Computational skills:

R (confirmed), QGIS (intermediate), Gephi (intermediate), Inkscape (intermediate), PostgreSQL (initiate)

Experimental and fieldwork skills:

- Capture-mark-recapture for amphibians
 - Points transect method
 - Field experiences in mountain area (French Pyrenees) and subantarctic area (Kerguelen archipelagos)
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TEACHING AND RESEARCH TRAINING

Supervising:

- 2020 – to present Julie Morla (Ph.D. student) – Climate change impact on food web structure and the functioning of aquatic ecosystems. Co-supervision with Arnaud Sentis and Martin Daufresne (Ph.D. Supervisors).
- 2019 (6 months) Camille Magneville (Master student 2nd year – Université de Rennes 1 / Agrocampus Ouest) – Assessment of multiple dimensions of insular biodiversity in order to establish conservation priorities. Co-supervision with Céline Bellard.
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RESPONSABILITIES

Administrative and associative responsibilities:

- Mar. 2018 – Mar. 2019 Representative of non-permanents (PhD student, Post-doc, contract worker) at the Unit (12 months) Council of the Ecology, Systematic, Evolution unit (Orsay, France).

Scientific reviewer for:

Biodiversity and Conservation, Climatic Change, Diversity and Distributions, Forests, GeoResJ, Global Change Biology, Journal of Applied Ecology, Mammalian Biology, PLoS ONE, Royal Society Open Science, Scientific Reports

Membership in scientific societies:

- 2017 – present French Society of Ecology and Evolution ([SFE²](#))
2019 – present International Biogeography Society ([IBS](#))
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GRANTS & AWARDS

- 2019 Student Travel Grant (190€) – *9th Biennial Conference International Biogeography*, Málaga, Spain.
2017 Best Poster Presentation (200€) – *4th Young Natural History scientists' Meeting*, Paris, France.
(<https://www.sfecologie.org/2017/03/11/laureats-sfe-jeunes-chercheurs-sciences-naturelles/>)
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REFERENCES

Céline BELLARD

Laboratoire Ecologie, Systématique, Evolution – UMR 8079
Université Paris Saclay - Bat 362
F-91405 Orsay Cedex
Tel: (0033/0) 1.69.15.79.61
Email: celine.bellard@universite-paris-saclay.fr

David RENAULT

Université de Rennes 1 – UMR 6553 ECOBIO
Avenue du Général Leclerc – Campus de Beaulieu
F-35042 Rennes Cedex
Tel: (0033/0) 2.23.23.66.27
Email: david.renault@univ-rennes1.fr

Franck COURCHAMP

Laboratoire Ecologie, Systématique, Evolution – UMR 8079
Université Paris Saclay - Bat 362
F-91405 Orsay Cedex
Tel: (0033/0) 1.69.15.56.85
Email: franck.courchamp@universite-paris-saclay.fr

Dirk SCHMELLER

Campus INPT-ENSAT
Avenue de l'Agrobiopole – BP 32607
F-31326 Castanet Tolosan Cedex
Tel: (0033/0) 5.34.32.39.38
Email: dirk.schmeller@ensat.fr
