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## Summary

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- Currently postdoc in François Blanquart's team at CIRB, Collège de France.
- First postdoc at the Mitri Lab, Département de Microbiologie Fondamentale, Université de Lausanne.
- PhD in Ecology and Evolution at Sorbonne Université.
- Specialized in theoretical ecology and evolution. Multidisciplinary background.

## Education

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- 2015 – 2018**    [SORBONNE UNIVERSITÉ \(FORMER UNIVERSITÉ PIERRE AND MARIE CURIE\)](#).  
PhD candidate in Ecology, supervised by [Nicolas Loeuille](#) ("Ecology and evolution of interaction networks" team) and [Thibaud Monnin](#) ("Social species in their environments" team) at the [Institute of Ecology and Environmental Sciences](#). PhD defended on the 13th of September 2018.
- 2011 – 2015**    [ÉCOLE NORMALE SUPÉRIEURE, SORBONNE UNIVERSITÉ \(FORMER UNIVERSITÉ PIERRE AND MARIE CURIE\)](#), Paris, France.  
2014 - 2015 : completed the École Normale Supérieure degree with a supplementary research year (see Research section).  
2012 - 2014 : "[Ecology, Biodiversity, Evolution](#)" Two-year masters program, majored in Theoretical Ecology and Modelling.  
2011 - 2012 : Bachelor degree in Biology at the École Normale Supérieure ([Licence de Biologie](#)).

## Research experience

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- Jan 2022 – present**    [EVOLUTIONARY EPIDEMIOLOGY OF INFECTIOUS DISEASES](#), CIRB, Collège de France, France.  
Post-doc in François Blanquart's lab (modelling the evolutionary epidemiology of commensal *E. coli*).
- Sept 2019 – Dec 2021**    [MITRI LAB](#), DMF, University of Lausanne, Switzerland.  
Post-doc in Sara Mitri's lab (modelling ecological interactions in bacterial communities).
- 2015 – 2018**    [INSTITUTE OF ECOLOGY AND ENVIRONMENTAL SCIENCES](#), Paris, France.  
PhD supervised by Nicolas Loeuille and Thibaud Monnin. Subject : "Implication of the eco-evolutionary dynamics of niche construction on the structure of (meta)communities".
- 2015**  
(6 months)    [FOSTER LAB](#), Department of Zoology, University of Oxford, United Kingdom.  
Research internship supervised by René Niehus and [Kevin Foster](#) (modelling the evolution of siderophore production).
- 2014 – 2015**  
(6 months)    [INSTITUTE OF ECOLOGY AND ENVIRONMENTAL SCIENCES](#), Paris, France.  
Pre-doctoral internship, supervised by Nicolas Loeuille and Thibaud Monnin.
- 2014**  
(5 months)    [INSTITUTE OF ECOLOGY AND ENVIRONMENTAL SCIENCES](#), Paris, France.  
2d-year master internship supervised by Ewen Georgelin and Nicolas Loeuille. Title : "Switching from antagonistic to mutualistic : effect of the ontogenetic change of role on the eco-evolutionary dynamics of communities".
- 2013**  
(4 months)    [BIOEMCO](#), Paris, France.  
1st-year master internship supervised by Elisa Thébault and Alix Sauve. Title : "The impact of interaction strength on the structure-stability relation in trophic networks".
- Summer 2012**  
(9 weeks)    [MOLECULAR ECOLOGY AND EVOLUTION LAB](#), Lund, Sweden.  
Internship supervised by [Maren Wellenreuther](#). Sampling of damselflies populations (*Ischnura elegans*) and bioinformatics study of RAD and EST sequences.

## Publications

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Picot, A., Monnin, T., and Loeuille, N. (2021) Implications of the evolution of agriculture and resource foraging for the maintenance of species diversity and community structure. [BioRxiv - not peer-reviewed](#).

Picot, A., Monnin, T., and Loeuille, N. (2019) From apparent competition to facilitation, impacts of consumer niche construction on the coexistence and stability of consumer-resource communities. [Functional Ecology](#).

Picot, A., Georgelin, E., and Loeuille, N. (2019) From antagonistic larvae to mutualistic adults : coevolution of diet niches within life cycles. [Oikos](#).

Niehus, R.\*, Picot, A.\*, Oliveira, N. M., Mitri, S., and Foster, K. R. (2017). The evolution of siderophore production as a competitive trait. [Evolution](#).

\* : shared first authors.

## Public appearances

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- Jan 2023** POPDYNAMICS WEBINAR.  
"How do microbial species interact and how do we find out?" combined talk with Sara Mitri and Oliver Meacock.
- Sept 2022** MPI FOR EVOLUTIONARY BIOLOGY, Plön, Germany.  
Poster : "Investigating the role of virulence genes for the colonization dynamics of commensal bacteria : a modelling and data-driven approach" at the "Mathematical modelling of microbiomes" workshop.
- March 2022** THEBIONET.  
Virtual seminar "Some considerations when modelling context-dependent bacterial interactions".
- Aug 2022** ISME18, Lausanne, Switzerland.  
Poster : "An oxidative stress gradient changes the interactions between two bacterial species".
- Aug 2022** ISME18, Lausanne, Switzerland.  
Invited speaker : "An evolutionary epidemiology model to investigate the role of virulence genes in bacterial colonisation dynamics, and an application to E. coli", session "A theoretical perspective on microbiome dynamics".
- Aug 2018** EVOLUTION JOINT CONGRESS ON EVOLUTIONARY BIOLOGY, Montpellier, France.  
Poster : "Implications of coevolution of agriculture and resource foraging for the maintenance of species diversity and community structure", symposium "S-61 The Evolution of Community Ecology" .
- Dec 2017** ECOLOGY ACROSS BORDERS (BES, GFÖ, NECOV, EEF JOINT MEETING), Ghent, Belgium.  
Talk : "The evolution of agriculture and specialization in a three-species module".
- June 2017** MODELS IN ECOLOGY AND EVOLUTION, Montpellier, France.  
Talk : "The evolution of siderophore production as a competitive trait".
- Oct 2016** MEETING OF THE FRENCH ECOLOGICAL SOCIETY, Marseille, France.  
Talk : "From antagonistic larvae to mutualistic adults : coevolution of diet niches within life cycles".
- Feb 2016** YOUNG NATURAL HISTORY SCIENTIST MEETING, Muséum National d'Histoire Naturelle, Paris, France.  
Talk : "From public to private goods : the interplay between ecology and the evolution of siderophore production".

## Teaching experience

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- 2020, 2021** Experimental Design in UNIL Biology Bachelor (assistant).
- 2019** Introduction to Biological Modelling in UNIL Biology Bachelor (assistant).
- 2019** Middle-school mathematics teacher (full-time, 6 months, at Collège JP Timbaud, Bobigny, France).
- 2015-2018** Teaching assistant in 1st year of Biology Bachelor. Practicals and tutorials, individual student supervising.

## Student supervision

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- 2020** First-step project (1st year of masters) of Loraine Hablützel on the comparison between batch culture and chemostat systems for coexistence principles.
- 2018** Master thesis of Elise Verrier (second year of masters) on the development of a spatial model of niche construction.

## Scientific animation

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- 2020 - 2021** Co-organizer of the "[Models in Ecology and Evolution Meeting](#)" (MEEM) online monthly seminar.
- 2017 - 2018** Co-organizer of the seminar "[History, Philosophy and Sociology of Ecology \(HPSE\)](#)".
- 2015, 2016** Aussois summer school of Veolia "[Chaire MMB](#)".

## Peer-review

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Reviewer for PLOS Computational Biology, Nature Communications.