Emilie Rojas

Dr. in freshwater ecology & bioacoustics research

emilie.rojas@ntnu.no
Trondheim, Norway
emilierojas.fr
0000-0001-8236-0517
Emilie Rojas
@EmilieRojas17

RESEARCH POSITION

2023 – 2025 Postdoctoral Research position – *Funded by JPI Oceans* *Trondheim, Norway*
Norwegian University of Science and Technology - *Marine Bioacoustics and Ecology team*
Effect of ship noise on the physiology and behavior of Atlantic salmon.

EDUCATION

2019 – 2022 PhD in freshwater ecology and bioacoustic research
Equipe de Neuro-Ethologie Sensorielle (ENES) Laboratory - *UMR CNRS 5292* *St-Etienne, FR*
Study on the effect of anthropogenic noise pollution on freshwater species at the individual and the community level. Freshwater is an ecosystem highly disturbed by invasive species, and my work focuses on their behavioral responses and adaptation to noise.
PhD awarded Nov 28, 2022
Ref: Vincent Médoc (vincent.medoc@univ-st-etienne.fr)

2017 – 2019 MSc. International Master of Predictive & Integrative Animal Biology (PRIAM)
Paris-Saclay University, AgroParistech (Paris, FR)
Main courses: Animal Physiology, Ethology, Statistics, Scientific Project with researchers, Genetics

2013 – 2016 B.A. Bachelor's Degree in Biology, option Biochemistry, Integrative Biology and Physiology
Paris-Diderot, Paris VII University (Paris, FR)

TEACHING

2019 – 2021: 36h of genetic tutorial in 2nd year of Bachelor's degree in Chemistry *Saint-Etienne, FR*

ACADEMIC POSITIONS

01/2019 – 07/2019
Equipe de Neuro-Ethologie Sensorielle (ENES) Laboratory - *UMR 5292* *Saint-Etienne, FR*
Effect of motorboat noise on the feeding behavior of the invasive Pumpkinseed sunfish. Ref: Vincent Médoc

04/2018 – 06/2018
Evolution & Biological Diversity Laboratory - *ECOLAB UMR 5174* *Toulouse, FR*
Characterization intra- and interpopulation variability (behavior) of sensitivity to chemical (heavy metals) and parasitic stresses in wild gudgeon using video analysis. Ref: Lisa Jacquin (jacquin.lisa@gmail.com)

02/2017 – 06/ 2017
MECADEV Laboratory - *BIOADAPT UMR 7179* *Brunoy, FR*
Study on the physiological and epigenetic variations of *Microcebus murinus.*
Ref: Fathia Djelti (fathia.djelti@gmail.com)

AWARDS & GRANT

2022: **Young Investigator** award by Jane Goodall Institute France

2019 : three-year Doctoral grants provided by the French ministry of Higher Education and Research

PUBLICATIONS

PUBLISHED PEER-REVIEWED JOURNAL ARTICLES

Rojas E., Thévenin S., Montes G., Boyer N., Médoc V. (2021) From distraction to habituation: Ecological and behavioural responses of invasive fish to anthropogenic noise. Freshwater Biology 66: 1606-1618. https://doi.org/ 10.1111/fwb.13778)

Rojas E., Prosnier L., Pradeau A., Boyer N., Médoc V. (2022), Anthropogenic noise does not strengthen multiple predator effects in a freshwater invasive fish (Journal of Fish Biology, https://doi.org/10.1111/jfb.15397)

IN PREPARATION

Rojas E, Desjonquères C., Agostini S., Fiorini S., Decencière B., Danger M., Felten V., Médoc V. Response of freshwater zooplankton communities to chronic anthropogenic noise (accepted in the next Aquatic Noise Life book published by Springer Nature)

Rojas E., Gouret M., Agostini S., Fiorini S., Lacroix G., Fonseca P., Médoc V. (2022) From behaviour to complex communities: Resilience to anthropogenic noise in a fish-induced trophic cascade. (preprint version available in bioRxiv 2022.07.05.498792; https://doi.org/10.1101/2022.07.05.498792)

Prosnier L., **Rojas E.**, Valéro O., Médoc V. (2022), Chronic noise unexpectedly increases fitness of a freshwater zooplankton (accepted in the next Aquatic Noise Life book published by Springer Nature and pre-print version available in bioRxiv, https://doi.org/10.1101/2022.11.19.517212)

Prosnier L., **Rojas E.,** Médoc V. (2022) A freshwater zooplankton in the face to boat noise pollution (preprint version available in bioRxiv, https://doi.org/10.1101/2022.11.20.517267)

Fernandez-Declerck M., **Rojas E.**, Prosnier L., Teulier L., Dechaume-Moncharmont FX., Médoc V. (2022). Adding insult to injury: anthropogenic noise intensifies predation risk by an invasive freshwater fish species (*under review* in Biological Invasion*,* preprint version available in Research square: *https://doi.org/10.21203/rs.3.rs-2136536/*v1)

CONFERENCES

ORAL COMMUNICATIONS

- 20th January 2022: Alt516 Symposium, Saint-Etienne, France

Rojas E., Thévenin S., Montes G., Boyer N., Médoc V. *From distraction to habituation: Ecological and behavioural responses of invasive fish to anthropogenic noise* (national talk)

- 5th August 2021: Animal Behavior Society, Virtual meeting

Rojas E., Gouret M., Agostini S., Lacroix G., Fonseca P., Médoc V. *Do individual responses to anthropogenic noise spread throughout the community scale?*

POSTER

Rojas E., Gouret M., Agostini S., Fiorini S., Fonseca P., Médoc V., (2022). From behaviour to complex communities: Resilience to anthropogenic noise in a fish-induces trophic-cascade. Aquatic noise on aquatic Life 2022 (Poster session with speed talk, Berlin, Germany)

SCIENTIFIC POPULARIZATION & COLLECTIVE RESPONSABILITIES

- Participation in a comic book about my thesis with 9 French PhD 'Planète Nature' published in 2021

- Scientific workshops in high school for the "Fête de la Science" in Paris and Saint-Etienne since 2020 (national scientific week), in primary & high school in Saint-Etienne. Presentation for the general public in libraries in Lyon and Saint-Etienne.

- Participation on the Research committee of the Jean-Monnet University, Saint-Etienne

TECHNICAL SKILLS

Ecological skills:
Aquatic mesocosms experiments
Functional response & trophic chain concepts

Behavioral skills :
Video analysis (BORIS - Behavioral observation software)
Video tracking (Kinovea software)

Acoustic skills:
Audacity, Adobe Audition
Playback on aquatic mesocosms systems
Bioacoustics Winter School (ENES training)

Physiological skills (master's degree): cell culture, DNA extraction and quantification, ELISA assay, measurement of mitochondrial respiration, basal metabolism, pyrosequencing analysis.

Languages:

French	●●●●●
Spanish	●●●●○
English	●●●○○

Programming Language: R programming
Other software: Pack-office (Word, Excel, PPT)