

MARTIN DESSART

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PhD candidate in Neuroethology at University of Tours, France

Education

**IRBI – UMR 7261
UNIVERSITY OF TOURS**
Tours, France
02/2021 – Current

PhD CANDIDATE – SENSORY ECOLOGY

“The cognition of mosquito larvae as a biological indicator of aquatic ecosystems”

Supervisors: Dr Fernando Guerrieri and Pr Claudio Lazzari

**UNIVERSITY OF
STRASBOURG**
Strasbourg, France
09/2018 – 09/2020

MSc WITH HIGH HONOURS

Functional and evolutive ecology – Statistics analysis using R
Ethology, cognition and behaviour - Neurobiology of rhythms
Ecophysiology– Metabolism

UDACITY & GOOGLE
Distance learning
11/2017 – 08/2018

FRONT-END WEB DEVELOPER DEGREE

Website design: from basics to the use of libraries / frameworks
Community support

**INSTITUT CATHOLIQUE
DES ARTS ET METIERS**
Toulouse, France
09/2014 – 09/2017

ENGINEER'S DEGREE | AUTOMATION - CONTROL SYSTEMS

Software and programming engineering
Project management – electrical and electronics

**INSTITUT CATHOLIQUE
DES ARTS ET METIERS**
Toulouse, France
09/2012 – 09/2014

PREPARATORY CLASS

Electrical engineering - Web technologies –
Networks management - Industrial organization

Research Experience

CRCA, GEODE
CNRS University Paul
Sabatier
Toulouse, France
07/2020 – 10/2020

RESEARCH INTERNSHIP

“How does honeybees perceive invasive flowers in vision domain? An applied case in the French Pyrénées”

Supervisors: Dr Sylvie Guillerme and Pr Martin Giurfa

ANIMAL MINDS LAB
The University of
Auckland
Christchurch, New
Zealand
01/2020 – 07/2020

MASTER'S FINAL PROJECT

“A measurement of optimism in kea Nestor notabilis”
Experimental design - Bioacoustics sampling and analysis

Supervisors: Dr Alexander Taylor and Dr Amalia Bastos

UMR MARBEC
Montpellier, France
04/2019 – 06/2019

RESEARCH PROTOCOL DESIGN | PhD Candidate assistant

Design and field experiment on fish gut microbiota and CH4 emissions
Supervisors: Dr Jean-Christophe Auguet and Dr Marie-Charlotte Cheutin

Engineer Experience

CLEMESSY AERONAUTICS & SPACE

Toulouse, France
09/2014 – 09/2017

AUCKLAND UNIVERSITY

Auckland, New Zealand
09/2016 – 02/2017

TESEO | CLEMESSY Entity

Torino, Italy
05/2015 – 08/2015

APPRENTICE ENGINEER

Project: physical and virtual integration of automatic cable tester
Customer/supplier relationship management
Design, planning and supervision of electrical tests

ENGINEERING THESIS | PhD Candidate assistant

Matlab analysis of the wind in New Zealand's electric wind farms
Supervisors: Pr Tek Tjing Lie and Dr. Gianni Goretti

INTERN IN COMPUTING DESIGN

Computing design using Excel VBA Macro
Radars and electronic cards calibration in anechoic chamber
Supervisors: Jean-Louis Menu

Teaching Experience

03/2021- 05/2021

Tristan Robineau, MSc Evolutionary and Behavioural Ecology
"Effet des conditions de luminosité et de turbidité sur l'habituation des larves du moustique *Aedes aegypti*"

2021 - 2023

Arthropod identification – 32h Laboratory course (TP)
Neuroscience: conditioning and addiction - 6h Lecture (TD)
Arthropod systematic - 7.5h Lecture (TD)
Ethology -25h Laboratory course (TP)

Other Skills and Experience

LANGUAGES

English: fluent - TOEIC 840 – 2014
Spanish: read and speak with basic competence

COMPUTING

Statistics and data treatment - R
Programming: Matlab – Python – SQL - VBA
Front End design – CSS – HTML – JS - React

VOLUNTEERING

- 2019 - 2021: **GEPMA, Strasbourg, France**
Field work and formation

- 2014 - 2017: **Terres en Mêlées**
Activity leader in France, Morocco and Madagascar

- 01/18-02/18: **AVA Sanctuary, France**
PhD Candidate field assistant: Telemetry, RFID

Publications

Dessart M., Piñeirúa M., Lazzari C.R., Guerrieri F.J. (2023) Assessing learning in mosquito larvae using video-tracking. *Journal of Insect Physiology*
<https://doi.org/10.1016/j.jinsphys.2023.104535>.

Dessart M., Aguiar J.M.R., Tabacchi E., Guillerme S., Giurfa M. Color-Advertising Strategies of Invasive Plants through the Bee Eye: A Study Case in the French Pyrenees. **In review** – *Science of The Total Environment*.

Dessart M., Lazzari C.R., Guerrieri F.J. A mosquito brain like a sieve: evaluating the memory persistence in mosquito larvae. **In review** - Journal of Insect Physiology
<http://dx.doi.org/10.2139/ssrn.4658441>

Dessart M., Lazzari C.R., Guerrieri F.J. Acute and chronic sublethal chemical pollution affects locomotion, learning and memory in mosquito larvae. **In preparation**

Dessart M., Lazzari C.R., Guerrieri F.J. In the wild or in the lab: how do environmental conditions affect the cognitive abilities of mosquito larvae? **In preparation**

Conference presentations

Aug 2020 "Effects of the Warble Call on Optimism in Kea (*Nestor notabilis*)" - **Laboratory seminar** - Research Center on Animal Cognition | University Paul Sabatier -Toulouse III

Oct 2021 "The influence of physico-chemical characteristics of aquatic ecosystems on prey-predator interactions. A behavioural-neuroanatomical approach" – **Laboratory seminar** - IRBI UMR 7261 CNRS | University of Tours, France

Oct 2021 "Invasive plant species through the bee eye: an analysis of flower coloration in the French Pyrenees" - **Laboratory seminar** - IPHC UMR 7178 CNRS | Strasbourg, France

Nov 2021 "Visual learning abilities in mosquito larvae are not impaired neither by light deprivation nor by turbidity" – **Oral presentation** - European PhD Network "Insect Science" - XII Annual Meeting – Florence, Italy

Mar 2022 "A tracking system to assess activity and learning in mosquito larvae" – **Poster presentation** - Ecology & Behaviour Meetings – 15th Edition – Strasbourg, France

Oct 2022 "Effect of two herbicides and one medical drug on locomotor activity and learning in *Aedes aegypti*" – **Oral presentation** – 34^e Colloque Biotechnocentre – Centre Val de Loire

May 2023 "Chemical pollution affects the behaviour of mosquito larvae" – **Poster presentation** - 52^e Colloque of SFECA – Tours, France

Jun 2023 "Chemical pollution affects the behaviour of mosquito larvae" – **Oral presentation** – DiPEE "Biodiversité et territoires : une recherche engagée" – CEBC Chizé, France

Aug 2023 "Cognitive abilities in mosquito larvae as indicators of environmental quality" – **Oral presentation** – Behaviour 2023 – Bielefeld, Germany

References

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