



Titouan BOUINIER

Born the 27th of April 2001 in Rennes, French nationality, driving license obtained

Tel : (+33) 6 95 35 75 81

e-mail : titouan.bouinier@college-de-france.fr / titouanbouinier@hotmail.fr

Current situation:

Third year PhD student in evolutionary ecology, affiliated with:

Muséum National d'Histoire Naturelle - Institut de Systématique, Evolution et Biodiversité

Collège de France - Centre Interdisciplinaire de Recherche en Biologie

Professional track:

2023 – 2025 Evolutionary ecology PhD candidate

Muséum National d'Histoire Naturelle - IDF/Paris (2023) - France

- Numerous extended field missions in neotropical primary forests (Amazon: French Guiana, Brazil; Mata Atlântica: Brazil), including temperature and light measurements.
- In vivo experiments and field sampling/identification of insects, characterization of the spatiotemporal distribution of multiple *Morpho* butterfly species.
- Several publications in high-impact scientific journals: the ecology journal *OIKOS* and the evolutionary ecology journal *Journal of Evolutionary Ecology*. Participation in national and international ecology conferences (CJCM, MMEE, EMPSEB).
- Elected to the Museum's Scientific Council as a member of the 3rd college for a three-year term.

2023 Research assistant in evolutionary ecology and modelling

Muséum National d'Histoire Naturelle - IDF/Paris (2023) - France

- Modelling population temporal activity to study a mechanism of speciation (allochrony).
- Fieldwork in French Guiana to conduct behavioural biology experiments.

2022 Research assistant in genetics and imaging

Université Louis-et-Maximilien - Bavière/Munich - Germany

- Development of a landmark recognition model for genetically modified fruit flies. Imaging and deep learning-based code (artificial intelligence, CNN, TensorFlow), as part of an international team.

Education:

2020 – 2023 Degree in Agricultural Engineering, major in Data Science

- Plant and animal biology, as well as bioinformatics and a specialization in data science.
- In-depth legal knowledge of ecology and environmental issues, as well as the study of environmental impact factors.
- Institut Agro Dijon - Bourgogne/Dijon - France*

2018 – 2020 **Prep School for Biology**, BCPST Track.

In-depth knowledge of biology, geology, mathematics, and physics and chemistry.
Brittany/Rennes - France

2015 – 2018 **Bachelor of Science**, specializing in Life and Earth Sciences, International Chinese Program (OIB), with honors.

Lycée Émile Zola - Rennes - France

Notable published articles

Bouinier, T., Arthur, B., Smadi, C., Llaurens, V. (2026), *Evolution of divergent daily temporal niches shaped by male–male competition can generate sympatric speciation*, *Journal of Evolutionary Biology*, 2026;, voag030, <https://doi.org/10.1093/jeb/voag030>

Poloni R., **Bouinier T.**, ..., Debat V., Llaurens V. (2026) *Sympatric speciation in Amazonian butterflies promoted by fast sexual chromosome evolution and allochrony (in prep.)*.

Bouinier, T., Smadi, C. and Llaurens, V. (2025), *Vertical and temporal niche partitioning in Amazonian butterflies: implications for the evolution of thermal tolerance*. *Oikos*, 2025: e11567. <https://doi.org/10.1002/oik.11567>

Above article received a research highlight in *Nature Ecology & Evolution* :

Andriuzzi, W. Hot butterflies. *Nat Ecol Evol* **9**, 1759 (2025). <https://doi.org/10.1038/s41559-025-02877-3>

Talks and conferences

Evolution of butterfly patrolling activity driven by ecological interactions.

International Society for Behavioural Ecology - July 20-24, 2026 - Turin, Italy

Differences in sex-determination system can drive different speeds of reproductive isolation.

European Meeting for PhD students in Evolutionary Biology - June 8-12, 2026 - Oberwiesenthal, Germany

Male-male competition shaping the evolution of differentiated temporal niches.

Mathematical Models in Ecology and Evolution - July 15-18, 2024 - Vienna, Austria

École de printemps de la chaire MMB - June 9-14, 2024 – Aussois, France

Evolution of ecological niches in a genus of Amazonian butterflies.

Congrès des Jeunes Chercheur-e-s du Muséum - April 17-19, 2024 – Paris, France

Skills :

Languages:

- ■ ■ ■ ■ ■ French (native)
- ■ ■ ■ ■ ■ High English proficiency (990/990 at the TOEIC, C1-C2 level)
- ■ ■ ■ □ □ Good Chinese proficiency (studied for 11 years, HSK4 obtained, B2 level)
- ■ □ □ □ □ Basics of Spanish and Portuguese

Software/Programming languages:

- Windows, Linux
- Python 3.0, R 4.0, Matlab, SQL, Git, bash and shell
- QGIS
- Adobe Suite (Illustrator, Photoshop) - Microsoft 365 Suite (Word, Excel, Power Point)

Social/Miscellaneous:

- Participated in workshops to share scientific findings with the general public (Science fair), frequent outreach and gave talks in conferences.
- Projects and collaborations with scientific illustrators from the École Estienne.
- Selected to teach at Sorbonne University; taught a course at the École Normale Supérieure (ENS)
- Received the IUBS early career scientist award