



Fidji Berio

- 30 years old
- Älvsjö Stationsgata 2A
125 31 Älvsjö, Sweden
- +33 679 971 358
- <https://fberio.github.io>
- fidji.berio@gmail.com
- French Citizenship

Social Network

- Twitter
- ResearchGate
- Google Scholar
- Github
- Orcid

Languages

- French
- English
- Spanish

Certifications

- Level 2 FFESSM (Advanced PADI)
- Level 1 Nitrox
- PADI Freediver

Hard Skills

- R programming
- Machine learning
- MicroCT imaging
- Histology
- Functional tests

Research Interests

Evo-Devo – Climate change – Biomechanics – Chondrichthyans

Working Experience

- Nov 2022–
Current **Postdoc fellow** Stockholm University
Projects Physiology of walking elasmobranchs & Mineralization patterns in bony fish related to climate change [11]
- Sept–Oct 2022 **Guest professor** University of Vienna
Teaching Functional evolution of jaw structures [10]
- 2021–2022 **Science communicator** Futura Sciences
Activities Online writing of popularization articles, interviews
Topics Marine biology, paleontology, paleoanthropology
- 2017 – 2021 **PhD Student** ENS Lyon & Institute of Evolution Sciences of Montpellier
Project Physical and genetic factors impacting development and evolution of elasmobranch odontodes [1–4, 6–9]
Methods microCT imaging, histology, machine learning and geometric morphometrics with R, functional tests on *Scyliorhinus canicula* embryos, comparative anatomy
- 2017 **Master Thesis** Univ. du Québec à Rimouski
Project Regionalisation of the vertebral column in a skate [5]
Methods microCT imaging, clustering with R, Clear & Stain double coloration
- 2016 **Master Thesis** Oceanological Observatory of Banyuls-sur-mer
Project Long-term experiment on growth dynamics of hydrothermal mussels *Bathymodiolus thermophilus* related to hydrothermal fluids dynamics
Methods Sclerochronology, Fast Fourier Transform, Mutvei staining
- 2015 **Bachelor Thesis** Institute of Integrative Neurosciences, Bordeaux
Project Effects of serotonin on aggressiveness of the invasive Louisiana crayfish *Procambarus clarkii*
Methods Video tracking with EthoVision, ethology, functional tests on mature specimens

Education

- 2017 – 2021 **PhD Studies** ENS Lyon & Institute of Evolution Sciences of Montpellier
Evo-devo of chondrichthyans
- 2015 – 2017 **Master Studies (1/31)** European Institute for Marine Studies, Brest
Littoral and Sea Sciences with focus on Marine ecosystems and Polar environments
- 2012 – 2015 **Bachelor Studies (1/60)** Univ. of Bordeaux
Biology of Organisms and Ecosystems
- 2010 – 2012 **Bachelor Studies** Univ. of Montpellier
Hypokhâgne & Khâgne – Literature studies (French and Spanish)

Teaching

- 2022 **To Master & PhD Students** Univ. of Vienna
Functional Evolution of Jaw Structures
- 2019 **To Bachelor Students** Univ. of Montpellier
Integrative Biology of Organisms and Comparative Anatomy
- 2019 **To High School Students** Univ. of Montpellier
Embryo and Evolution
- 2018 **To Bachelor Students** Univ. of Montpellier
Life Cycle of Organisms – Genetics

Publications

- 2023 **[11] Ontogenetic plasticity in shoaling behavior in a forage fish under warming**
F. Berio, C. Morerod, X. Qi & V. Di Santo
 Integrative & Comparative Biology
- Under review **[10] Husbandry conditions of spotted ratfish (*Hydrolagus colliei*, Chimaeriformes) in aquaria for successful embryonic development and long-term survival of juveniles**
F. Berio, R. Charron, J.-M. Dagouret, F. De Gasperis, A. Éon, E. Meunier, M. Simonet, N. Verschraegen & N. Hirel
 Zoo Biology
- 2023 **[9] A shark-inspired general model of tooth morphogenesis unveils developmental asymmetries in phenotype transitions**
R. Zimm, F. Berio, M. Debiais-Thibaud & N. Goudemand
 PNAS DOI: [10.1073/pnas.2216959120](https://doi.org/10.1073/pnas.2216959120)
- 2022 **[8] Hide and seek shark teeth in Random Forests: Machine learning applied to *Scyliorhinus canicula***
F. Berio*, Y. Bayle*, D. Baum, N. Goudemand & M. Debiais-Thibaud
 PeerJ - Aquatic Biology DOI: [10.7717/peerj.13575](https://doi.org/10.7717/peerj.13575)
- 2022 **[7] 3D models related to the publication: Hide and seek shark teeth in Random Forests: Machine learning applied to *Scyliorhinus canicula***
F. Berio, Y. Bayle, S. Agret, D. Baum, N. Goudemand & M. Debiais-Thibaud
 MorphoMuseumM DOI: [10.18563/journal.m3.164](https://doi.org/10.18563/journal.m3.164)
- 2022 **[6] Early shape divergence of developmental trajectories in the jaw of galeomorph sharks**
F. A. López-Romero, F. Berio, D. Abed-Navandi & J. Kriwet
 Frontiers in Zoology DOI: [10.1186/s12983-022-00452-1](https://doi.org/10.1186/s12983-022-00452-1)
- 2021 **[5] Phenotypic regionalization of the vertebral column in the thorny skate *Amblyraja radiata*: stability and variation**
F. Berio, Y. Bayle, C. Riley, O. Larouche & R. Cloutier
 Journal of Anatomy DOI: [10.1111/joa.13551](https://doi.org/10.1111/joa.13551)
- 2021 **[4] Diversity and evolution of mineralised skeletal tissues in chondrichthyans**
F. Berio, M. Broyon, S. Enault, N. Piro, F. A. López-Romero & M. Debiais-Thibaud
 Frontiers in Ecology and Evolution DOI: [10.3389/fevo.2021.660767](https://doi.org/10.3389/fevo.2021.660767)
- 2020 **[3] The intraspecific diversity of tooth morphology in the large-spotted catshark *Scyliorhinus stellaris*: insights into the ontogenetic cues driving sexual dimorphism**
F. Berio, A. Evin, N. Goudemand & M. Debiais-Thibaud
 Journal of Anatomy DOI: [10.1111/joa.13257](https://doi.org/10.1111/joa.13257)
- 2020 **[2] Scyland3D: Processing 3D landmarks**
F. Berio & Y. Bayle
 Journal of Open Science Software DOI: [10.21105/joss.01262](https://doi.org/10.21105/joss.01262)
- 2019 **[1] Evolutionary developmental genetics of teeth and odontodes in jawed vertebrates: A perspective from the study of elasmobranch fishes**
F. Berio & M. Debiais-Thibaud
 Journal of Fish Biology DOI: [10.1111/jfb.14225](https://doi.org/10.1111/jfb.14225)

Conferences

- 2022 **Oral presentation** Online Edition
 Sharks International
- 2020 **Oral presentation** Online Edition
 ToScA Global
- 2019 **Oral presentation** France
 Comparative Cartilage Biology meeting
- 2018 **Poster presentation** France
 Evolution
- 2018 **Poster presentation** Ireland
 EuroEvoDevo
- 2018 **Oral presentation** France
 Symposium of Morphometry and Evolution of Forms