

Curriculum Vitae

Aurèle TOUSSAINT

PhD

Date of birth: 16th of July 1988

Nationality: French

Professional address:

Institute of Ecology and Earth Sciences
Department of Botany
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Current position

January 2020 – Present: Research fellow

Research done at the Institute of Ecology and Earth Sciences, Department of Botany (University of Tartu, Estonia)

Supported by the Estonian Research Council

PSG-505: Toward an optimization of the functional diversity approaches of freshwater fish: historical patterns and impact of human activities.

Rank: 1/42

260.500,00 EUR

Professional appointments

September 2017 – August 2019: MOBILITAS Pluss Post-Doctoral researcher

Research done at the Institute of Ecology and Earth Sciences, Department of Botany (University of Tartu, Estonia)

Supported by the Estonian Research Council

MOBJD-276: Macroecology of functional diversity: comparison of taxonomic groups.

Rank: 1/106

63.300,00 EUR

Evolved in the project: *IUT20-29: Dark diversity: taxonomic, phylogenetic, functional and genetic levels in dynamic plant communities.*

September 2016 – August 2017: Specialist fellow in MacroEcology

Research done at the Institute of Ecology and Earth Sciences, Department of Botany (University of Tartu, Estonia)

Evolved in the project: *IUT20-29: Dark diversity: taxonomic, phylogenetic, functional and genetic levels in dynamic plant communities.*

January 2016 – June 2016: Erasmus-Mundus mobility grant for PhD Student

Research done at the Kyung Hee University – Dept of Biology – Seoul, Korea

Supervisor: Pr. Young-Seuk Park (Kyung-Hee University)

October 2012 – June 2016: PhD Student in Fish Macro-ecology

Research done at the Laboratory 'Evolution & Diversité Biologique' (University Paul Sabatier – Toulouse 3 UMR 5174)

Topic: Functional diversity of freshwater fish fauna at the world scale: patterns, determinants and human activities impacts

Supervisors: Pr. Sébastien Brosse (University Paul Sabatier) and Dr. Sébastien Villéger (University Montpellier 2)

October 2013 – June 2015: Teaching assistant in biostatistics at the University Paul Sabatier – Toulouse 3.

Education

2011-2012: Second year of Master of Science (MSc) in Biostatistics and ecological systems modelling University Paul Sabatier-Toulouse 3, France – With second highest distinction (Rank: 5/19)

Thesis done at the Laboratory 'Evolution & Diversité Biologique' (UMR 5174) supervised by Sébastien Brosse and Sébastien Villéger.

Topic: Determinants of change in taxonomic dissimilarity in the freshwater fish fauna at the world scale

2010-2011: First year of Master of Science (MSc) in Ecology at the University Paul Sabatier-Toulouse 3, France – With distinction (Rank: 43/172)

Thesis done at the Laboratory 'Evolution & Diversité Biologique' (UMR 5174) supervised by Sébastien Brosse and Simon Blanchet.

Topic: Revision of the taxonomy of the freshwater fish European fauna and implications for conservation and biogeography.

2008-2010: Bachelor of Science (BSc) in Biology of Organisms University of Lorraine, Nancy, France (Rank: 90/237)

2009, July: **Thesis** done at the 'Département d'Ecologie, Physiologie et Ethologie' (UMR 7178 DEPE) supervised by Pr. M. Trabalon & Dr. C. Gilbert.

Topic: Sexual behaviour of the rats in a choosing situation

2006-2007: 'PCEM1': First Year of the medical studies University of Lorraine in Nancy, France (Rank for the competitive examination: 888/1959)

2006: 'Baccalauréat' of Sciences (Equivalent to A-Level)

Scientific communications

Article in international peer-reviewed journals

* Co-senior authorship

8. **Toussaint A.**, Bueno G., Davison J., Moora M., Tedersoo L., Zobel M., Opik M. & Partel M. *Journal of Vegetation Science*, in press.
7. **Toussaint A.**, Charpin N., Villéger S.* & Brosse S.* Worldwide freshwater fish homogenization is driven by few widespread non-native species. *Ecology Letters* 21(11), 1649-1659
6. Kuczynski L., Côte J., **Toussaint A.**, Brosse S., Buisson L., Grenouillet G. (2018) Spatial mismatch in morphological, ecological and phylogenetic diversity, in historical and contemporary European freshwater fish faunas. *Ecography* 41:1665-1674.
5. Tedersoo L., Laanisto L., Rahimlou S., **Toussaint A.**, Hallikma T., Pärtel M. (2018) Global database of plants with root- symbiotic nitrogen fixation: Nod DB. *Journal of Vegetation Science* 10:560-568
4. **Toussaint A.**, Charpin N., Brosse S.* & Villéger S.* Global functional diversity of freshwater fish is concentrated in the Neotropics. 2016. *Scientific Report* 6: 22125.
3. **Toussaint A.**, Beauchard O., Oberdorff T., Brosse S. & Villegier S. Worldwide freshwater fish homogenization is driven by a few widespread non-native species. 2016. *Biological Invasions* 18: 1295–1304.
2. Allard L., **Toussaint A.**, Vigouroux R. & Brosse S. Length-weight relationship of 58 fish species in streams of French Guiana. 2015. *Journal of Applied Ichthyology* 31: 567-570.
1. **Toussaint A.**, Beauchard O., Oberdorff T., Brosse S. & Villegier S. 2014. Historical assemblage distinctiveness and the introduction of widespread non-native species explain worldwide changes in freshwater fish taxonomic dissimilarity. *Global Ecology and Biogeography* 23:574–584.

Oral presentations

5. **Toussaint, A.**, Pärtel M. Global mismatch between the species richness of vascular plants and symbiosis fungi across biogeographic realms. *Annual meeting for macroecology of the ecological society of Germany Austria and Switzerland, Birmendorf* (Switzerland). 2018, April.
4. **Toussaint, A.**, Pärtel M. Global mismatch between the species richness of vascular plants and symbiosis fungi across biogeographic realms. *60th IAVS Annual Symposium*. Palermo (Italy). 2017, June.
3. **Toussaint, A.**, Charpin, N., Brosse, S., Villéger, S. Functional diversity and

vulnerability of freshwater fish at the global scale. **7th EAFES International Congress**. Daegu (Korea). 2016, April.

2. **Toussaint, A.**, Charpin, N., Brosse, S., Villéger, S. Introductions of non-natives freshwater fish affected differently the taxonomic and functional biodiversity facets. **9th Symposium for European freshwater sciences**. Geneva (Switzerland). 2015, July
1. **Toussaint, A.**, Beauchard, O., Oberdorff, T., Brosse, S., Villéger, S. Historical assemblage distinctiveness and the introduction of widespread non-native species explain worldwide changes in freshwater fish taxonomic dissimilarity. **8th Symposium for European freshwater sciences**. Munster (Germany). 2013, July

Poster

1. **Toussaint, A.**, Charpin, N., Brosse, S., Villéger, S. Functional diversity of the freshwater fish fauna. **7th Biennial conference of the International Biogeography Society**. Bayreuth (Germany). 2015, January

Teaching

Teaching assistant (2013-2015), University Paul Sabatier – Toulouse 3 – France

Ecology & Quantitative Biology (BSc degree)

Biostatistics (BSc degree)

Multivariate analyses (MSc degree)

Teaching assistant (2019), University of Tartu, Estonia

Data analysis in community ecology (BSc-, MSc-, PhD-students)

Student supervision

Adrien Solacroup. **Master**. January to April 2014. *Characterization of the morphological intra specific variability on the French Guyana and European freshwater fish community*.

Scientific activities

Reviewer for international peer-reviewed journals

International Journal of Biodiversity and Conservation; Biological Journal of the Linnean Society; Hydrobiologia; Ecology; Scientific Report; New Phytologist

Languages

French: mother tongue

English: excellent command

German: basic communication skills

Italian: basic communication skills

Skills

- Office software (*Windows/Linux/Mac*)
- Statistical analyses, function programming and high level graphics *R*
- Good knowledge in GIS (*ArcGIS*)
- Image processing
- Driving licence