

## Curriculum Vitae

**Aurèle TOUSSAINT**

**PhD**

Date of birth: 16<sup>th</sup> of July 1988

Nationality: French

### Professional address:

Institute of Ecology and Earth Sciences  
Department of Botany  
Lai 40  
Tartu 51005  
ESTONIA  
E-mail: [toussaint.aurele@gmail.com](mailto:toussaint.aurele@gmail.com)

### **Current position**

#### **September 2016 – Present: Research fellow**

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

**Supported by** the Estonian Research Council (MOBJD-276).

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

### **Professional appointments**

#### **October 2012 – June 2016: PhD 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)

#### **January 2016 – June 2016: Erasmus-Mundus mobility for PhD (6 months)**

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

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

**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. Trébalon & 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

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. Kuczyński 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. **60<sup>th</sup> 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. **7<sup>th</sup> 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. **9<sup>th</sup> 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. **8<sup>th</sup> 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. **7<sup>th</sup> 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)

## 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 (1 review); Biological Journal of the Linnean Society (1 review); Hydrobiologia (3 review) ; Ecology (1 review); Scientific Report (1 review); New Phytologist (1 review)

## 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