

Alice Caroline POIRIER

Address: Department of Anthropology and Archaeology, University of Calgary,
2500 University Drive NW, T2N 1N4 Calgary, AB, Canada

Email: poirier.ac@gmail.com **Nationality:** French

Education

- | | |
|------|---|
| 2019 | PhD in Behavioral Ecology
Anglia Ruskin University, School of Life Sciences, Cambridge, UK |
| 2010 | MSc in Biodiversity, Ecology, Evolution & Environment
University of Montpellier, France (Hons.) |
| 2008 | BSc in Cell Biology & Physiology
University of Bordeaux, France (Hons.) |

Key skills & competences

Field methods in behavior, ecology & conservation

- Collection of behavioral & ecological data on free-ranging primates & big felines
- Collection of non-invasive biological samples: urine, feces, secretions, hair, saliva
- Capture-and-release techniques for arboreal primates & big felines
- Radio-telemetry, camera-trap surveys & GIS techniques
- Conservation issues in South America

Laboratory skills

- Chromatography techniques: gas chromatography-mass spectrometry, solid-phase microextraction
- Organic chemistry techniques: preparation & storage of solutions
- Molecular biology techniques: DNA extraction, PCR, spectrophotometry, gel electrophoresis, molecular labeling
- Knowledge of BSL-2 measures & regulations

Computing skills

- Microsoft Office
- R programming language
- Quantitative analysis of behavioral & chemical data
- Chromatography software: ChemStation, AMDIS, NIST, TurboMass, Openchrom
- Bioinformatics : online tools for gene sequence alignment & comparison, technical software for DNA analyses

Leadership & project management

- Design of research project
- Setting up & managing collaborative projects at international level
- Managing project budget & equipment
- Logistics of equipment, transportation & activities in the field
- Training & supervision of field research assistants

Communication & teamwork

- Teaching/learning new techniques to/from colleagues & collaborators
- Initiative in making connections with potential collaborators across disciplines
- Excellent record keeping of research activities & ability to work in a team
- Presentation of research findings at conferences, seminars, & through scientific publications

Research experience

Primate sensory ecology

- 2020–
current **Postdoctoral scholar** – University of Calgary, AB, Canada
Investigate the role of olfactory communication in primate social and reproductive systems. Study primate feeding ecology and the coevolution between tropical fruit trees and frugivorous mammals. PI: Dr Amanda Melin (www.amandamelin.com)
- 2016–19 **PhD project:** “*Scent-marking behaviour and semiochemistry in the Callitrichidae (New World primates)*” – Anglia Ruskin University, UK
Examined social, reproductive & environmental aspects influencing scent-marking behavior in callitrichids (marmosets & tamarins). Established existence of unique chemical signals of species, groups, sex, reproductive status, & the individual in callitrichid scent samples; identified putative semiochemicals. Compared *in situ* & laboratory techniques for chemical analysis of mammalian scents.
Advisors: Dr Andrew Smith, Prof. John Waterhouse & Dr Jacob Dunn (ARU-behavioural-ecology)

Field research assistant & coordinator in primatology, tropical mammal ecology & conservation in southeastern Peru

- 2011–15 **Field research coordinator:** “*Demography, feeding ecology, social behavior and parasitism of free-ranging callitrichine primates*” – Field Projects International
Collection of individual spatial & behavioral data on free-ranging tamarins (*Saguinus* spp.). Logistics & implementation of annual capture-and-release program. Collection & analysis of biological samples. Training & coordination of research assistants. PIs: Drs. Mini & Gideon Erkeniswick Watsa, Dr Jennifer Rehg (www.fieldprojects.org)
- 2012–14 **Field research coordinator:** “*Long-term monitoring of Amazonian mammals implemented to conservation strategies*” – Fauna Forever
Monitoring of terrestrial & arboreal mammals via line-transects, camera-trapping & behavioral follows (primates). Vegetation surveys & habitat assessments. Involvement in local conservation planning. Training & coordination of field assistants. PI: Dr Chris Kirby (www.faunaforever.org)
- 2012 **Field research assistant:** “*Risk perception and anti-predator strategy in Amazonian primates*” – Ohio State University
Collection of spatial & behavioral data on free-ranging saki monkeys (*Pithecia rylandsi*). Marking & monitoring of ocelots (*Leopardus pardalis*) via radio-telemetry & camera-trapping. PI: Dr Dara Adams (www.darabadams.com)
- 2011 **Field research assistant:** “*Ecology and demography of the Amazonian mega fauna*” – WWF & San Diego Zoo Global
Capture-and-release of jaguars (*Panthera onca*) & pumas (*Puma concolor*). Collection of biological samples. Monitoring via radio-tracking & camera-trapping. PI: Dr George Powell & Dr Mathias Tobler (AREASAmazonia)

Research internships in evolutionary biology & genetics

- 2010 **MSc. Year 2 internship in Evolutionary Genomics & Bioinformatics:** “*Study of the evolution of sex chromosomes and their role in the reproductive isolation of house mouse subspecies*” – Montpellier Evolutionary Sciences Institute, France (6 months)
Implemented Bayesian modeling tools on genomic data in R to retrace the history of the reproductive isolation in the house mouse. Advisor: Dr Pierre Boursot

- 2009 **MSc. Year 1 internship in Behavioral & Evolutionary Biology:** “*Study of sperm competition adaptation in response to sexual conflicts in the bruchid beetle*” – Exeter University Centre for Ecology & Conservation, UK (4 months)
Examined the influence of population size & genetic variability on the evolution of adaptations to sperm competition and their impact on the rate of evolution of reproductive isolation, using experimental crosses between different polyandrous lines of the bruchid beetle (*Callosobruchus maculatus*). Advisors: Dr Tom Tregenza & Dr Laurène Gay
- 2008 **BSc. internship in Molecular Cytogenetics:** “*Characterization of the Pacific oyster genome by the cytogenetic Primed in Situ (PRINS) labeling method*” – French Research Institute for Exploitation of the Sea (IFREMER), France (1.5 month)
Developed PRINS labeling method for rapid detection of numeric & structural chromosome anomalies in the Pacific oyster (*Crassostrea gigas*). Advisor: Dr Abdellah Benabdelmouna

Teaching experience

UK Higher Education Academy

- 2018 **Associate Fellow of the Higher Education Academy**, Cambridge, UK
Theoretical & practical training for teaching university students
- 2016–18 **Teaching assistant** at Anglia Ruskin University, Cambridge, UK
Introduction to biology (BSc), Animal behavior (BSc), Molecular biology (BSc & MSc), Biostatistics (BSc), Primate behavior & conservation (MSc), Research methods (MSc)

Field Courses

- 2019 Tropical Ecology & Conservation BSc field trip in Uganda (Kibale National Park, Queen Elisabeth National Park) – Anglia Ruskin University
- 2014 & 2017 Tropical Ecology & Primatology field course in Peru (Los Amigos Biological Station) – Field Projects International
- 2014 & 2015 Natural, Cultural & Economic history of the Amazon rainforest field course in Peru (Tambopata National Reserve) – Wasaí Lodge & Expeditions
Workshop for middle school level & high school students with special needs

Student supervision

- 2012–15 **Field coordinator** – Fauna Forever & Field Projects International
Co-supervision of interns from American & European universities conducting data collection in Peru for their MSc/BSc research projects

Scholarships & awards

- 2018 **Association for the Study of Animal Behaviour travel grant** for conference attendance (£400). Wrote proposal independently
- 2017 **Cambridge Philosophical Society travel grant** for conference attendance (£360)
Wrote proposal independently
- 2017 **Primate Society of Great Britain research grant** for field work in Peru (£1 000)
Wrote proposal independently
- 2016 **Anglia Ruskin University PhD scholarship** covering registration fees, research material & a stipend for 3 years (£56 300). Wrote & secured scholarship independently

- 2011 **Poitou-Charentes young professionals award** (Bourse de la Découverte) covering travel/living expenses for a first professional experience abroad (€3 000). Wrote & secured award independently

Publications

- Poirier AC**, Waterhouse JS, Dunn JC & Smith AC (*in press*). Temporal stability of primate scent samples. *SN Applied Sciences*.
- Poirier AC**, Waterhouse JS, Watsa M, Erkenwick GA, Moreira LAA, Tang J, Dunn JC, Melin AD & Smith AC. On the trail of primate scent signals: field analysis of tamarin scent-gland semiochemistry by portable gas chromatography-mass spectrometry. *American Journal of Primatology*. Accepted pending revisions.
- Poirier AC**, Waterhouse JS, Dunn JC & Smith AC. Scent-Marks Signal Species, Sex and Reproductive Status in Tamarins (*Saguinus* spp., Neotropical Primates). *Chemical Senses*. Accepted pending revisions.
- Poirier AC**, Waterhouse JS, Watsa M, Erkenwick GA, Melin AD, Dunn JC & Smith AC. The smell of captivity: Comparative analysis of wild and captive tamarin (*Callitrichidae*) scents. *Manuscript in preparation, expected submission to Journal of Zoology*.
- Souza-Alves JP, Mouthe I, Hilario RR, ..., **Poirier AC**, ... & Barnett AA (2019). Terrestrial behavior in titi monkeys (*Callicebus*, *Cheracebus* and *Plecturocebus*): Potential correlates, patterns and differences between genera. *International Journal of Primatology*, 1-20.
- Watsa M, Erkenwick G, Halloran D, Kane EK, **Poirier A**, Klonoski K, ... & Zuniga A (2015). A Field Protocol for the Capture and Release of Callitrichids. *Neotropical Primates*, 22(2), 59–68.

Conference presentations

- ‘Sniffing out primate scent communication’ (2018). 9th European Conference on Behavioural Biology, Liverpool, UK. Poster presentation
- ‘Sniffing out primate scent signals: the first field analysis of callitrichine scents by portable GC-MS’ (2018). Primate Society of Great Britain Spring meeting, Portsmouth, UK. Oral presentation
- ‘First field analysis of primate scents using a portable GCMS’ (2017). 14th Meeting of the Chemical Signals in Vertebrates group, Cardiff, UK. Oral presentation
- ‘Making sense of scents: deciphering primate olfactory communication’ (2017). Anglia Ruskin Faculty of Science & Technology research conference, Chelmsford, UK. Poster presentation

Outreach activities

- 2018 Documentary series ‘[Animals Decoded](#)’ – The Smithsonian Channel (US) & Love Nature: episode ‘[Invisible Communication](#)’ featuring my research work on primate chemical communication. Collaboration with Dr Stefano Vaglio, University of Wolverhampton, UK
- 2016–18 Treasurer of the Wildlife Society at Anglia Ruskin University, UK
- 2017 Volunteer at the Mammal Society conference in Cambridge, UK
Registration of conference attendants, information desk, sales assistant
- 2012 Volunteer at WWF Earth Hour in Peru
Scientific presenter

Summers 2005–09 Sailing instructor in France: lessons for children & adults; organization of nautical events & environmental manifestations

Additional skills & certificates

Languages French native language
English & Spanish fluent written & spoken

First aid First aid training certificate (re-validated Aug. 2019)

Licenses Valid driving license since 2006
Valid motorboat license since 2005

Tree climbing practice (applied to radio-telemetry techniques)