

# Andy R Griffiths

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website: <https://andy-griffiths.github.io/>

Motivated by broad ecological and evolutionary themes, I am interested in leveraging phylogenetic approaches and environmental gradients to explore diversity and distribution trends, climate change responses, and biodiversity conservation priorities. The mountain environment is an especial interest.

## EDUCATION

### Sept 2015 - March 2020 **PhD in Plant Evolutionary Ecology, University of Edinburgh**

*Thesis title: Woody plant distributions along an Amazon-to-Andes elevation gradient*

*Supervisors: Dr Kyle Dexter, Professor Patrick Meir, and Professor Miles Silman*

Using phylogenetic approaches to examine distribution and diversity trends across a large tropical elevation gradient I revealed niche conservatism, the high biodiversity value of tropical montane forests, and the significance of the cloud-base ecotone. Additional targeted field collections, trait measurements, and DNA sequencing within the Miconieae lineage, demonstrated correlated evolution between species' elevational niches and functional strategies.

#### **Selected competencies developed:**

- Data skills in R. e.g. data wrangling, phylogenetic comparative methods, null models, cluster analyses, and diversity metrics.
- DNA sequence compiling and phylogeny building
- Laboratory protocols, e.g. DNA extraction and sequencing
- Literature research, project management, and inter-institutional collaboration
- Remote international fieldwork logistics e.g. research permits, expedition planning
- One-month science communication placement at Royal Botanic Garden, Edinburgh

### Sept 2011 - Aug 2012 **MSc Biodiversity and Conservation, University of Leeds: Pass with Distinction**

*Thesis title: The effects of grazing and elevation interact to influence the expression of plant traits in a montane environment*

*Supervisors: Dr Daniel Chapman and Dr Steven Sait*

In two *Alchemilla* species, leaf size decreases with increasing elevation. However, small leaves also occur in lower elevation areas exposed to grazing. Lower elevation individuals display reduced flowering, particularly *A. alpina*, an alpine specialist.

### Sept 2004 - May 2008 **BSc Zoology, University of Sheffield: First Class Honours**

## PUBLICATIONS

- **Griffiths AR**, Silman MR, Rios WF, Feeley KJ, Cabrera KG, Meir P, Salinas N, Dexter KG. 2020. Evolutionary heritage shapes tree distribution trends along an Amazon-to-Andes elevation gradient. *Biotropica* (Accepted). Preprint: <https://doi.org/10.1101/2020.06.11.143875>
- Segovia RA, **Griffiths AR**, Arenas D, Dias P, Dexter KG. 2020. Signals of recent tropical radiations in Cunoniaceae, an iconic family for understanding Southern Hemisphere biogeography. *Systematic Biology* (In Revision). Preprint: <https://doi.org/10.1101/2020.01.23.916817>
- Dexter KG, Segovia RA, **Griffiths AR**. 2019. Exploring the Concept of Lineage Diversity across North American Forests. *Forests*. 10:520. <https://doi.org/10.3390/f10060520>

## CONFERENCES, SYMPOSIA, AND SEMINARS

- 2019** Oral presentation – Edinburgh University Biosphere Atmosphere Program Seminar Series, UK
- 2019** Oral presentation – Science Club – Royal Botanic Garden Edinburgh, UK
- 2019** Organiser and Chair – Thematic Session: *Tropical Mountains: Ecological Trends across Elevation*. Joint BES/gtö Symposium, Edinburgh, UK
- 2018** Poster – E3 Doctoral Training Partnership Symposium, Edinburgh, UK
- 2018** Oral presentation – British Ecological Society Annual Conference – Birmingham, UK
- 2018** Oral presentation – Davis Lab Seminar Group – Harvard University, USA
- 2017** Oral presentation – School of GeoSciences Postgraduate Conference, Edinburgh, UK
- 2017** Poster – European Society for Tropical Ecology Conference – Brussels, Belgium
- 2017** Oral presentation – Edinburgh Ecology Network Symposium, UK
- 2016** Poster – School of GeoSciences Postgraduate Conference, Edinburgh, UK
- 2015** Poster – British Ecological Society Annual Conference – Edinburgh, UK

## GRANTS

- 2018** Centenary Agroforestry Fund – Small Grant

2017 Moss Family Fund – Small Grant  
2016 Davis Expedition Fund – Small Grant

## SERVICE POSITIONS

2015-2019 Member of the E3 Doctoral Training Partnership Student Advisory Board  
2016-2017 Vice-Chair of the School of GeoSciences Graduate School Committee  
2015-2016 Convener of the Tropicology Seminar Group

## TEACHING AND MENTORING

2015-2019 Tutor and Demonstrator - University of Edinburgh  
*Courses: Field Ecology, Principles of Ecology, Ecological Measurement, Effective Project Planning and Management*  
2017 Mentoring two undergraduate research assistants on field expedition to Peru

## SELECTED EMPLOYMENT HISTORY

Mar 2014 - **National Trust for Scotland, Mar Lodge Estate, UK - Seasonal Ranger/Naturalist**  
Sept 2014

- Planning, managing, and leading an environmental education service including guided walks, school visits, and conservation volunteer groups
- Ecological monitoring and research

Mar 2013 - **National Trust for Scotland, Glencoe and Dalness, UK – Seasonal Ranger**  
Mar 2014

- Assisting with ecological surveys e.g. butterfly surveys and habitat condition monitoring
- Provision of public information service including guided walks, talks, land rover safaris, and supervision of volunteer work groups

Nov 2012 - **National Trust, Boscastle to Morwenstow, UK – Seasonal Ranger**  
Mar 2013

- Practical habitat, access, and estate management
- Preparation and delivery of events such as beach cleans and school visits

May 2008 - **Teabag Chihuahua Ltd, Salisbury, UK - Catering Manager**  
Sept 2011

- Logistical, financial and staff management for event catering company
- Customer service and liaison with event organisers

Dec 2008 - **Zambona Safaris, Zambia – Assistant and Interim Manager**  
Mar 2009 &  
Nov 2009 -  
Feb 2010

- Assisting the development of a private safari lodge and reserve, including 3 months managing the project
- Managing resources, financial concerns and staff work schedule

## SELECTED ADDITIONAL QUALIFICATIONS AND COURSES

- Expedition First Aid. Merlin Training. 2016
- Introductory Molecular Phylogenetics Short Course. Natural History Museum London, UK. 2015
- Alpine Plant Ecology Summer School. ALPFOR Research Station, Switzerland. 2015
- Mountain Leader Award (Summer). Mountain Training Association UK. 2014
- Certificate in Field Botany. Royal Botanical Garden Edinburgh. 2012

## PROFESSIONAL AFFILIATIONS (PAST AND PRESENT\*)

British Ecological Society\*; Botanical Society of the British Isles\*; European Society for Tropical Ecology\*; Association for Tropical Biology and Conservation\*; Chartered Institute of Ecology and Environmental Management

## LANGUAGES

**English:** Native language; **Spanish** and **German:** Intermediate; **Portuguese:** Beginner

## INTERESTS

As a keen hiker, climber, and mountaineer I have a great passion for the outdoors, particularly the mountain environment. Fascinated by exploring new landscapes and cultures I have enjoyed broad travel experience, including organising long-distance cycle rides and climbing trips in both the UK and Europe. I am a keen photographer, recently winning first prize at an exhibition within the University of Edinburgh, School of GeoSciences. I also enjoy growing chilli peppers and in the recent years have developed an interest in learning languages.