

# Andy R Griffiths

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I engage with broad themes across plant ecology, with a particular interest in applying an evolutionary lens to mountain ecosystems and environmental gradients to better understand diversity and distribution trends, adaptive trait strategies, plant-environment interactions, and conservation priorities.

## Education

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

March 2020 *Thesis title: Woody plant distributions along an Amazon-to-Andes elevation gradient*  
*Supervisors: Dr Kyle Dexter and Professor Patrick Meir*

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.

Targeted field collections and trait measurements, focused on the lineage Miconieae, demonstrated correlated evolution between species' elevational distributions and functional strategies

#### Selected competencies developed:

- Remote international fieldwork logistics e.g. research permits, expedition planning, equipment operation, plot establishment and sampling
- Laboratory protocols, e.g. DNA extraction and sequencing
- Plant taxonomy skills in the field and herbarium
- Data analysis in R. For example: cluster and ordination analyses, phylogenetic reconstructions, simulation studies, null models.
- Literature research, project management, and inter-institutional collaboration
- One-month science communication placement at Royal Botanic Garden, Edinburgh

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

Aug 2012 *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 smaller leaves occur in lower elevation areas exposed to grazing. Lower elevation individuals display reduced flowering, particularly *A. alpina* an alpine specialist.

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

May 2008

## Publications

- **Griffiths AR**, Silman MR, Rios WF, Feeley KJ, Cabrera KG, Meir P, Salinas N, Dexter KG. 2020. Evolutionary tendencies shape tree distribution trends along an Amazon-to-Andes elevation gradient. *Biotropica* (In Revision).
- 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).
- Dexter KG, Segovia RA, **Griffiths AR**. 2019. Exploring the Concept of Lineage Diversity across North American Forests. *Forests*. 10:520.

## 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 <i>Courses: Field Ecology, Principles of Ecology, Ecological Measurement, Effective Project Planning and Management</i>
2017	Mentoring two undergraduate research assistants on field expedition to Peru

## Selected Employment History

Mar 2014 -	<b>National Trust for Scotland, Mar Lodge Estate, UK - Seasonal Ranger/Naturalist</b>
Sept 2014	<ul style="list-style-type: none"><li>Planning, managing, and leading an environmental education service including guided walks, school visits, and conservation volunteer groups</li><li>Ecological monitoring and research</li></ul>
Mar 2013 -	<b>National Trust for Scotland, Glencoe and Dalness, UK – Seasonal Ranger</b>
Mar 2014	<ul style="list-style-type: none"><li>Assisting with ecological surveys and tree nursery care</li><li>Provision of public information service including guided walks, talks, land rover safaris, and supervision of volunteer work groups</li></ul>
Nov 2012 -	<b>National Trust, Boscawen to Morwenstow, UK – Seasonal Ranger</b>
Mar 2013	<ul style="list-style-type: none"><li>Practical habitat, access, and estate management</li><li>Preparation and delivery of events such as beach cleans and school visits</li></ul>
May 2008 -	<b>Teabag Chihuahua Ltd, Salisbury, UK - Catering Manager</b>
Sept 2011	<ul style="list-style-type: none"><li>Logistical, financial and staff management for event catering company</li><li>Customer service and liaison with event organisers</li></ul>
Dec 2008 -	<b>Zambona Safaris, Zambia – Assistant and Interim Manager</b>
Mar 2009 &	<ul style="list-style-type: none"><li>Assisting the development of a private safari lodge and reserve, including 3 months</li></ul>
Nov 2009 -	managing the project
Feb 2010	

## Selected Additional Qualifications

- Certificate in Field Botany. Royal Botanical Garden Edinburgh, 2012
- Mountain Leader Award (Summer). Mountain Training Association UK, 2014
- Expedition First Aid. Merlin Training, 2016

## 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.