

1. PERSONAL DETAILS

Full name: Thomas <u>Matthew Robson</u>	Gender: Male	Date of Birth 04-02-1975
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ResearcherID:	http://www.researcherid.com/rid/J-3381-2012	
URL for research group website:	http://blogs.helsinki.fi/robson/ https://researchportal.helsinki.fi/en/persons/t-matthew-robson	
Twitter research group	https://twitter.com/CanopySEE	
List of Publications		

2. EDUCATION AND DEGREES COMPLETED

Qualification	Awarding Institution	Obtained
Adjunct Professor in Plant Ecology (Docent) Grade 5/5	University of Helsinki, Finland	19-10-2012
Ecology (PhD)	Utah State University, Logan, Utah, USA. (Advisor, Martyn M Caldwell)	01-05-2004
Forest Science (M.Sc.)	Institute of Ecology & Resource Management, University of Edinburgh, UK. (Advisor, John Grace)	01-11-1998
Biological Sciences (B.Sc. Hons. 2:1 Dunelm)	Collingwood College, Durham University, UK. (Advisor, Phil Hulme)	07-07-1996

3. CURRENT POSITION

Position & Project	Dept & Institution	Duration
1°: University of Helsinki; Research Group Leader (PI) <i>Canopy Spectral Ecology & Ecophysiology.</i>	Organismal & Evolutionary Biology Research Programme, ViPS, Faculty of Biological & Environmental Sciences, University of Helsinki	01.09.2013 onwards
2°: UNEP EEAP - United Nations Environmental Programme Environmental Effects Assessment Panel Member	Effects of ozone depletion and associated climate change on terrestrial ecosystems	01.06.2018 onwards

4. RESEARCH & ACADEMIC POSITIONS

2. Helsinki University; Kone Experienced Researcher <i>Changes in the spectrum of radiation penetrating forests.</i>	Plant Biology Division, Dept Biosciences, University of Helsinki, Finland	01.01.2013 – 01.09.2013
3. Helsinki University Post-Doctoral Researcher: <i>Stomatal acclimation to changes in spectral composition of solar radiation.</i>	Plant Biology Division, Dept Biosciences, University of Helsinki, Finland	01.01.2010 – 31.12.2012
4. Juan de la Cierva Research Fellow <i>Response of Temperate Tree Species to Environmental Stress</i>	Spanish National Forestry Research Institute (CIFOR-INIA), Madrid, Spain.	01.09.2006 – 23.11.2009
5. CNRS Post-Doctoral Research Associate <i>Ecosystem Ecology in Subalpine Grasslands</i>	Laboratoire d'Ecologie Alpine Université Joseph Fourier Grenoble, France.	17.04.2004 - 01.07.2006
6. NSF Graduate Research Assistant <i>UV-B effects on Tierra del Fuego's Ecosystems</i>	The Ecology Center Utah State University, Logan, USA.	01.01.1999 – 01.05.2004
7. Graduate Research Assistant <i>UV-B effects on birch seedlings</i>	Faculty of Forestry University of Joensuu, Finland.	01.05.1997 – 28.06.1997

6. PERSONAL RESEARCH FUNDING AND GRANTS

- 2019-2023 Canopy level photosynthesis under conditions of diffuse and direct sunlight and its implications for light use efficiency by plants under future climates. Academy of Finland Project. (499,881€)
- 2018-2019 Detecting the spectral cue controlling diurnal rhythms in plant epidermal transmission: T.M Robson, granted H2020 eLTER2020 Transnational Access (3,000€)
- 2013-2018 How does the spectrum of radiation penetrating a deciduous forest canopy influence understorey phenology and interact with climate to affect ecosystem processes. Academy of Finland Research Fellowship. Project Funding 2013-2016 (328,974€) + follow-up funding awarded 2016-2018 (211,586€) extended to 2020.
- 2016-2018 Optimising site-specific solar radiation modelling for its application in the horticultural, agricultural and photonics industries. Academy of Finland Key Funding (297,749€).
- 2013 How does the spectrum of radiation penetrating forests canopies change with latitude and how does this influence understorey phenology through interactions with other environmental factors. Kone Foundation Experienced Researcher Award 2013 (36,000€ one year) + Travel Award for field research April 2013 (1,200€)
- 2010-2012 Stomatal acclimation to changes in the spectral composition of solar radiation as a component of plant response to environmental stress. TM Robson. University of Helsinki (Salary + 9000€ for 3 years)
- 2006-2009 The respective regeneration capacity of two coexisting species of oak under combinations of drought and light stress produced by climate in Mediterranean forests. TM Robson. Juan de la Cierva Programme, Spain. (Salary + 3000€).
- 2004-2005 Nutrient cycling in subalpine pasture under different land-use treatments. TM Robson, S Lavorel. CNRS, France (Salary + 20,000 €).

Funding Granted towards my PhD students

- 2017-2019 T Solanki - Upscaling the Optical Properties of leaves to model their contribution to canopy light use efficiency and carbon assimilation over vertical and horizontal profiles of spectral irradiance. CIMO into Finland award to TM Robson TM-16-10291. 6-months 2017 (10,500€), Herlin Foundation award 3-years June from 2018 (24,000€ per year).
- 2016-2019 M. Pieristè - How do signals in the sunlight penetrating beech forest canopies affect plant and soil community traits and consequently soil functioning? 3-years PhD project salary Oct 2016, cotutelle funded by the Region of Normandy.
- 2016-2020 D. Israel - Aquaporins and the water household of a plant. 4 years renewable annually from April 2016 Finnish Cultural Foundation small research grant plus salary.
- 2017-2019 C. Brelford - Doctoral Programme in Plant Science, University of Helsinki award of three years PhD student salary.
- 2016-2018 Lammi Biological Station, Finland, Grants for PhD to student research:
M. Pieristè 2016 (1,000€), C. Brelford 2017 (650€) 2018 (500€), and T. Solanki 2018 (500€).

Member but not leader of projects with major collaborators

- 2019-2022 Ecophysiological and evolutionary Roots of multiple stress tolerance in plants (EREMITA). Spanish National Plant for Scientific & Technical, Research and Innovation. (Jl Garcia-Plazaola, J Flexas, I Aranda, J Martinez-Abaiagar, funded)
- 2019-2020 Mechanisms controlling daily and seasonal fluctuations in photoprotection of alpine plants (B Fernandez-Marin, Univ. La Laguna, Tenerife, Spain, 10,000€).
- 2018-2019 Contribution of seed production to fitness of European beech across its distribution range. (Leader M Benito-Garzon/R Petit, Dept. EPFA, INRA, France granted 13,000€).
- 2018-2023 A proxy system model for pollen-based UV-B reconstructions in palaeoclimate and palaeoecology (Leader A. Seddon, University of Bergen, Decision Pending 2020-23 Norwegian Research Council 16,773NOK + 11,313NOK).

- 2018-2021 Understanding Biological Resilience (Leader R Thorogood, HiLIFE, University of Helsinki accepted 170,000€/ 2-years) seed grant: Seeds from the past – Measuring Realised adaptation to climate change (Leader M. Hällfors, 10,000€).
- 2017-2019 Development of LED panels for greenhouse lighting (Leader J Nezval /“LightDrop”, granted to University of Ostrava)
- 2017-2019 Mechanisms for sunlight to control biogeochemical cycles in a temperate forest (QingWei Wang, JSPS Fellowship)
- 2015-2020 From chlorophyll fluorescence to photosynthesis: upscaling the link (A Porcar-Castell, AKA funded)
- 2011-2014 Acclimation of stomatal responses to light: environmental cues, strategies and mechanisms. (PJ Aphalo AKA 417,698€)
- 2013-2015 ENVIMET Linking environmental metabolomics and ecophysiology and its integration into international network (Operational Programme of Education for Competitiveness: Leader K Klem, Brno)
- 2007-2009 Environmental limitations on a marginal beech population undergoing climate change (CLIMHAYA). (I Aranda/TM Robson). BOSALIM Moving northern species margins (75,000€ Spanish Ministry of Education and Science).
- 2010 Tracing N-deposition Impact in Agricultural Alpine Watersheds (NATEAU). (ANR, France, Leader J-C Clement).
- 2007 Regeneration dynamics in a mixed oak forest in central Spain. (PIs N Nanos, I Aranda, TM Robson 30,000€ UPM, Madrid).
- 2006 Atmospheric deposition, affects nitrogen cycling in soil and vegetation on sub-alpine terraces. (PIs J-C Clement, S Lavorel, TM Robson, 6000 € Université Joseph Fourier, Grenoble).

7. LEADERSHIP AND SUPERVISION EXPERIENCE

Supervision of Graduate Students and Research Fellows

- 2004-2019 Postdocs = 1 (T. Kotilainen 3 years - now has a permanent position at LUKE);
PhDs = 5 ongoing (Brelsford; Hartikainen; Pieristè final year; Israel 3rd year; Solanki 2nd year) + 3 as co-supervisor (Nieuwkerk, Wang, Siipola); Master Students = 9 (6 at University of Helsinki, and 3 at UJF Grenoble).
PhD Committees = 2 (Angove, Patama).

8. TEACHING EXPERIENCE

- 2019 Lecturer “Plants Underpin Ecosystem Responses to Climate Change”, Master’s Programme in Environmental Sustainability – Climate Change and Ecosystems course. (Jan 2019).
- 2017/2019 Organisation of International Graduate Student Course on Plant Response to Climate Change (DPPS-301) in Sept 2017/Oct 2019 at the University of Helsinki, coordinating and inviting an international panel of lecturers. (3 credits)
- 2013-2018 Organisation and teaching of Graduate Course in Plant Biology for Journal Article Discussion Group (526130), M.Sc./DPPS University of Helsinki, yearly Autumn and Spring (5 credits).
- 2014 Sabbatical Replacement Lecturer (12 months) – Plant Physiological Ecology (PBIOL-141 - 5 credits + Practicals) & Ecosystem Ecology (526040 - 3 credits), Undergraduate Courses, University of Helsinki. (also co-teacher 2010-2013)

9. ORGANISATION OF SCIENTIFIC MEETINGS, WORKSHOPS AND TRAINING SCHOOLS

- April 2018 Organising Committee of *UV4plants* biannual network meeting and training school (+teaching), Lake Bled, Slovenia
- 2012-2016 Organisation, Course design & Teaching: Three training schools on *Methods for research on the effect of UV-B on plants*. Cost Action UV4growth at University of Malaga, April 2012, Munich Feb 2013, and *UV4plants* Pécs May 2016.
- 2011- 2014 Organisation, Course design & Teaching: Training school in *Statistical Analysis of photobiology data in R*. Cost Action UV4growth at Helsinki University.

10. SCIENTIFIC AWARDS AND HONOURS

- Appointed as a co-author (July 2017) and subsequently panel member (June 2018) to the UNEP EEAP (Environmental Effects Assessment Panel) for ozone depletion and associated climate change effects on terrestrial ecosystems.
- The article entitled, *Incorporating plant functional diversity effects in ecosystem service assessments*, which proposed novel methodological guidelines for scaling between functional ecology and policy, received the *Cozzarelli Award* from the *US National Science Foundation*, and the *Ecological Society of America, Sustainable Science Award*.
- Elected a member of Viikki Plant Science Centre (ViPS), for the five-year term 1 May 2016 - 31 April 2021.

11. KEY SCIENTIFIC OR ACADEMIC MERITS

Institutional Responsibilities

- Dec, June 2019 / Aug 2018 PhD Thesis Grading Committee for Kerri Hunter, Aleksia Vaattovaara (DPPS) and Antti Takolander (LUOVA), Fac. Biological & Env. Sciences, University of Helsinki.
- Nov 2017 PhD Thesis pre-examiner and grader for Beñat Olascoaga Gracia (Forest Sciences, University of Helsinki)
Title: Leaf optical signals and the acclimation of photosynthesis.
- May 2017-2020 PhD Thesis committee member for Homero Garaté (University of Bordeaux, France)
Title: Modeling forest tree community turnover based on species' phenotypic variability and response to climate change
- Nov 2016 PhD Thesis pre-examiner for Alicia Forner Sales (Forestry School, UPM, CSIC, INIA, Madrid)
Title: Extreme drought effects on Mediterranean tree species and its modulation by microclimate and fragmentation.
- Feb 2015 PhD Thesis opponent for Javier Cano (Forestry School, Universidad Politécnica Madrid)
Title: Mesophyll conductance in forest tree species, implications for photosynthesis, water and light use efficiency.
- Jan 2008 PhD Thesis pre-examiner for Jesus Rodriguez-Calcerrada (Forestry Sciences, Universidad Politécnica Madrid).
Title: Influencia de la luz y la sequía estival en la respuesta funcional de brinzales de *Quercus petraea* y *Quercus pyrenaica*: Implicaciones para la regeneración.

Commissions of Trust

- 2019 Finnish Management Committee Rep. COST Action CA15226: CLIMO Climate-Smart Forestry in Mountain Regions.
- 2019 Dept. OEB Seminar Organising Committee, University of Helsinki
- 2019 Reviewer for Czech Science Foundation GAČR projects.
- 2017 Reviewer for Quo vaditis agriculture, forestry and society under Global Change? – Czech Global Conference 2-4 October 2017
- 2013-2014 Project reviewer and assessor for Swiss COST EU grants 2013 and 2014.
- 2012-2014 COST Action FP1106: STReESS – (Studying tree responses to extreme events: a synthesis).
- 2010-2013 COST Action FA0906 UV-B radiation: A specific regulator of plant growth and food quality in a changing climate (UV4growth: 2010-2013). Editor/co-author of report, *Beyond the Visible: guidelines for good practice in UV research*.
- 2006-2010 COST Action E52 Evaluation of beech genetic resources for sustainable forestry (2006-2010). Organisation of data-analysis workshop in Valsain, Segovia, January 2009, and the final conference in Burgos Spain (with Ricardo Alia, INIA). Co-Editor of the conference abstracts, author of the notes for field excursion, host of field excursion to provenance trial. Scientific Committee of COST E52. 5-6 May 2010. Burgos, La Rioja, Spain. Construction of a database from 27 partners collating data from pan-European beech trials, and co-ordinated (with Manfred Forstrueter) two project proposals to EUROCORES arising from the COST E52 each involving the coordination of a workshop of the international consortia (Dec 2008, June 2009).
- 2006-present Peer-review and editorial board for international Journals:
See [Publons profile https://publons.com/author/1223158/thomas-matthew-robson#profile](https://publons.com/author/1223158/thomas-matthew-robson#profile)
- 2010 Project review committee for the Biodiversity, Ecosystem and Agriculture panel (Blanc SVSE 7) of the non-thematic programme of the French National Research Agency (ANR): 2010 "BlueSky Program".
- 2008 Abstract review & editing. TREEBREEDEx: Activity-N° 3: Geographical Structure of Genetic Diversity of Species – towards the delineation of adaptive environments and breeding zones at European level. Workshop on Plasticity and Adaptation in Forest Trees.
- 2006-present Session Chair at various ESA-INTECOL meetings. Aug 3-6th 2006. Oral Session – Polar and Alpine Ecology: Climate Effects, communities Aug 8th 1:30-5:00 p.m. (ESA member 1999-2007).

12. MEMBERSHIPS AND POSITIONS OF TRUST IN SCIENTIFIC SOCIETIES

- 2015-2018 Elected Treasurer & Management Member Committee of UV4plants international organisation for the advancement of plant UV research. Organising Committee of the Societal Meeting in Bled May 2018.
Editorial board: UV4plants Bulletin.
- 2005-present Member of the British Ecological Society (BES: 2005-present). I participate in the BES Plant Environmental Physiology Group, in addition to regular attendance at the BES Annual Meeting.

OTHER TRAINING, QUALIFICATIONS AND LINGUISTIC SKILLS

- Completed Helsinki University Pedagogy Training (4 courses; Supervision / Assessment of learning / Pedagogy I & II, 20 credits).
- Basic training & 4 years experience in Teaching English as a Foreign Language (TEFL).
- English (native speaker); Spanish (fluent); French (good); Italian (beginner); Finnish (beginner).

OUTREACH TO SOCIETY FROM THE ACADEMIC COMMUNITY

- 2019 Presentation on Climate Change representing the UNEP EEAP to Dunstan High School, Alexandra, New Zealand
- 2019 University of Helsinki [Media Interview and Commentary](#) on UN Sustainable Development Report.
- 2019 [eLTER blog](#) of experiences at transnational access sites.
- 2019 Lecture & research tour at *Station Alpin Joseph Fourier Outreach Day* to French college teachers from around France.
- 2018 Publicity for Beech Trial Database: with [INRA](#) and the [EFI](#) and [EFI resilience](#).
- 2018 Grant-holder presentation/pitch to the [Academy of Finland Key Funding Final Stakeholder Meeting](#).
- 2018 [Skype a Scientist](#) Educational Programme: Teaching Secondary Schools / Colleges in Spain and USA.
- 2015-present Citizen Science Research Activities on Lammi Biological Research Station – [Research Nature Trail](#)
- 2015 Presentation of research at invited public seminar in Turku Public Library.
- 2015 Public discussion on communication and discourse with Ariel Bustamante from Alto University, Helsinki
- 2015/2014/2013 Presentation, debate and performance with artist Essi Kausalainen on plant sensory ecology and communication: Sinne Gallery, Helsinki, Titanik Gallery, Turku and Branching Out Event Workshop, Suomenlinna.
- 2012 Featured in Biodiversity Newsletter for Europe – Issue No. 40 p14. Final meeting of COST Action E52 “Evaluation of the genetic resources of European beech for sustainable forest management (G. Von Wuehlisch).
- 2012 & 2005 Translation into English. Guide to the Alpine Botanical Garden and Alpine Field Station / Livre guide du Jardin Botanique Alpin du Lautaret 1 & 2nd editions eds. Aubert S., Bignon A., Bligny R. Choler Ph., Douzet R. Fernandez P. (100 p.). Station Alpine Lautaret.
- 2012 Translation into English. Activity report of the Bialowieza Department of the Forest Research Institute, (132 p) Polish Forest Experimental Station - Instytut Badawczy Lesnictwa.
- 2012 Research Featured in Newspaper Holz Zentralblatt (21): Norddeutsche Buchen bestehen auch in Spanien.
- 2012 Speaker at the Fascination of Plants Week. UV sun screens in plants: Better than people at coping with ozone depletion?