

# Thomas Guillerme

email: [guillert@tcd.ie](mailto:guillert@tcd.ie) — Webpage: [tguillerme.github.io](http://tguillerme.github.io) — Twitter: [@TGuillerme](https://twitter.com/TGuillerme)  
GitHub: [TGuillerme](https://github.com/TGuillerme) — Google Scholar: [goo.gl/OP1XQG](https://scholar.google.com/citations?user=goo.gl/OP1XQG) — FigShare: [goo.gl/8fPU7k](https://figshare.com/8fPU7k)  
ORCID: [0000-0003-4325-1275](https://orcid.org/0000-0003-4325-1275) — ResearcherID: [G-9833-2014](https://www.researcherid.org/G-9833-2014)

## RESEARCH INTERESTS

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I am interested in macroevolutionary biology; the stories behind the history of Life and the methodologies with which it is investigated. I am particularly interested in ways of combining classical methods such as descriptive palaeontology with modern bioinformatic tools such as phylogenomics and mathematical modelling.

## EDUCATION

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2012 - Present: (viva due 22/10/2015)	PhD in Zoology, Trinity College Dublin <i>Macroevolution with living and fossil species</i>
2010 - 2012:	MSc in Palaeontology (honours), Université Montpellier II 2 <sup>nd</sup> year project: <i>Molecular clocks and evolutionary rates among primates: a palaeontological and genomic approach.</i> 1 <sup>st</sup> year project: <i>Southern France Upper Cretaceous Theropod teeth variability.</i>
2007 - 2010:	BSc in Biology, Université Montpellier II

## PUBLICATIONS

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### Peer reviewed

2016: **Guillerme T.** and Cooper, N. Effects of missing data on topological inference using a Total Evidence approach. *Molecular Phylogenetics and Evolution* 94:146158, DOI: [10.1016/j.ympev.2015.08.023](https://doi.org/10.1016/j.ympev.2015.08.023)

2015: **Guillerme T.** and Cooper, N. Morphological data are lacking for living mammals. *bioRxiv*, DOI: [10.1101/022970](https://doi.org/10.1101/022970)

*Note:* This paper is ready an invited submission for a special issue at **Biology Letters**. The deadline for submission to this issue has been extended until December 2015.

2014: Healy, K., **Guillerme T.**, Finlay, S., Kane, A., Kelly, S.B.A., McClean, D., Kelly, D.J., Donohue, I., Jackson, A.L. and Cooper, N.  
Ecology and mode-of-life explain lifespan variation in birds and mammals.  
*Proceedings of the Royal Society B*, 281(1784). DOI: [10.1098/rspb.2014.0298](https://doi.org/10.1098/rspb.2014.0298)

*Personal Contributions:* writing the code and running the analysis. Developed R package: *mulTree* – [github.com/TGuillerme/mulTree](https://github.com/TGuillerme/mulTree).

### In prep.

**Guillerme T.** and Cooper, N. Mammalian morphological diversity does not increase in response to the Cretaceous-Paleogene mass extinction and the extinction of the (non-avian) dinosaurs.

*Note:* To be submitted to *PLoS Biology* in September 2015. A preprint is available [here](https://goo.gl/MiaRaO) ([goo.gl/MiaRaO](https://goo.gl/MiaRaO)).

## AWARDS AND GRANTS

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- 2014: BES Photo Competition Student Price (Ecology and Society)  
 2012: Trinity Postgraduate Research Studentship (€46800)

## COMPUTER SKILLS

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- Coding: **R\***, **Bash\***, HTML,  $\LaTeX$ , git  
 Phylogenetics: PAUP, MrBayes, **BEAST\***, RAxML, PhyloBayes, CoEvol  
 MACSE, MAFFT, SEAvew, Tracer, Mesquite, R{ape}  
 R{geiger}, R{diversitree}, R{MCMCglmm}, R{caper}, ...  
 Morphometrics: TPS, R{geomorph}, R{MASS}  
 Graphics: Adobe Illustrator, Adobe Photoshop, Gimp, Inkscape

\* Skills taught at workshops (see below)

### Developed software:

- R{mulTree}: Performs MCMCglmm on multiple phylogenetic trees  
 GitHub page: [github.com/TGuillaume/mulTree](https://github.com/TGuillaume/mulTree)

## CONFERENCES AND WORKSHOPS

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### International Conferences

- 2015: *Systematics Association Biennial* - Oxford, UK  
 Talk: Total evidence phylogenies, the data issue  
 Available here: [goo.gl/MVwMTY](https://goo.gl/MVwMTY)  
 2014: *SVP annual meeting* - Berlin, Germany  
 Symposium presentation (**invited talk**): *Putting fossils in trees*  
 Talk: Total evidence phylogenies and missing data  
 Available here: [goo.gl/CBqSVJ](https://goo.gl/CBqSVJ)  
 2014: *BES Macroecology SIG meeting* - University of Nottingham, UK  
 Talk: Trees with fossil and living species: the data issue  
 Available here: [goo.gl/Sdcxon](https://goo.gl/Sdcxon)  
 2014: *Evolution 2014* - Raleigh NC, USA  
 Symposium presentation: *Ernst Mayr Symposium*  
 Talk: Total evidence phylogenies: the missing data issue  
 Available here: [goo.gl/oPfHZE](https://goo.gl/oPfHZE)  
 2014: *Challenges in Macroecology: Scaling the Time Barrier* - Natural History Museum  
 London, UK  
 Talk: Trees with fossil and living species: the missing data issue  
 Available here: [goo.gl/c1RBER](https://goo.gl/c1RBER)  
 2013: *European Society for Evolutionary Biology Congress* - Lisbon, Portugal  
 Poster: Combining fossils and molecular phylogenies  
 Available here: [goo.gl/3HcRGH](https://goo.gl/3HcRGH)  
 2013: *11th International Mammalogical Congress* - Queen's University, Belfast, UK  
 Poster: Combining fossils and molecular phylogenies  
 Available here: [goo.gl/3HcRGH](https://goo.gl/3HcRGH)

### Workshops

- 2015: OpenData & Reproducibility workshop  
Nick Isaac & Emiel van Loon, Charles Darwin House, London, UK
- 2013: Introduction to Trinity Centre for High Performance Computing  
Paddy Doyle, Trinity College Dublin, Ireland
- 2013: Spatial Analysis in R Workshop  
Barry Rowlingson, University of Sheffield, UK
- 2013: Introduction to Morphometrics Workshop  
François Gould, Trinity College Dublin, Ireland
- 2013: IUCN Red List of Ecosystems Workshop  
Edmund Barrow, Trinity College Dublin, Ireland

## PROFESSIONAL SERVICE

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**Reviewing:** Reviewer for: *the International Journal of Primatology*; *The Royal Society: Interface focus*.

### Workshops:

- 2014: Tip-Dating workshop — *helper*  
Nicholas Matzke & April Wright, SVP Annual meeting - Berlin
- 2014: Software Carpentry Bootcamp - R and UNIX — *helper*  
Devasena Inupakutika & Aur Saraf, University of Nottingham

### Academic memberships:

- 2015-present: Member of the Systematic Association
- 2014-present: Member of the Society of Vertebrate Palaeontology
- 2013-present: Member of Society of Systematic Biologists
- 2013-present: British Ecological Society (BES) including Macroecology Special Interest Group

**Departmental services:** 2013-present: Zoology Postgraduate student social committee chair

## TEACHING

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### Academia

- 2014: MSc students: Timing Evolution  
*Teacher*, Trinity College Dublin - IE
- 2014 : Software Carpentry Bootcamp - R and UNIX  
*Helper*, University of Nottingham - UK
- 2013-14: 2<sup>nd</sup> year MSc students: Statistics with R  
*Teaching assistant*, Trinity College Dublin - IE
- 2013-14: 4<sup>th</sup> year undergraduate students: Evolution  
*Teaching assistant*, Trinity College Dublin - IE
- 2012-13: 4<sup>th</sup> year undergraduate students: Statistics with R  
*Teaching assistant*, Trinity College Dublin - IE
- 2012-13: 1<sup>st</sup> year undergraduate students: Introduction to Biodiversity Evolution and the Environment  
*Teaching assistant*, Trinity College Dublin - IE

### Student supervision

- 2014-2015: Luke Hannon (4<sup>th</sup> year project) *Orbit size and nocturnality in living and fossil primates*.
- 2013-2014: Maura Judge (4<sup>th</sup> year project): *Bite force and diet in mammals*.

## FIELDWORK AND DATA COLLECTION

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- 2013-14: Museum data collection: Smithsonian Institute Natural History Museum (Washington DC), American Museum of Natural History (New York), Museum of Comparative Zoology (Cambridge, MA), Muséum National d'Histoire Naturelle (Paris)
- 2011-12: Excavations in Cruzy, France  
Southern France, Continental Cretaceous
- 2011: Excavations in Krasiejów, Poland  
Southern Poland, Continental Trias
- 2009-10: Excavations in Espéraza, France - Site fore-person  
Southern France, Continental Cretaceous

## PUBLIC ENGAGEMENT AND OUTREACH

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- Regular contributor to [EcoEvo@TCD](#) blog; rated [best Irish Science and Technology blog \(2014\)](#).
- Complete list available here: [goo.gl/MAq9oA](http://goo.gl/MAq9oA)
- Featured posts: [How do lego cars evolve?](#); [If you please – draw me a dino...](#); [The more the better?](#).
- [Threesis video](#) (*early stage* thesis project explained in three minutes).

### Outreach Events

- 2014 & 2013: Trinity College Dublin Zoology Department, Researcher's night – *participant*
- 2014: 1<sup>st</sup> Soapbox Science Ireland – *helper*
- 2014: "What can we learn from skeletons", comparative anatomy practical – *Co-organiser*
- 2013: Trinity College Zoology Museum guided tours – *tour guide*
- 2010: Introduction to palaeontological excavations, Musée des Dinosauriens (FR) – *animator*