

# Thomas Guillerme

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ORCID: [0000-0003-4325-1275](https://orcid.org/0000-0003-4325-1275) — ResearcherID: [G-9833-2014](https://www.researcherid.com/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: PhD in Zoology, Trinity College Dublin  
(due 10/2015) *How does combining data from fossils and living species change our interpretation of evolutionary patterns and processes?*
- 2010 - 2012: MSc in Palaeontology (honours), Université Montpellier II  
2<sup>nd</sup> year project: *Molecular clocks and evolutionary rates among primates: a palaeontological and genomic approach.*  
1<sup>st</sup> year project: *Southern France Upper Cretaceous Theropod teeth variability.*
- 2007 - 2010: BSc in Biology, Université Montpellier II

## PUBLICATIONS

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### Peer reviewed

In review: **Guillerme T.** and Cooper, N. Effects of missing data on topological inference using a Total Evidence approach.  
*PLOS ONE*

*Personal Contributions:* Designing the simulations, writing the code and running the analysis, writing the paper.

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

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

## 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, L<sup>A</sup>T<sub>E</sub>X, 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)

## CONFERENCES AND WORKSHOPS

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### International Conferences

- 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](http://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](http://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](http://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](http://goo.gl/c1RBER)
- 2013: *European Society for Evolutionary Biology Congress* - Lisbon, Portugal  
Poster: Combining fossils and molecular phylogenies  
Available here: [goo.gl/3HcRGH](http://goo.gl/3HcRGH)
- 2013: *11th International Mammalogical Congress* - Queen's University, Belfast, UK  
Poster: Combining fossils and molecular phylogenies  
Available here: [goo.gl/3HcRGH](http://goo.gl/3HcRGH)

### Workshops

- 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

**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:**

- 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: 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*