# Thomas Guillerme

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## RESEARCH INTERESTS

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**

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**

#### 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.

## AWARDS AND GRANTS

2014: BES Photo Competition Student Price (Ecology and Society)

2012: Trinity Postgraduate Research Studentship (€46800)

## COMPUTER SKILLS

Coding: R\*, Bash\*, HTML, LATEX, git

Phylogenetics: PAUP, MrBayes, BEAST\*, RAxML, PhyloBayes, CoEvol

MACSE, MAFFT, SEAview, 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

# **CONFERENCES AND WORKSHOPS**

#### **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

2014: BES Macroecology SIG meeting - University of Nottingham, UK

Talk: Trees with fossil and living species: the data issue

Available here: 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

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

2013: European Society for Evolutionary Biology Congress - Lisbon, Portugal

Poster: Combining fossils and molecular phylogenies

Available here: goo.gl/3HcRGH

2013: 11th International Mammalogical Congress - Queen's University, Belfast, UK

Poster: Combining fossils and molecular phylogenies

Available here: 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, İreland

2013: IUCN Red List of Ecosystems Workshop

Edmund Barrow, Trinity College Dublin, Ireland

#### PROFESSIONAL SERVICE

**Reviewing:** Reviewer for the International Journal of Primatology

#### Workshops:

<sup>\*</sup> Skills taught at workshops (see below)

Tip-Dating workshop — *helper* 2014:

Nicholas Matzke & April Wright, SVP Annual meeting - Berlin

Software Carpentry Bootcamp - R and UNIX — helper 2014:

Devasena Inupakutika & Aur Saraf, University of Nottingham

#### Academic memberships:

Member of the Society of Vertebrate Palaeontology 2014-present:

Member of Society of Systematic Biologists 2013-present:

British Ecological Society (BES) including Macroecology Special Interest Group 2013-present:

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

## TEACHING

#### Academia

2014: MSc students: Timing Evolution

Teacher, Trinity College Dublin - IE

Software Carpentry Bootcamp - R and UNIX 2014:

Helper, University of Nottingham - UK

2<sup>nd</sup> year MSc students: Statistics with R 2013-14:

Teaching assistant, Trinity College Dublin - IE

4<sup>th</sup> year undergraduate students: Evolution 2013-14:

Teaching assistant, Trinity College Dublin - IE

4<sup>th</sup> year undergraduate students: Statistics with R 2012-13:

Teaching assistant, Trinity College Dublin - IE

1st year undergraduate students: Introduction to Biodiversity Evolution and the Environment 2012-13:

Teaching assistant, Trinity College Dublin - IE

## Student supervision

2014: Maura Judge ( $4^{th}$  year project): Bite force and diet in mammals.

# FIELDWORK AND DATA COLLECTION

Museum data collection: Smithsonian Institute Natural History Museum (Washington 2013-14:

DC), American Museum of Natural History (New York), Museum of Comparative Zool-

ogy (Cambridge, MA), Muséum National d'Histoire Naturelle (Paris)

Excavations in Cruzy, France 2011-12:

Southern France, Continental Cretaceous

2011: Excavations in Krasiejów, Poland

Southern Poland, Continental Trias

Excavations in Espéraza, France - Site fore-person 2009-10:

Southern France, Continental Cretaceous

# PUBLIC ENGAGEMENT AND OUTREACH

- Regular contributor to EcoEvo@TCD blog; rated best Irish Science and Technology blog (2014).
- Complete list available here: goo.gl/MAq90A
- 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 Dinosaures (FR) – animator