

Dr. Thais N. C. Vasconcelos

Curriculum Vitae

(Including list of publications and grants)

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Curriculum Vitae

Personal information

Nationality: Brazilian
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Research Interests

I am passionate about plant diversity, particularly the variety of phenotypic strategies and how these are linked to the ecology and evolution of past, present and future biodiversity distribution. My scientific career to date has integrated molecular phylogenies and morphological traits to better understand plant systematics, ecology and evolution with a focus on species-rich, tropical groups. I am keen to learn new methods with which to investigate ecological strategies and evolutionary trends and to expand my experience in systematics of angiosperms, allowing me to become a future leader in my area.

Qualifications

**University College London
(UCL)** Department of
Genetics, Evolution and
Environment
London, United Kingdom &
**Royal Botanic Gardens
Kew** Comparative Plant &
Fungal Biology

**PhD in Systematics and Evolutionary Biology,
2013 – 2017**

A partnership between UCL and the Royal Botanic Gardens Kew, based full-time at the latter institution. My PhD thesis focused on the relationship between morphological homogeneity, phylogenetic heterogeneity and systematic complexity in the hyper-diverse family Myrtaceae.

University of Brasilia
Department of Botany
Brasilia, Brazil

MSc in Botany, 2011 – 2013

My MSc dissertation used morphological trait data to understand floral evolution in a phylogenetic context in the order Myrtales. This provided experience in gathering big data sets, manipulating phylogenies and undertaking statistical analysis using R.

University of Brasilia
Biological Sciences Institute
Brasilia, Brazil

**Bachelor and Teaching degree in Biological Sciences,
2007 – 2011**

My undergraduate course was heavily focused on plants sciences, particularly plant ecology and floristics in the savannahs of the South American highlands.

List of publications

Published

Lucas EJ, Amorim BS, Lima DF, Lima-Lourenço AR, Nic Lughadha EM, Proença CEB, Rosa PO, Rosário AS, Santos LL, Santos MF, Souza MC, Staggemeier VG, **Vasconcelos TNC**, Sobral M. 2018. A new infra-generic classification of the species-rich Neotropical genus *Myrcia* s.l. *Kew Bulletin* 73:9.

Vasconcelos TNC, Lucas EJ, Faria JE, Prenner G. 2018. Floral heterochrony promotes flexibility of reproductive strategies in the morphologically homogeneous genus *Eugenia* (Myrtaceae). *Annals of Botany* 121: 161–174.

Vasconcelos TNC, Proença CEB, Ahmad B, Aguilar DS, Aguilar R, Amorim BS, Campbell K, Costa IR, De-Carvalho PS, Faria JE, Giaretta A, Kooij PW, Lima DF, Mazine FF, Peguero B, Prenner G, Santos MF, Soewarto J, Wingler A, Lucas EJ. 2017. Myrteae phylogeny, calibration, biogeography and diversification patterns: Increased understanding in the most species rich tribe of Myrtaceae. *Molecular Phylogenetics and Evolution* 109: 113–137.

Vasconcelos TNC, Prenner G, Santos MF, Wingler A, Lucas EJ. 2017. Links between parallel evolution and systematic complexity in angiosperms: a case study of floral development in *Myrcia* s.l. (Myrtaceae). *Perspectives in Plant Ecology, Evolution and Systematics* 24: 11–24.

Vasconcelos TNC, Proença CE. 2015. Floral cost vs. floral display: Insights from the megadiverse Myrtales suggest that energetically expensive floral parts are less phylogenetically constrained. *American Journal of Botany* 102(6): 900–909.

Vasconcelos TNC, Prenner G, Bünger MO, De-Carvalho PS, Wingler A, Lucas EJ. 2015. Systematic and evolutionary implications of stamen position in Myrteae (Myrtaceae). *Botanical Journal of the Linnean Society* 179(3): 388–402.

Vasconcelos TNC, Silva JS, Ianhez ML, Proença CE. 2015. Floristic survey of the Brazilian Ages Memorial: a Cerrado *sensu stricto* area with an educational relevance. *Check List* 11(4): 1689.

Vasconcelos TNC, Silva JS, Proença CEB. 2012. Testando a função PPI: análise de previsibilidade fenológica utilizando dados de herbário. *Heringeriana* 6(1): 66-69.

Accepted for publication

Vasconcelos TNC, Lucas EJ, Peguero P. *in press*. One new species, two new combinations and taxonomic notes on the all-spice genus *Pimenta* (Myrtaceae) from Hispaniola. *Phytotaxa*

In revision

Vasconcelos TNC, Chartier M, Martins A, Prenner G, Wingler A. *in revision*. Floral uniformity through evolutionary time in a species-rich tree lineage. *New Phytologist*

Mazine FF, Faria JEQ, Giaretta A, **Vasconcelos TNC**, Forest F, Lucas E. *in revision*. Phylogeny and biogeography of the hyper diverse genus *Eugenia* (Myrtaceae: Myrteae), with emphasis on sect. *Umbellatae*, the most unmanageable clade. *Taxon*

Submitted

Vasconcelos TNC, Lucas EJ, Conejero M, Giaretta A, Prenner G. *submitted*. Augmenting phylogenetic signal of homoplastic traits: the evolutionary history of perianth fusion in Myrtaceae flowers. To be submitted to: *Annals of Botany*.

Nic-Lughada E, Canteiro C, Walker B, Staggemeier VG, **Vasconcelos TNC**, Lucas EJ. *submitted*. How integrated systematics is harnessing the conservation potential of megadiverse, taxonomically complex groups. To be submitted to: *Conservation Biology*

List of grants (all grant applications written by the candidate)

Bentham-Moxon Trust	2017 Awarded £1000 to cover attendance to conference
Emily Homes Memorial Scholarship	2015, 2016 Awarded £900 (2016) and £1500 (2017) for fieldwork
Science without Borders (Brazil)	2013 Awarded c. £150.000 during four years (full PhD grant)
FAP-DF (Brazil)	2012 Awarded c. £2.500 (R\$10.000) for visiting overseas institution
Capes	2011 Awarded c. £9.000 during two years (R\$36.000) (full MSc grant)

Medals and Awards

- **2018** - John C. Marsden Medal; awarded annually by the Linnean Society for the best doctoral thesis in biology examined during a single academic year

Ongoing collaborations

Flora do Brasil 2020	2016 – (Ongoing project) Project coordinator: Rafaela Forzza I am collaborating with taxonomy of <i>Myrcia</i> (Myrtaceae).
PAFTOL (Myrtales)	2016 – (Ongoing project) Project coordinators: Olivier Maurin, Eve Lucas. I am collaborating with samples, phylogenetic analysis and interpretation.

Languages

English	Fluent
Portuguese	Fluent (Mother tongue)
Spanish	Conversational

Technical Capabilities

- R statistical software (own functions and competent user of packages utils, stats, vegan, ape, geiger, Phytools, BioGeoBEARS, Bammtools, TESS, diversitree)
- BEAST – Bayesian evolutionary analysis by sampling trees (competent user)
- Geneious – Bioinformatics tools for molecular biology and NGS analysis (competent user)
- MEGA – Molecular Evolutionary Genetics Analysis (competent user)
- Mesquite – Modular, extendible software for evolutionary biology (competent user)
- MRBAYES – Bayesian inference of phylogenetic trees (competent user)
- RAxML – A tool for Phylogenetic Analysis and Post-Analysis of Large Phylogenies (competent user)
- Adobe (competent user: Illustrator, Photoshop)
- Office Suite (competent user: Word, Excel, Access, Power point)
- BRAHMS – Botanical Research and Herbarium Management Systems
- GeoCAT – Geospatial Conservation Assessment Tool (competent user)
- Microscopy techniques (SEM and LM).

Additional Training (last three years)

- **Upcoming (Jun/2018):** Phylogenetic comparative methods in R (one week intensive short course at the the Universidad Nacional Autónoma de México; a

partnership between the Revell Lab, University of Massachusetts Boston, and the Universidad Nacional Autónoma de México)

- **2017:** Hyb-Seq and phylogenomic methods (24 hours workshop at the RBG Kew; a partnership between RBGKew PAFTOL project and the Chicago Botanic Garden)
- **2017:** Computational Macroevolution (16 hours workshop at the Oregon State University; a partnership between OSU and the Rabosky lab, University of Michigan)
- **2016:** Bioinformatics (40 hours course at the UCL Department of Computer Science)

Fieldwork experience

Brazil	2009 – 2018 (Annual general collections)
Sabah (Malaysia)	2015 (General collections)
Singapore	2015 (General collections)
New Caledonia	2015 (General collections)
Dominican Republic	2015 (General collections)
Costa Rica	2015 (General collections)
Jamaica	2015 (General collections)

Presentation in conferences (last three years)

Latin American Conference of Botany	Upcoming (Oct/2018) (Speaker) Venue: Quito (Ecuador)
National Conference of Botany (Brazil)	2017 (Speaker and symposium organiser) Venue: Rio de Janeiro (Brazil)
XIX International Botanical Congress	2017 (Poster) Venue: Shenzhen (China)
Evolution	2017 (Poster) Venue: Portland, OR (USA)
Young Systematists' Forum	2016 (Speaker) Venue: London (UK)
Workshop on Historical Biogeography of Neotropical Myrtaceae	2016 (Speaker) Venue: Rio de Janeiro (Brazil)
Systematics Association Biennial	2015 (Speaker) Venue: Oxford (UK)