

# Caio Guilherme Pereira

## Curriculum vitae

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### Personal Information

<b>Name</b>	Caio Guilherme Pereira (Guilherme Pereira, C.; Pereira, C.G.)
<b>Office address</b>	The Des Marais Lab.   R.M. Parsons Laboratory Department of Civil and Environmental Engineering Massachusetts Institute of Technology (MIT) 15 Vassar Street, Bldg. 48 (RM 208) Cambridge, MA 02139, USA Phone: +1 (617) 378-8035
<b>Websites</b>	<a href="http://www.cguilhermepereira.info">www.cguilhermepereira.info</a> <a href="https://orcid.org/0000-0003-3288-8553">orcid.org/0000-0003-3288-8553</a>
<b>Contact</b>	Professional e-mail: <a href="mailto:caiogp@mit.edu">caiogp@mit.edu</a> Personal e-mail: <a href="mailto:caiodemolay@gmail.com">caiodemolay@gmail.com</a>

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### Professional Positions

<b>2019 - Now</b>	<b>Visiting Fellow</b> , The Arnold Arboretum, Department of Organismic and Evolutionary Biology, Harvard University; part-time position.
<b>2018 - Now</b>	<b>Postdoctoral Associate</b> , Department of Civil and Environmental Engineering, Massachusetts Institute of Technology (MIT); full-time position.
<b>2015 - 2018</b>	<b>Research Assistant</b> , School of Biological Sciences & School of Agriculture and Environment, University of Western Australia (UWA); part-time position.

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### Education

<b>2013 - 2018</b>	PhD Degree in Plant Sciences University of Western Australia (UWA), Crawley, Australia Title: " <b>Physiological and molecular aspects of phosphorus efficiency in Proteaceae and beyond</b> "; Supervisors: E. Prof. Hans Lambers, A. Prof. Peta Clode & Prof. Rafael S. Oliveira
<b>2011 - 2013</b>	Master's Degree in Ecology University of Campinas (UNICAMP), Campinas, Brazil Title: " <b>Carnivory and its ecological consequences in <i>Philcoxia minensis</i> V.C. Souza &amp; Giulietti (Plantaginaceae)</b> "; Supervisor: Prof. Rafael S. Oliveira
<b>2007 - 2010</b>	Bachelor's Degree in Biology <i>cum laude</i> University of Campinas (UNICAMP), Campinas, Brazil

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## Scholarships and Awards

- 2013 - 2017** International Postgraduate Research Scholarship (IPRS)  
- Currently named Research Training Program (RTP) International Fee Offset Scholarship; awarded by the Australian government, this is a competitive scholarship awarded to international students of high academic achievement and exceptional research potential who undertake a higher degree by research in Australia.
- 2013 - 2017** Australian Postgraduate Award (APA)  
- Awarded by the University of Western Australia, this is also a competitive scholarship awarded to students of high academic achievement and exceptional research potential who undertake a higher degree by research in Australia.
- 2013 - 2017** Australian Research Council (ARC) Ad-hoc Top-up Scholarship  
- Awarded by supervisors (E. Prof. Hans Lambers and A. Prof. Peta Clode) who jointly hold an ARC-Discovery grant to students of exceptional research potential that choose to undertake PhD level research on an ARC-funded Discovery Project.
- 2012 - 2013** Masters Scholarship (FAPESP)  
- Awarded by the São Paulo State Government (Brazil) to students of exceptional research potential that choose to undertake Masters' level research in Brazil, upon approval of a research proposal by a panel of researchers.
- 2011 - 2012** Masters Scholarship (CNPq)  
- Awarded by the University of Campinas to the top students classified to the Ecology Postgraduate Program.
- 2009 - 2010** Honors Scholarship (FAPESP)  
- Awarded by the São Paulo State Government (Brazil) to students of exceptional research potential that choose to undertake Honors' level research in Brazil, upon approval of a research proposal by a panel of researchers.
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## Experience and Training

### Field Work, Serra do Cabral and Serra do Cipó (MG, Brazil); Jurien Bay (WA, Australia)

Includes: Seed collection, leaf and soil sampling, soil-profile characterization, population and community surveys.

### Glasshouse Experiments, University of Campinas (UNICAMP); University of Western Australia (UWA)

Includes: Seed germination, plant growth (soil, rhizobox and hydroponics), plant harvesting and sample collection.

### Plant Mineral Nutrition, University of Campinas (UNICAMP); University of Western Australia (UWA)

Includes: Sample preparation, tissue-nutrient analyses, root-exudate collection and nutrient-uptake experiments.

### Plant Physiology, University of Campinas (UNICAMP); University of Western Australia (UWA)

Includes: Leaf-trait analyses, water-potential, gas-exchange and chlorophyll-fluorescence measurements.

### Molecular Biology, University of Western Australia (UWA)

Includes: DNA and RNA extraction, qPCR, RNAseq, subcellular localisation and protein targeting.

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## Bibliographical Production

### Peer-reviewed articles

1. **Guilherme Pereira C**, Almenara DP, Winter CE, Fritsch PW, Lambers H, Oliveira RS. (2012) Underground leaves of *Philcoxia* trap and digest nematodes. *Proceedings of the National Academy of Sciences* **109** (4), 1154-1158.
2. Scatigna AV, Souza VC, **Guilherme Pereira C**, Sartori MA, Simões AO. (2015) *Philcoxia rhizomatosa* (Gratiolaceae, Plantaginaceae): a new carnivorous species from Minas Gerais, Brazil. *Phytotaxa* **226**, 275-280.
3. **Guilherme Pereira C**, Clode P, Oliveira RS, Lambers H. (2018) Eudicots from severely phosphorus impoverished environments preferentially allocate phosphorus to their mesophyll. *New Phytologist* **218** (3), 959-973.

4. Hayes PE, **Guilherme Pereira C**, Clode P, Lambers H. (2019) Calcium-enhanced phosphorus toxicity in calcifuge and soil-indifferent Proteaceae along the Jurien Bay chronosequence. *New Phytologist* **221** (2), 764-777.
5. **Guilherme Pereira C**, Hayes PE, Clode P, Lambers H. (2019) Phosphorus toxicity, not deficiency, explains the calcifuge habit of phosphorus-efficient Proteaceae. *Proceedings of the Royal Society B* (under revision).
6. **Guilherme Pereira C**, Hayes PE, O'Sullivan OS, Weerasinghe LK, Clode P, Atkin OK, Lambers H. (2019) Trait convergence in photosynthetic nutrient-use efficiency along a 2 million year dune chronosequence in a global biodiversity hotspot. *Journal of Ecology* **107** (4), 2006-2023.
7. Hayes PE, Clode P, **Guilherme Pereira C**, Lambers H. (2019) Calcium modulates leaf cell-specific phosphorus allocation in Proteaceae from south-western Australia. *Journal of Experimental Botany* **70** (15), 3995-4009.
8. Shi Q, Pang J, Yong JWH, Bai C, **Guilherme Pereira C**, Song Q, Wu D, Dong Q, Cheng X, Wang F, Zheng J, Liu Y, Lambers H. (2019) Phosphorus-fertilisation has differential effects on leaf growth and photosynthetic capacity of *Arachis hypogaea* L. *Plant and Soil*, doi.org/10.1007/s11104-019-04041-w.
9. **Guilherme Pereira C**, Des Marais DL. (2019) The genetic basis of plant functional traits and the evolution of plant-environment interactions. *International Journal of Plant Sciences*, doi.org/10.1086/706190.

### Book chapters

1. **Guilherme Pereira C**, Oliveira RS. (2010) *Philcoxia: a new genus of carnivorous plants* In: *Carnivorous Plants and their Habitats*. Ed. Poole: Redfern Natural History Productions.
2. Oliveira RS, Abrahão A, **Guilherme Pereira C**, Teodoro GS, Monteiro Junior MB, Alcântara S, Lambers H. (2016) *Ecophysiology of Campos Rupestres Plants*. In: *Ecology and Conservation of Mountaintop Grasslands in Brazil*. Springer International Publishing.

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### Courses and Workshops

- **Research conduct: ethics, plagiarism, authorship and data management**, 2016  
Graduate Research School Seminar Series, University of Western Australia (UWA).
- **Scanning electron microscopy and microanalysis course**, 2015  
Centre for Microscopy, Characterisation and Analysis, University of Western Australia (UWA).
- **Graphics with R (R Base Graphics and ggplot2)**, 2015  
School of Biological Sciences, University of Western Australia (UWA).
- **Data analysis and visualization with R**, 2015  
School of Biological Sciences, University of Western Australia (UWA).

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### Referees

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| <b>Supervisor</b> | <b>Assoc. Prof. David L. Des Marais</b> , e-mail: dldesmar@mit.edu<br>Department of Civil and Environmental Engineering, Massachusetts Institute of Technology (MIT) |
| <b>Supervisor</b> | <b>E. Prof. Hans Lambers</b> , e-mail: hans.lambers@uwa.edu.au<br>School of Biological Sciences, University of Western Australia (UWA)                               |
| <b>Supervisor</b> | <b>Assoc. Prof. Peta Clode</b> , e-mail: peta.clode@uwa.edu.au<br>Centre for Microscopy, Characterisation and Analysis, University of Western Australia (UWA)        |
| <b>Supervisor</b> | <b>Prof. Rafael Silva Oliveira</b> , e-mail: rafaelso@unicamp.br<br>Department of Ecology, University of Campinas (UNICAMP)  |
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