

Curriculum Vitae
Michael J. O'Brien, PhD

Estación Experimental de Zonas Áridas – CSIC
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BORN 11 November 1982 in Michigan, USA

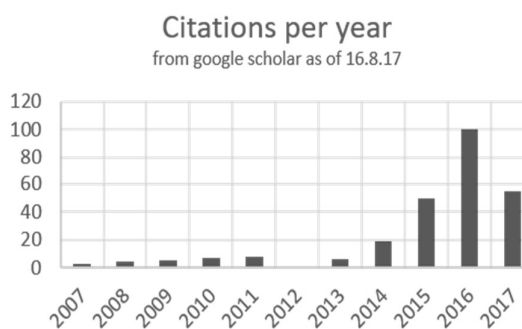
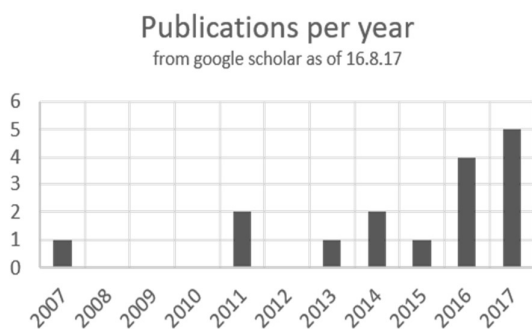
EDUCATION

University of Zurich	Ph.D Ecology	01/2010 – 03/2013
<i>Thesis: The Role of Functional-traits in the Response of Tropical Forests to Global Change</i>		
<i>Advisor: Prof. Andy Hector</i>		
State University of New York–ESF	M.S. Ecology	08/2007 – 04/2009
University of California, Berkeley	B.S. Forestry, Honors	08/2001 – 05/2005

EMPLOYMENT

EEZA – CSIC	Postdoctoral Fellow	01/2017 – present
<i>Swiss National Science Foundation Mobility Fellowship</i>		
EEZA – CSIC	Postdoctoral Fellow	01/2016 – 01/2017
<i>Stiefel-Zangger Research Fellowship</i>		
University of Zurich	Postdoctoral Researcher	07/2015 – 12/2015
<i>Department of Evolutionary Biology and Environmental Studies</i>		
University of Zurich	Postdoctoral Researcher	04/2013 – 06/2015
<i>Department of Geography</i>		

PUBLICATIONS



Reference	IF / cites
19. Wagg C, O'Brien MJ* , Vogel A, Scherer-Lorenzen M, Eisenhauer N, Schmid B, Weigelt A (in press) Biodiversity promotes ecosystem stability under drought by shifting seasonal productivity. <i>Ecology</i> . *co-developed the concept and co-wrote	4.8 / 0
18. O'Brien MJ , Reynolds G, Ong R Hector A (in press) Drought enhanced density dependence promotes tropical forest diversity and drought resistance. <i>Nature Ecology & Evolution</i> .	NA / 0
17. O'Brien MJ , Brezzi M, Schuldt A, Zhang JY, Ma K, Schmid B, Niklaus PA (in press) Tree diversity drives diversity of arthropod herbivores but successional stage mediates detritivores. <i>Ecology and Evolution</i> .	2.4 / 0
16. Adams H, Zeppel MJB, Anderegg WRL... O'Brien MJ* ... <i>et al.</i> (2017) A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. <i>Nature Ecology & Evolution</i> , 1, 1285 – 1291. *contributed data and to revisions	NA / 0
15. Granados A, Brodie J, Bernard H, O'Brien MJ (in press) Defaunation and habitat disturbance interact synergistically to alter seedling recruitment. <i>Ecological Applications</i> . DOI: 10.1002/eap.1592	4.3 / 0
14. O'Brien MJ , Pugnaire FI, Armas C, Rodríguez-Echeverría S, Schöb C (2017) The shift from facilitation to competition under severe water deficit is spatially explicit. <i>Ecology and Evolution</i> , 7, 2441 – 2448.	2.4 / 0
13. O'Brien MJ , Ong RC, Reynolds G. (in press) Intra-annual plasticity of growth mediates drought resilience over multiple years in tropical seedling communities. <i>Global Change Biology</i> . DOI: 10.1111/gcb.13658	8.5 / 0
12. O'Brien MJ , Engelbrecht BMJ, Joswig J, Pereyra G, Schuldt B, Jansen S, Kattge J, Landhäusser SM, Levick SR, Preisler Y, Väänänen P, Macinnis-Ng C (in press) A synthesis of tree functional traits related to drought-induced mortality in forests across climatic zones. <i>Journal of Applied Ecology</i> . DOI: 10.1111/1365-2664.12874.	5.3 / 1
11. Cheng Choon A, O'Brien MJ* , Ng KKS, Lee PC, Hector A, Schmid B, Shimizu KK (2017) Genetic diversity of two tropical tree species of the Dipterocarpaceae following logging and restoration in Borneo: high genetic diversity in plots with high species diversity. <i>Plant Ecology and Diversity</i> , 9, 459 – 469. *designed experiment, co-analyzed the data and co-wrote the manuscript	2.1 / 1
10. Tuck SL, O'Brien MJ* , Philipson CD <i>et al.</i> (2016). The value of biodiversity for the functioning of tropical forests: insurance effects during the first decade of the Sabah Biodiversity Experiment. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 283, 20161451. *managed the SBE for last 7 years and contributed to writing and analysis	4.9 / 7

9. Iturrate-Garcia M, **O'Brien MJ***, Khitun O, Abiven S, Niklaus PA, Schaeppman-Strub G (2016) Interactive effects of plant functional types and soil on species diversity and community composition in tundra. *Ecology and Evolution*, 6, 8126 – 8137.
*contributed to analysis and writing 2.4 / 1
8. Argüello A, **O'Brien MJ***, van der Heijden MGA, Wiemken A, Schmid B, Niklaus PA (2016) Options of partners improve carbon for phosphorus trade in the arbuscular mycorrhizal mutualism. *Ecology Letters*, 19, 648 – 656.
*co-first author/corresponding author; analyzed data and wrote the manuscript 9.5 / 5
7. **O'Brien MJ**, Burslem DFRP, Caduff A, Tay J, Hector A (2015) Contrasting non-structural carbohydrate dynamics of tropical tree seedlings under water deficit and variability. *New Phytologist*, 205, 1083 – 1094. 7.3 / 9
6. Philipson CD, Dent DH, **O'Brien MJ***, Chamagne J, Dzulkifli D, Nilus R, Philips S, Reynolds G, Saner P, Hector A (2014) A trait-based trade-off between growth and mortality: evidence from 15 tropical tree species using size-specific relative growth rates. *Ecology and Evolution*, 4, 3675 – 3688.
*contributed to writing, analysis and data collection 2.4 / 15
5. **O'Brien MJ**, Leuzinger S, Philipson CD, Tay J, Hector A (2014) Drought survival of tropical tree seedlings enhanced by non-structural carbohydrate levels. *Nature Climate Change*, 4, 710 – 714. 19.3 / 99
4. **O'Brien MJ**, Philipson CD, Tay J, Hector A (2013) The influence of variable rainfall frequency on germination and early growth of shade-tolerant dipterocarp seedlings in Borneo. *PLoS ONE*, 8, e70287. 3.5 / 16
3. Hector A, Philipson C, Saner P... **O'Brien MJ***...*et al.* (2011) The Sabah Biodiversity Experiment: a long-term test of the role of tree diversity in restoring tropical forest structure and functioning. *Philosophical Transactions of the Royal Society B*, 366, 3303 – 3315.
*contributed to writing and data collection 5.9 / 53
2. **O'Brien MJ**, Gomola CE, Horton TR (2010) The effect of forest soil and community composition on ectomycorrhizal colonization and seedling growth. *Plant and Soil*, 341, 321 – 331. 3.1 / 8
1. **O'Brien MJ**, O'Hara KL, Erbilgin N, Wood DL (2007) Overstory and shrub effects on natural regeneration processes in native *Pinus radiata* stands. *Forest Ecology and Management*, 240, 178 – 185. 3.8 / 31

MANUSCRIPTS IN REVIEW

- Hartmann H, Anderegg B, Moura C...**O'Brien MJ***...et al. (In revision) Research frontiers for improving our understanding of drought-induced tree and forest mortality. *New Phytologist*.
*wrote the section on physiological response of carbon
- Gomola C, Wagg C, McKay JK, Wallenstein MD, **O'Brien MJ** (In review) Within-species differences in plant-stimulated soil enzyme activity: A novel trait that affects invasive strategy and fitness. *Journal of Ecology*.
- **O'Brien MJ**, Burslem DFRP, Kellenberger R, Philipson CD, Ong R, Reynolds G, Hector A (In review) Temporal dynamics of seedling recruitment in a logged forest after a large-scale mast fruiting. *Journal of Ecology*.

PROFESSIONAL EXPERIENCE

- Co-PI of the CTFS plot in the Danum Valley Conservation Area with Dr. David Burslem (June 2017 – present)
- Invited participant to the workshop entitled “Crossing scales and disciplines to identify global trends in tree mortality as an indicator of forest health” funded by the Volkswagen Stiftung (June 2017)
- Assistant Director of Scientific Coordination for the Southeast Asian Rainforest Research Partnership in Sabah, Borneo (Sept. 2014 – Present)
- Director of a sustainable farm and community outreach center in the Izabal region of Guatemala (Aug. 2012 – present)
- Invited participant to the Workshop on International Tree Mortality at the Max Planck Institute for Biogeochemistry (Nov. 2014)
- Invited participant in a distributed graduate seminar at the National Center for Ecological Analysis and Synthesis (Feb. 2008)

FUNDED GRANTS

- Research-based forest restoration of an oil palm plantation in Aceh, Indonesia from Sime Darby Plantations in alignment with the Roundtable on Sustainable Palm Oil requirements (Jan. 2018 – Dec. 2022) – **4 million USD**
- Return Phase Post-Doctoral Mobility Fellowship from the Swiss National Science Foundation (Jan. 2018 – June 2018) – **59,000 CHF**
- Advanced Post-Doctoral Mobility Fellowship with Swiss return phase from the Swiss National Science Foundation (Jan. 2017 – Dec. 2017) – **49,000 CHF**
- Stiefel-Zangger Research Fellowship from the Swiss National Science Foundation (Jan. 2016 – Jan. 2017) – **46,000 CHF**

- Extension Grant for Graduate Research from the State University of New York, ESF (May 2008) – **5,000 USD**
- Undergraduate Grant for Independent Research from the University of California, Berkeley (Oct. 2004) – **3,000 USD**

AWARDS & HONORS

- Departmental Citation in the College of Natural Resources, UCB (May 2005)
- Phillip Knorr Scholarship (2004, 2005)
- Wollenberg Grant for excellence in Forest Science (2003, 2004, 2005)
- Mulford Grant for excellence in Forestry (2003)

TEACHING EXPERIENCE

- Scientific writing – University of Zurich (Fall 2015)
- Linear mixed-effects modelling – University of Zurich (Spring 2013)
- Basic applied statistics – University of Zurich (Jan. 2010 – May 2015)
- Field techniques for tropical research – University of Zurich (Jan. 2010 – May 2010)
- Plant pathology TA – State University of New York (Spring 2008 & 2009)
- General ecology TA – State University of New York (Fall 2007 & 2008)
- Forest ecology measurements and analysis – University of California, Berkeley (July 2007 & 2008)
- Forest ecology and management field course TA – University of California, Berkeley (Jun. 2006 – Aug. 2006)
- Current issues in education TA – University of California, Berkeley (Spring 2005)

PROFESSIONAL PRESENTATIONS

- O'Brien MJ (2017) Mechanisms mediating drought resistance in aseasonal tropical forests. ESA Annual Meeting.
- O'Brien MJ (2014) Seedling community response to yearly drought in aseasonal tropical forests. Southeast Asian Rainforest Research Project (SEARRP) London Meeting.
- O'Brien MJ (2013) Resistance and recovery of tree seedlings to drought in Borneo: examining growth-dieback trade-offs. ESA Annual Meeting.

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- O'Brien MJ, Tay J, Hector A (2011) Seed mass, germination and seedling growth under variable water cycles. EEf Congress.
- O'Brien MJ, Horton TR (2009) Using neighborhood models to examine the role of ecto and arbuscular mycorrhizal forest communities on Eastern hemlock seedling establishment. ESA Annual Meeting.
- O'Brien MJ, Werner NA (2008) Implications of *Sirex noctilio* introduction into US forests. NCEAS DGS Seminar
- O'Brien MJ (2005). The future of forests and society: A young researcher's perspective. NorCal SAF Convention.

STUDENT SUPERVISING

- Cheng Choon Ang, Ph.D, University of Zurich (Aug. 2013 – present)
- Sean Tuck, Ph.D, Oxford University (Aug. 2013 – Dec. 2016)
- Annabelle Valtat, M.S. thesis supervisor, University of Zurich (Sep. 2013 – Dec. 2014)
Title: Tracking carbon use and allocation of non-structural carbohydrates in plant response to drought
- Roman Kellenberger, B.S. thesis advisor, University of Zurich (Aug. 2010 – May 2011)
Title: Germination and establishment of dipterocarp seedlings: seedling recruitment of three dipterocarp species in logged lowland rainforest, Sabah, Borneo (Malaysia)

SOCIETY AFFILIATIONS

- Ecological Society of America (2007 – present)
- Associate Faculty Member F1000 (2015 – present)

JOURNAL AFFILIATIONS

- Journal of Plant Ecology Associate Editor (2015 – present)
- F1000 Prime

FUNDING REFEREE

- US National Science Foundation (2014 – present)