

MANOELA SCHIAVON MACHADO, PHD

Woodwell Climate Research Center

Woods Hole Road, Falmouth, MA, United States of America

Phone: (+44) 74 9039 5489; (+55) 11 9 3411 7258

• email: manoelamachadoeco@gmail.com / mmachado@woodwellclimate.org

Professional Summary

- A PH.D. degree on the impacts from selective logging and climatic variation on the forest thermal environment and fire risk in the Amazon forest completed with the University of Sheffield (UK) in 2019
- Broad experience in statistical and spatial modelling and data analyses in R and Google Earth Engine, further developed over a post doctoral project with the Ecosystems Lab at the University of Oxford (UK) in 2020
- Extensive fieldwork experience in the Amazon and Atlantic forests, including tree plot sampling and floristic inventories, with additional work experience in herbarium and native species seedlings nursery
- Involved in ecology research since 2008, working with research groups in Brazil, the US and the UK

Research interests

Biodiversity conservation • Fire ecology • Forest carbon dynamics • Land-use change • Plant ecology • Quantitative and applied ecology • Remote sensing • Tropical ecology • Tropical forest restoration • Tropical wildfires

Education

- 2015 – 2019 PH.D., Animal and Plant Sciences, University of Sheffield, United Kingdom
Thesis: “Fire risk in the Amazon forest amidst selective logging and climatic variation”
- 2008 – 2013 B.Sc. and Licentiate, Biological Sciences, University of São Paulo (USP), Brazil
Dissertation: “Enrichment of a young restored semi-deciduous forest with secondary and climax trees species by direct seeding in São Paulo state, Brazil”
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Publications & Presentations

Publications

- 2021 **Machado M. S.**, Berenguer E., Oliveras I., Brando P., Alencar A., Barlow J. & Malhi, Y. “Emergency policies fail to provide a solution to Amazonia’s fire crisis”. *Nature Communications*, *In review*.
- 2020 **Machado M. S.**, Hethcoat M. G., Brando P. M., Macedo N. M., Peres C. A. & Edwards D. P. “Selective logging and forest flammability in the Amazon”. *Frontiers in Forests and*

Global Change — Transformation of Tropical Forests Through Fire, In preparation.

- 2019 **Mollinari M. M.**, Peres C. A. & Edwards D. P. “Rapid recovery of thermal environment after selective logging in the Amazon”. *Agricultural and Forest Meteorology*, 2019, 278, 107637 (doi:10.1016/j.agrformet.2019.107637).
- 2013 **Machado, M. S.**, Brancalion, P. H. S., Potascheff, C. M., Santos, A. J. B., Nave, A. G., Rodrigues, R. R. & Gandolfi, S. (2013). “Fenologia da frutificação de espécies vegetais nativas e a restauração florestal no arquipélago de Fernando de Noronha, PE, Brasil”.

Conferences & Symposia

- 2019 **Mollinari M. M.**, Peres C. A. & Edwards D. P. “Fire risk in selectively logged Amazonian forests”, Oral presentation, Annual Association of Tropical Biology and Conservation Meeting.
- 2019 **Mollinari M. M.**, Peres C. A. & Edwards D. P. “Rapid recovery of thermal environment after selective logging in the Amazon”. Poster presentation, Science Graduate School Showcase Animal and Plant Sciences Department, University of Sheffield.
- 2013 **Machado, M. S.** & Gandolfi, S. “Enriquecimento de uma floresta em restauração através de Semeadura Direta de espécies arbóreas nativas no município de Araras, São Paulo, Brazil”, Poster presentation, V Simpósio de Restauração Ecológica, Instituto de Botânica, São Paulo, Brazil.
- 2013 **Machado, M. S.** & Gandolfi, S.. “Análise de dados fenológicos das espécies arbustivo-arbóreas nativas do arquipélago de Fernando de Noronha, Pernambuco, Brasil”, Poster presentation, 21o SIICUSP – Simpósio de Iniciação Científica da Universidade de São Paulo.
- 2013 **Machado, M. S.** & Gandolfi, S. “Enrichment of a young restored semi-deciduous forest with secondary and climax trees species by direct seeding in São Paulo state, Brazil”, Oral presentation, SER 2013 – 5th World Conference on Ecological Restoration, Madison, WI, USA.
- 2013 **Machado, M. S.**, Ribeiro, N. M. & Kageyama, P. Y. “Seed rain captured by traps in a semi-deciduous seasonal forest fragment in the state of São Paulo, Brazil”, Poster presentation, SER 2013 – 5th World Conference on Ecological Restoration, Madison, WI, USA.
- 2011 **Machado, M. S.**, Brancalion, P. H. S., Potascheff, C. M., Santos, A. J. B., Nave, A. G., Rodrigues, R. R. & Gandolfi, S. “Challenges for seedling production for forest restoration in an ocean island: the case study of protected areas of Fernando de Noronha, Pernambuco, Brazil”, Oral presentation, SER 2011 – 4th World Conference on Ecological Restoration, Merida, Mexico.

Research Fellowships & Awards

- 2020 The John Fell Fund and Global Challenges Research Fund — GCRF (£ 22,225)
- 2019 LSF — Learned Society Fund, Travel Grant — The University of Sheffield (£ 800)
- 2017 The Rufford Foundation (£ 5,000)
- 2015 – 2019 CNPq — National Council for Scientific and Technological Development, Brazil — Full PhD Scholarship from Science Without Borders Program — The University of Sheffield (£ 122,000)
- 2015 LSF — Learned Society Fund, Travel Grant — The University of Sheffield (£ 400)

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- 2013 FAPESP — São Paulo Research Foundation, Scientific Initiation Project — University of São Paulo (£ 1,500)
- 2012 CNPq — National Council for Scientific and Technological Development, Scientific Initiation Project — University of São Paulo (£ 830)
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Research and Professional Experience

- 2020 **Post-doctoral research consultant** with IPAM — Instituto de Pesquisa Ambiental da Amazônia, Brazil
“The 2019 and 2020 Amazon fires”
- 2020 **Post-doctoral research assistant** with the Ecosystems Lab at the School of Geography and the Environment at the University of Oxford, United Kingdom
“Emergency policies fail to provide a solution to Amazonia’s fire crisis”
- 2015 – 2019 **Ph.D. candidate** — Edwards lab (Tropical Ecology and Conservation), Department of Animal and Plant Sciences, University of Sheffield, United Kingdom
“Fire risk in the Amazon forest amidst selective logging and climatic variation”
- 2014 **Research assistant** — Prof. Jeffrey S. Dukes lab (Director of Purdue Climate Change Research Center), Dept of Forestry and Natural Resources, Purdue University, USA
Production of a Plant Identification Field Guide of prairie species from Purdue Wildlife Area. Assisted multiple M.Sc. and Ph.D. students with their fieldwork.
- 2011 – 2012 **Research assistant** — Sea Turtle Conservation Project — TAMAR, Fernando de Noronha, Pernambuco, Brazil
Plant phenology assessment, seed and seedling production of native species for vegetation restoration. Weekly lectures to visitors about the Archipelago history focusing on the natural landscape, and potential paths for native vegetation restoration.
- 2010 **Intern** — BioFlora Comercial Nursery - Piracicaba, São Paulo, Brazil
Seed and seedling production of native species of Atlantic Forest and Cerrado biomes
- 2008 **Research assistant** — Tapajós National Forest, Santarém, Pará, Brazil
Assistance to Prof. Plínio B. de Camargo (CENA — Centro de Energia Nuclear na Agricultura University of São Paulo) with fieldwork conducting tree measurements in long-term experimental plots as part of LBA-ECO project

Teaching experience

- 2015 – 2019 **Graduate teaching assistant** — Dept of Animal and Plant Sciences, University of Sheffield
Assisted in graduate and undergraduate courses on R and statistical analyses
- 2015 **Teacher** — Bilingual Education Institute (BEI), Salto, São Paulo state, Brazil
Prepared and taught theoretical and practical Science classes focused on Biology and Chemistry to middle grades
- 2013 **Teaching assistant** — Waldorf Novalis School, Piracicaba, São Paulo state, Brazil
Assisted Chemistry and Biology lectures for middle grades with preparing classes and experiments
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Services & Skills

Academic Engagement & Workshops

- 2013 Symposium: II Conservation Biology — Participant, Sorocaba, SP, Brazil
- 2013 Course: Atlantic Forest native species seedling production II — Participant, Nísia Floresta, RN, Brazil
- 2012 Course: Atlantic Forest native species seedling production I — Participant, Nísia Floresta, RN, Brazil
- 2012 Workshop: MOBIO — VI Momento da Biologia, ESALQ — Participant, Piracicaba, SP, Brazil
- 2012 Workshop: MOBIO — VI Momento da Biologia, ESALQ — Participant, Piracicaba, SP, Brazil
- 2011 Workshop: I Módulo do Curso de Quintais Agroecológicos — Participant, Fernando de Noronha, PE, Brazil
- 2010 Workshop: VI Semana da Biologia — UFSCar — Participant, São Carlos, SP, Brazil
- 2010 Workshop: International Workshop on long-term studies on biodiversity, FAPESP — Participant, São Paulo, SP, Brazil
- 2010 Seminar: The role of Amazonia on Global Climate Change — Prof. Philip Fearnside, ESALQ — Participant, Piracicaba, SP, Brazil
- 2010 Seminar: Forest Restoration and Carbon Sequestration, ESALQ — Participant, SP, Brazil
- 2009 Conference: IX Ecology Conference — Participant, São Lourenço, MG, Brazil
- 2009 Symposium: I Symposia “Water: Challenges to conservation”, ESALQ — Participant, SP, Brazil

Computer Literacy

- Data management and Statistics in R
- Mapping and spatial analysis in R, ARCGIS and Google Earth Engine (JAVA SCRIPT)
- Text editing in R MARKDOWN and LATEX
- Basic fluency of SHELL

Language Skills

- Portuguese — Native language
- English — Fluent
- Spanish — Fluent

Country experience

Argentina, Belgium, Brazil, Bolivia, Canada, England, France, Germany, Madagascar, Mexico, Netherlands, Northern Ireland, Scotland, Uganda, United States, Peru, Portugal

Academic Referees

Professor Yadvinder Malhi, School of Geography and the Environment, University of Oxford (yadvinder.malhi@ouce.ox.ac.uk)

Professor Carlos A. Peres, School of Environmental Sciences, University of East Anglia
(C.Peres@uea.ac.uk)

Professor Sergius Gandolfi, LERF — Laboratory of Ecology and Forest Restoration,
Dept of Biological Sciences, ESALQ 'Luiz de Queiroz' College of Agriculture, Universidade
de São Paulo (USP) (sgandolf@usp.br)

Professor Paulo Brando, Ecology & Conservation of Tropical Ecosystems @ESS
(ECOTRESS), Dept of Earth System Science, UCI — University of California Irvine)
(pbrando@uci.edu)