Marco D. Visser

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Research experience

2016 - Present	Postdoctoral researcher (Nov 2016 - Present) at Department of Ecology and Evolutionary Biology, Princeton University (USA).
2011 - 2016	PhD candidate (Apr 2011 - Sep 2016) at Institute for Water and Wetland Research, Plant Ecology Group, Radboud University Nijmegen (The Netherlands). Predoctoral Fellow (Apr 2010 - Apr 2011) at the Smithsonian Tropical Research Institute, Gamboa (Panama).
2009 - 2010	Junior researcher (Sept 2009 - Feb 2010) at the Department of Experimental Plant Ecology, Radboud University Nijmegen (The Netherlands).
2008-2009	Short-term Fellow (Oct 2008 - Feb 2009) at the Smithsonian Tropical Research Institute, Barro Colorado Island (Panama). MSc. Thesis research (2008-2009) at the Smithsonian Tropical Research Institute, Barro Colorado Island, Panama. MSc. Thesis research (2008-2009) at the unit Mathematical and Statistical Methods of Wageningen University.
2007	B.A. Thesis research (2007) at the Forest Research Institute Malaysia, Pasoh Forest Reserve, Malaysia.
2005	Internship (2005) at the Forest Research Institute Malaysia, Kepong, Malaysia.
2004	Internship (2004) at the Mammal Research Institute, Polish Academy of Sciences, Bialowieza, Poland.
2003	Volunteer (2003) at the Mammal Research Institute, Polish Academy of Sciences, Bialowieza, Poland.

Education

November, 2016	Radboud University Nijmegen, PhD (cum laude, highest distinction at RU).
September, 2009	Wageningen University and research centre, M.Sc. (cum laude, highest distinction at WU). Forestry and Nature Conservation, with a minor in Mathematics and Statistical Methods.
September, 2007	Larenstein University of Applied Sciences, B.A. Forestry and Nature Conservation, with specialization in Tropical Forestry.

Publications (inc. submitted/ in preparation)

2011	**1. M. D. Visser**, E. Jongejans, M. van Breugel, P. A. Zuidema, Y. Chen, A. R. Kassim, H. de Kroon. 2011. Strict mast fruiting for a tropical dipterocarp tree: A demographic cost-benefit analysis of delayed reproduction and seed predation. Journal of Ecology. 99, 1033-1044. **2. M. D. Visser**, S. Joseph Wright, Helene C. Muller-Landau, Gemma Rutten and Patrick A. Jansen. Tri-trophic interactions affect density dependence of seed fate in a tropical forest palm. Ecology Letters. 14, 1093-1100.
2012	**3.** B. van Putten, **M. D. Visser**, P. A. Jansen and H. C. Muller-Landau. Distorted- distance models for directional dispersal: a general framework and its application to a wind-dispersed tropical forest trees. Methods in Ecology and Evolution. 2012. **4.** B. T. Hirsch, **M. D. Visser**, R. Kays and P. A. Jansen. Quantifying seed dispersal kernels from truncated seed-tracking data. Methods in Ecology and Evolution.
2013	**5. M. D. Visser**. aprof: Amdahl's profiler, directed optimization made easy. R package version 0.1 - 0.4.1. http://cran.r-project.org/web/packages/aprof/index.html. 2014 **6.** P. A. Jansen, **M. D. Visser**, S. J. Wright, G. Rutten, H. C. Muller-Landau. Negative density-dependence of seed dispersal and seedling recruitment in a Neotropical palm. Ecology Letters 17: 1111–1120.
2015	**7. M. D. Visser**, S. M. McMahon, C. Merow, P. M. Dixon, S. Record and E. Jongejans. Speeding Up Ecological and Evolutionary Computations in R; Essentials of High Performance Computing for Biologists. PLoS Comput Biol 11(3): e1004140. doi:10.1371/journal.pcbi.1004140.
2016	**8. M. D. Visser**, M. Bruijning, S. J. Wright, H. C. Muller-Landau, E. Jongejans, L. S. Comita and H. de Kroon. Functional traits as predictors of vital rates across the life-cycle of tropical trees. Functional Ecology.
2017	**9.** M. Bruijning, **M. D. Visser**, H. C. Muller-Landau, S. J. Wright, L. S. Comita, S. P. Hubbell, H. de Kroon, E. Jongejans. Surviving in a cosexual world: a cost-benefit analysis of dioecy in tropical trees. 189:297-314. American Naturalist. **10.** M. Bruijning, **Marco D. Visser**, C. A. Hallmann, E. Jongejans. trackdem: Particle Tracking and Demography. R package version 0.1 - 0.4.2 https://cran.r-project.org/package=trackdem. **11. M. D. Visser**, S. Joseph Wright, Helene C. Muller-Landau, Eelke Jongejans, Liza S. Comita, Hans de Kroon and Stefan Schnitzer. Tree species vary widely in their tolerance for liana infestation: A case study of differential host response to generalist parasites. Journal of Ecology. **12.** E.J. Francis, H.C. Muller-Landau, S.J. Wright, **M. D. Visser**, Y. Iida, A.R. Kassim, C. Fletcher, and S.P. Hubbell. Quantifying the role of wood density in explaining interspecific variation in growth of tropical trees. Global Ecology and Biogeography
2018	**13.** Nadja Rüger, Liza S. Comita, Richard Condit, Drew Purves, Benjamin Rosenbaum, **Marco D. Visser**, S. Joseph Wright, Christian Wirth. Beyond the fast-slow continuum: A novel trade-off structuring demographic dimensions of tropical trees. Ecology Letters 21 (7). 1075-1084. **14.** M. Bruijning, **M. D. Visser**, C. A. Hallmann, E. Jongejans. Automated particle tracking to obtain population counts and size distributions from videos in R. Methods in Ecology and Evolution 9 (4), 965-973 **15. M. D. Visser**, Helene C. Muller-Landau, Eelke Jongejans, Liza S. Comita, Hans de Kroon and S. Joseph Wright. A host-parasite model explains variation in liana infestation among co-occurring tree species. Journal of Ecology 106 (6), 2435-2445
2019	**16** H. C. Muller-Landau and **M. D. Visser**. How do lianas and vines influence competitive differences and niche differences among tree species? Concepts and a case study in a tropical forest. Journal of Ecology. **17** H. De Deurwaerder, **M. D. Visser**, M. Detto, P. Boeckx, F. Meunier, H. Verbeeck. Diurnal variation in xylem water isotopic signature biases estimation depth of root-water uptake. bioRxiv 712554; doi: https://doi.org/10.1101/712554. **18** M. J. E. Broekmana, H. de Kroona, **M. D. Visser**, E. Jongejansa, S. J. Wright, H. C. Muller-Landau. Signs of Stable Coexistence. Ecology Letters, doi:10.1111/ele.13349. **19** M. Detto, **M. D. Visser**, S. J. Wright, S. Pacala. Bias in the detection of negative density dependence in plant communities. Ecology Letters, doi:10.1111/ele.13372.

About my research

2016 **Chisholm R**. F1000Prime Recommendation of [Visser MD et al., PLoS Comput Biol 2015, 11(3):e1004140]. In F1000Prime, 21 Jul 2016; DOI: 10.3410/f.725405210.793520972. F1000Prime.com/725405210#eval793520972

2015 **Salguero-Gómez, R**. Demography to infinity and beyond! Journal of Ecology blog. https://jecologyblog.wordpress.com/2015/04/09/demography-to-infinity-and-beyond/

Wang I. F1000Prime Recommendation of [Visser MD et al., PLoS Comput Biol 2015, 11(3):e1004140]. In F1000Prime, 28 Jul 2015; DOI: 10.3410/f.725405210.793508140. F1000Prime.com/725405210#eval793508140

2011 **Sugden AM** (2011) Science Editors' choice. Ecology. The Enemy of My Enemy is my? Science 334:569.

Sugden AM (2011) Science Editors' choice. Ecology. Why trees skip a year. Science 333:386

Rees M (2011) Editor's Choice: Volume 99, Issue 4 (July). Journal of Ecology.

King, B (2011), The enemy of my enemy is my friend. Smithsonian Tropical Research Institute News 1:2

Ecological Society of America - young plant population ecologist of the month (October 2011). Featured work: M. D. Visser et al, 2011, Ecology Letters.

Kouwen M (2011) Mastjaar overtreft jaarlijkse zaadzetting. Bionieuws 13:6.

Grants and awards

2016
- **Grant**: Academy Ecology Fund. Royal Dutch Academy of Sciences (KNAW), Quantifying the effects of extreme years on tropical tree dynamics: capitalizing a rare El Niño occurrence (6k).

2011
- **Grant**: NWO-ALW, What maintains the diversity of tropical tree species? Unravelling the importance of niche and neutrality with a life cycle approach. Co-wrote with Hans de Kroon, Helene Muller-Landau, Eelke Jongejans, S. J. Wright, P.A. Zuidema, P.A. Jansen and S. Tuljapurkar (230k).

2009
- **Award**: WUF-KLV thesis prize for the best thesis in the life sciences from Wageningen University awarded for my MSc thesis: Density-dependent dispersal and seed predation in a Neotropical palm.

2008
- **Grant**: Smithsonian Tropical Research Institute, short term fellowship awarded for the study: Quantifying density-dependent responses of seed predators in the Neotropical palm Attalea butyracea. ($ 5k).

International presentations

2019 **Session organizer** at the Netherlands Annual Ecology Meeting, February 2019, Lunteren, The Netherlands. Governing dynamics of community assembly: from big data to best practices

Speaker at the Netherlands Annual Ecology Meeting, February 2019, Lunteren, The Netherlands. Bigger isn't always better: how regression dilution distorted the perception of negative density dependence.

2018 **Speaker** at the at the Association for Tropical Biology and Conservation Annual Meeting 2016. June 2018, Kuching, Malaysia. Beyond density-dependence alone: How density-dependent and independent mechanisms together determine species abundance in a common tree species.

Speaker at the European Conference of Tropical Ecology. March 2018, Paris, France. Density-dependent regulation and density-independent limitation together determine the abundance of a common tree species.

2017 **Invited Speaker** at the European Conference of Tropical Ecology. March 2017, Brussels, Belgium. Parasite-host interactions in tropical trees: lianas differentially impact population growth rates among host trees species.

2016 **Speaker** at the at the Association for Tropical Biology and Conservation Annual Meeting 2016. June 2016, Montpellier, France. Population-level effects of hunting on dispersal, seed predation and population abundance in the Neotropical palm Attalea butyracea.

2015 **Workshop** at the British Ecological Society Annual Meeting. December 2015, Edinburgh. Speeding Up Ecological and Evolutionary Computations in R; Essentials of High Performance Computing for Biologists. Organizer.

Workshop at the Evolutionary Demography Society Annual Meeting. October 2015, Lunteren. Speeding Up Ecological and Evolutionary Computations in R; Essentials of High Performance Computing for Biologists. Organizer.

Speaker at the at the Ecological Society of America Annual Meeting 2015. August 2015, Baltimore. Differential effects of lianas on population growth rates of tropical forest trees.

Workshop at the at the Ecological Society of America Annual Meeting 2015. August 2015, Baltimore. Demography in a Continuous World: New Advances in Integral Projection Models (IPMs). Co-organizer.

Workshop at the at the British Ecological Society Symposium "Demography Beyond The Population". March 2015, Sheffield. Speeding Up Ecological and Evolutionary Computations in R; Essentials of High Performance Computing for Biologists.

Speaker at the British Ecological Society Symposium "Demography Beyond The Population". March 2015, Sheffield. Differential effects of lianas on population growth rates of tropical forest trees.

2014 **Short Workshop** at the Yale School of Forestry & Environmental Studies. December 2014, New Haven. Speeding Up Ecological and Evolutionary Computations in R; Essentials of High Performance Computing for Biologists.

2012 **Invited speaker** at the conference "Everything disperses to Miami", December 14 - December 16, 2012, the University of Miami. The fitness consequences of dispersal for a tropical palm; the role of dispersers, natural enemies and negative density dependence.

Invited speaker at the Max Planck Intitute for Demographic Research, workshop on Integral Projection Models, Rostock Germany. June 2012. A Blueprint for speeding-up calculations in R.

Speaker at the Netherlands Annual Ecology Meeting. February 2012. Quantifying dispersal kernels through inverse modeling.

2010 **Invited speaker** at the 5th International Symposium-Workshop on Frugivores and Seed Dispersal. Montpellier, France. June 2010. Measuring dispersal kernels through inverse modeling: density dependence of seed dispersal in a Neotropical palm.

Speaker at Plant Population Biology: Crossing Borders. Gfo-conference, Nijmegen, Netherlands. May 2010. Strict mast fruiting for a tropical dipterocarp tree: a demographic cost-benefit analysis

2009 **Oral presentation** at the Smithsonian Tropical Research Institute. Panama. December 2009. Density-dependent dispersal and seed predation in a Neotropical palm.

2008 **Oral presentation** at the workshop on stochastic elasticity and matrix modeling. Nijmegen, the Netherlands, June 2008. Strict masting in the tropical tree species Shorea leprosula: demographic consequences and evolutionary benefit of predator satiation.

2007 **Oral presentation** at the International workshop in Matrix models of plant populations. Sogndal, Norway, June 2007. Demographic consequences of strict masting for two tropical tree species Shorea leprosula and Shorea parvifolia.

Reviewer

Scientific Journals: Biotropica, Canadian Journal of Forest Research, Ecology, Ecology and Evolution, Ecology Letters, Ecological Modelling, Journal of Biogeography, Journal of Ecology, Methods in Ecology and Evolution, PLOS computational biology, The R Journal. *National Funds for Scientific Research*: Research Foundation Flanders (FWO).