

**Curriculum Vitae: Bénédicte Bachelot**  
**Assistant professor, Department of Plant Biology, Ecology, and Evolution,**  
**Oklahoma State University**

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**ACADEMIC APPOINTMENT**

2020 – present	Oklahoma State University, Assistant Professor
2017- 2020	Rice University, EEB fellow
2015-2017	Duke University, Postdoctoral Associate

**EDUCATIONAL BACKGROUND**

2016-2017	“Preparing Future Faculty” fellow
2015-2017	Duke University, Postdoctoral fellow
2011-2015	Columbia University, PhD program: E3B
2009-2011	Michigan State University, dual Master’s program: Forestry and Ecology (EEBB)
2006-2011	AgroParisTech (formerly Institute National Agronomique Paris-Grignon) France’s leading post graduate engineering school for agricultural and life sciences. Master in Environmental engineering
2004-2006	Lycée Sainte Genevieve, Versailles. Preparatory classes for the national entrance exams for the selective “Grandes Ecoles” specialized in biology, mathematics, physics and chemistry

**PUBLICATIONS**

1. **Bachelot B.**, et al. Forest age and land use history influences species interactions (in prep).
2. **Bachelot B.**, et al. Effects of climate variability on species growth rates across North America (in prep).
3. Alonso-Rodríguez A.M., Wood, T.E., Torres-Díaz, J., Cavaleri, M.A., Reed, S.C. & **Bachelot, B.** (2022). Understorey plant communities show resistance to drought, hurricanes, and experimental warming in a wet tropical forest. *Frontiers in Forest and Global Change*, 5, 733967 (\*Student paper).
4. Liu, J., et al. (2021). Predicting the responses of subalpine forest landscape dynamics to climate change on the southeastern Tibetan Plateau (in press). *Global Change Biology*.
5. Villellas J., et al. (2021). Observational data predicts genetic differentiation in reproductive but not vegetative traits in a widespread short-lived plant (in press). *Ecology Letters*.
6. **Bachelot B.**, Alonso-Rodríguez A.M., Aldrich-Wolfe L., Cavaleri M.A., Reed S.C., and Wood T.E. (2020). Altered climate leads to positive density-dependent feedbacks in a tropical rainforest. *Global Change Biology*. (\*Highlighted in Project Biodiversify)
7. Howe-kerr L., **Bachelot B.**, Wright R.M., Kendel C.D.; Bay L.K., and Correa A.M.S. (2020). Symbiont community diversity is more variable in host genets that respond poorly to stress. *Global Change Biology*.
8. **Bachelot B.**, and C. Lee (2020). Disturbances can promote and hinder coexistence of competitors in on-going partner choice mutualisms. *The American Naturalist*.

9. Jie Y., **Bachelot B.**, Zhang C.; Meng L.; Qin J., and Zhao X. (2019). Abiotic niche partitioning and negative density dependence across multiple life stages in a temperate forest in northeastern China. *Journal of Ecology*.
10. Hogan J., Hérault B., **Bachelot B.**, Gorel A., Baraloto C., Jounieaux M. (2018). Understanding the recruitment response of juvenile tropical trees to logging intensity using functional traits. *Ecological Applications*.
11. **Bachelot B.**, Clark J., Uriarte M., Muscarella R., Forero-Montaña J., Thompson J., McGuire K., and J.K. Zimmerman (2018). Associations among arbuscular mycorrhizal fungi and tropical tree communities change with tree successional status. *Ecology*
12. **Bachelot B.**, and C. Lee (2018). Preferential carbon allocation to arbuscular mycorrhizal fungi along succession and fungal coexistence. *Ecology*, 99:607-620.
13. Taylor B., Chazdon R., **Bachelot B.**, and D. Menge (2017). Nitrogen-fixing trees inhibit growth of regenerating Costa Rican rainforests. *PNAS*
14. **Bachelot B.**, Uriarte M., McGuire K., Thompson J., and J.K. Zimmerman (2017). Arbuscular mycorrhizal fungal diversity and natural enemies promote coexistence of tropical tree species. *Ecology*, 93:712-720.
15. **Bachelot B.**, Uriarte M., Zimmerman J.K., Thompson J., Leff J.W., Asaii A., Koshner J., and K. McGuire (2016). Long-lasting effects of land use history on soil fungal communities in secondary tropical rain forests. *Ecological applications*.
16. **Bachelot B.** (2016). Sky: Canopy Openness Analyzer Package. R package version 1.0.<http://CRAN.R-project.org/package=Sky>
17. **Bachelot B.**, Uriarte M., Thompson J., and J.K. Zimmerman (2016). The advantage of living at the extremes: tree seedlings at intermediate abundance suffer greater richness of aboveground enemies and more damage in a tropical forest. *Journal of Ecology*. *Journal of Ecology*, 104:90-103.
18. Lasky, J.R., **Bachelot B.**, Muscarella R., Schwartz N., Forero-Montaña J., Nytech C.J., Swenson N.G., Thompson J., Zimmerman J.K., and M. Uriarte (2015). Ontogenetic shifts in trait-mediated mechanisms of plant community assembly. *Ecology*, 96:2157-2169.
19. **Bachelot B.**, Kobe R.K., and C. Vriesendorp (2015). Negative density-dependent mortality varies over time in a wet tropical forest advantaging rare species, common species, or no species. *Oecologia*, 179:853-861.
20. **Bachelot B.**, Uriarte M., and K. McGuire. (2015). Interactions among mutualism, competition, and predation foster species coexistence in diverse communities. *Theoretical Ecology*, 8:297-312.
21. **Bachelot B.**, and R.K. Kobe (2013). Rare species advantage? Richness of damage types due to natural enemies increases with species abundance in a wet tropical forest. *Journal of Ecology*, 101:846-856.
22. Hérault B., **Bachelot B.**, Poorter L., Rossi V., Bongers F., Chave J., Paine C.E.T., Wagner F., and C. Baraloto (2011). Functional traits predict ontogenetic growth trajectories among neotropical trees. *Journal of Ecology*, 99:1431-1440.

### PROFESSIONAL EXPERIENCE

Fall 2021	Instructor for General Ecology
Fall 2020	Instructor for General Ecology
Fall 2019	Instructor for two undergraduate courses: Insect Biology Lab Module, and Insect Biology
Fall 2018	Instructor for two undergraduate courses: Insect Biology Lab Module, and Insect Biology
Fall 2017	Instructor for two undergraduate courses: Ecology Lab Module, and Insect Biology

Fall 2016 “Preparing Future Faculty” fellow  
 Fall 2014 Teaching certificate track  
 Sep-Dec 2014 Lab instructor for Dr. Duncan Menge in Theoretical Ecology  
 Jan-May 2014 Lab instructor for Dr. Paul Olsen, Dr. Matt Palmer, and Dr. Kevin Griffin in Environmental Biology II  
 Sep-Dec 2012 Lab instructor for Dr. Maria Uriarte in Statistical Modeling  
 Feb-March 2010 Completed the graduate course “Tropical biology: an ecological approach” through Organization for Tropical Studies (OTS)  
 Jan-July 2009 Completed a 6-month internship with the CIRAD in French Guiana studying the growth of tropical trees: Ontogenic and competition traits- based models  
 June-Nov 2008 Completed a 6-month internship at the US Forest Service (3 months at Hubbard Brook Experimental Forest and 3 at Forest Service Office in Burlington, VT). Investigating the effects of increased soil nitrogen concentration on the roots of sugar maple; also, the role of herbs in the nitrogen cycle and changes in nitrogen and N15 concentrations in beech and sugar maple seedlings  
 August 2007 Worked as a researcher in genetic epidemiology at the INSERM, Paris  
 Created models to estimate model parameters

#### **GRANTS, FELLOWSHIPS and HONORS**

2022 USDA soil health (submission planned, co-PI – \$750,000)  
 2022 NSF:DEB-NERC (submitted, Lead PI – 2.5 million)  
 2021 STF: Student Tech Fee to improve teaching (\$86,000)  
 2021 ASR: Summer Salary  
 2021 Travel award  
 2021 NSF:DEB (funded- lead PI - \$335,000)  
 2021 NSF:MRI (submitted, Senior personnel - \$500,00)  
 2020 NASA:NIP (funded, Senior personnel)  
 2020 NSF:EAGER (funded \$200,000, co PI)  
 2019 NSF:CNH2 (submitted- co PI)  
 2013 Second place at the MCED young modeler award  
 2013 Sigma Xi Grants-in-Aid of research (\$900)  
 2013 Institute of Latin American Studies, summer field research grant (\$1,100)  
 2012 Institute of Latin American Studies, summer field research grant (\$1,480)  
 2012 E3B, Pre-Dissertation research travel grant (\$2,500)  
 2011 OTS research fellowship (\$1,890)  
 2011 Graduate school of Art and Sciences Faculty fellowship, Columbia University, 4 years (~ 267,000\$)  
 2010 Honorary Member, Phi Beta Delta Honor Society for International Scholars  
 2010 Organization for Tropical Studies post course grant (1,000\$)  
 2009 Second place at Michigan State University international essay contest

#### **MEETINGS and TALKS**

December 2021: University of Michigan, Special seminar series  
 August 2021: ESA meeting  
 December 2020: Festival of Ecology conference, British Ecological Society  
 March 2020: University of Massachusetts Boston, Special seminar series  
 March 2020: North Carolina State University, Special seminar series

March 2020: Oklahoma State University, Special seminar series  
 March 2020: University of Arizona, Special seminar series  
 February 2020: University of California in Los Angeles, Special seminar series  
 December 2019: University of Massachusetts Lowell, Special seminar series  
 December 2019: Nebraska University, Species seminar series  
 May 2019: Yosemite Symbiosis Workshop  
 February 2019: Princeton University, Special seminar series  
 March 2018: University of Georgia, Special seminar series  
 February 2018: University of Wyoming, Special seminar series  
 February 2017: Cornell University, Special seminar  
 January 2017: Washington State University, Spring 2017 seminar series  
 September 2016: Rice University, Vanzant Lecture series  
 June 2016: ATBC meeting  
 February 2016: Invited seminar at University of North Carolina, Ecology Seminar  
 November 2015: Invited seminar at Swarthmore College, Biology Department  
 September 2015: Invited seminar in Population Biology at Duke University  
 October 2014: Two guest lectures about the Lotka-Volterra competition model in Theoretical Ecology taught by Dr. Duncan Menge at Columbia University  
 August 2014: ESA meeting  
 September 2011: E3B research seminar at Columbia University  
 25th March 2011: Graduate Academic Conference at Michigan State University  
 August 2010: ESA meeting  
 10th August 2009: Weekly research seminar at UMR Ecofog (Kourou, French Guiana)  
 19th June 2008: 1st Annual Undergraduate research and Outreach conference at Hubbard Brook Experimental Forest

### STUDENT AND POST-DOC MENTORING

#### **Current graduate students**

Gina Errico, Master's student started in Fall 2021, Plant Biology, Ecology, Evolution

#### **Current undergraduate students**

Elizabeth Struble, Freshman student started working with me in Fall 2021 as part of the AURCA program.

Gabbi Barber, Junior student started working with me in Fall 2021

Izzy Gonzalez, Senior, Honor's student, started working with me in Fall 2021

#### **Graduate student committee**

Sierra Carmel Hubbard (MS, PBEE, OSU)

David Kunkel (PhD, PBEE, OSU)

Nimani Rathnasooriya (MS, PBEE, OSU)

### SERVICES

Equity Advocate	2021-2024
Associate Editor	Journal of Tropical Ecology
Judge	OSSEF
Reviewer	The American Naturalist, Journal of Theoretical Biology, PLOS One, Ecology, Oecologia, Axios, Austral Ecology, Biotropica, Functional Ecology, Plant Ecology and Diversity