**Megan K. Sullivan**

Yale School of the Environmental

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**EDUCATION:**

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| --- | --- |
| **Yale University**School of the Environment, *PhD Candidate*Advisors: Liza Comita and Simon Queenborough | New Haven, CTExpected: 2023 |
| **The Ohio State University**Department of Ecology, Evolution, and Organismal Biology, *B.S. with Research Distinction* | Columbus, OH2011-2014 |
| **Cleveland Institute of Art**Coursework: *Scientific illustration* | Cleveland, OH2010-11 |

**RESEARCH GRANTS:**

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| **Graduate Student Conference/Research Award ($500),** Council on African Studies | 2021 |
| **YSE Conference Travel Award ($500),** Yale Doctoral Committee | 2021 |
| **International Dissertation Research Fellowship ($3000)**, MacMillan Center  | 2021 |
| **Doctoral Dissertation Improvement Award ($5000)**, Yale Institute for Biospheric Studies | 2020 |
| **TRI Endowment Fellowship ($8000)**, Tropical Resource Institute | 2020 |
| **Post-Candidacy Research Award** **($5000),** Yale–NYBG Cullman Fellowship | 2020 |
| **International Conference Travel Grant ($750),** MacMillan Center | 2019 |
| **YSE Travel Award ($500),** Yale Doctoral Committee | 2019 |
| **Award in Tropical Botany ($5000**), Garden Club of America | 2019 |
| **Lindsay Fellowship for Research in Africa ($3000)**, Council on African Studies | 2019 |
| **Dennis Stanfield Memorial Fund (£1500),** Linnean Society of London | 2018 |
| **International Dissertation Research Fellowship ($15,000)**, MacMillan Center  | 2018 |
| **TRI Endowment Fellowship ($5000)**, Tropical Resources Institute | 2018 |
| **Pre-Candidacy Research Award ($5000)**, Yale – New York Botanical Garden: Cullman Fellow | 2018 |
| **Doctoral Pilot Award ($3000)**, Yale Institute for Biospheric Studies | 2017 |
| **TRI Endowment Fellowship ($5000)**, Tropical Resources Institute | 2017 |
| **Research Funding Grant ($4500),** Yale Institute for Biospheric Studies | 2017 |

**FELLOWSHIPS AND AWARDS:**

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| **Lewis B. Cullman** **Doctoral Fellowship** – Yale School of Environment & New York Botanical Garden  | 2018-2023 |
| **Graduate Research Fellowship ($138,000)** – National Science Foundation | 2016-2021 |
| **Research Experience for Undergraduates Fellowship** – National Science Foundation (PI: Dr. Liza Comita) | 2013 |

**PEER-REVIEWED PUBLICATIONS:**

*In Prep:* **Sullivan, M.K.,** Fayolle, A., Bush, E. Ofosu-Bamfo, B., Vleminckx, J., Metz, M.R., and Queenborough, S.A. Reproductive phenology of tropical forests: recent advances in our understanding of patterns, drivers, and cues. *Plant Ecology. Paper proposal accepted.*

*Submitted:* **Sullivan, M.K.,** Browne, L., Penagos Zuluaga, J.C., Liu, J., Surendra, A, Radhamoni, H.V.N., Estrada-Villegas, S. Sacred groves and their significance to biodiversity conservation: a quantitative meta-analysis. *Biological Conservation.*

*In Review:* Graves, S.J., Marconi, S., Stewart, D., Harmon, I., Weinstein, B.G., Kanazawa, Y., Scholl, V.M., Joseph, M.B., McClinchy, J., Browne, L. and **Sullivan, M.K.** (2021). Data science competition for cross-site delineation and classification of individual trees from airborne remote sensing data. bioRxiv.

4. **Sullivan, M. K.,** Biessiemou, P. A. M., Niangadouma, R., Abernethy, K., Queenborough, S. A., & Comita, L. (2022). A decade of diversity and forest structure: Post-logging patterns across life stages in an Afrotropical forest. Forest Ecology and Management, 513, 120169.

3. Vandvik, V., Halbritter, A.H., Yang, Y., He, H., Klanderud, K., Maitner, B.S., Michaletz S., Sun X., Telford R.J., Wang G., Zhang, L., Althuizen I., Henn J., Gya,, R.,Jaroszynska F., Joyce, B.L., Moerland, M.S., Peng A., Ponsac, C., Seltzer L., **Sullivan, M.K.**, Tjendra, J., Xiao, Y., Zhao, X., Enquist, B.J.  (2020). Plant traits and vegetation data from climate warming experiments along an 1100 m elevation gradient in Gongga Mountains, China. *Scientific data,* 7(1), 1-15.

2. **Sullivan, M.K.** & Queenborough, SA. (2020). Precipitation gradients, plant biogeography, and the incidence of drip‐tips in Cerrado plant species. *Biotropica*, 52(4), 583-589.

1. Rosin C, Beals KK, Belovitch MW, Harrison RE, Pendred M, **Sullivan M.K.**, Yao N, Poulsen JR. (2020). Assessing the effects of elephant foraging on the structure and diversity of an Afrotropical forest. *Biotropica*, 52(3), 502-508.

Non-Academic Writing:

* Co-Chairs' Summary Report: Democratic Republic of the Congo (DRC) Land Use Dialogue (LUD) – Idiofa, Mangai Landscape ([theforestsdialogue.org](https://theforestsdialogue.org/dialogue/mangai-landscape-land-use-dialogue)). 2019 Oct 28.
* Yale School of Forestry and Environmental Studies News (US): Gabon ‘Dialogue’ Examines Challenges Of Deforestation-Free Development ([environment.yale.edu/news](https://environment.yale.edu/news/article/forest-dialogues-examines-challenge-of-deforestation-free-development-in-gabon/)). 2018 Nov 28.
* The Plain Dealer (US): Americans aren't quitters - stay in the Paris climate-change agreement, President Trump (Opinion). ([cleveland.com/opinion](http://www.cleveland.com/opinion/index.ssf/2017/05/americans_arent_quitters_-_sta.html)). 2017 May 9.

**RESEARCH EXPERIENCE:**

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| **Yale University – Dissertation Research**MOU: Institut de Recherche en Ecologie Tropicale, Libreville, Gabon*NSF Graduate Research Fellow, Lewis B. Cullman Yale-NYBG Fellow,**PhD Candidate* | Monts de Cristal, Gabon Libreville, GabonNew Haven, CT2017-present |
| (worked in both English and French)* Assessed the impacts of low-level selective logging on the biodiversity and ecosystem services in African tropical forests by setting up a network of 80 vegetation plots measuring seedling, sapling, and adult trees & lianas across a chronosequence of logged forest & unlogged forest in a logging concession in northwestern Gabon.
* Fostered collaboration between international scientists by creating an MOU between Yale University and the Institute of Tropical Ecology Research (IRET)
* Provided training in field methods to a team of six Gabonese research technicians, and lead a field team to set up plots, identify tree species, and take herbarium samples for documentation. Field work involved backpacking trips (up to a month long) into remote areas, management of a $60,000+ project budget.
* Sponsored internships for two Gabonese master’s students from the National School of Water and Forests (ENEF) and trained in a 12-week seminar program & field trip.
 |
| **Duke University – Poulsen Lab***Research Project Manager* | Makokou, GabonJun–Dec 2015 |
| (worked in both English and French)* Explored forest diversity and impacts of trophic interactions on woody plant community dynamics. Research included: vegetation plot censuses (seedlings, saplings, and adults), animal enclosure vegetation dynamics studies, seed dispersal and seed fate studies.
* Trained eight local and four international research assistants in project methodology and provided logistic support and scientific mentorship for two graduate students from U.S. universities. Managed a $12,000 monthly budget. Coordinated with local managers of Duke University’s Community Wildlife Project, a social science study and parabiologist training project. Participated in monthly meetings with CWP leaders and parabiologists to provide training in camera trap setup and ecological data collection, discussed field observations and methods questions, and was responsible for paying salaries for 25+ employees.
 |
| **Duke University – Poulsen Lab***Research Assistant* | Makokou, GabonJan-May 2015 |
| (worked in both English and French)* Investigated impacts of hunting on animal diversity, measured how elephants affect tree species diversity and forest structure, and explored fruit & seed diversity in a 1ha plot.
* Research included: Transect censuses to identify central African animals by sight, sound, and cryptic evidence (tracks, nests, scat). Vegetation plot censuses around elephant-dispersed and non-elephant-dispersed fruit trees. Vegetation plot censuses and inside and outside of elephant exclosure plots. Vegetation census of seedlings, saplings, and adults in a 1ha vegetation plot. Seed trap monitoring in a 1-ha plot and creation of a fruit and seed database.
 |
| **Northern Arizona University – Waring Lab****USFS - Flagstaff Office***Research Assistant* | Flagstaff,AZMay-Aug 2014 |
| * Exploring the effects of long term thinning on ponderosa pine reproduction, and investigating how tree provenance affects climate change resilience in Ponderosa pine. Research included: seedling plot regeneration censuses and collecting tree cores from trees in the provenance trial. I trained a USFS intern in ecological methods for these projects.
 |
| **Ohio State University – Queenborough Lab***Research Technician* | Columbus, OHMar-May 2014 |
| * Exploring how climate variation and plant biogeography affect leaf traits distribution across the Brazaillan Cerrado. Research involved creating a database of several leaf traits for herbarium specimens of 800+ tropical tree species.
 |
| **The Ohio State University – Comita Lab****Smithsonian Tropical Research Institute – Barro Colorado Island***Research Technician* | BCI, PanamaColumbus, OHJun 2013 - Mar 2014 |
| * Collected, weighed, and sterilized seeds and collected and sterilized soil for a shadehouse experiment to explore the effect of genetic relatedness on the strength of CNDD interactions within a particular species
* Constructed a shadehouse and planted 700+ seeds, monitored germination for 4 weeks
* Designed and carried out a field experiment on seed fate of Virola surinamensis
* Analysis, and write-up of an undergraduate thesis project
 |
| **The Ohio State University – Snow Lab***Research Assistant* | Columbus, OHFall 2012-May 2013 |
| * Investigated gene flow in Collected and processed samples and measured data for research investigating gene flow in switchgrass species
 |

**PRESENTATIONS:**

2021 Sullivan, MK. *Selective logging alters forest understory structure & diversity: a natural experiment in an African tropical forest.* ICCB Conference (webinar), poster.

2021 Sullivan, MK. *Low-intensity selective logging does not negatively impact forest structure or diversity in an African tropical forest.* Association for Tropical Biology and Conservation, ATBC Conference (webinar), oral presentation.

2021 Sullivan, MK. *Selective logging in an African tropical forest*. Yale School of the Environment, March Confluence Research Series (webinar), oral presentation.

2020 Sullivan, MK. *Impacts of selective logging in Central African forests.* Sussex Plant Biology Symposium (webinar), oral presentation.

2019 Sullivan, MK. & Queenborough SA. *Macroecological patterns of leaf size, shape, and function in the cerrado*. Joint Meeting of the Society for Tropical Ecology (gtö) and the British Ecological Society Tropical Ecology Group (BESTEG), poster.

2018 Sullivan, MK. *Effects of logging on forest regeneration*, Yale FES Environmental Research Conference, Yale School of Forestry and Environmental Studies, oral presentation.

2017 Sullivan, MK. *Selective logging in Afro-tropical forests and implications for sustainability.* Yale FES Environmental Research Conference, Yale School of Forestry and Environmental Studies, oral presentation.

2017 Sullivan, MK*. Effects of selective logging on Afro-tropical forests*. Greeley Research Roundup. Yale School of Forestry and Environmental Studies, oral presentation.

2014 Sullivan, MK*. Ponderosa pine seedling density and survival as a function of stand characteristics.* Fort Valley Experimental Research Symposium, Fort Valley Experimental Research Station, oral presentation.

2014 Sullivan, MK. *Drivers of reproductive success in a tropical tree species.* OSU Natural and Mathematical Sciences Forum and Denman Forum, Ohio State University, poster.

**TEACHING EXPERIENCE:**

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| *Teaching Fellow:***Tropical Field Ecology** (ENV717b)**Pests, Pathogens & Parasites** (ENV768) | Spring 2020Spring 2018 |

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| *Yale Center for Teaching & Learning: Certificate of College Teaching Preparation* | Expected: 2023 |
| **Teaching as an Embodied Practice** – Learning Community | Spring 2022 |
| **Teaching Iteratively and Sustainably –** Advanced Teaching Workshop (ATW) | Spring 2022 |
| **Preparing & Delivering an Effective Lecture –** ATW | Spring 2021 |
| **Leading Effective Discussions–** ATW | Spring 2021 |
| **Quantitative Reasoning –** ATW | Spring 2021 |
| **Enriching the Classroom through Multiple Media –** ATW | Spring 2020 |
| **Quiet Teaching –** ATW | Spring 2020 |
| **Course Design –** ATW | Spring 2020 |
| **Mentoring in the Lab –** ATW | Spring 2020 |
| **Difficult Conversations in the Classroom (Race, Ethnicity, and Culture) –** ATW | Spring 2020 |
| **Anti-Racist Pedagogy** – Learning Community | Fall 2020 |
| **Using Technology for Feedback –** ATW | Fall 2020 |
| **First Generation and Non-Traditional Students** **–** ATW | Fall 2020 |
| **Assessing Participation Equitably** **–** ATW | Fall 2020 |
| **Fundamentals of Inclusive Teaching** – Short Course | Fall 2020 |
| **The Theory and Practice of Online Teaching** – Short Course | Summer 2020 |

**LEADERSHIP & PROFESSIONAL SERVICE:**

**Committees:**

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| *Planning Committee Member*, the 27th Annual ISTF Conference  | 2021 |
| * Organized speakers, and hosted panels at the International Society for Tropical Foresters (ISTF) Conference to discuss socio-ecological issues across the tropics among natural resource professionals.
 |
| *Member,* YSE Anti-Racism Nework (YARN) | 2020-2021 |
| * Member of a doctoral student working group focused on increasing diversity, equity, and inclusion in the YSE doctoral program. Advocated for increased transparency in faculty hiring processes, suggested accessibility updates to the doctoral admissions website, created implicit bias infographics for faculty and staff, organized and attended anti-racist trainings (e.g. anti-racist pedagogy, fieldwork & identity).
 |
| *Elected Member,*YSE DocComm | 2020-2021 |
| * Elected member of the official student government body for YSE doctoral program. Worked with YSE faculty, staff, and administrators to address PhD community concerns. Co-lead the creation of a departmental Field Handbook and co-lead the formation of the YSE doctoral student government body.
 |
| *Seminar Coordinator*, YSE Confluence Seminar Series | 2020 |
| * Coordinated logistics and introduced Confluence speakers. The Confluence Research Seminar highlights researchers across YSE’s highly multidisciplinary research community.
 |
| *Planning Committee Member,* the 26th Annual ISTF International Conference | 2020 |
| * Attended planning meetings and organized logistics for the ISTF Conference.
 |
| *TFD Representative,* Mangai Landscape Land Use Dialogue,  | 2019 |
| Meeting coordinator, translator, and co-chair summary reporter for the Mangai Landscape Land Use Dialogue held in Idiofa, DRC, and organized by the Forests Dialogue (TFD). TFD is a multi-stakeholder process and platform focused on developing collaborative solutions to forest management.  |
| *Planning Committee Member,* the 34th Annual F&ES Research Day Conference. | 2018 |
| Created printed communications and advertising materials for this multi-disciplinary conference.  |
| *TFD Representative,* Understanding Deforestation-Free in an African Context | 2017 |
| Meeting coordinator, translator, communications reporter for the Dialogue on Understanding Deforestation-Free in an African Context, held in Mouila, Gabon. |
| *PhD Representative*, Student Activity Council*Group Leader,* PhD Student Interest Group | 2016-2017 |
| In charge of organizing social events and coordinating with other student groups YSE student body. |

**Invited Reviewer:** Journal of Sustainable Forestry, Ecology and Evolution

**Professional Society Member:** Association for Tropical Biology and Conservation, International Society of Tropical Forestry, British Ecological Society, Society for Conservation Biology

**PUBLIC OUTREACH:**

**Mentoring**

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| *Ecology and Evolutionary Biology Mentor Match* – Program Mentor  | 2020-2021 |
| * Mentored international students to apply for graduate school and fellowships.
 |
| *FRANKE Fellowship* – Project Mentor | 2020-2021 |
| * Mentored an undergraduate student project: meta-analysis on insect biodiversity in agroforestry plantations
 |
| *Integrated Refugee & Immigrant Services (IRIS)* - Volunteer Tutor | 2020-2021 |
| * Tutored college students in undergraduate level math and science classes
 |
| *National School of Water and Forests (ENEF, Gabon)* – Master’s Student Mentor | 2019 |
| * Sponsored summer internships for two Gabonese master’s students. Lead seminar – 2x a week for three months, focusing on research project development, field methods, database creation & data management, and introductory programming skills in R. Week-long field trip at the end of the internship.
 |
| *PlantingScience* - Online Mentor | 2016 -2017 |
| * Provided high school students feedback on scientific experiments.
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**Yale Peabody Natural History Museum**

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| *Graduate Research Spotlight Series Coordinator* | 2021-present |
| * Organized and hosted the online webinar series. Co-curated photo exhibits the museum’s collections.
 |
| *Peabody Graduate Partner*  | 2018-2020 |
| * Docent in the Peabody Museum & at off-campus events. Helped develop grade-school museum programs.
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| *Presenter,* Next Generation Science Standards for K-12 Teachers Event | 2018 |
| * This event invited K-12 teachers to listen to presentations on Yale research and NGSS K-12 Standards.
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**Science Communication & Outreach Events**

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| *Science Fair Judge*, New Haven Science Fair | 2021 |
| *Photographer*, Yale Climate Day Photo Exhibition | 2021 |
| *Presenter,* Yale University Science Battle Series | 2020 |
| *Co-Host*, WISAY Lunchtime Mentoring Series | 2020 |
| *Panelist*, Intrepid Museum “Morning Mentoring” session | 2020 |
| *Docent,* British Ecological Society “Capturing Ecology” Photo Competition  | 2020 |
| *Presenter,* Marsh Botanical Garden “Green Café” | 2017 |

**SKILLS:**

**Field Research:** Operating 4x4 manual transmission vehicles, basic vehicle maintenance/mechanical knowledge, floristic surveys, transect surveys, camera trapping, seed fate studies, vegetation plot installation, census, and monitoring, animal enclosure building, installation, and monitoring

**Software:** R, ArcGIS, QGIS

**Languages:** English – native speaker, French – working proficiency (Advanced Low/B2 level), Spanish – basic proficiency

**Certifications:** Wilderness First Responder (2016, 2018, 2020) – includes backcountry First Aid and Adult & Child/Infant CPR

**Workshops & Short Courses:**

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| Moderation and facilitation training for panels and webinars*YSE Professional Communication Center* | 2021 |
| **M**odel-based multivariate analysis of abundance data using R*PR Statistics* | 2017 |
| Carl Zimmer Graduate Student Science Writing Workshop *Yale University Department of Ecology & Evolutionary Biology* | 2017 |