

Seokmin Kim

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PERSONAL STATEMENT

Community ecologist specializing in invasion science, spatial analysis, island biogeography, and plant-animal interactions, with over a decade of research experience on how anthropogenic change shapes ecosystems. Developed and led diverse research programs spanning invasive species, disturbance ecology, species distributions, defaunation, and population connectivity, while applying innovative analytical approaches to complex ecological challenges. Experienced leader, educator, and collaborator with a strong record of coordinating multidisciplinary teams, designing impactful coursework, and partnering with academic, government, nonprofit, and community stakeholders. Returned Peace Corps Volunteer committed to advancing environmental research, conservation, and community engagement.

EDUCATION

Ph. D, Biology University of Miami, Coral Gables, FL <i>Adviser: Dr. Christopher Searcy / Dr. Mauro Galetti</i>	2024
Masters in Environmental Management Duke University, Durham, NC <i>Adviser: Dr. John Poulsen</i>	2019
Bachelor of Arts Princeton University, Princeton, NJ <i>Adviser: Dr. Robert Pringle</i>	2014

PROFESSIONAL EXPERIENCE

UF/IFAS Assessment Coordinator 06/2024 – Current | 30 hours/week
University of Florida, Agronomy Department, Gainesville, FL

Supervisor: S. Luke Flory, PhD, flory@ufl.edu | May contact

Focused on prevention and early eradication efforts for managing plant invasions. Used literature and expert based assessment tools to evaluate the invasion risk of non-native plant species that occur in Florida, new species proposed for introduction, and novel agricultural and horticultural selections, hybrids, and cultivars. Incorporated climate matching to estimate climate suitability of all candidate species. Regularly engaged with relevant stakeholders (local communities, state government organizations, and NGOs) to accomplish our objectives.

- **Led invasion risk assessments**
 - Managed the Institute of Food and Agricultural Sciences (IFAS) assessment of non-native plant in Florida's natural areas website
 - Corresponded with community questions and received species assessment requests
 - Conducted weed risk assessments through the literature review based Predictive Tool
 - Conducted status assessments through the expert and literature review based Florida Invasive Plant Status Assessment tool
 - Modeled climate suitability of candidate plants
 - Assisted the Invasive Plant Working Group in examining potential invasive characteristics of plant cultivars suggested for release
- **Helped create invasive plant lists**

- Elected to the Florida Invasive Species Council (FISC) Plant Listing Committee and attended quarterly meetings to designate plants of interest as invasive by reviewing evidence from literature and expert testimonials.
- Collaborated with Florida Fish and Wildlife Commission (FWC) in preparing and submitting petitions to the Florida Department of Agriculture and Consumer Services (FDACS) for plants of interest to be included in the state noxious weed list.
- Attended quarterly meetings to defend noxious weed list petitions
- Successfully reduced the invasion risk of *Millettia pinnata* (the pongame oil tree) by having it be included in the state noxious weed list.
- Published a manuscript in Biological Invasion Records regarding the spread of *Millettia pinnata* in native Florida ecosystems and gave a talk about this topic at the North American Invasive Species Management Association conference (2025).
- **Conducted community outreach**
 - Gave 5 virtual/in-person webinars (815 total in attendance) regarding invasion science and management to Master Gardener groups and Cooperative Invasive Species Management Area groups.
 - Presented 5 poster session about plant invasions and the utility of the UF/IFAS Assessment at the Florida Invasive Species Council annual symposium (2025), Ecology and Management of Alien Plant Invasion conference (2025), North American Invasive Species Management Association conference (2025), Reshaping Nature symposium (2026), and the Urban landscape summit (2026).
- **Recruited and mentored a Masters student**
 - Reviewed 58 applications for a Masters student at the University of Florida
 - Invited two students for campus visits and in-person interviews, and admitted one student
 - Trained the student in risk assessment and climate suitability modelling
 - Advised the student with developing and conducting Masters research project regarding the effects of flooding and nutrient runoff and the performance of invasive and native wetland plant species.

Postdoctoral Associate

06/2024 – Current | 10 hours/week

University of Florida, Agronomy Department, Gainesville, FL

Supervisor: S. Luke Flory, PhD, flory@ufl.edu | May contact

Helped lead two major projects regarding invasion science.

- **Examined how invasive species, drought, and repeated fires shape plant communities.**
 - Analyzed data from a decade-long factorial field experiment that tested the combined effects of plant invasions, simulated drought, and prescribed fire on plant communities.
 - Quantified how *Imperata cylindrica* (cogongrass) invasion reduced native plant dominance by 52% and species richness by 42% prior to fire disturbances.
 - Demonstrated that repeated fires amplified cogongrass dominance, causing >300% declines in native plant dominance and nearly doubling native species loss.
 - Provided experimental evidence for the fire-invasion cycle and showed how extreme climate conditions can alter long-term invasion dynamics.
- **Helped lead the Invasive Vine Winter Institute at the University of Puerto Rico**
 - Taught more than 30 students about invasion science and species distribution modelling in December 2024 and 2025.
 - Explored how invasive vines are affecting agriculture and infrastructure projects in Puerto Rico by engaging in community outreach efforts.
 - Using species distribution modelling, assessed which areas in Puerto Rico are most susceptible to further vine invasions.

Graduate Researcher (Dissertation)

08/2020 – 05/2024 | 40 hours/week

University of Miami, Biology Department, Coral Gables, FL

Supervisor: Christopher Searcy, PhD, cas383@miami.edu | May contact

Evaluated plant-frugivore interactions in the Caribbean archipelagos, an understudied biological hotspot, with the aim of assessing the effects of anthropogenic effects on this important ecological process. In this pursuit, I 1) investigated spatial associations between frugivore and plant distributions, 2) evaluated the loss of frugivory function due to declining large animal populations and determined its effects on plant germination, 3) assessed how frugivory dynamics react to non-native mammal activity, and 4) explored an alternative, abiotic dispersal method that plants may use in the absence of frugivore partners due to defaunation. Collected and managed spatial data from a variety of sources, conducted germination trials, engaged in mistnet surveys, and laboratory trials, while also being engaged in collaborations with researchers from the University of Copenhagen. Additionally, served as an active member both within and beyond the department through outreach events and university service.

- **Conducted the full cycle of scientific research**
 - Demonstrated originality and creativity by formulating a research plan and hypotheses for a new study to examine plant-animal interactions.
 - Identified research topics, defined study objectives, organized and conducted research, collected data from various field sites, interpreted results, and presented findings in the form of reports, manuscripts, and presentations.
 - Conducted spatial analyses, greenhouse experiments, field surveys, statistical model selection, and movement modeling
 - Collaborated with researchers from the University of Copenhagen in assessing plant-animal mutualistic interactions in the Lesser Antilles and Trinidad/Tobago through animal and plant surveys
- **Formed, led and coordinated research team**
 - Coordinated multiple research teams across different islands in the Lesser Antilles in assessing the effects of non-native mammals on native frugivory dynamics
 - Mentored undergraduate and Master's student researchers and partnered with them in multiple research projects
- **Disseminated research findings**
 - Presented research findings at conferences
 - Primary authorship in three published manuscripts with one manuscript in review.
 - Secondary authorship in at least two other manuscripts
- **Departmental Contributions**
 - Graduate student mentor program organizer, *Elected position (2021-2022)*
 - Paired new graduate students with more senior students to create and reinforce support networks
 - Organized regular check-ins between the mentor and mentee

Teaching Assistant

08/2021 – 12/2021 | 15 hours/week

University of Miami, Biology Department, Coral Gables, FL

Supervisor: Kenneth Feeley, PhD, kxf347@miami.edu

Organized and oversaw all course duties for an undergraduate level, ecology-based lab course. Students were taught fundamental ecology topics, statistical analyses, and laboratory skills (e.g., field survey techniques) and interpersonal skills through working in teams.

- **Course logistics and preparation**

- Created lecture materials, led (in-person) laboratory sections, and performed other relevant duties (i.e., syllabus preparation, grading, organizing assignments, exams, lecture presentations, and lab materials)
- Designed and led outdoor laboratory exercises
- Held regular office hours and engaged with students to effectively teach lesson materials
- Altered previous classes' reliance on R for teaching statistical methods after assessing previous students' feedback and developed an alternative, Excel based format

GIS Analyst / Weed Risk Analyst **08/2019 – 07/2020 | 40 hours/week**
University of Florida, Agronomy Department, Gainesville, FL
Supervisor: Deah Lieurance, PhD, dzl5661@psu.edu

Validated and implemented species geopotential distribution models to evaluate the invasion status or risk of non-native species that are proposed for introduction. Created a new geospatial model for weed risk assessments and compared the accuracy and efficiency of the new model to established models.

- **Constructed species distribution models**
 - Evaluated climatic characteristics within global distributions of candidate plant species
 - Incorporated global climate datasets to create species distribution models within the United States to determine invasion potential
 - Collaborated with other weed risk analysts to provide recommendations for invasive species management
- **Created a novel geospatial model**
 - Collaborated with experts at the USDA in creating an accurate and easy-to-use spatial modelling process, coined “Proto4”, which currently forms the basis of geospatial models used by current USDA weed risk analysts
 - Incorporated elevation and finer scale climate data
 - Compared the accuracy and efficiency of “Proto4” to established models
 - Primary authorship in one published manuscript

Graduate Researcher (Master’s thesis) **08/2017 – 05/2019 | 40 hours/week**
Duke University, Nicholas School of the Environment, Durham, NC
Supervisor: John Poulsen, PhD

Conducted spatial analyses, statistical models, and field expeditions to assess seed dispersal potential of wild forest elephants in Gabon.

- **Helped conduct and organize scientific research**
 - Collaborated with university researchers, zoo staff, and Gabonese government officials to produce project objectives and methods for estimating ecosystem services of forest elephants and their mutualistic relationships with tropical plant communities
 - Participated in a field expedition in Gabon which was the first to successfully measure gut passage time of wild forest elephants
 - Integrated gut passage and movement data from GPS collared elephants to model seed dispersal potential
 - Managed and analyzed spatial topographic data to assess the practicality and generalizability of using movement speed to predict habitat preferences
- **Disseminated research findings**
 - Presented research findings at conferences
 - Secondary authorship in three published manuscripts

Teaching Assistant **08/2018 – 12/20`9 | 15 hours/week**
Duke University, Nicholas School of the Environment, Durham, NC

Supervisor: John Poulsen, PhD

Oversaw all course duties for a Master's level, ecology and environmental management focused statistics course. Students were taught statistical analyses and coding through R, and were encouraged to incorporate lessons to their own Master's theses.

- **Course logistics and preparation**
 - Led (in-person) statistical laboratory sections, and performed other relevant duties (i.e., grading, organizing assignments, and lab materials)
 - Held regular office hours and engaged with students to effectively teach lesson materials

Peace Corps Volunteer

08/2014 – 12/2016 | 56 hours/week

Peace Corps Fiji, Nadarivatu, Fiji

Country Director: Dennis MacMahon

Integrated health education into the village school curriculum and reinforced healthy living practices in rural communities by partnering with the Ministry of Education and Nadala village. Taught more than 100 students at Nadarivatu Primary School and Secondary School in health, sciences, math, and English.

- **Curriculum development and teaching**
 - Incorporated lessons regarding healthy living into the school curriculum
 - Led lectures and hands-on exercises regarding important healthy practices including proper hygiene, communicable and non-communicable diseases, and dental health
 - Organized climate change and conservation themed events with school and village youths
- **Fundraising, grant writing, and infrastructure development**
 - Coordinated with federal and local partners to assess the community's water system and developed project plans and grant applications.
 - Received nearly \$400,000 from the Prime Minister's office of Fiji to sustainability renovate the district's ailing water system and greatly expanded clean running water access to hundreds of people
 - Obtained and fundraised \$20,000 through Peace Corps Partnerships Project (PCPP) and USAID funded Small Project Assistance (SPA) grants to reinforce and reconstruct cyclone-damaged community structures

PUBLICATIONS

- **Kim, S.,** Hiatt, D., Fahey, C., Luke, S. L. (in prep). Invasion, drought, and fires interact to degrade native plant communities.
- **Kim, S.,** Brym, Z., Murphy, M., Sthreshley, M., Lieurance, D. (in press; 2026). Invasiveness of pongamia, *Millettia pinnata* (L.) Panigrahi, in South Florida: an observational report. *BioInvasions Records*, 15.
- **Kim, S.,** Montoya, S., Chavez, C., Lima, J., Olson, D., Searcy, C. (in press; 2026). Ocean currents could benefit plant dispersal in the Caribbean. *PLOS One*.
- **Kim, S.,** Tarazona, F., Vollstädt, M., Gonçalves, F., Agerskov, C., Norrild, A., Welzel, H., Zhang, T., Kaiser-Bunbury, C., Fernández, M., Galetti, M., Simmons, B., Dalsgaard, B., Searcy, C. (in prep). Non-native mammals negatively affect rates of native frugivory in the Eastern Caribbean islands.
- Tarazona-Tubens, F., **Kim, S.,** Dalsgaard, B., Searcy, C. (in press, 2026). Elevated threat status of large-fruited plants is associated with the extinction of large frugivores in the Caribbean islands. *PNAS*.

- Schröder, T., Gonçalves, F., Vollstädt, M., Zhang, T., Jensen, R., Tarazona-Tubens, F., **Kim, S.**, Galetti, M., Simmons, B., Kaiser-Bunbury, C., Temeles, E., & Dalsgaard, B. (2024). Hurricane-induced pollinator shifts in a tightly coadapted plant-hummingbird mutualism. *New Phytologist*, 244(1). <https://doi.org/10.1111/nph.19938>
- **Kim, S.**, Lautenschlager, L., Tarazona-Tubens, F., Abels, J., Lloret, M., Park, T., Malcolm-Parker, A., Galetti, M., Searcy, C. (2024). Resurrecting plant-animal interactions in the Caribbean can benefit large-fruited plants. *Restoration Ecology*, 32(7), e14233. <https://doi.org/10.1111/rec.14233>
- **Kim, S.**, Koop, A., Fowler, G., Israel, K., Takeuchi, Y., Lieurance, D. (2023). Addition of finer scale data and uncertainty analysis increases precision of geospatial suitability model for non-native plants in the US. *Ecological Modelling*, 484, 110458. <https://doi.org/10.1016/j.ecolmodel.2023.110458>
- **Kim, S.**, Sales, L., Carreira, D., & Galetti, M. (2022). Frugivore distributions are associated with plant dispersal syndrome diversity in the Caribbean archipelagos. *Diversity and Distributions*, ddi.13503. <https://doi.org/10.1111/ddi.13503>
- Poulsen, J. R., Beirne, C., Rundel, C., Baldino, M., **Kim, S.**, Knorr, J., Minich, T., Jin, L., Núñez, C. L., Xiao, S., Mbamy, W., Obiang, G. N., Masseloux, J., Nkoghe, T., Ebanega, M. O., Clark, C. J., Fay, M. J., Morkel, P., Okouyi, J., ... Wright, J. P. (2021). Long Distance Seed Dispersal by Forest Elephants. *Frontiers in Ecology and Evolution*, 9, 789264. <https://doi.org/10.3389/fevo.2021.789264>
- Nuñez, C. L., Froese, G., Meier, A. C., Beirne, C., Depenthal, J., **Kim, S.**, Mbélé, A. E., Nordseth, A., & Poulsen, J. R. (2019). Stronger together: Comparing and integrating camera trap, visual, and dung survey data in tropical forest communities. *Ecosphere*, 10(12). <https://doi.org/10.1002/ecs2.2965>
- Beirne, C., Nuñez, C. L., Baldino, M., **Kim, S.**, Knorr, J., Minich, T., Jin, L., Xiao, S., Mbamy, W., Obiang, G. N., Masseloux, J., Nkoghe, T., Ebanega, M. O., Rundel, C., Wright, J. P., & Poulsen, J. R. (2019). Estimation of gut passage time of wild, free roaming forest elephants. *Wildlife Biology*, 2019(1). <https://doi.org/10.2981/wlb.00543>

GRANTS & FELLOWSHIPS

- 2023 Dean's Academic Year Fellowship, University of Miami
- 2022 Graduate Research Scholarship, Tropical Fern & Exotic Plant Society Scholarship
- 2021 Evoy fund, University of Miami
- 2020 Graduate Research Scholarship, Coral Gables Garden Club
- 2020 Kushlan fund, University of Miami
- 2019 Dean's Fellowship, University of Miami
- 2018 Kuzmier-Lee-Nikitine fund, Duke University

AWARDS & HONORS

- 2022 First Runner Up Poster, Biology Graduate Symposium, University of Miami, Coral Gables, FL
- 2019 First Runner Up Poster, Duke Bass Connections Symposium, Duke University, Durham, NC

PRESENTATIONS (2016-PRESENT)

- 2025/6 Implementation of the UF/IFAS Assessment to reduce the risk of biological invasion in Florida, *Poster presentation*, Florida Invasive Species Council annual symposium (Gainesville, FL: 2025), Ecology and Management of Alien Plant Invasion conference (Lincoln, New Zealand: 2025), North American Invasive Species Management Association conference (Lake Tahoe, NV: 2025), Reshaping Nature symposium (Gainesville, FL: 2026), and the Urban landscape summit (Orlando, FL: 2026).
- 2025 Invasion, drought, and fires interact to degrade native plant communities, *Oral presentation*, Ecology and Management of Alien Plant Invasion conference, Lincoln, New Zealand
- 2024 Non-native mammals negatively affect rates of native frugivory in the Eastern Caribbean islands, *Oral presentation*, Invasion Science Research Symposium, Gainesville, FL
- 2022 Frugivore distributions are associated with plant dispersal syndrome diversity in the Caribbean archipelagos, *Oral presentation*, Ornithological Conference, San Juan, Puerto Rico
- 2022 Frugivore distributions are associated with plant dispersal syndrome diversity in the Caribbean archipelagos, *Poster presentation*, Biology Graduate Symposium, University of Miami, Coral Gables, FL
- 2021 Seed dispersal effectiveness of large Caribbean frugivores in the Bahamas, *Oral presentation*, Biology Graduate Symposium, University of Miami, Coral Gables, FL
- 2019 Estimation of gut passage time of wild, free roaming forest elephants. *Poster presentation*, Duke Bass Connections Symposium, Duke University, Durham, NC
- 2016 Environmental awareness and climate change resilience for Fijian youths, *Oral presentation*, Be the Change Youth Conference, Navua, Fiji

COMMUNITY OUTREACH & VOLUNTEERING (2012-PRESENT)

- 2022 - 2024 Bioreach educator (~six times a year). Collaborated with local middle schools in leading lectures and activities regarding invasive species ecology and management
- 2020 - 2024 Academic journal reviewer for the following peer-reviewed journals: Diversity and Distributions, Global Ecology and Conservation, and Biological Invasions
- 2020 – 2024 Green Grad Group (student group). Organized environmental advocacy and awareness actions, investigated methods for mitigating bird-window collisions, collaborated with campus sustainability garden in directing composting efforts, and participated in local recycling and beach clean-up efforts. Elected Vice President in 2020.
- 2017 – Current Friends of Fiji (Returned Peace Corps Volunteer group). Provided materials to support Peace Corps activities around the world, reviewed current Peace Corps Volunteers' project grants and funded up to \$1000 per project, organized biennial fundraising galas in partnership with the Fiji Association of Washington, DC, raised ~\$25,000 for two major infrastructure development projects in Fiji, and edited the quarterly newsletter for the organization. Elected President in 2021. Currently serving as the website manager.
- 2017 – 2019 Duke Climate Coalition (student group). Organized weekly environmental advocacy and awareness actions, advised Duke administration regarding environmentally sustainable policy on campus, successfully postponed the construction of a gas power plant on campus, and led student efforts to convince Duke administration to support the Durham-Orange Light Rail Project. Elected Vice President in 2018.

2012 – 2014 Princeton First Aid and Rescue Squad (Emergency Medical Technician organization). Administered first aid and transport in medical emergencies, was on call for at least 24 hours a month, and assisted with Superstorm Sandy recovery efforts. Promoted to Driver Trainee in 2013.

ADDITIONAL SKILLS

Languages: Fluent Korean speaker (written, spoken, read), Advanced Fijian speaker (written, spoken, read)