

Plant Sciences Recruiting visitor brief biographies

Michael Barash (PLB) - B.A., Environmental Biology, Washington University in St. Louis (2024). My undergraduate research consisted of analysis of biases in restoration species pools and separately, the impact of species conservatism on seed-based recruitment in a degraded prairie landscape. Congeneric prairie forbs were tested for recruitment standardized by pure live weight and additionally received treatments of arbuscular mycorrhizal fungi inoculum and weeding in a factorial design. As a Ph.D. student at MSU, I am interested in continuing similar research into the dynamics of restoring highly conservative prairie species that typically fail to recruit at rates comparable to matrix or weedy native forbs, with a plan to combine community ecology, soil ecology, and functional trait ecology to develop an understanding of the system. I am specifically interested in Dr. Lars Brudvig's research group, and would love to speak with Drs. Carolyn Malmstrom, Chris Blackwood, and Laura Sullivan as well.

Patrick Bell (PBGB-HRT) - MS, Plant Biology, Rutgers (2024), BS, Biology, Minors in Chemistry and Education, Warren Wilson College (2010). My research looked into the phenology of hazelnut trees, both hybrid and novel *C. avellana* germplasm, as it relates to the number of days below freezing. I hope to use my PhD at MSU to use plant breeding to improve abiotic stress resistance in annual food crops. Profs Douches, Thompson, VanBuren, and Jiang are doing fascinating work, and I would love to meet them in person, as well as members of the Plant Resiliency Institute.

Caroline Bendickson (PLB) – B.S., Double Major in Biology and Chemistry with a Mathematics Minor, University of Alabama in Huntsville (Expected May 2025). In the laboratory of Dr. Alex Harkess at HudsonAlpha Institute for Biotechnology, I led an independent undergraduate research project reconstructing a molecular-based phylogeny for the *Trillium* genus using Angiosperms353 bait capture, resulting in a first-author manuscript that is in progress. I have also collaborated to assemble a *de novo* reference genome for the Toomer's Oak (*Quercus virginiana*) at Auburn University with the American Campus Tree Genomes Initiative. Currently, I am helping optimize the novel computational pipeline *OrthoScout* to identify putative floral orthologs that may impact sex determination in SDRs across diverse species of dioecious angiosperms. In graduate school, I aim to use computational methods to approach broad genetics and evolutionary questions such as the regulation of processes including gene expression and floral development across diverse plant species, and I am particularly interested in the laboratories of Dr. Erich Grotewold, Dr. David Lowry, Dr. Bob VanBuren, and Dr. Andrea Case.

Alex Bray (PLP) - I am currently in the final year of pursuing an undergraduate degree in microbiology with minors in genetics and global health at Iowa State University. My most relevant research experiences in plant pathology have been at Iowa State under Dr. Daren Mueller and during two internships at Corteva Agriscience. Projects I have worked on include optimizing nucleic acid extraction methodologies to improve fungal pathogen detection, performing seed health quality assays to assess fungal endophyte frequencies based on fungicide treatments, field location, and storage conditions, and screening various crop tissues to identify potential genetic components of disease resistance for application in transgene expression and vector engineering. As a prospective PhD student at Michigan State University, I am interested in advancing pathogen detection techniques and analyzing disease resistance in the context of integrated management practices. I am particularly intrigued by the research conducted in the labs of Dr. Timothy Miles, Dr. Martin Chilvers, Dr. Alejandro Rojas, Dr. Gregory Bonito, Dr. George Sundin, and Dr. Michelle Hulin.

Ben Brown (BMS) – B.S., Biochemistry, Chatham University (2025). My work intersecting plant biology and analytical chemistry involves characterizing defensive chemical concentrations across ecotypes of *M. guttatus*. After a jasmonic acid treatment to simulate herbivory, concentrations of phenylpropanoid glycosides (defensive chemicals) were quantified via high performance liquid chromatography coupled to ultraviolet spectroscopy. If chosen as a Ph.D. student at MSU, I would be interested in studying plant metabolism and genomics for the purposes of understanding plant physiological response and developing natural products. The research conducted by Dr. Erich Grotewold, Dr. Gregg Howe, Dr. Seung Rhee, Dr. Robert Last, and Dr. Bjoern Hamberger inspired me to apply to MSU, and I would appreciate an opportunity to meet with them.

Garrett Brown (PLB) - B.S., Biology, Grand Valley State University (2025). My primary experience was geology-based and included field and lab work detailing stratigraphic and isotope variance of 2.2 billion-year-old stromatolites in the Upper Peninsula of Michigan. Additionally, I worked on a biology-based project examining the arthropod abundance and diversity within conifer cones to develop a K-12 lesson plan. As a Ph.D. student, I am interested in exploring the interactions between educators, students, and the general public in the hope of combating plant blindness and fostering sustainable communities. My interests will likely align with those of Dr. Tammy Long, Dr. Lauren Sullivan, Dr. Lars Brudvig, Dr. Shinhan Shiu, and Dr. Addie Thompson.

Mitchell Calvin (PBGB-FOR) - B.S., Ecology, Evolution, and Biodiversity, University of Michigan (2020); M.S., Forestry, Michigan State University (expected 2025). My master's thesis research is investigating genetic resistance to the invasive beech bark disease in American beech (*Fagus grandifolia*). This involves quantitative trait loci mapping using the F1 generation of a reciprocal cross mapping family. For my Ph.D. dissertation, I am interested in studying the genomics of forest tree assisted migration. I am very interested in the research done in the labs of Robert VanBuren, Emily Josephs, and David Lowry.

Pin-Jui Chen (HRT) – B.S., Horticulture and Landscape Architecture, National Taiwan University (2021); M.S., Plant Science, The University of British Columbia (2025). My research focused on sustainable fruit crop production and precision agriculture. I investigated the variation of vine performance (vigor, nutrient status, photosynthesis, yield) and grape quality (TSS, TA, pH, aroma) within vineyards, and developed a strategy based on remote sensing assessment of vegetation indices to segregate vineyard zones with different grape quality. I am interested in fine-tuning environmental factors to optimize the production and quality of horticultural crops, and developing sustainable crop production strategies. The research interests of Dr. Roberto Lopez, Dr. Joshua Vander Weide, and Dr. Erik Runkle appeal to me, and I would like to chat with them about their research projects.

Ashton Datko (PLB) – B.S. Mathematics, Kutztown University of Pennsylvania (2025). I am an upcoming graduate with an interest in studying plant genomics and plant stress responses for the purpose of improving agricultural sustainability. Previously, I researched desiccation tolerance in a transcriptomic study of the resurrection grass *Oropetium thomaeum*. For this research, I used weighted gene co-expression network analysis (WGCNA) to compare how gene-expression differs between seed and vegetative tissue in *O. thomaeum* during recovery from desiccation. I would like to focus my PhD studies on using functional genomic techniques to elucidate gene regulatory networks related to plant stress responses, and I would be interested in speaking with Dr. VanBuren, Dr. Rhee, Dr. Shiu, and their lab members about their research.

Aidan Deneen (BMS) - B.S., Biology, American University (2025). My research focuses on testing a proposed regulatory region of the Arabidopsis transcription factor ABI4. CRISPR/Cas9 was leveraged to mutate a key structural amino acid in a promising region, and the mutation is expected to affect protein folding and disrupt ABI4's binding ability. As a Ph.D. student at MSU, I am interested in studying the signaling and regulation of plant metabolism as a means for crop improvement. The research of Dr. Hideki Takahashi, Dr. Bjoern Hamberger, Dr. Dean Della Penna, and Dr. Daniel Ducat interest me and I would like to discuss their work with them.

Michael Dodde (CSS) – B.S., Agribusiness Management, Michigan State University (2023) and M.S., Crop, Soil, and Environmental Science – Weed Science, University of Arkansas (2025). My master's research has been focused on understanding the fit of an amicarbazone/metribuzin premixture in corn and grain sorghum as an alternative to atrazine. I've conducted numerous field, growth chamber, and greenhouse experiments looking at crop tolerance, weed control, attempts to safen the herbicide mixture, and have investigated which conditions are mostly likely to cause crop injury. A portion of my research also involves using the John Deere See & Spray to reduce the area treated and further mitigate atrazine use. As a Ph.D. student at MSU, I am interested in working with Dr. Christy Sprague researching a novel herbicide resistant sugar beet variety.

Courtney Fouke (IBIO) - B.S., Biology, Denison University (2023). My research experience has ranged from studying how rising sea surface temperatures affect relationships between corals and their symbionts, to examining how non-native plant species and predators influence the social and agnostic behavior of Eastern red-backed salamanders. As a Ph.D. student at MSU, I am interested in studying the dynamic spatial and temporal impacts of invasive species on the biodiversity of animal and plant communities. My research interests align closely with Dr. Phoebe Zarnetske, Dr. Anne Bronikowski, and Dr. Sarah Fitzpatrick. I look forward to speaking with them more about their exciting research in the fields of ecology and conservation biology.

Mataeus Funderburk (PLB) – B.S., Zoology, North Carolina State University (2025). My research has involved investigating salt tolerance of Venus Flytraps (*Dionaea muscipula*) within the context of saltwater intrusion by measuring Venus Flytrap leaf count responses to different soil salinity concentrations. Particularly within this research, I was interested in studying certain traits utilized in species interactions (i.e. modified Venus Flytrap leaves for trapping prey) and their effects from altered environmental factors. As a prospective Ph.D. student at MSU, I am interested in studying the function of traits involved in species interactions, particularly in Symbiosis, and how both biological traits and species interactions are altered by varying environmental factors. The research interests of Dr. Kadeem Gilbert, Dr. Christopher Blackwood, and Dr. Andrea Case appeal to me through their specializations in plant species interactions, and I would like to speak to them about their work.

Krishna Girish (IBIO) – BS-MS Dual Degree in Biology (minor in Mathematics), Indian Institute of Science Education and Research, Pune, India (2024). My research focuses broadly on quantitatively modeling the response of ecological communities to change. I currently work as a research associate at the University of Montpellier in France, assessing the impact of future climate disasters on global biodiversity. Prior to this, I worked on modeling ecosystem recovery using dynamical attractor reconstruction for my masters' thesis at MIT, and worked as an undergraduate researcher at the Indian Institute of Science modeling upslope range shifts in montane bird communities using citizen science data. As a PhD student at MSU, I aim to work towards using mathematical and statistical tools applied to long-term ecosystem time-series from the NEON

project to predict how interaction structures within plant communities are modified by environmental change, and relating this with metrics of their resilience. The research interests of Prof. Phoebe Zarnetske and Prof. Chris Klausmeier are strongly aligned with mine, and I would like to speak to them about their ongoing work.

Sora Haagenen (PLB) - B.S., Biology, Brandeis University (2025). My research experience includes investigating the genetic diversity of Shaw's agave (*A. shawii* ssp. *shawii*), studying DNA repair in budding yeast, and examining chromosome dynamics in maize. As a Plant Genome REU intern this past summer, I created chromosome spreads and performed super-resolution microscopy to quantify Type 1 crossovers (COs) in a maize mutant. I have a wide range of interests including plant genetics, development, and abiotic stress tolerance. The research of Jiming Jiang, Thelma Madzima, Shiyong Ding, and Seung Yon Rhee at MSU appeals to me the most.

Helena Heiberger (BMS) - B.S., Biology, University of North Alabama (2024). My research interests center on plant biology, with a particular focus on plant-microbe interactions. I've studied how exogenous abscisic acid influences the shade avoidance response in *Arabidopsis thaliana* and investigated bacterial-phage interactions relating to bacterial spot disease in peaches. Additionally, I explored how the plant immune receptor ZAR1 in *Nicotiana benthamiana* recognizes the *Pseudomonas syringae* effector protein called HopZ1a. While I'm especially intrigued by the plant-microbe research of Dr. Michelle Hulin, Dr. Sarah Lebeis, and Dr. Gregory Bonito, I am also excited to explore other areas of plant biology, such as genetics and cellular biology.

Nianyuan (Sam) Hu (PLB) - B.S., Plant Biology, Michigan State University (2024). My research focuses on the discovery of novel components of the jasmonic acid (JA) biosynthesis and signaling pathways in *A. thaliana*. To achieve this, suppressor mutants of the JA-accumulating *PLIP3-OX* were screened, and several interesting mutants were identified. As an MSU Ph.D student, I aim to further study plant physiological processes through molecular methods, and I am also interested in plant responses to environmental stresses and strategies to improve crop yield. I am interested in the research of Dr. Jianping Hu, Dr. Seung Yon Rhee, and Dr. Ryan Warner, and I would appreciate the opportunity to speak with them.

Larissa Kahan (PLB) – B.S., Botany, University of Wisconsin-Madison (2019). I have research experiences in fields such as plant breeding, phylogenetics, and agroecology, which exposed me to a variety of methods and techniques that strengthen my current research in plant ecology. My research interests include community ecology, global change factors, plant community assembly, plant-soil feedbacks, and using tools such as quantitative methods and global collaborative networks to answer research questions. I developed an independent project investigating the effect of nutrient addition and tilling on the ability of a seed to remain in the soil seedbank, work that is vital in understanding the soil seedbank's role in plant diversity maintenance after global change disturbances. As a PhD student at MSU, I am interested in working with Dr. Lauren Sullivan and collaborating with others such as Dr. Sarah Evans and Dr. Elise Zipkin to study mechanisms of plant community diversity. For example, how abiotic and biotic factors interact with seed traits to influence seed survival in the soil seed bank using quantitative methods.

Mouesanao Kate Kandjoze (virtual visit) (PLB) - MSc., Biotechnology, University of Essex (2024). For my MSc project, I investigated the effect of guard cell-specific overexpression of the *Golden2-like* transcription factor on stomatal activity, photosynthetic efficiency, and non-photochemical quenching in *Solanum lycopersicum*. Although transformed *S.lycopersicum* showed improved

stomatal conductance, no changes in photosynthetic efficiency were observed. My research interests focus on using comparative genomics and synthetic biology to develop climate-resilient crops for climate-vulnerable regions, such as sub-Saharan Africa. I am specifically interested in the Madzima, VanBuren and Kerfeld labs, which align closely with my research goals.

Emma Land (FOR) – B.S. Environmental Studies, Roanoke College (2023). During my undergraduate studies, I conducted research at Roanoke College and The Ohio State University, focusing on key functional systems within the environment, including hydrologic relations and forest dynamics. This diverse academic foundation has informed my graduate studies in forest biology at The University of Georgia, where my master's thesis explores optimization of somatic embryogenesis as a clonal propagation technique for emerald ash borer-resistant North American ash species. As a prospective Ph.D. student at MSU, I am interested in understanding how local forests are responding to climate change. The research conducted by [Dr. David Carter](#), Dr. Deborah McCullough, and Dr. David MacFarlane aligns with my interests, and I look forward to learning more about their work and lab environments during my visit.

Sophia LaRochelle (PLB) – B.S., Biology, Minors: Geology and Math, University of Houston (2023). My research has involved investigating plant-soil feedbacks and microbial community relationships in coastal dune communities and analyzing UAV multispectral data to classify dune vegetation densities and their relationship to erosion. As a post-baccalaureate I am currently testing the impact of anthropogenic stressors, mainly artificial light at night, on behavior using the *Drosophila melanogaster* system. As a Ph.D. student at MSU, I am interested in studying plant-microbe interactions. The research interest of Dr. Carolyn Malmstrom and Dr. Kadeem Gilbert appeal to me, and I would enjoy speaking to them about their work.

Joanna Lee (virtual visit) (BMS) – B.S., Horticulture and Landscape Architecture & Plant Pathology and Microbiology, National Taiwan University (2025). My research focuses on uncovering the mechanisms by which the commercial microbial pesticide *Bacillus amyloliquefaciens* Tcba05 enhances flooding tolerance in vegetable crops. Using morphological analyses, biochemical approaches and RNA-seq, I investigate how Tcba05 modulates reactive oxygen species metabolism and reduces oxidative stress caused by flooding in Chinese cabbage (*Brassica rapa* subsp. *chinensis*). As a Ph.D. student at MSU, I am interested in exploring how environmental stresses impact plant immunity. I am particularly interested in the research conducted by Dr. Jianping Hu, Dr. Seung Yon (Sue) Rhee, and Dr. Raymond Hammerschmidt, and I look forward to the opportunity to learn more about their work.

Cristiana Martinez (BMS) - B.S., Biology, East Tennessee State University (2025). My current undergraduate research project focuses on functionalizing the role of a P450 cytochrome in salicylic acid mediated immune responses. I am testing mutant and wildtype *A. thaliana* against biotic and abiotic stressors with the goal of improving agricultural yield. As a part of Michigan State's Biochemistry & Molecular Biology program, I am interested in studying protein function and the manipulation of plant metabolism for discovery of therapeutics and the improvement of nutrition in staple crops. The research areas of Dr. Hamberger, Dr. Jones, and Dr. Rhee's labs align with my research interests, and I would like to discuss more about their work and potential upcoming projects.

Lucas Mansfield (IBIO) - B.S., Biology (Ecology, Evolution & Conservation Biology), University of Washington (2024). In my past research, I developed a method to model live specimens in the field

through photogrammetry and conducted trait-based ecological studies of nectarivorous birds. Additionally, I performed spatial analysis of rainforest structure using remotely sensed drone data alongside machine learning models. As a Ph.D. student at MSU, I am interested in integrating themes from my previous work to study the impacts of anthropogenic changes in land use and vegetation cover on functional diversity and community structure at large scales. The work done by Dr. Phoebe Zarnetske, Dr. Elise Zipkin, Dr. Lydia Beaudrot, Dr. Kyla Dahlin, and Dr. Chris Klausmeier interests me, and I would enjoy speaking with them further about their research.

Ameila McGinnis (ENT) - I am a senior at Michigan State University, pursuing a degree in Environmental Biology/Plant Biology. My current research involves the community analysis of flies in agricultural ecosystems, potentially using the fly community as a bioindicator to measure ecosystem health and inform sustainable farming practices. As a Ph.D. student at MSU, I aim to compare the pollination services of Hymenoptera (bees, wasps, ants) and Diptera (flies) using the “quality” vs “quantity” pollination framework in newly established Michigan prairies, with the goal of informing the environmental restoration and mitigation of these ecosystems. I am particularly interested in speaking with and potentially collaborating with Dr. Lauren Sullivan, Dr. Hannah Burrack, Dr. Rufus Isaacs, and Dr. Lars Brudvig.

Li Meinhold (PBGB-CSS) - B.S., Biochemistry and Molecular Biology, minor in Quantitative Biology and Bioinformatics at UC Davis. A recent research project I was involved in was the construction of a high quality reference genome for pistachio through the sequencing of 160 crosses of 11 species that was then paired with long term phenotype data to identify candidates for genes critical to flowering. At MSU I am interested in utilizing comparative genomics to identify stress response genes and constructing synthetic pathways for crop improvement. The work of Dr. Robert Van Buren and Dr. Seung Yon (Sue) Rhee are most interesting to me, and I hope to be able to discuss their research with them.

Mary Nguyen (CSS) – B.S., Environmental Biology, Georgetown University (2025). My research aims to better understand how plants grow in association with micro and macro organisms, varying environmental conditions, and different management practices in urban gardens. I apply this understanding to assess processes for sustainable agricultural development in Asia-Pacific. As a Ph.D. student at MSU, I am eager to research and implement nature-based approaches to agriculture as they enhance ecosystem services alongside farmer livelihoods. I am interested in the work of Dr. Krista Isaacs, Dr. Christine Sprunger, and Dr. Lisa Tiemann.

Kathryn Pagano (PLB) - B.S. Biology/Biotechnology, Worcester Polytechnic Institute (2025). My research investigates the role of the cytoskeleton, exocytosis, and cell wall mechanics in polarized plant cell growth using the moss *Physcomitrium patens*. My senior thesis focuses on the membrane-binding subunits of the Exocyst protein complex, Sec3 and Exo70, and what role they play together in plant cell growth and immunity. I am using an APT-based RNAi system to characterize Sec3 and Exo70 loss-of-function phenotypes in both wildtype and plants with a reduced amount of PIP2s. As a graduate student at MSU, I am very interested in continuing my studies in cell biology, while also expanding my focus to organelle dynamics, distribution, and morphology. The work of Dr. Jianping Hu, Dr. Federica Brandizzi, and Dr. Shiyong Ding are very fascinating, and I would love the opportunity to discuss their research with them.

Isabela Pedro (PLB) - M.S., Biology, California State University Los Angeles (expected May 2025). In my Master's research I am assessing the role that biodiversity plays in mitigating or exacerbating

drought stress in California native herbaceous species. Through my research we have found that microclimate cooling and humidification in higher diversity herbaceous communities mitigates atmospheric drying (VPD) and can enhance plant community facilitation. As a Ph.D. student at MSU, I am interested in studying plant community assembly and biodiversity. I am particularly interested in trying to understand the underlying mechanisms of biodiversity, and the maintenance of biodiversity in the face of global change. Dr. Lars Brudvig's research interests, as well as Dr. Carolyn Malmstrom's, Dr. Lauren Sullivan's, and Dr. Chris Blackwood's work have drawn my interest, and I would be happy to speak to them about their work.

Jedidiah Peek (BMS) – B.S. in Biochemistry and Minor in Plant Biology from UC Davis. My current research is focused on understanding metabolism of specialized diterpenes, specifically how terpene synthases (TPSs) convert the precursor molecule GGPP into the carbon skeleton that is later modified further by other enzymes. I am working to crystallize a number of TPSs so that we can use x-ray diffraction to determine their molecular structure and understand what residues in the enzymes drive specificity. As a Ph.D. student at MSU, I am interested in researching plant specialized metabolism, how metabolic pathways evolved, and how they are regulated. I am interested in the work of Dr. Sue Rhee, Dr. Erich Grotewold, and Dr. Bjoern hamburger, and I would love the opportunity to discuss their research with them.

Dominique Pham (PLB) – B.S., Biology, University of Richmond (2023). As an undergraduate, I have studied seed germination and morphological plasticity under different light intensities in invasive *Oplismenus undulatifolius* and characterized the phenomenon of "leaky" dioecy in *Valeriana edulis*. My current research at the Donald Danforth Plant Science Center seeks to understand high light acclimation in *C4 Setaria viridis* through the quantification and localization of reactive oxygen species using high resolution microscopy. As a Ph.D. student at MSU, I am interested in studying the mechanisms that enable plants to efficiently respond and adapt to challenging environments, especially through enhanced photosynthesis, stress response, and symbiotic relationships. My research interests closely align with many of the faculty at MSU, and I would love the opportunity to meet or talk more with Dr. Kadeem Gilbert, Dr. David Lowry, Dr. Robert VanBuren, Dr. Jeffrey Conner, Dr. Emily Josephs, and Dr. Berkley Walker.

Aadil Rahman (CSS) - BS Zoology with a Minor in Sociology (2023) and Currently a Masters student in Agronomy. My undergraduate research focused on the incorporation of rhizomal peanuts in pastoral grass systems. My master's research explores nutrient cycling, with a paper currently in progress on the effects of sulfur and nitrogen fertilization on soybean quality, specifically examining protein, oil, and sulfur-containing amino acid content. As a prospective Ph.D. student at MSU, I am interested in studying agronomic management in the context of our ever-changing world, particularly its impact on yield, quality, nitrogen use efficiency and water use efficiency. My broader goal is to contribute to sustainable agricultural practices in the face of a changing climate. The research interests of Dr. Maninder Singh, Dr. Christy Sprague, and Dr. Christine Sprunger align closely with mine, and I would love to talk about them a little bit further.

Makayla Ritko (PLP) – B.S., Biological Sciences, minor in Chemistry, Northern Illinois University (2025). At my university, I have created a gene deletion mutant of the fungal pathogen *Aspergillus flavus* to elucidate its effects on morphology and I am currently working to characterize protein interactions between tomato golden mosaic virus and its host. I have an array of research experience via previous NSF REUs including analyzing the interaction between BAP1 and CAT in *Arabidopsis thaliana* immune responses. I am interested in researching bacterial pathogens that

impact plant development and agricultural production. The plant pathology research programs led by Dr. Michelle Hulin and Dr. George Sundin intrigue me, so I would like to speak with them further.

Hridi Prova Saha (virtual visit) (PLB) – B.S., Biotechnology, Brac University (2024). My undergraduate thesis research was focused on establishing an aseptic tissue culture-mediated regeneration protocol for BARI-11 variety of *Brassica juncea* (mustard). This work optimized seed sterilization, explant selection and hormonal combinations for shoot and root growth to obtain the most efficient regeneration rate. During my PhD, I want to explore plant adaptation and plasticity in response to climate change, utilizing both molecular biology and computational tools to explore mechanisms underlying resilience. At MSU, I am excited about the opportunity to collaborate with Dr. Seung Yon (Sue) Rhee to study molecular mechanisms of plant adaptation to extreme temperatures, Dr. Robert VanBuren's research on enhancing climate resilience in C4 cereals, Dr. Erich Grotewold's work on stress-regulated specialized metabolites, and Dr. Andrea Case's studies on evolutionary processes shaping plant diversity.

Jazlyn Salazar-Lucero (HRT) - B.S., Biology and General Studies, Texas Tech University (2025). My research has been a survey of the flora of Guadalupe National Park to better understand the effects of a changing climate via the plant stomata from 50 years ago with the original survey when the park first opened, to specimens matched via elevation, species, and ecoregion collected within the past few years. As a Ph.D. student at MSU, I am interested in joining Dr. McNair's lab in the Horticulture department to develop low-cost hardware that will allow for the acceleration of plant research to allow scientists from all backgrounds to be empowered to ask new questions, because of their newfound access to affordable cutting-edge tools and protocols via studying powdery mildew and phlox, which align with his Plant x Tech lab goals.

Thomas Schrader (PBGB-PLB) - B.A., Environmental Policy, French and Francophone Studies, Union College (2024). The research I participated in assessed the restoration success of Pitch Pine Barrens ten years following the removal of black locust, an invasive species. Plant community analysis and coverage plots were used to compare restored pine barren plots to model pine barrens, and allowed for the identification of individual species that were not actively regenerating in the restored habitat. As a Ph.D. student at MSU, I am interested in studying the restoration of grassland ecosystems, specifically looking at the roles of seed limitation, invasive species, and altered soil biomes following intensive agriculture. The research of Dr. Christopher Blackwood, Dr. Lauren Sullivan, and Dr. Lars Brudvig interests me in particular.

Rongfei Su (virtual visit) (IBIO) – B.S., Landscape Architecture, Shanghai Jiao Tong University (2022); M. Eng., Landscape Science, Shanghai Jiao Tong University (2025.3). My research has involved the causes and consequences of patterns of birds and small mammals in coupled human and natural systems (cities) and cascading effects on ecosystem services. I employ a multidisciplinary approach that integrates multimodal data sources—such as citizen science, camera trapping, field surveys, functional traits, and remotely sensed data—with analytical tools like species distribution models (SDMs), mixed-effects regression models, and ecological theories (e.g., functional connectivity, metacommunity dynamics, source-sink dynamics). As a Ph.D. student at MSU, I am interested in studying the patterns of biodiversity (from plants to animals) and their responses to environmental change through trait-based approaches. The research interests of Dr. Christopher Klausmeier and Dr. Phoebe Lehmann Zarnetske appeal to me, and I would like to speak to them about their work.

Aracely Watson (BMS) - B.A., Biology, Williams College (to be conferred, 2025). My research employs enzyme biochemistry to explore how plants utilize aromatic volatiles, specifically the grape aroma molecule methyl-anthranilate and the wintergreen aroma molecule methyl-salicylate, to interact with each other and their environment. Recently, I have been planting *A. thaliana* on media supplemented with a variety of anthranilates and observing a shorted root phenotype with anthranilate and N-methyl anthranilate. As a Ph.D. student at MSU, I am interested in studying plant's metabolic and genetic responses to environmental stresses. I am interested in meeting with Dr. Seung Yon Rhee, Dr. Gregg A Howe, and Dr. David Mark Kramer to speak about their work.

Jordan Ziss (PLB) – B.S. Biology, Indiana University Bloomington (2023). My research has investigated the effect of global change factors on plant communities, specifically community-level functional trait responses. I focused on how functional traits were being altered by microbial inoculation and drought stress both at an individual species level and community level, while incorporating the potential for plasticity in these traits into my analyses. I found that while only a few species responded to the treatments, community-level analyses that incorporated plasticity showed significant shifts in functional traits to the treatment interactions. At MSU, I am most interested in investigating how plant communities respond to global change, what aspects of the community determine that response, and how this information can be applied to restoration efforts under worsening global change. I am most interested in talking with and learning about the research of Dr. Lars Brudvig, Dr. Christopher Blackwood, Dr. Andrea Case, and Dr. Lauren Sullivan, along with other faculty in the plant biology department.

Plant Sciences Recruiting Program Reps

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