

2017 Scholars

The Garden Club of America



Leadership and Discovery



Julie Johnson, GCA Scholarship Committee Chairman. Photo Judy Chester

“The most incomprehensible thing about the world is that it is comprehensible.”

— Albert Einstein

The GCA Class of 2017 represents yet another wonderful group of talented scholars eager to comprehend and motivated to improve our environment. Each recipient represents the promise of tomorrow as they pursue discovery and grow to leadership. Please join the Scholarship Committee in celebrating this class by reading about their work.

Discovery has been on the Scholarship Committee's own agenda, too. Delving into the ongoing stories of former scholarship recipients, we have uncovered a wealth of talent and leadership. Leadership is exemplified in the careers of former scholars like Stephanie Julita, CEO of the Des Moines Botanic Garden; Grace Elton Chapman, CEO of Tower Hill Botanic Garden; Dr. Ari Novy, executive director of the US Botanic Garden; and Scot Medbury, president and CEO of the Brooklyn Botanic Garden to name a few.

In this issue of the *Bulletin*, we introduce two more leaders: former GCA scholars Matt Wasson and Rebecca Vidra, both important voices in the environmental arena. Working with Appalachian Voices, Matt is a national expert on mountaintop-removal coal mining and coal ash contamination. His work today is an outgrowth of his study of the effects of acid rain on birds when he was a 1997 Frances M. Peacock Scholar. Rebecca Vidra, a 2003 Garden Club of America Fellow in Ecological Restoration, now serves as Faculty Director of Environmental Leadership at Duke University, where her focus is the ethical challenges of ecological restoration.

We think it is important for you to know about our former scholars, and we also want them to know about each other. Would Rebecca benefit from knowing Matt? We think so. In the coming year we intend to establish a virtual community facilitating such contacts and the “cross pollination” of ideas. Not only will we enhance the value of being a GCA scholar but we will add depth and accessibility to the resource they represent. A new way of thinking about the “benefits of association” that the GCA offers!

Finally, the Scholarship Committee is very pleased to announce the establishment of The Garden Club of America Montine M. Freeman Scholarship in Native Plant Studies to encourage the understanding, development, and use of underutilized native plants. This important addition to GCA Scholarship owes much to the efforts of the Horticulture Committee and its chairman, Barbara Tuffli. Made possible through the generosity of the Freeman family and by reprogramming surplus medal account funds, as well as the sale of many, many wonderful notecards, this new scholarship will enrich us all, open a new field of discovery, and provide a new avenue to leadership.

Scholarship Committee 2016-17

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The Anne S. Chatham Fellowship in Medicinal Botany

Established in 1997 to protect and preserve knowledge about medicinal use of plants by providing research support in the field of ethnobotany for recent PhDs or PhD candidates, this fellowship is administered by the Missouri Botanical Garden.

For 2017, funds were awarded directly to the Missouri Botanical Garden to support the work of three fellows.

The Garden Club of America Summer Scholarship in Field Botany

Established in 2000, this scholarship is for students interested in furthering their studies in field botany and gaining knowledge and experience beyond the regular course of study.

Rachel Renne is a master's student in the School of Forestry and Environmental Studies at Yale University. She will serve as a field botanist for a study investigating the impacts of livestock grazing on plant diversity in Wyoming sagebrush (*Artemisia tridentata*) communities, as well as the influence of local and regional patterns of soil and water disturbances of sagebrush in the western US. As she becomes more proficient in plant identification skills and plant collection, she will mentor two undergraduate students in field botany and contribute to the collection of western plants in the Yale and Rocky Mountain herbariums.

Colette Berg is a master's student at Southeast Missouri State University in Cape Girardeau. She is studying the evolution of inbreeding and outcrossing flowers in Venus' looking glass genus *Triodanis*. This summer she will collect samples of *Triodanis perfoliata* from meadows located in Texas, Arkansas, and Missouri, record the ratio of inbreeding to outcrossing flowers, and study the differences in genetic diversity between populations. Her goal is to provide more information about the evolution of unique mating systems of *Triodanis*.



Catherine Hu is a master's student in environmental conservation at the University of Wisconsin-Madison. She interns at the Missouri Botanical Garden's Shaw Nature Reserve, and her project focuses on a 60-acre woodland restoration. She will assist with invasive species control, seed collection, volunteer workdays, and prescribed burns. She will establish and monitor plots to document vegetation response to different invasive species control techniques and native seed addition. She will also create a website to interpret the objectives and progress of this restoration project for the public. Her work will provide insight for future restorations of Ozark woodlands.



Lauren Audi is a master's student studying plant biology and conservation at Northwestern University and the Chicago Botanic Garden. Her project is titled "Genetic Characterization of Caribbean Breadfruit: Advancing Food Security and Local Sustainable Agriculture via Germplasm Conservation and Collaboration with Local Growers." She will study the unique diversity of breadfruit (*Artocarpus altilis*) in the Caribbean, using genetic approaches, as well as establish a germplasm collection at the St. Vincent Botanic Gardens in Kingstown, St. Vincent and the Grenadines, to conserve this economical and environmentally important and underutilized tropical food crop species.

The Zeller Summer Scholarship in Medicinal Botany

Established in 2003, the Zeller Summer Scholarship encourages undergraduate students to expand their knowledge of medicinal botany by pursuing summer study through course work or internships.

Zoe Jeka is a senior in the American Studies program at Tufts University in Massachusetts. She will apprentice with Muddy River Herbals, a medicinal herb business, where organic and sustainable growing practices are used for over 100 medicinal herbs. She will assist with daily fieldwork, including the drying and storing of large quantities of harvested herbs, and help manage an herb CSA, learning how to make tinctures, salves, and lip balms. She will also help organize on-site events to share knowledge about medicinal

botany with the community. The apprenticeship will provide crucial knowledge about herbal growth cycles, healing properties, and the transformation of harvest into medicine. Her goal is to become a holistic medicine practitioner.

The Joan K. Hunt and Rachel M. Hunt Summer Scholarship in Field Botany

Established in 2003, this scholarship encourages the study of field botany beyond the regular course of study, thus promoting the importance of botany to horticulture.



Mary Elizabeth Patterson is a master's student in plant biology and conservation at Northwestern University and the Chicago Botanic Garden. Her project is titled "Monitoring Protocol for *Packeria layneae*: a Federally Threatened Species." Her fieldwork will focus on developing a long-term monitoring protocol for *Packeria layneae*, also known as Layne's ragwort or Layne's butterweed, a threatened species endemic to California. Creating a monitoring protocol is the first step to stabilizing threatened and endangered species populations. Tahoe National Forest botanists and other managers of *P. layneae* will use the protocol to monitor the species' long-term demographics.

Funded by Friends of Nishi Rajakaruna in honor of Nishanta Rajakaruna

The Garden Club of America Awards in Tropical Botany

Established in 1983 and administered by the World Wildlife Fund's Education for Nature Division, the awards are to support the fieldwork in tropical forests of doctoral candidates in botany.



Alexander Linan is a PhD candidate at St. Louis University in affiliation with the Missouri Botanical Garden. His research combines population genomics, phylogenomics, and taxonomy in order to describe species, their evolutionary relationships, and species boundaries in members of the ebony and persimmon tree genus, *Diospyros*. He will focus on currently undescribed species of *Diospyros* endemic to Madagascar, and his research will provide insight into their extraordinary diversity in Madagascar. By naming and describing species, strategies can be developed to protect against, and properly control, illegal logging in this group of trees that are sought after for heartwood.

Funded by the Arundel Scholarship



Benton Taylor is a PhD candidate in Ecology, Evolution, and Environmental Biology at Columbia University. His project is titled "Understanding the Ecological Drivers of Nitrogen Fixation in Regenerating Tropical Forests." He will focus on the ecology of nitrogen-fixing trees in regenerating rainforests in Costa Rica. Regenerating tropical forests is critical to global conservation and climate change mitigation efforts; the nitrogen-fixing trees studied naturally fertilize the regrowth of these tropical forests following disturbance. His research investigates how changes in light and soil-nutrient availability during forest regeneration influences the success and the nitrogen inputs of nitrogen-fixing trees.

Funded by the GCA Visiting Gardens Committee

Meredith Martin is a PhD candidate in the School of Forestry and Environmental Studies at Yale University, and holds a Cullman Fellowship with the New York Botanical Garden. Her project is titled "Stand Dynamics of Subtropical Pine-Oak Forests in Sierra Norte, Oaxaca, Mexico, and Implications for Firewood Management." Her research focuses on the ecology of montane pine-oak forests in Oaxaca, Mexico, and specifically on the growth and regeneration dynamics of oaks (*Quercus*) harvested for firewood and charcoal. While Mexico is a center of diversity for oaks, little is known about the majority of these species or forest types. Her research collaborates with a union of three Zapotec communities, and her results will be used to inform others about sustainable management techniques for firewood.

Funded by the GCA Visiting Gardens Committee

Natalie Christian is a PhD candidate in the Evolution, Ecology and Behavior Graduate Program at Indiana University Bloomington. Her project is titled "Understanding How Plant-endophyte Symbiotic Communities Assemble in Tropical Forests and Identifying the Genetic Mechanisms by which Endophytes Affect Host Well-being." Her dissertation research takes place in Panama, where she will study the fungal microbiome of plant leaves. She will combine field collections with manipulative studies and total RNA (ribonucleic acid) sequencing to study how fungal communities are transmitted and assembled in nature to interact within their host and affect plant health.

Funded by the GCA Visiting Gardens Committee

The Garden Club of America Award in Coastal Wetlands Studies

Established in 1999 to promote wetland conservation through the support of young scientists in their field work and research, this award is administered by the Center for Coastal Resources Management, Virginia Institute of Marine Science of the College of William & Mary.



Janet Walker is a PhD candidate in the Joint Doctoral Program in Ecology at the University of California, Davis, and San Diego State University. Her research will focus on the role of burrowing crabs and how they structure California salt marsh plant communities. Crabs can burrow into soils surrounding

marsh vegetation and thereby alleviate submergence and hypoxic stress for plants. The impacts of crabs may shape the distribution and abundance of plant species, which may be especially pronounced at lower latitudes where temperature-related stress is already high. Identifying factors that mitigate this environmental stress (e.g., the activities of burrowing crabs) will contribute to conservation strategies and acknowledge the resilience of these ecosystems in the face of climate change.

Samantha Apgar is a PhD candidate in Dr. Chris Elphick's laboratory at the University of Connecticut. She is studying the extinction risk of specialist tidal marsh birds in coastal Connecticut. As sea levels rise, ground nesting tidal marsh birds will be more vulnerable to nest failure due to increased flooding. She will evaluate how different aspects of the nesting ecology of the seaside sparrow, willet, and clapper rail make each species more or less likely to fledge chicks over time. Specifically, she will study how the nest sites, nest structures, egg qualities, and chick and adult behaviors in response to flooding vary among species. She wants to better understand how specialist species in tidal marshes will fare as large-scale change occurs.

Elisabeth B. Powell is a master's student in the Biodiversity, Earth and Environmental Science Department (BEES) at Drexel University in Philadelphia. She studies gas flux in salt marshes to reveal the potential for climate change mitigation from vegetated coastal habitats. Her master's thesis will examine the effect of open marsh water management practices (OMWM) on the carbon balance of tidal marshes in Barnegat Bay, New Jersey. OMWM is a mosquito control technique that is widely used along the Atlantic Coast. She will examine the gas flux from the open water systems as well as intact marsh and dead plant areas to determine if the carbon balance has been altered by this management practice.

Nate Stott is a master's student at Bowling Green University in Ohio. His project is titled "Use of Reconnected Lake Erie Wetlands by Fishes: Comparing Native Pike and Invasive Common Carp Spawning Migrations." His research aims to estimate northern pike (*Esox lucius*) populations in various Lake Erie coastal wetlands and determine if a more active management strategy is needed to ensure their success. By quantifying fish movement into coastal wetlands, a more robust management strategy may be needed to allow native northern pike into coastal wetlands while denying access to invasive common carp. Carp are known to degrade Laurentian Great Lakes coastal wetland habitats.

The Garden Club of America Fellowship in Ecological Restoration

Established in 2000 and administered by the University of Wisconsin, Madison Arboretum, this fellowship supports specialized graduate studies and research in ecological restoration, the active healing of land.



Joan Dudney is a PhD candidate in the Environmental Science Department at the University of California, Berkeley. She is studying the current spread and severity of white pine blister rust (WPBR) in California. She aims to develop science-based management for climate change and invasive rust. An exotic fungus from China, *Cronortium ribicola*, causes WPBR, which is attributed to precipitous population declines in several white pine species.

She plans to incorporate drought impacts on the WPBR pathosystem to develop a more accurate habitat refugia map that will establish the baseline for white pine management in the southern Sierra Nevada mountain range.

Melissa Booher is a master's ecology student in the Warner College of Natural Resources at Colorado State University in Fort Collins. Her project is titled "*Carex scopulorum*'s Role in Restoration of the Carbon Storing Ecosystem in Tuolumne Meadows, Yosemite National Park." Her research will assess the fate and contribution of introducing thousands of *Carex scopulorum* (also known as mountain sedge) seedlings to areas of Tuolumne Meadows, a subalpine Sierra Nevada meadow, with high bare soil cover. This sedge species is native, highly productive, and predicted to contribute to organic soil building. Understanding how *Carex scopulorum* contributes to the recovery of this meadow will help land managers effectively restore similarly degraded areas throughout the Sierra Nevada.



Katya Jay is a PhD candidate in the Integrative Biology Department at Oregon State University in Corvallis. She studies relationships between beach grasses, dune geomorphology, and extreme storm events. She is investigating the recovery of coastal dune systems following Hurricane Matthew by comparing natural and managed dunes along the Outer Banks of North Carolina in Cape Lookout National Seashore. The dunes of the barrier island provide the coastline with critical protection against flooding and storm surges for nearby communities. She will conduct field surveys every four months over the next two years, and the results of

her research will be used to inform coastal ecosystem management about dune restoration techniques.



Tomasz Falkowski is a PhD candidate in the Environmental and Forest Biology Department at the State University of New York in Syracuse. He studies the application of traditional ecological knowledge in ecosystem restoration management. His research empirically assesses whether Lacandon Maya agroforestry can effectively and sustainably restore ecosystem services in degraded and deforested tropical rainforests in the Montes Azules Biosphere Reserve region of Chiapas, Mexico. His work demonstrates how Lacandon Maya agroforestry can restore forest cover and fulfill the socioeconomic needs of rural communities. His research will be performed in collaboration with traditional farmers in the Lacandon Maya community of Lacañja Chansayab, Chiapas, Mexico.

The Sara Shallenberger Brown Garden Club of America National Parks Conservation Scholarship

Established in 2010 and administered by the Student Conservation Association (SCA), this scholarship encourages college undergraduates, ages 19-20, to pursue careers in conservation by experiencing field training while protecting the treasured resources of America's national parks through the SCA's apprentice crew leader program.

Henry Fanning, an undergraduate majoring in environmental and ecosystem sciences at Washington State University in Pullman, enjoys studying plant identification, greenhouse management, and water quality monitoring. A multi-year alumnus, he has served on six national and community SCA crews and was an apprentice crew leader with two community crews. He has participated in plant propagation in the Northern Cascades, heavy stone work in New Jersey, and trail building in Grand Teton National Park. He would like to be an SCA crew leader to inspire others to love the outdoors. This summer he will be serving at Kennesaw Mountain National Battlefield Park.

Sara (Sadie) Hennen, a 2016 high school graduate with honors from Cretin-Durham Hall High School, St. Paul, Minnesota, plans to start college this fall. She is a two-time alumna of SCA's National Crew Program and has completed an SCA internship as well as one SCA trail corps. She has participated on crews for trail maintenance on the Blue Ridge Parkway and at Zion National Park; spent a summer as an interpretive park guide at Mammoth Cave National Park; and constructed more than ten miles of new trail on Catalina Island. She is dedicated to SCA's mission and wants to influence others about the importance of conservation. This summer she will be serving in Olympic National Park.

Luisa McGarvey is an undergraduate in environmental studies and biology at Oberlin College in Ohio. She is a two-time alumna of SCA's National Crew Program and has participated on crews at the Big South Fork National Park and Marsh Billings Rockefeller National Park, where she built bridges and performed trail work. Her volunteer activities include work with after school programs for disadvantaged children; and serving as a tour guide at the National Air and Space Museum in Washington, DC. This summer she will be serving in Denali National Park.

The Garden Club of America Award in Desert Studies

Established in 2006 and administered by the Desert Botanical Garden, this award enables graduate or advanced undergraduate students studying horticulture, conservation, botany, environmental science, and landscape design relating to the arid landscape to further their studies pertaining to the arid environment, with preference given to projects that generate scientifically sound water and plant management.

John Miller is a sophomore studying sustainable horticulture and business at Arizona State University in Phoenix. As an intern at the Desert Botanical Garden, he will develop his knowledge about desert plants, their use in different landscapes, and arid environments. He will learn about rainwater harvesting and its essential benefits in arid landscapes.



Cole Larson-Whittaker

is a master's student in plant biology and conservation at Arizona State University in Phoenix. He will collaborate with the Desert Botanical Garden to determine the genetic origins of *Agave murpheyi*, one of the major agricultural crops of the pre-Columbian Southwest. His research will use spatial models, state-of-the-art genetic analysis, and fieldwork to reanalyze *A. angustifolia*, taxonomically and molecularly, so that

the genetic connection between the newly reclassified *A. angustifolia* and *A. murpheyi* can be tested to expand the phylogenetic understanding of the genus *Agave*.

Dominic M. Gentilcore

is a PhD candidate at the University of Nevada, Las Vegas. He studies in the Soil-Plant-Water Stress Interactions Lab under the direction of Dr. Scott Abella. His project is a floristic inventory of the newly designated Gold Butte National Monument (GOBU) in Clark County, Nevada. GOBU is a triple transition zone between the Mojave Desert, Great Basin Desert, and Colorado Plateau. He will produce a comprehensive checklist of all vascular plants within GOBU as well as establish a set of ecological plot maps for the area to allow better protections for rare plant habitats.

The Garden Club of America Internship in Garden History and Design

Established in 2001, the GCA Internship in Garden History and Design supports independent study in the field of landscape history and design. Preference is given to students planning to intern at the Archives of American Gardens at the Smithsonian Institution in Washington, DC.



Laura Elizabeth Bell is a master's student in Archives and Records Management Specialization for the Master of Library Science

Program at Indiana University Bloomington. Her interest in archives and digital preservation aligns well with her goals for the internship at the Smithsonian Institute Archives of American Gardens (AAG). As an intern in garden history and design, she will help increase accessibility of the AAG materials by processing archival collections and digitizing items, creating online search aids, cataloging, applying metadata to digital assets, and promoting collection materials on social media.

The Douglas Dockery Thomas Fellowship in Garden History and Design

Established in 2000 to further the study of history and design in the American garden and also look to the future of gardens and their place in the environment, this fellowship is administered by the Landscape Architecture Foundation.

Kevin Jeffery is a master's student in landscape architecture at the University of Texas at Austin. His objective is to develop a "blue index" project in the City of Austin, which will rank and categorize water areas of all types for the amount of relaxation they induce as well as their perceived human value. He will install 25 photo stations throughout the city for participants to rank an area for how much it contributes to their level of calmness as well as submit a photograph capturing the water scene with their smart device.

The Catherine H. Beattie Fellowship in Conservation Horticulture

Established in 1983 and administered by the Center for Plant Conservation, Missouri Botanical Gardens, this fellowship promotes the conservation of rare and endangered flora in the Southeastern United States by supporting field research by graduate students.



Jordan T. Wood is a master's student in the Program in Plant Biology and Conservation at Northwestern University and the Chicago Botanic Garden, where he studies conservation biology, population genetics, and living collections management. He will research threatened North American oak species to characterize and compare the genetic diversity of wild populations and living collections held in botanic gardens. The resulting genetic data may be used by botanic gardens to increase their capacity to meet conservation goals of threatened plants.

Yasmin A. Khan is a master's student in biology at Halmos College of Natural Science and Oceanography at Nova Southeastern University, Fort Lauderdale, Florida. Her project is titled "A Comparative Metagenomic Study of the Microbiome of an Endangered Florida Lupine Species

(*Lupinus aridorum*).” Her research will compare the soil, root nodule, and flower microbiomes of the endangered *L. aridorum* species to the commonly found species *L. diffusus*. She aims to provide significant insight into the complex dynamics that contribute to the species’ growth and development. Her project serves as a contribution to the plant conservation initiative at Bok Tower Gardens in Lake Wales, Florida.

The Katharine M. Grosscup Scholarships in Horticulture

Established in 1981 as a regional scholarship, this scholarship is designed to encourage undergraduate and master’s level students in the study of horticulture and related fields.



Christian Moore is an undergraduate landscape architecture student at the Knowlton School of Architecture at The Ohio State University in Columbus. His research explores planting design as a means to improve polluted runoff, prevent erosion, and establish habitat in agricultural contexts. This summer he will conduct independent research in the Netherlands, studying Dutch polder design and the current Room for the River project for the Rhine delta. Upon completing his fieldwork, he will study under Cassian Schmidt, Director of Hermannshof Botanical Garden in Weinheim, Germany.

Kristie Lane Anderson

is a master’s student in landscape architecture at Temple University in Philadelphia. She is currently employed by the architecture firm Fielding Nair International, where she specializes in learning spaces and peaceful and reflective outdoor environments for early childhood education. Her research will focus on ecological restoration and educational landscapes. Her thesis will examine the restoration of wetland ecosystems and design for interpretation of ecology and conservation for students and visitors.

Josh VanderWeide

is a master’s student studying viticulture in the Horticulture Department at Michigan State University in East Lansing. He aims to improve the wine grape quality in Midwest growing regions. His research involves mechanizing the viticulture practice of leaf removal, which will help vineyard managers to improve growing conditions, yield, and fruit quality.

Helen Andrews is a master’s student of plant health management in the Department of Plant Pathology at The Ohio State University in Columbus. Through the interdisciplinary degree program, she is studying topics such as disease diagnosis, biological control, and soil fertility. This program will enable her to offer a well-rounded skill set in plant health management to those who seek professional guidance.

Megan Bender is a sophomore studying sustainable landscape design and urban agriculture at the University of Cincinnati in Ohio. She is interested in garden design and the historical preservation of gardens and will intern at The Fells Historic Estate & Gardens in Newbury, New Hampshire, where she will learn more about historic gardens and the maintenance required to preserve them.



Pete Grantham is a junior studying sustainable plant systems focusing in landscape design and management at The Ohio State University in Columbus. He owns and operates a landscaping company in northeastern Ohio and plans to incorporate his knowledge of sustainable landscape practices into his business as well as educate others within the landscape industry to promote environmentally friendly methods to care for commercial and residential properties.



Stephani Milette is a junior studying horticulture production and marketing at Purdue University in Indiana. She is a ten-year Air Force veteran who served as a logisticians in Iraq and Afghanistan. As an intern in floral design and plant propagation, her focus is on greenhouse management and viticulture. She aims to discover sustainable growing conditions to produce grapes.

The Corliss Knapp Engle Scholarship in Horticulture

Established in 2010 to encourage the development of research, documentation, and teaching skills in the field of horticulture, this

scholarship honors the memory of the exceptional and inspiring Corliss Knapp Engle, a long-time member of the Chestnut Hill Garden Club. This scholarship is open to undergraduate and graduate students, advanced-degree candidates, or non-degree seeking applicants above the high school level.

Nathan Jahnke is a master’s student in floriculture post-harvest handling at North Carolina State University. His research aims to improve the commercial viability of un-rooted *Pelargonium* cuttings (commonly known as geraniums) during shipment from Central and South America. He is studying the sensitivity of the cuttings to stresses such as temperature, disease, and ethylene. The fungus *Botrytis cinerea* (a necrotrophic fungus also known as gray mold) is capable of damaging hundreds of plant species. Ethylene gas and ethylene inhibitors are being tested as screening techniques for *Botrytis* susceptibility and prevention during shipping and storage of *Pelargonium* cuttings to help growers reduce losses and find new technology that will be more effective and safer for the environment.

Natalie McMann is a master’s student in the Integrated Biosciences Graduate Program at the University of Minnesota-Duluth. Her project is titled “Vascular Transport Capacity and Floral Water Use.” She aims to understand how physiological limitations may influence flowering time in woody species. Her research will examine trees and shrubs such as red maple and forsythia that flower before they leaf out to determine how the timing of plant emergence from winter dormancy affects water supply to the flowers and the relationship between floral water use and floral size.

John Dindia is a master’s student in the Environmental Studies Graduate Program at the University of Montana with a focus on sustainable food and farming systems. He

is working with Michigan State University to develop and convey IPM (integrated pest management) strategies to the rapidly expanding US hop industry. His research will focus on evaluating, identifying, and promoting best IPM strategies for major pests in emerging hop production regions in Michigan. He aims to develop phenology-based arthropod and disease decision aids to assist growers in hop-growing regions with pest management timing decisions.



Jennifer Lauer is a master's student in landscape architecture in the College of Environmental Science and Forestry at the State University of New York in Syracuse. Her research focuses on the cultural landscape of Rose Hill Farm in Geneva, New York. The site is notable for the development of field-drainage technology, which became a driving force in the economic transition from subsistence to merchant farming in mid-19th-century America. The Geneva Historical Society manages 27 acres of the original 350-acre property, including a Greek Revival mansion built in 1839, which is considered among the finest examples of its style in the nation. She will provide a cultural landscape report to help restore and preserve the site's important horticultural heritage.

Melinda J. Knuth is a PhD candidate in horticulture economics at Texas A&M University. Her research will focus on consumer preferences and economic trends in the floriculture industry as well as consumers' perception of water conservation activities and their willingness to pay for a series of water-conserving plant attributes. She also has developed independent observation studies for floriculture companies, analyzing the cut flower value chain and movement efficiency. She plans to use eye tracking and neurological technology to analyze consumer preference of cut flower attributes to provide consumer data to growers, wholesalers, and retail firms.

The Garden Club of America Hope Goddard Iselin Fellowship in Public Horticulture

Established in 2013 and administered by the American Public Gardens Association, this fellowship furthers the study of public horticulture through experiential learning that takes place at a recognized public garden, botanic garden, or arboretum within the United States.

Leslie Touzeau is a master's student in rural sociology at the University of Missouri in Columbia. Her research examines the life experiences of African-Americans in agriculture. In collaboration with the Mizzou Botanic Garden, she is developing several on-campus gardens to honor native Missourian George Washington Carver. The gardens will serve as community growing areas on campus as well as educate students about the roles of marginalized groups in agriculture. Through signage, demonstration plots, and lectures, her project intends to teach the public about the forgotten contributions of minorities and women in building and maintaining our current food system.

The Garden Club of America and the Royal Horticultural Society Interchange Fellowships

Established in 1948, the fellowships provide for a reciprocal exchange of British and American students interested in horticulture, landscape architecture, and related fields to study and intern in each other's country for one year.

The Garden Club of America Interchange Fellow



Polly Stevens will receive her diploma in horticultural practice from the Royal Horticultural Society (RHS) based at RHS Garden, Wisley. This fall, she will be a master's student in landscape architecture at Cornell University. Interested in urban horticultural design and park redevelopment, she envisions cities of the future as lush, green environments where plants grow in every possible space. Her career path was inspired by her background in interactive art, along with internships at Kew Gardens and a year-long placement at Audley End House and Gardens and various horticultural volunteer activities. She is excited to return to the US, and fondly remembers a childhood vacation to the West Coast, where she was awed by the redwood forests and golden beaches. In 2014 she interned at the Los Angeles County Arboretum and Botanic Garden.

The Royal Horticultural Society Interchange Fellow

Eva Steinberg, a graduate in anthropology, biology, and environmental studies from Wesleyan University, is passionate about sustainable agricultural practices and the role that seeds can play in preserving biodiversity. She is interested in collecting and sharing native seeds and in biodiversity cultivation, eventually working with the Millennium Seed Bank in England. Her most recent research examined modes of seed preservation among farmers in the South, including seed saving as a mode of cultural and biodiversity preservation.

The Garden Club of America Rome Prize Fellowship in Landscape Architecture

Established in 1928, this fellowship provides American landscape architects special opportunity for advanced study at the American Academy in Rome.



Rosetta Elkin is an assistant professor at Harvard University's Graduate School of Design and an associate at the Arnold Arboretum. Her project is titled "Shorelines: The Case of Italian Stone Pine." Her study will explore the varied ages, adaptive forms, and changing behaviors along the Ostia shorelines in order to help articulate a broader role for plants when characterizing future coastal development in the context of changing climates.

The Frances M. Peacock Scholarship for Native Bird Habitat

Established in 1994 and administered by the Cornell Lab of Ornithology, Ithaca, New York, the scholarship is awarded to college seniors and graduate students for the study of habitat-related issues that will benefit threatened or endangered bird species and inform land management decisions.

Megan S. Jones is a PhD candidate at Colorado State University in Fort Collins. Her project is titled “Identifying Gardeners’ Barriers and Motivations to Improve Habitat for Threatened and Endangered Native Birds.” She will interview residents along the Colorado Front Range to understand what factors motivate them to adopt new bird-friendly gardening behaviors, such as planting native plants, and what challenges may be preventing them from doing more. Her research will draw on an innovative model of behavior change and will generate recommendations for how to improve bird-friendly gardening programs across the US.



Emily Graves is a PhD candidate at the University of California, Davis. Her project is titled “Risks and Mechanisms of Tricolored Blackbird Exposure to Neonicotinoid Pesticides in Wetland and Grassland Habitats.” Her research will utilize radio telemetry

to investigate tricolored blackbird foraging movements in relation to different habitat types. She will evaluate pesticide exposure, bird body condition, stress hormone levels, and insect abundance to determine habitat characteristics that affect reproductive success in this species of conservation concern. Her study provides awareness about the role agricultural pesticides play in population decline of insectivorous wetland and grassland species.



Anna Tucker is a PhD candidate at Auburn University in Alabama. Her project is titled “A Network Theory Approach to Evaluate Drivers of Stopover Site Use by Migratory Shorebirds.” Her research provides a better understanding of the ecological factors that influence movement patterns and space use during spring migration in Delaware Bay, a globally important stopover site for Arctic-breeding migratory shorebirds. By using a network theory approach to quantify dynamic movement patterns, she will evaluate the effect of factors, including habitat characteristics, food abundance, and predation pressure on those patterns over the past 12 years.

The Garden Club of America Board of Associates Centennial Pollinator Fellowship

Established in the spring of 2013 and administered by the Pollinator Partnership, this fellowship supports one or more graduate students to advance the knowledge of pollinator science and was made possible by generous gifts given in honor of the GCA Centennial by members of the Board of Associates.

Michelle L. Fearon is a PhD candidate in the Ecology and Evolutionary Biology Department at the University of Michigan. Her project is titled “Tracking Virus Strains Spillover: Pollinator Community Interaction Networks Impact Honeybee and Native Bee Virus Prevalence and Viral Load.” Her research will focus on tracking pathogen transmission in a network of interactions between honeybee and native bee species in different pollinator communities. This research will incorporate realistic community interactions into the study of bee pathogens to broaden the understanding of how pollinator species are infected and how different pathogens are transmitted between pollinator species in a community.

Kelsey E. Fisher is a PhD candidate in the Entomology Department at Iowa State University. Her project, “Tracking Monarch Butterflies Through the Iowa Landscape Utilizing an Automated Radio Telemetry System,” researches how monarch butterflies are utilizing the fragmented landscape to support the establishment of biological guidelines for habitat restoration. In order for monarchs to utilize small gardens and newly planted habitat, they must be able to detect their presence. She will track monarchs with active radio telemetry technology to understand their perception of distance and navigational patterns.

This will help determine how far apart habitat patches should be planted to increase overall connectivity and provide essential resources. Results from the study will inform conservation and restoration efforts.



Jonathan Giacomini is a PhD candidate in the Zoology Program at North Carolina State University. His project is titled “Can Helianthus Heal Bees? Management of Bumblebee Parasites with Sunflower Pollen Supplements.” His research investigates the role of floral resources in shaping the ecology and evolution of pollinator diseases. Pollen plays an important role in bee health by providing essential nutrients, but varies tremendously in chemical content between plant species. His preliminary lab results suggest that certain pollen species may have disproportional effects on bee diseases. His field study will examine the impact of medicinal floral resources on the management of bee parasites using techniques that can be adapted for conservation and management.

Rachael E. Bonoan is a PhD candidate at Tufts University in Massachusetts, and is president of the Boston Area Beekeepers Association. Her project is titled “The Effect of Dietary Essential Amino Acids on Immunocompetence in Immune-Challenged Honeybees.” She studies pollinator nutrition and is particularly interested in how honeybees get the right nutrients in the right amounts from their ever-changing environment. This summer she will investigate how dietary protein diversity affects honeybee immunity. In addition to her studies, she enjoys sharing her research and the importance of pollinator health with beekeepers, garden clubs, and the general public.

The Clara Carter Higgins Summer Environmental Studies Scholarship

Established in 1964 to encourage college students to further their studies and careers in the field of ecology, this scholarship offers opportunities to gain knowledge and experience beyond the regular course of study.

Johnny Buck is a junior studying native environmental science at Northwest Indian College in Bellingham, Washington. A second-year Higgins scholar, he will participate in the Harvard Forest Summer Research Program in Ecology at Harvard University. His research is titled “Explaining Variation in the Seasonal Changes of Trees.” He will study the effects of natural and human disturbances on forest ecosystems including global climate change, hurricanes, forest harvest, wildlife dynamics, and species diversity.



Nathaniel Kiel is a junior at the College of Environmental Science and Forestry, majoring in conservation biology with a minor in native peoples and the environment at the State University of New York, Syracuse. His research will observe the ability of flowering understory plants to reestablish in post-agricultural woodlands across central New York. He will observe and quantify ant dispersal of forest understory herb seeds. He aims to learn about plant ecology, particularly in plant-animal interactions and their roles in habitat succession and organismal evolution.

The Garden Club of America Awards for Summer Environmental Studies Scholarships

Established in 1993, this scholarship encourages undergraduate summer studies doing fieldwork, research, or classroom work in the environmental field beyond the regular course of study.

Matt Wersebe is a junior majoring in biology with a minor in environmental studies at the State University of New York, Binghamton. His project is titled “Independent Research of the Long-term Impacts of Antimicrobials on Wetland Communities.” As an assistant to Dr. Jessica Hua of The Hua Lab, he will study the impacts of agricultural contaminants on wetland communities. He will use field research and laboratory techniques to understand the effect of changing patterns of food resource quality elicited by antimicrobials on amphibian-parasite interactions in degraded habitats.

Funded by Piscataqua Garden Club, Zone I

Sage Max is a junior studying environmental policy at Barnard College in New York. This summer, her research will take place in Jordan with Columbia’s Summer Ecosystem Experience program to study the effects of animal agriculture across the country. Focusing on the habits of goat herders, she will study the impact of goats in national parks as well as the environmental footprint for eating meat in a nation where water resources are scarce. She will use her research about farming and the environment to understand how environmental questions can help shape environmental policy. She also plans to use this research to complete her senior thesis.

Funded by Amateur Gardeners Club, Zone VI

Sarah Hossain is a junior at the University of Connecticut majoring in environmental science with a minor in ecology and evolutionary biology. Her research, in the Cape Floristic region of South Africa, will focus on the *Protea* genus. She will collect samples of *Protea* to create CO₂ curves and study the growth of juvenile plants in greenhouse experiments under various controlled CO₂ levels and soil moistures. Her experiments will simulate the increased drought conditions of the region to determine the viability of *Protea* in a changing climate.



Ella Matsuda is a sophomore studying ecology and environmental science at Rice University in Texas. Her research in Madagascar investigates the interactions between lemurs, birds, trees, and mistletoe in tropical forests. Her research will illuminate the complex interactions in Malagasy seed dispersal networks, emphasizing the importance of studying the ecological significance of smaller plant and animal species. She will also study the dispersal of small-seeded mistletoe seeds by small mouse lemurs, thereby enabling the survival of mistletoe, which in turn enables the survival of large lemurs who disperse large seeded tree species. Mistletoe, often considered a parasitic plant, may benefit its host plant.



Quentin Hubbard, a freshman at Rhodes College in Tennessee, is participating in the Rocky Mountain Ecology Field Research summer program in Jackson Hole, Wyoming. He will observe the grazing effects of aquatic and riparian foraging by resident ungulate species and their effects on water quality as well as the diversity, abundance, and distribution of aquatic plant species, all of which support life cycle stages of Yellowstone cutthroat trout. His research and analysis will be compiled into a final report.

Hannah Gibbs is a Bonner Scholar sophomore at Centre College in Kentucky. Last summer as a member of a research team she studied the deep-rooted social and cultural ramifications of coal mining. This summer, the research team will focus on the environmental ramifications of coal extraction. Through intensive interviews with eastern Kentucky residents, her research will study its effect on the culture, livelihood, and the economic future of those who live in the Appalachian Mountains.



Ayla Allen is a junior in the Department of Ecology and Evolutionary Biology and Program for Environmental Studies at Princeton University. She was accepted to Operation Wallacea, a conservation organization made up of academics conducting environmentally-oriented research. She will study habitat preferences of different primate species in the Pacaya-Samiria National Reserve in Peru. During the rainy season, the Pacaya-Samiria National Reserve experiences heavy flooding that affects food availability for primates. Her research will focus on primate responses to extreme variations in rainfall and compare the results with past data to make predictions for the future.

The Caroline Thorn Kissel Summer Environmental Studies Scholarship

Established in 2004, this scholarship promotes environmental studies for residents of New Jersey or persons studying in the state.

Tyler Coverdale is a PhD candidate in the Department of Ecology and Evolutionary Biology at Princeton University. His project is titled “Plant Defenses in African Savannas: Does Herbivory Drive Epigenetic Variation?” He studies African savanna plant defenses at Mpala Research Center and Wildlife Foundation in Laikipia, Kenya, with a focus on how interactions between

plants shape plant defense strategies. He will use a combination of field experiments and genetic analysis to investigate how the proximity of well-defended neighbors, which shelter palatable plants from large savanna herbivores (e.g., elephants, zebra, impala), impacts the defensive strategy and epigenetic signature of a common savanna shrub.



Tony Cullen is a PhD candidate in the Graduate Program in Ecology and Evolution at Rutgers University in New Jersey. His project is titled “The Great Garden Escape: the Role of Evolution in the Invasion for Two Ornamental Viburnums.” His research explores how small populations of non-native shrubs become larger naturalized populations. He uses a landscape genetics study to determine how environmental and geographic features influence gene flow and local adaptation. Gaining insight into the potential rapid microevolutionary change in invasive species will allow ecologists to understand the factors involved in colonization and spread. This knowledge will help land managers make more informed decisions about management strategies and restoration practices.

The Mary T. Carothers Summer Environmental Studies Scholarship

Established in 2005, this scholarship is for undergraduate students who are doing summer fieldwork, research, or classroom

work in the field beyond their regular course of study.

Soren Struckman is a sophomore biology major with a minor in computational and applied math and statistics at the College of William & Mary in Virginia. He will participate in a summer research program in plant ecology where he will collect field data on common milkweed demographics and leaf chemistry at various sites across the state. He will use the data to create a computational/mathematical model of milkweed population dynamics to determine the affect of leaf chemistry on population growth. This area of research has strong implications for monarch butterfly conservation.

Colleen Smith is a PhD candidate in the Graduate Program in Ecology and Evolution at Rutgers University in New Jersey. Her project is titled “Threats to the Forest-Associated Bees of New Jersey.” Her research investigates how past and current forest habitat loss affects native bee species that require forest habitat for floral and nesting resources. She will collect bees and measure floral resources at 36 forests in New Jersey that vary in forest age and fragmentation.

Joni Baumgarten is a PhD candidate in the Graduate Program in Ecology and Evolution at Rutgers University in New Jersey. She is interested in learning how plant and soil communities interact. Her project investigates how soil nutrients and the surrounding plant community influence the association of the rare plant, Knieskern’s beaksedge (*Rhynchospora knieskernii*) with beneficial mycorrhizae. She will study numerous populations in wetlands throughout New Jersey’s Pine Barrens. The results of this project will add to the knowledge of the soil conditions favorable to Knieskern’s beaksedge, which can be used to help conservation and restoration efforts.

The Elizabeth Gardner Norweb Environmental Studies Scholarship

Established in 2005, this scholarship encourages undergraduate summer studies doing fieldwork, research, or classroom work in the environmental field beyond their regular course of study.



Camille DeSisto is a sophomore studying integrative biology at Harvard. Her conservation biology fieldwork will be conducted at Madagascar’s Ranomafana National Park, where she will study how lemurs and birds facilitate the spread of invasive plant species, particularly the strawberry guava, in the rainforests. She will collect data on the eating and defecation patterns of lemurs and birds, gather samples of plant tissues for DNA analysis, record the size and extent of flora, and conduct germination experiments.

Clara Guillem, a junior studying molecular biology at Eckerd College in Florida, was a 2016 Summer Environmental Studies (SES) scholar. This summer she will continue her research to find causes of “citrus greening,” also known as HLB, a vector-transmitted pathogen that poses a major threat to citrus crops. She will compare the bacterial root microbiomes of asymptomatic and HLB-symptomatic grapefruit trees. She will focus on the further characterization of fungal species present near the roots of citrus trees to provide a greater understanding of citrus health and how it may be affected by citrus greening.

The Garden Club of America Zone VI Fellowship in Urban Forestry

Established in 2005 for advanced undergraduate or graduate students to study urban forestry and related subjects, this fellowship is administered by the GCA in collaboration with Casey Trees, Washington, DC.

Benjamin Breger is a master's student in landscape architecture at the University of Massachusetts-Amherst. His project is titled "Tree Survival in the Urban Landscape: Nursery Treatment, Site Conditions, and Stewardship." Interested in the functionality and aesthetics of urban vegetation, he will examine the socio-ecological factors that impact the survival of urban trees such as nursery treatment, site conditions, and level of human stewardship. His field study will take place in Holyoke, Massachusetts, where thousands of trees have been planted over the past three years as part of a statewide urban greening initiative. Providing more accurate and localized data on urban tree survival will allow forestry professionals to better plan greening initiatives and assess the benefits of large scale urban tree planting campaigns.



Nancy Falxa Sonti is a PhD candidate in the Department of Plant Science & Landscape Architecture at the University of Maryland in College Park. Her project is titled "Socio-Cultural Ecosystem Services of Urban Forests." She will conduct interviews with Baltimore residents to compare the perception

and use of forest patches on vacant land with those of city parkland in neighborhoods with varying levels of income. Her research will assess qualitatively whether these factors affect the socio-cultural ecosystem services of Baltimore's urban forests and the degree to which these urban green spaces are viewed by nearby residents as amenities or disamenities.

David Bañuelas is a master's student at the Center for Regenerative Studies at California Polytechnic University in Pomona. In 2016 he started the Southern California Allelopathic Flora for Eradication (SAFE) project to study allelopathic trees that occur in the urban forests of Los Angeles. Allelopathic plants emit phytotoxins that inhibit the growth of weedy plant species. His research will test how mulch from various trees can reduce the growth of invasive plant species to aid in habitat restoration. The results of his research may encourage the development of allelopathic-based pesticides and further our understanding of weedy species that are susceptible to allelopathy.

John Roberts is a PhD candidate in environmental horticulture at the University of Florida in Gainesville. His project is titled "Semi-automatic Street Tree Inventory and Assessment from Mobile Terrestrial Remote Sensing." As laser scanning and photogrammetric data become more common, these datasets have been applied to monitoring urban forests. Using data collected from ground-based and unmanned aerial vehicles, Roberts creates three-dimensional models of urban streetscapes. These models are being tested for semi-automatic mapping and measurement of street trees, potentially leading to partial updates to existing urban tree inventories. Techniques to detect structural stem defects (i.e., lean status, low taper, etc.) from these datasets are also being developed.

The Elizabeth Abernathy Hull Awards

In addition to announcing its scholarships, The Garden Club of America, through its Hull Awards, "recognizes an individual who, through working with children under 16 years of age in horticulture and the environment, has inspired their appreciation of the beauty and fragility of our planet." Awardees are proposed by a GCA club or club member.



Byrna Bass

Cincinnati, OH
Proposed by Debbie Oliver, Cincinnati Town & Garden Club, Zone X

Byrna Bass is an outdoor classroom educator for inner city elementary students at the Rothenberg Rooftop Garden in Cincinnati. She teaches environmentally friendly garden practices and is developing a pollinator garden. In her limited space, she uses beneficial insects, a tumble composter, and rain barrel to instill sustainable growing practices and encourage respect for the environment. She has dedicated most of her life and work to fostering a love of the environment in children.
Funded by Jane Chapman, Rochester Garden Club, Zone III

Christine Dietz

Dallas, TX
Proposed by Catherine Corrigan, Founders Garden Club, Zone IX

Christine Dietz has worked in youth education in Dallas for more than ten years, and currently works as the Children's Program Specialist at the Dallas Arboretum. She is the lead wetlands educator in their children's adventure garden. More than half of the 5,000-6,000 students who attend her program each year are only familiar with a city biome, and she opens the doors of the natural world for them.

Funded by South Side Garden Club of LI, Zone III

Kathy Gooch

Dayton, OH
Proposed by Tracy Bieser, Garden Club of Dayton, Zone X

Kathy Gooch has been an occupational therapy assistant in the Dayton public school system for 20 years. She currently works at an urban at-risk school and developed a garden so that her students can connect with nature and enjoy the space. The garden includes a bed of pollinator perennials, native plants, a prairie, raised tables for herbs and vegetables, a compost area, stump stools, and blackboards.

Funded by Kilduff Family Foundation in memory of Jane Kilduff, Zone V



Kathryn Kocarnik

Los Angeles, CA
Proposed by Edith Frère, Hancock Park Garden Club, Zone XII

Kathryn Kocarnik is a beloved garden teacher and cooking instructor at the Garden School Foundation, an outdoor experiential school for Title I students in Los Angeles. Described as "a

rock star on our campus,” she teaches the value of composting and worms, the importance of bees, concepts of germination and photosynthesis, and the science of gardening. Her seed-to-table curriculum helps students learn about the environment, sustainability, and nutrition.

Funded by Kilduff Family Foundation in memory of Jane Kilduff, Zone V



Pat Marks

Houston, TX

Proposed by Ruth Flournoy, River Oaks Garden Club, Zone IX

Pat Marks, the associate director of the Houston Arboretum and Nature Center, has been an educator for over 40 years. She created the original curriculum at the center for most of their programming and has devoted her life to educating students about the wonders of native flora and fauna. Whether hiking through the woods in search of armadillos or hawks, dipping in the ponds for crawfish and tadpoles, or planting pollinator gardens full of wildflowers, she encourages a love for the environment in young children.

James McCarron

Bernardsville, NJ

Proposed by Dorcas Cochran, Garden Club of Somerset Hills, Zone IV

James McCarron has taught art in Bernardsville, New Jersey, for 25 years and has incorporated a love of nature, gardening, and conservation into his art classes. He turned an unused courtyard into a vegetable garden and greenhouse, creating a micro-eco-system that incorporates New Jersey native plants and trees in this oasis for the community. A high-school senior who came back to work in the garden said, “he brings art, nature, conservation, environmental awareness, and respect into his classroom.”

Jack McWilliams

Baltimore, MD

Proposed by Lindsay Hardesty, Amateur Gardeners Club, Zone VI

Jack McWilliams has been a volunteer at the William S. Baer School, a public school for profoundly disabled students in Baltimore, for 20 years. He turned an unused greenhouse into a garden and gazebo where children in wheelchairs can plant and pick the fruit and vegetables in the raised beds he created, making nature approachable for a population that too often is neglected when it comes to environmental education.

Catherine Pierson

New Orleans, LA

Proposed by Karin Eustis, New Orleans Town Gardeners, Inc., Zone IX

Catherine Pierson serves as a volunteer environmental educator in the New Orleans School District. After Hurricane Katrina, she helped to create “Edible Schoolyard New Orleans,” which changed the way children eat, learn, and live. This program has created acres of organic gardens that are used by five FirstLine schools—where over 4,000 garden and culinary classes are taught, and 70 food education events occur each year. One supporter said, “Cathy knew that engaging children through their senses was a magical and transformative experience that many of the urban children never experienced.”

Aaron Schomburg

Princeton, NJ

Proposed by Bonnie Higgins, Stony Brook Garden Club, Zone IV

Aaron Schomburg has been a science teacher at Princeton Day School for 25 years. His interactive approach to teaching through outdoor classes and experiential learning sparks creativity and engagement within his students. His pond study and wetlands education, beehives, “Earth-Walks” curriculum, canal clean-up days, composting program, rain garden, and Green Team Summer Camp focus on sustainability and love of the environment.

Sean Sheppard

Richmond, VA

Proposed by Cameron Furber, James River Garden Club, Zone VII

Sean Sheppard founded Backyard Farmer in Richmond, Virginia. The program builds and runs learning gardens in schools, community centers, and afterschool programs. This past year, he ran gardens in 19 different public schools. Students care for the soil, plant, weed, compost, harvest, and taste. The yearlong program teaches garden planning, photosynthesis, pollination, plant structure, seed-germination, weather, and nutrition. The program has cultivated awe and respect for the natural world through teaching the life cycle of plants and giving students the gift of working in the garden. Sean has “cultivated young students’ minds and his exuberance is infectious.”



Sally Shwartz

Providence, RI

Proposed by Kathleen Leddy, Perennial Planters, Zone II

Sally Shwartz, a volunteer coordinator at the Roger Williams Park Botanical Center in Providence, conducts botany tours for elementary students and created a program “to help people look more closely at horticulture and the environment, to be inspired, connect people with plants, and to foster a sense of stewardship for nature.” The goals are accomplished at the center through experiential learning and classes. She created “Fairy Garden Days,” held for two weeks each spring, which attract more than 5,000 visitors to the center. Fairy “homes” are created from natural materials and supplied by volunteers.

This whimsical event promotes imagination and observation of the natural world.

Funded by Sasqua Garden Club, Zone II

Damian Thompson

Little Rock, AR

Proposed by Katherine Ann Trotter, Little Rock Garden Club, Zone IX

Damian Thompson has been a garden educator at the Dunbar Garden Project in Little Rock for 14 years and its director for 12 years. He manages the three-acre urban garden and teaching farm, providing curriculum development, fundraising leadership, animal husbandry, and educational programming. The purpose of the garden project is to teach sustainable urban agriculture to the nearly 800 students it hosts each month. One supporter wrote, “Damian and the garden are the most powerful assets to ensure my kids WANT to become stewards of the environment.”



Cesar Zuniga

Atherton, CA

Proposed by Sara Jorgensen, Woodside-Atherton Garden Club, Zone XII

Cesar Zuniga has developed school community gardens in Redwood City and Atherton since 2000. He most recently developed The Selby Lane School Garden serving as its coordinator. With 85 percent of his students at or below the poverty line, he believes that planting, caring for, and harvesting healthy fruits and vegetables will help these children develop a special relationship with the earth, and have a new appreciation for what it provides.

Former Scholars Making a Difference



Matt Wasson. Photo by Erin Savage, courtesy of Appalachian Voices

Matt Wasson is director of programs for Appalachian Voices (AV), an environmental nonprofit protecting the land, air, and water of central and southern Appalachia. Wasson holds a BS in zoology from the University of Washington and a PhD in ecology from Cornell University. As a 1997 recipient of the GCA's Frances M. Peacock Scholarship for Native Bird Habitat, Wasson did research on acid rain effects on birds in remote areas of the Adirondack Mountains. With Wasson at the helm, AV collaborated with 12 North Carolina groups to address air pollution; their campaign resulted in the 2002 passage of the Clean Smokestacks Act, one of the nation's strongest air pollution laws at the time. Several years later Wasson helped create a

website and online campaign named *iLoveMountains.org*, aimed at increasing awareness of mountaintop-removal coal mining, an effort that turned what had been primarily an issue of concern in Appalachia into a national one. Recently Wasson has been involved in a movement in Virginia to encourage solar-sourced energy as an alternative to coal. A series of community meetings led to formation of the Southwest Virginia Solar Workgroup made up of state agencies, colleges, planning commissions, and interested citizens and businesses. This May the workgroup hosted an open-to-the-public Solar Fair, where a 5,000-watt mobile solar system built by students demonstrated how solar energy systems work. The Solar Fair also kicked off the Solarize Wise program, making it easier and less expensive for homeowners, small businesses, and farmers to install solar power in Wise County, Virginia. This fall AV will award two \$500 grants to teams of students for developing "Solar in Your School" projects. Earlier this year, Wasson testified before Congress on the impacts of the proposed Stream Protection Rule as it relates to the Endangered Species and Clean Water acts. Throughout his career Wasson is making a difference for our environment.

Rebecca L. Vidra, currently with the Nicholas School of the Environment at Duke University, earned her BS from The Ohio State University's School of Natural Resources. After graduation she was a naturalist with the Conservancy of Southwest Florida and later an AmeriCorps volunteer with the Nature Conservancy in the Florida Keys, training volunteers to monitor coral reefs, fish populations, and water quality. This experience fueled her interest in restoration ecology and, in 2000, led to an MS in ecology from the University of North Carolina. By 2003 the invasion of exotic species throughout the forests of the North Carolina Piedmont region spurred Vidra to obtain a PhD in forestry. That same year Vidra received The Garden Club of America Fellowship in Ecological Restoration to research the control of exotic plants in urban forest corridors.

Today Vidra teaches courses in ecology and ethics at Duke University and is a respected storyteller of restoration projects that heal not only nature but also communities. This summer, in an ecological diversity program based in Kaua'i called DukeEngage, Vidra is leading ten undergraduate students in collaborative work with local organizations. Informed by principles of native Hawaiian traditions blended with tenets of land management, their goal will be sustainable food production, specifically restoration of ancient fishponds, taro fields, coral reefs, and tropical forests. Vidra will lead weekly sessions bringing together students and local residents to create opportunities to share ideas and experiences.



Rebecca L. Vidra. Photo by Carlhey Bolz

Scholars pictured on page 41. Top row from left: Kevin Jeffery, Luisa McGarvey, Tyler Coverdale, Rachel R. Renne. Middle row: Elizabeth B. Powell, Johnny Buck, Meredith Martin, Soren Struckman. Bottom row: Nathan Jahnke, Leslie Touzeau, David Bañuelas, Samantha Apgar