

A Newsletter for IRREC Advisory Committee Members, Faculty, Staff and Students

**From the Director**



Photo by  
Velma Spencer

On behalf of the University of Florida administrators, staff and students, both current, and those who have graduated, I would like to take this moment to thank all of the organizations, families and personal donors who support our students with scholarships.

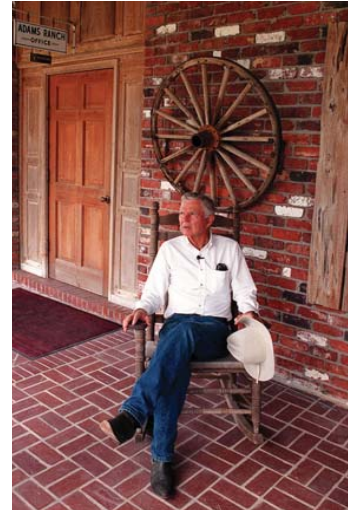
For the last academic year, IRREC students have been honored with \$12,000 in scholarship funds towards bachelor's and master's degrees, and doctoral work as well. For many of the students, the scholarship awards make a profound impact on their ability to pursue their academic dreams.

Organizations which have provided generous scholarships to our students are: The Garden Club of Indian River County, The St. Lucie County Master Gardeners, Martin County Master Gardeners, and, the Fort Pierce Garden Club. The University of Florida/IFAS College of Agricultural and Life Sciences has provided two separate memorial and university awards.

Private scholarship donor organizations were: the Bud Adams Family, and the Simpson Family Foundation.

I applaud the generous service to deserving students the organizations and families bring to our students.

Legendary local agriculturalist, ecologist and photographer, Alto "Bud" Adams Jr., and his family, have contributed \$10,000 to IRREC students who were recognized with the "Bud Adams Family Scholarship Award"



Please recognize the student recipients' accomplishments as they are presented in this newsletter. We thank each scholarship donor and each student who accepts and applies these valuable scholarship awards to their own betterment, and to the improvement of our environment, and to the industries we serve.

*Pete Stoffella*

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Cristina Pisani and Dr. Ritenour

## Bud Adams Family Scholarship Award Recipient

### Doctoral Candidate, Cristina Pisani

with postharvest quality and technology; and, Dr. Ed Stover, a horticulturist and geneticist for the U.S. Department of Agriculture U.S. Horticulture Research Laboratory, adjacent to IRREC.

Additional UF/IFAS and USDA research scientists stationed in the Miami-Dade areas are also collaborating with the research. Annual value of Florida's avocado crop is ~\$13 million, with most of the six thousand production acres in Miami-Dade County. While citrus remains the most important crop along the Treasure Coast, many local citrus growers are eager to have alternative crops for cultivation.

The four scholarship awards were presented to her for distinguished academic performance. The awarding organizations are: the St. Lucie County Master Gardeners, The Bud Adams Family, the University of Florida College of Agricultural and Life Sciences, and the Florida State Horticultural Society.

From the University of Florida College of Agricultural and Life Sciences, she was awarded the Harold E. Kendall Sr. Endowed Scholarship. The scholarship is offered exclusively to UF graduate students enrolled full-time and who are pursuing studies in subtropical fruit with an emphasis on limes, avocados, and mangoes, including production and marketing.

The St. Lucie County Master Gardeners organization's members are highly trained gardeners who donate their time to serve the community's gardening interests. The group has provided local UF students with scholarships that total \$4,000.

**F**ort Pierce resident and University of Florida doctoral candidate Cristina Pisani garnered five academic awards in November 2014,

Pisani, who is pursuing a PhD in Horticultural Science at the UF/IRREC, is conducting leading research to protect Florida's specialty avocado crop.

The awards by which she was honored were four scholarships, and a second place award for an oral report presentation she made before the Florida State Horticultural Society meeting held recently in Clearwater, Fla.

The award-winning presentation was related to her dissertation research which focuses primarily on the fungal avocado disease known as laurel wilt, which is carried by the redbay ambrosia beetle, an invasive insect from Asia. Her research will continue for another two years and is expected to identify avocado genotypes that are resistant to the disease.

Pisani's doctorate research is being directed by Dr. Mark Ritenour, IRREC Associate Professor of Horticulture, whose expertise is

## Bud Adams Family Scholarship Award Recipients

### Doctoral Candidate, Liquang Li



Alto "Bud" Adams, at Adams Ranch

The Alto "Bud" Adams Family is a prominent agricultural family that has farmed in the Fort Pierce area for nearly 100 years. The family has provided \$10,000 to UF scholars studying at the Fort Pierce location.

Scholarship awards in the amount of \$200 are made by the Florida State Horticultural Society during the annual meeting events to promising students statewide.

Cristina earned a Master of Science degree in Plant Pathology at the University of California Davis and a Bachelor of Science degree in Biology at Florida International University.

For more information about Florida's avocado industry and the threat of laurel wilt, please access the website: <http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Save-the-Guac>.



Liquang Li, IRREC doctoral student

Liquang Li is pursuing a PhD in Soil and Water Science and is studying under the direction of IRREC Soil and Water Science Professor Dr. Zhenli He.

Her career goal is to become a leader in Earth ecosystem research as a participant in large-scale collaborative research group and projects.

She earned a Master of Science degree at Nanjing Forestry University in Ecology in 2012. Her Bachelor of Science degree, also in Ecology, was earned at the University of Science and Technology in Beijing.

She has served as a research assistant in the Key Laboratory of Forestry and Ecological Engineering and at the Research Center for Eco-Environmental Sciences.

Additionally, she worked as a teaching assistant Nanjing Forestry University.



## Bud Adams Family and Garden Club of Indian River County Scholarship Awards Recipient, Joshua Tveraas



Joshua Tveraas at work for Walt Disney World internship

Vero Beach resident Joshua Tveraas was recognized with the Bud Adams Family and the Garden Club of Indian River County Scholarship Awards.

Joshua is on the cutting-edge of sustainable food production. In his mid-20s, he started farming as a young child on his family's organic Vermont production operation. Growing up, he reared Quail, grew Christmas trees and harvested Polish walnuts and apples from the family's orchards. Quail is one of the many game birds he tended to; the nuts and apples are only two of the crops for which he was largely responsible.

Following completion of high school, Joshua found opportunities with the World Wide Opportunities on Organic Farms. He farmed abroad in the United Kingdom for

three weeks. Returning to the states, he for three years worked in Hawaii, cultivating a high-value specialty crop called Noni; he harvested other agricultural production opportunities in Colorado, New Jersey, and in New Mexico. In Albuquerque, he worked with what he regales as "the world's premier chili peppers."

Joshua's plans for a dooryard garden include: eight raised beds, container and hummingbird gardens, a hydroponic section utilizing vertical farming methods, fruit trees and a chicken coup. The Vero Beach garden is at this time only a plan because Joshua is home only weekends.

Away during the work week, he is employed as a Plant Science Intern at Walt Disney World, in the Land Pavilion at EPCOT. The position was originally offered to him as a 6-month stint inside the renowned amusement park's greenhouse

production facility. The internship is a nationally-coveted student opportunity--only nine percent of applicants are accepted. Joshua's original internship was extended for an additional six months due to a remarkable research proposal he made to his supervisors there. Of the 16 interns this year, he was one of only two approved for an extension.

Endorsed by Walt Disney World Co. multiple management levels, Joshua proposed a hydroponics model that will produce tenfold the amount of collard greens now cultivated inside the production greenhouse.

For the last six months, Joshua has devoted his time there to maintaining the greenhouse's vegetable production operations. His work includes pruning excessive vine growth from cucumber vines by hand so that nutrients will grow into the vegetables instead of into the trimmed away vines. He uses string to train the vines so that they will grow up and orderly, for easy access during care and harvest times. He uses wasps to find leaf miner pests when he sees the pests' trails on cucumber leaves. The wasps provide biological control for the leaf miners because they are the pest's natural enemies. Biological control works because the wasps will destroy the leaf miners before the leaf miners destroy the cucumbers.

Another of Joshua's tasks is to conduct "Behind the Seeds" specialty tours. Joshua has been recognized for "exemplary public speaking skills," which further enhance the guest experience. The tours take place alongside the attraction's popular "Living With the Land" boat ride that passes through the same greenhouse.

Joshua's research proposal at Disney's production greenhouse will fulfill part of his university degree program requirement. Joshua is pursuing a Bachelor of Science degree in Environmental Management at IRREC.

"Agriculture is the most important task humans perform because we all need food," said Tveraas. "We must grow so we can thrive and food is our fuel."

But, Joshua feels consumers do not have an appreciation for how food is produced and how valuable the knowledge would be to them if they knew how to grow high quality, high-nutrient food with cutting-edge methods. New engineering and science has revolutionized food production in recent years, he says.

Yet, much of the food Americans eat, he insists, is produced by large corporations far away from where the people are who will consume the food.

"My career goal is to create urban models nationwide for sustainable food crop production inside greenhouses, utilizing efficient hydroponics systems," he said.

His longer-term goals include employment with a government bureau that has authority over manufacturing and regulation of food production. He believes some food production must be moved to city environments. Large population areas must have the benefit of fresh food, he believes.

Joshua points to the EPCOT greenhouse as an ideal example for urban agriculture. The vegetables produced there are distributed for use in restaurants at the theme parks, or close to where the people are who will consume the crops--shortly following their harvest. He noted the space necessary to grow the crops is much smaller than traditional agriculture's wide-open real estate tracts; he explained the amount of water needed to produce the hydroponic greenhouse crops is a fraction of what is used in field crop production.

"I want to get my bachelor's degree and make things happen," he says eagerly. "Education is important, and so is experience with all the different facets of food production: plant healthiness relates to quality of life and longevity for people."

## New Graduate Student Joy Stanilka Honored with Indian River County Scholarship Award



Joy Stanilka was recognized with a Garden Club of Indian River County Scholarship Award

Sebastian native Joy Stanilka has been recognized by the Garden Club of Indian River County with an annual merit scholarship. The \$2,000 award will offset tuition expenses for her academic work at the University of Florida/IFAS Indian River Research and Education Center in Fort Pierce, where she is pursuing a Master's of Science degree in Environmental Horticulture.

Her graduate work is being supervised by Dr. Sandra Wilson, an expert in Environmental Horticulture, and a recipient of multiple national teaching and research awards.

Stanilka is an experienced biological scientist, having been employed at the U.S. Department of Agriculture U.S. Horticultural Research Laboratory in Fort Pierce, and at the University of Florida in Gainesville.



Joy Stanilka doing field research

For three years, she worked as a Biological Scientist and Laboratory Manager for the University of Florida, in the Food Science and Human Nutrition department. Her work there involved the study of bioactive compounds in foods, and their impact on human immunology.

At the U.S. Department of Agriculture U.S. Horticultural Research Service Laboratory, in Fort Pierce, she served as a Biological Science Aid. For nearly two years she was employed there, working in the Subtropical Plant Pathology division, researching applications of molecular biology for pathogens. Her time there included work with a fluorescent microscope, how to isolate genetic materials from tissue and, sequence genes.

During her employment at the University of Florida, she attended courses and completed a graduate-level certificate in Sustainable Land and Nutrient Resource Management.

Joy earned a Bachelor of Science degree in Pre-Health and Music from the University of Florida in 2007. She graduated Sebastian River High School, where she was enrolled in the prestigious International Baccalaureate program.



## Alex Kroenke Honored with Fort Pierce Garden Club Scholarship Award



**F**ort Pierce resident Alex Kroenke was recently recognized as the Garden Club of Fort Pierce's annual scholarship recipient. The \$1,000 scholarship will offset tuition expenses for his academic work towards a Master of Science degree in Environmental Horticulture at the University of Florida Indian River Research and Education Center in Fort Pierce.

Alex's career goal is to gain employment as a Foreign Service Officer with USAID, and represent his country abroad, while improving the quality of life for other nations' people. His interests are to support third world countries with horticultural and environmental restoration, as well as with agricultural enrichment programs to promote sustainability with agricultural production, and with environmental protection as it relates to horticulture and the preservation of natural landscapes.

His graduate work is being supervised by Dr. Sandra Wilson, an expert in Environmental Horticulture, and a recipient of multiple national teaching and research awards.

It was during his youth, while growing up in California, and in Quito, Ecuador, when Alex was immersed in agriculture and the production of commercial plants. He learned to appreciate plants and their value to the economy, and to the livelihood of his family and neighbors. Alex worked as a Postharvest Quality Control Manager for a rose plantation, Rosas Del Prado, located in Latacunga, about 50 miles south of Quito.

In addition to his academic work, Alex has been employed at the U.S. Department of Agriculture U.S. Horticultural Research Laboratory in Fort Pierce for four years, as a Biological Science Technician- Plants. His tasks include taking care of plants for multiple research projects in 26 greenhouses. Alex completed a prestigious volunteer position at the USDA-ARS lab under the direction of Research Entomologist Dr. Wayne Hunter, who directed Alex Kroenke's work to sustain a cell culture maintenance program over a 9-month time period.

At this time, Alex also works as a Professional Spanish Interpreter with Language Line Solutions.

Alex completed a Bachelor of Science degree in Viticulture Tree Fruits from California State University at Fresno in 1997, graduating Summa Cum Laude.

## Simpson Family Foundation Scholarship Recipients



**J**iaqi Yan was selected as a 2014 Simpson Family Foundation Scholarship Award recipient. A new IRREC graduate student, Jiaqi is pursuing a doctorate in Horticultural Sciences, with a minor in Plant Pathology.

Her graduate work is under the supervision of Dr. Mark Ritenour and involves postharvest technology for fresh fruit. Her career goal is to become a college professor and research scientist who will make contributions to agricultural production as it relates to postharvest science.

Jiaqi earned a Master degree in Processing and Storage of Agricultural Products, from China Agricultural University, the College of Food Science and Nutritional Engineering in 2011. She completed a Bachelor degree in Food Science and Technology in 2008, at the Northeast Agricultural University, College of Food Science and Engineering, in China.

An accomplished scholar, Jiaqi has been recognized with paper and scholarship awards, including "Excellent Paper on



The Simpson Family Foundation Scholarship was presented to IRREC officials by Mr. and Mrs. Mason Simpson, on behalf of their family, in May, 2011.

Their daughter, Adrienne Smith, graduated IRREC with a Master of Science degree in Environmental Horticulture. She is now pursuing a PhD in Horticulture at UF in Gainesville.

National PhD Student Forum on Food Safety and Human Health," and four scholarships from the universities she attended in China.

Jiaqi's research projects have been published or have been accepted for publication in science journals such as the Journal of Food Protection; the International Journal of Food Science and Technology; the Journal of Food Science and Food and Bioprocess Technology.

She is a student member in the American Society for Horticultural Science and the Florida State Horticultural Society. In addition, she is a member of the Horticultural Science Graduate Student Club. She served as a volunteer at the 126<sup>th</sup> Florida State Horticultural meeting.



## Simpson Family Foundation Scholarship Recipients



IRREC student Ashley Witkowski is employed at the USDA in Fort Pierce

**A**shley Witkowski has earned a Bachelor of Science degree in Environmental Management with a minor in Environmental Horticulture. She is IRREC's first student to have achieved status as an UF College of Agricultural and Life Sciences Honors Scholar. She graduated Summa Cum Laude.

A lifelong resident of Vero Beach, Ashley has devoted her career to sustain the region's renowned citrus industry. While earning the bachelor's degree, she has for four years been employed with the U.S. Department of Agriculture U.S. Horticultural Research Laboratory, where she contributes to science as a biological science technician, under the direction of Dr. Ed Stover, a horticulturalist and geneticist for the federal laboratory's horticulture and breeding unit, a citrus scion breeding program.

Ashley's work at the USDA laboratory involves management of a greenhouse in which citrus greening resistance experiments are conducted. At this time the laboratory's goal is to promote citrus trees resistant or tolerant to Huanglongbing, or citrus greening disease.

Ashley has continued with her education and is at this time pursuing a Master of Science degree here at IRREC.

During her undergraduate work, Witkowski was presented with a Simpson Family Foundation Graduate Student Scholarship Award, the Garden Club of Indian River County Scholarship and a Treasure Coast Gator Club Scholarship in honor of Ray and Beth Smith.

In 2010, she earned an Associate in Arts degree in Biology at Indian River State College, while dually enrolled as a high school student at Indian River Charter High School in Vero Beach. While a student at Indian River State College, Ashley earned a 2-year Quail Valley Charities Scholarship, awarded by the Dollars for Scholars program. A second scholarship was presented to her by Seacoast National Bank.

Her career goal is to continue her employment with the U.S. Department of Agriculture and gain advancement within the federal laboratory.

"Growing up in Vero Beach showed me how important the citrus industry is to Florida," said Ashley. "The ability to help protect the agricultural industry and help make citrus trees resistant to its most challenging disease is a wonderful opportunity."

## Martin County Master Gardeners Scholarship Award Recipient



Jennifer Brown in her palm tree grove

Jennifer Brown was honored with a Martin County Master Gardener's Scholarship Award for 2014, as well as for academic years 2013, and 2012.

She also completed a Bachelor of Science degree in Environmental Management with a minor in Environmental Horticulture.

Retired from a long and successful banking career, Jennifer and her family moved to Stuart about 10 years ago. It was then that she realized a passion for Florida native landscaping and for the state's natural resources.

To enhance her personal gardening interests she started taking courses at Indian River State College in horticulture and earned two degrees: an Associate in Arts degree in Forestry and Wildlife Ecology; as second, an Associate in Science degree in Horticulture Technology.

Meanwhile, she took up palm tree cultivation and now cares for an orchard of more than 80 palm trees.

She recently gained employment with the U.S. Department Agriculture at the Farm Service Agency here in Fort Pierce, as program technician. She previously held a full-time position as a nursery customer service specialist at Palm City Palms and Tropicals, LLC.

Jennifer's exemplary academic work with UF was recognized with a number of scholarships from local sources, as well as the UF College of Agricultural and Life Sciences. She also garnered the James H. Davis Memorial Scholarship from the National Foliage Foundation administered by the Florida Nursery, Growers and Landscape Association; and, a John F. Smoak Memorial Scholarship for students of agriculture.

## Pure Grown Aquaculture Scholarship Award Recipient



IRREC Doctoral student Bryan Danson working in the Aquaculture Hatchery

**V**ero Beach resident Bryan Danson was recognized with the Pure Grown Aquaculture Scholarship Award.

Bryan is never far from an aquatic fish tank. Having devoted his career to the care of aquatic fish, his current step is the pursuit of a doctorate in Fisheries and Aquatic Sciences at the University of Florida/IFAS Indian River Research and Education Center.

Under the direction of Dr. Cortney Ohs, who leads the aquaculture program at the Fort Pierce UF location, Danson's dissertation involves work with South

American catfish that consume algae. The research he said, is with an entire family of the catfish, called loricariidae, by their Latin name. Funding for his research was garnered from a coveted assistantship from the UF Fort Pierce location, and by from the Florida Tropical Fish Farmers Association. The later donates live fish necessary for the project.

"The idea is to release pressure on the wild fish populations," said Danson. "Harvesting fish from the wild populations in the rivers, bays and oceans causes overfishing but, hatchery-aquaculture raised fish relieves that problem."

In addition to the catfish study, Danson is working with projects for ornamental aquaculture, or fish used for display and enjoyment in public and private aquariums. The UF research department is working with staff at both SeaWorld and Walt Disney World theme parks, in an effort to spawn smaller sized fish than those spawned inside the adventure park tanks.

Currently a doctoral candidate, Danson has many years of experience working with aquatic fish in both marine tank and natural environments, along with two degrees. He earned a Bachelor of Science degree in Biology from Corpus Christi A&M, and a Master's degree in Marine Biology from the College of Charleston, in Charleston, South Carolina.

Bryan's career goal is to secure employment in a public aquarium setting, interacting with the public for educational purposes. In addition, he would like to conduct research projects for the advancement and protection of ornamental fish interests.





**T**he University of Florida/IFAS Indian River Research and Education Center serves as a research location where graduate students complete the research facet of their master's or doctoral work.

## IRREC Scholarships

The Bud Adams Family Scholarship Award

Simpson Family Foundation Graduate  
Scholarship Award

## Local Scholarships

St. Lucie County Master Gardeners  
Scholarship Award

Martin County Master Gardeners  
Scholarship Award

Garden Club of Indian River County  
Scholarship Award

Fort Pierce Garden Club Scholarship Award

Treasure Coast Gator Club Scholarships

Puregrown Aquaculture Scholarship Award

## UF College of Agricultural and Life Sciences Scholarships

Florida Regional Rural Scholarship

James H. Davis Memorial Scholarship

John F. Smoak Memorial Scholarship

The Indian River Research and Education Center News is published quarterly. To submit material or story ideas please contact editor Robin Koestoyo at [koestoyo@ufl.edu](mailto:koestoyo@ufl.edu), or (772) 468-3922, Ext. 103