

# 2014 IPBGG Highlights



Institute of Plant Breeding,  
Genetics & Genomics

Two of our most significant events for the year were our program (PRAC) review in January and the Institute Retreat in May. In spite of the last-minute schedule changes due to the January snow storm that paralyzed Atlanta and much of North Georgia, the review team, which included



Mike Azain (ADS), CJ Tsai (FANR), Shane Hamilton (HIST), and Charlie Stuber (NCSU), was able to receive input from faculty and students at all three locations. The team's report affirmed our strengths in diverse research and cultivar development programs, and made useful suggestions for additional ways to increase visibility and program appeal. We are currently working to add a PBGG Graduate Certificate option that may be of interest to students in other departments whose projects encompass a significant plant breeding component. Graduate Internship guidelines also have been established, and will be useful for students whose programs can benefit from such an experience.

Our annual retreat was held in Tifton, May 19-20, at the Tifton Campus Conference Center. New member speakers included Joe Knoll, Karen Harris-Shultz, and Soraya Bertoli, and Shelley Fincher provided an update on intellectual property as it relates to cultivars. Three University of Florida breeders, Fred

Gmitter (citrus), Sam Hutton (tomato), and Patricio Munoz (forages) spoke about their respective crops and breeding strategies, all of which are now taking advantage of molecular tools. We also were treated to samples of a product of the Florida tomato breeding program, Tasti-Lee tomatoes!



A highlight of the retreat was a tour and dinner at Pike Creek Nursery. Jimmy, Quay, and Jamie Allen demonstrated the epitome of southern hospitality with a beautiful indoor and outdoor setting including a reception featuring locally grown products. Students, faculty, and visitors were introduced to operations on a premier turf farm near Adel, GA, that provides quality turf to domestic and international customers.



The tour of sod fields and the sprig-washing facility was followed by social time and dinner.



Scott Sebastian from Pioneer delivered the keynote after-dinner talk on context-specific marker-assisted selection, enlightening the group on how industry is using genomic information in breeding.



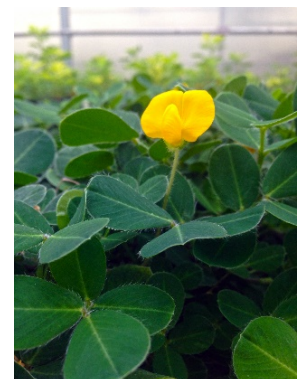
Both the poster competition and photo contest were well enrolled. There were three award categories, PhD, first place to Maria Ortega and second to Ben Stewart-Brown; MS, first place to Clint Steketee; and Postdoc/Staff, first place to Justin Vaughn. These are monetary awards that would not be possible without the support of our stakeholders.



The top prize in the photo contest went to Pawan Kumar for his stunning “Bolls at Sunset” (below).



Thanks to Josh Clevenger and Amy Weiser for organizing this new activity that brought together creativity, aesthetics, and our favorite research subjects (Stephanie Botton’s, Born to be Wild, right).



## Other Events

We welcomed a new administrative manager, Deborah Franco, who has quickly learned our operations and assisted Institute faculty and students with participation at numerous College, University, and Professional events and meetings. IPBGG partially funded travel for 4 students/postdocs to present at Plant and Animal Genome XXII in San Diego, three at the 15<sup>th</sup> Biennial Conference on Molecular and Cellular Biology of Soybean in Minneapolis, and one each at the American Peanut Research and Education Society Annual Meeting in San Antonio and the ASA-CSSA-SSSA Annual Meeting in Long Beach. The Institute was represented at the University's Sustainability Symposium in February, the Plant Center Retreat in October, and the Plant and Soil Interdisciplinary Symposium in November. Proudly, PBGG student Maria Ortega won first place in graduate student poster awards at the Plant Center Retreat, and second among presentations at the Plant and Soil Interdisciplinary Symposium, while Zach King took first place at the latter. Eight MS and twelve PhD students from Plant Breeding, Genetics & Genomics, Crop and Soil Sciences, Horticulture, and Plant Pathology made presentations at the Interdisciplinary Symposium.

## Graduate Students

We welcomed nine new students in 2014:

- Laxman Adhikari (Missaoui) - PhD
- Mary Campbell (Li) - MS
- Afia Karikari (Ozias-Akins) - PhD
- Walid Korani (Ozias-Akins) - PhD
- Yuji Ke (Ozias-Akins) - PhD
- Zhitong Li (Ruter) - MS
- Leynar Leyton Naranjo (Robacker) - PhD
- Brian Nadon (Jackson) - PhD
- Clint Steketee (Li) - PhD

Afia is a Borlaug Higher Education for Agricultural Research (BHEARD) Fellow, Yuji is a Provost's Scholar of Excellence, Brian is a Graduate School Assistantship recipient, and Zhitong is our IPBGG Assistantship recipient. Short bios of new students can be found under the current student section of our [website](#).

Six students completed their degrees:

- Ananta Acharya (Devos/Brummer) - PhD; Genetic Diversity, Population Structure and Association Mapping of Biofuel Traits in Southern Switchgrass
- Yanina Alarcon (Parrott/Monteros) - MS; Aluminum-tolerant Legumes
- Donna Harris (Boerma) - PhD; Identification, Mapping and Evaluation of Unique Sources of Soybean Rust Resistance
- Doug Heckart (Parrott) - PhD; Screaming Past Gene Silencing with Silent Mutations
- Tom Jacobs (Parrott) - PhD; Molecular Tools for Soybean Functional Genomics
- Clint Steketee (Raymer) - MS; Dollar Spot Resistance in Seashore Paspalum

Clint remains with us as a PBGG PhD student supported by a Soybean Board Fellowship and Donna is a Research Professional in the Center for Applied Genetic Technologies. Tom has moved to the Boyce Thompson Institute for a postdoc, Ananta is at Dow Agrosiences, and Yanina will be at the Noble Foundation.

Two students, Josh Clevenger and Ben Stewart-Brown, received Innovative and Interdisciplinary Research Grants for Doctoral Study from the Graduate School. Rajiv Parvatheneni won a Graduate School Dissertation Completion Award, Ben Stewart-Brown received the Glenn and Helen Burton Feeding the Hungry Scholarship Award, and Zach King received a Graduate Scholarship Award from

the National Council of Commercial Plant Breeders. Congratulations to all these students for their achievements!

The PBGG Graduate Student Association organized a Dow AgroSciences-sponsored symposium entitled “From Classroom to Career” in which UGA graduates, Glen Ritchie, Juan Rey, and Maria Monteros spoke about the transition from graduate school to professional life. Students from throughout the College attended.



The GSA also had a very successful fundraiser with their annual plant sale. Current GSA officers are Ben Stewart-Brown, President, Josh Clevenger, Vice-President, and Nicole Bachleda, Secretary/Treasurer. Students also organize and conduct journal club.



## Cultivar Releases

A part of the Institute’s mission is to develop improved crop cultivars through the integration of classical and modern genetic technologies. Plant cultivars released by Institute faculty contribute significantly to UGA’s royalty income (See Spring 2014 [Southscapes](#) magazine and Fall 2014 [UGAResearch](#) Magazine).

Cultivar or germplasm releases of pecan, muscadine, wheat, blueberry, soybean, *Vitex*, white clover, bermudagrass, and cotton were made in 2014.

Georgia became #1 in blueberry production in 2014, a noteworthy industry milestone that was reached due in part to Georgia’s blueberry breeding program led by Scott NeSmith,



Follow the institute at our website, [plantbreeding.uga.edu](http://plantbreeding.uga.edu), on facebook, and on twitter. Also check out our new recruiting [video](#) coordinated by Zenglu Li and Cecilia McGregor and posted on YouTube

