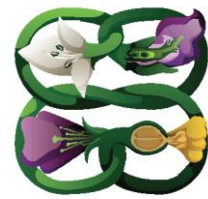


2015 IPBGG Highlights

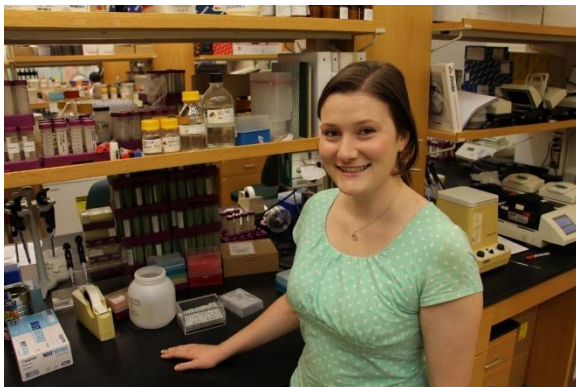


Institute of Plant Breeding,
Genetics & Genomics

In alignment with our mission to train graduate students and to support the University's initiative "to recruit world-class graduate students while expanding access to graduate programs," IPBGG increased graduate student enrollment by 15% from Fall 2014 to Fall 2015. As important as numbers is the quality of our student body evidenced by the scope of national, university, college, and institute awards our students received. These achievements are listed below.

Nicole Bachleda, MS student, received the

- ✔ 2015 E. Broadus Browne Award - M.S. division
- ✔ 1st place in poster competition at the Soybean Breeders Workshop



Zach King, PhD student, was recipient of the

- ✔ 2015 E. Broadus Browne Award - Ph.D. division
- ✔ 3rd place in poster competition at the Soybean Breeders Workshop



Clint Steketee, PhD student, received a

- ✔ United Soybean Board Fellowship
- ✔ The Grant A. Harris Fellowship from Decagon Devices
- ✔ Georgia Seed Association Scholarship



Josh Clevenger, PhD student, received the

- ✔ Bailey Award from the American Peanut Research and Education Society for best paper
- ✔ Glenn and Helen Burton Feeding the Hungry Scholarship
- ✔ James L. Carmon Award from UGA for creativity in computer applications



Ben Stewart-Brown, PhD student, received the

- ✔ National Council of Commercial Plant Breeders Graduate Student Award



Congratulations to all our award winners!

2015 Graduates

- ✔ Nicole Bachleda, MS (Li), Molecular Breeding for Improvement of Fatty Acids in Soybean
- ✔ Adam Bray, MS (Parrott), Characterizing Soybean Resistance to Kudzu Bug
- ✔ Rupesh Gaire, MS (Wilde), Allelic variation in candidate genes for ornamental traits in blueberry
- ✔ Zach King, PhD (Boerma & Li), Discovery and Deployment of Soybean Rust (*Phakopsora pachyrhizi*) Resistance (*Rpp*) Genes
- ✔ Yupeng Li, PhD (Jackson), Nodulation Gene Networks in Legumes
- ✔ Sandra Odonkor, MS (Devos), Quantitative Trait Loci (QTL) Mapping of Seed Weight, Pericarp Color, Bristling and Seed Shattering in *Setaria*
- ✔ Rajiv Parvatheni, PhD (Devos), Isolation, Characterization and the Dynamic Structure of the Pearl Millet *d2* Dwarfing Gene

Where Are They Now?

Adam Bray began a PhD at the University of Missouri and the Donald Danforth Center in St. Louis, Yupeng Li joined Eli Lilly and Company in Indianapolis as a Research Scientist, and Zach King is a corn breeder with Monsanto in Stanton, Minnesota. Others are still at UGA or in Athens completing publications or conducting research.

2015 New Students

Seven students graduated, but eleven students matriculated, 7 MS and 4 PhD!

- ✔ Tim Chappell, MS (Parrott)
- ✔ Silas Childs, MS (Li)
- ✔ Leigh Ann Fall, MS (McGregor)
- ✔ Davis Gimode, PhD (Ozias-Akins)
- ✔ Jacob Hoyle, MS (Parrott)
- ✔ Evan McCoy, MS (Parrott)
- ✔ Rasyidah Mohamad Razar, PhD (Missaoui)
- ✔ Luellen Swayzer, MS (Schwartz)
- ✔ Carolina Ballen Taborda, PhD (Jackson)
- ✔ Nathan Taitano, PhD (van der Knaap)
- ✔ Dung Thuy Tran, MS (Li)

New student bios were distributed at the beginning of each semester with more information on each student's background, current program and a photo.

To ensure the PBGG curriculum remains relevant to educational needs of students and the plant breeding community, a curriculum review was conducted under the leadership of Wayne Parrott. The need for a course on **Research methods and design in crop science** will finally be met with the development of this course by Jason Wallace, new faculty in Crop and Soil Sciences and a member of IPBGG. It is expected to be offered in Fall 2016. Jason also will offer 1-h courses in genomic selection and GWAS.

Student Activities

The PBGG GSA remained very active this year, holding their annual plant sale in April.



GSA officers who will continue to serve throughout this academic year are President - Clint Steketee, Vice President - Brian Nadon, Secretary/Treasurer - Tim Chappell, Webmaster - Mary Campbell, Journal Club - Evan McCoy, and Representative for UGA GSA - Jacob Hoyle.

Clint Steketee helped to organize Fall seminar speakers: Gary McMurray from Georgia Tech who spoke on 'Detection of Presymptomatic Plants and Trees', Bill Beavis from Iowa State who presented on 'Transforming Plant Breeding from an Agricultural Art to a Systems Engineering Discipline', and Vasilias Fasoula, Adjunct Institute Faculty, who presented on 'Prognostic Breeding'. Graduate students also helped to organize and participated in the annual Interdisciplinary Graduate Plant and Soil Symposium which IPBGG co-sponsored.

Students and postdocs were active in attending and presenting at national and international meetings. IPBGG travel grants partially funded various students or postdocs to participate in the 2015 Soybean Breeders Workshop (St. Louis, MO), Advances in Arachis Genomics and Biotechnology (Brisbane, Australia), and Plant and Animal Genome (San Diego, CA). Students also were awarded travel grants from the Graduate School, the Plant Center, and the Office of the Vice President for

Research for presentations at national or international meetings.

New Faculty

One affiliate and two regular faculty members joined IPBGG in 2015. Jason Wallace, Assistant Professor in Crop and Soil Sciences, will fill a need in research and teaching in the area of quantitative genomics. Jason received his PhD from Yale and completed a postdoc in Ed Buckler's lab at Cornell. More information on Jason's interests can be found at his website <http://wallacelab.uga.edu/> - and they clearly are broader than his website demonstrates - Jason took first place in the trivia contest at the Interdisciplinary Graduate Plant and Soil Symposium!



Esther van der Knaap, Professor, was recruited to the Department of Horticulture and IPBGG through a Presidential Hiring Initiative. Esther comes most recently from Ohio State University where she developed an internationally recognized research program on the regulation of fruit shape and size of tomato and other Solanaceous crops. Esther received her PhD from Michigan State.



Melanie Harrison, USDA-ARS, is the curator for warm season grasses at the USDA germplasm conservation unit on the Griffin Campus of UGA. The collection includes over 8600 accessions of forage and grain, ornamental and turf type grasses.



Melanie conducts cooperative research with some of our UGA faculty members and has been involved in ornamental grass cultivar development. Melanie received her PhD from UGA.

Faculty Awards

All faculty awards are not included here, but two continue the track record for recognition of UGA plant breeders. Jerry Johnson was named [UGA's 2015 Inventor of the Year](#) based on his



release of 44 small grain varieties during his tenure thus far with UGA. Jerry joins the ranks of other UGA plant breeders, Wayne Hanna and Roger Boerma in having received this award.

Wayne Hanna also was inducted as a [Fellow of the National Academy of Inventors](#), in particular for his development of warm-season bermudagrass cultivars. "His practice of extensive testing of potential plant cultivars in different environments resulted in cultivars

that are still in the marketplace today, unlike most plant cultivars, which have very short commercial life spans."



Annual Retreat

Our annual retreat was abbreviated this year since it was held in tandem with an international meeting, CROPS, that IPBGG helped to organize. Faculty, students, and staff gathered in the Student Learning Center in Griffin for their annual face-to-face meetings and a session on 'Professional Development Opportunities for Graduate Students and Postdocs at UGA' presented by Meredith Welch-Devine, Director of Interdisciplinary and Innovative Initiatives. CROPS was held at the HudsonAlpha Institute for Biotechnology in Huntsville, AL, where participants had the opportunity to tour the institute, including its Double Helix Park on Genome Way, and take part in the closing banquet at the US Space and Rocket Center. With around 350 attendees, the CROPS conference brought together speakers from 11 countries plus the US,

industry representatives, and scientists to provide excellent networking opportunities. Hops on the Helix with local food trucks and the Space Center were popular events. Stay tuned for a sequel event in 2017.



These releases provide a service to the industry along with income for reinvestment in our breeding programs. UGA breeding programs continue to be supported in part by the Cultivar Development Research Program.



Cultivar Releases

Crop improvement efforts continue to be realized through the release of new cultivars from a variety of crops including wheat, soybean, pecan, little bluestem, and abelia,

Follow the institute at our [website](http://plantbreeding.uga.edu), [facebook](https://www.facebook.com/plantbreeding.uga.edu), [twitter](https://twitter.com/plantbreeding.uga.edu), and [YouTube](https://www.youtube.com/channel/UC...).



Contact us at pbgg@uga.edu

Deborah Franco, Administrative Manager
Peggy Ozias-Akins, Director
Scott Jackson, Graduate Coordinator