

Thomas Gottilla
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EDUCATION

The University of Georgia, Athens, GA
Master of Science Plant Breeding, Genetics and Genomics Expected to Graduate May 2019

The University of Georgia, Athens, GA
Bachelor of Science in Applied Biotechnology (B.S.A.B) Expected to Graduate May 2019
Minor in Russian

Moscow State University, Moscow, Russia May 2015-June 2015
Visiting Student, Institute of Russian Language and Culture

RESEARCH

University of Georgia Institute of Plant Breeding, Genetics & Genomics Aug 2017-Present
Investigating the genetic basis of salt tolerance in seashore paspalum

- Currently conducting greenhouse trials to assess the performance of several genotypes under salt stress
- Performed DNA extractions on 150 *Paspalum vaginatum* accessions
- Conducted restriction digests of genomic DNA and prepared libraries for sequencing
- Utilized a bioinformatics approach to conduct SNP calling and confirm breeder records
- Evaluated data to recommend future directions of research
- Investigated gene family amplification in *P. vaginatum* using Exonerate, Geneious, and other bioinformatics software

WinField United Answer Plot Research Team May 2017-Aug 2017
Evaluating potential uses of high-resolution aerial imagery for small-plot research

- Assisted in the management of field trials of corn and soybean hybrids
- Coordinated data collection among multiple teams to ensure consistent research methods
- Analyzed and evaluated high-resolution aerial images for use in small-plot research at five sites
- Presented results to management and gave recommendations about future research implications

University of Georgia Department of Plant Pathology Jan 2015-May 2017
Investigating mating systems of fungal pathogens causing gummy stem blight

- Utilized genomic data to characterize the mating-type genes and mating systems of a recently described fungal species complex causing gummy stem blight of cucurbits

- Analyzed sequence data to determine genetic similarity and the role of selection pressure among mating-type genes towards the emergence of the species complex
- Conducted genetic and statistical analyses using computational tools such as Basic Local Alignment Search Tool, Geneious, DNASP, PAML, and others

Optimization of virulence assays of Fusarium oxysporum f. sp. vasinfectum

- Independently managed and conducted greenhouse inoculation trials
- Designed and utilized disease rating scales to obtain data for statistical analysis
- Prepared and maintained single-spore fungal cultures
- Performed statistical analyses of disease and yield data using JMP
- Used inferences from data and methods to advise future research

Exploring fungal diversity at the State Botanical Garden of Georgia

- Collected over 100 tissue samples from the field and performed DNA extractions
- Performed high-throughput DNA extraction and sequence analysis for the genetic identification of samples
- Currently formatting data for presentation to technical and non-technical audiences

University of Georgia Extension

Field Research Technician

May 2016-Aug 2016

- Assisted in field trials for treatments of pathogens affecting blueberries, blackberries, peaches, and apples
- Utilized plot maps to harvest and organize fruit for disease assessment independently and as part of a team
- Performed disease assessments in order to evaluate the efficacy of disease treatments on a variety of fruit pathogens
- Input data from disease assessments and performed statistical analysis (SAS)
- Interpreted data from disease treatment trials and analyzed results in written field reports

PUBLICATIONS

Sikora, E.J., Pitts, J., Brannen, P.M., Gottilla, T., Bock, C.H., & Hotchkiss, M.W. (2017). Plant Disease Management Reports: Efficacy of agricultural oil and fungicide combinations as a late dormant treatment for control of peach scab in Alabama, 2016(Report No. 11:STF002). Available at the Plant Management Network Website: <https://www.plantmanagementnetwork.org/pub/trial/PDMR/volume11/abstracts/STF002.asp>

Li, H.X., Gottilla, T.M., & Brewer, M.T. (2017). Organization and evolution of mating-type genes in three Stagonosporopsis species causing gummy stem blight of cucurbits and leaf spot and dry rot of papaya. *Fungal Biology*, 121(10), 849-857.

PRESENTATIONS

The College of Agricultural and Environmental Sciences Research Symposium, The University of Georgia, Athens, GA, Preliminary investigation into the genetic mechanisms of salt tolerance of *Paspalum vaginatum*, April 2018

The College of Agricultural and Environmental Sciences Research Symposium, The University of Georgia, Athens, GA, Improved virulence assays for *Fusarium oxysporum* f. sp. *vasinfectum* causing Fusarium wilt of cotton, April 2017

The Center for Undergraduate Research Opportunities Symposium, The University of Georgia, Athens, GA, Comparative genomics of mating-type genes in *Stagonosporopsis* species causing gummy stem blight of cucurbits, April 2015

HONORS AND AWARDS

- The Georgia Seed Association Scholarship Recipient, July 2018
- The CAES Undergraduate Research Assistantship, August 2016-December 2017
- Center for Undergraduate Research Opportunities Assistantship, January 2015-May 2016
- Member of the American Phytopathological Society, March 2015-March 2016
- Selected for The Honors Program at the University of Georgia
- Zell Miller Scholarship Recipient, August 2014-May 2018

CAMPUS AND COMMUNITY ENGAGEMENT

Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS)

UGA Chapter President, August 2017–May 2018

- Led the officer team in coordinating programs, meetings and required chapter activities
- Planned, coordinated and led meetings for the officer group and general body of the chapter

Region II National Undergraduate Vice President, May 2016-May 2017

- Served as point of contact between Region II MANRRS chapters and the National Office
- Responsible for organizing Regional Cluster conference to further the professional development of students

UGA Chapter Vice President, August 2015-May 2016

- Created and presented fall proposal
- Responsible for scheduling and receiving guest speakers from academia and industry
- Arranged and planned for the organization to participate in college-wide recruitment events

UGA Chapter Conference Co-Chair, August 2014-May 2015

- Assisted in preparing students to participate in the National Conference
- Responsible for logistical arrangements such as ground transportation and itineraries
- Coordinated Chapter of Excellence Packet (record of chapter achievements)

The University of Georgia Department of Biochemistry

Peer Learning Assistant (PLA), August 2017-December 2017

- Aided students in the completion of self-guided learning activities in an introductory biochemistry course
- Provided feedback in the design of lesson plans by instructors each week

The University of Georgia Honors Program

Honors Teaching Assistant (HTA), August 2015-December 2015

- Communicated to students the opportunities available through the Honors Program in the format of weekly seminars
- Assigned and graded small assignments
- Assisting student in developing portfolios

The University of Georgia Model United Nations

Committee Chair, September 2015-February 2016

- Led committee proceedings for the United Nations Office on Drugs and Crime committee at The University of Georgia Model United Nations Conference
- Researched relevant topics and developed background guides for conference participants
- Moderated communication and discussion of 60 students to facilitate the development of policy resolutions

Thomas Lay After School Program

Mentor, August 2014-May 2015

- Mentored elementary school students by assisting with schoolwork and overseeing recreational activities