SPECIES
Daktulosphaira vitifoliae

COMMON NAME
Phylloxera

PLANT HOSTS
Grape (Vitis species) Huckleberry

DAMAGE
Wart-like leaf galls Root galls on the rootlets

CONTROL
Use resistant rootstocks Pesticide treatment
INSIDE THIS ISSUE

4  Welcoming Remarks

5  Destination Ecuador by Julia Rycyna

8  New Student Profiles

9  Congratulations to our Graduates

10 Internship Highlight: Matt Borden

11 Program Exhibits, Activities, and Student Recruiting

12 Student Accomplishments

13 Alumni Spotlight: Dr. Bonnie Wells
Dear Alumni, Friends, and Faculty:

I continue to be amazed by the outstanding contributions of the DPM students, and 2019 has been an exceptionally productive year. Additionally, internship providers, stakeholders, and course instructors continue to notice the quality of our current students and alumni. The DPM Program is providing an unprecedented educational experience!

This edition of DPM News includes some of our student current achievements, but then it would not be possible to print a comprehensive list of all student and alumni accomplishments for the summer of 2019. The DPM Program currently has over 90 alumni, and we enjoy learning your successes when you share news with us! It’s great to be part of the DPM Gator Community—Go Gators!

I would also like to welcome one of our new fall semester students and the current lead newsletter editor to our team, Hannah Talton! I would like to thank our co-student newsletter editor, Alicia Kelley, for her work and service with DPM News as she will be graduating during the spring term of 2020.

As we conclude 20 years of the DPM Program, I would also like for you to mark you calendars for an exciting event that will occur at Steinmetz Hall in Gainesville, Florida on February 8-9, 2019: February Flora and Fauna Fest. This will be the first conference and public event associated with the UF, DPM Program, and we are planning on an annual event. The conference program will feature alumni speakers, hands-on workshops, and opportunities for continuing education units. Questions about February Flora and Fauna Fest should be directed to our primary student leader, Brianna Whitman (bwhitman@ufl.edu).

Thank you for your continued support of the UF, DPM Program!

Sincerely,

Dr. Amanda Hodges
Director, Doctor of Plant Medicine Program
During May 2019, seven students and the DPM Director, Dr. Amanda Hodges, went on a professional development trip to Ecuador to learn about different agricultural crops. In addition, we also got to see beautiful landmarks and learn about the history and culture of Ecuador.

**DAY 1 & 2**  
**Cuenca**

On our way to Cuenca we visited el Cajas national park. It was a beautiful place and it was amazing to be able to see the difference in the landscape as we drove up into the mountains. We visited the Cuenca museum provided a look into the history; however, it was the outdoor portion that was particularly interesting. The outdoor garden demonstrated the different crops that could be grown in the region, there was also ruins discovered and excavated.

**DAY 3**  
**UAE and ESPOL**

We visited Universidad Agraria de Ecuador (UAE) in the morning. Former DPM student Daniel Mancero showed us around his lab where he explained the projects he is working on, the classes he teaches, and general information about the goals of the university. We got to see some of the students at a student fair to educate and encourage high school students. The DPM program made him a very valuable asset to the university because he knew about several fields. Though he teaches entomology, he could be flexible with the universities needs and teach other subjects. UAE is a large university focused on getting a large amount of people educated in agriculture, whereas we would later visit Escuela Superior Politécnica de Litoral (ESPOL) which focuses more on research. At ESPOL, former DPM student Lisabeth Espinoza showed us her lab where she teaches entomology. Like Daniel the degree provides her flexibility in teaching courses as she taught botany the previous semester. We also got to visit a UF Alumni in the Soil and Nutrition lab to learn about his research in cacao and cadmium. It is great to be able to connect with Alumni and understand how diverse career choices are after
graduation and what sorts of impacts, no matter how small or large, we can make through education.

**DAY 4**

**Cacao and coffee farm**

**Tropical flower packing house**

We visited one of the farms in the Hacienda Victoria company. While their website boasts about their cacao production, the farm we visited focused on coffee. We got a chance to see the different stages of coffee berry development and how coffee is harvested and processed. They explained that the coffee borer beetle is the primary pest and prepared plant material to show us the damage.

The tropical packing house operation also had a cacao farm. We learned about how the flowers are prepared for shipping and the cacao is processed. There are different cultivars of cacao that do not have as many problems with disease or pests. For Ecuador to compete with other countries which produce cacao cheaper, they focus on producing higher quality products that can justify a higher cost and be economical for the growers.

**DAY 5**

**Banana farm**

We learned about how it is a “walking” farm because the new son/daughter trees are chosen to grow after the parent tree has produced its crop. It was amazing to see how intensive banana harvesting is and that workers must go out several times to check when the different plants are blooming, fruiting, and ready for harvest. Then the post-harvest processing really brought the experience full circle to understand how long it takes a banana to get to me the consumer.

**DAY 6**

**Quitoloa lake**

Quitoloa lake is a lake that was created from an extinct volcano crater. The view and the water were breathtaking. At such a high altitude it was a difficult hike back up the crater; however, the experience was worth it.
DAY 7 & 8

Rose farms
Quito Botanical garden
Mitad del Mundo

We visited a rose farm that goes under the names Ecuatorian Flowers and Paola Flowers. It was interesting to see how different countries wanted different characteristics in their roses which resulted in so many different varieties of flowers. Like the coffee business, the rose industry is competing with other nations who can produce roses cheaper. Here the key is selling a relationship rather than a product. Having good relations keeps business stable. The requirements for breeding new cultivars are very detailed and not just for the appearance. Flowers need to survive transport, last two weeks after cut, and look beautiful. Also, it’s not just the flower that matters, large leaves can also provide good insulation for packing in addition to all the other methods they use to minimize the damage during post-harvest processing.

Our guide Cesar emphasize that EVERY rose has their own personality. The Quito Botanical garden was a great natural spot compared to the very urban and historical parts of Quito. So far we had learned about Ecuadorian history and Ecuadorian agriculture. Our guide was able to provide some of the histories of the plants in the gardens. We visited Mitad del Mundo is a national monument that was built on the equatorial band. The museum there provided some information about the different regions of Ecuador and how the people differed. So while we were unable to see everything ourselves it was very education to learn about the places we couldn’t get to.

Overall, this trip was a wonderful experience to not only learn about a new culture but to get to know the other students in the DPM program. The opportunities to learn are a great way to get potential or new students interested in the program.
NEW STUDENT PROFILES

JENNY GAVILANEZ-SLONE

Academic Credentials:
• B.S. in Plant Protection and General Agriculture – Zamorano University
• M.S. in Entomology – Oregon State University

Why DPM?
I first learned about the DPM program in 2000 from some friends and thought it was a great path to a doctorate emphasizing practical, applied plant protection given that my background is general agriculture, plant protection and entomology. Unfortunately, I moved away to Louisiana before I could apply, but later returned and was able to enter this exciting and very important program for plant health, the basic trophic level for a healthy ecosystem, which includes IPM. I am currently developing a biological control program with Dr. Henri Herrera at Escuela Superior Politécnica de Chimborazo for the invasive tropical fire ant Solenopsis geminata in the Galápagos Islands, Ecuador, using decapitating phorid flies. I am confident the DPM program will provide me with the tools I need to accomplish this challenging and rewarding task.

ANDY JEAN-LOUIS

Academic Credentials:
• B.S. in Agronomy – Escuela Agrícola de la Región del Tropico Humedo
• Enrolled DPM

Why DPM?
I graduated in agricultural sciences with a multidisciplinary degree. Even if I have always wanted to pursue a grad degree in Entomology, I also felt the need to have a broad idea and be able to apply a multi-faceted approach while trying to tackle plant challenges. When I heard about the DPM program, I took my time to look it up and I was excited to see that it was perfectly what I wanted.
We asked our Summer graduate to share a few words on his time as a DPM student and his next steps.

**DR. ARJUN KHADKA**

Four and half years at UF has been truly wonderful, although stressful at times. I graduated with MS (Entomology) last year and now it feels good to be able to finish up with the DPM degree. I have learned a lot during the program and thoroughly enjoyed all the projects and internships I was involved in. I would like to thank Dr. Hodges for mentoring me throughout the DPM program. All of the applied knowledge on plant protection, experiences and internships from the program will be useful for my future. After graduation, I am moving to Lexington, KY and from there the job search is on. When you want something, all the universe conspires in helping you to achieve it. (Paulo Coelho, The Alchemist).

Congratulations to our Summer 2019 Graduate! We wish you the best!
This summer, 4th year DPM student Matt Borden has been working for Bartlett Tree Experts at the Tree Research Laboratories & Arboretum in Charlotte, North Carolina. Matt spends most of his time in the diagnostics lab, examining samples of symptomatic trees and shrubs and writing recommendation reports. There is no shortage of fascinating plant problems, as the lab annually receives around 9,000 samples for diagnosis from Bartlett branches nationwide, as well as coordinating hundreds of foliar nutrient samples and around 16,000 soil nutrient analyses for prescription fertilization. The surrounding arboretum contains over 15,000 accessioned plants, including vast collections of conifers, oak, holly, elm, crapemyrtle, rhododendron, and the largest collection of magnolia cultivars in the world!

Matt has enjoyed the diagnostics work immensely, especially exposure to conifer pests and diseases from other regions. Outside of the lab, Matt has enjoyed lessons in structural pruning, proactive health care through tree inventory management, and ride-along opportunities with plant health care technicians and arborist representatives. A highlight of the summer was learning to climb and installing lightning protection cabling in a 110 ft sweet gum tree! He hopes that this job will open a new opportunity for future DPM students to gain experience in diagnostics and arboriculture.
**MAY**
- Ecuador officially signed an agreement with UF to allow for more collaboration between ESPOCH and UF.

**JUNE**
- DPM students, Keir Hamilton and Cleveland Ivey attended the Grace Marketplace 5th year anniversary.

**JULY**
- DPM students Sage Thompson and Keir Hamilton were featured in the news for their volunteer efforts at Grace Grows.
- DPM students Brianna Whitman and Keir Hamilton, attended an excellent Fruit Fly Workshop and recording session of taxonomic identification training by expert guest speakers.
- DPM alumni, Dr. Cory Penca organized a symposium at the Florida Entomological Society Meeting in Jupiter Beach, Florida.

**AUGUST**
- DPM student Arjun Khadka worked as an intern in Dr. Richard Raid Laboratory at the Everglades Research and Education Center (EREC), in Belle Glade, FL. on pineapple disease in sugarcane.
STUDENT
ACCOMPLISHMENTS

**MATT BORDEN**

We are pleased to congratulate our DPM student Matt Borden for receiving the 2019 Friends of Southern IPM Award.

**ALEX GANNON**

MS/DPM student Alex Gannon successfully defended his MS thesis entitled “A Sorghum Crop to Prevent Stink Bugs from Infesting Organic Tomatoes.”

**BRIANNA WHITMAN**

Brianna Whitman presented information on peachtree borer trapping at the FSHS annual meeting.

**ELEANOR PHILLIPS**

Eleanor Phillips presented some of the highlights from her MS work in olives at this year’s Florida Entomological Society Meeting in Jupiter Beach, Florida.

**SAGE THOMPSON**

Sage Thompson presented IPM information about Florida tomato crops to prepare for the annual tomato conference in Naples, FL.

**KEIR HAMILTON**

Keir Hamilton was featured in The Gainesville Sun newspaper for his work at the first UF Institute of Food and Agricultural Sciences Hemp Field Day workshop.
**Alumni Spotlight**

**DR. BONNIE WELLS**

**Why did you choose to enroll in the DPM program?**

I ultimately chose to enroll in the DPM program because of its interdisciplinary nature and holistic approach to plant health management. I had plans to pursue a PhD in Plant Pathology, but I began to struggle with the idea of choosing one crop and one disease to focus my studies on. The DPM curriculum covered all the important factors that affect the health of all plants in our biodiverse environment, and that was very exciting to me! I also liked the fact that when training plant doctors, the program focused on holistic and integrated solutions that ensure the health of not only plants, but also people and the environment.

**What is your current occupation, and how has your DPM degree aided you in the tasks and responsibilities associated with your position?**

I am currently the Commercial Horticulture Extension Agent for UF/IFAS Extension in Brevard County. My clientele are predominantly in the turfgrass and ornamental production industry. The DPM degree was excellent preparation for my extension career, as it provided me a broad-based knowledge applicable to many different production scenarios as well as equipped me with the integrated management know-how to find sustainable solutions to plant health problems.

**After graduation, what career paths/opportunities were available to you?**

One of the many benefits of the DPM degree has been that the career opportunities were numerous after graduation. I had offers for employment from crop consulting firms, private industry and extension positions in Florida and beyond.

**Are there any challenges that your DPM degree has helped you overcome?**

When I found myself transferring to a different county within Extension due to family relocation, my employment responsibilities changed significantly from vegetable production agriculture to turfgrass and ornamental production horticulture. Although I had little experience with turf or ornamental plants, I was able to make an easy transition because the DPM degree prepared me with a vast base-knowledge of how to solve health problems across all plant species.

**Do you have any advice for current DPM students?**

Study hard but have fun doing it! Take every opportunity to enjoy the short time you have with your cohort. You will miss them all dearly one day!
DPM STUDENTS

Jessica Awad
Florida, USA

Clayton Bania
Florida, USA

Matt Borden
Virginia, USA

Craig Frey
Maryland, USA

Alex Gannon
Florida, USA

Jenny Gavilanez-Slone
Florida, USA

Nick Goltz
Florida, USA

Keir Hamilton
Florida, USA

Andy Jean-Louis
Cap-Haitien, Haiti

Heather Kalaman
Louisiana, USA

Alicia Kelley
Indiana, USA

Arjun Khadka
Nepal

Amanda Long
Florida, USA

Eleanor Phillips
Tennessee, USA

Morgan Pinkerton
Florida, USA

Julia Rycyna
Maryland, USA

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Brianna Whitman
Idaho, USA

Doctor of Plant Medicine News
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Volume 17  Summer 2019 | 15