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Keith Schneider, Food Science and Human Nutrition Department
Jason Smith, School of Forest Resources and Conservation
J. Stacy Strickland, County Extension Director, Osceola County
Xin Zhao, Horticultural Sciences Department

DPM Student Organization (DPMSO)

Blaire Colvin, President
Ploy Kurdmongkoltham, Vice President
Matt Borden, Treasurer
Morgan Byron, Secretary
Amanda Hodges, Faculty Advisor

DPM Program Staff

Amanda Hodges, DPM Director
Elena Alynaya, Academic Advisor I
Greetings!

Welcome to this issue of DPM News, Volume XII, Fall 2017. The following highlights are included in this edition:

- A Faculty Highlight for Dr. Tesfa Mengistu, Assistant Professor and Extension Specialist of Nematology
- A Welcome to our new students: Michael Gonzalez, Amanda Long, and Susan Swartzfager
- Our first DPM Alumni Reunion Event
- Congratulatory Remarks for our Summer 2017 Graduate, Dr. Theresa Chormanski
- Our Alumni Spotlight, Dr. Rebecca Barocco
- DPM Seminar Course Highlights, DPMSO News, Student Accomplishments, and Much More!

I hope you enjoy reading DPM News, Volume 12, Fall 2017! Thank you for your interest in the UF DPM Program!

-Amanda Hodges, DPM Program Director

Inside this issue:

- Welcoming Remarks
- Faculty Highlight
- New Student Profiles
- DPM Alumni Reunion
- Program Exhibits, Activities, and Student Recruiting
- Congratulations to our Graduate
- Course Highlight
- DPMSO News
- Student Accomplishments
- Alumni Spotlight: Dr. Tatiana Sanchez
- If the shoe fits...

Faculty Highlight: Dr. Tesfamariam Mengistu

Dr. Tesfamariam Mengistu (see above photo left) is an Assistant Professor of Nematology in the UF Entomology and Nematology Department with a 45% extension, 30% teaching, and 25% research appointment. He also serves as the Director of the UF Nematode Diagnostic and Assay Laboratory on campus.

Dr. Mengistu received his B.S. in Plant Sciences from Alemaya University, Ethiopia, his M.S. in Nematology from the University of Ghent, Belgium, and his PhD in Soil Ecosystem Phytopathology and Nematology from the University of Bonn in Germany. Before coming to UF, Dr. Mengistu worked as a Plant Pathologist and Nematologist at the National Plant Protection Research Institute in Ethiopia and as a Post Doc at the University of Illinois working on research focused on nematodes that infect plants grown for bioenergy crops.

When asked what first got him interested in nematology Dr. Mengistu shared the following, “My interest in nematology all started by coincidence. At the time I was working at an agricultural research center in Ethiopia and there was no nematologist at the center. A IITA scientist contacted me and asked if I would be interested in participating in a nematode survey in Ethiopia. I accepted and had the opportunity to learn about nematodes and become trained in nematology. I’ve been studying nematodes ever since.”

Dr. Mengistu’s research primarily focuses on the biological control of major nematodes that occur in the U.S, specifically root-knot and cyst nematodes. In his research program...

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the lab utilizes metagenomic tools to understand the microbial communities associated with suppressive soils. Dr. Mengistu also serves as the Director of the UF Nematode Diagnostic and Assay Laboratory on campus. The assay lab runs more than 5000 nematodes samples per year and is busy year round. The assay lab provides sample submitters with the type and number of plant parasitic nematodes present in a sample, provides management recommendations, species level identifications using molecular sequencing, and participates in many outreach activities. As Director of the lab Dr. Mengistu oversees the daily activities of the lab, works on nematode identifications, and provides management advice to Florida growers. Dr. Mengistu encourages students to work in the nematode diagnostic lab as this is an excellent learning experience. To learn more about the UF Nematode Diagnostic and Assay Laboratory check out this website: http://nematology.ifas.ufl.edu/assaylab/index.html.

Dr. Mengistu teaches several courses including: Nematode Morphology and Anatomy (NEM 6101), Plant Nematology (NEM 5707 - online), Nematode Systematics and Molecular Phylogeny (NEM 6102), Nematode Diagnostics (NEM 6942), and Insect Parasitic Nematodes (NEM 6103).

Many DPM students take Dr. Mengistu’s courses while in the DPM program.

When asked what he most enjoys about his job, Dr. Mengistu replied, “I thoroughly enjoy the non stop research challenges I encounter and all of the interactions I have with many different types of students.”

Dr. Mengistu is supportive of the DPM program and currently administers the DPM Nematology comprehensive exam to all DPM students. He also served on the DPM committee and was the M.S. advisor for DPM student Lisbeth Espinoza. When asked to discuss the DPM program Dr. Mengistu stated, “I always tell my students that if I had the opportunity to go back to school I would get a DPM degree. The diversity and intensive nature of the program fully prepares students to excel in many different professions.”

Dr. Mengistu was asked to share some words of advice to our student readers. Dr. Mengistu shared the following:

“When we are no longer able to change a situation, we are challenged to change ourselves.”

-Victor Frankl

NEW STUDENT PROFILES

We would like to welcome our new Fall 2017 students!

Michael Gonzalez

Academic Credentials:

- B.S. in Horticultural Science with a specialization in Organic Crop Production — University of Florida
- M.S. in Entomology with a specialization in IPM — University of Florida

Why DPM?

I will be working with Dr. Oscar Liburd in the Small Fruit and Vegetable IPM Lab. I first heard about the DPM program throughout my time in the Entomology Department at UF. I joined the program because I wanted to focus my education on hands-on plant diagnostics. I want to own a farm one day, and the multi-disciplinary comprehensive curriculum of the program is perfect for me and my goals.

“You must do things you think you cannot do”

- Eleanor Roosevelt
Amanda Long

Academic Credentials:

- B.S. in Biology & B.A. in Music—Florida Southern College, Lakeland, FL
- Co-enrolled M.S. in Environmental Horticulture and DPM

Why DPM?

I’m a first generation Floridian; born and raised in Clearwater, FL. From early on in my childhood, I spent many weekends helping my grandmother tend to her garden and this, I believe, first sparked my fascination with plants. While pursuing my undergraduate education at Florida Southern College, I continued to nurture my love for plants by working in the greenhouse on campus and conducting research analyzing the phylogenetic relationship between ancient tea roses. From the greenhouse, I expanded my interests to large-scale agriculture and interned at the University of Florida Citrus Research and Education Center in a Plant Pathology lab with Dr. Evan Johnson. It was here that I discovered my passion for plant pathology. In June 2016, I attended the annual American Phytopathological Society Meeting in Tampa, FL and learned about the Doctor of Plant Medicine Program. I instantly thought this degree would be a perfect fit since it provides a broad, interdisciplinary background for future “plant doctors” and will help prepare me for a career in industry or extension.

In addition to the DPM degree I am also pursuing a Master’s in Environmental Horticulture with Dr. John Peterson. We are working on a project testing different rates of plant growth regulators to keep plants small for use in miniature landscapes as part of the Chinese art form, Penjing.

Susan Swartzfager

Academic Credentials:

- B.S. in Agricultural Education and Communication—University of Florida
- M.S. in Agricultural Education and Communication—University of Florida

Why DPM?

I have three grown children, two of which are Florida Gators and Agricultural Education and Communications graduates and one police officer that has attended South Florida and is completing his degree in criminology through SNHU. I have four grandchildren three boys and a girl. I live on KOKO Ranch in Lake Panasoffkee, Florida.

I retired from teaching after 30 years in 2015. I taught science and agriculture. I now grow Hoya species in a greenhouse on the ranch. I sell online around the world. I have several hybrids of my own and I grow hybrids for other people to evaluate and then disseminate if they are good enough. We also raise black angus cattle.

I came back to school because my customers ask me entomological questions about their plants and I needed a solid knowledge base to be able to answer those questions. I have for many years wanted to attain a doctoral degree but could not decide on a specialty. I love insects and plants so the degree of Doctor of Plant Medicine seems perfect for my purposes. I have really enjoyed the classes so far, especially Dr. Baldwin’s Principles of Entomology.

“Pursue what you love and what fascinates you, and the rest will follow.” - Mary Dell Chilton

“Develop a passion for learning. If you do, you will never cease to grow.” - Anthony J. D’Angelo
First DPM Alumni Reunion

The first ever DPM Alumni reunion was held on September 29, 2017 at the UF Entomology & Nematology Department building on campus. This was a great event that allowed DPM alumni to meet and interact with current DPM students and faculty. The event consisted of an afternoon session on September 29th followed by CALS Tailgator on September 30, 2017. The afternoon session started off with an overview and current status of the DPM program presented by program Director Dr. Amanda Hodges. Following Dr. Hodges’ presentation, a series of alumni presentations were given that represented the diversity of career paths that the DPM degree can lead to. The following alumni presented at the reunion:

- Dr. Tim Durham, Assistant Professor of Agronomy and Agricultural Science at Ferrum College presented “DPM and the Academic Perspective.”
- Dr. Leroy Whilby, Bureau Chief for Entomology, Nematology, and Plant Pathology at FDACS-DPI presented “A Career in Regulatory Plant Health.”
- Dr. Brianne Reeves, Innovation Specialist for North Carolina and Virginia at BASF presented “Industry - Opportunity and Innovation.”
- Dr. Denise Debusk, Extension Agent II at Alachua County Cooperative Extension presented “Government and Extension Opportunity with DPM.”

After the alumni presentations several students presented on different projects they have participated in while enrolled in the DPM program, showcasing the interdisciplinary experiences of DPM. The following students gave presentations:

- Blaire Colvin presented on Carinata Research
- Benjamin Waldo presented on Nematode Research
- Matt Borden presented on Ornamental Entomology Research and DPM Learning Experiences
- Morgan Pinkerton and Sage Thompson presented on Youth Outreach and Extension

Following the student and alumni presentations all attendees of the reunion had the opportunity to participate in a roundtable discussion led by a panel of DPM Alumni and Faculty. The topic of the discussion was “DPM - Communicating the Profession.” Attendees discussed the best ways to communicate the value of a DPM degree in different settings from multiple perspectives. And shared ideas to continue to maintain excellence and enhance the DPM student experience. This discussion facilitated a lively and productive discussion between students, faculty, and alumni.

Following the discussion DPH alumnus Kevin Korus gave a brief presentation about the similar Doctor of Plant Health Program offered at the University of Nebraska-Lincoln. The title of his presentation was, “The Profession- A Nebraska Perspective.” The afternoon session ended with a pizza reception that allowed time for students, faculty, and alumni to interact and continue to share experiences regarding the DPM program. Alumni and Students were encouraged to participate in CALS Tailgator which was held the next day. The DPM Alumni Reunion was a great success and we hope to continue to expand the event in the future.
Program Exhibits, Activities, and Student Recruiting

- **September 30, 2017** - DPM student Ploy Kurdmongkoltham, Academic Advisor I Elena Alyanaya, and Program Director Amanda Hodges represented the program at CALS Tailgator on campus. This is a great event to expose students and alumni to the DPM program. Alumni Dr. Tim Durham even stopped by the booth!

- **October 22-25, 2017** - Elena Alyanaya, Academic Advisor I, attended the ASA (Agronomy Society of America), CSSA (Crop Science Society of America), and SSSA (Soil Science Society of America) International Annual Meeting in Tampa, FL. This is a large meeting that many students from all over the country attend. Elena had the opportunity to speak with many potential future DPM students.

- **November 2-4, 2017** - DPM students Ploy Kurdmongkoltham, Matt Borden, and Ariane McCorquodale attended the FNGLA (Florida Nursery Growers and Landscape Association) Landscape Show in Orlando, FL. This was a great event to get the word out about the DPM program and what it has to offer. This event has over 7000 attendees.

- **November 5-8, 2017** - DPM Students Cory Penca, Morgan Pinkerton, Sage Thompson, Jessica Awad, and Matt Borden along with Program Director Amanda Hodges attended the ESA (Entomological Society of America) Annual Meeting in Denver, CO. This was an excellent opportunity to get the word out about the DPM program and allowed students to present their research. DPM Students Cory Penca and Matt Borden both placed 2nd in their respective sections of the Oral Graduate Student Competition!

- **November 14, 2017** - DPM Student Amanda Long, Jenny Carr, BRE Lab Manager, and Elena Alyanaya, Academic Advisor I represented the program at ABAC (Abraham Baldwin Agricultural College) Career Connections Day in Tifton, GA. This was an excellent opportunity to recruit students for the DPM program.

- **September - December, 2017** - DPM students Morgan Pinkerton and Sage Thompson led the DPM High School Outreach program this semester. The outreach program goes into high schools throughout the state to educate students on invasive species and plant biosecurity. The following events occurred: Sep 25 - three classes at Astronaut High School, Sep 27 - six classes at Buchholz High school, Oct 2 - five classes at Jupiter High School, Nov 13 - seven classes at Colonial High School, Nov 27 - seven classes at Space Coast High School, and Dec. 2 - class at Ormond Beach Environmental Discovery Center.

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Elena Alyanaya speaking to prospective students at ASA, CSSA, SSSA Meeting in Tampa, FL.

Amanda Hodges, Cory Penca, Sage Thompson, Matt Borden, Jessica Awad, & Morgan Pinkerton at ESA Meeting.

Elena Alyanaya and Ploy Kurdmongkoltham at CALS Tailgator.
I would like to sincerely thank Dr. Amanda Hodges, Dr. Kimberly Moore, Dr. Aaron Palmateer, Dr. Giblin-Davis, and Dr. William Kern along with all the other faculty that instructed me through the DPM program. These faculty worked for eight years to provide me with a multi-disciplinary and relevant education. I began the program when I started teaching as an instructor at Miami Dade College and as the Program Director of the Landscape and Horticulture Technology Program in 2009. Through the diverse curriculum and internship activities outlined by the program, I gained valuable instruction and experience in solving agricultural problems and finally graduated in 2017. During my program tenure, I was able to contribute to extension services, publications, presentations, and most importantly, pass on the material to my own students. Degrees should open doors; I believe that the education and experience I had in the DPM program has made me a better teacher, allowed me to earn faculty promotions, and provide scholarly publications. I look forward to continuing to make contributions in the field of agriculture with my DPM cohort, the past students, and the talented new students to come.

Plant Jumble
Unscramble the following words. Then compile all of the bolded letters in the words to solve the phrase at the bottom of the puzzle.

1. SEEDDAIS
2. TINESC
3. PRCO
4. NTIOHPAEQ
5. LSIO
6. SESPT

Everyone needs a …
**Course Highlight: DPM Seminar**

DPM Seminar (ALS 6931) is a required course for all DPM students and is typically offered in the Fall Semester of odd years. The course is taught by Program Director Amanda Hodges. The seminar course consists of a mixture of student led seminars along with a guest seminar series. The seminar topics and guest speakers change each semester the course is offered, so each DPM Seminar is unique. Students enrolled in the course are required to give one seminar on an assigned topic and write weekly summaries about each seminar given. Seminar topics covered by student presenters this semester included: organic agriculture, agricultural marketing and business practices, aquaponics, applied plant disease management, insect toxicology, precision agriculture and remote sensing, new Florida crops, and phytosanitary regulations. This semester there was a special group student presentation on Agriculture in Ecuador given by DPM students who participated in the DPM Ecuador trip over the summer. The guest speaker series this semester was called “DPM Career Pathways” and consisted of three alumni speakers. The following seminars were part of the series:

- Dr. Katherine Dover Koenig - DPM and the Law
- Dr. Scott Croxton - An Industry Perspective
- Dr. Sarah Taber - Ag Tech and Indoor Farming

The DPM Career Pathways seminar series was very beneficial for students as it showcased the diversity of DPM career paths and allowed students the opportunity to interact with alumni and get career advice.

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**DPMSO News**

**Another Fulfilling semester for DPMSO!**

**August** - We kicked off the semester with an ice cream social meeting where students reconnected and brainstormed ideas for upcoming events.

**September** - DPMSO held a student travel grant fundraiser and social at First Magnitude Brewing Company in Gainesville. Funds raised were put towards student travel grants to help DPM students travel to conferences and take educational trips. A fun time was had by all!

**November** - DPMSO members participated in Ag Literacy Day held by the Marion County Farm Bureau. DPM students volunteered and went into to K-5 classrooms in Marion county to teach about Florida agriculture with a focus on aquaculture this year. DPM students brought some critters along, which were a huge hit with the kids and great way to get them thinking about insects and Florida agriculture.

**December** - To end off a busy semester DPMSO held a holiday potluck at DPM student Craig Frey's house. Lots of delicious food was brought and members participated in a white elephant gift exchange. This was a fun way to end the semester and welcome in the holiday season!
Arjun Khadka
DPM student Arjun Khadka completed an internship with Dr. Jeffrey Bloomquist at Emerging pathogen institute (EPI), UF. His projects were: Selectivity of permethrin, carbaryl and matrine on Aedes aegyptii (L.) and Drosophila melanogaster (Meigen) and Assessment of toxicity of mixture of fatty acids and permethrin in three different proportions on Aedes aegyptii (L.). Congratulations Arjun!

Cory Penca
DPM/PhD Student Cory placed 2nd in the horticulture section of the Oral Graduate Student competition at the ESA (Entomological Society of America) conference in Denver with his presentation titled: "The Pest Status of Cat-Facing Heteroptera in Subtropical Peach Production." Congratulations Cory!

Craig Frey
DPM/MS Student Craig Frey presented his research titled: “A Comparison Of High Tunnel And Open Field Production Systems For Organic Spinach Production In Florida” and “Postharvest Performance Of Spinach From High Tunnel And Open Field Production Systems” at the Florida State Horticultural Society Meeting over the summer. This Fall he presented his research titled: “High Tunnel and Grafting Effects on Organic Tomato Production in Subtropical Florida,” “High Tunnel and Grafting Effects on Postharvest Quality of Tomato in Subtropical Florida,” and “Compost Application Method Affects Plant Establishment: A Case Study of Organic Spinach Production” at the American Society of Horticultural Science conference. Congratulations Craig!

Morgan Pinkerton
DPM/MS Student Morgan Pinkerton was selected as a recipient of the Plant Biosecurity NNF (USDA-NIFA National Needs Fellows) Scholar Fellowship. Congratulations Morgan!

Sage Thompson
DPM/MS Student Sage Thompson was selected as a recipient of the Plant Biosecurity NNF (USDA-NIFA National Needs Fellows) Scholar Fellowship. Congratulations Sage!
Alumni Spotlight: Dr. Rebecca Barocco

Q: Describe your academic background?

A: I obtained a BS degree in Horticulture at the University of Arkansas, Fayetteville in the fall of 2009. After graduating, I spent some time in the plant pathology department in Arkansas and then worked on a small CSA farm before deciding to pursue the DPM program from 2012-2016.

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

A: My current position is a Post-doctoral Associate in plant pathology at the UF/IFAS NFREC in Quincy, FL. I am part of the agronomy and plant pathology team working on carinata and peanut research. One of our current projects is to develop high-throughput phenotyping methods using imagery and computer vision. This data combined with other agronomic and disease management trials will ideally discover the best cultivars and management strategies for growing carinata in the Southeast. The imagery techniques we develop for carinata will be then be translated for use in peanut research in the summer. Because the DPM program is integrated across a variety of fields in applied crop science, it was a great preparation for my current position. Although I am technically in the plant pathology department, I am part of a cross-discipline team in field research. The DPM program also allowed me to take a variety of electives in GIS, precision agriculture, and Unmanned Aerial Systems (UAS), which are directly relevant to my current position.

Q: What prompted you to pursue your present career and where are you located?

A: From the start of my DPM program, I was interested in focusing on GIS and precision ag technology and quickly developed an interest in UAS imagery, environmental field sensors, and decision support systems (DSS). I was very fortunate to be hired as a post-doc in plant pathology on the main campus in Gainesville after graduating where I was able to explore some of these areas and how they can be useful for crop production. I was then recently given the opportunity to work more intensely in these areas by transferring to the NFREC in Quincy. It is also nice that the position has brought me closer to some of my family along the northern Gulf Coast area. Crop production is becoming more data-driven and automated, and I am excited about being a part of this transition. I hope to build a career where I can translate what I learn in this position to fruit and vegetable production as well as continuing to work with agronomic crops.

Q: Why did you choose to enroll in the DPM program?

A: I chose the DPM program, because the factors affecting crop production are so intertwined. For example, plant weakness due to poor water management can increase susceptibility to disease. I certainly think the knowledge obtained through specialists, such as genetic research, is vital to improving crop production. However, it’s important to step back and look at the whole picture, particularly when engaging in field research and production, and I personally prefer working in the field and on computers than working in the lab.

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We often find students wondering if the DPM program is a good option for them. By answering this short quiz you can see if the shoe fits!

1. Do you want to know more about plant disease management, arthropod pest or nematode management, crop nutrition and agronomy, or horticultural sciences?
2. Are you interested in hands-on curriculum that allows you to work in the field and/or in a lab, internships with local businesses or federal agencies, and interdisciplinary studies?
3. Do you aspire to work in academia, industry, extension, or regulatory?
4. Do you enjoy opportunities to get involved with community outreach, networking, and attending professional development workshops, seminars, and scientific conferences?
5. Do you prefer application-based science?

If you answered yes to most of the questions listed above, then we recommend that you explore your graduate career options with the UF DPM Program!
DPM Students

Interested in learning more about our current DPM students?
Visit our website at: http://www.dpm.ifas.ufl.edu/current_students.html

Jessica Awad
Florida, USA

Jamey Betts
Georgia, USA

Matt Borden
Virginia, USA

Morgan Byron
Florida, USA

Blaire Colvin
Florida, USA

Wael Elwakil
Egypt

Lisbeth Espinoza
Ecuador

Craig Frey
Maryland, USA

Alex Gannon
Florida, USA

Michael Gonzalez
Florida, USA

Brandon Jones
Florida, USA

Alicia Kelley
Indiana, USA

Arjun Khadka
Nepal

Ploy Kurdmongkoltham
Georgia, USA

Amanda Long
Florida, USA

Daniel Mancero
Ecuador

Ariane McCorquodale
Florida, USA

Cory Penca
Florida, USA

Eleanor Phillips
Tennessee, USA

Morgan Pinkerton
Florida, USA

Bruce Stripling
Georgia, USA

Taylor Smith
Florida, USA

Lanette Sobel
Florida, USA

Susan Swartzfager
Florida, USA

Sage Thompson
Florida, USA

Benjamin Waldo
Indiana, USA