NPDN News

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WORKSHOPS WRAP UP SENTINEL PLANT NETWORK SERIES

SPN Managers: Rachel McCarthy, NEPDN, and Dan Stern, American Public Gardens Association (APGA)

The Sentinel Plant Network (SPN) team wrapped up its second workshop series with two back to back workshops in July – first at Lauritzen Gardens, in Omaha NE and then at the Bloedel Reserve in Bainbridge, WA. While this series of workshops provided new SPN members with an introduction to the program's diagnostic and First Detector training resources, the primary objective was to demonstrate ways they can use SPN's interpretation and educational outreach materials to inspire and empower visitors to act as citizen scientists, monitoring their neighborhoods for potential pest and pathogen threats.

Lauritzen Gardens hosted the central SPN workshop on July 9 & 10. This event served 28 participants from 10 states and included representatives from 15 public gardens and USDA-APHIS. Spencer Crews, Lauritzen Gardens' Executive Director and Jim Locklear, Director of Conservation were gracious hosts, as well as their entire staff. Both Lauritzen's gardens and facilities were beautiful and proved to be a perfect venue for an SPN workshop.

The weather in Omaha was sweltering — with a "real feel" temperature of 110°F but participants were still eager to spend time outdoors in the gardens. The central pest/pathogen expert duo was made up of Kevin Korus, plant pathologist with the Plant and Pest Diagnostic Clinic, University of Nebraska-Lincoln (UNL), and Jim Kalisch, Extension entomologist, Department of Entomology, UNL. Despite the grueling humidity they provided an exceptional tour and provided all sorts of tips to help one improve their scouting techniques. Melissa Burdick, Director of Horticulture, provided the interpretive signage tour through the gardens.

© Rachel McCarthy, Cornell Univ.

Kevin Korus, plant pathologist from UNL examining leaf symptoms on the pest and pathogen walk (left). Julie Van Meter, State Entomologist with the Nebraska Department of Agricluture checks out a tree with borer damage.

The last workshop of the series served SPN's northwestern chapter and was held at the Bloedel Reserve on July 24 & 25. The weather was amazing — crystal blue sky and

NPDN National Plant Diagnostic Network

EDUCATE to DETECT

Special Training & Education Issue

- Diagnostic tip - new turf app
- Leveraging NPDN's First Detector resources
- IPM training modules for Master Gardeners, home gardeners and Green Industry professionals
- New online resources on BMSB, EAB, ALB and TCD
- *Plus:* a laboratory Director's thoughts on the Star-D process

pleasant temperatures in the seventies all week. Our meeting was held in the beautiful and cozy Education Center which comfortably fit 19 participants from nine public gardens in Washington, Oregon, Idaho and California. Ed Moydell, Executive Director welcomed our group with a brief history of the beautiful and unique property.

Andy Navage, Horticulture Director, led our interpretive signage and garden tour — a rather unique experience at the Bloedel Reserve as they do not display **any** form of signage, interpretive or directional, anywhere in the garden. For this reason three of the interpretive signs were outfitted with other participating gardens' logos so that those gardens could bring them home after the workshop concluded and utilize them in their own gardens.

This plant pathogen/pest expert team was made up of Marianne Elliott, plant pathologist from Washington State University-Puyallup, Sharon Collman, Extension entomologist with Washington State University, Snohomish County Extension, and Darren Strenge, horticulturist/pathologist, Bloedel Reserve.

Andy Navage, Director of Horticulture at the Bloedel Reserve, leads the group on the interpretive signage and garden tour.

This wraps up phase II of the SPN project but stay tuned…SPN will gear up for a third phase with new educational materials and workshops beginning in late fall. The Sentinel Plant Network is funded by USDA-APHIS through Section 10201 of the Farm Bill. For more information on SPN, visit www.sentinelplantnetwork.org or contact Rachel McCarthy at Rachel.McCarthy@cornell.edu.

SPN's interpretive signage series consists of three pictoral signs: a comprehensive sign, one on signs and symptoms and another featuring host plants. Five regionally significant threats are available including sudden oak death, thousand cankers disease, laurel wilt, emerald ash borer and Asian longhorned beetle. Each sign includes a quick response (QR) code which takes one to SPN's new mobile webpages - one for each threat. SPN members can download the signage templates, customize them with their garden's logo and have them produced at a local sign shop.

TIP OF THE MONTH

FREE TurfPath app

http://turfpath.com/about-turfpath/

Be sure to take advantage of the free Turfpath app designed by John Kaminsky at Penn State University. The app includes images and descriptions of diseases, insects and weed pests and updated control products. The app also includes several very nice videos that include dissecting and compound microscope images on how to diagnose several turf diseases. The TurfPath app is free.

Quality Corner

As we wrap-up a very productive and successful STAR-D development year, we thought hearing from a Diagnostician/ Laboratory Director that recently implemented the STAR-D program in her laboratory would be valuable to other NPDN members. Judy O'Mara of Kansas State University and the GPDN Regional Laboratory agreed to share with you her point of view and thoughts after preparing for and participating in a gap audit and auditor exercise. As you may recall from previous articles, Judy hosted the STAR-D team members and auditors at her facility in March of 2013. We really appreciate her very honest and straight forward comments about her experience and hope that you will find her comments valuable. Thank you Judy! — Karen Snover-Clift and Dawn Dailey O'Brien, Plant Pathology and Plant-Microbe Biology, Cornell University

It's Doable…We Did It; a Laboratory Director's Thoughts on the STAR-D Implementation Process

Judy O'Mara, Department of Plant Pathology, Kansas State University

Laboratory accreditation has been on the minds of diagnosticians for many years and the creation of the NPDN set the stage for the development of the program we now call STAR-D. This accreditation program for diagnostic labs is designed to improve quality management through better documentation. It is also the closet nightmare of every diagnostician and lab director. There is fear of the amount of work involved; a fear of lack of resources to accomplish the task; and a fear of the audit process (IRS anyone?? LOL). Those are pretty valid fears and it makes it hard to jump on the band wagon.

Nevertheless, I guess that is where I am, on the band wagon. Over the last few years, I've had the opportunity to attend STAR-D auditor training workshops at the University of Florida, Cornell and the Nevada Department of Agriculture. I thought the auditor program would give me insights into the STAR-D program and help us prepare the GPDN lab for when it went through an audit. It did. However, working on the STAR-D Quality Manual along with the preparation for the gap audit truly opened my eyes to what is needed for the program.

To undergo a STAR-D audit (and achieve lab accreditation) you need a Lab Quality Manual. As the STAR-D team members state quite often, "Say what you are going to do and do what you say you are going to do" (or something like that). This manual documents everything: personnel expertise and training; lab techniques; equipment and maintenance; record keeping; customer satisfaction; management review; corrective and preventive actions, document control and more. You get the idea. Lots of stuff. The idea of working on it felt overwhelming, but once we got started it was actually OK.

Dr. Fanny Iriarte and I spent about three solid weeks on it. Some nights it would be late and we would be laughing because there were so many sections and so many files. Honestly if we had to create this manual from scratch I would probably be bald. The Quality Manual template as well as other quality management system document templates created by Karen Snover-Clift, Dawn Dailey O'Brien and Anne Vitoreli along with the STAR-D working group members, gave us a great place to start the development of our documents. We took the Quality Manual template as well as the Quality Manuals developed by Cornell, UFL and the NDA read through them closely and decided which sections applied to the GPDN-KSU lab. Then we slowly built our Quality Manual based on the activities that applied to the GPDN-KSU diagnostic lab. It took work but it was achievable. Another lab could probably spend some winter down time putting one together.

Quality Manual in place. Check. Next step—Audit. Time to freak out? Definitely. Spring break 2013 at the beach right? Nope. In Kansas, undergoing the dreaded STAR-D audit. It turned out to be kind of cool. Weird right? Rather than a formal audit we went through a gap audit. The gap audit served as both an auditor training workshop and an opportunity to find out where we were in the STAR-D accreditation process. It was set up to help us identify areas that needed to be worked on. There were three groups of two or three auditors who handled different sections of the Quality Manual. The audit started at 8:00 in the morning and went until 5:30 that day. The auditors questioned different lab members about a range of activities. We talked and talked ALL day long. You would think audit/auditors—intimidating right? But it wasn't. Weirdly enough we spent the day talking to auditors who were also diagnosticians. It was like talking to people who actually understood what you do. It was a different experience than I thought it would be. It was useful! The next day the audit team provided feedback—which areas were working great and which areas needed work. The information didn't feel like a criticism of the program. Again it was just insightful and very useful. The audit team was professional, respectful and a very useful resource.

© Karen Snover-Clift, Cornell University

Dr. Fanny Iriarte, GPDN Regional Diagnostician, (left) explains a lab procedure to the auditors during the KSU laboratory gap audit in March 2013.

So how do I feel post-audit? OK. It wasn't as hard or scary as I thought it would be. Our next step is to fill in the gaps of our quality manual, work on implementing the quality system and then shoot for full STAR-D lab accreditation. There are still issues that need to be worked out about the program as a whole, but I think working towards STAR-D accreditation is doable and probably not as scary as people think it is.

Leveraging NPDN's First Detector Resources

Rachel McCarthy, Northeast Plant Diagnostic Network, Cornell University, and Gail Ruhl, Plant and Pest Diagnostic Laboratory, Purdue University

Over the last several years NPDN has been faced with reduced funding. These have been difficult times resulting in fewer committee calls and opportunities for professional development. Positions have been cut back or lost entirely.

Despite tighter funds our mission has not changed — to enhance national agricultural security by quickly detecting and identifying introduced pests and pathogens. NPDN's mission areas include: detection and diagnosis; training and education; and communication. We coined the now communal term "First Detector (FD)." Traditionally FD training has been carried out by diagnosticians. However, with reduced funding, more and more often one hears, "I'm not conducting FD training because I don't have travel funds." Luckily the NPDN has an entire online website for First Detectors — full of great resources and modules with self-tests and quizzes. We understand that online learning could never replace an on-site face to face experience but it is a tool to help during times of tight budgets.

E-learning offers the individual a self-paced, asynchronous learning environment

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We live in an increasingly digital world. Virtual meetings are held with participants from all over the world via technologies like Skype or GoToMeeting. "Google that" or "I need to Google that..." are phrases you hear throughout the day; so much so that there is a website called let me Google that for you. Regardless, people are always connected — at work via computers, to and from destinations on their smartphones or other mobile devices and home again to their preferred device to update, blog or learn.

webpage which links directly to the NPDN First Detector website www.FirstDetector.org. Call it low hanging fruit — something that anyone can create on their website with minimal effort or need for creativity.

At the end of the day, we all have the same underlying goals: to detect high-consequence pests early and to diagnosis them accurately and rapidly. People visiting your diagnostic lab website are a captured

audience. These individuals are already coming to your website to submit a sample or learn more about insect pests or diseases. Whatever their reason, they are coming because they are interested and want to know more. Most individuals who create accounts on the FirstDetector.org site are repeat users. That means they create an account and come back and complete multiple modules — often times again and again.

> Most individuals who create accounts on the FirstDetector.org site are repeat users...they create an account and come back – often times again and again.

Consider making a 'go-to' button on your website which links to www.FirstDetector.org and leverage the great resources available at NPDN's FD site. Promoting this educational opportunity will hopefully enhance the understanding of our clientele in the diagnostic process; possibly even provide a FD early detection success story! And we can all use a few more of those!

NPDN First Detector e-learning: the numbers

12, 735
NPDN e-learning modules completed since 2009

2,640
unique accounts on FirstDetector.org site

NPDN registered online
First Detectors
in 49 states, DC, Puerto Rico, American Samoa & Guam

new brown marmorated stink bug online resources

Researchers have published a list of 170 plants that the brown marmorated stink bug (BMSB) uses for food and reproduction, called Host Plants of the Brown Marmorated Stink Bug in the U.S. "This publication will be a living document, updated regularly on the web," said North Carolina State University researcher Jim Walgenbach, one of the scientists who contributed to the project.

The list is a companion to five short web videos about BMSB host plants that show growers how to monitor for damage and infestations. Topics span orchard crops, small fruit, vegetables, ornamental crops, and Pacific Northwest host plants and damage. The segments, which can also be watched as one 20-minute video, are the latest installment in the "Tracking the Brown Marmorated Stink Bug" series produced by the Northeastern Integrated Pest Management Center at Cornell University. Earlier videos explain history and identification, overwintering and spread, and monitoring and mapping.

BMSB has been detected in 40 states, posing severe agricultural problems in six states and nuisance problems in thirteen others. The insect threatens an estimated $21 billion worth of crops in the United States alone.

To view the list and videos visit:

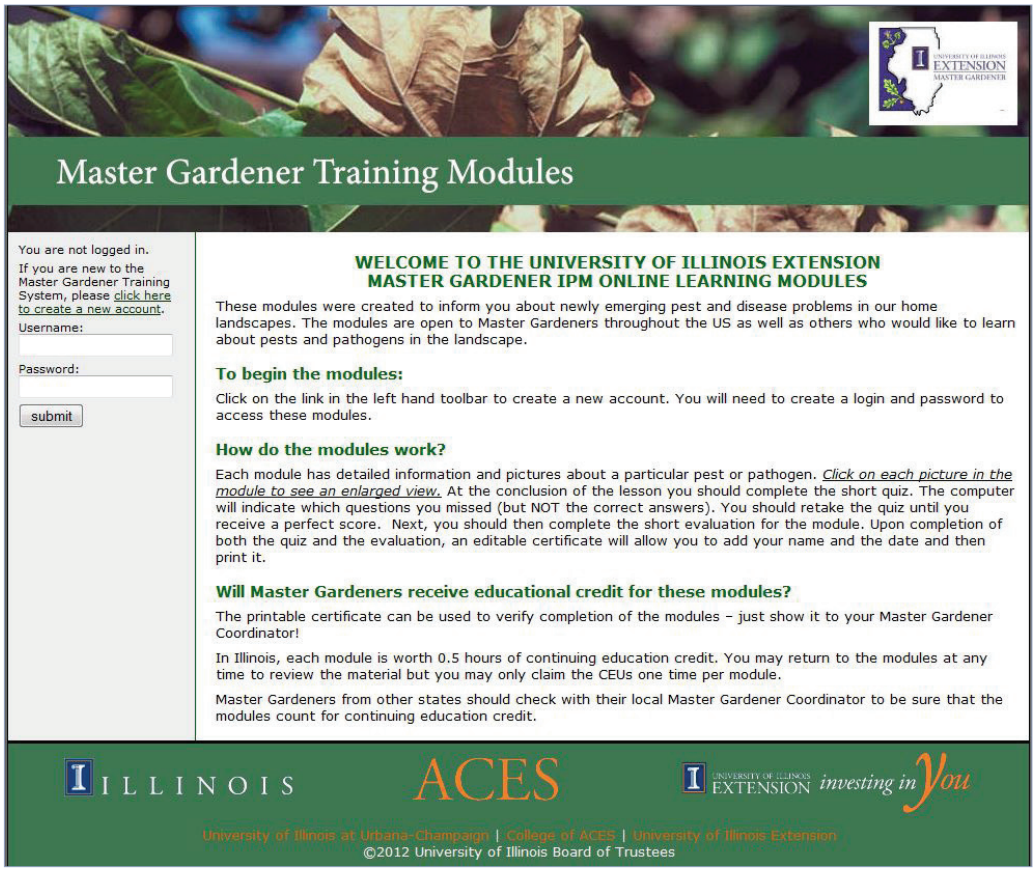
www.stopbmsb.org/stink-bug-bulletin/host-plants/

IPM Training Modules for Master Gardeners, Home Gardeners and Green Industry Professionals

Stephanie Porter, University of Illinois Plant Clinic and Monica David, University of Illinois Extension

Thanks to the Illinois IPM Grant, many University of Illinois specialists have been busy creating a series of online training modules which cover pertinent pests, weeds and diseases. Topics focus on newly emerging, exotic, or invasive pests as well as pests or diseases which have generated significant questions or concerns to Extension. Each module includes information on how to identify the pest as well as current management options — stressing those methods which offer the best long term control with minimal environmental impact. The modules were developed for Master Gardeners but can be used by home gardeners and green industry professionals. Master Gardeners throughout the North Central region having been using these modules as credit towards required continuing education hours and also as a reference to answer client home gardening questions.

The training modules can be accessed at the following link: http://mg.cropsci.illinois.edu/



There is no charge to use the modules but participants will need to go to the website and create a login and password. Currently these modules are available and more will be added in the coming months:

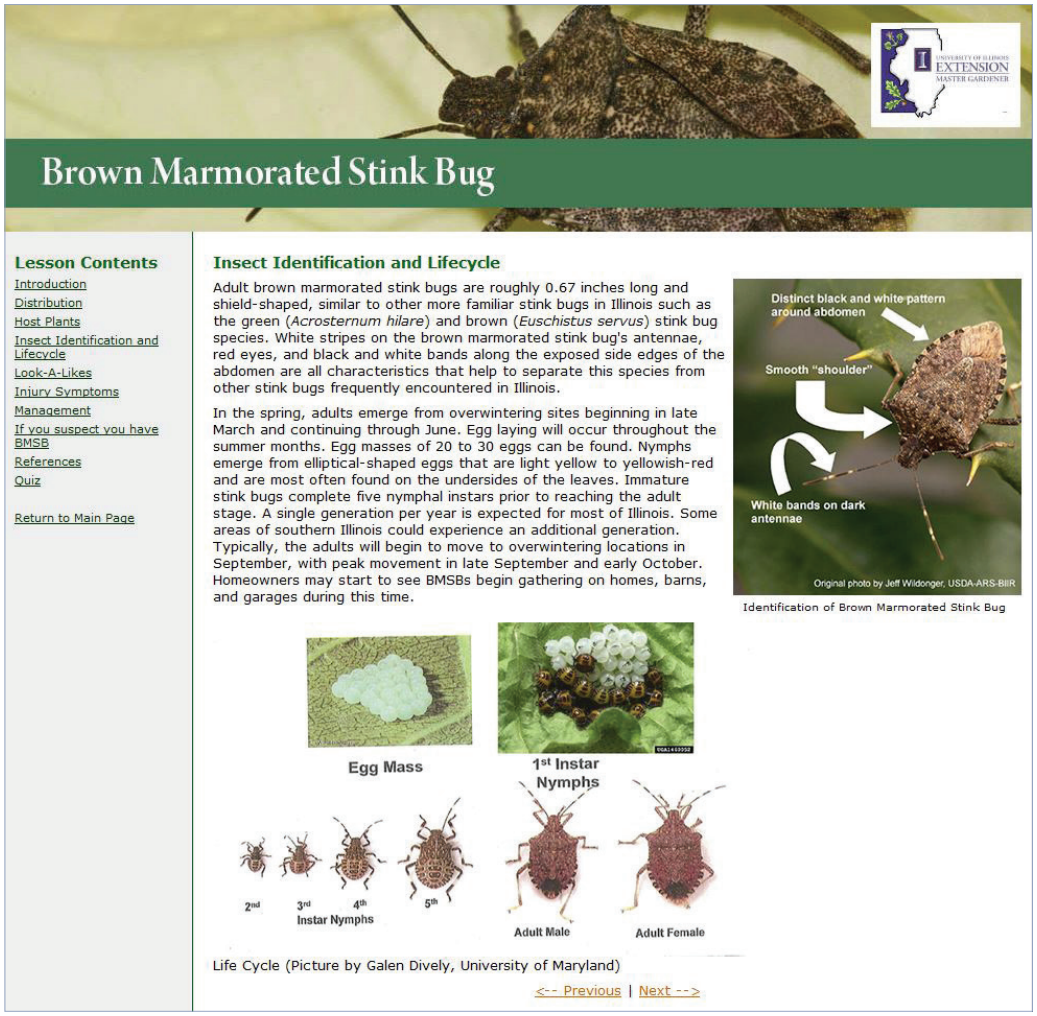
- Bacterial Leaf Scorch
- Brown Marmorated Stink Bug
- Sudden Oak Death (SOD)
- Thousand Canker Disease (TCD)
- Illinois Spruce Problems
- Downy mildew of impatiens and basil
- Emerald ash borer (EAB)
- Burr Oak Blight (BOB)
- Boxwood blight

Each module features information about the distribution/history of the pathogen or pest; host plant(s); pathogen or vector information; diagnostics, symptoms, look-a-like diseases which may confuse diagnosis; management and references. The modules also include many pictures and maps to enhance the learning experience. When finished, participants take a short quiz and complete an evaluation before being able to print a certificate of completion. In Illinois, each module is worth 0.5 hours of continuing education for Master Gardeners. Master Gardeners from other states should contact their local Master Gardener Coordinator to determine how much credit they will receive for completing a module.

Currently over 600 participants have completed at least one module. Evaluations show that overall for the eight modules respondents reported a 75% increase in knowledge of the pest after taking the course. As an example, evaluation results for the brown marmorated stink bug module, 123 respondents reported an 86% increase in knowledge after taking the module. They reported 85% confidence that they could identify the pest in the landscape and 80% confidence that they

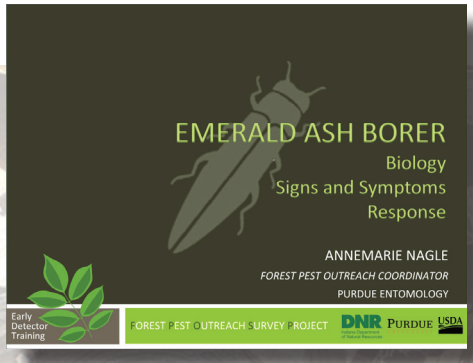
could teach others about the pest. They gave the module a 95% rating.

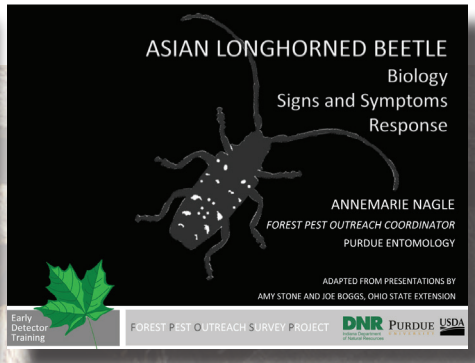
In 2007, the North Central Consumer Horticulture IPM Working Group conducted a survey to determine Master Gardener's knowledge and use of IPM. The survey was completed by 3,852 Master Gardeners region-wide with 624 Illinois Master Gardeners participating. Most Master Gardeners indicated that they are confident in using and recommending IPM practices. However, the survey showed that 81% indicated a need for more training in identifying diseases and insects. The primary goal of this project was to educate these volunteers in insect and disease diagnosis and then for these volunteers to educate the public, answer questions on IPM and promote wise gardening decisions.

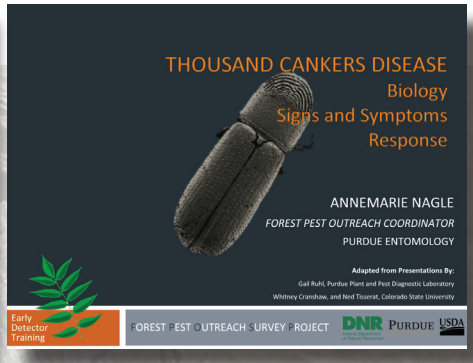


This project was supported by Extension IPM Coordination and Support Competitive Grant no. 2010-41534-21419 from the USDA National Institute of Food and Agriculture.

TRAINING WEBINARS ON INVASIVE FOREST PESTS IN INDIANA







https://ag.purdue.edu/entm/forestpest/Pages/early-detection-training.aspx

Invasive Forest Pests in Indiana

REGIONAL NEWS

Japanese Beetles are Back in a BIG Way!

Mary Kay Malinoski, Home and Garden Information Center, University of Maryland

We haven't had much of a problem with Japanese beetles in the last few years, but they are out in droves now! The Japanese beetle is a major pest of lawns and ornamental plants in Maryland. Adult beetles feed on more than 275 species of plants, but especially like plants in the rose family. Grubs feed on the roots of turfgrasses such as Kentucky bluegrass, fine fescues, ryegrasses, or bentgrasses. Although several species of birds feed on adult beetles, their efforts are insufficient to prevent injury to ornamental plants, and even the best insecticides will only provide temporary relief when adult populations are heavy.

Read more from Hort Tips — a new newsletter from the University of Maryland's Home and Garden Information Center. Look for the Educational Resources tab here http://plantdiagnostics.umd.edu/.

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JOB OPPORTUNITIES

The Plant Pathology Department seeks applicants for a Specialist in Cooperative Extension (CE) at the Assistant rank in the field of nut and fruit tree pathology. This is a full time, career-track position. The successful candidate will be expected to conduct original applied research in order to develop information that can be applied to management of diseases of nut and fruit crops in California, and to extend this information to grower clientele and other industry professionals. These activities will be closely coordinated with other disciplinary CE specialists at the Kearney Agricultural Research and Extension Center (KARE), with UC Agriculture and Natural Resources (ANR), county-based CE colleagues and others.

The link to the position and the application portal is at: https://recruit.ucdavis.edu/apply/JPF00101

For more information contact
Deborah Golino, CE Specialist, Department of Plant Pathology, UC Davis
(530) 754-8102, dagolino@ucdavis.edu

The Department of Plant Pathology at WSU is beginning a search for an Assistant Professor to focus on molecular/genomic aspects of plant-pathogen interactions. The position is part of a cluster hire, and the Entomology Department has a similar position. Anyone interested in either position is welcome to contact me for details.

For more information contact
Scot Hulbert, Cook Chair for Cropping Systems Pathology, Washington State University
scot_hulbert@wsu.edu

UPCOMING EVENTS

National Events

August 4–8, 2013
National Plant Board 2013 Annual Meeting
Louisville, KY

August 10–14, 2013
2013 APS-MSA Joint Meeting
Austin, TX

November 10–13, 2013
Entomology 2013
Austin, TX

Training/Workshops

May 2014
Bark and Ambrosia Beetle Academy
University of Florida
Gainsville, FL

PHOTO OF THE MONTH

dogwood sawfly larvae

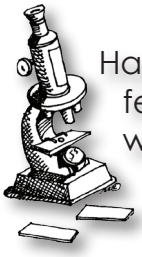
Macremphytus tarsatus

Brian Kunkel, University of Delaware, Bugwood.org

www.bugwood.org

CONTRIBUTE

Share Tips and News with Your Colleagues
Recently write an article for a trade journal? Do you have a tip, announcement, regional news or network update you would like to include in the *NPDN News*? Email Rachel McCarthy at rachel.mccarthy@cornell.edu



Have a tip you would like to share with your fellow diagnosticians? Or a technique you would like to learn more about? Email Gail Ruhl at ruhlg@purdue.edu

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NPDN
National Plant Diagnostic Network

USDA
National Institute of Food and Agriculture