

## Sentinel Plant Network Meeting at Longwood Gardens

Rachel McCarthy, Cornell University, Department of Plant Pathology and Plant-Microbe Biology

On January 20-21 the NPDN hosted a strategic planning meeting for a Sentinel Plant Network (SPN) at Longwood Gardens in Kennett

Square, PA. The meeting brought together public garden staff and representatives from the NPDN, the American Public Garden Association (APGA), USDA-APHIS, the US Forest Service, and North Central IPM Center. Members from across garden departments including

horticulture, IPM, and education staff and directors participated enthusiastically and represented gardens from all across the country and of varying size.

The Sentinel Plant Network is a cooperative project between the NPDN and the APGA and is funded through the Farm Bill by USDA-APHIS. Kerry Britton from the US Forest Service can be credited for the initial vision for the Sentinel Plant Network and along with others would like to see this network

grow to include an international component.

Representing more than 500 public gardens throughout North America, and membership in all 50 states in the US, APGA estimates that their gardens' combined visitors exceeds 60 million people annually. These gardens are already monitoring their collections, on some level, for pests and most gardens have education and outreach programs in place. The NPDN will provide the Sentinel Plant Network member gardens with educational materials and diagnostic support, should they need it. These gardens are in an ideal position to educate a large, diverse audience about pest detection and invasives.

George Hudler, Director of the NEPDN, is coordinating the NPDN portion of



Casey Sclar, Plant Health Care Leader, Longwood Gardens, Inc. giving participants a private tour of some of Longwood's seasonal highlights including a sneak peek at their Orchid Extravaganza.

### Issue Highlights:

- SOS in Arizona and Florida
- Diagnostic tip: Inducing *Phomopsis* to produce beta spores
- Bugwood image usage statistics
- Tribute to Jackie Marie Mullen
- New reports from the National Repository
- Upcoming webinars
- Xyleborini lucid key released
- CWR, GM and CBB regional updates



National Institute of Food and Agriculture

the project to develop targeted train-the-trainer materials for educating horticulture and IPM garden staff so they may improve their scouting skills and know when and where to send in a sample to an NPDN diagnostic lab. The NPDN will also create materials that the gardens can use to educate their other paid staff, volunteers and the public.



Sentinel Plant Network strategic meeting participants in the conservatory at Longwood Gardens. Photo courtesy of Jim Stack, Kansas State University.

Dan Stark, Executive Director of the APGA pointed out that several of the APGA's strategic goals fit well with the idea of a Sentinel Plant Network which includes

having public gardens serve as leaders in their communities, helping to raise awareness about preservation and conservation, and raising professional standards at their institutions. Dan Stern recently joined the APGA staff and will work with Dan Stark to recruit APGA member gardens to participate in the network. The ultimate goal is to have more people looking for pests and knowing when to send in something unusual. Given the vast number of people who work, volunteer and visit public gardens, the network is sure to be a success. 🌿

## Sweet Orange Scab Confirmed in Florida and Arizona

On January 10, 2011, the APHIS Molecular Diagnostics Laboratory (MDL) confirmed Sweet Orange

Scab (SOS) in a sample taken from a tangerine grove in Maricopa County, Arizona. APHIS issued an Emergency Action Notification (EAN) and initiated delimitation surveys.

On December 23, 2010, the MDL confirmed SOS in two samples of citrus fruit submitted from Florida. To date, there have been no detections in commercial groves. In response to these finds, APHIS issued EAN's to the property owners in Polk and Sarasota Counties requiring that fruit, leaves, branches, and other plant parts remain on the property. The bitter orange tree in Broward County has been removed.

APHIS confirmed the first U.S. detections of the disease in Texas, Louisiana, and Mississippi in July 2010. In response to these detections, APHIS issued a Federal Order (FO) on December 22, 2010, establishing quarantine areas for the entire States of Louisiana, Mississippi and Texas. APHIS is revising the FO to reflect the detections in Arizona and Florida.

[Click here](#) to read the official announcement. 🌿

**The new line up of Emerald Ash Borer (EAB) University webinars is available. For more information visit**

[www.emeraldashborer.info/eab\\_university.cfm](http://www.emeraldashborer.info/eab_university.cfm)

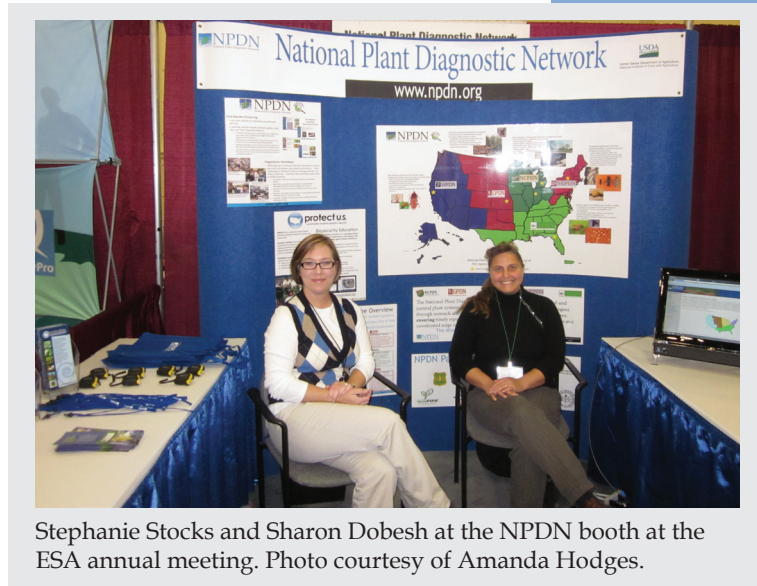


## NPDN Booth Well Visited at ESA Annual Meeting

Amanda Hodges,  
University of Florida,  
Entomology and  
Nematology Department



The NPDN had a booth at the Entomological Society of America's meeting in San Diego, CA, December 12-15, 2010. Approximately 1,000 attendees stopped by the booth, completed an informational quiz, and received prizes. Many of the booth visitors had never heard of the NPDN, but others were familiar with the NPDN and interested in program updates. NPDN e-learning modules were demonstrated 'live' on an interactive, touch-screen computer. Sharon Dobesh, Stephanie Stocks, and Amanda Hodges represented NPDN at the booth. 🌿



Stephanie Stocks and Sharon Dobesh at the NPDN booth at the ESA annual meeting. Photo courtesy of Amanda Hodges.



© Michael A. Dirr

*Larix kaempferi*, Japanese larch, habit in fall color. Photo courtesy of Michael A. Dirr's Photo - Library of Woody Landscape Plants.

### Sudden oak death is making the news again in the UK!

Read a recent article featured in *the Observer* here.

After reading this article, we decided to dig deeper to find a source for their information. In doing so, we found a couple of sites with useful links on where SOD is spreading elsewhere in Europe, host plants it has been found on, maps, as well as an earlier article "Sudden larch death" in *Nature*, *International weekly journal of science*, published August 2010.

[www.forestry.gov.uk/pramorur](http://www.forestry.gov.uk/pramorur)

[www.eppo.org/QUARANTINE/Alert\\_List/fungi/PHYTRA.htm](http://www.eppo.org/QUARANTINE/Alert_List/fungi/PHYTRA.htm)



# Diagnostic Updates

## Inducing *Phomopsis* to Produce Beta Spores

Charles Hodges,  
Professor

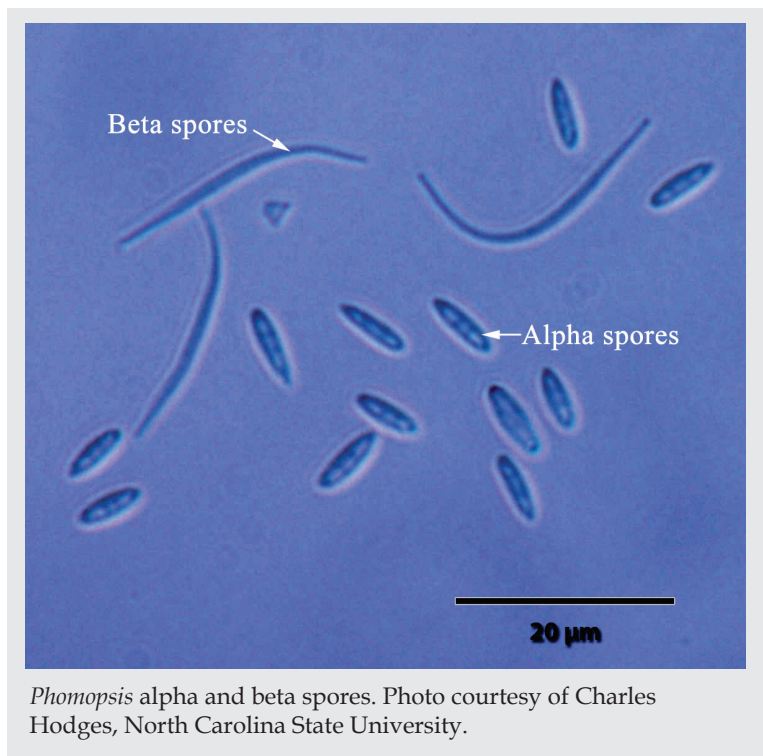
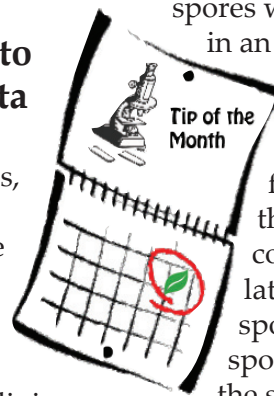
Emeritus, North Carolina State University, Plant Disease and Insect Clinic

For several years we have received samples into the clinic of dogwood with large necrotic leaf blotches, usually coming in late in the summer. Often there are pycnidia with spores already on the material, or they form

Often there are pycnidia with spores already on the material

soon after placing the leaves in a moist chamber. The spores are unicellular and hyaline, but without the typical mucoid appendage of *Phyllosticta*, and without the beta spores typical of *Phomopsis*. I have made mass conidial isolates many times, and although the cultures (which produce fertile pycnidia) are typical of those of *Phomopsis*, still no beta

spores were produced. As suggested in an article I remember reading, I placed cultures several days old (with immature pycnidia) in the refrigerator for a week, and then incubated them at room temperature under continuous light. Several days later the pycnidia were exuding spores, most of which were beta spores. Next year I plan to place the symptomatic leaves in the refrigerator for several days, and then into a moist chamber at ambient



temperature to see if that will induce beta spores to form on the host tissue as well. 🌿

Remember that all Diagnostic Tips are archived on our website.

Visit [www.npdn.org/newsletter](http://www.npdn.org/newsletter)

Click on Diagnostic Tips in the left navigation bar.

No login and password required. Hooray!





## Bugwood Image Usage Statistics

Joseph LaForest, University of Georgia, Center for Invasive Species and Ecosystem Health

Over 1,700 photographers have chosen to post images in the Bugwood Image Database. Many of these photographers need to have some measure of how their images are used to show impact of their work. Others, as reward for their hard work, just like to know how the images are used. We have been recording this data but we have never had a good way for users to access this information... until now! Here's how to get these reports:

1. Go to <http://images.bugwood.org>. Notice there is no WWW in the address!
2. Click on the icon for "Statistics". This is the last icon in the "Tools" section.
3. Sign in. Use your Username and Password. If you do not remember what yours is, the links to reset your information is directly below the username and password blanks. If you don't have one, you don't have images in the system...so there will be no reports.
4. Select the reports you want to see. There are three types of reports:

### IMAGE USAGE REQUESTS (SUMMARY)

If someone requests to use an image, their request will be indicated here. You will also see the top 40 images that have been requested.

### IMAGE USAGE REQUESTS (DETAILS)

This report shows all of the details for the individual requests and has links to the images that were requested. This includes ALL requests (commercial, educational, and personal) rather than just the commercial request notifications that some photographers receive.

## VIEWS OF THE IMAGE DETAIL PAGE

Any time a person looks at the webpage containing the details for a specific image, we record the visit. This report summarizes that data.

5. Select the dates that you want for the report. The default time period all reports is the past year, but you can choose any set of dates that you like.

Many people viewing their statistics page will also notice that there are multiple sections on the page. Each section has the same three types of reports but the report is customized to show stats for a different set of images. Possible sections include:

## BUGWOOD

Image Database System  
[images.bugwood.org](http://images.bugwood.org)

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### Image Request Summary

**Photographer:** Joseph LaForest  
**Dates:** 12/15/2009 to 12/15/2010

**Request Summary Statistics**

- Number of Personal requests: 184
- Number of Educational requests: 133
- Number of Commercial requests: 37
- Total Number of Requests: 354
- Total Images Requested: 603

[View Details of these Requests](#)









































**Change Dates**

12/15/2009  Start Date  
12/15/2010  End Date

[Submit new dates](#)

Long intervals will increase page load times and will require patience while the page loads.

### Top Images

1-10		11-20		21-30		31-40	
Image	Requests	Image	Requests	Image	Requests	Image	Requests
	100		14		5		2
	99		12		5		2
	41		12		4		2
	35		11		4		2
	26		10		3		2
	26		9		3		2
	24		7		3		2
	23		6		2		1
	20		5		2		1
	15		5		2		1

**STATISTICS FOR YOUR IMAGES.** This is the default that most users see.

**STATISTICS FOR IMAGES THAT YOU ARE A CONTACT FOR.** Not all photographers are the contact for their images. This lets people who are managing the images

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of others to get the statistics they need either by photographer or as a combined report.

for your organization and I'll get the Organization Profile Page created and the reports available.

**BUGWOOD**  
Image Database System  
images.bugwood.org

**Image Requests Details**

Photographer: Joseph LaForest  
Dates: 12/15/2009 to 12/15/2010  
Summary: 603 Images Requested in 354 Requests

Change Dates  
12/15/2009 Start Date  
12/15/2010 End Date  
Submit new dates  
Long intervals will increase page load times and will require patience while the page loads.

View Image Request Summary

Date	Use Type	Requested From	Publication / Company / URL / Comment	Requestor	Images Requested
11/28/2010	Educational	Forestry Images		Aliakbar Maghsoudi moud Kerman University	5405463
11/23/2010	Commercial	IPM Images	Encyclopedia of Invasive Species ABC-CLIO I am the author of the plant volume of a 2-volume set on invasive species in the US. The set will be reference/library material, with the intended audience high school, undergraduates, or any interested persons. Photos will be changed to B&W and set in a composite to show the various parts of the plants. If desired, I will send each photographer a draft, both text and mock-up of photo composite, of the entry that the photo(s) will be part of. I have previously published 2 volumes (Desert Biomes, Arctic & Alpine Biomes) of Greenwood Guides to Biomes of the World. Many thanks! Joyce A. Quinn, PhD Professor Emerita of Geography California State University Fresno.	Joyce Quinn Greenwood ABC-CLIO	5391522 5391525 5391530
11/18/2010	Educational	Forestry Images		Aaron Bergdahl North Dakota Forest Service	5025082
11/10/2010	Commercial	IPM Images	Natural processes and Human Impacts Springer	Sergey Govorushko Pacific Geographical Institute of Russian Academy of Sciences	5025082
11/5/2010	Educational	Forestry Images	Public training on recognizing tree hazards	Marty Shaw Happy Tree	2187071 5177098 5177099 5177100 5191065 5291032 5394947 5394964
10/27/2010	Personal	Insect Images		Lucas Taliberti	5137039

**STATISTICS FOR YOUR ARCHIVE.**

Various organizations have asked for a way to group their images into an archive despite the fact that the different photographers have moved on and have their images associated with other organizations. A prime example of this has been the Ohio State Weed Lab Archive (<http://www.weedimages.org/browse/Archivethumb.cfm?Arc=1>) which has had many grad students, post docs, researchers, and staff working in the program over the years and wanted to have a way to highlight the images captured while they were at the Ohio State University. The result is a substantial collection of images with photographers from multiple organizations including USDA-ARS and The Presidio Trust. 🌿

**STATISTICS FOR YOUR ORGANIZATION.**

These reports are available to any organization that has created an Organization Profile Page. It shows the usage of images from the entire organization and you can look to see where you rank. If you do not see your organization reports, e-mail me a logo, website url, and description

**BUGWOOD**  
Image Database System  
images.bugwood.org

**Image views summary**  
Organization: University of Georgia  
Publicly Available Images: 16,386  
(as of 12/15/2010)  
Dates: 12/15/2009 to 12/15/2010

**Image Views Summary Statistics**  
Views on Forestry Images: 1,056,891  
Views on IPM Images: 431,079  
Views on Invasive.org: 305,513  
Views on Insect Images: 182,694  
Views on Weed Images: 3,222  
Total Image Views: 1,979,399

Change Dates  
12/15/2009 Start Date  
12/15/2010 End Date  
Submit new dates  
Long intervals will increase page load times and will require patience while the page loads.

**Top Images**

1-10		11-20		21-30		31-40	
Image	Views	Image	Views	Image	Views	Image	Views
	2,158		982		796		695
	1,934		956		796		682
	1,340		944		795		670
	1,153		902		789		662
	1,151		879		766		658
	1,116		866		755		644
	1,097		859		731		631
	1,063		819		716		631
	1,060		803		713		630
	1,001		801		712		624

## JACQUELINE (JACKIE) MARIE MULLEN 1945-2011

Jacqueline (Jackie) M. Mullen, age 65, passed away on January 23, 2011 at her home in Auburn, AL. Funeral services were held at Auburn United Methodist Church Founders' Chapel in Auburn, AL, on Friday, January 28.

Jackie was born on October 30, 1945 in Boston, MA, the only child of Cyril M. Kupec and Ruth H. Roberts. She lived in Rhode Island until she was 15. The family then moved to Randolph, MA, where Jackie graduated from Randolph High School in 1963.

She attended Northeastern University (Boston), receiving her B.A. Degree in biological sciences in 1968. She met her future husband at



Northeastern during their senior year, when both had been accepted to graduate school at Cornell University. They married one year later in Ithaca, NY, on June 21, 1969.

Jackie earned her M.S. and Ph.D. Degrees in plant pathology at Cornell in 1970 and 1974, respectively. The family moved to Auburn in 1975 with their two-year-old son when her husband accepted a faculty position in the Department of Zoology and Entomology. Their daughter was born three months later.

Jackie taught part-time at Southern Union State Junior College (Langdale) and Auburn University, before she joined the Alabama Cooperative Extension System in 1979 as an extension research associate. She advanced to extension plant pathology specialist and director of the Plant Diagnostic Lab at Auburn, where she served from 1995 until her retirement in December 2009, after 30 years with the Alabama Cooperative Extension System. During the latter years she taught courses in general plant pathology and clinical plant disease diagnosis in the Department of Entomology and Plant Pathology. She also authored four book chapters and innumerable extension publications. These extension publications have been widely distributed and are highly acclaimed as excellent reference sources by her peers and other colleagues.

Jackie was an active member of The American Phytopathological Society (APS) for 41 years. As an active APS member, she was invited to



participate as a member of both the Diagnostics and Teaching Committees and was also nominated and appointed to serve as chair on both of these Committees. As a member of the Diagnostics Committee, she organized a one and a half day workshop on the identification of *Pythium* species prior to the 1993 APS meetings. The workshop was highly praised by all attendees. In 1995 she was requested by APS to serve as a member of an Ad Hoc Committee on Publications for Communicating with External Audiences. More recently, she served as co-chair of the Diagnostics Committee in 2004. In 2008, her clinic, The Auburn University Plant Diagnostic Lab, hosted the annual meeting of the Southern Plant Diagnostics Network. Jackie helped to organize this meeting, which included a taxonomic training on identification of *Cercospora* and related genera. The meeting included a tour of the new lab that she had helped to design and her diagnostic colleagues were very impressed.

Dr. Mullen's excellent plant pathology teaching and writing prowess gained her statewide as well as national recognition. During 1998-99 Dr. Mullen was chosen as one of the reviewers for nineteen APS Plant Disease Teaching Lessons (college level) to be published on the newly established website for the APS net Education Center. She also served as a reviewer for a Feature Article manuscript "Plant Pathology Courses for Agricultural Awareness" published in Plant Disease.

Jackie loved plants and flower gardening, reading, square dancing with the Village Squares, family vacation trips, and her precious grandchildren. She was a member of the Auburn United Methodist Church.

She is survived by her husband of 41 years, Gary Richard Mullen of Auburn; a son, Alan Cyril (Marian Harris) of Cambridge, MA; a daughter, Diane Marion of Tacoma, WA; and two granddaughters, Charlotte (age 5) and Eleanor (age 2).

In lieu of flowers, donations may be made to the American Cancer Society, P.O. Box 22718, Oklahoma City, OK, 73123-7108, [www.cancer.org](http://www.cancer.org); or to the Mercy Fund, Auburn United Methodist Church, P.O. Box 3135, Auburn, AL, 36831.



Visit the NPDN homepage at [www.npdn.org](http://www.npdn.org) for more information on specific Program Area Committees.  
**Login and password required**

DIAGNOSTICS  
COMMITTEE

## Diagnostics Committee

Anne Vitoreli, Committee Chair, University of Florida, Department of Plant Pathology

The Diagnostics Committee held a conference call on January 6, 2011 and the following agenda items were discussed:

- National repository – new search features (PowerPoint available)
- Trainings and workshops
- SOP updates

- Surge capacity

Please refer to the website, [www.npdn.org/diagnostics](http://www.npdn.org/diagnostics), for complete minutes of this meeting and the PowerPoint presentation of new search features available on the National Repository. The next conference call will be held February 10, 2011.

EPIDEMIOLOGY  
COMMITTEE

## Epidemiology Committee

Carla Thomas, Program Area Manager/Committee Chair, University of California at Davis, Department of Plant Pathology

The Epidemiology Committee held a conference call on January 19, 2011 and the following agenda items were discussed:

- Update on NPDN analysis tool roll out
- Update on websites

- Update on training plans
- Other items?

EXERCISE  
COMMITTEE

## Exercise Committee

Sharon Dobesh, Program Area Manager/Committee Chair, Kansas State University, Department of Plant Pathology

The Exercise Committee conducted a conference call on January 10, 2011 and the following agenda items were discussed:

- APHIS-PPQ Oklahoma full-scale update

- NPDN committee activity update
- Regional updates

The next conference call is scheduled for February 1, 2011.

NATIONAL  
DATABASE

**National Database Committee**

Nancy Gregory, Committee Chair, University of Delaware, Department of Plant and Soil Sciences

Following the last newsletter, the National Database Subcommittee held a conference call on January 12, 2011. The subcommittee continues to work on reviewing the extensive NPDN pest lists. The agenda included:

- Discussion of change submissions
- Discussion of the Phytoplasma Pest List

- Discussion of the Gastropod Pest List
- Discussion of Insect Pest lists, approach, and entomology contacts

The next conference call will be held on February 9, 2011.

TRAINING  
EDUCATION

**Training and Education Committee**

Dick Hoenisch, Committee Chair, University of California at Davis, Department of Plant Pathology

The Training and Education Committee held a conference call on January 24, 2011 and the following agenda items were discussed on the call:

- Compiled list of the states' training coordinators
- The use of Twitter and Facebook for T & E info
- The final T&E brochure
- Updating "How to Conduct First Detector Training"

- Change in name for *Ralstonia solanacearum*
- Webinar for the "Protect U.S. Community Invasive Species Network"
- Training and Education "Module Review Policy"

The next conference call is scheduled for February 22, 2011.

WEBSITES  
COMMITTEE

**Web Committee**

Karen Scott, Committee Chair, Cornell University, Department of Plant Pathology and Plant-Microbe Biology

The Web Committee conducted a conference call on January 11, 2011 and the following agenda items were discussed:

- Status and updates of new regional web sites
- Discussion of calendar function for all portal sites
- Discussion of search function for all portal sites

- Discussion of the functions requested
- Update on web site usage statistics

The next conference call will be held on February 15, 2011.

Visit the NPDN homepage at [www.npdn.org](http://www.npdn.org) for more information on specific Program Area Committees.

*Announcements ~ Membership information ~ Committee reports and meeting minutes ~ Documents and SOPs*



## New Reports available for the NPDN National Repository

Michael Hill, Purdue University, CERIS

Two new reports were made available to Diagnosticians as of Wednesday December 22, 2010. The first report is the NPDN Pest/Host Index Report. This report represents confirmed pests/pathogens and the hosts they have been found on. The report can be searched by pest, host, or both. Options include the ability to show common names and determine the overall sort order. Image 1 shows an example of a report for *Phakopsora pachyrhizi*, with common names turned on, and sorted by Pest.

The second report also released in December is the First Submission by State Report. Diagnosticians will now be able to view all records that are recorded as first submissions for their state and diagnostic lab(s). The reports contain submission date (date uploaded to NPDN), sample date (date diagnosed), state, diagnostic lab, pest, and host common name. The report can be sorted by submission date, sample date, state, or diagnostic lab by clicking on the heading in the table. Listed below

is an example of the report. This example is for demonstration purposes only and does not represent a real data record in the NPDN National Repository.

## IT News

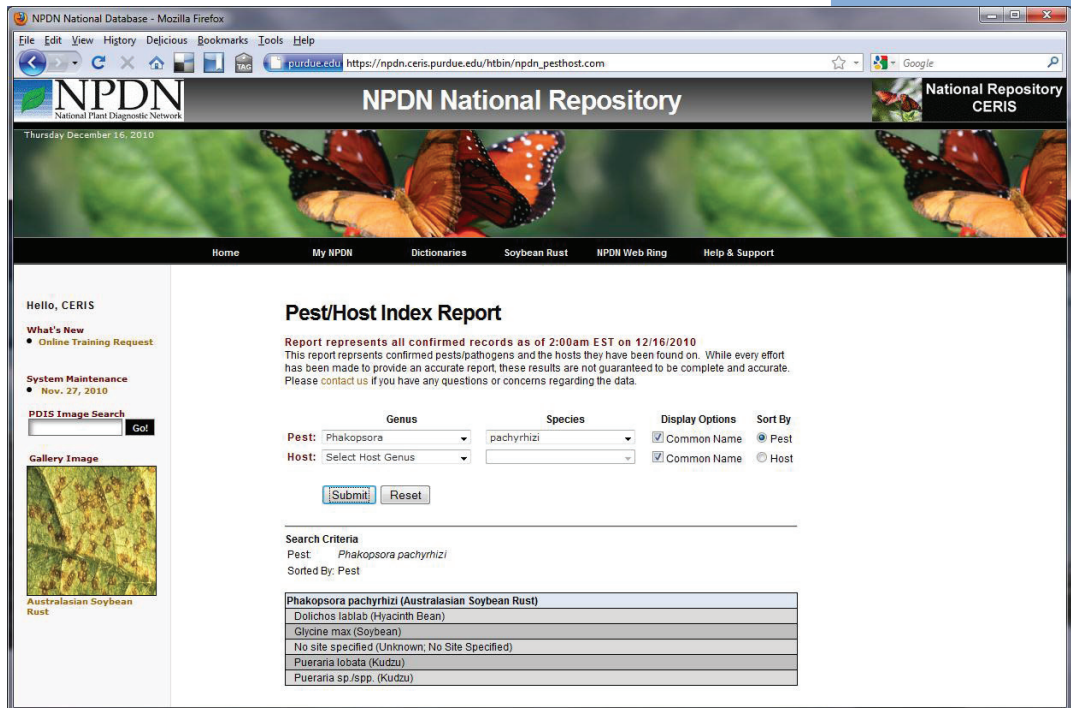


Image 1



Image 2

For questions or comments please contact Eileen Luke ([lukee@purdue.edu](mailto:lukee@purdue.edu)), or Mike Hill ([mhill@ceris.purdue.edu](mailto:mhill@ceris.purdue.edu)). 🌿


# Training and Education

## Protect U.S. Community Invasive Species Network Train-the-Trainer Webinar

Amanda Hodges,

University of Florida, Entomology and Nematology Department

A train-the-trainer introductory webinar for the "Protect U.S. Community Invasive Species Network" will be held on Tuesday, February 8, 2011 at 3:00 p.m. ET, 2:00 p.m. CT, 1:00 p.m. MT, 12:00 p.m. PT and 9:00 a.m. Hawaii-Aleutian time zone. This session will provide basic information on the purpose, content and direction of the Protect U.S. project. It is expected that key participants will include IPM coordinators, NPDN first detector trainers, and other extension educators from 1862, 1890 and 1994 Land Grant Institutions. The training is also appropriate for other federal and

state governmental agency employees involved in invasive species detection and management. This training is voluntary and offered at no cost to the participants. Interested individuals must register on-line at <http://www.ncipmc.org/training/>. Once registered, the automated system will provide updates regarding call-in information as well as access to PowerPoint slide sets and other web-based delivery tools that will be used during the training. Although some PowerPoint slide sets will be available in advance, participants should plan to have access to a high-speed internet connection during the training. Some of the web-based demonstrations will only be available through the webinar portion of the session. If you have questions about the training, please contact Susan Ratcliffe, Director of the North Central IPM Center at 217-333-9656 or via email at [ipm@illinois.edu](mailto:ipm@illinois.edu). 



Click the above image to download the Protecting U.S. announcement.

**Impact of the Disease**

Sassafras is found throughout the Eastern United States extending into Texas and Oklahoma and can reach up to 60 feet in height (though you usually find them as an understory tree). The leaves are simple with a smooth edge, but have 3 different shapes (2 lobed mitten, 3 lobed trident, and no lobes). They are very fragrant when crushed (as is the twig). They flower in the early to mid spring with small, bright yellow-green flowers. The fruit is dark blue measuring 0.33 inches in length and are found in a red cup on a red stalk in late summer.

Sassafras: *Sassafras albidum*

protectus.us  
Exit Previous Next

**Released this month!**  
The Protect U.S. e-learning module

**'laurel wilt and the redbay ambrosia beetle'**

**Protect U.S. e-learning modules are housed on the NPDN training site at**

<http://cbc.at.ufl.edu/>

***Xyleborini Ambrosia Beetles: An Identification Tool to the World Genera***  
CPHST ITP

A NEW LUCID® INTERACTIVE IDENTIFICATION TOOL BY JIRI HULCR AND SARAH M. SMITH

North Carolina State University, University of California, and University of Wisconsin. Xyleborini (Coleoptera, Curculionidae, Scolytinae) is the most important and species-rich tribe of ambrosia beetles. The tribe includes more invasive pests than all other ambrosia beetle groups combined and is one of the most frequently intercepted organisms at ports-of-entry.

USDA-APHIS Center for Plant Health Science and Technology (CPHST) is pleased to announce the release of its latest identification tool, *Xyleborini Ambrosia Beetles: An Identification Tool to the World Genera*. Designed by a leading taxonomic expert on xyleborines, this is the first multi-media internet-based identification tool using the most recent world taxonomic classification of the tribe. *Xyleborini Ambrosia Beetles*, part of the upcoming *A Resource for Wood Boring Beetles of the World*, was created through collaboration among USDA/APHIS/PPQ Center for Plant Health Science and Technology (CPHST), Michigan State University,

A Resource for Wood Boring Beetles of the World

**Xyleborini ambrosia beetles**  
An identification tool to the World Genera  
Jiri Hulcr • North Carolina State University • Sarah M. Smith • Michigan State University • 2010

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**Who are Xyleborini?**

Xyleborini ambrosia beetle are a subtribe (tribe) of bark beetles (Coleoptera, Curculionidae), a hugely diverse miniature weevils, primarily inhabiting dying trees. Xyleborines are one of several clades that underwent a major evolutionary innovation - from feeding on host tree tissues to farming symbiotic fungi. Along with farming, Xyleborini also evolved extreme inbreeding (all females get fertilized by a single brother) and haplodiploidy. Combination of these features gave them unprecedented reproductive capability, huge host range, and the ability of even a single female to establish a thriving population. For more information about Xyleborini or about the beetle-fungus symbiosis, see the **References** section.

**About this tool**

Xyleborini are the most rapidly diversifying ambrosia beetles, hugely abundant, and a constant source of devastating invasive species. Damage to timber, orchards, and forests ecosystems by these invasive species is skyrocketing. Yet, until recently the classification of their 1,200 species has been a mystery, identification resources were scarce, and usable only by specialists.

Here we present a comprehensive, user-friendly, illustrated set of information resources and a Lucid key to genera of Xyleborini of the World. The classification used here is up to date as of July 2010. It is based on a comprehensive review by Alonzo-Zaragoza and Lyal (2009), and includes the most recent taxonomic changes by Hulcr & Cognato (2009, 2010).

**Site Author (Personal Info)**

*Xyleborini ambrosia beetle* - a dominant ambrosia beetle in the south-east US.

*Phragmoterus* in *Hydracris* genus

Redbay beetle on a dead tree - typical sign of ambrosia beetle at work.

Extreme sexual dimorphism in *Dinoderus* head/male on the right.

*Spilostela* *ambrosiae* staining a redbay tree: quick death followed by *Xyleborini* glabratu.

A parade of fancy xyleborines from tropical rainforests.

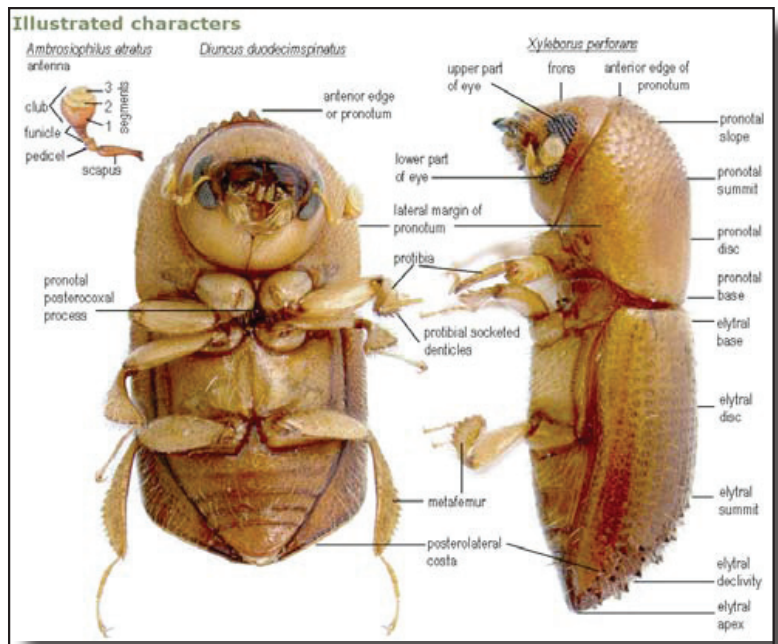
*Xyleborini Ambrosia Beetles* can be accessed at: <http://itp.lucidcentral.org/id/wbb/xyleborini/>

The authors of *Xyleborini Ambrosia Beetles*



would appreciate receiving any comments about the value and usefulness of this tool and learning of any problems you encounter when accessing or using the tool. Please email Jiri Hulcr at [jhulcr@ncsu.edu](mailto:jhulcr@ncsu.edu) with any comments or questions.

To learn more about Lucid software and Lucid tools, visit [www.lucidcentral.org](http://www.lucidcentral.org). For information concerning other CPHST developed tools for plant protection and quarantine, email Amanda Redford at [amanda.j.redford@aphis.usda.gov](mailto:amanda.j.redford@aphis.usda.gov).



## Regional News



### GPDN Spring 2011 Webinar Series

Sharon Dobesh, Kansas State University, Department of Plant Pathology

GPDN will again have their spring webinar series, see schedule below.

The webinars are open to anyone who would like to join at 10:00 a.m. CT/9:00 a.m. MT.

To join go to <http://connect.ksre.ksu.edu/gpdnseminars/>. Once there click on "Audio" at the top of the screen, then "Start Audio Conference". This will list three options, choose "Receive call from meeting" and enter your phone number. If this does not work, there is a manual conference number 1-866-910-4857, participant code 447113. If you have any questions regarding this seminar series or connecting, contact Sharon Dobesh at [sdobesh@ksu.edu](mailto:sdobesh@ksu.edu) or 785-532-1340. All webinars are recorded and can be viewed later at [www.gpdn.org](http://www.gpdn.org) along with those from 2008 through 2010.

Feb. 23	Frank Peairs, CSU	Development of IPM approaches for Russian wheat aphid
March 2	Tamra Jackson, UNL	Nematodes of Corn: Tools and Tidbits for Diagnosticians
March 9	Shannon Arnold, MSU	Creating Interactive and Engaging Activities for Adult Learners
March 16		OPEN
March 23	Karen Snover-Clift and Dawn O'Brien, Cornell	STAR-D-NPDN's Laboratory Accreditation Quality Management System
March 30	Gary Franc, UW	Microbes in the Atmosphere: Bacteria should get frequent-flyer miles.
April 6	Jim Stack, KSU	NPDN: A solid foundation and a decade of achievement. Now what?
April 13	Bill Jacobi, CSU	Firewood Survey
April 20	Janet Knodel, NDSU	bed bugs, wheat stem sawfly, or wheat midge



Northeast Plant Diagnostic Network

## Chrysanthemum White Rust in Maryland

Karen Rane, University of Maryland, Plant Diagnostic Laboratory

Chrysanthemum white rust (CWR) was confirmed in December 2010 on plants in a homeowner landscape in Montgomery County, MD. The disease is caused by the fungus *Puccinia horiana*, a federally regulated, quarantine significant plant pathogen. Chrysanthemum white rust originated in Asia, and is now established in Europe, Africa, Australia, Central America, and South America. The disease has been introduced several times to the US through importation of infected plants, but eradication efforts have so far successfully kept CWR from becoming established. The infected plants in this latest case were chrysanthemum cultivars "Snowdon" and "Yellow Snowdon" inadvertently distributed through garden club plant sales in 2010. To date, approximately 20 Maryland citizens have been identified as receiving potentially infected plants, and the MD Department of Agriculture is heading eradication efforts. 🌿



CWR infected leaves from Montgomery County, MD December 2010. Photo courtesy of T. Y. Faulkner.

## Expanded Gypsy Moth Quarantine in Maine

It was announced on January 7, 2011 that APHIS has expanded its gypsy moth (GM-*Lymantria dispar*) quarantine area to include additional townships in Penobscot, Piscataquis, and Somerset Counties in Maine.

To read the official announcement and Federal Order [click here](#). 🌿



Adult male (bottom right) and adult female (left) Asian gypsy moth shown for comparison. Photo courtesy of USDA APHIS PPQ Archive, USDA APHIS PPQ, Bugwood.org



Western Plant Diagnostic Network

## Coffee Berry Borer Update

Fred Brooks, University of Hawaii Manoa, Plant and Environmental Protection Sciences

An interim quarantine went into effect

on December 2, 2010 for the island of Hawaii. This rule is effective for one year. A permit to ensure that disinfestation treatments (methyl bromide, sulfuryl fluoride, heat, and other approved treatments) and other required quarantine protocols are being followed is required to move coffee plants, plant parts, green beans, or used bags from Hawaii Island to the rest of the state. 🌿

# Upcoming Events

## National Events

**May 18-19, 2011**

NPDN Operations Committee Meeting  
Ithaca, NY

**November 6-9, 2011**

NPDN National Meeting  
Berkeley, CA

## Regional Events

**February 22-24, 2011**

NEPDN Regional Meeting  
New Haven, CT

**March 21-23, 2011**

Soilborne Plant Pathogens and California Nematology Workshop  
Davis, CA

**April 5-6, 2011**

NCPDN Regional Meeting  
Ames, IA