

NPDN News

Volume 8 Issue 2, February 2013

STAR-D AUDITING EXERCISE AT THE UNIVERSITY OF FLORIDA, PLANT DIAGNOSTIC CENTER

Dawn Dailey O'Brien and Karen Snover-Clift, Department of Plant Pathology and Plant-Microbe Biology, Cornell University

The third of four scheduled NPDN STAR-D auditing exercises was hosted by Anne Vitoreli, Laboratory Manager, and Carrie Harmon, Laboratory Director, at the University of Florida, Plant Diagnostic Center (UFPDC) in Gainesville on February 19–21, 2013. The UFPDC recently moved to a brand new building and Anne and Carrie proudly introduced us to their new facilities. Farm Bill funding has allowed for continued development of the STAR-D program with this current phase consisting of auditing exercises for members of the STAR-D auditor pool which provides

closing audit meeting with the laboratory members and administrators and the writing of a final report. This report summarizes observations of items found to be working well, suggestions for improvements and noncompliant observations which were documented

Our auditors do not make suggestions on how a laboratory should function...

an opportunity to practice their auditing skills. The fourth auditing exercise is scheduled in mid-March at the Kansas State University, Diagnostic Laboratory in Manhattan, KS.

The three-day training session included a review of the UFPDC quality management documents, development of an auditor's checklist customized for the UFPDC, an opening audit meeting with the laboratory members and administrators, a day-long practice audit, a



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The auditors review the sample handling process, beginning with samples arriving at the front door!

in nonconformance reports. The suggestions for improvements will not be included in actual audits. Our auditors do not make suggestions on how a laboratory should function; they only look for evidence of compliance. Suggestions are included in the exercises only to provide some additional feedback to our hosts.

Issue Highlights

- USDA proposes updates to plant import regulations
- Diagnostic tip: transfer tools for fungi
- Fungus-host data crowd sourcing opportunity
- Benefits of internal audits
- National Repository tip: NPDN data summary reports
- Upcoming Sentinel Plant Network workshops

Although all auditors were present for all aspects of the audit, the eight auditors were divided into three groups, with each group focused on specific sections of the UFPDC STAR-D Quality Management System



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Anne shows Kathy Burch corrective action reports she generated as part of the lab's quality management system.

and responsible for writing up their focus areas in the auditor's checklist and associated documents.

During the audit, Group A, comprised of Kathy Burch (USDA-APHIS-PPQ-CPHST) and Laura Jesse

(Iowa State University), focused on organizational management, document control, customer feedback, corrective and preventive actions, records, internal audits and management reviews. Group B, comprised of Ron French (Texas A & M University), Pat Shiel (USDA-APHIS-PPQ-CPHST), and Karen Snover-Clift (Cornell University) focused on technical requirements, accommodations & environmental conditions, test methods & method validation, equipment, reference materials, and test results quality control. Group C, comprised of auditors Raghuvinder (Raj) Singh (Louisiana State University Ag Center), Dawn Dailey O'Brien (Cornell University), and Geoff Dennis (USDA-APHIS-PPQ-CPHST) focused on review of requests and agreements, subcontracting of tests, purchasing, personnel, sample & sample handling, and test result reporting.

Through these exercises the auditors continue to develop their auditing skills, STAR-D staff incorporate improvements to the system based on comments and observations of the process and the diagnostic laboratories receive a very comprehensive review and input on the development of their STAR-D laboratory accreditation-quality management system. 🍃

USDA Proposes Updates to Plant Import Regulations *APHIS Newsroom*

February, 13, 2013--APHIS is proposing to make several amendments to update and streamline its regulations involving the importation of plants for planting.

"The importation of plants from foreign countries has greatly increased in the past 20 years and some of the regulations have not been updated," said Rebecca Bech, deputy administrator of APHIS-PPQ. "These proposed changes are necessary to relieve certain restrictions, update existing provisions, and to make the regulations easier to understand and implement."

Some of these proposed changes include requiring permits for the importation of certain coated or pelleted seeds, and providing for an alternate additional declaration on phytosanitary certificates that

These improvements will...provide a faster and simpler process for industry and maintain the existing level of protections for U.S. agriculture.

accompany plants from countries known to have potato cyst nematodes. The proposed regulations also change provisions specific to certain countries, to ensure they reflect the latest information regarding quarantine pests detected in various places. For example, they would add Turkey to the list of countries from which importation of certain plants is prohibited

due to the presence of Chrysanthemum white rust; provide conditions for the importation of certain plants from Canada to address the presence of plum pox potyvirus in that country; and provide for the importation of carnations from the Netherlands.

These improvements will make the existing regulations current, provide a faster and simpler process for industry, and maintain the existing level of protections for U.S. agriculture.

APHIS is seeking public review and comments on this proposed rule. Consideration will be given to comments received on or before April 15, 2013. To leave a comment or review others' comments visit www.regulations.gov and search APHIS-2008-0071-0001. 🍃

Tree and Human Health May Be Linked

Excerpt from *USDA Forest Service, Pacific Northwest Research Station*

Portland, Ore. January 16, 2013. Evidence is increasing from multiple scientific fields that exposure to the natural environment can improve human health. In a new study by the U.S. Forest Service, the presence of trees was associated with human health.

For Geoffrey Donovan, a research forester at the Forest Service's Pacific Northwest Research Station, and his colleagues, the loss of 100 million trees in the eastern and midwestern United States was an unprecedented opportunity to study the impact of a major change in the natural environment on human health.

In an analysis of 18 years of data from 1,296 counties in 15 states, researchers found that Americans living in areas infested by the emerald ash borer, a beetle that kills ash trees, suffered from an additional 15,000 deaths from cardiovascular

disease and 6,000 more deaths from lower respiratory disease when compared to uninfested areas. When emerald ash borer comes into a community, city streets lined with ash trees become treeless.

"...the same pattern repeated over and over in counties with very different demographic makeups."

The researchers analyzed demographic, human mortality, and forest health data at the county level between 1990 and 2007. The data came from counties in states with at least one confirmed case of the emerald ash borer in 2010. The findings—which hold true after accounting for the influence of demographic differences, like income, race, and education—are published in the current issue of the *American Journal of Preventive Medicine*.



Neighborhood ash trees removed that were infested with EAB. © PDCNR - Forestry Archive, Bugwood.org

"There's a natural tendency to see our findings and conclude that, surely, the higher mortality rates are because of some confounding variable, like income or education, and not the loss of trees," said Donovan. "But we saw the same pattern repeated over and over in counties with very different demographic makeups."

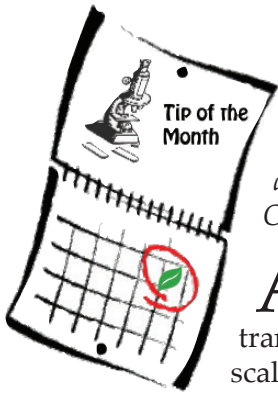
Although the study shows the association between loss of trees and human mortality from cardiovascular and lower respiratory disease, it did not prove a causal link. The reason for the association is yet to be determined.

Read the complete story on this [USFS website](http://tinyurl.com/bf6kwp6) or here <http://tinyurl.com/bf6kwp6>.

SUNDAY, MARCH 3 - FRIDAY MARCH 8, 2013



SEE WWW.NISAW.ORG FOR INDIVIDUAL EVENT AGENDAS



Diagnostic tip - Transfer Tools for Fungi

Jennifer Olson, Plant Disease and Insect Diagnostic Laboratory, Oklahoma State University

About a year ago, we needed to purchase replacement tools for transferring fungi. I prefer not to use scalpels mainly due to the sharp blades. I went searching through the scientific catalogs trying to find replacements and found myself scratching my head trying to figure out what these things are called—spatula, transfer tool, scalpel? Try

Somehow, in looking at online images, I came across carving and sculpting tools. Why didn't anyone tell me about these? Super cheap and exactly what I was looking for! We purchased a set of 12 tools for about \$9 from Amazon (www.amazon.com/Hawk-SE-Pick-Set-12Pc/dp/B001LJGMXI). That's totally affordable! There are many different sets, but this is the set that we selected (Fig 1). Each tool is double sided (different shaped tool at each end) and out of the 24 heads, there is only one that I have not come up with a laboratory use for. Aside from transferring fungal cultures, some of these tools can also be used as spatulas for weighing small amounts of chemicals or as dissecting needles. In the center of each tool, there is a rough area which helps

with dexterity and control.

We have used these tools for a year now and I am still delighted with the purchase. The silver color has darkened due to repeated flaming, but they have held up well (Fig 2).



Fig. 1



Fig. 2

© Jen Olsen, Oklahoma State University

as I might, I just could not find what I was looking for. I wanted something inexpensive (most options I found were \$15+ for a single tool) and made of a durable material (ie. stainless steel) which could be disinfected repeatedly by flaming or autoclaving.

And when they “walk out of the lab” without asking, I don't mind since the tools were inexpensive and easily replaced. I felt this was such a great find, I had to share it with my colleagues. 🌿

2013 Advanced Diagnostic Workshops

TIME IS RUNNING OUT...BUT SPACES ARE STILL AVAILABLE!

Were you hoping to fit a diagnostic technique workshop into your schedule in the next few weeks? This is our final call for participants. We had a number of recent cancellations for the upcoming Beltsville workshops and have openings in the following sessions:

Week 3: Potato Wart, March 11–12, 2 days

Week 3: Bioinformatics, March 13–15, 3 days

Week 4: Citrus pathogens, March 19–22, 4 days

Week 5: Citrus Greening-HLB, March 26–28, 3 days

If you are interested in any of these workshops, you need to act quickly as time is running out. Please contact Karen Snover-Clift, kls13@cornell.edu, as soon as possible.

Calling ALL Crazyies! Fungus-Host Data Crowd-Sourcing Opportunity!

Amy Rossman, *Systematic Mycology & Microbiology Laboratory, USDA-ARS*

For decades personnel at the USDA made a card index of fungi reported on plant hosts based on literature coming to the National Agricultural Library. When this work was discontinued in the 1970's, the index included about 500,000 cards that have recently been scanned. As the cards were scanned, critical data i.e. fungus scientific name, host scientific name, and country were databased, however, many errors exist in the automated entry. Thus, data from each card must be reviewed for accuracy before being included in the SMML Fungus-Host Database.

A computer-based system was developed in which the card and critical data pop-up on the screen and can be quickly reviewed (Fig. 1). If any data are indicated

as erroneous, accurate data are selected from a menu by typing the first few letters. Doing this is fun and foolproof i.e. you cannot enter wrong data because the data must come from the menus. You may learn a little about geography such as the current name for Nyassaland is Malawi. You could pick your favorite genus and review those reports (although I already did *Phytophthora*). I do this during the ads while watching HGTV. Once reviewed, these data immediately become available in the SMML Fungus-Host Database <http://nt.ars-grin.gov/fungalatabases/fungushost/fungushost.cfm> with the card serving as the source. As an example, look at reports of *Plasmopora obducens* on *Impatiens*, some of which come from the index cards.

If you use the SMM Fungus-Host database and would like to make it even better by reviewing these cards, please contact Amy Rossman (amy.rossman@ars.usda.gov) for detailed instructions. 🍃

The image shows a data entry interface for a fungus-host database. On the left, there are three input fields: 'Fungus' with 'Alternaria Citri', 'Host' with 'Citrus sinensis', and 'Locality' with 'Pd'. Each field has a green checkmark icon. Below these are buttons for 'Save', 'Skip', and 'Ignore'. There are also checkboxes for 'Show Previously Skipped' and 'Search By Genus', and a dropdown menu. On the right, a scanned index card is displayed. The card title is 'Alternaria citri'. The main text on the card reads: 'Bazan de Segura, Consuelo (1953) Principales enfermedades de las plantas en el Peru. [PRINCIPAL DISEASES OF PLANTS IN PERU.] Lima, Peru Estac. Expt. Agr. de La Molina Bol. 51. 46pp.' Below this is the text 'Suggestions for control. On Citrus sinensis. p. 28'. At the bottom left of the card is a small box containing 'B R L'. At the bottom right is a larger box titled 'MYCOL. DESCRIPTION' with a list of options: 'MYCOL. NOTES', 'PATH. NOTES', 'ILLUSTRATED', 'OCCURRENCE ONLY', and 'HISTORY'.

Fig. 1 Index card and data entry screens for fungus scientific name, host, and locality.

ROSE ROSETTE SURVEY

Nancy Gregory is putting together information on incidence of rose rosette disease for an upcoming conference. If you are interested in contributing information to this survey [click here](#) or reply directly to Nancy Gregory at ngregory@udel.edu. Information on the survey includes:

- What state do you work in? Have you seen rose rosette disease (RRD) on multiflora rose in your state?
- Have you seen RRD on cultivated rose in your state?
- Have you confirmed RRD by methods other than visual observation? What method have you used?
- Have you microscopically identified the *Phyllocoptes eriophyid* mite on rose?
- Do you believe the incidence of RRD in your region has increased in the past 5 years?



Quality Corner

Benefits of Doing Internal Audits

Dawn Dailey O'Brien and Karen Snover-Clift, Cornell University and Kathy Burch, USDA-APHIS-PPQ-CPHST

Long before an actual quality management accreditation audit takes place a laboratory should begin doing its own internal audits. Simply put, an internal audit is a laboratory's self-evaluation to determine if they are following their own internal processes. Internal audits should become an integral part of every laboratory's routine operations as they:

- Verify compliance to requirements (STAR-D requirements as well as internal laboratory requirements)
- Evaluate the effectiveness of processes
- Identify areas for improvement

Does the word audit sound too intimidating to you or your staff? If so, you are not alone. Most people would rather have a tooth pulled than think about being audited (or even worse, being the auditor) so, it is important to routinely remind staff that the goal of an internal audit is to contribute to laboratory improvement. Think of the internal audit as a checkup or review. If a laboratory wants to improve its processes, become more efficient and identify problem areas, then it needs to spend time performing these checkups. Make the internal audit a positive experience for everyone!

Internal audits help prevent surprises at critical times, especially during an accreditation audit but also during the busy sample processing season when surprises can slow down or halt sample processing. Internal audits allow a laboratory to know exactly where it stands with regard to any potential gaps and can help initiate plans to address them. The STAR-D requirements state that all aspects of the laboratory need to be reviewed within a two year period. This can be accomplished at one time, with one very in-depth internal audit or in multiple, small internal audits. Those that have experience in this area, recommend the latter because it really can serve as a useful tool... check...review...of your operations. And because they are so useful, why would you want to wait every two years to perform these checks? By routinely and systematically performing smaller internal audits, you are more likely to uncover potential problems before they happen or before they become larger problems.

An internal audit can help identify areas for improvement, maybe even more so than those performed by external auditors, because the internal auditors know their system the best and are most familiar with all the various activities they perform. They'll see the potential for improvements as they are objectively reviewing evidence and information while performing the audit. This in turn will generate ideas for continual improvements that can be implemented by the laboratory. It is a win-win situation for everyone.

Don't have the money or resources to formally train your staff to conduct these audits? Don't worry, formal training isn't always necessary. Some internal audits can be performed by anyone. For example, document control audits can be performed by anyone willing to help. To do this, someone can take all the lab documents and compare them with the master list to make sure the documents are identified and formatted in accordance with the lab's working instructions describing document formatting. They would need to ask themselves questions such as the following: Are the documents formatted and numbered correctly? Are they approved by the right person? Are the current versions noted on the document master list? After conducting this review, the auditor would summarize their review findings to the laboratory quality manager, and a document review internal audit is complete.

Another example of a relatively simple internal audit

could involve reviewing the lab's master equipment list. Is all the equipment listed? Is all the necessary information included? Again these questions need to be checked against the work instruction describing the laboratory's equipment documentation. If what the lab is doing matches with what the written requirements are, then great. If not, what can be done to improve the process so that what is being done does agree with the requirement? This is what improvement is all about!

So, as you can see, an internal audit doesn't have to be a daunting procedure. Take it a little bit at a time; ask for help when you get stuck. Don't let the fear of the unknown prevent you from starting. Internal audits are easy to perform, painless, and, most of all, beneficial. By inspecting its own processes, a lab can identify areas in need of improvement which is just good lab management and is the final goal! 🌱

NPDN Summary Data Reports

Mike Hill and Eileen Luke, CERIS, Purdue University

The National Repository website has a new look, but you can still run many of your favorite reports. In this month's article we will describe how you can create summary data reports within the new site. This report comes in handy when you would like to get an overall summary of how many records have confirmations of confirmed, suspected, inconclusive and not detected. There are currently six different types of summary reports that can be created which include:

- Diagnostic Lab
- Enter User ID
- Lab Method
- Pest Category
- Program
- State

To bring up the summary data report. Click on [Reports](#) under menu bar and select the last option named "Summary Data". The screen (*top*) will appear.

After selecting summary report type and search criteria, click the [Generate Report](#) button to run the report. The screenshot (*bottom*) is an example of the results for a summary report on pest categories that uses data from a fictional lab. The results of the report can be saved to an Excel file, saved as a text file, or opened in a printer friendly window by clicking the appropriate icon in the upper right hand corner.

Please feel free to contact Mike Hill (mikehill@purdue.edu) at (765) 494-9854 or Eileen Luke (lukee@purdue.edu) at (765) 494-6613 if you have any questions about summary reports or the NPDN National Repository and we will be happy to help. 🍀



NPDN Summary Data Reports

Summary Report Type
 Diagnostic Lab Enter User ID Lab Method Pest Category Program State

Search Criteria
 Sample Start Date: Sample End Date:
 Enter Start Date: Enter End Date:
 Pest: Select Genus Species Sub-Species
 Host: Select Genus Species Sub-Species
 State:
 Diagnostic Lab(s): 9995 CERIS Test Data

[Generate Report](#) [Reset](#) Click Generate Report after selecting search options

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NPDN Summary Data Reports

Search Criteria
 Report Type: Pest Category This is an example using test data from a fictional lab
 Diagnostic Lab(s): 9995

Lab Sample Data Summary Report					
Pest Category	Confirmed	Suspected	Inconclusive	Not Detected	Total
Abiotics	0	0	0	1	1
Arthropods	0	1	7	1	9
Nematode	0	0	0	1	1
Other	11	3	78	54	146
Pathogen	2	3	11	7	23
Plants/Weeds	0	1	5	1	7
Totals	13	8	101	65	187

TRAINING & EDUCATION

New Workshops, New Materials, New Audience



Rachel McCarthy, Plant Pathology and Plant Microbe-Biology, Cornell University and Daniel Stern, American Public Gardens Association

NPDN's collaborative project with the American Public Gardens Association, the Sentinel Plant Network (SPN), engages public garden professionals, volunteers and visitors in the early detection of high-consequence plant pests and diseases. Member recruitment began during the summer of 2011 and to date there are over 134 public garden institutions in the network from 35 states, DC and 3 Canadian provinces.

SPN is holding its second series of regional workshops this spring and summer. While the first round of workshops focused on participants who were frontline horticulture and IPM staff, this next round of workshops aims to target mostly education/volunteer coordinator staff working at SPN gardens. This series will introduce participants to SPN's new interpretation and educational outreach materials and provide guidance on how to incorporate these resources into their outreach activities in such a way as to inspire and

enable visitors to act as citizen scientists, monitoring their neighborhoods for potential pest and pathogen threats. For new members, we will also provide an overview of SPN's diagnostic and First Detector training resources as well as the Plant Heroes youth education program.

Our next workshop is for the Southeastern region and will be held at Birmingham Botanical Gardens on April 25 & 26, 2013. If you would like to learn more about the Sentinel Plant Network or have an interest in participating in a regional workshop near you, contact Rachel McCarthy at Rachel.McCarthy@cornell.edu. You can also learn more about the Sentinel Plant Network on the SPN website at <http://www.publicgardens.org/content/sentinel-plant-network>.

Upcoming SPN workshops

Southwest Region: March 27–28
Springs Preserve, Las Vegas, NV

Southeast Region: April 25–26
Birmingham Botanical Gardens, Birmingham, AL

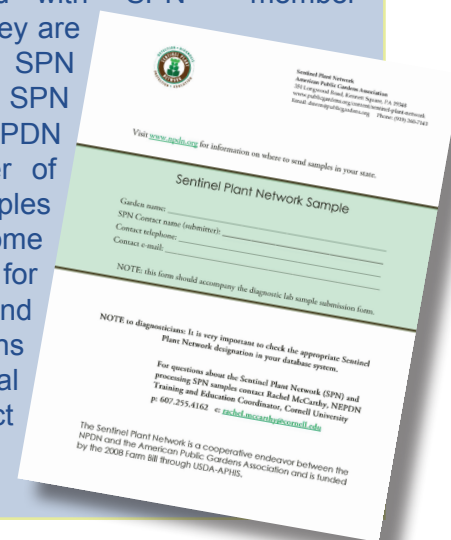
Northeast Region: June 24–25
Frelinghuysen Arboretum in Morristown, NJ

Central Region: July 9–10
Lauritzen Gardens in Omaha, NE

Northwest Region: July 24–25
Bloedel Reserve in Bainbridge, WA

During the first phase of this project five regional workshops were held – representing 74 different public gardens and 132 professionals. Several workshop exercises focused on teaching participants ways to improve scouting and how to collect, package and submit quality samples to member NPDN laboratories. One benefit of SPN membership is that they can submit suspect samples to NPDN labs and not incur a sample submission fee when they include the “SPN packing slip.”

NPDN labs were offered funding to help cover the costs associated with SPN member samples as long as they are accompanied by this SPN packing slip. The first SPN samples came into NPDN labs back in October of 2011 and more samples are beginning to come in. Keep an eye out for samples with this slip and if you have any questions about them or general SPN questions contact Rachel McCarthy.



Diagnostics Committee

Sara May, Committee Chair, Department of Plant Pathology and Environmental Biology, Penn State

The Diagnostics Committee conducted a conference call on February 14, 2013, and the following agenda items were discussed:

- GAP Audit- Gainesville, FL
 - Besides the FL audit, 1 more is scheduled for next month in Manhattan, KS.
 - Hopefully funding will be available for 1 more auditor training in Ames, IA
- Trainings- are starting the week of February 28th and are scheduled for 5 consecutive weeks.
- New Chair/Secretary- Sara May has volunteered to take over the chair position and Clarissa Balbalian for the secretary position.
- Other items:
 - LSU has an opening (Don Ferrin's position)
 - New NPDN Repository site is up and running- email Mike Hill if you have problems

Next Diagnostics conference call is scheduled for April 11, 2013. ☺

National Database Committee

Linnea Skoglund, Committee Chair, Department of Plant Sciences and Plant Pathology, Montana State University

The National Database Committee conducted a conference call on February 6, 2013, and the following agenda items were discussed:

- Linnea Skoglund agreed to serve as chair.

- Discussion was held regarding changes for some codes of *Sclerotinia* and *Sclerotium*. Discussion was also held on the difference between southern blight and seedling blight and could these be combined.
- Upload guidelines will be revised over the next few months to educate toward consistency. Some committee members are Beta testing the new NPDN National Repository web site.
- The "One Name for Fungi" project is underway with funding from the Farm Bill.
- There was further discussion including a paper by Amy Rossman in regards to conserving the name *Bipolaris* over *Cochliobolus*. Comments or feedback on proposed changes for the 'One Name for Fungi' project should be sent to Amy Rossman or Nancy Gregory.

The next National Database conference call will be held April 17, 2013. ☺

Training and Education

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

The Training and Education Committee held a conference call on January 14, 2013. Too few members participated in today's important call. For your 2013 New Year's resolution, please make time to attend the T&E conference calls. Today's conference call:

- Introduction and "installation" of Rachel McCarthy and Dave Clement as chair and secretary, respectively. Rachel was inaugurated as the new Training

and Education chair. Dick Hoenisch will help her with the transition. Thank you Rachel for taking the time to do this.

- Planning a conference call with all the state FDEs. We have been planning an informative conference call with the states' and territories' First Detector Educators since late 2012. Rachel will send out a doodle to poll the FDEs as to a good day and time for such a meeting. We plan the conference to include information as to who we are, what resources are available for FD training and how we may help and support our FDEs.
- New training modules status. We are waiting for a new date for the final NPDN modules.
- Module slides for boxwood blight and downy mildew on impatiens. Dick asked if anyone has PPT slides on boxwood blight and downy mildew on impatiens. Rachel suggested asking Margaret Daughtry who has done work on both.

The next Training and Education conference call (be there or be square): Monday, March 18, 2013. ☺

Visit the NPDN homepage
at www.npdn.org for
more information on
specific Program Area
Committees.
Login and password
required

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

Regional Events

March 26–28, 2013
Malacology Workshop
Davis, CA

June 24–27, 2013
4th Int'l. Symposium on Tomato Diseases
& 28th US Annual Tomato Disease Workshop
Orlando, FL

PHOTO OF THE MONTH

Adult lovebugs
on goldenrod.

Happy February!



Anne W. Gideon,
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

Rachel McCarthy, Editor
NEPDN, Training and Education Coordinator
Cornell University



National Institute
of Food and
Agriculture