

## NPDN Third National Meeting in Berkeley, CA

*Rick Bostock and Carla Thomas, Department of Plant Pathology, University of California at Davis*

The NPDN third National Meeting was held November 6–9 at the Doubletree Hotel and Executive Meeting Center on the Marina in Berkeley, California. With the theme “Next Gen NPDN”, the meeting was attended by more than 180 people from throughout the U.S. and the Pacific territories of

Guam and American Samoa, with international guests from the countries of Canada, France, United Kingdom, New Zealand, and Czech Republic.

Sixty three participants attended pre-meeting workshops

led by teams of experts who presented contemporary diagnostic methods for nematodes, light brown apple moth and European grapevine moth, phytopathogenic bacteria and the fungal genus *Botryosphaeria*. Monday and Tuesday sessions featured plenary talks and symposia. Secretary Karen

Ross of the California Department of Food and Agriculture (CDFA) kicked off the conference, emphasizing in her talk the importance of partnerships in combating new and emerging pests and diseases. Other keynote speakers were Jim Stack of Kansas State University; Niklaus Grunwald of the USDA-ARS in Corvallis, Oregon; Paul Jepson of Oregon State University and Arturo Casadevall of the Albert Einstein College of Medicine of Yeshiva University in New York. Symposia and presentations covered state of the art technologies for plant diagnostics; new and emerging pests and diseases; analysis of data in the NPDN National Repository; an update



Rick Bostock, NPDN Executive Director, at the third National Meeting. Photo courtesy of Karen Snover-Clift, Cornell University.

### Issue Highlights

- National Meeting award recipients
- Diag tip — Use of Autoclaved Pine Needles for Inducing Sporulation of *Botryosphaeria* Isolated from Plant Tissue
- NPDN/USDA-APHIS 2012 Advanced Diagnostic Workshops
- NPPLAP's *P. ramorum* proficiency panel
- IT — How Do I Use the NPDN National Repository?



National Institute of Food and Agriculture

on the STAR-D laboratory accreditation program; and training the next generation of students and professionals in food security, plant health and diagnostics. Monday evening featured a banquet and lively awards ceremony to honor individuals who have made outstanding contributions to the NPDN. On Wednesday, attendees participated in tours of the Port of Oakland/APHIS San Francisco Plant Inspection Station; Muir Woods and *Phytophthora ramorum* research at the National Ornamental Research Site/Dominican University of California; IPM in the Napa wine



*Botryosphaeria* workshop at the microscope. Photo courtesy of Karen Snover-Clift, Cornell University.

country; walnut orchards impacted by thousand cankers disease; clean stock programs at UC Davis's Foundation Plant Services; and the CDFA Plant Pest Diagnostics Center in Sacramento. Workshops and tours were made possible in part with support provided by USDA-APHIS, Dominican University of California and Agdia. Thanks to the many individuals who contributed to make the meeting a success and especially members of the WPDN Regional Center team and colleagues at CDFA for local arrangements and planning. 🌿

## NPDN Third National Meeting Award Recipients

*Karen Snover-Clift, NEPDN Associate Director, Cornell University, Richard Bostock, NPDN Executive Director and WPDN Director and Sharon Dobesh, Associate Director, Kansas State University*

An awards ceremony was held during the third NPDN National Meeting banquet on November 7, 2011. Awards were given for NPDN Outstanding Team Service, NPDN Outstanding Service by an individual, NPDN Outstanding First Detector Training and for the first time, the NPDN Rotten Tuber Award.

The NPDN Outstanding Team Service Award was presented to NPDN teams of members and colleagues that have performed outstanding service and gone above and beyond the call of duty. Four teams were given awards this year. The first team award was presented to the PDIS Programming Team for the development of the PDIS database system. The award recipients included Will Baldwin, Sharmila Dabade, Judy Dizon and Chandrika Mitra, all of Kansas State University (Picture A). The second team award was presented to the NPDN Portal Team for the development of the new portal used for the NPDN national and regional websites. The award recipients included Andrew Coggeshall, University of California at Davis, Lee Duynslager, Michigan State University, Mike Hill, Purdue University and the NPDN National Repository, and Karen Scott, Cornell University (Picture B). The third team award was presented to the Sentinel Plant Network Team for the creation and implementation of the Sentinel Plant Network (SPN). Award recipients included Amanda Hodges of the University of Florida and George Hudler and Rachel McCarthy of Cornell University (Picture C). The fourth team award was presented to the NPDN National Database Program Area Committee. Award recipients included Nancy Gregory, Chairman, University

of Delaware; Nancy Taylor, Secretary, Ohio State University; Karen Snover-Clift, Program Area Manager, Cornell University; David Barber and Sherri Clark, University of Georgia; Andrew Coggeshall and Carla Thomas, University of California at Davis; Marty Draper, National Institute of Food & Agriculture; Mike Hill and Virginia Russell, CERIS and the NPDN National Repository, Purdue University; Karen Rane, University of Maryland; Tim Tidwell, California Department of Food & Agriculture; and Anne Vitoreli of the University of Florida (Picture D).

The NPDN Outstanding First Detector Awards are presented to recognize outstanding First Detector Educators who have excelled at training First Detectors. Three awards are given this year: 1) NPDN Outstanding First Detector Educator Training Award, 2) NPDN Team Outstanding First Detector Educator Training Award, and 3) NPDN Outstanding Promotion of the Online Crop Biosecurity Course Award. The NPDN Outstanding First Detector Training Award was presented to Natalie Hummel of Louisiana State University AgCenter. The NPDN Team Outstanding First Detector Training Award was presented to the Minnesota Forest Pest Detector Program. Award recipients include from the Minnesota Department of Agriculture (MDA), Mark Abrahamson, Monika Chandler, Lucy Hunt, Bob Koch and Kathy Kromroy; from the Department of Natural Resources, Val Cervenka,

Ken Holman; from the University of Minnesota, Angela Gupta, Jeffrey Hahn, Dean Hertzfeld, Gary Johnson,



(A) The PDIS Programming Team: Chandrika Mitra & Sharmila Dabade; (B) the NPDN Portal Team: Karen Scott, Andrew Coggeshall & Lee Duynslager; (C) the Sentinel Plant Network Team: George Hudler, Rachel McCarthy & Amanda Hodges; (D) the NPDN National Database Committee: Carla Thomas, Eileen Luke (for Mike Hill & Virginia Russell), Nancy Gregory, Marty Draper, Karen Rane, Linnea Skoglund, Anne Vitoreli, Andrew Coggeshall, Karen Snover-Clift & Nancy Taylor; (E) Rachel McCarthy; (F) Sara May; (G) Gail Ruhl; (H) Carla Thomas; (I) Connie Tande; (J) Cheryl Smith; (K) Connie Tande's actual submission image.

Gary Wyatt, Mary Kay Ferguson and Brian Aukema. The NPDN Promotion of the Online Crop Biosecurity Award was presented to Nancy Hulett of the

University of Vermont. Unfortunately, none of the First Detector award recipients were present to receive their awards but they were notified and sent their plaques.

The NPDN Outstanding Service Award was presented to an individual that performed outstanding service and gone above and beyond the call of duty. The first individual award was presented to Rachel McCarthy as editor of the *NPDN News*. The second individual award was presented to Sara May of the Pennsylvania State University for her leadership in coordinating the NPDN-PSU Basic Techniques and Fusarium Identification Workshops. The third individual award was presented to Gail Ruhl of Purdue University for her many contributions to the NPDN. The fourth individual award was presented to Carla Thomas of the University of California at Davis for her many contributions to the NPDN.

We concluded the evening with a fun award...the newly created NPDN Rotten Tuber Award. This award was formed to give a stage for NPDN members and/or colleagues to showcase those very

unique and/or unusual samples that create stories worth sharing within our community. The award submissions were evaluated based on the uniqueness of the situation, the story telling ability of the submitter, and the shock value. The 3<sup>rd</sup> place award was presented to Connie Tande (Picture I) of South Dakota State University for her submission about a suspect fungal growth (Picture K) found on the side of a road. The 2<sup>nd</sup> place award was presented to Cheryl Smith (Picture J) of the University of New Hampshire for her submission of "linoleum blight". The 1<sup>st</sup> place award was presented to Ruth O'Neill (no picture available) of Montana State University for her submission of an ant named Gigi.

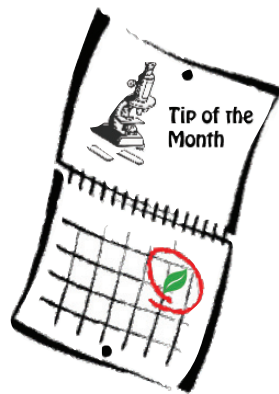
The NPDN awards presentation and banquet at the third National Meeting were a lot of fun and we appreciate everyone's contributions to make it a huge success! If you would like more details about the awards and those who received them this year, please visit the 2011 National Meeting website at [www.npdn.org/node/119](http://www.npdn.org/node/119). And remember to save those unique samples for the fourth National Meeting! 🌿

## Diagnostic Updates

### Use of Autoclaved Pine Needles for Inducing Sporulation of *Botryosphaeria* Isolated from Plant Tissue

Compiled by Gail Ruhl; Purdue Plant and Pest Diagnostic Lab, Purdue University

I recently attended an excellent hands-on *Botryosphaeria* identification workshop



presented by Dr. Jose Ramon Urbez-Torres, Dr. Suzanne Rooney-Latham and Dr. Cheryl Blomquist at the NPDN Third National Meeting. We were given the opportunity to examine many different cultures and practice correct identification of species using conidial morphology (size, shape, pigmentation, septation, etc.). We learned that formation of pycnidia and conidia of some of the *Botryosphaeria* species, such as *Fusicoccum* and *Neofusicoccum* do not always occur on regular culture media and under standard growing conditions. Special techniques such as the use of a host substrate (e.g. pine needles) on a low nutrient media, (e.g. water agar) may be necessary to induce

production of pycnidia and conidia. Twice autoclaved pine needles are placed on the surface of water agar and small mycelial plugs from suspect cultures are

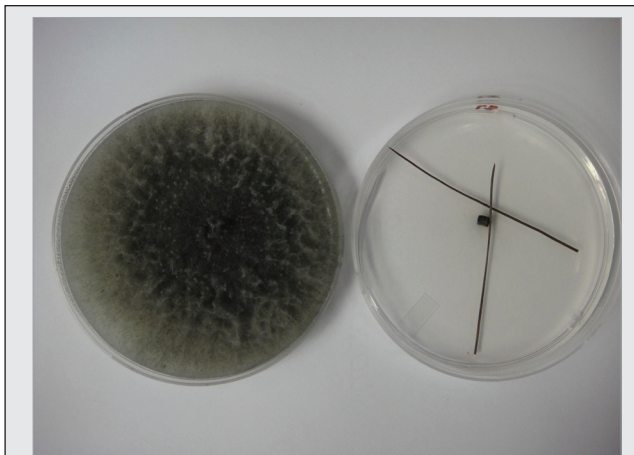


Figure 1. Plug from nonsporulating culture placed on 'pine needle' agar. Photo courtesy of S. Latham.



Figure 2. Pine needles. Photo courtesy of Nancy Harding University of Maryland.

then placed on the media (mycelium side down) next to the pine needle (Figures 1 and 2). Pycnidia usually develop within a month.

#### Useful websites for fungal ID:

[www.crem.fct.unl.pt/botryosphaeria\\_site/](http://www.crem.fct.unl.pt/botryosphaeria_site/)

<http://nt.ars-grin.gov/fungaldatabases/fungushost/fungushost.cfm>

[www.mycobank.org/](http://www.mycobank.org/) 

## NPDN/USDA-APHIS 2012 Advanced Diagnostic Workshops

Karen L. Snover-Clift, Cornell University  
and Mark Nakhla, USDA-APHIS-PPQ-  
CHPST-NPGBL

The NPDN Diagnostics Program Area Committee and members of USDA-APHIS-PPQ-CHPST-National Plant Germplasm and Biotechnology Laboratory (NPGBL) are pleased to announce the 2012 advanced diagnostic workshops. During the spring of 2012, we will offer advanced trainings on a number of topics. One of the most important sessions offered is on citrus leprosis (CiLV) to include sweet orange scab (SOS) and citrus black spot (CBS). We are hoping diagnosticians from all the states where citrus is grown will attend this 4½ day session. The training will cover disease symptoms and methods of detection and identification of CiLV, CBS and SOS. The molecular diagnostics will include PCR, real-time PCR, RT-PCR and RT-real-time PCR. Another topic offered will be bioinformatics, part one (1½ day session), which has been offered previously and will cover analysis of obtained sequences from both plus and minus strands, editing sequences, blasting sequences, understanding blast results based

on size and gene target, when to directly sequence PCR products or clones, which genes are used for sequence analysis for fungi, bacteria, and viruses, what sequence analysis programs are available commercially or as freeware, and hands-on use of sequence analysis programs using sequences from case studies for different pathogen types, and bioinformatics part two (1½ day session), which is a new addition to the line-up and will allow the participants to work with their own sequences. Due to continued interest, we have scheduled three *Phytophthora* training sessions. The

sessions are 4 ½ days long and cover ELISA, DNA extraction, conventional PCR (nested and multiplex), real-time PCR (ITS and Elicitin), and interpretation

soon as possible to ensure your spot in the workshop and expense coverage! If you are interested in participating in any of these workshops please refer to the

## NPDN/USDA-APHIS 2012 Advanced Diagnostic Workshops

### Bioinformatics-Part One

February 21–22 (1.5 days)

### Bioinformatics-Part Two

February 22–23 (1.5 days)

### Citrus Leprosis with Sweet Orange Scab and Citrus Black Spot

March 6-8 (4.5 days)

### Bioinformatics-Part One

March 20–21 (1.5 days)

### Bioinformatics-Part Two

March 21–22 (1.5 days)

### *Phytophthora* Basics with focus on *P. ramorum* and *P. kernoviae*

March 26–30 (4.5 days)

### *Phytophthora* Basics with focus on *P. ramorum* and *P. kernoviae*

April 16–20 (4.5 days)

### *Phytophthora* Basics with focus on *P. ramorum* and *P. kernoviae*

May 7–11 (ONLY IF NEEDED) (4.5 days)

### Potato Wart,

May 15–17 (3 days)

of results. The last topic for the spring will be potato wart with a three day workshop.

Expenses for travel, lodging and meals will be covered from a supplemental grant for diagnostician training. All expenses will be processed through Cornell University. There is no registration charge for the meeting or for meeting materials. These expenses are covered by our colleagues at USDA-APHIS-PPQ-CPHST-NGBTL. Funds for reimbursement of travel expenses are limited. Priority will be given to those attending the citrus leprosis workshop followed by a first come, first served basis in order by requests received until funds are exhausted. Please sign-up as

information provided below and contact Karen Snover-Clift at [kls13@cornell.edu](mailto:kls13@cornell.edu).



## National Plant Protection Laboratory Accreditation Program and 2012 *P. ramorum* Proficiency Test Panel

*Patrick J. Shiel, USDA-APHIS-PPQ-CPHST*

The National Plant Protection Laboratory Accreditation Program (NPPLAP) evaluates laboratories using molecular diagnostics on behalf of USDA-PPQ

regulatory programs to ensure their capability for making accurate diagnostic determinations. In addition to ensuring lab capability within PPQ and other agencies in the USDA, NPPLAP engages the NPDN in this process to increase diagnostic capacity and proficiency. The goal of this program is to establish a state of readiness when needed by PPQ in emergency situations. NPPLAP also fosters the adoption of practices that promote continuous improvement and accreditation standards suitable for use by plant diagnostic labs and serves to develop functional Quality Assurance programs. NPPLAP began as the Provisional Approval process for the USDA *Phytophthora ramorum* Emergency Program and currently accredits

laboratories to diagnose *Phytophthora ramorum* and the Huanglongbing (citrus greening) pathogen, with over 30 labs participating in one or both programs. The NPPLAP website is: [www.aphis.usda.gov/plant\\_health/cphst/npplap.shtml](http://www.aphis.usda.gov/plant_health/cphst/npplap.shtml). This website describes the program in detail and contains links to Inspection Checklists and other NPPLAP-related documents.

Visit the NPDN diagnostic website at [www.npdn.org/diagnostics](http://www.npdn.org/diagnostics) to read the 2012 *Phytophthora ramorum* panel information letter and to download a form for requesting panels. The documents can be found under the heading "Provisionally Approved Laboratories." 🌿

## IT – How Do I Use the NPDN National Repository?

Tom Creswell, Eileen Luke and Mike Hill, Purdue University

At the recent NPDN National Meeting Tom Creswell, diagnostician from Purdue University, gave a presentation titled 'Mining your own data'. In his presentation, he demonstrated several reports and described how they are useful to him. Three key reports that he uses from the NPDN National Repository are:

### 1<sup>st</sup> Occurrence Report

– This report contains records of pests, weeds, or diseases submitted to the NPDN Repository for the first time in that state for that pest/pathogen. The report shows three types of first submissions.

1. What your lab reports from your state
2. What your lab reports from other states
3. What other labs report from your state

**First Reports**

Print File   CSV File   Excel File

**First Submission by State Report**

Date of Search: 11/01/11  
 Time of Search: 10:26 AM EDT  
 Sorted By: Submission Date (Descending)  
 Number of Records: 171

**Search Criteria**  
 Submission Date: 01/01/2011-11/01/2011  
 State(s): IN  
 Diag. Lab(s): 0849

\*Note: Report contains records of pests, weeds, or diseases submitted to the NPDN Repository for the first time in that state for that pest code. Please note *Phytophthora sp./spp.* will be a different code than *Phytophthora parasitica* and each will have its own "first submission" for a state record. It is NPDN Policy that records submitted to the NPDN repository are final results, not presumptive positives. It also is NPDN policy that diagnoses of regulatory significance are not to be submitted to the NPDN repository until after the SPRO and SPHD have been notified of the diagnostic result.

Submission Date	Sample Date	State	Diagnostic Lab	Pest	Host Common Name
10/26/2011	10/13/2011	IN	0849 (IN)	Gloomy Scale [Melanaspis tenebrosica ]	Maple
10/26/2011	10/17/2011	IN	0849 (IN)	White Pine Eriophyid [Setoptus strobacus ]	Eastern White Pine
10/26/2011	09/19/2011	MI	0849 (IN)	Snowy Tree Cricket [Oecanthus fultoni ]	Hawthorn
10/26/2011	10/20/2011	IN	0849 (IN)	Fall Needle Drop [Abiotic disorder ]	Arborvitae
10/25/2011	10/19/2011	VA	0849 (IN)	Soybean Target Spot [Corynespora cassiicola ]	Soybean
10/25/2011	10/19/2011	VA	0849 (IN)	Soybean Anthracnose [Glomerella (Colletotrichum) glycines (destructivum) ]	Soybean
10/21/2011	10/19/2011	IN	0849 (IN)	Green Peach Aphid [Myzus persicae ]	Tomato
10/18/2011	10/12/2011	IN	0849 (IN)	Cercospora Stem Blight [Cercospora sp./spp. ]	Soybean
10/18/2011	10/10/2011	OH	0849 (IN)	Fusarium Ear Rot [Fusarium sp./spp. ]	Corn (Forage-fodder-silage)
10/18/2011	10/10/2011	IN	0849 (IN)	Fruit Spot [Unidentified Agent ]	Tomato
10/17/2011	10/11/2011	IN	4304 (NC)	Azalea Lace Bug [Stephanitis pyrioides ]	Azalea; Rhododendron
10/17/2011	09/28/2011	IN	0849 (IN)	Soybean Anthracnose [Glomerella (Colletotrichum) glycines (destructivum) ]	Soybean
10/17/2011	10/05/2011	IN	0849 (IN)	Cottony Camellia Scale [Pulvinaria Roccifera ]	Blue Holly

## IT News

**Pest/Host Index Report** – Represents confirmed pests/pathogens and the hosts they have been found on. Many diagnosticians have found this report useful to just determine what has been found on a specific host plant. When using this report the information needs to be kept within the network.

**Pest/Host Index Report**

Report represents all confirmed records as of 2:00am EDT on 11/01/2011  
 This report represents confirmed pests/pathogens and the hosts they have been found on. While every effort has been made to provide an accurate report, these results are not guaranteed to be complete and accurate. Please contact us if you have any questions or concerns regarding the data.

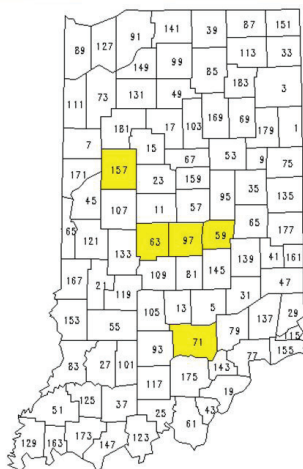
Genus: [Select Pest Genus] Species: [ ] Display Options:  Common Name  Pest Host: Cyclamen Species: [ ]  Common Name  Host

[Submit] [Reset]

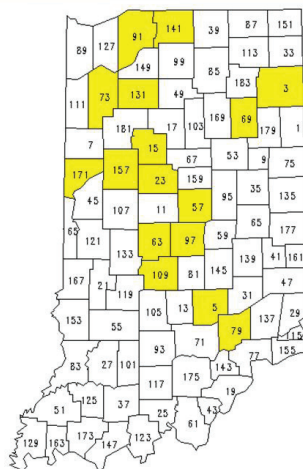
Search Criteria  
 Host: Cyclamen  
 Sorted By: Pest

Apiognomonina sp./spp.
Cyclamen persicum
Botryotinia (Botrytis) fuckeliana (cinerea)
Cyclamen sp./spp.
Botrytis sp./spp.
Cyclamen persicum
Class Myxomycetes; Myxomycota
Cyclamen persicum
Colletotrichum fragariae
Cyclamen sp./spp.
Colletotrichum sp./spp.
Cyclamen persicum
Cyclamen sp./spp.
Cylindrocarpon destructans
Cyclamen persicum
Enterobacter cloacae
Cyclamen sp./spp.
Erwinia (Pectobacterium) chrysanthemi and dissolvens
Cyclamen persicum
Erwinia carotovora carotovora
Cyclamen persicum
Erwinia sp./spp.
Cyclamen persicum
Fusarium oxysporum
Cyclamen persicum
Cyclamen sp./spp.

## Mapping your Data



Drought Stress 2010



Drought Stress 2011

**Mapping Data** — U.S. or state maps based on Lab Sample Data using Sample Dates and pest/pathogen can be generated. In the examples below there was an interest in comparing the abiotic ‘pest’ of herbicide injury for Indiana between 2010 and 2011. Note the colors indicate diagnostics “confidence level”, Yellow = suspected, Red= Confirmed, Pink = Inconclusive and Green = Not detected.

If you have access to the National Repository and desire to learn more about the reports available to you, please contact Mike Hill at [mikehill@purdue.edu](mailto:mikehill@purdue.edu) or (765)494-9854. 🌱



### EPIDEMIOL OGY COMMITTEE

#### Epidemiology Committee

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

#### NPDN IT/Epidemiology – Epidemiology Efforts

Carla Thomas and Eileen Luke

Dr. Neil McRoberts, faculty member of the Department of Plant Pathology, UC Davis has joined the NPDN epidemiology committee. He completed both his undergraduate and Ph.d training in plant pathology in Scotland. After 20 years of doing

epidemiology work in Scotland integrating weather and plant pathology with economics and social science, he joined the UC Davis faculty in June, 2010. The NPDN Epidemiology Committee looks forward to working with Neil.

### NATIONAL DATABASE

#### National Database Committee

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

Following the last newsletter, many National Database PAC members, attended the NPDN National Meeting Nov 7-9, in San Francisco. A poster highlighting accomplishments was displayed. The Committee was the recipient of the Team Service award. The committee continues to work on reviewing NPDN Pest lists and on improving data

entry guidelines. Please refer to the website, [www.npdn.org/national\\_database](http://www.npdn.org/national_database) for information about the National Database Committee including past meeting minutes (login and password is required).

The next meeting will be held on December 14, 2011 at 1:30 PM EDT.