

## ASH DIEBACK DISEASE THREATENS TREES IN UK

Over the last decade, ash dieback disease caused by the fungus *Chalara fraxinea* has been spreading across mainland Europe. Norway, the Netherlands and Germany have been badly hit, but most affected may be Denmark which reports having already lost 90% of its ash to the disease. In



*Chalara fraxinea* symptoms on *Fraxinus excelsior*. Photos courtesy of Andrej Kunca, National Forest Centre, Slovakia, Bugwood.org.

February of this year, ash dieback was found in British nursery tree stocks, but had not been found in any natural areas in the UK until this month. The East Anglia outbreak was confirmed by scientists from the Food and Environment Research Agency at the Woodland Trust's Pound Farm woodland in Suffolk, as well as Norfolk Wildlife Trust's Lower Wood reserve, in Ashwellthorpe.

The British environmental secretary announced a ban on the importation of all ash into the country effective October 29;

however, as reports of symptomatic ash trees have been popping up across the UK, scientists now question if such a ban is too little, too late. While these new sites are being confirmed by scientists, the extent of the damage may not be realized until springtime, as detections will be more difficult given autumn defoliation. The impact of this disease—should it become established—has been compared to that of Dutch elm disease.

### ASH DECLINE SYMPTOMS

- Diseased saplings typically display dead tops and side shoots.
- Lesions often found at base of dead side shoots.
- Lesions on branch or stem can cause wilting of foliage above.
- Disease affects mature trees by killing off new growth.

Once symptoms become apparent, ash dieback disease is able to kill young trees in as little as one growing season. Older trees can withstand the initial infection, but tend to die after several seasons of attacks.

Read more about ash dieback disease at the [UK Forestry Commission website](#) or at this [BBC news website](#). 

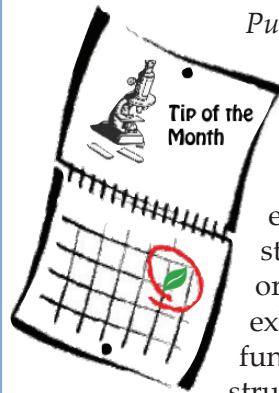
### Issue Highlights

- Tip: 3-D Riker mounts
- STAR-D team members attend AAVLD training
- 2013 advanced diagnostic workshops announced
- Tribute to Gary Franc

# Diagnostic Updates

## 3-D Riker Mounts For Bulky Samples

Gail Ruhl and Tom Creswell, Purdue Plant and Pest Diagnostic Lab, Purdue University



Have you had just the perfect example of a stem canker or trunk rot exhibiting fungal fruiting structures that you wanted to preserve

for teaching? With this easy method using clear packing tape to expand the width needed and seal the mount, you can convert two of the glass covers from Rikers into one perfect 3-D Riker mount for small, bulky sections of branch or small diameter tree trunks. (Figs 1, 2) The 360 degree visibility allotted by the two-sided glass Riker mount allows for viewing access to all sides of a girdling canker and any associated fungal growth or bacterial ooze. (Fig 3, 4) This method will also work well for 3-D preservation/observation of insects on bulky plant material or the 3-D display of lichen on branch segments. Use your creativity and expand your collection of Riker mounts to improve hands-on teaching opportunities for First Detector trainings. 🌿



Figs 1, 2, 3. Cankers of chestnut blight (*Cryphonectria parasitica*). Fig 4. Southern blight (*Sclerotium rolfsii*) on the trunk of a young apple tree. Photos courtesy of Gail Ruhl, Purdue University.



## **STAR-D Team Members Attend AAVLD-NAHLN Quality Assurance Symposium**

*Karen Snover-Clift, National Quality Manager and Dawn Dailey O'Brien, National Quality Coordinator, NEPDN, Cornell University*

On October 18, 2012, some of the STAR-D team members, Karen Snover-Clift, Dawn Dailey O'Brien and their colleagues Pat Shiel, Kathy Burch, Geoff Dennis and Vessela Mavrodieva from USDA-APHIS-PPQ-CPHST, joined members of the American Association of Veterinary Laboratory Diagnosticians (AAVLD) and the National Animal Health Laboratory Network (NAHLN) at their annual meeting location in Greensboro, North Carolina, to attend a quality assurance symposium offered as a continued education workshop to their members.

Since the NPDN has put a renewed emphasis on the development of our STAR-D laboratory accreditation program, STAR-D team members have worked closely with our AAVLD-NAHLN counterparts in hopes of learning about their successes and challenges in the development of their quality assurance system. The AAVLD accreditation committee was established in 1969 and they recorded three fully accredited laboratories and three provisionally accredited laboratories that first year. With such an extensive history and experience in creating their own ISO-17025-like laboratory accreditation program, the STAR-D team members have relied on them as a resource during our development phase. The AAVLD group provided us with copies of their requirements and standards document and with examples of their laboratory's quality manual which, in conjunction with USDA-APHIS-PPQ-CPHST materials, we used as reference material in the development of the NPDN STAR-D Requirements and Standards and in the creation of all of our STAR-D

quality system templates. Additionally, the AAVLD members developed (with our CHPST colleagues), an Introduction to Quality Management System for Plant Diagnostic Laboratories Workshop at the National Veterinary Services Laboratory (NVSL) in Ames, Iowa. Twenty five of our members participated in this workshop and provided very positive feedback to the organizers. We are hoping to repeat this workshop in the spring of 2013 (you may have seen a survey request recently) for other members that could not attend the first offering.

The symposium in Greensboro consisted of two parts; a presentation given by AAVLD members on responding to an AAVLD accreditation site visit report and an internal auditor course given by a representative from the American Association for Laboratory Accreditation (A2LA). Participating in AAVLD functions and working with their members has allowed us to learn from their experiences, which enables us to develop a strong accreditation program. Hopefully we will continue to collaborate with AAVLD members and someday, be in a position to offer them some of our resources and experiences to continually improve their program. As we have learned in our short time in the quality management system world—continual improvement is the name of the game! 🌱



Photo courtesy of Karen Snover-Clift, Cornell University.

## NPDN / USDA-APHIS 2013 Advanced Diagnostic Workshops

*Karen L. Snover-Clift, Department of Plant Pathology and Plant-Microbe Biology, 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 2013 advanced diagnostic workshops. We have planned the workshops in consecutive weeks beginning on February 26, 2013, so that the Beltsville staff can focus on the workshops in five weeks and devote the rest of the year to other activities. During the spring of 2013, we will again offer advanced trainings on a number of topics.

**Week 1: Bioinformatics, February 26–28, 2013, & Week 3 (second part of week): Bioinformatics, March 13–15, 2013**

In previous years, we have offered this session in two parts. This year the two parts will be combined and we will add detailed guidance on sequencing PCR

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. This session will allow participants to work with their own sequences.

**Week 2: *Phytophthora*, March 5–8, 2013**

Due to continued interest, we have scheduled another *Phytophthora* workshop. The session is 4 ½ days long and covers ELISA, DNA extraction, conventional PCR (nested and multiplex), real-time PCR (ITS and Elicitin) and interpretation of results.

**Week 3 (first part of week): Potato Wart, March 11–12, 2013**

Again, due to continued interest, we have scheduled another potato wart session. The session is two days long and will be held the first part of the week with bioinformatics at the end of the same week. Those interested in both topics may want to choose this option to complete both sessions with one trip.

**Week 4: Citrus pathogens, March 19–22, 2013**

This topic was so popular last year that we were unable to get everyone interested in to a session. Hopefully we can accommodate those who missed out last year in this year's session.

The session will cover citrus leprosis, sweet orange scab and citrus black spot in a 4½ day session. The training will cover disease symptoms and methods of detection and identification of CiLV, CBS and SOS. The molecular diagnostics will

### 2013 Advanced Diagnostic Workshops

Week 1: Bioinformatics, February 26–28, 2013, 3 days

Week 2: *Phytophthora*, March 5–8, 2013, 3.5 days

Week 3 (first part of week): Potato Wart, March 11–12, 2013, 2 days

Week 3 (second part of week): Bioinformatics, March 13–15, 2013, 3 days

Week 4: Citrus pathogens, March 19–22, 2013, 4 days

Week 5: Citrus Greening-HLB, March 26–28, 2013, 3 days

amplified fragments either directly or after cloning. The rest of the session will cover analysis of obtained sequences from both plus and minus strands, editing sequences, blasting sequences, understanding blast results based on

include PCR, real-time PCR, RT-PCR and RT-real-time PCR.

#### Week 5: Citrus Greening-HLB, March 26–28, 2013, 3 days

Due to the continued presence and spread, there continues to be a need for HLB training. This session will be done over a three day period and will conclude our training for the year.

More specifics about travel and lodging will be sent directly to participants before the end of December so they can make their travel plans. Expenses for travel, lodging and meals will be covered from a supplemental Farm Bill grant for diagnostician training so you will not need to use your funds from this year's NPDN allocation. 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 on a first come, first served basis in order of requests received until funds are exhausted. Please sign-up as soon as possible to ensure your spot in the workshop and your expense coverage! If you are interested in participating in any of these workshops please contact Karen Snover-Clift at [kls13@cornell.edu](mailto:kls13@cornell.edu). 🌿

## Quality Corner

We will be starting a monthly column focused on quality and plant diagnostic labs. Every month will bring educational topics to our readers, as well as new developments within the STAR-D laboratory accreditation programs. Each article will be a resource for those in NPDN that are interested in quality management and continual improvement.

If you would like to submit an article suggestion, please contact Dawn Dailey O'Brien at [ddo1@cornell.edu](mailto:ddo1@cornell.edu) or Karen Snover-Clift at [kls13@cornell.edu](mailto:kls13@cornell.edu).



## **GPDN Loses an Esteemed Colleague**

*Sharon Dobesh, Department of Plant Pathology, Kansas State University*

GPDN was saddened at the news of the passing of Dr. Gary Franc, University of Wyoming GPDN PI, on Wednesday, October 17, 2012 in Laramie, WY. We will miss him greatly in the GPDN membership.

William Stump will take over as the acting University of Wyoming GPDN PI.

The following was received through correspondence of the Potato Association of America:

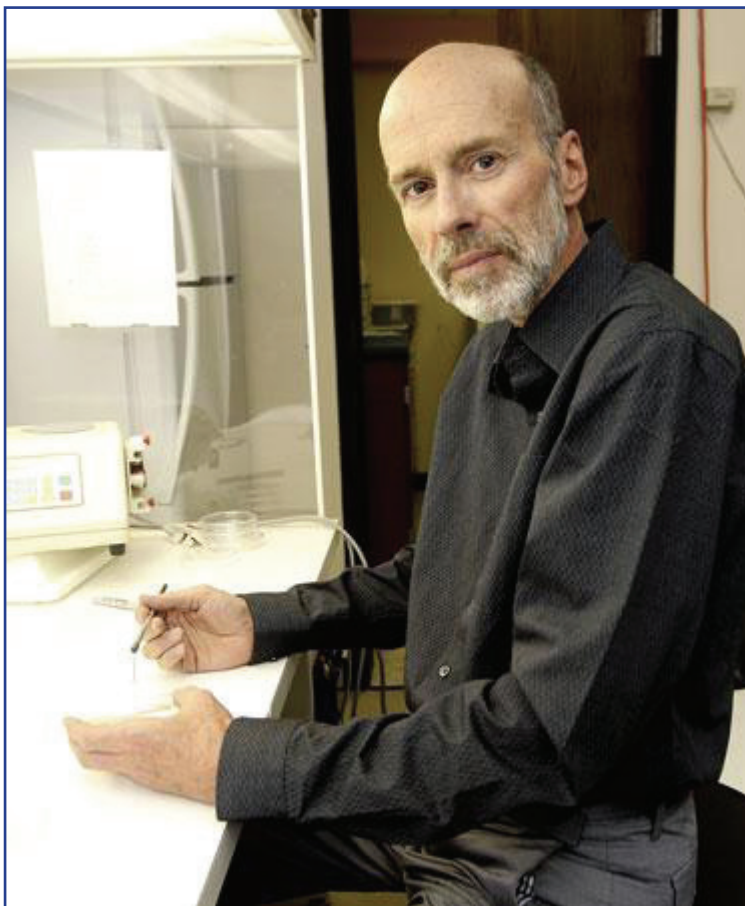
Gary was struggling with heart and lung failure for the past year and most recently spent almost four weeks in the cardiac intensive care unit in Loveland, CO. Gary's heart/lung system was affected by radiation treatment for Hodgkins disease as a teenager about 40 years ago and the effects only became evident in recent years. Gary was a faculty member of the University of Wyoming since the early 1990s. A memorial service was held on October 27 in Laramie.

Gary is survived by his wife Lori, son Jessie (age 13) and daughter Ally (age 11).

Gary had a research/extension appointment at the University of

Wyoming; prior to that he held an extension appointment at Colorado State University.

Gary was a native of Wisconsin and attended the University of Wisconsin at Madison for his Bachelor's degree, the University of Minnesota for his Master's and Colorado State University for his PhD.



Gary Franc in the lab. Photo courtesy of Andy Carpenean, Boomerang.

The mailing address for those who may want to send a card is--

**1085 Colina Drive  
Laramie, WY 82072**





## GPDN Welcomes Regional Diagnostician

Sharon Dobesh, Department of  
Plant Pathology, Kansas State  
University



## Regional News

Fanny Iriarte assumed the GPDN regional diagnostician position as of August 1, 2012. Fanny replaced Elizabeth Schrum who left to continue her studies. Fanny obtained a PhD from Kansas State University where she worked with Dr. Ned Tisserat on genetic diversity and aggressiveness of spring dead spot disease of bermudagrass. She then went to the University of Florida to work with Dr. Jeff Jones on integrated management of bacterial diseases of tomato. While in Florida, she also worked with Dr. Erin Roskopf at USDA-ARS-USHRL evaluating novel compounds against weeds, nematodes and soil borne fungi in support of the Methyl Bromide Alternatives program. Fanny's desire to gain more experience in diagnostics, led her to the Iowa State University Plant & Insect diagnostic clinic where she worked for a couple of years. She returned to KSU and while working on a *Fusarium verticillioides* population genetics project with Drs. Jim Stack and John Leslie, she attended the USDA-APHIS-PPQ-CPHST regulated pathogens training courses in Beltsville, MD.

Fanny comes with broad experience in both applied and molecular plant pathology and we are pleased to have her working at the KSU molecular diagnostic laboratory in support of GPDN. The GPDN laboratory besides

two Cepheid smart cyclers counts now with a BIO-RAD CFX96 Real-Time PCR machine and GENIII Microplate BIOLOG. In addition to occasionally working with standardized procedures for regulated pathogens (USDA-APHIS-PPQ Western regional laboratory with Dr. Craig Webb also in this building), the GPDN laboratory will now offer DNA-based identification of any non-regulated plant pathogenic fungi or bacteria using universal primers and sequencing as well as DNA-based identification of a number of pathogens using species-specific primers and conventional PCR.

Specificity and sensitivity studies are underway to implement published and new RT-PCR protocols using our CFX96 Real Time PCR machine for several pathogens. We are also in the process of implementing a GenieII Loop-mediated isothermal amplification (LAMP) system for pathogens of interest. We will be happy to assist Kansas and the states in our region with their diagnostic needs. 🌱

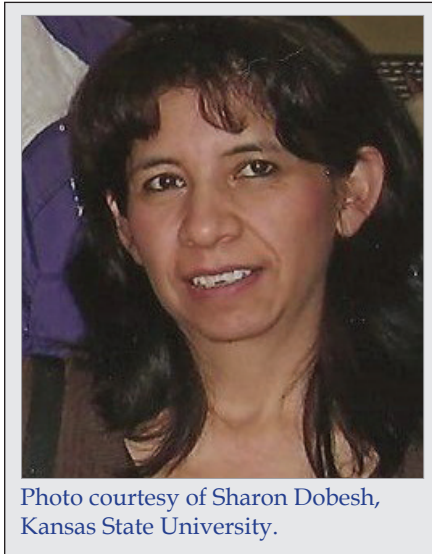


Photo courtesy of Sharon Dobesh,  
Kansas State University.



# WPDN

Western Plant Diagnostic Network

## Malacology Workshop

*Dick Hoenisch, Department of Plant Pathology, University of California, Davis*

The WPDN is planning a Malacology Workshop (snails, slugs, mollusks) at the University of California, Davis from March 26–28, 2013. Dr. David Robinson, the USDA-APHIS National Malacologist, will be one of the presenters. Contact Dick Hoenisch at [rwhoenisch@ucdavis.edu](mailto:rwhoenisch@ucdavis.edu) if you are interested in attending. 🌿



## Upcoming Events

### National Events

November 11–14, 2012

Entomology 2012, ESA 60<sup>th</sup> Annual Meeting  
Knoxville, TN

#### LAST CALL TO COMPLETE FARM BILL SURVEY!

The NPDN Directors are interested in learning about ALL submitted Farm Bill suggestions that are related to NPDN work, WHETHER they were FUNDED OR NOT. Also, please provide information about significant items that may have been removed from your project due to the funding amount requested being lowered in the approved grant. For example, if you were designing a survey for five different pest species and due to the amount of funding received, you can no longer survey for one of those pests...we would like to know of this loss.

This information is very important in our efforts to better understand how people are dealing with the lower base funding amounts for NPDN and what type of projects are occurring due to external funding.

Rachel McCarthy, Editor  
NEPDN  
Cornell University

