

# Forest Health Monitoring Program Monthly Update April 2015

## WHAT'S NEW

**The Forest Health Monitoring (FHM) Program** is planning a first ever Virtual FHM Workgroup Session on April 21, 2015. Because 2015 is not a year for a regular FHM Workgroup Meeting, the virtual session is intended to maintain contact within the FHM community and foster sharing of and discussion about on-going forest health research. Please see the listing about the virtual session in the *Upcoming Events* section.

**New resource for identifying at-risk forests.** The U.S. Forest Service Forest Health Protection staff recently developed the [Forest Health Advisory System](#), a web-based application that highlights potential future activities of more than 40 major forest pests and pathogens across 1.2 billion acres of U.S. forest land. Through a simple web interface on the front page of the web application, a user can create an advisory to explore places of interest including national forests, national parks, U.S. Fish and Wildlife units, tribal land and States. The advisory also includes background information on the survey status of the land, information about the most prevalent pests and tree species, potential risks and threats, and interactive maps.

**The FHM Program has awarded the Evaluation Monitoring projects for 2014.** A list of the new and continuing projects follows.

### **New Projects:**

- Evaluation of the resurgence of larch casebearer in eastern larch
- Evaluating the effects of non-native grass invasion on fuels, fire behavior, and oak regeneration in oak-hickory communities of the central hardwoods region
- Assessment and etiology of thousand cankers disease within the native range of black walnut (*Juglans nigra*)
- Conditions of riparian forest corridors invaded by emerald ash borer
- The influence of forest and landscape conditions on the early outbreak dynamics of the eastern spruce budworm
- Assessing Carolina hemlock health on national forests in the southern Appalachian Mountains following hemlock woolly adelgid infestation
- Assessing the severity and rate of spread of an invasive forest pathogen: a foundation for management response in the southern Sierra Nevada
- Influence of the invasive goldspotted oak borer on fuel loading in southern California

- Woodboring beetle colonization of conifers killed by fire and bark beetles: implications for forest restoration and black-backed woodpecker conservation

#### **Continuing Projects:**

- Vulnerability of Great Basin bristlecone pine and foxtail pine to mountain pine beetle
- White pine needle damage in the Northeast: characterization/distribution of fungi associated with needle damage and effect of climate
- Impacts of the non-native balsam woolly adelgid attacking subalpine fir in riparian habitats
- Effects of mountain pine beetle (MPB) outbreaks on fuels, carbon, stand structure and composition, and the availability and suitability of snags for salvage in the Intermountain West
- Effects of spruce beetle (SB) outbreaks on fuels, carbon, and stand structure and composition in Utah and western Wyoming
- Lichen responses to experimental temperature and CO<sub>2</sub> treatments and implications for using the FHM/FIA lichen indicator
- Early detection of *P. ramorum* lineages in Oregon forests using genetic markers
- Evaluating the extent and nature of pine decline and health using FIA plots in the Southeastern U.S.
- Evaluation of incidence and severity of *Diplodia* dieback of slash pine in peninsular Florida
- Monitoring riparian forest health on the northern Great Plains: a case study examining *Armillaria*-induced tree mortality following extreme flooding and drought
- Regional assessment and monitoring of rapid-onset red pine decline in New England
- Composition and structure of limber and whitebark pine stands in the Interior West and the silvicultural implications
- Distribution and impacts of *Heterobasidion* root disease in the Lake States and development of a standardized early detection protocol
- How does wildfire severity influence post-fire nutrient cycling in forest soil?
- White pine decline in the Great Lakes region
- Utilizing cooperative Alaska forest inventory permanent plots for boreal forest disease detection and quantification

#### **NEWS ABOUT** **FHM PARTNERS**

**The International Institute of Tropical Forestry, Puerto Rico**, would like to welcome Kevin D. Carlin as the new Forest Health Programs Coordinator - Forest Entomologist. Kevin holds a M.S.F. in Forest Management/Forest

Entomology from Northern Arizona University, Flagstaff where his research focused on plant-insect interactions and Ponderosa pine response to induced water deficits. Kevin brings a great deal of experience from his previous work with the Pennsylvania Bureau of Forestry as the Pest Suppression Supervisor. Kevin also has extensive international forest health experience from the Asian-Pacific and Central American regions. Kevin has agency-wide responsibility for Forest Health reporting and as the UAO and STPD-IITF Coordinator. His start date was February 8, 2015.

## **UPCOMING** **EVENTS**

(Items beginning with \* indicate a new listing or new information)

**\*April 21, 2015. Forest Health Monitoring Program (FHM) Virtual Workgroup Session.** The virtual workgroup session will begin at 11:00 A.M. Eastern time/8:00 A.M. Pacific time. Please mark your calendars and join us for some exciting topics and interactive technology sessions. Sessions will include: (1) National FHM update; (2) A tablet near you – changing the way aerial and ground surveys/monitoring is conducted; (3) Near real-time monitoring and planning via the web – successes and limitations; (4) Supplementing aerial surveys with operational remote sensing (ORS); (5) Where did all my data go? Streamlining the distribution of survey and monitoring data and supporting Forest Action Plans.

For video and audio please use the Adobe Connect Web Session:  
[https://usfs.adobeconnect.com/fhtet100\\_fhm/](https://usfs.adobeconnect.com/fhtet100_fhm/)

If you are unable to use the Adobe Connect Web Session, please use this line for audio only: 1-888-844-9904 passcode 5804506#

Please note, if you are unable to connect to either the audio or video feeds all presentations will be posted at a later date on the FHM website. A link will be provided in the May FHM Monthly Update.

Additional information will follow in a supplement to the April Monthly Update.

**\*May 14-16, 2015.** Pacific Grove, CA. Enhancing Risk Index-Driven Decision Tools for Managing Insect Transmitted Plant Pathogens. This scientific program will be held at Asilomar Conference Grounds in Pacific Grove, CA. Workshop speakers and discussions will focus on development and deployment of risk index-driven tools for the management of vector-borne diseases, including modeling, epidemiology, risk assessment, and user interfaces. For complete information including registration and lodging, visit [the workshop website](#).

**\*May 16-20, 2015.** Pacific Grove, CA. The X<sup>th</sup> International Symposium on Thysanoptera and Tospoviruses. This scientific program will be held at

Asilomar Conference Grounds in Pacific Grove, CA. The ISTT convenes leading international scientists, extension specialists, and individuals in the agricultural industry to share and discuss the latest findings in thrips and tospovirus biology, ecology and management. For complete information including registration and lodging, visit [the workshop website](#).

**July 21-24, 2015.** Fayetteville, AR. **EARLY ALERT!** The 57<sup>th</sup> Annual Southern Forest Insect Work Conference. We have chosen The Chancellor Hotel for our meeting. Although meeting registration is not yet open, I encourage you to make your hotel reservation as soon as possible. We have a block of 75 rooms set aside for the group until **June 20**, so make your reservations by this date. Don't miss out on the special pricing! Here are the details: Date: 21-24 July 2015; Place: The Chancellor Hotel, 70 North East Ave., Fayetteville, Arkansas; Phone reservations: 1-855-285-6162 (or 479-442-5555). Mention that you are attending the *Southern Forest Insect Work Conference*. Visit the [hotel website](#) for hotel information. Room rates are \$83.00 per night plus tax. Remember, this low rate is valid only until June 20, and only for the first 75 rooms (first 30 on Monday, July 20). Make your reservation right away! **IMPORTANT NOTE:** If you reserve your hotel room now, we will be able to determine if we need to open additional rooms at the \$83.00 rate, and can ensure that everyone who needs a room gets one! Please be considerate to your fellow attendees and reserve your room as soon as possible. **YOUR INPUT IS NEEDED FOR THE 2015 PROGRAM!!!** Please contact Bob Coulson (r-coulson@tamu.edu) or John Riggins (jriggins@entomology.msstate.edu), our 2015 Program Co-Chairs, if you have any program or session topic suggestions, or would like to volunteer as a session moderator. More program details coming soon!

\***August 23-28, 2015.** Orléans, France. The 5<sup>th</sup> International Workshop on the Genetics of Tree-Parasite Interactions. **The call for abstracts is open and the deadline for submission has been extended until April 15, 2015. The deadline for early bird registration is April 15, 2015.** To help the organizers with this event AND if you are considering attending the meeting but still waiting for money/approval, **please create a user account** on the conference's website. Creating a user account on the website does not imply registration to the conference or abstract submission, it is just a way to let organizers know that there is a fair probability that you will come. **To create your user account, just click [on this link](#).** (if the link does not work, go to the conference website <https://colloque.inra.fr/tree-parasite-interactions2015> and you will find a link in the "Abstract submission" section. Although the link states "I want to create an account to submit" you will not be forced to submit an abstract once your account is created.) This workshop is intended to foster collaboration and communication among all scientific disciplines working on tree-parasite interactions, and between science and management. Forest trees will be the main focus, but contributions regarding ornamental or fruit trees are also welcome. For more information including the main topics, visit the workshop website: <https://colloque.inra.fr/tree-parasite-interactions2015>.

**\*September 17-20, 2015.** Ashland, OR. 2015. EARLY ALERT! 2015 Whitebark Pine Ecosystem Foundation Annual Science and Management Workshop. This will be the first time the Whitebark Pine Ecosystem Foundation (WPEF) has had their scientific meeting in the Pacific Coast range of whitebark pine – a chance to feature unique aspects of this part of the range (California, Oregon, Washington, British Columbia), the other high elevation white pine species, and to hear key information from scientists and managers from other areas. The hope is to feature not only whitebark pine, but also the other high-elevation 5-needle pines (foxtail, limber, southwestern white pine, the two bristlecone pines – many of which occur in this area [and notably in California]). Also, the definitive (through 2015) information on genetic blister rust resistance will be available. The Crater Lake National Park field trip will feature many things, including the successful restoration plantings they have established, the dramatic impacts of mountain pine beetle on whitebark pine, the selection of trees for resistance testing and gene conservation, and much more. There will be an indoor session followed by a poster session, and multiple field trips. For planning purposes, after June 1, please check [the meeting website](#) to register for the meeting and fieldtrips. Preliminary information is currently available on the website. Contacts for more information are: Kristen Chadwick ([kchadwick@fs.fed.us](mailto:kchadwick@fs.fed.us)), Richard Sniezko ([rsniezko@fs.fed.us](mailto:rsniezko@fs.fed.us)) and Jen Beck ([Jen\\_Beck@nps.gov](mailto:Jen_Beck@nps.gov)).

**\*September 21-25, 2015.** Newport, OR. EARLY ALERT! The 63<sup>rd</sup> Western International Forest Disease Work Conference (WIFDWC). The conference will be held at the Best Western Agate Beach Inn. Register with the inn by **August 21, 2015** to receive the conference rate. Visit [the conference website](#) for updated information about the conference as it becomes available.

**November 3-7, 2015.** Baton Rouge, LA. Society of American Foresters 2015 National Convention. The theme of the convention is *Recreating Forestry: The Confluence of Science, Society, and Technology*. The 2015 call for presentations is currently posted. The deadline for presentation submissions was March 31, 2015. The deadline for poster submissions is **September 30, 2015**. For complete information about the convention, visit the [Society of American Foresters convention website](#).

**December 8-10, 2015.** Portland, OR (location tentative). 2015 Forest Inventory and Analysis Science Symposium. The US Forest Service, Forest Inventory and Analysis (FIA) Program is pleased to announce the 2015 FIA Science Symposium. The theme of the 12<sup>th</sup> biennial Science Symposium is *Pushing Boundaries – New Directions in Inventory Techniques & Applications*, emphasizing the development of innovative approaches to incorporating non-traditional approaches and uses of inventory information. The Symposium brings together international forest scientists, managers, and stakeholders to share insights on a wide variety of topics, including contemporary issues, science policy, mensuration, geospatial products, and inventory methods. The

first call for sessions and papers has been issued. All abstracts and proposals were due March 11, 2015. Please send submissions to [pnw\\_iram@fs.fed.us](mailto:pnw_iram@fs.fed.us). For more information about the symposium, including details about submitting abstracts, visit [the symposium website](#) or contact Sharon Stanton ([sharonMstanton@fs.fed.us](mailto:sharonMstanton@fs.fed.us)).

## UPCOMING WEBINARS

(Items beginning with \* indicate a new listing or new information)

\***The Sustainable Forest Roundtable** offers periodic webinars. A recent webinar, Invasive Plants Best Management Practices, is open to the public and may be viewed at this [website](#). For information about accessing past and future webinars, please visit [the Webinar Portal for Sustainable Forests](#).

**Webinars offered by the U.S Forest Service Remote Sensing Applications Center (RSAC)** include three varieties. The lightning talks (**Lightning Talk**) are very short presentations that will last approximately 15 minutes; they will focus on specific geoprocessing tasks and are designed to provide concise and useful information in a very efficient manner. The Awareness Sessions (**Awareness**) are designed to build your knowledge base on the particular topic and enable you to further explore the technology with realistic expectations. The Technical Training Webcasts (**Technical**) are designed to provide you with the technical skills and tools to complete remote sensing geoprocessing tasks. **Note: If you don't have access to the Forest Service Intranet, the registration links will not work. Please email Brent Mitchell ([brentmitchell@fs.fed.us](mailto:brentmitchell@fs.fed.us)) directly after Jan. 26 to make accommodations. Before Jan. 26, please contact Brenna Schwert ([bmschwert@fs.fed.us](mailto:bmschwert@fs.fed.us)) to ensure you can register for the classes you want.**

- **[Using Stereo Analyst \(Technical\)](#)** This course will introduce the basic characteristics of photos that allow for stereo viewing, demonstrate how to add stereo block files to both Stereo Analyst for Arc Map (10.1 or later) and Stereo Analyst for Imagine (2013 or later), and how to use the stereo imagery for measuring tree heights and digitizing features with elevation information. No special equipment is required, as you will be able to view imagery in stereo on your current computer monitor. This webinar will be conducted from **10:00am – 4:00pm (Mountain Time) on April 15<sup>th</sup>, 2015**. **[Click here to register or for additional information.](#)**
- **[Large Lidar Acquisition Processing - Advanced Work-flows \(Technical\)](#)** This one day webinar will explore the complexities, and potential work-flows, for processing large lidar datasets to extract 3-D canopy structure metrics in the form of seamless ArcGIS raster products. Participants will walk away with the tools and knowledge to apply the workflow to their existing lidar datasets. This

webinar will be conducted from **10:00am – 4:00pm (Mountain Time)** on **April 21<sup>st</sup>, 2015**. [Click here to register or for additional information.](#)

- [3-D Surface Creation with Aerial Imagery](#) (**Technical**) Aerial imagery, when acquired with sufficient image overlap, can be used to create a 3D surface of the landscape. By pairing the 3-D surface with high resolution ground elevation data, such as a photo or lidar-derived DEM, it can be used to produce height and cover metrics of vegetation. This awareness session will introduce a newly added algorithm, Semi-Global Matching (SGM), which can be found in the ERDAS Imagine 2014 suite of tools. SGM is a powerful and easy to use tool for creating surface models from digital aerial imagery. This awareness session will include a live demonstration of SGM, as well as a comparison of the results with lidar data. This webinar will be conducted from **10:00am – 11:00am (Mountain Time)** on **April 23<sup>rd</sup>, 2015**. [Click here to register or for additional information.](#)
- [Using the R Statistical Package to Explore Lidar Inventory Models](#) (**Technical**) In this 1-day workshop, we will use RStudio to streamline the process of building statistical models with lidar data or similar datasets in R. The hands-on portion of the webinar will introduce participants to working with data in R (both a statistical package and computing language) using RStudio. Participants will gain experience exploring data, building and evaluating models and using models to make predictions. No R experience is required for this course. This webinar will be conducted from **10:00am – 4:00pm (Mountain Time)** on **April 29<sup>th</sup>, 2015**. [Click here to register or for additional information.](#)
- [Obtaining Remote Sensing Data](#) (**Technical**) Do you need to find some remotely sensed imagery, or just want to know your options for finding it in the future? This 1/2-day course will showcase useful websites for obtaining remotely sensed imagery and other data, and demonstrate efficient methods and useful tips for effectively downloading your desired datasets. The webinar will be conducted from **10:00am – 12:00pm (Mountain Time)** on **May 6<sup>th</sup>, 2015**. [Click here to register or for additional information.](#)
- [Overview of Mosaicking Images](#) (**Awareness**) This 1-hour webinar will explain various methods for mosaicking or combining multiple images into a single image. This simple process can be used for many projects, and can save you a lot of time by reducing data management tasks. The Forest Service enterprise software suite includes many tools for mosaicking raster datasets. The various tools can be used on a number of datasets, including terrain data, maps, and aerial/satellite imagery. This webinar will include demonstrations of many of these tools, ranging from the most simple to some of the more advanced tools that allow for seamline editing and color-balancing. This webinar will be conducted from **10:00am to 11:00am (Mountain Time)** on **May 13<sup>th</sup>, 2015**. [Click here to register or for additional information.](#)
- [Using eCognition to Map Pine Beetle Infestations](#) (**Awareness**) Mapping trees affected by beetle infestation can aid forest managers in devising plans to reduce

the spread of infestation. This 1-hour awareness session will examine a case study of how eCognition was used to map beetle infested trees in the Black Hills of South Dakota. The processing workflow of preparing the high resolution aerial photography, creating segments, collecting samples, choosing the best classifier, exporting a shapefile of the infected tree areas, and product cleanup will be showcased in a live demonstration. This webinar will be conducted from **10:00am to 11:00am (Mountain Time) on May 19<sup>th</sup>, 2015.** [Click here to register or for additional information.](#)

## **PUBLICATIONS OF INTEREST**

1. **McCullough, D.G.; Mercader, R.J.; Siegert, N.W.** 2015. Developing and integrating tactics to slow ash (Oleaceae) mortality caused by emerald ash borer (Coleoptera: Buprestidae). The Canadian Entomologist. FirstView. <http://dx.doi.org/10.4039/tce.2015.3>
2. **Morin, R.S.; Randolph, K.C.; Steinman, J.** 2015. Mortality rates associated with crown health for eastern forest tree species. Environmental Monitoring and Assessment. 187(3): 87 <http://www.nrs.fs.fed.us/pubs/47685>
3. **Munck, I.A.; Tanguay, P.; Weimer, J.; Villani, S.M.; Cox, K.** 2015. Impact of white pine blister rust on resistant cultivated *Ribes* and neighboring eastern white pine in New Hampshire. Plant Disease. [doi: 10.1094/PDIS-12-14-1338-RE](https://doi.org/10.1094/PDIS-12-14-1338-RE).

## **FOR MORE FHM INFORMATION**

Visit the [FHM homepage](#) and the [Forest Health Portal](#) or access both via the [USDA Forest Service homepage](#)