

# Forest Health Monitoring Program Monthly Update June 2017

## WHAT'S NEW

**Remember** the “peppered moth” *Biston betularia* whose color variant proportions changed in response to air pollution in industrializing environments? A light-colored body was an effective camouflage in a clean environment, while dark color was beneficial in a polluted environment. This selective survival was due to birds which easily caught dark moths on clean trees and caught white moths on trees darkened with soot. The peppered moth provides an easily understood example of Darwinian evolution in action. In 2016, the peppered moth was collected for the first time in Alaska. Peppered moth larvae are also proficient at blending in to their background – matching branches or petioles of alder trees. See the [2016 Alaska Forest Health Conditions Report](#) (p. 48) for a photograph of peppered moth larvae.

**Also in the** [2016 Alaska Forest Health Conditions Report](#) (p. 49) is a description of recent defoliation caused by the speckled green fruit worm (SGFW) *Orthosia hibisci*. SGFW is a transcontinental noctuid that feeds on many deciduous trees and shrubs and some conifers. An outbreak in Alaska is expected to increase to about 300-400,000 acres in 2017. SGFW has never previously been documented causing damage to this extent. Abundant spring-flying adult moths are attracting attention in [Alaskan towns](#) and as they aggregate on winter-broken birch saplings that are leaking sap.

## NEWS ABOUT FHM PARTNERS

**The U.S. Department of Agriculture** seeks nominations for the Forestry Research Advisory Council (FRAC). In accordance with provisions of Section 1441 (c) of the Agriculture and Food Act of 1981 (Pub. L. 97-98), and the Federal Advisory Committee Act (FACA), (5 U.S.C. App. 2), the FRAC provides advice to the Secretary of Agriculture on accomplishing efficiently the purposes of the Act of October 10, 1962 (16 U.S.C. 582a, et seq.), commonly known as the McIntire-Stennis Act of 1962. The FRAC also provides advice relative to the Forest Service research program, authorized by the Forest and Rangeland Renewable Resources Research Act of 1978 (P.L. 95-307, 92 Stat.353, as amended; 16 U.S.C. 1600). Therefore, the Secretary of Agriculture is seeking nominations for the membership of the FRAC. **DATES:** Written nominations must be received by **June 16, 2017**. Nominations must contain a completed application packet that includes the nominee’s name, resume, and completed form AD-755 (Advisory Committee Membership Background Information). A cover letter and letters of recommendation are welcome. The [form AD-755](#) may be obtained by clicking on the title link or the following web site link: from the following website:

<https://www.ocio.usda.gov/sites/default/files/docs/2012/AD-755%20-%20Approved%20Master%202015.pdf>. The package must be sent electronically to [mhpetrie@fs.fed.us](mailto:mhpetrie@fs.fed.us) or to the following address: Tracy C. Hancock, USDA Forest Service, Office of the Deputy Chief, Research and Development, 201 14th Street, SW, Mail Stop 1120, Washington, DC 20250-11 by express mail or overnight courier service. If sent via the U.S. Postal Service, they must be sent to the following address: U.S. Department of Agriculture, Forest Service, Office of the Deputy Chief, Research and Development, Mail Stop 1120, 1400 Independence Avenue, SW, Washington, DC 20250-1120. FOR FURTHER INFORMATION CONTACT:

- Tracy Hancock, FRAC Designated Federal Official, USDA Forest Service, Telephone: (202) 205-1724, Email: [tchancock@fs.fed.us](mailto:tchancock@fs.fed.us).
- Dr. Sharon Parker, FRAC Executive Secretary, USDA Forest Service, Telephone: (703) 340-7864, Email: [sparker01@fs.fed.us](mailto:sparker01@fs.fed.us).
- Martha Petrie, FRAC Staff Assistant, USDA Forest Service, Telephone: (202) 205-1643, Email: [mhpetrie@fs.fed.us](mailto:mhpetrie@fs.fed.us).

Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 between 8 a.m. and 5 p.m., Eastern Standard Time, Monday through Friday.

## UPCOMING EVENTS

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

**June 13-15, 2017.** Lafayette, IN. The Thousand Cankers Disease Research & Management Operational Meeting. The purpose of the meeting is to receive and review all survey, research and regulatory activity of the impacted states and agencies. A goal is to determine and suggest direction for thousand cankers disease (TCD) research, management and regulation. Invitation goes to all states and agencies impacted in some manner by TCD. At the end of meeting, state regulatory people and others will discuss update/changes to quarantines and management practices and suggest research direction. If you have a research topic or other topic you feel would benefit the meeting, please let Liz Jackson ([jackson@purdue.edu](mailto:jackson@purdue.edu)) and Phil Marshall ([PMarshall@dnr.IN.gov](mailto:PMarshall@dnr.IN.gov)) know as the goal is report on all information related to TCD. The Courtyard by Marriott in Lafayette is the meeting site and the meeting is in conjunction with the Walnut Council National Meeting June 11-14. The hotel reservations date was extended to May 18. **Contact Liz Jackson ([jackson@purdue.edu](mailto:jackson@purdue.edu)) if you have questions.** Use Walnut Council to get the meeting rate for the rooms. There is **NO Registration Fee** for the TCD meeting, but please **REMEMBER to register!** There is an additional charge if you want to attend the Walnut Council banquet on Tuesday June 13. An updated TCD meeting agenda and hotel and travel information are available at [the TCD website](#), [the National Plant Board website](#) or [the Hardwood Tree Improvement & Regeneration Center website](#).

**June 19-22, 2017.** Edmonton, Alberta, Canada. The 11<sup>th</sup> North America Forest Ecology Workshop (NAFEW). Hosted by the University of Alberta, the theme will be: *Sustaining Forests from Restoration to Conservation*. There will be a special session on the great North American aspen transect, as well as sessions on resilience, thresholds, forest understory, climate change/disturbance, and

modeling complexity, and more! The conference will include one-day in-conference field trips to see both natural and industrial landscapes. Further details and regular updates can be found at the [conference web site](#).

**October 24-26, 2017.** Park City, Utah. 2017 Forest Inventory and Analysis Science Stakeholder Meeting: Doing more with the Core. The US Forest Service, Forest Inventory and Analysis (FIA) Program is pleased to announce the 2017 FIA Science Stakeholder Meeting. The theme of the 13th biennial Science Stakeholder Meeting is Doing More with the Core, emphasizing innovation around how FIA analyzes, augments, and delivers information derived from its central data collection operations. 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 presentations is available. Presentation abstracts are due **May 5, 2017**. For more information about the meeting including lodging, call for papers, author standards, and manuscript guidelines, visit [the meeting web site](#).

**October 24-26, 2017.** Knoxville, TN. Oak Symposium: Sustaining Oak Forests in the 21<sup>st</sup> Century through Science-based Management. This symposium is the third in a series that began in 1992 and continued in 2002. The purpose of the symposium is technology transfer of state-of-the-art management and research for sustainability of oaks in the Central Hardwood Region. Topic to be covered by invited speakers are prescribed fire, silviculture, economic markets, forest health, and climate change of upland oak forests. There will be a poster session (abstracts accepted until **July 15, 2017**), and a field tour to showcase collaborative research among the University of Tennessee (UT) Forest Resources Research and Education Center, the UT Tree Improvement Program, and the USDA Forest Service Southern Research Station. For complete information about the symposium including lodging and registration, visit the [conference website](#).

**November 15-19, 2017.** Albuquerque, New Mexico. The 2017 Society of American Foresters National Convention. For complete information about the convention as it becomes available, visit the [convention web site](#).

## **UPCOMING** **WEBINARS**

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

**\*Developing a Climate Action Plan for Your Community: Lessons from the Florida Keys.** (Sponsored by The Climate Learning Network) Speaker: Alicia Betancourt (University of Florida – IFAS, Monroe County Extension Director). Many communities are taking action to create plans to prepare for potential climate change impacts, such as sea level rise, changes in weather conditions (floods or drought), higher maximum temperatures, more severe weather, and changes in distribution of plants and insects. This session will focus on methods to address climate issues and tools that agents can use to provide leadership in climate change planning. Alicia Betancourt will share the program strategies and barriers she learned over 10 years in her effort to increase climate resilient policies and energy efficiency in county operations. Through the efforts of this Extension program Monroe County has adopted 40

local policies on energy and climate resiliency since 2010. Alicia worked with county staff and community members to develop the Monroe County Climate Action Plan. Monroe County was one of the first in Florida to adopt climate and energy policies into their comprehensive plan. A 5 year plan for sustainability implementation began in 2016 with 42-46 projects per year. The projects cover all aspects of resiliency such as infrastructure, purchasing and road elevation and have led to local funding of over 3.3 million dollars through 2018. No pre-registration is required! CEU available: Society of American Foresters – 1 hour Category 1 Credit. This webinar will be conducted at **3:00 p.m. (EDT) on June 8, 2017**. To access this free webinar, visit [the webinar information site](#) for more details. Plan to join the webinar 15 minutes early.

**\*Development and Use of Generalized Provisional Seed Zones.** (Sponsored by Eastern Seed Zone Forum) Speaker: Dr. Andy Bower (Area Geneticist, USDA Forest Service). The fourth of the Eastern Seed Zone Forum's online lecture and discussion hours aimed at providing both information about the creation of seed zones in general and a forum in which professionals, experts, and interested parties discuss the possibility of drafting seed zone guidelines for the eastern United States. No pre-registration is required! CEU applied for: Georgia Master Timber Harvester – 1 hour CLE Continuing Logger Ed Credit; Society of American Foresters – 1 hour Category 1 Credit. This webinar will be conducted at **1:00 p.m. (EDT) on June 14, 2017**. To access this free webinar, visit [the webinar information site](#) for more details. Plan to join the webinar 15 minutes early.

**\*Learn at Lunch Live Webinar: Soil Profile Rebuilding: Rehabilitating Compacted Soils.** (Sponsored by the Utah State University Forestry Extension) Speaker: Dr. Susan D. Day (Associate Professor of Urban Forestry, Virginia Tech). Arborists and urban foresters are frequently faced with tree planting in poor quality soils that have been damaged by scraping and grading during land development or construction. These poor soils not only limit tree growth and slow establishment, but also impair the resilience of urban trees in the face of both drought and heavy rains. Dr. Day has recently completed a series of research projects evaluating a soil rehabilitation technique known as Soil Profile Rebuilding that can be used to remediate soils on site. The presentation will provide an overview of this technique, which is also available in the form of a written specification to allow for easy adoption. No registration is required! 1 CEU is available from the following organizations: International Society of Arboriculture, and Society of American Foresters for **LIVE** broadcast only. This webinar will be conducted at **12:00 p.m. (MDT) on June 21, 2017**. To access this free webinar, visit [the registration site](#). Plan to access the site a few minutes early.

**The Sustainable Forest Roundtable** offers periodic webinars. For information about accessing past and future webinars, please visit [the Webinar Portal for Sustainable Forests](#).

**\*Webinars offered by the U.S Forest Service Geospatial Technology and Applications Center (GTAC)** include three varieties. The lightning talks (**Lightning Talk**) are very short presentations that will last approximately 15-30 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 geospatial tasks. **GIS** listed after presentation type indicates GIS training. **RM** listed after the presentation type indicates remote sensing training. **Note: If you don't have access to the Forest Service Intranet, the registration links will not work. Please email Brenna Schwert ([bmschwert@fs.fed.us](mailto:bmschwert@fs.fed.us)) directly to make accommodations.**

- [\*\*ArcGIS 10.3 Working with Tables\*\*](#) (**Technical - GIS**) Participants will learn how to work with tabular information in ArcGIS. The course covers how to use different commands and functions within tables, query attribute data, and join and relate tables. Suggested Background: The prerequisites for this class are the Quick Start course or basic GIS skills (Participants must be open projects, load data, understand Data Frame and Layer properties, and be able to manage GIS data in ArcCatalog). **10:00 am – 4:00 pm (Mountain Time) on June 14, 2017.**
- [\*\*ArcGIS 10.3 Editing\*\*](#) (**Technical - GIS**) This class demonstrates editing environment in ArcGIS Desktop 10.3. You will be exposed to the new editing environment. The course covers editing attribute data, performing spatial edits, and creating new data (digitizing). The hands on exercises teach basic editing functionality. **10:00 am – 4:00 pm (Mountain Time) on June 15.**
- [\*\*Introduction to ArcGIS Online\*\*](#) (**Technical - GIS**) **Forest Service Only**  
\*\*Note: This is not an introductory course for ArcGIS Desktop. If you are interested in an introductory training in ArcGIS, please see our ArcGIS 10.3 Quick Start course. Participants will learn how to create simple web maps, create and manage groups, create a Story Map Journal web app, and learn how to work with ArcGIS Collector. This course also covers how to administer ArcGIS Online and how roles and privileges relate. Included in the course is an optional lesson on further exploring Story Maps by creating a Tour App. **10:00 am – 4:00 pm (Mountain Time) on June 22, 2017.**
- [\*\*ArcGIS 10.3 – Spatial Statistics\*\*](#) (**Technical - GIS**) Participants will learn the basics of Spatial Statistics and ways in which you can explore spatial data using the Spatial Statistics toolset. This course covers measuring the distribution and relationship of spatial features and any significant patterns that may exist. Participants will also learn how to analyze patterns in spatial data and identify locations of statistically significant spatial clusters and/or dispersion. **10:00 am – 4:00 pm (Mountain Time) on June 27, 2017.**
- [\*\*ArcGIS 10.3 – Spatial Analyst\*\*](#) (**Technical - GIS**) ArcGIS Spatial Analyst provides a broad range of powerful spatial modeling and analysis capabilities. You can create, query, map, and analyze cell-based raster data; perform integrated raster/vector analysis; derive new information from existing data; query information across multiple data layers; and fully integrate cell-based raster data with traditional vector data sources. **10:00 am – 4:00 pm (Mountain Time) on June 28, 2017.**
- [\*\*ArcGIS 10.3 Geodatabases\*\*](#) (**Technical -GIS**) Participants will learn how to create a File Geodatabase, and import existing data, how to create attribute domains, and edit table-attribute values that are linked to those domains; and

how to create Topologies. These topologies will be used to verify the vertical integration of spatially coincident feature classes. **10:00 am – 4:00 pm (Mountain Time) on July 6, 2017.**

- [ArcGIS 10.3 Quick Start](#) (**Technical - GIS**) Participants will learn how to get started using ArcGIS Desktop's primary applications, ArcMap and ArcCatalog. The course covers fundamental GIS concepts and basic functionality to view and manipulate display properties. The hands on exercises teach basic viewing functionality and GIS data types and their properties. **10:00 am – 4:00 pm (Mountain Time) on July 11-12, 2017.**
- [Existing Vegetation Classification, Mapping and Inventory Technical Guide \(EVTG\)](#) (**Lightning Talk – Remote Sensing**) This Lightning Talk will touch on the new “Existing Vegetation Classification, Mapping and Inventory Technical Guide (EVTG)” Training Modules for [Section 3.1](#) and [Section 3.2](#) (Chapter 3 is the Mapping portion of the EVTG). Mapping activities are key to helping to fulfill the Forest Service's Mission. To provide national standards and guidelines to the agency for conducting such activities, Ecosystem Management Coordination managed the development of a new version of the Existing Vegetation Classification, Mapping and Inventory Technical Guide (EVTG) and requested and funded the development of the supporting tutorials that will be highlighted in this Lightning Talk. **10:00 am – 11:00 pm (Mountain Time) on July 13, 2017.**
- [Introduction to ArcGIS Online](#) (**Technical - GIS**) Forest **Service Only**  
\*\*Note: This is not an introductory course for ArcGIS Desktop. If you are interested in an introductory training in ArcGIS, please see our ArcGIS 10.3 Quick Start course. Participants will learn how to create simple web maps, create and manage groups, create a Story Map Journal web app, and learn how to work with ArcGIS Collector. This course also covers how to administer ArcGIS Online and how roles and privileges relate. Included in the course is an optional lesson on further exploring Story Maps by creating a Tour App. **10:00 am – 4:00 pm (Mountain Time) on July 18, 2017.**
- [Introduction to Forest Service Geospatial Resources](#) (**Awareness - GIS**) **Forest Service Only** NEW! This course is for people who are new to the Forest Service or new to GIS and need to learn about the geospatial data, protocols, and platforms available in the Forest Service. PLEASE NOTE: This course will not teach you how to use specific GIS software. If you are new to GIS, we recommend you take the GSTC ArcGIS 10.3 Quick Start class, or the Introduction to ArcGIS Online course. **10:00 am – 12:00 pm (Mountain Time) on July 20, 2017.**
- [ArcGIS 10.3 - Using Citrix for GIS Projects](#) (**Technical - GIS**) **Forest Service Only** Participants will learn how to use GIS data to analyze a vegetation project proposal and prepare information for a NEPA analysis. Students will use the Forest Service Data Center and Citrix programs that allow for inter-discipline collaboration, and provides a central repository for all the project data. This course covers the process of finding, creating, managing, and analyzing GIS data in order to prepare outputs for a collaborative Forest Service Project. **10:00 am – 4:00 pm (Mountain Time) on July 26, 2017.**
- [ArcGIS 10.3 Quick Start](#) (**Technical - GIS**) Participants will learn how to get started using ArcGIS Desktop's primary applications, ArcMap and ArcCatalog. The course covers fundamental GIS concepts and basic functionality to view and manipulate display properties. The hands on

exercises teach basic viewing functionality and GIS data types and their properties. **10:00 am – 4:00 pm (Mountain Time) on August 1-2, 2017.**

- [ArcGIS 10.3 Cartographic Tools](#) (**Technical - GIS**) Participants will learn how to work with various cartographic related properties in ArcGIS. The course covers how to set Layer and Data Frame properties, work with Layer files, assign classification symbology, work with labeling and annotation, and create a final map product. **10:00 am – 4:00 pm (Mountain Time) on August 8, 2017.**
- [ArcGIS 10.3 Editing](#) (**Technical - GIS**) This class demonstrates editing environment in ArcGIS Desktop 10.3. You will be exposed to the new editing environment. The course covers editing attribute data, performing spatial edits, and creating new data (digitizing). The hands on exercises teach basic editing functionality. **10:00 am – 4:00 pm (Mountain Time) on August 17, 2017.**
- [Introduction to ArcGIS Online](#) (**Technical - GIS**) **Forest Service Only**  
\*\*Note: This is not an introductory course for ArcGIS Desktop. If you are interested in an introductory training in ArcGIS, please see our ArcGIS 10.3 Quick Start course. Participants will learn how to create simple web maps, create and manage groups, create a Story Map Journal web app, and learn how to work with ArcGIS Collector. This course also covers how to administer ArcGIS Online and how roles and privileges relate. Included in the course is an optional lesson on further exploring Story Maps by creating a Tour App. **10:00 am – 4:00 pm (Mountain Time) on August 22, 2017.**
- [ArcGIS 10.3 Working with Tables](#) (**Technical - GIS**) Participants will learn how to work with tabular information in ArcGIS. The course covers how to use different commands and functions within tables, query attribute data, and join and relate tables. Suggested Background: The prerequisites for this class are the Quick Start course or basic GIS skills (Participants must be open projects, load data, understand Data Frame and Layer properties, and be able manage GIS data in ArcCatalog). **10:00 am – 4:00 pm (Mountain Time) on August 29, 2017.**
- [Introduction to Forest Service Geospatial Resources](#) (**Awareness - GIS**) **Forest Service Only** NEW! This course is for people who are new to the Forest Service or new to GIS and need to learn about the geospatial data, protocols, and platforms available in the Forest Service. PLEASE NOTE: This course will not teach you how to use specific GIS software. If you are new to GIS, we recommend you take the GSTC ArcGIS 10.3 Quick Start class, or the Introduction to ArcGIS Online course. **10:00 am – 12:00 pm (Mountain Time) on August 30, 2017.**

## **PUBLICATIONS OF INTEREST**

1. **Fei, S.; Desprez, J.M.; Potter, K.M.; Jo, I.; Knott, J.A.; Oswald, C.M.** 2017. Divergence of species responses to climate change. *Science Advances*. 3(5):e1603055. DOI: 10.1126/sciadv.1603055.
2. **Rogers, P.C.** 2017. [Guide to quaking aspen ecology and management](#). BLM-UT-G1017-001-8000. Salt Lake City, UT: U.S. Department of the

Interior, Bureau of Land Management. 98 p. Available online by clicking on the title above or on the following web address: [http://western-aspen-alliance.org/files/AspenFieldGuide\\_050817\\_final4.pdf](http://western-aspen-alliance.org/files/AspenFieldGuide_050817_final4.pdf)

3. **Zegler, Tom.** 2017. [New Mexico forest health conditions report, 2016](#)  
Energy, minerals, and Natural Resources Department, Forestry Division,  
New Mexico State Forestry. 18 p. Available online by clicking on the title  
above or on the following web link:  
[http://www.emnrd.state.nm.us/SFD/FWHPlan/documents/2016\\_NMconditionsreport\\_short.pdf](http://www.emnrd.state.nm.us/SFD/FWHPlan/documents/2016_NMconditionsreport_short.pdf)

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or access both via the [USDA Forest Service homepage](#)