**DRAFT CAPS Fair / Breakout Session Ideas Related to Diagnostics/Identification/Screening and Survey Support Technologies for the 2015 National CAPS Conference**

**CAPS FAIR -morning**

*Format:* *large room with individual tables set up with displays, handouts, specimens, etc. where SME’s answer questions or discuss aspects of their area. Brief encounters with interested participants normally.*

***Proper Lepidoptera Trap Sample Preparation for Maintaining Sample Quality***

***Julieta Brambila, PPQ Domestic Identifier, Gainesville, FL***

Those visiting the CAPS Fair display “Quality Improvement” will learn how to treat captured moths in such a way that specimens reach the Identifiers in the highest quality possible, increasing the chance of target detection.

***Using Portable Computer Based Microscopes for Trap Screening,***

***Internet Training and Collaboration***

**AMY RODA, Entomologist, USDA, APHIS, PPQ S&T CPHST Miami Laboratory, Miami, FL**

Ever wonder if that by-catch or massively invested soybean plant is something very important? Is it the new invasion we are all expecting or just something you should have recognized??? The latest advances in portable computer based microscopes combined with smartphone/tablet technology may help you get an answer fast.

***Screening and Identification Websites, Digital Documents, and Mobile Applications to Support Plant Protection* Terrence Walters, Identification Technology Program (ITP) Coordinator, USDA, APHIS, PPQ S&T Ft. Collins Laboratory**

ITP will highlight the 2015 release of 11 mobile apps for Android smartphones, iOS smartphones, and iPads. ITP will provide demonstrations for over 20 screening aids (2014-2015 – Lepidoptera and Coleoptera) to support the CAPS community.

***Ways the PPQ Plant Pathologist – Domestic Identifier Laboratory supports CAPS***

**Craig Webb, PPQ Domestic Identifier/Plant Pathology, Kansas State University, Manhattan KS**

The CAPS community can drop by the PPQ Plant Pathologist – Domestic Identifier table and learn how we provide diagnostic support to the CAPS program. This will be a good time to learn more about the services our laboratory offers. Please bring your questions and ideas on ways we can be of service to you.

***Bark Beetles and Other Woodborers***

**Bobby Brown, PPQ Domestic Identifier, Purdue University/ Jim LaBonte, Taxonomic Entomologist, Oregon Department of Agriculture**

Displays of pinned specimens, references, handouts to answer questions about Coleoptera survey methods and targets. Also included is the proper way to preserve and send Lindgren funnel traps samples.

***Lepidoptera Adult Surveys***

**Kira Metz, PPQ Domestic Identifier, Texas A&M University/ Richard Brown, Professor of Entomology, Mississippi State University/ Eric LaGasa, Taxonomic Entomologist, Washington State Department of Agriculture**

Displays of pinned specimens, references, handouts to answer questions about Lepidoptera survey methods and targets.

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**BREAKOUT SESSIONS- Afternoon**

*Format:* *30 - 45 minute sessions presenting a particular subject to a group. The CAPS Fair participants above all have roles in the Breakout Sessions. It could be methods, identification or screening training, data collection, etc. but offered in more detail than is possible with the CAPS Fair’s limited contact. These sessions could be offered more than once every hour so participants can attend more than one session in an afternoon.*

***Recognizing Target and Non-Target Moths in Trap Samples During Screening***

**Kira Metz, PPQ Domestic Identifier, Texas A&M University/ Richard Brown, Professor of Entomology, Mississippi State University/ Eric LaGasa, Taxonomic Entomologist, Washington State Department of Agriculture**

The presenters will have examples of actual trap samples from the previous year to show how screening is done and examples of common non-target moths as they appear in the traps. Discussion of the use of screening aids will be included.

***“What Happens After I Send My Plant Pathogen Survey Sample to the Diagnostic Lab?”***

**Craig Webb, PPQ Domestic Identifier/Plant Pathology, Kansas State University, Manhattan KS**

The session will demonstrate the process’ a sample goes through once submitted to the Identifier Lab. ELISA assays could be demonstrated. Participants will be learn about the process of sample prep, DNA extraction, and PCR testing. Props could include large gel photographs, PCR instruments, and perhaps a live real-time demo?

***Identification of Helicoverpa armigera Adults From Trap Samples Through Genitalia Dissection***

***Julieta Brambila, PPQ Domestic Identifier, Gainesville, FL***

This demonstration will include the proper way to prepare and dissect male *Helicoverpa* sp. found in large numbers in bucket traps because the pheromone attracts non-target corn earworm, *H. zea*. In order to find new *H. armigera* detections, dissection is the only approved method since external morphology is not adequate, even for screening.

***Using Portable Computer Based Microscopes for Trap Screening,***

***Internet Training and Collaboration***

**AMY RODA, Entomologist, USDA, APHIS, PPQ S&T CPHST Miami Laboratory, Miami, FL**

Amy will demonstrate how hand held microscope cameras may serve as a tool to easily capture and send pictures from the field. She will show how to overcome difficulties encounter in the field that were solved during pilot studies conducted with Emerald Ash Borer in MA and KS and with moth traps in FL. She will also highlight how the technology is being used to conduct palm weevil (*Rhynchophorus spp.)* identification training in 6 Caribbean countries simultaneously through a web collaboration tool that uses Adobe® ConnectTM known as “Food Shield”.  The technology has promise for rapid preliminary identification, trap screening and delivering training and presenting taxonomic information about pests.

***Screening and Identification Websites, Digital Documents, and Mobile Applications to Support Plant Protection* Terrence Walters, Identification Technology Program (ITP) Coordinator, USDA, APHIS, PPQ S&T Ft. Collins Laboratory**

Hands-on training will be provided for some of ITP’s recently released multimedia identification tools including exotic scarabs, buprestids, bee mites, scales, and grasshoppers. Visitors will be able to view and use the newly updated and popular ITP Partner Image Database.

***Cerambycidae, CAPS Target Longhorned Beetle Recognition and Some Native Look-a-likes***

**Bobby Brown, PPQ Domestic Identifier, Purdue University/ Jim LaBonte, Taxonomic Entomologist, Oregon Department of Agriculture**

Presentation of LaBonte’s screening aid for Western Cerambycidae and include examples more specific to Eastern US. Show specimens under scope projected on screen if possible.

**Additional Optional Breakout Session:** How to deploy and properly service a Lindgren funnel trap.

**Equipment Needs:**

*This still needs to be worked out for each presenter/display.*

*Below are Terrence Walters’ specified needs as an example:*

* Requirements for Booth – two very large monitors, one large monitor, two tables, three chairs, internet access for two CPUs, one CPU (run a continuous powerpoint slide presentation), Wi-Fi service for smartphones (if Verizon and AT&T accessible, then will use data plan) and tablet, extension cords allowing at least 8 electric outlets
* Host will bring the following – Laptop, smartphones (Samsung and iPhone), tablet (iPad), and handouts

For some of the ID training in breakouts, it will not be practical to have dissecting microscopes for all the participants. It is suggested that for demonstration purposes, use dissecting scopes equipped with cameras that can project on a screen from a laptop connected LCD projector. This will be needed for *Helicoverpa armigera* dissection demonstration, the cerambycid ID breakout, and the Lepidoptera non-target ID breakout. Patrick Haslem is the new Remote Pest Identification program manager in NIS, and he can likely provide support for getting the equipment there, and possibly assisting in set-up if he attends the conference.