A Resource for Pests and Diseases of Cultivated Palms: Screening Aid to Pests

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CPHST is pleased to announce the release of its newest identification tool: *A Resource for Pests and Diseases of Cultivated Palms: Screening Aid to Pests*, developed through collaboration among USDA-APHIS-PPQ-CPHST, University of Florida, and the Southern Plant Diagnostic Network. *Screening Aid to Pests* (*SAP*) is part of the commodity-based *A Resource for Pests and Diseases of Cultivated Palms*, developed to support Federal, State, and County plant protection agencies and other organizations involved with surveillance, detection, and monitoring of pests and diseases associated with cultivated palms. Palms are commonly cultivated as ornamentals and have been used as crop plants for centuries, providing important sources of food and a variety of other products. As such, palms are one of the most economically important groups of plants.

The soon-to-be-released *A Resource for Pests and Diseases of Cultivated Palms* has been designed as a screening resource to aid individuals conducting field surveys for pests and diseases of cultivated palms. When complete, the resource will include links to six different tools offering detection and identification support for cultivated palms and their pests, diseases, and disorders known to occur in the continental US, Hawaii, and the Caribbean Islands as of 2010, as well as those of immediate concern to these regions. *SAP*, the first of the palm resource tools to be released, is aimed at the novice entomologist, supporting identification of palm pests to order, family, and in some cases, to species.

The interactive keys featured in *SAP* were developed in Lucid version 3.4 software. The tool was uploaded to the Internet in September 2010 to support easy access by the Cooperative Agricultural Pest Survey (CAPS) community, the National Plant Diagnostic Network (NPDN), and other PPQ cooperators. *SAP* can be accessed at:

http://itp.lucidcentral.org/id/palms/SAP/

SAP is cross-platform and is compatible with all major operating systems, including Windows, Macintosh, and Unix. The interactive keys require that your computer has Java Runtime Environment version 1.4.2 or greater installed; Lucid software is not necessary.


Home page of *SAP* (foreground) provides several explanatory links to major tool components. Each tool will be linked from the resource home page (background).
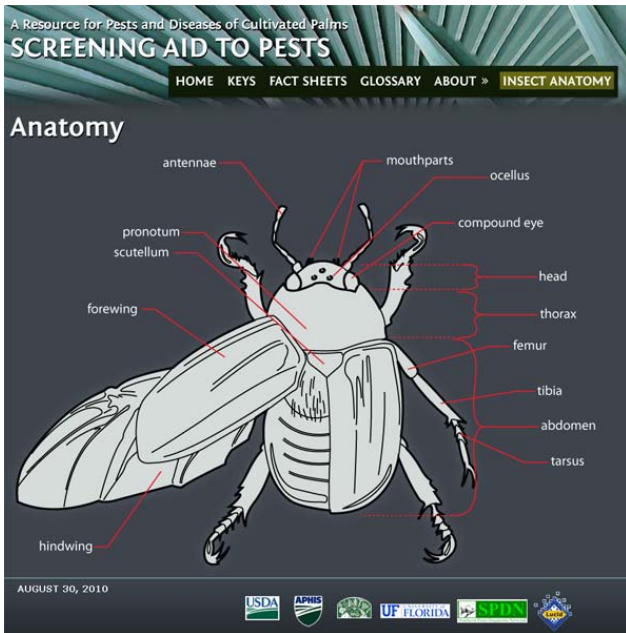
An illustrated guide to insect anatomy is provided to support users with little entomology background.

Lucid keys are easy to use, electronic, and matrix based. Quite different from traditional pathway or dichotomous keys, matrix keys allow users to direct the identification process, choosing which characters to examine. The process is facilitated by multimedia attached to taxa and characters, including photographs, illustrations, and HTML pages.

SAP features illustrated fact sheets with descriptions of each pest or group of pests, as well as two interactive keys, one to adult arthropod pests and one to select larvae. In the keys themselves, common language terms are used to help support their use by inexperienced individuals. The keys are fully illustrated, providing the user with diagrammatic illustrations along with photographs of live specimens to support identification. A glossary is provided to assist the user in understanding the specialized entomological terminology that appears in the fact sheets. An illustrated guide to insect anatomy is also provided.
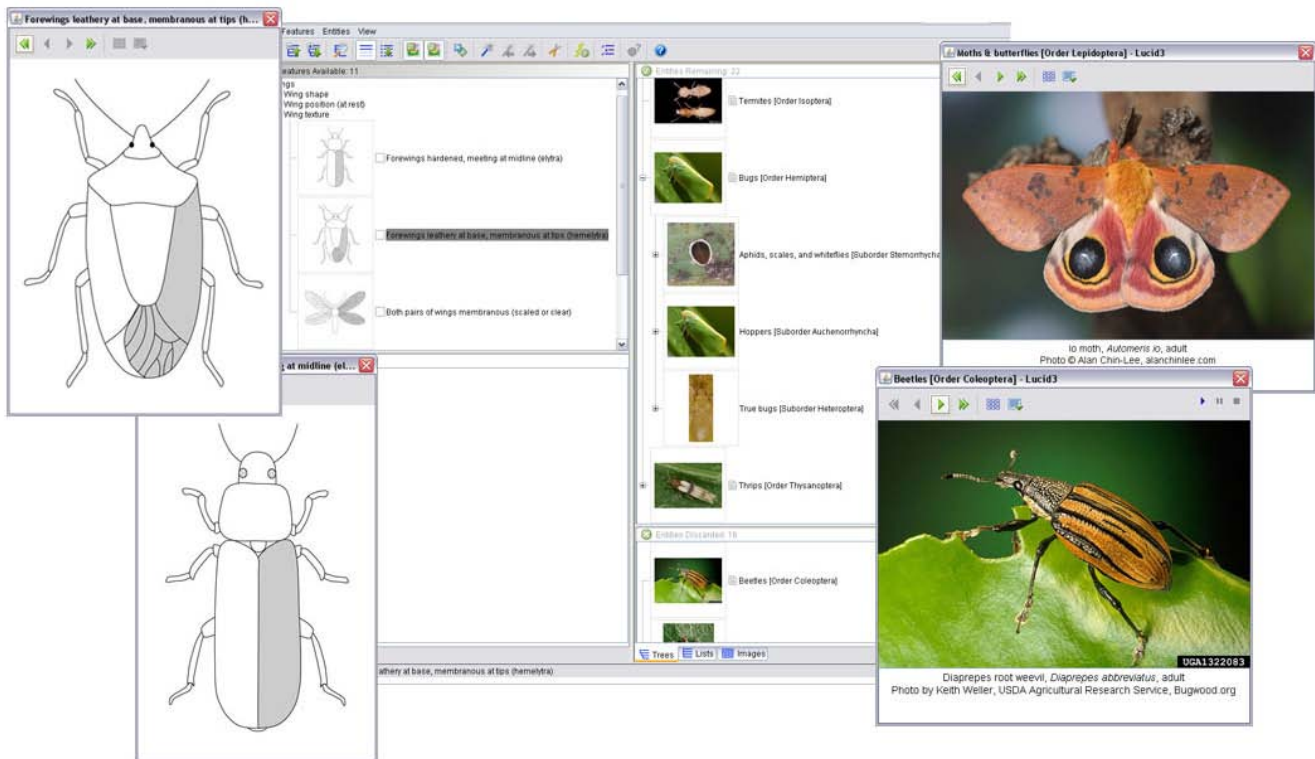
SAP interactive matrix key to adults (background) and associated media. Illustrations show the difference between two states of the feature "wing texture" (lower left). Two images associated with entities within the key (right).

The authors of *SAP* would appreciate receiving any comments about the value and usefulness of this tool and learning of any problems you encounter when accessing or using the tool. Please contact Amanda Redford (email amanda.j.redford@aphis.usda.gov) with any comments or questions.

To learn more about Lucid software and Lucid tools, visit www.lucidcentral.org. For information concerning tools resources for plant protection and quarantine, contact Amanda Redford, USDA CPHST ITP Tool Developer.