

## USDA-APHIS Web-Based Tools for “Bug Busting”

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Insect and other invertebrate pests can be hard to identify. They can be a big problem for farmers or any other land manager. Sure, you can direct folks to an extension agent but USDA-APHIS has some nice web-based keys and other tools available if someone wants to try to identify a problem on their own.

Created by USDA-APHIS' Identification Technology Program (ITP), **ID Tools** helps to quickly identify pests, including insects, diseases, harmful weeds, and more, through an efficient, online database system. ID Tools currently includes more than 30 websites covering a vast array of pests and pests associated with specific commodities. ITP's ID Tools web site receives about 12,000 visitors a month and is not only for experts.

Using identification key software called “Lucid,” users select a specimen's distinguishing characteristics (e.g., color, shape, size) with the aid of illustrations and photographs; they don't need to know the scientific terms for the specimen's anatomy. Each characteristic chosen can eliminate up to hundreds of possibilities and quickly narrows the search to the exact species. Users will find Lucid keys in the majority of the tools.

For example, if you wanted to use ID Tools to identify a terrestrial mollusc (think slugs and snails) that you believe is a pest species, you would first choose whether the creature has a shell. This choice immediately narrows down the possibilities, making the system vastly more efficient than a text version.

Some of the tools are specific to Mainland issues and crops, but most have some applicability in the Pacific Islands Area. There is even one dedicated to identifying invasive ants in the Pacific Islands ([PIA key – Pacific Invasive Ant Key](#)).

If you feel that identifying characteristics is not your style, ID Tools offers users a wonderful diversity of other media to support the identification process. Many of the tools contain an image gallery, glossary, visual dictionary, and species fact sheets with descriptions and diagnostic images.



*A screen shot of the ID Tools home page*

<http://www.idtools.org/>

Try out ID Tools for yourself by clicking [this link](#) to explore ITP's many digital pest identification pest products. A link to this web site is also on the NRCS Pacific Islands Area Technical Resources Web page under Biology.

A Hawaii-centric set of tools can be found at [Starr Environmental](#) under "Free Resources". This web page includes photo galleries of plants, birds, and insects of Hawaii, identification help for insects and plants (native and nonnative) found in Hawaii and several other identification guides.

*Article content is the sole responsibility of the author. For more information about this article, contact Gregory A. Koob, email: [gregory.koob@hi.usda.gov](mailto:gregory.koob@hi.usda.gov).*

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