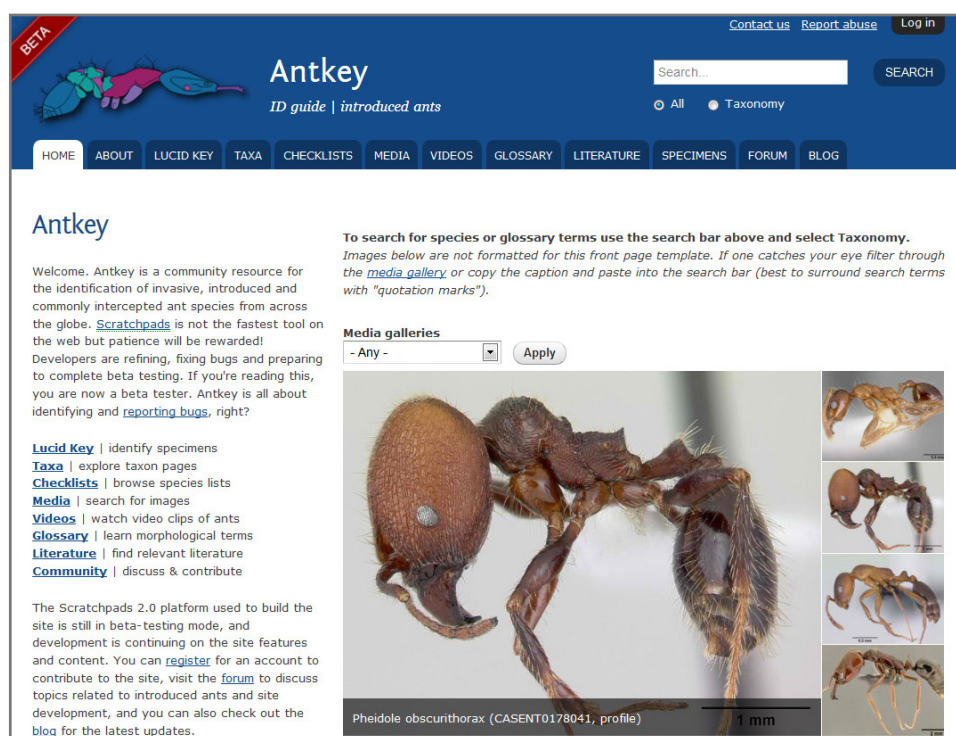# Antkey

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CPHST's Identification Technology Program is pleased to announce the release of *Antkey*. Developed through collaboration between CPHST and the University of Illinois, *Antkey* focuses on over 115 ant species that are introduced, invasive or commonly intercepted in the United States including Hawaii. Over 15,000 species of ants have been described, and more than 200 have established populations outside of their native ranges. A small subset of these have become highly destructive invaders including five which are currently listed among the world's 100 worst invasive species. Unfortunately, detection of non-native ants is hampered by the taxonomic specialization required for accurate species identification. *Antkey* seeks to mitigate the spread of established introduced ants and prevent the incursion of new introductions by providing quarantine personnel, inspectors and conservation biologists with a user-friendly identification tool specifically designed for non-specialists.

http://www.antkey.org

Features include an interactive Lucid key, dynamically generated species pages, a searchable media collection of over 1150 images, over 70 live video clips of introduced ants, a fully illustrated glossary with over 400 terms, a searchable database of introduced ant literature, over 12,000 specimen records of introduced ants imported from Antweb (www.antweb.org), and community features such as blogs, discussion forums and comment options. The interactive Lucid key allows users to start at multiple entry points, skip ambiguous or difficult characters, and keep track of the choices already made. Novice users can use the 'best' feature to determine which available characters will lead to the most parsimonious pathway. More advanced users can skip straight to subfamily or genus. The characters are illustrated with original line drawings and link to glossary definitions and additional specimen photographs.

The *Antkey* taxonomic classification includes 8 subfamilies, 43 genera and 116 valid species. Taxon pages include tabs for overview, descriptions, media, maps, literature and specimens. In addition to original diagnostic descriptions and overview sections, all the species pages dynamically import relevant articles from the Encyclopedia of Life (www.eol.org) and specimen images from Antweb. Google maps (*below*) are dynamically generated from specimen data imported from Antweb and distribution data imported from GBIF.
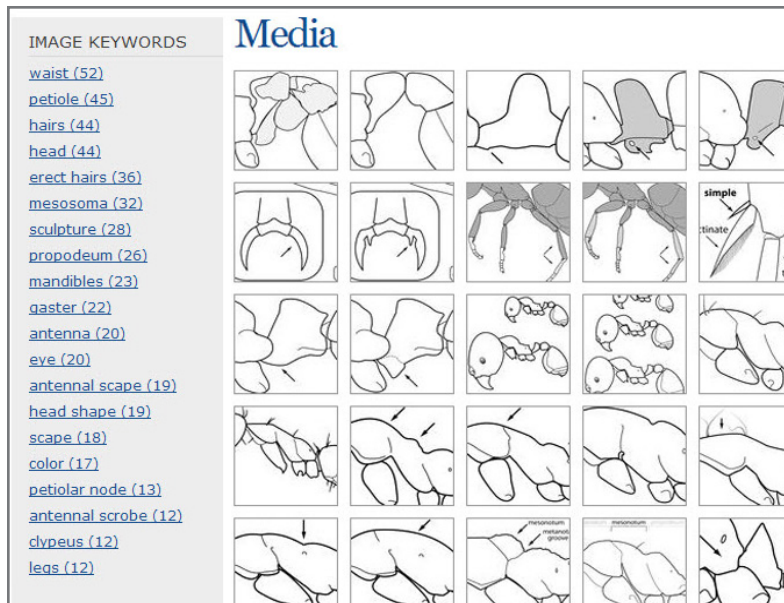
Partial screenshot of media feature with "illustrations" filter selected. Other filters are available to select via the left menu.

The media feature (*left*) contains over 1150 images and uses a faceted search tool that allows users to filter images by media gallery, taxonomic name, keywords, description and creator. Each thumbnail links to a lightbox window that displays the standard scaled image and associated metadata, and also offers a link to download the original, full-sized image. All images tagged with a taxon name automatically appear on that taxon's species page.

The tool includes approximately 75 video clips of 22 species. There are many important identification characters for ant species that are only possible to detect while the ant is alive. The standardized thirty-second video clips feature ants feeding at and recruiting to baits, foraging in natural environments, and entering and exiting their nests. The videos can be downloaded by users or embedded in other webpages.
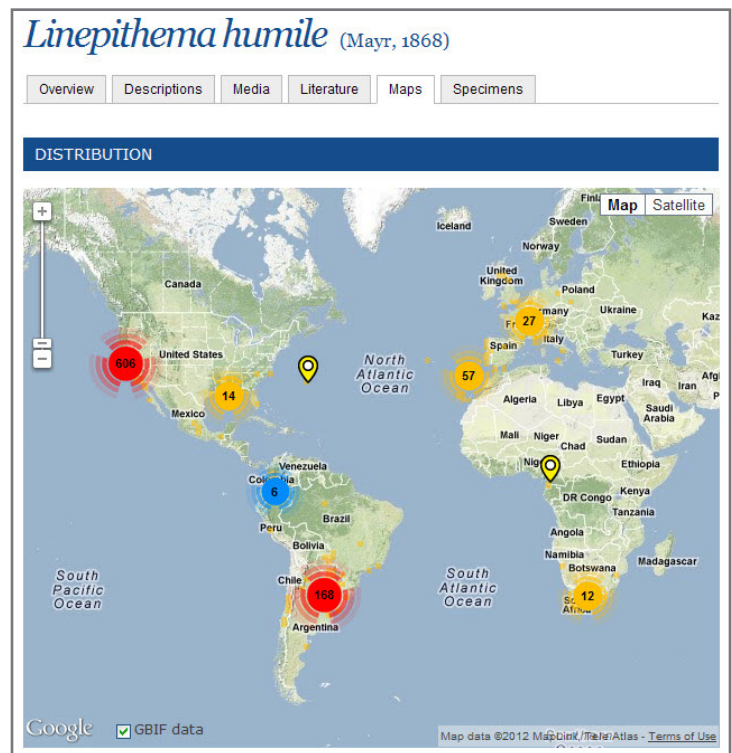
A fully illustrated glossary of over 400 terms, including all the character states used in the Lucid key, allows users to quickly learn the important morphology needed to make accurate identifications. The terms are integrated throughout the site so that whenever one appears in the text the user can point to it and the definition will automatically display.

The Scratchpads platform (www.scratchpads.eu) used to build *Antkey* allows users to participate in the discussion forums and post comments on nearly every page. The platform also allows multiple authors to create and edit content without using any html code.

For more information about other CPHST identification tools for plant protection and quarantine, contact Amanda Redford (email amanda.j.redford@aphis.usda.gov). To find other identification aids for ants, visit ID Source - ants. To view other identification tools developed by the CPHST ITP team, visit ID Source - ITP.

Screenshot of taxon page showing dynamically generated distribution map for the species.