Anastrepha and Toxotrypana: descriptions, illustrations, and interactive keys

Allen L. Norrbom, Cheslavo A. Korytkowski, Roberto A. Zucchi, Keiko Uramoto, George L. Venable, Jerrett McCormick, and Michael J. Dallwitz

CPHST is pleased to announce the release of its latest identification tool, “Anastrepha and Toxotrypana: descriptions, illustrations, and interactive keys,” developed through collaboration between CPHST and an international team led by USDA Agriculture Research Service’s Systematic Entomology Laboratory. True fruit flies (Diptera: Tephritidae) include some of the world’s most serious agricultural pests. Besides causing billions of dollars in direct losses to a wide variety of fruit, vegetable and flower crops, they limit the development of agriculture in many countries because of the strict trade quarantines imposed to prevent their spread. Of the more than 4,600 tephritids known worldwide, nearly 200 are considered pests. Reliable identifications of specimens are critical for effective control programs for pest fruit flies and for regulatory agencies to detect new outbreaks of invasive species.

Anastrepha and Toxotrypana are the two most economically important genera of true fruit flies in the American tropics and subtropics. Together they form the most diverse clade of fruit flies in the region, with more than 250 valid species and numerous undescribed species, many of which are extremely similar. This system attempts to bring together in a single package all the relevant taxonomic information for these species, as well as images for each species, and a choice of two electronic keys (Intkey or Lucid) that allow the user greater flexibility than a dichotomous key. To access the tool, go to:

http://delta-intkey.com/anatox/

The tool is aimed primarily at professional users, but a wealth of annotated illustrations are provided, along with glossary definitions, enabling use of the keys by a wider audience. Each character in the keys is attached to a page with one or more images that illustrate the character, helping you to make the best choice for each one. Detailed descriptions are provided on the fact sheets, as well as many images showing the important features of each species. The tool also includes generic diagnostic information to help you make certain your specimen belongs to Anastrepha or Toxotrypana, as well as links to databases with host plant, distribution, and nomenclatural information.

The developers of this tool would appreciate receiving any comments about the value and usefulness of this tool and learning of any problems you encounter when accessing or using it. Please contact Allen Norrbom with comments about content and Michael Dallwitz with any website accessibility or functionality issues.

For more information about other CPHST identification resources and tools for plant protection and quarantine, contact Amanda Redford. To find other identification aids for tephritid fruit flies, visit ID Source - Tephritidae. To view other tools developed by the CPHST ITP team, visit ID Source - ITP.