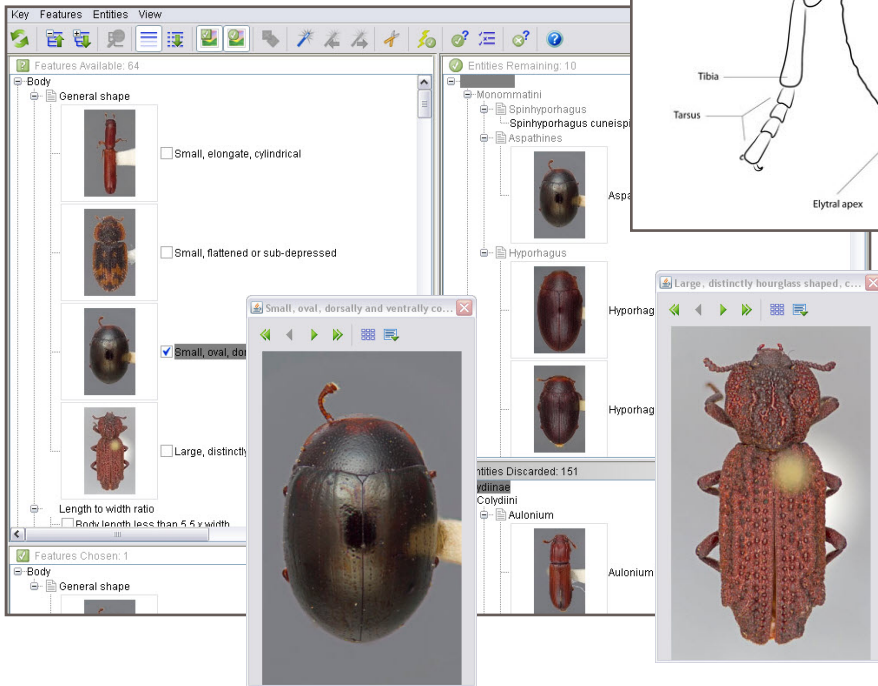
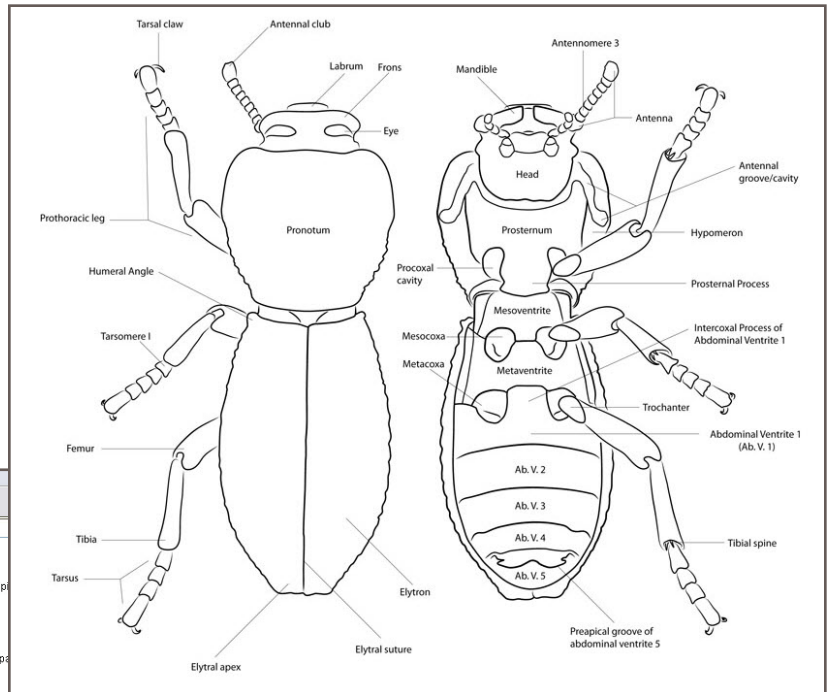


Ironclad ID is an extensively illustrated identification tool, featuring a gallery page with habitus images of representatives of each genus (see previous page), with additional “mini-galleries” for those genera with multiple species. The genus fact sheets feature detailed descriptions, diagnostic features including distinguishing characteristics for similar genera, geographic distribution, biology, and references. Each fact sheet includes species diagnoses where applicable, along with high-quality images for each species, with several of the images being of the type specimens. Also included are information on potential problems with identification and taxonomic uncertainties, as generic and tribal concepts are still in flux for this diverse group.

The tool also features a morphological atlas to help users who may not be completely familiar with all the morphological terminology featured in the tool. A glossary is provided within the tool to provide more specific definitions to terms used in the key and fact sheets. A page detailing diagnostic features for the family, as well as each of the subfamilies and tribes, is also offered, since due to the tremendous heterogeneity within zopherids, they can often be difficult to identify with any consistent set of features.

Screenshot of the morphological atlas



Screenshot of the key with two feature state images open

The matrix-based key (left) offers identification support for the 37 genera and 112 species of zopherid beetles known to occur in the United States and Canada. Many of the features are illustrated with photographs, and others are described in detail on separate pages accessible from within the key. Nearly every species in the key is represented by a habitus image to facilitate efficient identification. Larger sized images are available by clicking the thumbnails, as shown here.

The developers of *Ironclad ID* 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 Nathan Lord (email bothriderid@gmail.com) with any comments or questions.

To learn more about Lucid software and Lucid tools, visit www.lucidcentral.org. For information concerning other CPHST-developed tools for plant protection and quarantine, contact Amanda Redford (email amanda.j.redford@aphis.usda.gov).