

## ***Aquarium and Pond Plants of the World, Edition 2.0***

**A new Lucid® interactive identification tool, by Shaun L. Winterton and Julia Scher**

CPHST is pleased to announce the release of its newest identification tool, *Aquarium and Pond Plants of the World, Edition 2.0*, a major update to the first edition. Edition 2.0 was developed in response to the expanding aquarium and pond plant trade, recent changes in taxonomy, and suggestions from users of the first edition. With this edition, users will benefit from the improved interface in the most current version of Lucid. *Aquarium and Pond Plants of the World, Edition 2.0* was created through a federal-state collaboration between USDA/APHIS/PPQ - CPHST and California Department of Food and Agriculture (CDFA). The new edition helps users identify over 140 genera of aquatic plants (and some algae) currently cultivated or collected around the world for the freshwater aquarium and pond plant trade. The plants covered include aquatics on the Federal Noxious Weed List, and some that may be host material for quarantine pests.

*Aquarium and Pond Plants of the World, Edition 2.0* was developed and released in Lucid version 3.4 software. The tool was uploaded to the Internet on February 21, 2007 to support easy access by PPQ and our cooperators. *Aquarium and Pond Plants of the World, Edition 2.0* can be accessed at:

**<http://www.lucidcentral.org/keys/aquariumplants2/>**

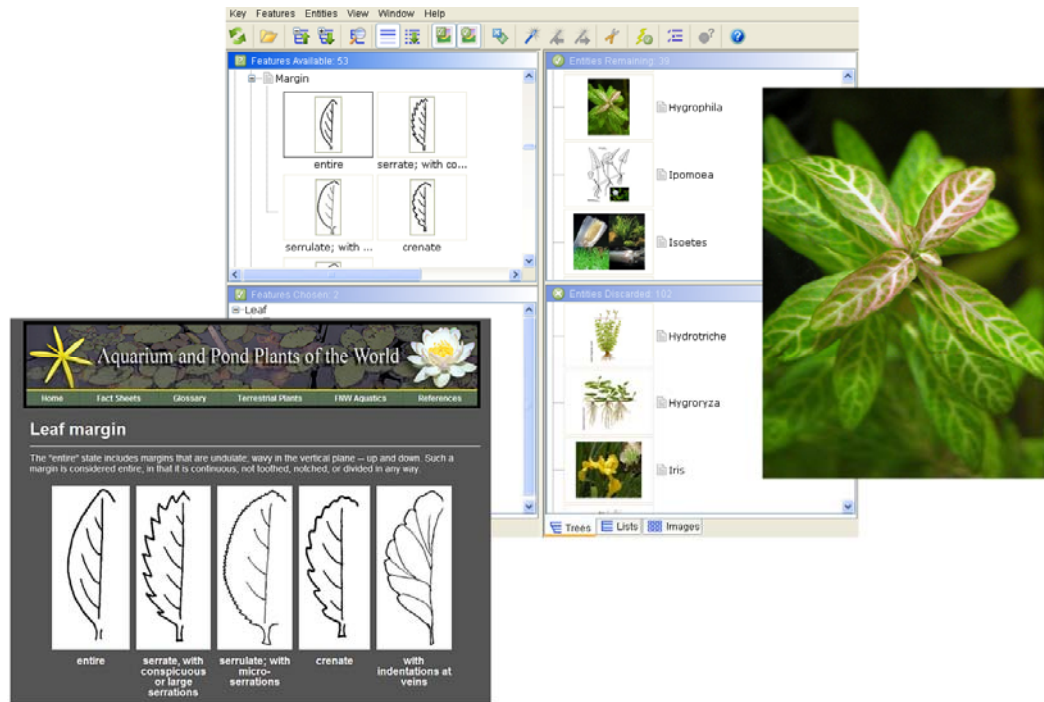
*Aquarium and Pond Plants of the World, Edition 2.0* is cross-platform; it can be viewed and used on PCs or Macs. The interactive key component of this identification tool requires that your computer has Java Runtime Environment version 1.4.2 or greater installed; Lucid software is not necessary.



Home page of the Lucid3 tool *Aquarium and Pond Plants of the World, Edition 2.0*.

The movement of aquatic plants across international borders is of considerable quarantine concern. Owing to the strong competitiveness of many aquatic species, serious ecological consequences can result if they are released into waterways, where they often become dominant, displacing native

species. The most common pathway for aquatic weeds into new areas is through discarded aquarium material. Many species in the aquatic and pond plant trade have become serious environmental weeds in various countries. The sheer diversity and phenotypic plasticity of aquatic plants often makes their identification difficult.



*Aquarium and Pond Plants of the World, Edition 2.0* matrix and associated media (left to right):  
1. explanatory Html page for the feature "Leaf margin"; 2. interactive matrix; 3. photo of *Hygrophila polysperma* 'Rosanervig'.

Lucid keys are easy-to-use, electronic, and matrix-based. In a matrix-type key, users can select characters to examine, and are thus not hampered by the pathway structure of traditional paper-based dichotomous keys. Identification is facilitated by multimedia (images, Html pages) attached to taxa and characters. This tool is richly illustrated with over 900 character drawings and photos of representative species of often highly variable genera. Taxon fact sheets include descriptions, weed information, and links to similar looking genera.

The authors of *Aquarium and Pond Plants of the World, Edition 2.0*, Dr. Shaun L. Winterton (Queensland Department of Primary Industries & Fisheries, Brisbane, Australia, formerly of CDFA Plant Pest Diagnostics Center (PPDC) and sole author of the first edition) and Julia Scher (USDA/APHIS/PPQ - CPHST), would appreciate receiving any comments you might have about the value and usefulness of this tool and learning of any problems you encounter when accessing or using the tool. Please contact Julia via email ([julia.l.scher@aphis.usda.gov](mailto:julia.l.scher@aphis.usda.gov)) or by phone (916-262-3181).

To learn more about Lucid software and other Lucid tools, visit [www.lucidcentral.org](http://www.lucidcentral.org). For information concerning identification tools and resources for plant protection and quarantine activities, contact Terrence Walters ([terrence.w.walters@aphis.usda.gov](mailto:terrence.w.walters@aphis.usda.gov)).