

## Workshop Process

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A workshop on nonindigenous plant databases convened on September 23–24, 1997, by the U.S. Geological Survey (USGS) in cooperation with the Federal Interagency Committee for Management of Noxious and Exotic Weeds (FICMNEW) provided valuable experience for planning the subsequent workshop on databases for other groups of nonindigenous organisms. In mid-1998, the Riley Memorial Foundation coordinated the establishment of a Program Advisory Committee to help plan the second workshop. The Committee included individuals familiar with invasive species issues and databases from the U.S. Department of Agriculture (Agricultural Research Service, Animal and Plant Health Inspection Service, and the Forest Service), the Department of Commerce, the Department of the Interior (Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and USGS), the Smithsonian Institution, and specialists from academia, industry, and nongovernmental organizations (see Appendix A—Participants). The advisory committee agreed to utilize the general structure and reporting formats used in the first workshop. The structure included presentations by specialists familiar with important databases containing, at the minimum, information on the occurrence of one or more major groups of organisms containing some proportion of invasive nonindigenous species. These presentations provided the basis for discussions on information gaps and other data issues, as well as opportunities for improving the documentation, availability, and integration of data and information needed to address the increasing threats from nonindigenous invasive species. The plant database workshop demonstrated that, although relevant databases had been developed by various agencies to serve their particular goals and objectives, there was a clear need to share experience and to focus attention on how these efforts could be better coordinated to deal with invasive species. The Committee, therefore, agreed that the workshop would provide abundant opportunity for hands-on database demonstrations and informal discussion.

Relevant databases and potential participants in the workshop were identified based on the personal knowledge of advisory committee members and solicitations through their respective organizations, review of previous documentation of potential data sources such as inventories of sources biological information coordinated by USGS in planning the National Biological Information Infrastructure (NBII) and on-line distribution of a database survey information form through an Internet homepage for the workshop. Professional societies also distributed requests through their websites and newsletters. The advisory committee's decision to convene the workshop in Las Vegas, Nevada, concurrently with the annual meetings of the American Phytopathological Society and the Entomological Society of America helped facilitate contributions from specialists representing key groups of invasive organisms. The staff of the USGS Nonindigenous Aquatic Nuisance Species Program provided invaluable support by revising the survey form used in a previous workshop and assisting in the collection of information. Also, NBII staff helped ensure conformity with National Metadata Standards in documenting the databases. Subsequently, the information was transferred to the NSF (National Science Foundation) Center for Integrated Pest Management at North Carolina State University in Raleigh, North Carolina, for processing which included editing and organizing the survey forms and preparing them for placement on the NBII website on invasive species at <http://www.nbii.gov/invasive/workshops/dbsurveys.html>.

Prior to the convening of the workshop, respondents provided information on 34 databases covering all major taxonomic groups of nonindigenous organisms, including several plant databases not identified for the first workshop. Of these databases, 29 are actively providing data to users (versus 5 in the planning stage), and 28 have a website on the Internet; 21 focus primarily or exclusively on nonindigenous species, with the remaining 13 not focused specifically on nonindigenous species but providing useful data. Databases range in scale from state-level to global, in taxonomic scope from a

single species to thousands of species in numerous taxonomic groups, and in content from taxonomic lists to broad information systems with scores of data fields. Over 60 workshop participants represented the many sectors concerned with invasive species, and included policy officials from key federal agencies and organizations, and specialists from many professional disciplines representing the majority of the databases identified in the survey (see Appendix A—Participants). Most were meeting together for the first time, and perhaps realizing more fully their shared concerns and potential contributions in addressing ecological and economic threats from invasive species. Specialists representing the important databases participated in panels for databases on terrestrial vertebrates, animal and plant

diseases, plant pests and other arthropods, marine and aquatic organisms, and databases with broad taxonomic coverage focusing on nonindigenous species in particular tribal lands, states, and regions. These were followed by a concluding panel on cross-cutting issues, which brought together specialists from government and academia with broad experience in the design and implementation of biological data systems. The format facilitated productive communication, both in documented question and answer sessions following each panel, and especially in informal discussions associated with the informal database demonstrations which both preceded and followed the panel sessions on the first day (see Appendix B—Workshop Program).