

# FORT COLLINS SCIENCE CENTER

## National Institute of Invasive Species (NIISS)

### What is the NIISS?

The National Institute of Invasive Species Science ([www.NIISS.org](http://www.NIISS.org)) is a consortium of governmental and nongovernmental partners, led by the U.S. Geological Survey (USGS), whose aim is to provide reliable information and advanced decision support tools for documenting, understanding, predicting, assessing, and addressing the threat of invasive species in the United States. The Institute coordinates the National Aeronautical and Space Administration's (NASA's) Invasive Species National Application activities for the Department of the Interior and has a lead role in developing, testing, and deploying NASA-

derived remote sensing and landscape-scale predictive modeling capabilities for the invasive species community.

Our vision is to provide national leadership in the area of invasive species science and work with others to disseminate and synthesize current, accurate data and research to detect, predict, and reduce the effects of harmful nonnative plants, animals, and diseases in ecosystems and natural areas throughout the United States. Our mission is to develop cooperative approaches for invasive species science to meet the urgent needs of land managers and the public.

### From the field . . .

Field data on aquatic and terrestrial species and diseases can be collected in any form and uploaded in three formats: Palm programs (EcoNab and WIMS), GIS Shapefile, and tab-delimited text file. Users map their fields to NIISS database fields.

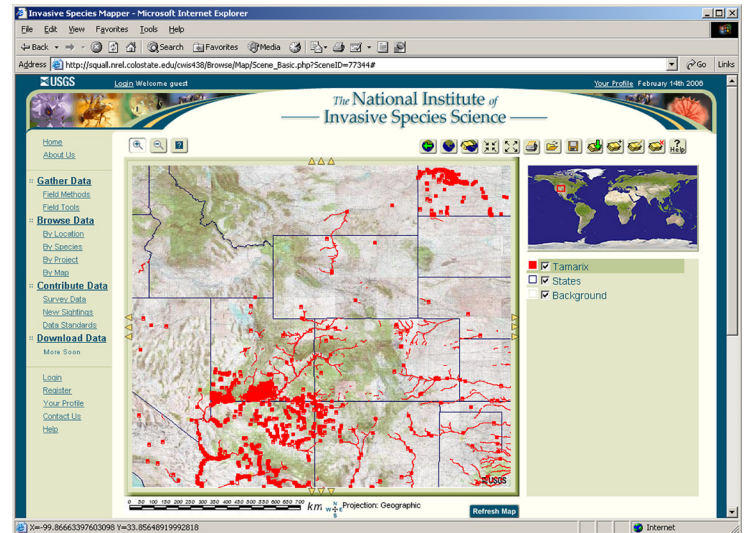


### . . . to the Web-based global database . . .

The Global Organism Detection and Monitoring System captures information (location data, species characteristics, and environmental attributes) on all taxa of invasive species—terrestrial and aquatic plants, animals, and diseases—to detect, control, and monitor their

spread. These datasets are integrated into the database and displayed as “living maps” of harmful invaders on the Web to serve land managers, landowners, researchers, government officials, and the public.

Users (agency resource managers, citizen scientists, counties, States, tribes) log in for security, getting variable levels of access based on their needs. Data are managed in projects that are created and managed by users.



Location “fuzzing” (from quarter quadrangle to 1°) is set by users to protect sensitive species and locations. Core information collected includes date, location, and organism as required fields. Connections to existing regional databases are being developed to integrate and share their data for management efforts. The Web site makes everyone’s data more useful and accessible. There are interactive maps of invasive species distributions, and users can add new locations by clicking on the map. Users can query or download the database by species, project, or location. Real-time statistics are being developed for datasets and links to other research. Also available are species profiles, watch lists, and species lists for any selected area.

### . . . to the Invasive Species Forecasting System . . .

Planned to be available in 2007, the Invasive Species Forecasting System (ISFS) is a Web-based decision support environment that combines field data with satellite and other environmental data to generate landscape- and regional-scale predictive maps of invasive species distributions and potential habitat. Predictive maps are essential to almost all invasive species research and management decisionmaking. The system is the result of a 6-year collaboration

