Newsletter of the National Biological Information Infrastructure

nbii Access

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Contest to Name New NBII Search Engine Ends: Raptor It Is!

Some *Access* readers might remember the article "What's In a Name?" from the Spring 2009 issue of *Access* — the call to a contest to name the new NBII search engine. Now we're pleased to say that if you go to the search box on the top right portion of the NBII home page <www.nbii.gov>, you'll see an animated graphic that depicts the result of that contest.

Raptor is the name that was chosen to represent what our search engine is and does for NBII users. As you may already know, a raptor (e.g., an eagle) is a bird of prey that has a mountaintop (comprehensive) view. It scans the terrain, cruises, targets, captures, then retrieves its prey. Our prey is information, but not just any information.

raptor

We wanted — and we now have — a search engine that retrieves precise information for our users, quickly and effortlessly, from more than 40 key repositories of data and information about biodiversity, including all NBII databases and U.S. Fish and Wildlife Service collections about fisheries, habitat conservation, wetlands, migratory bird management, and threatened and endangered species. Searches also tap the Global Biodiversity Information Facility (GBIF), which holds 180 million global species records, and a broad range of additional sources.

Not to put too fine a point on it, but

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NBII and Partners to Help Scientists Deal with Data Deluge

A new global data access program will help scientists deal with the ever-increasing amount of information they must access to understand the Earth's living and nonliving systems.

The program, called DataONE, is a global data access and preservation network created by experts at the U.S. Geological Survey's (USGS) National Biological Information Infrastructure (NBII), in partnership with many universities. DataONE is the result of a recent 5-year $20 million award through the National Science Foundation. ONE is short for **O**bservation **N**etwork for **E**arth.

"With DataONE, our involvement will go beyond the focus on biological resources..."

DataONE is committed to ensuring the preservation and access to Earth-observation data across scientific disciplines to make new discoveries that improve life, said Mike Frame, a bioinformatics expert leading the USGS efforts along with Vivian Hutchison, also of the NBII.

Frame noted that the NBII offers DataONE partners expertise in biological informatics: the convergence of the biological sciences, information science, and computer technologies.

"We've been developing standards and tools for using and integrating data for more than a decade," says Frame. "With DataONE, our involvement will go beyond the focus on biological resources to include the necessary infrastructure and integration of data needed to confront broader environmental challenges."

Much work will center on learning how scientists from many scientific domains gather and label their data, then identify and develop tools, including software, that allow scientists to more

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In This Issue

The NBII's Library of Images From the Environment (LIFE) – Accessed by Users Worldwide

Print and online publications using NBII LIFE images. Top left to right: the Natural Sounds Program, National Park Service brochure (2009); the USDA's National Wildlife Research Center's 2008 report on human-wildlife conflict; and the Canadian Wildlife Service's 2004-05 Annual Report. Bottom left to right: The Alliance for the Chesapeake Bay Journal's Web site (2009) and the EPA's Region 5 Superfund's Threatened and Endangered Species Photo Gallery (2010).

The NBII **L**ibrary of **I**mages **F**rom the **E**nvironment (NBII LIFE) <http://life.nbii.gov> is a collaborative platform for agencies, organizations, and individual partners to share high-quality, authoritative images of our natural world. Subjects cover species, species interactions, landscapes, research, management, and environmental topics.

The goal is to manage images as scientific records and ensure they are useful for future research and decision-making. Contributors and images must meet certain criteria, including that the images are available for nonprofit use and that detailed information (e.g., date, location, and context) is attached. These standards and subject diversity make LIFE a valuable resource – as research and user feedback have confirmed.

One type of user we get feedback from are those who contribute images to LIFE; examples include Finding Species, different groups within the U.S. Geological Survey (USGS), and the U.S. National Herbarium, Smithsonian Institution. But who in the broader community is accessing the site, and how do they use the images?

There are limits to what the U.S. government can record about users accessing government Web sites, but we know hundreds of thousands of people viewed millions of pages within the NBII LIFE in 2009, most from U.S. government computers. Globally, an average of 150 countries (out of 203 recorded) also had users entering the library each month. Leading countries include Canada, Great Britain, and India; but small countries such as Liechtenstein and Vatican City also accessed our Web site.

Many organizations point to the NBII LIFE as a resource, including the U.S. Bureau of Land Management. Other federal sites include the USGS, the U.S. Fish and Wildlife Service (USFWS), and the Library of Congress. The National Academy of Sciences' Vireo Web site includes the LIFE under "Sites Worth Seeing" <http://vireo.acnatsci.org/links.html>, and MatchaCollege lists LIFE in an article, "100 Excellent Websites for Exploring the Ocean Online" <http://www.matchacollege.com/blog/2009/100-excellent-websites-for-exploring-the-ocean-online/>.

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nbii Access

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Be sure to check out *Access* online at <www.nbii.gov>→ Publications Library.

Please direct your general questions about the NBII, including partnership opportunities, to:

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Raptor It Is! (continued from page 1)

as the search engine for the *National* Biological Information Infrastructure, what better icon than our *national* bird, an eagle? And just as our NBII logo has the embedded silhouette of an eagle, that same noble creature served as a model for the look of our search engine graphic.

If you go to the search engine box and watch Raptor, after a brief stationary phase, you'll see him take off and go searching to meet the needs of anyone who cares to test his incredible talents. For more information on those talents, please see our article in that same Spring 2009 issue of *Access*.

As for details of the contest, 98 names were submitted by 16 entrants. All the names were sent to Gladys Cotter, USGS Associate Chief Biologist for Information – who also oversees NBII development – for her consideration and final selection. The names were submitted to Ms. Cotter in alphabetical order and without reference to who sent in which name. As it turns out, Raptor came from Ron Sepic, the *Access* editor.

The designer of the Raptor animated graphic is Steve Chambers, a well-known designer in the Washington, DC, area who has done work for the NBII for nearly two decades (including the original NBII logo!).

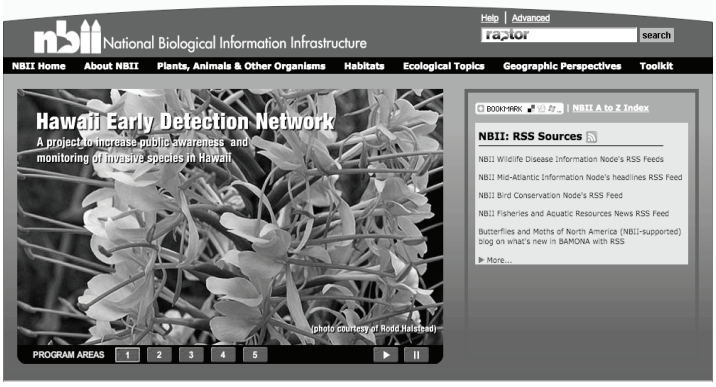
And now, just as our Raptor uses its "eagle eye" to spot and then circle its prey, so too our quest for a search engine name has come full circle.

So fly on Raptor, fly on. You carry our questions on your powerful wings. Soar, swoop, spot, and — when the moment is right — strike! Bring us information that satisfies and sustains all who turn to you.

Photo credit: Bruce Avera Hunter

Ron Sepic (far left), Gladys Cotter, and Steve Chambers at the launch party held for Raptor on December 18, 2009.

NBII Home Page Update



The redesigned NBII home page <www.nbii.gov> is now almost one year old, and it has undergone continual change and refinement throughout most of 2009. Going into the new year, the home page has stabilized to include the following features:

- Monthly slideshow changes — The five images in each of the NBII home page's slideshows link to content within the NBII that is new, recently changed or updated, or especially topical.
- A clickable listing of NBII RSS feeds — Several topical and regional areas of the NBII Web presence produce their own feeds, and access to them is aggregated on the home page.
- The most recent entries from the NBII Blog — The headline and the first few words of the three most recent articles to be posted to the blog appear on the home page, beneath the RSS feeds list. The headlines are clickable and lead to the full text for each blog entry.
- A listing of standards supported and observed by NBII.
- A selective listing of data and tools available through the NBII.
- A clickable, regional map of the United States — From individual regions on the map, you can link to selected information products specific to particular areas of the country.
- People Are Asking — Key questions from NBII users are listed, along with their answers.
- NBII Publications Library — NBII fact sheets and other publications, including back issues of the *Access* newsletter, are made available in Adobe Acrobat (pdf) file format as exact replicas of the corresponding print publications.

NBII and Partners to Help Scientists Deal with Data Deluge (continued from page 1)

easily access, interpret, and use each other's research.

Those benefiting from DataONE will include scientists, land managers, policy makers, students, educators, and the public. Most importantly, said Frame, DataONE is not an end in itself but a means to serve a broader range of science domains, both directly and through interoperability with the DataONE distributed network.

The NBII Program is contributing thousands of metadata and datasets to DataONE through the NBII Metadata Clearinghouse. Through the clearinghouse, users can search detailed descriptions (metadata) of hundreds of different biological datasets and information products. These records describing biological datasets will be combined with metadata contributions from other partners in the DataONE system to provide a foundation for users to identify, access, and analyze data collected across multiple disciplines.

"Even though these datasets were collected to answer specific scientific questions at the time of data development," says Hutchison, "there may be broader uses for the data, such as for complex analysis needed in climate change research."

The USGS is the only federal agency participating in this grant. DataONE is led by the University of New Mexico and includes partner organizations across the United States, Europe, Africa, South America, Asia, and Australia. It also includes experts from library, computer, and environmental sciences to bridge these worlds and to develop an infrastructure to serve science and the public at large for decades to come.

The NBII is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. Coordinated by the USGS, the NBII links diverse, high-quality biological databases, information products, and analytical tools maintained by NBII partners and other contributors in government agencies, academic institutions, non-government organizations, and private industry. NBII partners and collaborators also work on new standards, tools, and technologies that make it easier to find, integrate, and apply biological resources information. Resource managers, scientists, educators, and the general public use the NBII to answer a wide range of questions related to the management, use, or conservation of this nation's biological resources.

The NBII's Library of Images From the Environment (LIFE) – Accessed by Users Worldwide (continued from page 2)

We're also finding that diverse organizations are using our photographs for exhibits, Web sites, publications, and research, including federal agencies such as the USGS (our biggest user), the USFWS, the U.S. Environmental Protection Agency (EPA), the National Institute of Health, the National Aeronautics and Space Administration, the U.S. Department of Agriculture (USDA), and the Smithsonian Institution. Local and state agencies (e.g., New York State's Department of Environmental Conservation) and nonprofits (e.g., the Defenders of Wildlife) have also used our images. One research project incorporating LIFE images is the Tree of Life project <http://tolweb.org/tree/phylogeny.html>. The Comprehensive Everglades Restoration Plan (CERP) wrote to us for advice on creating image metadata.

News and information organizations also have used images to illustrate online articles, including Public Radio International, *Encyclopedia Britannica*, Wikipedia, the *Washington Post*, and *Science* magazine. Also, hundreds of educational sites incorporate our images into their lesson plans: students have used images for book reports and in computer modeling classes. Other users include libraries, museums, botanical gardens, film makers, artists, and bloggers. Users' interests have been very diverse.

> *"The images by Finding Species and hosted by NBII have proven invaluable to me as a herpetologist, tropical biologist, and graduate student."*
>
> *—Shawn F. McCracken, Executive Director - TADPOLE*

The NBII LIFE's images may soon be used in additional ways. Our team is partnering with the Global Biodiversity Information Facility to make image metadata available to more researchers, especially modelers. Metadata about a photograph of a rare bird at a certain place and time could be fed into models predicting the effects of climate change on species distributions. Schema development is under way.

We look forward to increased use and further feedback, with our Web site's latest tools online and continuing image uploads. This year, NBII LIFE managers will create a new strategic plan to increase capabilities, and feedback from *Access* readers is welcome. For details, contact Annette Olson, NBII LIFE Lead, at <alolson@usgs.gov>.

NBII Trains the Trainers and Future Scientists

The NBII offers a "Train the Trainer" workshop designed to teach people how to train others about metadata standards for scientific datasets. For three days, workshop attendees learn how to put together a successful workshop, with details ranging from tips about handling logistics and how to write a lesson plan, to sharpening presentation skills.

The Bureau of Land Management (BLM) hosted NBII trainer Viv Hutchison and Federal Geographic Data Committee (FGDC) Trainer Lynda Wayne December 1–3, 2009, to teach a class composed of 14 BLM employees and one National Oceanic and Atmospheric Administration (NOAA) employee. The class took place in Portland, OR, at the BLM offices downtown. To complete the workshop, each participant was asked to create a metadata-related learning activity and present it to the class. Activities ranged in complexity from "Metadata Jeopardy" to a game determining how important metadata is to interpreting data correctly. Presentation skills were sharpened, and each participant left with a structured lesson plan to expand into a presentation for his or her next metadata workshop.

Workshop participants are given time to prepare their presentations in "Train the Trainer."

The "Train the Trainer" workshop is important because it expands the base of available trainers on a topic that can be challenging to teach. The more people who understand the value of creating metadata and how to do it, the more benefits will be realized for scientists. Metadata records allow scientists to learn what data has been collected, where it is located, and how to interpret it. These are important concepts as we move toward data integration and management on a higher level.

Looking to educate the future generations of scientists about metadata, NBII's Mid-Atlantic Information Node (MAIN) sponsored a half-day workshop for the students from California University of Pennsylvania on November 3, 2009. Three undergraduate sections of GIS and biology attended the class, approximately 90 students. Their professor, Tom Mueller, is determined to educate his students on the importance of creating quality metadata for their datasets, and he asked the NBII to assist in his efforts. He intends to continue teaching metadata himself to future classes, including those in the consortium of Pennsylvania schools in which he teaches. "Metadata is like Christmas come early for little Tommy Mueller!," he is quoted as saying to his students — a true testament to the kind of enthusiasm required to make metadata programs successful!

BLM and NOAA employees pose with trainers Lynda Wayne (front row, left) and Viv Hutchison (far right) at the conclusion of their "Train the Trainer" workshop.

GAP National Land Cover Map Now Available

The GAP national land cover map depicts 583 ecological systems and land use classes.

The U.S. Geological Survey (USGS) NBII Gap Analysis Program (GAP) has released a new national land cover map depicting the distribution of ecological systems across the United States. GAP has also developed an online Land Cover Viewer at <http://Gap.uidaho.edu/Landcover.html>, which allows map users to explore the distribution of ecological systems at multiple scales.

The national map contains 551 ecological systems and modified ecological systems and 32 land use classes, which represent developed and disturbed land cover. Ecological systems were developed by NatureServe to represent recurring groups of biological communities that are found in similar physical environments and influenced by similar dynamic ecological processes, such as fire or flooding. GAP has incorporated ecological systems into its mapping efforts because they were designed to provide a classification unit that is readily mappable from remote imagery, and they are readily identifiable by conservation and resource managers in the field.

The national land cover map combines the efforts of several ongoing mapping initiatives. Ecological system-level GAP data developed for the Southwest, Southeast, Northwest, and California compose the majority of the map. However, in areas of the continental United States where ecological system-level GAP data has not yet been developed, data from the Landfire project compiled by Landscope was used. This allowed for the construction of a seamless representation of ecological system distributions across the continental United States.

This new national land cover map furthers GAP's mission of "keeping common species common" by identifying those places in the country with sufficient good-quality habitat to support wildlife. Information about land cover is a key component of effective conservation planning and the management of biological diversity because it is used to build predictive models of wildlife distribution and biodiversity across large geographic areas. The map also meets natural resources agencies' need for a way to characterize land cover and monitor how it changes over time. Finally, the new map furthers the mission of GAP to promote conservation by providing state, regional, and national assessments of the conservation status of land cover types to resource managers, planners, and policy makers who can use the information to make informed decisions.

To fulfill the NBII mission to facilitate the widest possible access to and use of biological data and information, GAP has developed an online Land Cover Viewer. Three summary levels have been developed from the 583 classes in the map to allow Web users to visualize and summarize data at different levels of detail. Level 1 contains eight classes, and generalizes to the level of vegetative physiognomy, e.g., grassland, shrubland, forest. Level 2 contains 43 classes, and incorporates information on elevation and climate. Level 3 contains the full 583 classes. This online tool facilitates exploration of ecological system distribution patterns at multiple scales and allows users to calculate statistics on the types of vegetation occurring within an MRLC-zone, a state, or a county.

As part of the NBII — a collaborative program to provide increased access to data and information on the nation's biological resources — GAP data and analytical tools have been used in hundreds of applications, from basic research to comprehensive state wildlife plans, and from education projects in schools to ecoregional assessments of biodiversity.

GAP has developed land cover data since the 1980s — initially on a state-by-state basis and more recently on a regional basis. The national land cover map provides seamless coverage across political boundaries, facilitating its use by other governmental agencies and inter-state collaborators.

For more information, see <http://gapanalysis.nbii.gov/> or contact Anne Davidson, Remote Sensing/GIS Senior Analyst, at <adavidson@uidaho.edu>, or John Mosesso, Gap Analysis Program Manager, at <john_ mosesso@usgs.gov>.

Multi-Agency Team Collaborates on Appalachian Trail Decision Support System Project

In June 2009, the project titled "A Decision Support System for Monitoring, Reporting, and Forecasting Ecological Conditions of the Appalachian National Scenic Trail" was selected by NASA's Applied Sciences Program for funding at a requested amount of $1.145 million for four years starting in September 2009. The A.T. MEGA-Transect DSS, as the project is referred to, received letters of support from National Geographic and USGS Geology, among others.

Photo credit: Dr. Y.Q. (Yeqiao) Wang

A multi-agency team led by principal investigator Dr. Y.Q. (Yeqiao) Wang of the University of Rhode Island met in Asheville, NC, in November 2009 to work on the Appalachian Trail Decision Support System Project.

The purpose of this DSS is to improve the decision-making system between the Appalachian Trail Park Office (ATPO), the Appalachian Trail Conservancy (ATC), the National Park Service (NPS) and the U.S. Forest Service (FS), and to provide a means to convey meaningful information to the American public. The Appalachian Trail (A.T.) stretches more than 2,175 miles from Maine to Georgia, crossing through 14 eastern states. The latitudinal gradients within its north-south alignment provide an excellent cross-section of the eastern United States and make it a natural transect for collecting relevant scientific data on the health and resiliency of high elevation and mid-range communities. The Trail, with its protected corridor, is an ideal indicator for environmental conditions that directly affect more than 120 million Americans.

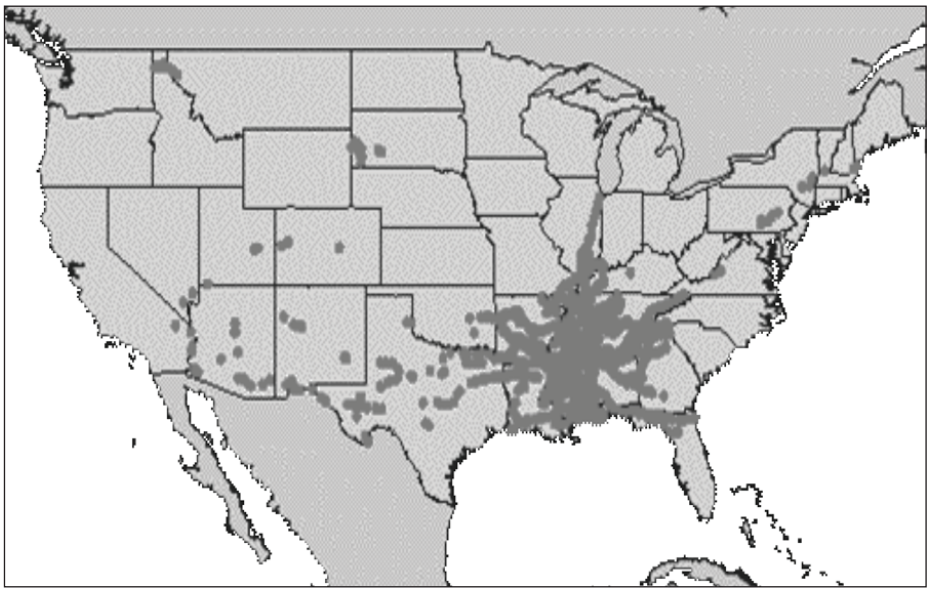
The objectives of this project are: 1) to develop a comprehensive set of seamless indicator data layers consistent with selected A.T. "Vital Signs"; 2) to establish a ground monitoring system to complement the Terrestrial Observation and Prediction System (TOPS) and integration of NASA data with in situ observations; 3) to assess historical and current ecosystem conditions and forecast trends by coupling TOPS with habitat models; and 4) to develop an Internet-based implementation and dissemination system for data visualization, sharing, and management to facilitate collaboration and promote public understanding of the A.T. environment.

The multi-agency team working on the project is led by principal investigator Dr. Y.Q. (Yeqiao) Wang of the University of Rhode Island (URI), and includes members from the NASA Ames Research Center, NPS, FS, ATC, USGS, the State University of New York, and URI. The team met in Asheville, NC, in November 2009 in conjunction with the Southern Appalachian Man and the Biosphere (SAMAB) annual conference. Project team members, Glenn Holcomb of USGS Eastern Region and Marcia McNiff of the National Biological Information Infrastructure (NBII), participated in the meeting. At the meeting, the group completed and approved the final Project Plan, which was submitted to NASA as the first project deliverable. John Peine from USGS' Southern Appalachian Field Lab attended the meeting among invited guests. Dr. Peine commented, "This project is going to be a great example for interdisciplinary and interagency collaboration."

The ultimate destination for the completed databases and models will be the NBII, managed by the USGS Biological Informatics Office. This transition will benefit from the existing infrastructure and administrative capability of the NBII. To assure the end-user's ability to adopt enhancements to the DSS activities, the USGS will work to establish a "usability working group" of stakeholders and discipline experts to conduct usability tests of the A.T. MEGA-Transect DSS, assist with engineering the user interface, and serve as a conduit for feedback from users to the back-end development team during the initial stages of transition and provide assistance in refining existing functionality or in designing and developing future functionality. System transition activities include workshops on decision analysis, which will help identify key components of a decision analysis module for the DSS. This module will provide an overall framework for organizing and presenting the information to be collected in the DSS in a way that supports the needs of end-users.

Invasive Species Toolbox

Do you have news about an invasive species project you would like to share through this column? Please send suggestions for Toolbox columns to <asimpson@usgs.gov> or <esellers@usgs.gov>.



Invasive plant locations recently recorded in the IPAMS database. (image courtesy of Geosystems Research Institute, Mississippi State University)

Ireland's National Invasive Species Database Added to GISIN List

In December 2009, a representative from Ireland's National Invasive Species Database contacted the Global Invasive Species Information Network (GISIN) to request that their database <http://invasivespecies.biodiversityireland.ie> be added to the GISIN List. First generated in 2004, the GISIN List is maintained as a living, automated list at <http://www.gisin.org/GISINList.htm>. The GISIN List not only provides an index of online invasive alien species databases from around the world, it also indicates those databases that publish or share invasive species data through the GISIN. The GISIN is a voluntary network for sharing invasive species information via the Internet and other digital means. Recently added data providers include the Delivering Alien Invasive Species Inventories for Europe (DAISIE) database and the Global Invasive Species Database (GISD) of the Invasive Species Specialist Group of the World Conservation Union's Species Survival Commission.

70 volunteers were trained in 2009 through IPAMS workshops. (photo courtesy of Geosystems Research Institute, Mississippi State University)

IPANE Partners With Vital Signs for Invasive Plant Early Detection

Representatives of the Invasive Plant Atlas of New England (IPANE) are partnering with the Vital Signs Maine network to provide expert reviewers for invasive plant data validation. Vital Signs Maine is a community of students, educators, and professional and citizen scientists who collect, analyze, and share information about freshwater, coastal, and upland habitats in Maine. According to the Vital Signs Web site, the network consists of "learners, researchers, observers, collectors, thinkers, doers, creators, and communicators of all shapes and sizes motivated to address the problem of invasive species in Maine." For more information, see <http://vitalsignsme.org>.

(Continued on page 9)

Invasive Species Toolbox (continued from page 8)

Transition to RSS Feeds on the Invasive Species Information Node (ISIN) Web Site

With the new Really Simple Syndication (RSS) technology available within the NBII's portal software, ISIN partners at the Florida Integrated Science Center have converted all the RCV portlets to RSS on the ISIN. These new portlets are expected to be more stable, and their content is more searchable and portable to different Web applications. The results in the ISIN's RSS portlets are expandable to view the resource's description, type, format, and publisher, and they can be viewed at <http://invasivespecies.nbii.gov>.

Dr. Victor Maddox trains IPAMS volunteers. (photo courtesy of Geosystems Research Institute, Mississippi State University)

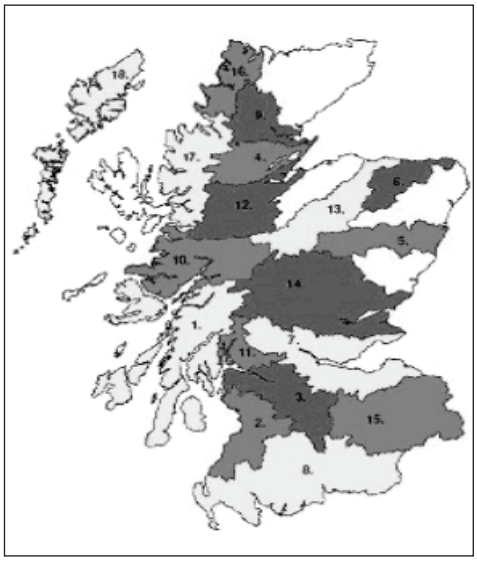
RAFTS
INVASIVE SPECIES & BIOSECURITY PROGRAMME

ISIN Partner NISbase Adds New Member to Its Federated Search

NISbase, an ISIN partner, is a distributed online database providing information about nonindigenous aquatic species <http://www.nisbase.org>. It has added a new member, the Rivers and Fisheries Trust of Scotland (RAFTS) Invasive Species and Biosecurity Program, bringing its data providers to eleven. Through NISbase's single interface, end-users can perform a federated search of multiple data providers for information concerning nonindigenous aquatic species (existing species summaries and collections records). Users can access information on taxonomy, life history, native and introduced ranges, photos, maps, and the impacts of aquatic species introduced around the world.

Invasive Plant Atlas of the MidSouth (IPAMS) Holds Training Sessions

ISIN partners at the Mississippi State University Geosystems Research Institute (GRI) coordinate the regional citizen science plant network, IPAMS, which was designed based on the Invasive Plant Atlas of New England. Data from experts and volunteers are consolidated on the IPAMS Web site at <http://www.gri.msstate.edu/research/ipams/>. Volunteers include members of garden clubs, Master Gardeners and other adult extension activities, youth extension activities such as 4-H, and workshops for production agriculture.



Scottish invasive species map from RAFTS. (image courtesy of Pam Fuller, USGS)

"Recently, IPAMS held two training workshops, with 59 registered participants."

GRI developed a training program for volunteers to identify invasive species and report them using the IPAMS database. Recently, IPAMS held two training workshops, with 59 registered participants. The data the volunteers collect will be combined with previous research data on IPAMS, which is searchable and has ArcIMS capabilities to produce distribution maps of species of interest.

NBII in the News

The NBII is mentioned throughout the year in a variety of venues, including the popular and trade press, government publications, and professional journals, as well as the broadcast media. Recent examples include:

- The NBII is alive and well in the blogosphere. In the Executive Director's blog, Richard O'Grady of The American Institute of Biological Sciences (AIBS) talked about our new search engine at <http://blogs.aibs.org/richardogrady/2009/08/nbii-launches-new-search-engin.html>. He mentioned that the NBII was recently demonstrating the search engine and everyone at the meeting came away with lots of ideas for how the search engine could be used for searches that are both broad and deep. The audience also gave many suggestions to the NBII folks for the search engine's further development, and he noted that the NBII plans to hold more community-feedback meetings in the future.
- The Friday, October 23, 2009, edition of *TradingMarkets*.com featured an article titled "USGS Biological Informatics Information and Geospatial Technologies Support" <http://www.tradingmarkets.com/.site/news/Stock%20News/2597997/>. The article describes the NBII in some depth, including its founding and development.
- An article about DataONE and one of its partners, Oak Ridge National Laboratory (see our article on DataONE in this issue of *Access* on the lower section of the cover page) appeared in the November 18, 2009, issues of *Physorg.com* <http://www.physorg.com/news177765736.html> and HPC Wire, *The Leading Source for Global News and Information Covering the Ecosystem of High Productivity Computing* (see < http://www.hpcwire.com/industry/government/ORNL-Partners-Helping-Scientists-Deal-with-Data-Deluge-70381842.html?viewAll=y>).
- A short article on the NBII appeared in the *OGC Newsletter* (of the Open Geospatial Consortium, Inc.). It looked at the NBII Geospatial Interoperability Framework strategy, which is based on the International Standards Organization (ISO) standards and Open Geospatial Consortium (OGC) specifications. For more information, see <http://www.opengeospatial.org/pressroom/newsletters/201001>.
- "Sharing: lessons from natural history's success story" appeared in *Nature*, the international weekly of science, November 5, 2009 (see <http://www.nature.com/nature/journal/v462/n7269/full/462034a.html>. The correspondence looks at data sharing among natural history collections and talks about the NBII as providing support in these efforts.
- Many *Access* readers will remember our lead article in the Fall 2009 issue about OBIS-USA. Articles are turning up in lots of places that explore the site's offerings. Here are just a few: Be Specific <http://www.bespacific.com/mt/archives/023404.html> offers accurate, focused law and technology news and featured a piece on February 1, 2010, titled "USGS Releases New One-Stop Source for Scientific Information about U.S. Oceans and Waters." The piece looks briefly at OBIS-USA and its capabilities. GIS Development, the geospatial resource portal, produced an article titled about OBIS-USA on February 1, 2010, titled "One-Stop Source for biogeographic Information." The article is available at <http://www.gisdevelopment.net/news/viewn.asp?id=GIS:N_zhordkwcxu>. Resource Shelf, a daily newsletter with resources of interest to information professionals, educators, and journalists, produced an article about OBIS-USA, "New One-Stop Source for Scientific Information about U.S. Oceans and Waters." The article can be found at <http://www.resourceshelf.com/2010/02/01/usgs-new-one-stop-source-for-scientific-information-about-u-s-oceans-and-waters/>.

Electronic or Print *Access*?

We want to remind readers that *Access* is available as both a printed publication and an electronic document. The location of the online version of *Access* is noted in the masthead (bottom of page 2) of each issue: simply go to <www.nbii.gov> →Publications Library.

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International Connections

NBII, United States Have Strong Showing at GBIF Annual Meeting

The NBII and its U.S. partners in the Global Biodiversity Information Facility (GBIF) continued their tradition of support for GBIF by sending a strong delegation to the 16th meeting of the Governing Board of GBIF (GB16) in Copenhagen, Denmark, October 2–9, 2009. The United States was a founding member of GBIF and has contributed over 200 million records to the GBIF network, as well as providing critical leadership and technical support for GBIF activities.

At each Governing Board meeting, GBIF elects a new slate of officers from its participant countries to coordinate the network and lead distinct activities and committees. The United States assumed a range of leadership positions this year, with the NBII's Gladys Cotter winning reelection to a second term as 3rd Vice Chair of GBIF's Governing Board; Dr. Mark Fornwall of the NBII Pacific Basin Information Node (PBIN) assuming the post of 2nd Vice Chair of the GBIF Rules Committee; and Dr. Leonard "Kris" Krishtalka of the University of Kansas elected Chair of the GBIF Nodes Committee.

These officers, together with representatives from each of GBIF's country and institutional nodes and data providers, reviewed and approved GBIF's 2009–2010 Work Programme at the meeting, adopted several decisions and recommendations for the network, and discussed progress on the content and application of GBIF's data and tools. In advance of the COP15 United Nations Climate Change Conference in December 2009 and the International Year of Biodiversity in 2010, participants attempted to focus their efforts and those of the network to provide synergies with these broader global initiatives.

Christine Fournier of the NBII and Williame Ulate of The Nature Conservancy at the GB16 Meeting in Copenhagen.

To help the GBIF community stay in close collaboration between meetings, GBIF unveiled a new social networking site for its members at GB16. This system, known as the GBIF Community Site, will help GBIF's widely geographically distributed participants stay apprised of developments in the network, facilitate document sharing and editing and technical collaboration between each node's IT staff, and allow GBIF participants unable to attend annual meetings or workshops to share in their planning and outcomes.

The GB16 meeting also continued to demonstrate GBIF's commitment to making its data digitization and access efforts broadly useful to the scientific and resource management communities, as well as to decision makers. The GBIF Secretariat and member institutions from around the world presented several examples of new tools utilizing GBIF data to address issues of global concern, including climate change impacts on fish stocks, agriculture, and forestry.

For more information, please contact Christine Fournier at <cfournie@usgs.gov> or 703-648-4307.

Inter-American Biodiversity Information Network Secures Project Extension

The Global Environment Facility (GEF) and World Bank, primary funders of the Inter-American Biodiversity Information Network (IABIN), have granted IABIN a one-year extension on the "Building IABIN" GEF Project the network is currently implementing. This extension prolongs project activities through June 2011, from the original ending date of June 2010.

This additional year of project activities will allow IABIN´s Thematic Networks (TNs) and data content grantees to finalize their data creation activities, and permit more complete integration of IABIN's infrastructure. The IABIN Council, IABIN Executive Committee, and TNs will also have more time to prioritize future projects for IABIN and build support in the region for these efforts.

For more information, please contact Ben Wheeler at <bwheeler@usgs.gov> or 703-648-4072.

Upcoming Events of NBII Interest

37th Annual Meeting of the Pacific Seabird Group, Long Beach, CA. February 17–20

2010 Southern Division of the American Fisheries Society Spring Meeting, Asheville, NC. February 25–28

Aquaculture 2010, San Diego, CA. March 1 – 5

Climate Change Science: Understanding the Past, Informing Decisions for the Future, Denver, CO. March 9 –11

North American Wildlife and Natural Resources Conference, Milwaukee, WI. March 22–27

33rd Annual Herpetology Conference, Orlando, FL. March 29–31

Association of Southeastern Biologists 2010, Asheville, NC. April 4–10

International Association of Landscape Ecologists, Athens, GA. April 5–9

Species Introductions and Re-introductions Symposium, Starkville, MS. April 8–9

Research Data Access and Preservation, Phoenix, AZ. April 9–10

2010 Amphibian Biology, Conservation and Management Professional Training Course, Toledo, OH. April 17–23

Southeast Exotic Pest Plant Council and Southeast Chapter of the Society for Ecological Restoration International 2010, Chattanooga, TN. May 11-13

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