

# nbii Access

## New NBII Web Site Released

Without question, December is a festive time of year. The National Biological Information Infrastructure (NBII) emphatically agrees since December – or, more specifically, December 13, 2006 – marked the unveiling of the new NBII Web site <www.nbio.gov>. It was many months in the making, but now it's up and running. Time for the bubbly, indeed!

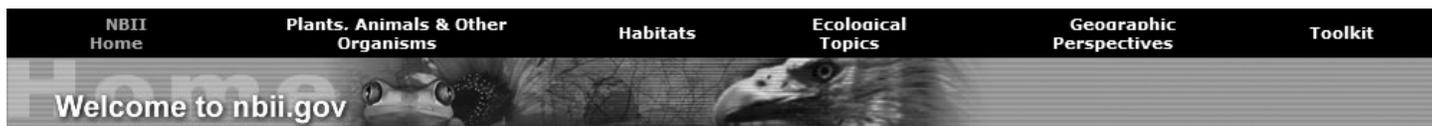
The NBII is a Web-based system

coordinated by the U.S. Geological Survey (USGS) that provides access to data and information on the nation's biological resources. The Web portion of the NBII Program is our window on the world. But behind that window are NBII partners and collaborators who work on content, standards, tools, and technologies that make it easier to find, integrate, and apply biological resources

information. The new NBII Web site is our most recent, and possibly our best, example of the collaborative spirit that is so essential to those activities ... and to NBII success.

“Now, all core NBII Web site components are available through a single, integrated network – Botany, Frogweb, Mammals, Threatened & Endangered Species, Publications,

*(continued on page 6)*



## Seabirds as Indicators of Environmental Health: Citizen Scientists Monitor Seabird Mortality Throughout the Atlantic Coast of the United States

The Seabird Ecological Assessment Network (SEANET), a project of Tufts University's Center for Conservation Medicine, Wildlife Trust, and several other collaborators, aims to link marine ecological health and human health by monitoring seabird mortality along the U.S. Atlantic Coast.

Numerous threats contribute to seabird mortality, including disease, fisheries operations, organic pollutants, heavy metals, offshore development, and oil pollution. These risks also threaten coastal and marine environments used by humans for recreation and ecological services. The goals of the SEANET project

are to pinpoint the most detrimental threats to marine bird populations, to target specific conservation measures to alleviate those threats, and to educate the public about conservation of the larger marine ecosystem.

One of the specific objectives of SEANET, which is modeled after similar projects in Canada and on the Pacific Coast, is to involve as many citizen-scientists as possible in collecting reliable data. Monthly beached bird surveys were initiated in Massachusetts in fall 2002. Surveys are now being conducted throughout the Northeast and more recently in

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# The NRMP: Fostering Collaboration and Consultation Across Monitoring Communities

Imagine you are a research biologist with a nature reserve that has witnessed a marked decline in several freshwater fishes. These declines have been attributed to nonpoint source pollution, but you suspect a local Superfund site is leaching contaminants into the stream. You need historical water data for the region, but who might be collecting such data?

Or perhaps you are a highway engineer developing a blueprint for a new road that will cross a desert area known to be habitat to a population of desert tortoises. You wish to avoid areas known to include tortoise dens,

but how might you find out who is monitoring those dens and where you should construct the road to minimize its impact?

You might even be a state wildlife coordinator establishing a volunteer calling survey program to gather annual indicator data about amphibian populations. You know similar efforts are underway elsewhere and

you'd like to review their survey protocols; you're especially interested in protocols that include detailed information about the training and experience of monitoring volunteers. How could you find out if such protocols exist?

Tracking down the people, data, and protocols associated with monitoring projects can be tedious, painstaking, and sometimes fruitless. Knowledge of current and historical monitoring projects and methods is typically confined to a handful of people in an agency, and information is rarely available online. The challenge is compounded by the hundreds of agencies across multiple sectors and scientific disciplines that are engaged in monitoring.

Recognizing the value in sharing information about monitoring activities and methodologies, program coordinators from the USGS, the National Park Service, and the Association of Fish and Wildlife Agencies brought together representatives from state, federal, non-profit, and academic natural resources agencies to form the Natural Resources Monitoring Partnership (NRMP), a voluntary mechanism facilitating awareness of monitoring projects, sharing of methodologies, and potential collaboration across agencies and scientific disciplines. The NRMP exerts no authority over the work of these agencies, but is a collaborative partnership with a mutual interest in sharing information about monitoring activities and practices. Sharing of actual monitoring data is not a prerequisite for participation in NRMP.

The NRMP concept is simple: to provide online tools that natural resources management agencies can use to enter information about monitoring projects and protocols,

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*Banding a black oystercatcher at Kenai Fjords National Park, AK. (Photo Courtesy Ron Niebrugge, USGS Alaska Cooperative Research Unit)*

## Access

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Be sure to check out Access online at <[www.nbio.gov](http://www.nbio.gov)>→Toolkit→Publications Library.

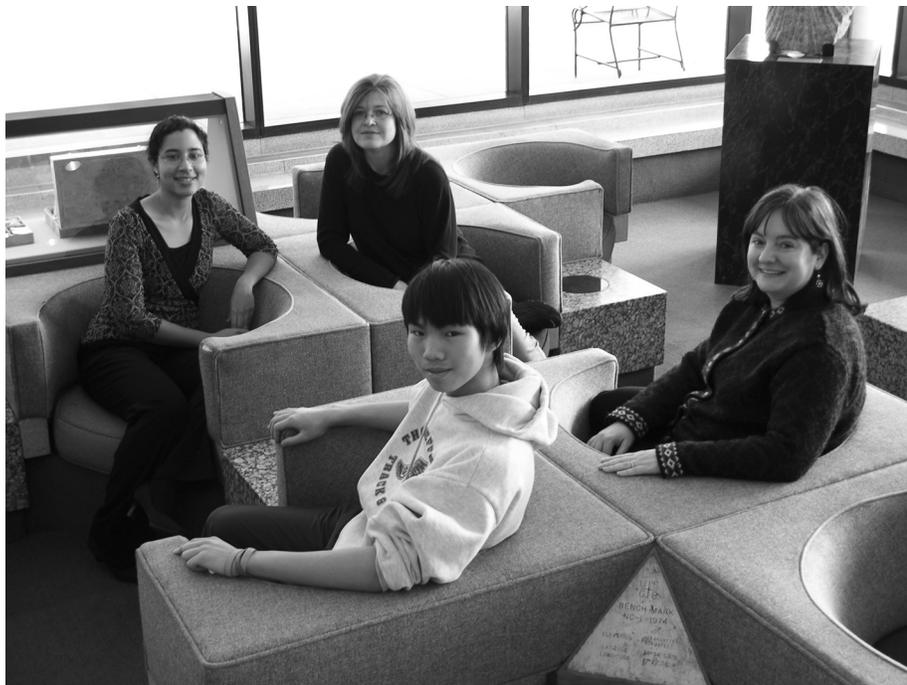
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Visit the NBII Home Page at <[www.nbio.gov](http://www.nbio.gov)>.

## Volunteers Bring Their Dedication to the NBII



Clockwise, starting far left: Bernadette Guerra, Darrill Anderson, Janice Hermann, and Sherwin Yu all started in fall 2006 (Darrill and Sherwin are still volunteering, while Janice and Bern now work for the NBII).

The NBII has been fortunate over the past few years to have had several dedicated volunteers bring their interests and efforts to NBII projects. This past fall, the number of volunteers jumped, with six people contributing a total of 66 hours per week at the NBII Program Office in Reston alone, not including those helping at specific nodes. Throughout the NBII, their work has been integral to project management and research – and their help is greatly appreciated.

What brought these dedicated people to the NBII? Many heard about opportunities through <http://volunteer.gov/gov>, where the NBII posts announcements (contact Ben Wheeler at [bwheeler@usgs.gov](mailto:bwheeler@usgs.gov) for more information). Others heard through universities or friends. Mike Strouts was the first to come through the Volunteer.gov site, in the summer of 2005. A recent college graduate, he came for one of the primary reasons volunteers serve — to gain

experience in his field. Mike assisted with online research and also quality control for the Digital Image Library (DIL) <http://images.nbii.gov>. Another recent graduate, Bernadette Guerra, who also assisted with research and the DIL, came on board for “a chance to work closely with a scientist; to apply the skills I had learned from college . . . and most of all, to support a project of real value to other researchers.” The NBII’s varied and innovative programs mean there are many different opportunities to match the interests of volunteers.

We have also had several student volunteers. College junior Ricardo McClees-Funinan volunteered with the DIL in 2006 to learn more about his major, earth sciences. Students currently helping on projects include Dan Capellan and Michelle McLinden (assisting with observations and GIS projects for the Pacific Basin Information Node), Sherwin Yu (a high school student conducting online

research), and Darrill Anderson (first exploring the field of bioinformatics and now for her Master’s in Library Science practicum).

Gaining experience is not the only attraction for volunteers. Many say they love science and want to contribute to protecting the environment. Janice Hermann, a stay-at-home mother with a previous career in environmental management, decided to help build the DIL, while Sebastian Hill, a legal assistant, volunteered on aquatic resource issues.

Susanne Underkoffler, previously a marketing director, volunteered with the USGS because she had consulted there in the past and “had great respect for the employees and their work.” Susanne comes in twice a week to research audience needs for the NBII and to help develop DIL Web sites.

The NBII strives to make the volunteer experience valuable through hands-on work and through the chance to learn about other projects. As Susanne put it: “The Gap Analysis Program, the Global Biodiversity Information Facility, Regional and Thematic Information Nodes, and the Integrated Taxonomic Informatic Service were all foreign to me four months ago. I now know that the tasks being accomplished by the NBII are extremely important to all species of our planet, and I appreciate the opportunity to contribute.”

In return, all of us at the NBII greatly appreciate the time and effort of our volunteers. We look forward to continuing to work with them and with new volunteers as our program grows. To all volunteers — thank you!

*If you have volunteers assisting in NBII projects and would like to recognize their work in future articles or with a volunteer certificate, please contact Annette Olson at [alolson@usgs.gov](mailto:alolson@usgs.gov).* 

# Migratory Bird Data Center: Additional Monitoring Data Now Available

New bird-monitoring data sets are now available online through the Migratory Bird Data Center Web site <<http://mbdcapps.fws.gov>>. This site is maintained by the U.S. Fish and Wildlife Service (USFWS) Division of Migratory Bird Management (DMBM) and the USGS Patuxent Wildlife Research Center (PWRC) and serves as a centralized, Internet repository for DMBM and PWRC bird-monitoring data.

Accessibility to primary sources of information – such as data sets from bird inventories, surveys, and monitoring programs – is critical because those sources provide baseline information for assessing status and trends of North American bird populations. With support from the NBII Bird Conservation Node <<http://birdcon.nbii.gov>>, USFWS and PWRC established the Migratory Bird Data Center to increase the accessibility of agency databases to the bird conservation community.

Building on the complementary capabilities of the USFWS and the

USGS, the objectives of this Center are: (1) to assemble and document bird population and habitat data maintained by these agencies at their finest levels of spatial and temporal resolution; (2) to assure that databases remain current; and (3) to provide researchers and managers Web-based access to the data for use in strategic planning and evaluation of avian conservation strategies.

During the early establishment of the Migratory Bird Data Center, visualization and query capabilities were developed

for important databases such as the North American Breeding Bird Survey, the Bird Point Count Database, the Waterfowl Breeding Population and Habitat Survey, and the Mid-winter Waterfowl Survey. In December 2006, additional data became available

through the Data Center, including count and estimates data from the Atlantic Flyway Breeding Waterfowl Survey, the Atlantic Flyway Sea Duck Survey, the Mexican Mid-winter Waterfowl Survey, the American Woodcock Singing-ground Survey, and the Mourning Dove Call-count Survey. Harvest Surveys Duck Stamp Sales data are now available online, including the cost per stamp and the

number of federal duck stamps sold from 1934 to 2003.

Through the Data Center, users can learn about federal

survey programs, search data, create maps, and download spatial files. Options for viewing and retrieving data maintained and reviewed by the DMBM and the PWRC include:

- **General Information** – survey and database information, as well as scientific references.
- **Database Query** – a form builder that enables the user to construct a complex relational query of a bird population database maintained by the Data Center. All predetermined queries allow the user to select specific interests like the database, time interval, species, and geographic region. Additional criteria can be selected for many of the databases. Results can be downloaded for local use.
- **Interactive Mapping Application** – enables the user to interactively view various elements of population survey designs, including strata and survey units (e.g., transects, segments, routes,

*Accessibility to primary sources of information . . . is critical because those sources provide baseline information for assessing status and trends of North American bird populations.*

Visitors to the Migratory Bird Data Center Web site have easy access to a broad range of data.

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*Migratory (continued from page 4)*

zones). The user can display these elements over a backdrop of political boundaries, North American Bird Conservation regions, land cover, hydrology, and terrain. These options allow the user to make a more informative and targeted query of the bird population database of interest. Simple querying of population and geospatial databases is also supported.

- **Retrieve Geospatial Data** – an FTP site within the interactive mapping application that enables the user to download ArcInfo™ export (\*.e00) or ArcView™ shape files (\*.shp) of geospatial layers for local use. Federal Geographic Data Committee compliant metadata are also provided for geospatial layers.

Long-term enhancements planned for the Data Center will focus on

further developing spatial coverages (e.g., GIS coverages of strata, transects, units, routes, points, etc.) for the bird-monitoring data sets that came online in 2006. The DMBM also hopes to expand the migratory bird harvest data portion of the Web site to include hunter activity and harvest estimates. For more information about the Migratory Bird Data Center and to view our Web site, please visit us at <<http://mbdcapps.fws.gov>>. 

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*NRMP (continued from page 2)*

and to provide search and browse tools that enable other managers to retrieve this information by

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*NRMP leadership approached the NBII to facilitate the development of standards to support this system and to build the tools and host the site.*

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parameters of interest, including place, focus of the monitoring activity, agencies performing the monitoring, management questions addressed by the monitoring activity, availability of data, and operating procedures. While information about monitoring is important for other managers, it is often of direct value to policymakers, planners, engineers, developers, and other decision-makers who weigh natural resource impacts in their work.

NRMP leadership approached the NBII to facilitate the development of standards to support this system and to build the tools and host the site. An official partner in the NRMP and a member of the NRMP Steering Group, the NBII led the NRMP Technical

Working group, whose membership included partners and interested agencies from multiple sectors. The resulting metadata standards for describing projects and protocols formed the blueprint for easy online tools that allow natural resources agencies to enter information and manage these records throughout their projects' life cycles.

In November 2006, the NBII brought online the NRMP Web site <<http://nrmp.nbii.gov>>, which provides tools to enter metadata about projects and protocols, and to display records currently held in the database. Visitors to the site can view records

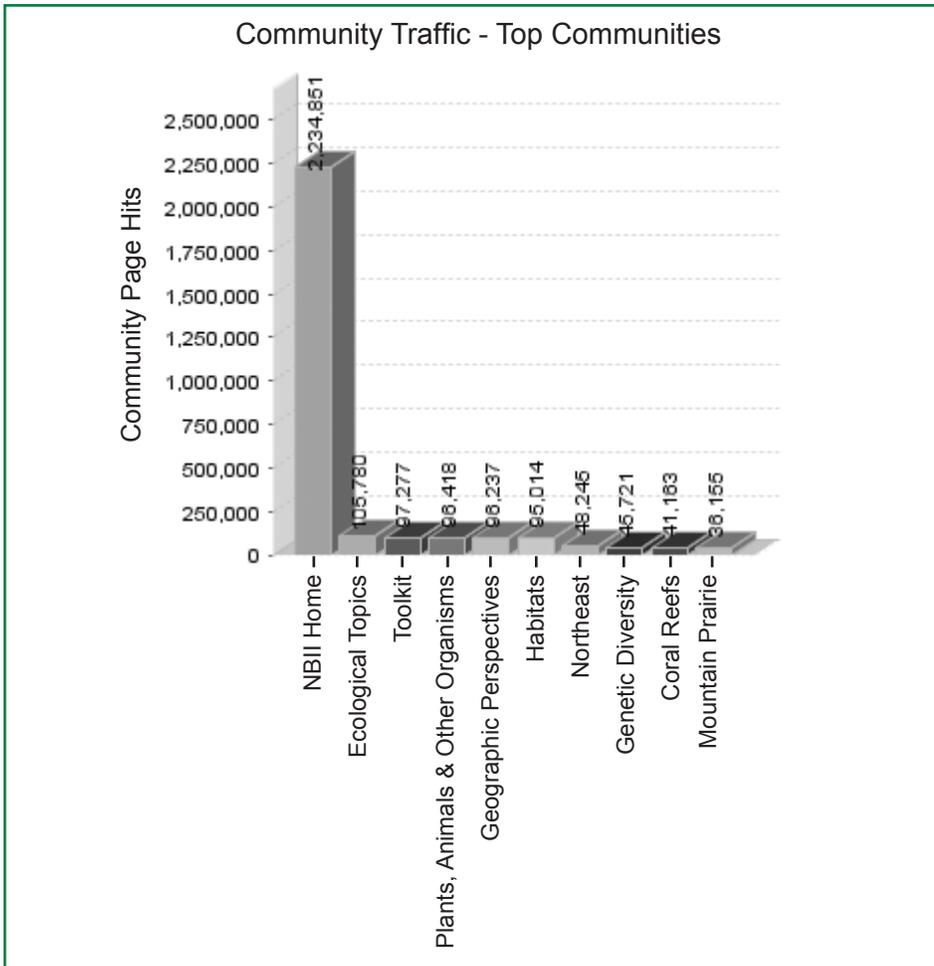
and management agencies can create a login account to enter information. Currently, more than 15 agencies have signed on officially as partners, and many more have expressed interest in using the system. In 2007, the NBII will leverage its suite of geospatial tools to provide the NRMP with a map-based interface to the records in the database.

The NRMP's goals of enhancing awareness of current and historical monitoring, and of fostering collaboration across agencies and science disciplines go to the core of the NBII mission. The NBII Program is proud to be a partner in the NRMP. 



Photo courtesy of Wayne Hubert, USGS Wyoming Cooperative Research Unit

*A researcher attaches a radio collar to a moose cow as part of a study of moose movement, habitat use, and mortality near Jackson Hole, WY.*



Here are the top 10 areas of the new NBII Web site since its release on December 13, 2006.

Partners, and Metadata, as well as over 75 percent of our node/project Web sites,” says Mike Frame, NBII Director of Technology. “The migration of the remaining NBII nodes should be completed this spring.”

The new site’s organization was developed with input from node partners and internal staff. The site went through its final iteration last summer, with the group reaching consensus on the Program’s six top-level categories:

- What is the NBII?
- Plants, Animals & Other Organisms,
- Habitats,
- Ecological Topics,
- Geographic Perspectives, and
- Toolkit.

Early feedback has shown that these top-level categories along with several node sites – Northeast, Coral Reefs, and Mountain Prairie – are extremely popular, contributing to an average 3 million hits per month. Specific details are shown in our graphic, above.

Evidence of the new site’s flexibility can be found in the home page’s organization; for instance, the aforementioned top-level areas are available by clicking on each in the horizontal bar that runs across the top of the screen at <www.nbii.gov> – or via the same subject areas located further down the screen. First-level components, listed under these headings, are only a click away.

Other major improvements include:

- **Multiple navigation paths** – This capability is based on the notion

that many areas of knowledge overlap, so why have just a single point of access to a given topic? One somewhat biased example: you can find the *Access* newsletter by way of NBII Home Page → What is the NBII? → About NBII → NBII Publications Library. P.S. You can also reach the NBII Publications Library in one step via the top-level area, Toolkit.

- **Distributed content management** – Site updates and new input aren’t handled by just a few people. Now we have scores of content managers from the nodes, Reston, Denver, Seattle, and our partners. Easily accessible “templates” let the non-Web developer drop properly formatted material into appropriate sections, with content managers still providing quality control and review for all changes.
- **Collaboration** – Users can supply content, share documents, handle versioning of documents, and so forth through each content manager. Formerly, this was only possible through My.NBII.Gov, the Intranet portion of our Web site (no public access).
- **Section 508 modifications** – The new network makes it easier to ensure we stay in compliance with Section 508 of the Rehabilitation Act (federal agency technology must be accessible to employees and members of the public with disabilities).

“The new NBII Web site establishes our foundation for the future,” says Frame. “We can easily modify current content areas or add new ones. At the same time, if we need to de-emphasize some areas, we can do that, too. In a nutshell, this site amounts to a new collaborative infrastructure for the whole program!”

Questions or comments about the new NBII Web site should be directed to Mike Frame at <mike\_frame@usgs.gov>. 

# Invasive Species Toolbox

Do you have news about an invasive species project you'd like to share through this column? The Toolbox is a collection of useful items and highlights related to invasive species information management issues. Please send suggestions for Toolbox columns to <asimpson@usgs.gov> or <esellers@usgs.gov> and cc: the Access editor <ron\_seplic@usgs.gov>.

## NAS Creates Online Expertise Directory for Aquatic Invasive Species

At the request of the regional panels of the Aquatic Nuisance Species Task Force, personnel from the Nonindigenous Aquatic Species (NAS) Program have created an online system for experts in aquatic invasive species. The system consists of different levels of contacts, for both public and restricted access, and is currently being populated with information. The site will be made public soon and will be found by a link from <<http://www.anstaskforce.gov>>.

## Global Invasive Species Information Network Online Needs Assessment

The Global Invasive Species Information Network is developing a distributed online system to share invasive species data and information held in diverse online databases around the world, with assistance from the Global

Biodiversity Information Facility, the Taxonomic Databases Working Group, and volunteers from many other organizations. A successful Web solution will require full analysis of the needs and current status of potential invasive species information providers and users. A survey is being conducted to analyze these information needs. As of mid-January 2007, we had received 98 responses from 29 countries. A summary of the final results will appear in the next "Invasive Species Toolbox" column.

## I3N Database and Web Template Available Soon for Use in the United States

The Inter-American Biodiversity Information Network's Invasives Information Network (I3N) has been working on the standardization of invasive species information systems in the Western Hemisphere since 2001. I3N has developed simple to use database and Web interface and Intranet templates, which are being modified for use in the United States. If you would like to try out the database and Web tool with your invasive species data, please contact the I3N-US lead, Annie Simpson, at <asimpson@usgs.gov>.

## Web-based Database for Cactus and Cactus Moth Distribution

Mississippi State University's GeoResources Institute is developing a Web-based avenue for reporting suspected U.S. locations of the invasive cactus moth (*Cactobastis cactorum*), and a Web GIS database to display the movement of the moth and locations of natural *Opuntia* cactus populations. Related resources now available to the public include data submission forms (click "Resources"

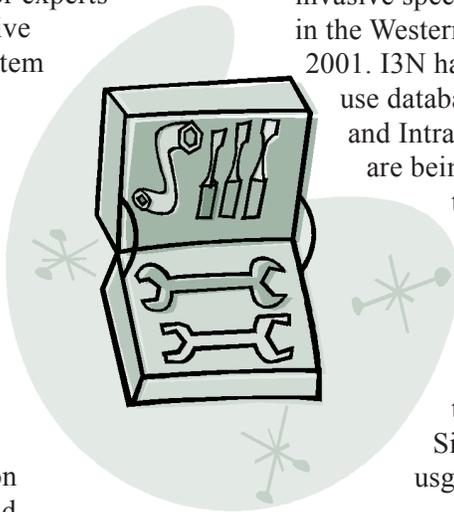
in the left toolbar); Web page: <[http://www.gri.msstate.edu/cactus\\_moth](http://www.gri.msstate.edu/cactus_moth)>.

## National Institute of Invasive Species Science Announces Version 12 of the GODM

The Global Organism Detection and Monitoring (GODM) System is a sophisticated, real-time, online mapping system designed to map, monitor, and predict known and likely locations of invasive species globally. It is part of the National Institute of Invasive Species Science (NIISS) at the USGS Fort Collins Science Center. Version 12 of GODM and the NIISS Web site are now available at <<http://www.niiss.org>>. Version 12.0 highlights include:

- Georaster analysis,
- Tools to manage your georaster files,
- Improved analysis tools,
- Better job management tools,
- Better spatial data handling, and
- Improved spreadsheet update capabilities.

The prototype modeling features now demonstrate uploading data, extracting pixel values from various predictive remote sensing layers, running various analyses such as simple and multiple logistic regression for a response variable (presence/absence or percent cover) using "n" predictor variables, obtaining statistical output for the model, creating a predictive surface for the chosen response variable, and displaying the final predictive surface on our map application (along with the field data points used for its creation). The final surface is a grayscale image of a user-selected size (with white areas being high probability of occurrence for presence/absence and black areas being low probability), and is displayed on top of background imagery for the globe. 



## International Connections

### Inter-American Biodiversity Information Network to Hold Fifth Council Meeting in May

The Inter-American Biodiversity Information Network (IABIN) will hold its Fifth Meeting of the IABIN Council May 9-11, 2007, in Uruguay. The Council is IABIN's governing body and provides the vision and strategic direction for IABIN. IABIN

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*The primary goal of the meeting will be to provide direction and support to IABIN's five data-coordinating Thematic Networks . . .*

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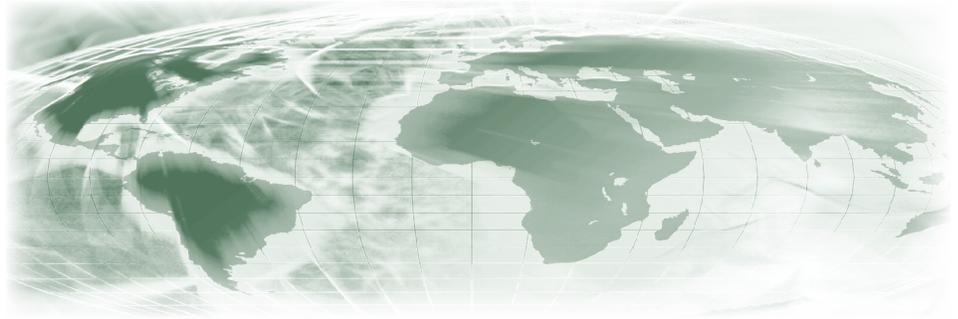
Chair Gladys Cotter, USGS Associate Chief Biologist for Information, will preside over the meeting, along with the members of the IABIN Council from each of the 34 IABIN nations in the Americas.

The primary goal of the meeting will be to provide direction and support to IABIN's five data-coordinating Thematic Networks — Species and Specimens, Invasive Species, Pollinators, Ecosystems, and Protected Areas — and to link these hemispheric initiatives to efforts in each Focal Point's nation and region. Previous IABIN Council Meetings have been held in Panama (2005), Cancun (2003), and Miami (1999 and 2002).

For more information, contact Ben Wheeler at <bwheeler@usgs.gov>.

### USGS-BIO to Host Symposium at EcoSummit 2007

Dr. Toral Patel-Weynand, Head of the USGS Biological Informatics Office (BIO) International Bioinformatics Program, has been invited to host a symposium at the



upcoming EcoSummit 2007 in Beijing, China, May 22–27, 2007. The theme for the meeting is “Ecological Complexity and Sustainability: Challenges and Opportunities for the 21st-Century's Ecology.” The session, titled “Ecoinformatics: Sharing Complex Multidisciplinary Information and Data for Addressing Environmental Challenges,” will be moderated by the USGS Associate Chief Biologist for Information and BIO Director Gladys Cotter. The session will feature presentations on the USGS Gap Analysis Program, the World Data Center for Biodiversity and Ecology, the Integrated Taxonomic Information System, and the USGS-

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*Attendees will learn how these initiatives work together to collect, organize, and disseminate biological and ecological data to decision-makers, scientists, and the international community.*

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BIO International Program.

Presenters will also include NBII partners from around the world, such as the Global Forestry Information Service, United Nations Environment Program, Global Biodiversity Information Facility, and IABIN. Attendees will learn how these

initiatives work together to collect, organize, and disseminate biological and ecological data to decision-makers, scientists, and the international community. For more information, contact Dr. Toral Patel-Weynand at <tpatel-weynand@usgs.gov>.

### USGS Invasive Species Scientists Offer Database Training to Association of Southeast Asian Nations

Annie Simpson, the NBII Invasive Species Information Coordinator, delivered a welcome address at the Association of Southeast Asian Nations (ASEAN) Workshop on Invasive Species and Database Development. Ms. Simpson discussed the Global Invasive Species Information Network and the benefits this information-sharing initiative can provide to ASEAN nations.

Ms. Simpson and Elizabeth Sellers, NBII Pollinator Project Manager, also organized an invasive species database workshop at the meetings, held January 28–February 1, 2007, in Kuala Lumpur, Malaysia, with funding from the U.S. State Department's Bureau of Oceans and International Environmental and Scientific Affairs. Participants learned how to employ the invasive species occurrence and tracking database and Web site templates developed by the IABIN Invasives Information Network.

For more information, contact Annie Simpson at <asimpson@usgs.gov>.

## Are You Ready to Learn About Metadata?

### Upcoming Workshops

Train the Trainer	
TBD – late April or early May 2007	College Station, TX
Introduction to Metadata	
March 6-7, 2007	Asheville, NC
May 22-23, 2007	Portland, OR

### Introduction to Metadata

This one-day workshop provides an introduction to the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and

*The Biological Data Profile encompasses the entire geospatial metadata standard and includes additional elements . . .*

the NBII Biological Data Profile, as well as metadata development tools, strategies for production, and clearinghouses. The Biological Data Profile encompasses the entire geospatial metadata standard and includes additional elements to describe taxonomy, methods, and analytical tools (such as models). Demonstrations for producing documentation for a sample data set using Metavist software will be part of the main workshop, and the half-day will allow participants time to gain hands-on experience with the software.

### Train the Trainer

This three-day intensive interactive course covers basic training concepts and skills as a foundation for addressing challenging metadata subjects. The course teaches the



Attendees at the NBII Train the Trainer Workshop held last June in Denver, CO, included (left to right, back row): Kimberly Bahl, National Oceanic and Atmospheric Association (NOAA); Andre Andreyev, U.S. Fish and Wildlife Service; Kathy Martinolich, NOAA; Adona Fleming, University of Nebraska; Tom Burley, University of Tennessee – NBII Southern Appalachian Information Node; Terry Giles, USGS Trainer; Lynn Kutner, NatureServe Trainer; Jacqueline Mize, NOAA; and Melanie Myers, National Park Service. Left to right, front row: Viv Hutchison, USGS-NBII Metadata Coordinator; AC Brown, USGS; Brad Georgic, Western Pennsylvania Conservancy; Angel Bolinger, Maryland Department of Natural Resources; and Sophi Beym, Bishop Paiute Tribe.

trainer to address metadata in a lively, invigorating, and memorable workshop. The course enables the agency to define metadata training goals, content, and approaches for implementing metadata training programs specific to their data community. This course covers:

- What is training?
- How to quickly engage the audience in metadata,
- What are the NBII-FGDC's metadata learning goals and objectives, and
- Why goals and objectives are critical to agency-wide training implementation.

Learning styles, training and visual aids, and presentation styles are discussed as a means to connect with broad workshop audiences.

The workshop covers applying audience analysis to develop the workshop content, duration, approach, determining facility requirements, and assuring a successful and meaningful workshop.

The FGDC metadata curriculum is introduced to workshop participants as subject areas for presentations and exercise development areas. Participants apply their newly acquired trainer skills to develop a twenty-minute metadata presentation, which includes an interactive exercise on a metadata concept, goal, or objective. The instructors and participants critique the presentation, the presenter, and the learning exercise.

For more information or to register, contact Viv Hutchison at <vhutchison@usgs.gov> or call 206/526-6282, extension 329.

## Seabirds (continued from page 1)

the Southeast. Volunteers are trained in standard data-collection methods so the findings from each state and region can be compared.

As of March 2006, 2,278 surveys had been completed, covering over 2,700 miles of the Atlantic coastline. A total of 716 carcasses of 62 different species were encountered by volunteers, who submitted the fresh carcasses for necropsy. Results revealing a number of different causes of death have generated several ongoing research projects and in some cases have contributed to management decisions.

Wildlife Trust and the Tufts Wildlife Clinic partnered with the NBII, the NBII Wildlife Disease Information Node (WDIN), and the NBII Northeast Information Node (NIN) to work on the SEANET project. With input from all partners, in fall 2005 WDIN began creating a Web-based reporting system for seabird strandings, which is housed at <http://wildlifedisease.nbio.gov/seanet>. The system enables volunteers to enter data directly on the Web, allowing results to be quickly compiled. In addition, the data are streamed to an interactive

GIS application for the assessment of risk factors and mortality patterns across the region. The dynamically generated GIS application functions as part of the NBII's Geospatial Information Framework (GIF), allowing users to include additional Web mapping services (using the Open Geospatial Consortium's Web Map Service standards) and tools like the Gazetteer to zoom to specific locations and investigate beached bird information. NIN's lead partner, the Center for International Earth Science Information Network at Columbia University, is evaluating additional GIS layers to contribute to the mapping application.

As of January 2007, 58 volunteers have been registered to perform online entry, reporting 475 unique



Main Menu for SEANET's online data entry system.

beach walks including 424 carcasses. The use of standards in the SEANET system drives its success. Providing easy-to-use Web forms ensures that data are captured efficiently for comparison and storage using the Integrated Taxonomic Information System <http://www.itis.gov/> for species information and existing environmental observation standards.

A goal for this year is to cultivate a network of local veterinarians and wildlife rehabilitators to perform necropsies and collect health-screening data for entry into the database. Collaboration with other academic, federal, and non-profit groups is also planned. The long-term goal of SEANET is to maintain a consistent effort to record changes in seabird mortality patterns, establishing baseline data with which "unusual" mortality events can be compared. SEANET's online data-entry system also serves as a model for other wildlife mortality reporting, including a multi-agency reporting system for avian influenza sampling data for the United States.

For more information about SEANET, contact SEANET Coordinator Julie Ellis at [julie.ellis@tufts.edu](mailto:julie.ellis@tufts.edu).



Volunteers walk a stretch of beach.

## 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. Here are a few of the most recent examples:

### ■ The Appalachian Trail

Environmental Monitoring Mega-Transect Symposium held recently in Shepherdstown, WV, was the subject of articles in the past two issues of *A.T. Journeys* magazine. A short article in the November-December 2006

issue contained an overview of the symposium, while a six-page spread in the January-February 2007 issue described the events of the symposium and the excitement it has generated. In addition to the *A.T. Journeys* articles, an Associated Press story was published in about 200 newspapers and other media outlets.

NBII staff and partners from the Southern Appalachian, Mid-Atlantic, and Northeast Information nodes have been participating in planning efforts for the Appalachian Trail Environmental Monitoring Mega-Transect.

■ Staff members from the Penn State Institutes of the Environment, a partner within the Fisheries and Aquatic Resources (FAR) node,

have written a chapter, “Ensuring the Future of Oceans,” in the *Companion Encyclopedia of Geography: From Local to Global*, which was just published by Routledge. Their essay includes a section on fisheries, in which they mention the USGS, NBII, and FAR, including their URLs.

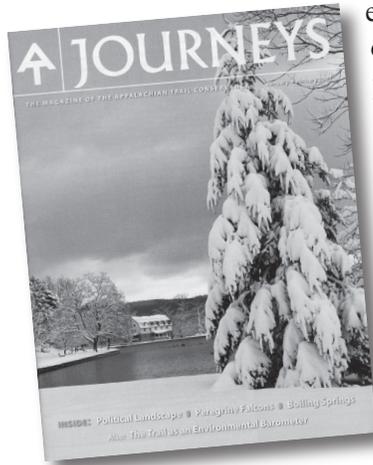
This revised edition of the encyclopedia takes the theme of “place” as the unifying principle for a full account of the discipline at the beginning of the twenty-first century.

■ The NBII has teamed up with the U.S. National Ocean Biogeographic Information System (OBIS) Committee to develop a pilot project for marine information. This would represent the United States as the U.S. Regional

OBIS Node (RON) of the international OBIS. OBIS has been created to manage and make available existing information relevant to the Census of Marine Life (CoML), as well as to manage the data created by the CoML. The November 2006 issue of the *U.S. CoML Newsletter* discusses, among other things, work that Mark Fornwall of the U.S. Regional OBIS Node, and Node Manager of the Pacific Basin Information Node, is doing in these activities.

■ Three NBII biologists recently co-authored a peer-reviewed article with a colleague from the Chinese Academy of Sciences. The paper – titled “Essential Elements of Online Information Networks on Invasive Alien Species” – appeared in the October 2006 issue of *Biological Invasions*, an online publication available at <<http://dx.doi.org/10.1007/s10530-005-5850-1>> and

published by Springer Netherlands. In the paper, Annie Simpson, Elizabeth Sellers, Andrea Grosse, and Yan Xie describe the common characteristics of the Global Invasive Species Information Network, the Inter-American Biodiversity Information Network’s Invasives Information Network (I3N), the Invasive Species Information Node of the NBII, and the Chinese Invasive Species Network. They conclude that successful invasive species networks require a common goal, dedicated leaders, effective communication, and broad endorsement to obtain sustainable, long-term funding and stability. 🌿



*The NBII is mentioned throughout the year in a variety of venues . . .*

## Electronic or Print Access?

We wanted to take a moment to remind readers that *Access* is available as both a printed publication and online as 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](http://www.nbii.gov)> → Toolkit → Publications Library.

If you would prefer to read only the online version from now on, just send an e-mail stating that to <[ron\\_seplic@usgs.gov](mailto:ron_seplic@usgs.gov)>, and we’ll remove your name from the standard *Access* mailing list. Next, we’ll add you to our listserv for notifying *Access* readers when future online issues are ready – with a link to the online version – so you’ll be able to stay up-to-date on NBII developments without adding to your incoming snail mail. It’s your call!

## Upcoming Events of NBII Interest

Second National Conference on USGS Health-Related Research, Reston, VA.	February 27– March 1	International Symposium on Wetland Biogeochemistry, Annapolis, MD.	April 1–4
Pacific Ecology and Evolution Conference, Eatonville, WA.	March 2–4	Annual Meeting of the U.S. Regional Association for the International Association of Landscape Ecology, Tucson, AZ.	April 9–13
Coastal GeoTools '07, Myrtle Beach, SC.	March 5–8	Environmental Terminology Workshop, Fourth Ecoterm Group Meeting, Vienna, Austria	April 17–18
Presidents' Forum on Meeting Coastal Challenges, Baton Rouge, LA.	March 20	Association of Southeastern Biologists Annual Meeting, Columbia, SC.	April 18–21
North American Wildlife and Natural Resources Conference, Portland, OR.	March 20-24	National Conference on Ecosystem Restoration, Kansas City, MO.	April 23–27
Wilson Ornithological Society Annual Meeting, Boston, MA.	March 22–25	The Center for Biodiversity and Conservation's Annual Symposium, New York, NY.	April 26–27
Big Thicket Science Conference IV: Biodiversity, Ecology, and Conservation of Natural Areas in the West Gulf Coastal Plain, Beaumont, TX.	March 22–25	The Climate Change Conference, Tampa, FL.	May 9–11
Annual Meeting of the Eastern Bird Banding Association, Brewster, MA.	March 23–25	Annual Meeting of the Society for the Preservation of Natural History Collections, St. Paul, MN.	May 21–26



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