

nbii ACCESS

NBII Collaborates with the Ecological Society of America on New Pollinator Web Site

The alarming disappearances of bees and reports of collapsing bee colonies have caught the media's attention in recent weeks. The phenomenon now known as Colony Collapse Disorder has forced us to pay attention to the plight of bees and other pollinators and to consider what their disappearance might mean for agricultural and natural ecosystems worldwide.

Pollinators provide an essential ecological service to over 90 percent of the world's wild and cultivated flowering plants and an estimated

one-third of the food consumed by humans.

For pollinators to be successfully monitored, managed, and conserved, pollinator data and information must be available and accessible.

Numerous information resources about apiculture, or beekeeping, can be found on the Internet. Comprehensive Web sites on specific groups of animal

pollinators other than bees have been developed by groups such as The Hummingbird Society

<www.hummingbirdsociety.org> and The North American Butterfly Association <www.naba.org>. But

(continued on page 5)



© Charles H. Warren: used with permission
Ruby-throated hummingbird (*Archilochus colubris*),
Please see the NBII Digital Image Library at
<<http://images.nbii.gov/details.php?id=55503>>.

Whirling Disease Partnership Promotes Data Sharing for Fish Managers and Researchers

The NBII Mountain Prairie Information Node (MPIN) has partnered with Montana State University's Big Sky Institute (BSI) and the Whirling Disease Initiative (WDI) to develop the Whirling Disease Data Repository, Interactive Map, and static maps. These resources offer unprecedented access to data from research projects and detection efforts from across the 25 states affected by the parasite, and they are valuable resources for fisheries professionals and anglers in their efforts to prevent the disease's spread.

The whirling disease parasite (*Myxozoan cerebralis*) was first detected in the United States in the 1950s. Little was known about the

parasite until the 1990s, when whirling disease garnered national attention after it was linked to significant declines in Intermountain West trout populations. To learn more about whirling disease, see <<http://whirlingdisease.montana.edu/about/faq.htm>>.

In 1997, Congress established the WDI to conduct research that would lead to practical methods of managing wild trout fisheries. Initial studies focused on the parasite's complex life cycle and factors that influence its spread and severity. These indicated the eradication of whirling disease is highly unlikely; that's why the WDI encourages research

(continued on page 3)

In This Issue

"Fish On"-Line: A Web-based Aquatic Biological Database.....	2
Workshop Addresses ATBI Data Interaction	4
2007 NBII Metadata Program Highlights	6
Carroll Explores Georeferencing Software at GBIF-HerpNET Workshop	8
Librarians Love the NBII	8
Invasive Species Toolbox	9
NBII in the News.....	10
International Connections.....	11
Upcoming Events of NBII Interest	12

“Fish On”-Line: A Web-based Aquatic Biological Database

The NBII Great Basin Information Project <<http://greatbasin.nbii.gov>> and the USGS Idaho Water Science Center (IWSC) have partnered to develop “Fish On”-Line, a management and delivery system for aquatic biological monitoring data <<http://greatbasin.nbii.gov/fish/>>. The objectives of the project are:

- to develop and populate a relational database, using a standard data dictionary, that functions as a stand-alone product and is compatible with a developing USGS database similar to the National Water-Quality Assessment (NAWQA) database; and
- to build a Web-based query tool allowing users to search for and extract segments of the data for report generation and analysis.

“Fish On-line” Web Site

In 2006, the fish community data were loaded into a relational database, which provides the data



Sampling fish on the Boise River, in southwestern Idaho. Photo by USGS.

backbone for the Web site. Query engines were developed allowing users to search the database in two ways: using an interactive map or drop-down menus. Searches can focus on specific streams, fish species, or sampling event. Detailed sampling site information and summary fish data are also available for each site. In addition, natural history information is available for each fish family and species through links to the FishBase

Web site <<http://www.fishbase.org>>.

Importance of Aquatic Biological Community Data

Aquatic biological community data integrate both water quality and habitat conditions. Biological communities (fish, macroinvertebrates, and algae) help managers determine whether a stream can support species such as cold-water biota or pollution-

tolerant species. Community data have also been used to determine beneficial uses of streams and rivers that are required for developing total maximum daily loads. Long-term trend analysis of aquatic communities helps managers evaluate the effectiveness of best management practices.

Background

Since the early 1990s, the IWSC has collected biological data describing algae, aquatic macroinvertebrates, and fish communities as they relate to water-quality conditions from many aquatic locations in Idaho, as well as in Oregon, Washington, Montana, and Wyoming. The fish community data were obtained through cooperative projects between the USGS and the State of Idaho Department of Environmental Quality, the City of Boise, the Henry’s Fork Foundation, and The Nature Conservancy. The USGS National Water Quality Assessment (NAWQA) program also contributed fish community data. The objectives varied among the projects, but the sampling protocols were similar. All fish samples for each site are preserved at the Orma J. Smith

(continued on page 7)



Access, the quarterly newsletter of the National Biological Information Infrastructure, is published by the NBII National Program Office.

Ron Sepic, Editor
Linda Lincoln, Associate Editor
Gene Morris, Production Specialist

Contributors:

Shelaine Curd-Hetrick
Jean Freeney
Judith Haydel
Viv Hutchison
Kelly Lotts
Toral Patel-Weynand
Dan Phillips
Jen Pollock
Julie Prior-Magee
Elizabeth Sellers
Annie Simpson
Ben Wheeler

Just send your comments, article ideas, and requests to be added to our mailing list (as well as address corrections) to:

Ron Sepic, Access Editor
USGS Biological Resources Discipline
302 National Center
Reston, VA 20192
Phone: 703/648-4218
Fax: 703/648-4224
E-mail: ron_seplic@usgs.gov

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

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

Program Manager
U.S. Geological Survey
NBII National Program Office
302 National Center
Reston, VA 20192
Phone: 703/648-NBII (6244)
Fax: 703/648-4224
E-mail: nbii@nbii.gov



Visit the NBII Home Page at <www.nbii.gov>.

that develops management strategies. Unfortunately, only a small percentage of funded research data has surfaced in publication, so fisheries managers have not had access to effective strategies from empirical data to manage the disease and control its spread.

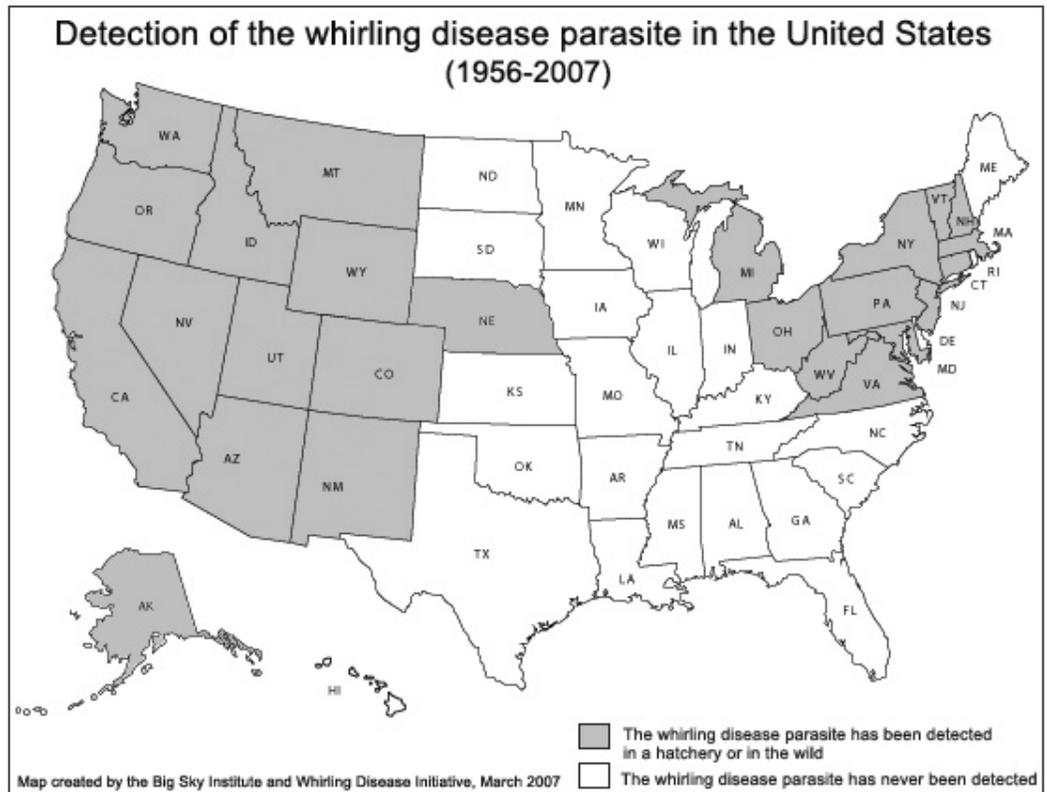
Liz Galli-Noble, WDI's Program Director, saw a critical need for data sharing among researchers and fisheries professionals and recognized that the Initiative needed a way to "store and effectively disseminate the enormous amount of information generated through the WDI." To address this issue, the WDI approached BSI and MPIN for their database skills and expertise in data management.

A multiyear partnership generated three products now available via the WDI <<http://whirlingdisease.montana.edu/>> and NBII MPIN <<http://mpin.nbii.gov>> Web sites: the WDI Data Repository, WDI Interactive Map, and static maps of whirling disease distribution.

WDI Data Repository

The WDI Data Repository at <<http://data.whirlingdisease.montana.edu/>> contains metadata, data sets, and reports generated from WDI-funded research. The goals of the project were to protect against data loss and offer an easy data retrieval system for data and metadata from completed research efforts.

MPIN and BSI staff worked with researchers to collect data sets and create metadata compliant



with the Federal Geographic Data Committee standard. The repository now makes available more than 35 data sets and associated metadata, with more to come. Metadata are also available through the NBII Metadata Clearinghouse <<http://mercury.ornl.gov/nbii/>>.

WDI Interactive Map

The WDI Interactive Map <<http://whirlingdisease.montana.edu/about/map3.htm>> is the most comprehensive and current regional-scale

mapping resource of *M. cerebralis* parasite detection available, making it a valuable tool for anglers and professionals. Users can display data by watershed or by point. Metadata are available through the "identify" tool.

The map provides access to the

vast data stores of state and federal agencies that have not been available to the public, despite the tremendous impacts of whirling disease on wild trout populations and the evidence of angler spread of the parasite. So far, detection data from five affected states have been acquired through cooperation with state and federal agencies and were utilized to generate static and interactive maps.

Static Maps

Static maps have been created that can be printed and taken into the field. These maps show locations where the whirling disease parasite has been detected, and are available now for Montana, Utah, and Idaho <<http://whirlingdisease.montana.edu/about/map2.htm>>.

MPIN and BSI are eager to explore ways to continue this important work with agencies to disseminate parasite detection and collection data through mapping. If you are interested in participating, contact Kelly Lotts at <klotts@montana.edu>. 

Workshop Addresses ATBI Data Interaction

Thirty-one scientists and resource managers from 10 states participated in a two-day workshop in December 2006 to discuss design methods, standards, and practices for sharing data generated by the All Taxa Biodiversity Inventory (ATBI) Alliance. The workshop was sponsored by the NBII Southern Appalachian Information Node (SAIN) and held in conjunction with Discover Life in America (DLIA) <www.discoverlifeinamerica.org> annual ATBI conference in Gatlinburg, TN.

The concept of an ATBI grew out of the frustration of land managers who needed to make resource decisions about their parks and preserves without an understanding of the biodiversity present. One of the most successful ATBIs is conducted by DLIA, a nonprofit organization working with the Great Smoky Mountains National Park (GSMNP), to inventory its estimated 100,000 species of living organisms. The ATBI of the GSMNP has been studied as a model for organizing and conducting inventories throughout the world.

The increased number of ATBIs being conducted in the United States has led to a recognition of the benefits of collaboration among the federal, state, and non-government organizations managing parks and preserves. At the 2005 annual ATBI conference, DLIA and representatives of several organizations agreed to the formation of the ATBI Alliance



Keith Langdon, National Park Service (far left), and other ATBI Data Interaction Workshop participants discuss how to effectively share information through an ATBI Alliance. Photograph by Kemp Davis, Jr. shared courtesy of Discover Life in America <www.dlia.org>.

<<http://www.atbialliance.org>>.

The ATBI Alliance was formed to provide a cooperative structure to coordinate, share, and disseminate findings of the various ATBIs. Some of the benefits the Alliance is expected to provide include:

- advancing the science and practice of conducting ATBIs through standardized protocols, methods, and outputs, and
- creating efficient use of taxonomic and systematic ecological expertise and resources through collaboration, rather than competition.

The Alliance is working to ensure that community standards are developed so information collected through these inventories is interoperable and readily accessible. SAIN, DLIA, and the GSMNP assisted in the effort by hosting the 2006 workshop

on data interaction. Representatives from several organizations conducting ATBIs attended, including:

- Big Thicket National Park,
- Tennessee State Parks,
- Discover Life in America,
- Acadia National Park, and
- Adirondack Ecological Center.

Results from an online survey given prior to the workshop formed the basis for much of the discussions. Survey responses showed that users want to be able to search ATBI data by scientific name and have search results returned as distribution maps, fact sheets/species profiles, and/or species occurrence reports. These results underscored the need to standardize input field formats and formalize a required core group of data fields.

Outcomes

Workshop attendees considered what standards and practices are necessary to ensure that scientists, educators, students, and the public can easily access data collected from many local sources. They also discussed

(continued on page 5)



*The velvet lead blueberry (*Vaccinium myrtilloides*) was the 5,000th discovery for the ATBI. Photograph by Heather MacCulloch shared courtesy of Discover Life in America <www.dlia.org>.*

Pollinators (continued from page 1)

very few resources bring together information on a variety of pollinator species and issues in one place. So in 2007, the National Biological Information Infrastructure (NBII) collaborated with the Ecological Society of America (ESA) to develop the NBII Pollinators Web site <<http://pollinators.nbio.gov/>> to provide increased exposure, support, and access to important pollinator information resources.

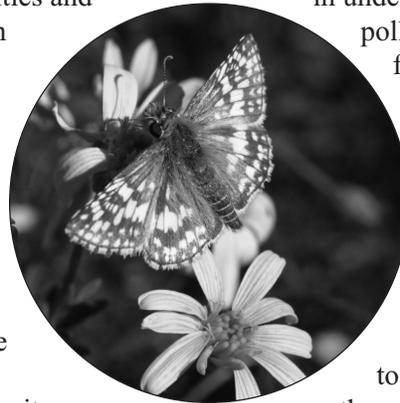
The NBII Pollinators Web site includes several informative sections, including Announcements and News, Conservation, Farming and Gardening for Pollinators, Learning about Pollination, Pollinator Species, References, Teacher Resources, and a section describing what the public can do to help conserve pollinators. Some of the specific topics covered include pollination syndromes, how to identify pollinator species, and recommended conservation practices. Each subject area includes detailed narratives, recommended reading, and links to relevant online resources.

The Web site is designed to help visitors narrow their topic of interest and find more information by linking to other online resources. The site benefits pollinators by increasing public awareness and publicizing online resources about pollinators. In the conservation section, for example, visitors are introduced to various

concepts, including initiatives and organizations, management plans, pollinator conservation threats, and an explanation of why it is important to conserve pollinators.

Future plans for the site include the development of detailed species-specific information pages and the substantial expansion of sections such as Initiatives and Organizations (under Conservation) to provide more information about other national and international pollinator conservation activities and organizations, such as the Forgotten Pollinators Campaign, the North American Pollinator Protection Campaign, the International Pollinator Initiative in the Convention on Biological Diversity, and the Inter-American Biodiversity Information Network (IABIN) Pollinators Thematic Network (also hosted online by the NBII at <<http://pollinators.iabin.net/>>).

The target audience for the NBII Pollinators Web site currently includes educators, students, gardeners, and concerned citizens. In the future, we hope to serve the needs of scientists and researchers by providing increased access to pollinator data



sets like the Butterflies and Moths of North America database, hosted and maintained by the Big Sky Institute at Montana State University, and the NBII Mountain Prairie Information Node online at <www.butterfliesandmoths.org>. The NBII Pollinators Web site will help to identify and provide access to existing efforts and information on pollinators, assist people in finding the information they need, and encourage them to discover and become more involved in understanding and conserving pollinators. We welcome feedback on the site's design and content. Please send your thoughts to Elizabeth Sellers at <esellers@usgs.gov>. The NBII <www.nbio.gov> is a broad, collaborative program to provide increased access to data and information on the nation's biological resources.

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. 

ATBI (continued from page 4)

the technical aspects of data sharing, including system design, and had critical conversations to define the user base and the users' information needs.

Attendees agreed that a decentralized system allowing users to "pull" data from participating databases offers the best solution, and the associated Web site needs to be simple and flexible to ensure easy input and access of data.

Attendees also identified targeted

user groups and customers as primarily those working with raw data. Secondary users would be those working with interpreted data for education, policy creation, and resource management.

Four working groups formed to continue working on the issues, and each group identified goals and milestones to move the issues forward. The working groups are:

1. Reserve Resources,

2. Taxonomic Working Group,
3. Natural History Data Structure, and
4. Inventory Data Structure.

SAIN partner Information International Associates facilitated the workshop and compiled the proceedings, which are posted on the ATBI Alliance Web site at <www.atbialliance.org/biodiversity_data.shtml>. 

2007 NBII Metadata Program Highlights

NBII Grant Proposal Funded by Federal Geographic Data Committee CAP Grant

The 2007-08 project proposal focuses on enhancing metadata development for USGS Science Centers through several opportunities: a presentation specifically for center managers about the benefits of metadata, small workshops for data managers focused on metadata creation, individual interviews with scientists about their primary data sets, NBII record creation assistance, and uploading of records to the NBII Clearinghouse.



Metadata Train the Trainer Workshop (embracing the “Don’t Duck Metadata” theme...). Back Row: Grant Garrison, Randy Neal, Pat Striefer, Christy Burch, and Jaci Mize; 3rd Row: Dawn Killian, Ray McCarty, and Lynda Wayne; 2nd Row: Aaron Burciaga, Nancy Echols, Steve Smith, and Amy Snelgrove; Front Row: Shelley Broyles, Viv Hutchison, and Kathy Martinolich.

Status on the ISO Standard

The new ISO (International Organization for Standardization) standard for documenting geospatial data has been approved by the American National Standards Institute (ANSI). The North American Profile (NAP) is a collaborative result of North America and Canada, with Mexico observing. The purpose of the NAP is to customize content in the standard to fit the needs of North America in describing geospatial data. The committee review will soon be complete and the public review will occur this summer.

The new ISO standard will replace the current Federal Geographic Data Committee (FGDC) standard for documenting geospatial data. The standard is capable of documenting all geospatial resources including projects, resources, data sets, and services. A crosswalk tool will be released this fall that will translate from FGDC’s Content Standard for Digital Geospatial Metadata

(CSDGM) to the NAP. The FGDC Standards Working Group will then take action to adopt or recognize the U.S. National Standard.

The Biological Data Profile is in development and will be submitted to the Standard Working Group once the NAP is completed.

Clearinghouse Stats

These are the Clearinghouse stats as of early May 2007:

- Total metadata records: 27,603
- Total increase in records during 2006: 6,014
- Total number of contributing partners: 38
- Newest partners: The Whirling Disease Initiative and the Center for International Earth Science Information Network (CIESIN)/ NASA Socioeconomic Data and Applications Center

To visit the Clearinghouse, go to www.nbii.gov and click on

“Metadata” (under “Toolkit”) > FGDC Metadata > Clearinghouse > Search the Clearinghouse.

New partners are welcome! Sharing your metadata with the NBII is an easy process. Please visit our Web site www.nbii.gov then contact Viv Hutchison to get started: vhutchison@usgs.gov.

Training

The NBII recently co-taught a successful Train the Trainer Workshop in College Station, TX, with the FGDC. Trainers were Lynda Wayne (FGDC), Viv Hutchison (NBII), Kathy Martinolich (National Oceanic and Atmospheric Administration [NOAA]), and Jaci Mize (NOAA). The majority of workshop participants were from a wide range of Texas Council of Governments, but also included the Texas A&M Institute of Renewable Natural Resources, the

(continued on page 7)

"Fish-On" Line (continued from page 2)

Museum of Natural History at Albertson's College of Idaho for taxonomic verification.

Although these data are compatible with the NAWQA database, they were not collected as an integral part of the NAWQA program and therefore cannot be served with this national data set. Prior to this project, these data were stored in separate Excel spreadsheets for each sampling event and delivered through an Internet Map Service (ArcIMS) managed by the IWSC. In that format, the data were available, but not particularly usable because the flat Excel files were not cross-referenced and data were only available in temporally and spatially restricted site-specific blocks. A user needed to download many files and relate them to one another for analyses across time or among sampling sites.

Future Plans

In 2007, we plan to add historical macroinvertebrate, habitat, and

USGS **nbii**
science for a changing world National Biological Information Infrastructure

"Fish On"--Line: A Web-accessible Database of Aquatic Biological Data

Home About Search the Fish Database Reference Documents Reports Links Contact

Welcome To "Fish On"-line.

 MOUNTAIN SUCKER
USGS

The USGS [Idaho Water Science Center](#) and the USGS [National Biological Information Infrastructure \(NBII\) Great Basin Information Project](#) have partnered together to develop a management and delivery system for aquatic biological monitoring data. A large amount of aquatic biological data has been collected by the USGS water quality projects since early 1990s. It is the mission of the NBII to locate biological data sources that are important to management and deliver the data to scientists, managers, and stakeholders. In 2006 the fish community data was loaded into a relational database. This database provides the base for this web site.

This site currently allows users to search for aquatic data in the State of Idaho by selecting a sampling site or a stream. These data can be filtered further by fish species and date of sample. We've linked this site to the [FISHBASE](#) web site so detailed natural history information is available for each fish family and species.

All fish samples have been vouchered at [Orma J. Smith Museum of Natural History](#) at Albertson's College of Idaho. Fish specimens for each site sampled are preserved in jars at the museum for taxonomic verification (necessary when collecting community composition data).

Search the site in one of two ways:

USING PULL-DOWN MENUS

This option allows you to investigate fish data by specify a stream name using pull-down menus to view data from all sampling sites on that stream.

You can then further refine your search by individual sample and/or fish species.

[Search using menus.](#)

USING A MAP

This option allows you to investigate data from individual sampling locations by clicking on a map to view data from that sampling site.

You can then further refine your search by selecting an individual sample and/or fish species.

[Search using a map.](#)

Importance of aquatic biological community data

Aquatic biological community data integrates both water quality and habitat conditions. Biological communities (fish, macroinvertebrates, and algae) help managers determine if a stream is supportive of certain species such as cold water biota or pollution tolerant species. Community data has been used recently to determine beneficial use of streams and rivers required for the total maximum daily load (TMDL) process. Long term trend analysis of aquatic communities also helps managers evaluate best management practice (BMP) effectiveness. Aquatic communities are highly correlated with water quality and habitat conditions and are a good indicator of the decline or improvement in the quality of a water body.

water-quality data to the database and make it accessible on the Web site. We would also like to coordinate with other USGS Water Science Centers and stakeholders to continue the effort to make historic current biologic community data available on the Web.

Support for this Web site has come from the Columbia River USGS Interdisciplinary Science Explorer (CRUISE) project and the NBII. CRUISE's focus is on serving USGS data, science applications, and real-time modeling analyses. 

Metadata (continued from page 6)

Houston-Galveston Area Council, the Sonoma Ecology Center, and the Texas Parks and Wildlife Department. Kathy and Jaci were participants in the workshop last summer and were "in training" to put on Train the Trainer for NOAA. The "Don't Duck Metadata" theme was prevalent (see photo on page 6)!

More Training

Introduction to Metadata will take place in Portland, OR, May 22–23, 2007. The majority of the participants attending will be associated with the Northwest Environmental Data (NED) portal project and the Pacific Northwest Aquatic Monitoring Partnership (PNAMP).

Metadata Creation Assistance

Over 1,200 metadata records have been created for organizations requesting assistance in metadata production in the past six years. Please contact Viv Hutchison <vhutchison@usgs.gov> if you are interested in metadata creation assistance. It's free! 

Carroll Explores Georeferencing Software at GBIF-HerpNET Workshop

Andy Carroll, a GIS Specialist working with the NBII Southern Appalachian Information Node (SAIN) at the University of Tennessee-Chattanooga, was selected as the U.S. representative at a December 2006 Georeferencing Workshop. Fifteen countries participated in the workshop, which was co-hosted by the Global Biodiversity Information Facility and HerpNet at the Royal Museum of Central Africa in Tervuren, Belgium. Carroll was chosen as the U.S. representative because of his experience with manual

Fifteen countries participated in the workshop, which was co-hosted by the Global Biodiversity Information Facility and HerpNet at the Royal Museum of Central Africa in Tervuren, Belgium.

georeferencing, batch georeferencing (Tulane University's "Geolocate" program), and his basic familiarity with the BioGeomancer application, which was highlighted at the workshop.

During the workshop, attendees focused on georeferencing and error calculation concepts, methods, and tools currently used by the HerpNet, MaNIS (Mammal Networked Information System), and ORNIS (Ornithological Information System) projects. Other software and toolkits highlighted at the workshop were the DIVA-GIS platform and the MaNIS-HerpNET Error Calculator.

According to Carroll, the BioGeomancer Workbench does batch georeferencing of data sets through an automated process, which will be particularly useful for large databases



A participant of the Georeferencing Workshop visits the collections of the Royal Museum of Central Africa <www.biomi.org/temp/georef>.

such as the southeast herbarium collections. The Workbench also allows visual editing through Google Map mash-ups, location validation, and outlier detection. A stand-alone version of BioGeomancer is expected in spring 2007. Detailed information

and a demonstration version of the software are available at <<http://www.biogeomancer.org>>. Additional notes, exercises, presentations, and technical documents from the Georeferencing Workshop are available at <<http://www.herpnet.org/gbif/gbif.htm>>. 🌿

Librarians Love the NBII

Did you know that eighty-seven percent of online users 18 and older consider the Internet a research tool? The vast majority of these 128 million adults use it to find science information. These data come from a 2006 Pew report, *The Internet as a Resource for News and Information about Science* <http://www.pewinternet.org/pdfs/PIP_Exploratorium_Science.pdf>.

With this in mind, Judith Haydel, USGS National Wetlands Research Center (NWRC), gave a seminar on March 8 on "How to Find and

Evaluate Government Information on the Web: Lessons Learned," to a standing-room-only crowd during the Louisiana Library Association conference. Many of the lessons she shared are based on her experience cataloging Web content for the NBII Central Southwest/Gulf Coast Information Node (CSWGCIN). She discussed when to use general and specialized search engines, how to read URLs, metadata, Dublin Core, and the NBII. She finished up with a

(continued on page 10)

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 highlights related to invasive species information management issues. Please send your ideas or suggestions for the Toolbox to <asimpson@usgs.gov> or <esellers@usgs.gov>.

NIISS Releases Version 16.0 of 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. The latest version of GODM and the NIISS Web site are now available at <<http://www.niiss.org>>. Version 16.0 highlights include:

- new, improved statistical output for online analyses,
- redesigned “My Profile” page for an improved user experience,
- improved data storage capacity for future improvements to our map application, and
- an improved Web Map Service prototype, which now works with ESRI ArcMap.

NBII-GISIN to Lead Invasive Species Task for the Group on Earth Observations

Annie Simpson has agreed to

coordinate (as chair of the Global Invasive Species Information Network [GISIN]) the Group on Earth Observations' (GEO) biodiversity task BI-07-02, related to Target #177, to “facilitate the operational deployment of a system to provide near-real-time data on the detection, establishment, and spread of problematic invasive organisms.” (See <<http://www.earthobservations.org>> for more on GEO.) As a deliverable toward this task, GISIN is facilitating the development of an information system that will cross-search invasive species databases on the Web (see below).

GISIN Needs Assessment Results

The GISIN is developing a system for exchanging invasive species information over the Internet. A needs assessment determined the requirements of the eventual users of this protocol, including data providers, data consumers/intermediaries, end-users, and stakeholders. There were 137 respondents to the assessment (from 41 countries), and the vast majority (80 percent) identified themselves as both providers and consumers of invasive species data. Most data providers (77 percent) offer spatial/temporal information, profiles/species pages (65 percent), and checklist information (59 percent). Data consumers seek all three kinds of information. To filter or search for invasive species information, virtually all respondents (95 percent) use scientific name.

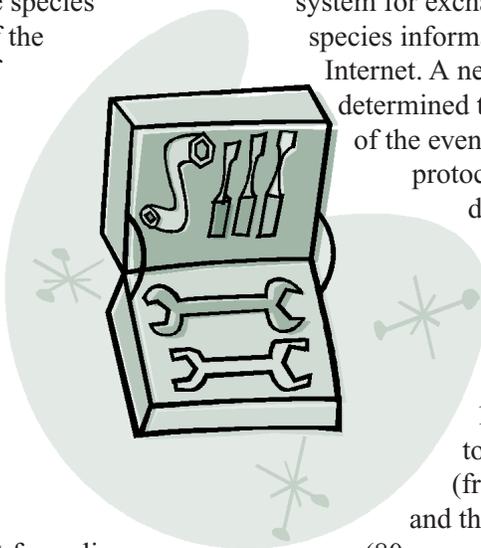
There were some significant knowledge gaps among respondents: half did not know the level of Web

services their organization provides and/or uses; 80 percent did not know what existing protocols are appropriate for invasive species information management; and 75 percent did not know what schemas or grammars would be acceptable to implement the proposed system. For full survey results, go to <<http://www.gisnetwork.org/Survey/SurveyResultsFinal.htm>>.

Harlequin Ladybird Beetle Tracked by the United Kingdom's National Biodiversity Network

Since 2004, the National Biodiversity Network (NBN) has been tracking the spread of the invasive harlequin ladybird (*Harmonia axyridis*), in conjunction with the Biological Records Centre and a number of scientists and experts, including representatives from Cambridge University. The results are shown on a specially created Web site <www.harlequin-survey.org> and the data sets appear on the NBN Gateway mapping application as a result of this survey <<http://www.searchnbn.net/gridMap/gridMap.jsp?allIDs=1&srchSpKey=NHMSYS0000712592>>. The harlequin is becoming widespread in many parts of Europe and collaborative work with other European nations has begun.

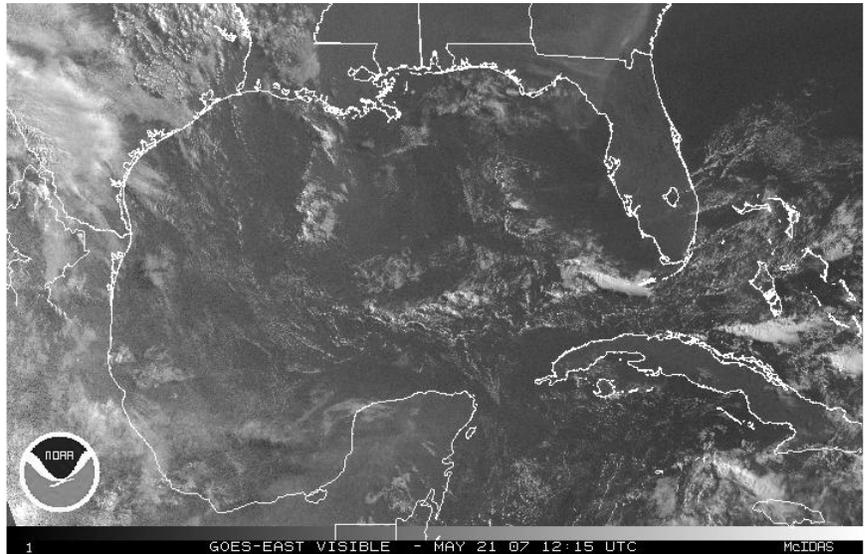
The NBN is a partnership operating within the United Kingdom (UK) that comprises a number of conservation organizations, government agencies, voluntary recording schemes, and record centers. A parallel organization to the NBII, the NBN is committed to making as much UK biodiversity information as possible available via the Internet through its Web site, the NBN Gateway <www.searchnbn.net>, which now holds more than 27 million UK species records. 



Librarians Love the NBII (continued from page 8)

presentation on the NBII Gulf Coast hurricanes site.

The NWRC team has recently updated and expanded the content on the Gulf of Mexico hurricane site (see at right) to create a user-friendly method for locating topical information provided by multiple agencies and resources. The new pages, “Hurricanes: Powerful Agents Shaping the Coast,” (NBII > Geographic Perspectives > Central Southwest/Gulf Coast > Ecosystems > Gulf of Mexico > Gulf Coast Hurricanes) offer a wide variety of information on tropical cyclones. Categories include information on the relationship between hurricanes and climate, data resources, economic impact, environmental impact,



flooding and storm surge, health and safety, land loss, maps and images, and response and recovery. A special

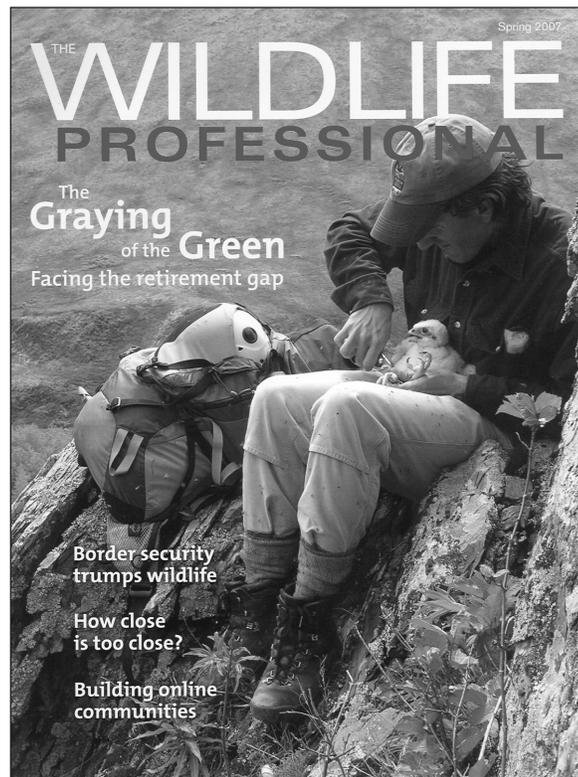
section focuses on hurricanes that have had a significant impact on the Gulf Coast. 🌿

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 NBII and the Integrated Taxonomic Information System (ITIS), a vital NBII component, were mentioned in a recent Associated Press story on ITIS and the Catalog of Life, a collaborative effort to provide a coherent and authoritative view on the taxonomy of the 1.75 million known species of living organisms on Earth. One place where the story (“Species Catalog Breaks 1 Million”) was picked up on April 9: <<http://www.ocala.com/apps/pbcs.dll/article?AID=/20070409/NEWS/204090320/1368/googlesitemapnews&template=printpicart>>.

■ The NBII is discussed in an article by Jonathan S. Adams titled “Opening Access: New Tools for Conservation,” in The Wildlife Society’s new journal,



The Wildlife Professional (see above). The article details the goals, products, and services of ConserveOnline, an evolving, Web-based, experimental project designed to foster changes in the way conservationists share

and use information in their daily work. See <<http://www.wildlifejournals.org/archive/1933-2866/1/1/pdf/i1933-2866-1-1-40.pdf>>.

■ In the fall 2006 issue of *Access*, we talked about supporting conservation through land trusts and work that the NBII Mid-Atlantic Information Node (MAIN) is doing in Blacksburg, VA, with the New River Land Trust. MAIN efforts have been focused on developing an Internet-based mapping and decision-support system that allows members to identify lands that offer the greatest economy for meeting their objectives. A success story (“GIS Decision-Support System Focuses Conservation Efforts”) exploring these activities in greater depth

appears in *Land Trust Alliance*, a monthly e-mail news digest for the land trust community <http://www.lta.org/yourregion/s_midatl.htm>. 🌿

Fifth Council Meeting of the Inter-American Biodiversity Information Network (IABIN)

From May 9–11, biodiversity information experts and government representatives from the Americas met in Uruguay to participate in the Fifth Council Meeting of IABIN. IABIN was created in 1996 as an initiative of the Summit of the Americas held in Santa Cruz, Bolivia, to provide the networking information infrastructure (such as standards and protocols), tools, and biodiversity information content required by the countries of the Americas to improve decision-making, particularly for issues at the interface of sustainable development and biodiversity conservation. Gladys Cotter, USGS Associate Chief Biologist for Information and Chair of IABIN, presided over the meeting.

In addition to 30 IABIN Focal Points from governments throughout the hemisphere, participants included representatives from the World Bank, Organization of American States, Global Biodiversity Information Facility, The Nature Conservancy, Global Invasive Species Program, City of Knowledge Foundation, international and national non-government organizations, academic institutions, and the private sector. Participants reaffirmed that biological information and tools using this information must play a vital role in the conservation of biological diversity in the Western Hemisphere. They agreed on the next steps for scientific and technical information exchange through the IABIN Catalog and five Thematic Networks (species and specimens, ecosystems, pollinators, protected areas, and invasive species).

The IABIN Invasives Information



Andrea Grosse, coordinator of the Inter-American Biodiversity Information Network (IABIN) Invasives Information Network (I3N), prepares to address the IABIN Council at the Fifth Council Meeting in Uruguay.

Network (I3N), coordinated by Andrea Grosse from NBII, and GeoSUR, a project to create a geospatial information network in South America, also hosted meetings in Uruguay before the Council. Presentations, news releases, and other documents from the meeting are available on the IABIN Web site <www.iabin.net>. For more information, contact Ben Wheeler at <bwheeler@usgs.gov>.

Pacific Biodiversity Information Forum to Host Taxonomy Databases Symposium in June

As part of the 21st Pacific Science Congress in Okinawa, Japan, June 13–18, the Pacific Biodiversity Information Forum (PBIF) will facilitate a gathering of taxonomic experts from throughout the Pacific Region. Led by Dr. Mark Fornwall, Node Manager of the NBII Pacific Basin Information Node, the attendees will review and revise taxonomic authority files (species checklists) produced by PBIF for each Pacific Island nation. The PBIF agreed to build the checklists in support of a partnership with the Global Biodiversity Information Facility and the Global Taxonomy Initiative. The species checklists will be made available free of charge on

the Web and via CD-ROM for those partners in the Pacific with limited Internet connectivity. For more information, contact Allison Baum at <abaum@usgs.gov>.

Pacific Biodiversity Information Forum to Bring Together Scientists at NBII, OBIS-USA, and NIES (Japan) for Biodiversity Informatics Paper

Dr. Toral Patel-Weynand, Head of the USGS Biological Informatics Office International Bioinformatics Program, and Dr. Mark Fornwall will lead in the preparation of a paper on collaboration between Japanese and American information systems. The purpose of the paper will be to introduce how formal agreements between countries and advances in information technology can aid in making biodiversity data available for decision-making. The paper will be presented at the American Fisheries Society in September in a joint symposium organized by BRD Fisheries: Aquatic & Endangered Resources Program Coordinator, Dr. Douglas Beard, on the restoration, enhancement, and protection of coastal marine fishery ecosystems. For more information, contact Allison Baum at <abaum@usgs.gov>.

Upcoming Events of NBII Interest

2007 Annual Meeting of the American Institute for Biological Sciences: Evolutionary Biology and Human Health, Washington, DC.	May 14–15	Urban Wildlife Management National Conference, Portland, OR.	June 18–20
Geoinformatics 2007: Data to Knowledge, San Diego, CA.	May 17–18	27th Annual ESRI International User Conference, San Diego, CA.	June 18–22
Challenges of Natural Resource Economics and Policy (CNREP) 2007: 2nd National Forum on Socioeconomic Research in Coastal Systems, New Orleans, LA.	May 20–23	9th International Pollination Symposium on Plant-Pollinator Relationships: Diversity in Action, Ames, IA.	June 24–28
Society for the Preservation of Natural History Collections 22nd Annual Meeting, St. Paul, MN.	May 21–26	2007 American Water Resources Association Summer Specialty Conference, Vail, CO.	June 25–27
Western State Workshop: Strengthening the Roles of Land Trusts and Local Governments in Protecting and Restoring Wetlands and Riparian Areas, Park City, UT.	June 4–5	Association of Field Ornithologists 2007 Annual Meeting, Orono, ME.	June 26–29
5th International Symposium on Digital Earth, Berkeley, CA.	June 5–9	Early Detection and Distribution Mapping System and Assessment Workshop, Chattanooga, TN.	June 29
		10th Open Forum on Metadata Registries: Integrating Standards in Practice, New York, NY.	July 9–11



NBII National Program Office
 U.S. Geological Survey, 302 National Center
 Reston, VA 20192
