

Encore Performance: NBII Again Recognized by Renew America

For the second consecutive year, the National Biological Information Infrastructure (NBII) has received a Certificate of Environmental Achievement from Renew America's National Awards Council for Environmental Sustainability.

The NBII Program will also be recognized in the *1999 Environmental Success Index*. Coordinated by Renew America <http://www.crest.org/renew_america>, the National Awards

Council for Environmental Sustainability recognizes innovative and successful environmental programs in 26 different categories. For two years running, the NBII program has been recognized in the "Telecommunication and New Communication Tools" category.

To be selected, programs must go through a rigorous three-stage review process that includes reference checks and evaluations by independent local

organizations, verification of program results by participating nonprofit organizations at the state level, and final review by the National Awards Council for Environmental Sustainability. The Council is a coalition of sixty nonprofit, business, and government organizations, including the National Geographic Society, AT&T, the Smithsonian Institution, Bank of America, and the National Audubon Society. 🌿



The Okefenokee Swamp, one example from NBII's virtual postcards.

NBII and the Association for Biodiversity Information Develop New Web Site

The USGS Biological Resources Division (BRD) and the Association for Biodiversity Information (ABI) have cooperated in the development of a new Web site for the ABI as part of the NBII.

The new Web site <<http://www.abi.org>> provides easy access to a variety of biodiversity data and information products, including:

- General information on conservation status and location (at the scale of U.S. counties and eight-digit USGS hydrologic watershed units) of species of conservation

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Send NBII Postcards to Friends and Colleagues

Whether your mood reflects the energy of a majestic bull elk or the tranquility of a fragrant water lily, you can electronically send an NBII postcard to anyone with an e-mail address. Just go to the NBII Home Page <<http://www.nbii.gov>> and press the "Postcard" button on the left side of the screen. Then select your choice of a wide array of species images. Our exciting photo and sound gallery is

continually growing—and we're looking for your suggestions for additions. You can even send us your own unique or interesting photos or sound files for inclusion in the gallery! We hope you will have fun with this capability and in so doing help us share the tremendous importance and value of the NBII with others. 🌿

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IABIN Start-Up Projects to Commence

At the official establishment of the Inter-American Biodiversity Information Network (IABIN) in Brasilia, the World Bank announced it was providing funds for the initial development of IABIN projects. Since then, the World Bank has been working with IABIN experts to finalize terms of reference and contracts for selected IABIN start-up projects.

Funds from the World Bank will allow for training of Latin American specialists on the use of Species Analyst. This software, developed under the guidance of the North American Biodiversity Information Network, predicts species distributions based on information from distributed databases of museum collections.

Another project will promote the development of IABIN by starting an evaluation process of metadata standards being used throughout the hemisphere. This project on metadata

initiatives will examine standards as they relate to biological data sets and develop a distributed catalog system for biodiversity information in Central America.

Funding provided by the World Bank will also support an invasive species pilot project to develop prototype databases on species names, experts, alerts, projects, data, resources and occurrences of invasive vascular plants and freshwater fish throughout the region. Another pilot project will identify collections of New World biological specimens held in European institutions and produce an on-line directory of the findings, which will be made available to the public.

For additional information or to discuss your participating in any of these projects, please contact barbara_bauldock@usgs.gov (phone 202/208-3808) or elizabeth_martin@usgs.gov (phone 202/208-4062).

NBII and the Association for Biodiversity Information Develop New Web Site
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concern and natural communities;

- Descriptive information about the biology and natural history of individual species; and
- Analytical products that identify trends and priorities for research and conservation action relating to species and natural communities.

Individuals or organizations interested in local-scale information related to the jurisdiction of an individual natural heritage program or conservation data center can also contact that program directly through ABI's Web site.

The new Web site <<http://www.abi.org>> provides easy access to a variety of biodiversity data and information products.

ABI is the membership organization for the International Network of Natural Heritage Programs and Conservation Data Centers, known as "the Network." ABI was established to support the Network in the mission of collecting, interpreting, and disseminating biological information for conservation and land-use planning.

ABI and its member programs, in collaboration with The Nature Conservancy (TNC), are working to create comprehensive regional, national, and international data products and services related to biodiversity for use by government, industry, scientists, educators, and the interested public. Through these efforts, the ABI, its member programs, and TNC have been key participants in the ongoing development of the NBII.



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Be sure to check out Access on the Web at <http://www.nbii.gov/news/>.

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ITIS Attracts Variety of New Users

The Integrated Taxonomic Information System (ITIS), which has been supported by the NBII since ITIS's inception in 1994, has received growing recognition and attention in recent years. After receiving Vice President Gore's Hammer Award for reinventing government and an endorsement in the President's Committee of Advisors on Science and Technology (PCAST) report entitled *Teaming with Life: Investing in Science to Understand and Use America's Living Capital* (see *Access*, September 1998), several different federal agencies and programs within USGS have developed taxonomic support applications of the ITIS database to expand the value of their own Web sites and present more comprehensive biological information.

One of the first applications of ITIS data to support another Web site originated at the USGS Patuxent Wildlife Research Center in Laurel, Maryland. Scientists there were working to develop an educational Web site on birds that would incorporate data from many different Biological Resources Division (BRD) programs and databases, and combine them in one integrated, easy-to-use Web site for the public. The resulting Web site is called the "Patuxent Bird ID Info Center" <<http://www.mbr-pwrc.usgs.gov/id/framlst/framlst.html>>. Working with BRD's Center for Biological Informatics, an on-the-fly ITIS query was programmed at CBI that allowed a user to perform a set of sophisticated queries of the ITIS database in Fort Collins, Colorado, at the click of a mouse. When a user clicks the hotlink, a species-specific set of queries is electronically transmitted to the ITIS database. The query results are then automatically formatted in a uniform manner providing the user with the ITIS accepted name, author, synonyms, common names, and the ITIS

classification of the species all the way up the classification hierarchy to Kingdom.

The Patuxent Bird ID Info Center Web site contains considerable information on the particular bird of choice, but it does not possess the authoritative taxonomic information that is the business of ITIS. World Wide Web technology permits this information integration from distributed Web sites. No longer does any single organization need to develop and maintain all the information about a single species.

Similar applications of ITIS data to provide authoritative taxonomic information support to currently accessible Web sites with very different subject matter can be viewed at the following URLs:

- Frogweb: Frogs & Toads/ Clickable Maps: <www.mbr-pwrc.usgs.gov/frog.html>;
- The Acute Toxicity Database (CERC) <www.cerc.usgs.gov/data/acute/acute.html>; and
- The CalFlora UC Berkeley Digital Library Project <<http://elib.cs.berkeley.edu/calflora/botanical.html>>.

Additional Web sites developing comparable Web applications of the ITIS database include a soon-to-be-released application within the USGS-NPS Vegetation Mapping Program Web site <<http://biology.usgs.gov/npsveg/index.html>>, where ITIS taxonomic information and images of plant species are being linked to vegetation description and mapping information for Scotts Bluff National Monument in Nebraska.


Other non-Web-based applications of ITIS data are being worked on at the National Park Service Inventory and Monitoring Program, the U.S. Forest Service Natural Resource

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CHM Connection

National CHM Web Site Under Development, CHM's Pilot Phase to be Reviewed

In support of the Clearing-House Mechanism (CHM) of the Convention on Biological Diversity (CBD), the United States is developing a U.S. CHM Web site that will be integrated into the National Biological Information Infrastructure (NBII). This Web site will provide information on U.S. activities, programs, and regulations relevant to the CBD, as well as information on cooperation at the international level. The U.S. CHM Web site is being built under the guidance of the Biodiversity and Ecosystems Informatics Work Group of the Committee on Environmental and Natural Resources Research—a work group established to improve coordination of biodiversity and ecosystem information within the federal government.

The Conference of the Parties to the CBD has called for an independent review of the Pilot Phase of the CHM and development of a long-term Strategic Plan. The review, to be completed by the end of August 1999, will provide an assessment of the progress made by the CHM and give recommendations for its future direction. Informal discussions on the CHM's five-year Strategic Plan and review of its Pilot Phase will take place this June at the fourth meeting of the Subsidiary Body on Scientific, Technical, and Technological Advice (SBSTTA) of the CBD in Montreal. Formal discussions on the CHM are scheduled for next year at the fifth meeting of SBSTTA in January 2000. 

Partners in the Spotlight

Partners in the Spotlight highlights the activities and contributions of a wide range of NBII partners. We are pleased to welcome Jay Donnelly and the National Atlas as this issue's Partner in the Spotlight. If you're interested in producing a similar article about your organization, please contact Ron Sepic, Access Editor, at: ron_sepic@usgs.gov.

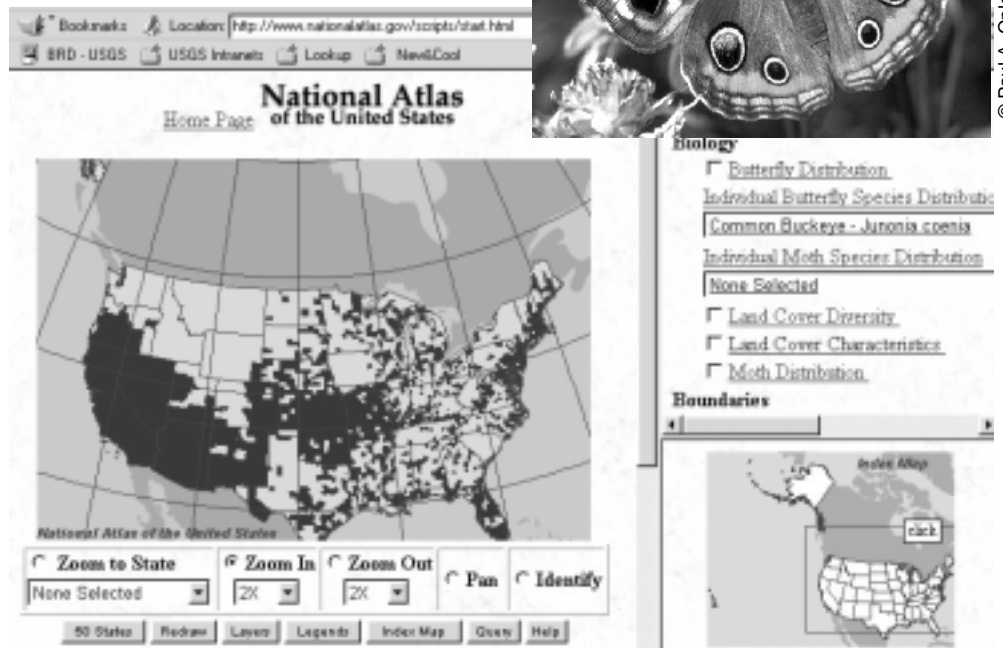
The National Atlas: Cooking a New Book of Maps

Take one big book of maps. Listen to and act on suggestions from Americans for a new edition. Recruit cooperators to help produce new maps. Employ modern technologies to make the maps more interesting, useful, and accessible. Find business partners to cooperatively develop innovative new products. This is the basic recipe the U.S. Geological Survey (USGS) is following as it leads in the preparation of the new "National Atlas of the United States."

The original national atlas was published in 1970. It was a 400-page, oversized collection of 765 maps. The atlas was a scientific presentation, in cartographic format, of the principal characteristics of the country. This 12-pound tome included maps that portrayed America's physical features, historical evolution, economic activities, sociocultural conditions, administrative subdivisions, and place in world affairs. The Government printed 15,000 copies of the original national atlas. It was offered at a price of \$100, which, though reasonable based on its value, made it beyond the reach of most Americans. The atlas quickly went out of print and has been unavailable for purchase since the early seventies.

Since receiving authorization from Congress in 1997, the USGS and its partners have made tremendous progress toward the production of a new national atlas. Like its predecessor, the new atlas will provide a comprehensive, map-like view into the enormous wealth of geospatial and geostatistical data collected for the United States. It will enhance and

extend the user's geographic knowledge and understanding and foster national self-awareness. Unlike the 1970 edition, there will be multiple products in this atlas, and some of

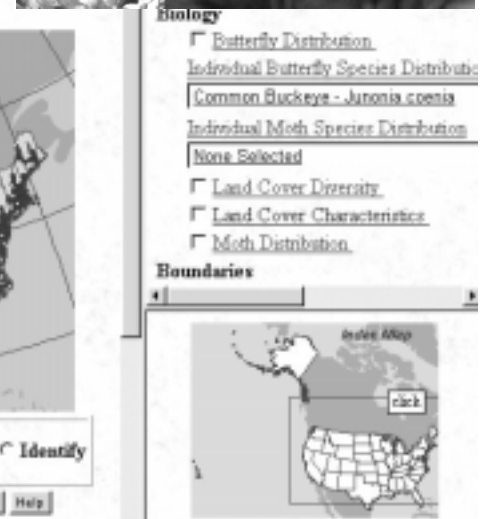
The image shows a screenshot of the National Atlas of the United States website. At the top, there is a navigation bar with links for "Bookmarks", "Location", and "http://www.nationalatlas.gov/scripts/start.html". Below this is a search bar and a "Home Page" link. The main content area features a map of the United States with a grid overlay. To the right of the map is a sidebar with a "Biology" section containing several links: "Butterfly Distribution", "Individual Butterfly Species Distribution", "Common Buckeye - Junonia coenia", "Individual Moth Species Distribution", "None Selected", "Land Cover Diversity", "Land Cover Characteristics", and "Moth Distribution". Below the "Biology" section is a "Boundaries" section with a dropdown menu and a small inset map of the United States. At the bottom of the map area, there are controls for "Zoom to State", "Zoom In", "Zoom Out", "Pan", and "Identify".

The distribution of the common buckeye butterfly is just one example of biological information available through the National Atlas.

these are designed specifically for individuals. The new national atlas also employs information presentation, access, and delivery technologies that didn't exist 30 years ago. High-quality paper maps will continue to be a product of the national atlas. Several maps, including one delineating the boundaries of America's watersheds, have been printed to date. But atlas partners are concentrating their efforts on producing electronic products and services that can be distributed through the World Wide Web (WWW), on CD-ROM, and on digital versatile disc.



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This image is a close-up photograph of a Common Buckeye Butterfly (Junonia coenia) resting on a flower. The butterfly's wings are dark with prominent white eyespots and a white band across the middle. The background is blurred, focusing attention on the butterfly.


The national atlas is an ambitious effort to step back and present consistent, current, and reliable national themes of information for exploring the human dimensions of landscape and environment. Two private companies and 17 federal organizations are actively engaged in its production. The atlas currently includes low-resolution databases, which Americans can use to explore and appreciate a complex web of national geographies. More than 63,000 of these documented map layers have been downloaded in the past 11 months. Atlas partners have

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The National Atlas: Cooking a New Book of Maps
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developed software that makes it easy to design and query custom maps. An online, interactive mapping system that works within Netscape and Microsoft Web browsers supports 49,000 distinct users requesting 1.9 million services each month. New map layers and mapping functions are added periodically.

Like the National Biological Information Infrastructure (NBII), the "National Atlas of the United States" is an innovative project of the National Partnership for Reinventing Government. In "Access America: Reengineering Through Information Technology," Vice President Gore urged all federal agencies to use information technology to deliver comprehensive Government services to Americans and to dramatically increase Government productivity. He specifically challenged the USGS to lead the development of the national atlas. The online, interactive national atlas was developed in direct response to the Vice President's charge. In partnership with the NBII, it serves as a complementary gateway to biological data and information. Atlas users discover that mapped features serve as points of introduction to the rich narrative and scientific content published on the WWW by NBII participants. The national atlas now includes two biologic map themes (butterfly and moth species distribution) and will soon be broadened to include new maps illustrating land cover, land cover diversity, and North American Breeding Bird Survey routes.

All scientists engaged in mapping national phenomena are encouraged to add their own ingredients to the national atlas recipe. 

"National Atlas of the United States" is a trademark of the U.S. Geological Survey

Metadata Training Update

The Benefits of Metadata


Metadata can extend the value of biological data beyond time and place. Many people use biological data from other agencies and organizations in addition to their own data. Often, to use these data, people must contact the originating office or person to acquire additional information about the data, such as units of measure, acronyms, map projection, or methodology. In other cases, it is impossible to get the needed information about a data set because the person with the most detailed knowledge has left, and there is not adequate documentation.

Metadata are a good solution for these dilemmas because they extend the value of data beyond a project or person by providing detailed information about the data set. The value is also increased by serving these metadata through the Internet-based, fully-searchable NBII Clearinghouse at <http://www.nbii.gov/clearinghouse.html>.

If you have invested staff, time, and money to create a data set, don't let your data set go to waste! Sign up for an NBII metadata training workshop

in your area to learn about the basic concepts of metadata standards and get hands-on experience using the NBII metadata creation tool, MetaMaker. The workshops use the Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata with added NBII elements that specifically describe biological data.

Interested participants are encouraged to contact the NBII metadata training workshop coordinator (see below) for upcoming NBII workshops in your area or possibilities for tailoring a workshop to your office or agency needs. Also, check the training calendar at <http://www.nbii.gov/training/>.

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NBII Metadata Training Schedule

1999

USGS GAP Analysis Program Annual Conference, Duluth, MN. 1 day workshop. Date to be announced.	August 2-6
U.S. Geological Survey, Reston, VA. 2 day workshop.	August 25-26
American Fisheries Society Annual Meeting, Charlotte, NC. 1 day workshop.	August 29
The Wildlife Society 6th Annual Conference, Austin, TX. 1 day workshop.	September 7
Fish and Wildlife Information Exchange, Lake Tahoe, CA/NV. 1 day workshop.	October 24-27

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Information System, the U.S. Fish and Wildlife Service, and the Wild Animal and Plant Information Infrastructure (WAPITI) project of the Fish and Wildlife Information Exchange. ITIS is also a major collaborator with the international Species 2000 Programme, which has a central goal of indexing the world's known species, and ITIS is represented on its governing board, as well as being a major contributor of data.

In summary, the ITIS has been widely recognized as an important partnership within the biodiversity community. The need for a reliable, authoritative database of taxonomic information accessible 24 hours per day, 365 days per year is endorsed by many, and the critical importance of scientific names of organisms being used as the hub of a biological information wheel is beginning to be understood and appreciated. 🌱

Upcoming Events of NBII Interest

1999

USGS GAP Analysis Annual Conference, Duluth, MN	August 2-6
The 5th International Conference on Virtual Systems and Multimedia 1999 (VSMM 99), Dundee, Scotland	September 1-3
The Wildlife Society 6th Annual Conference, Austin, TX	September 7-11
International Association of Fish and Wildlife Agencies Annual Meeting, Killington, VT	September 16-21
Fall Meeting of the Association of Information and Dissemination Centers, Washington, DC	September 26-28
Gray Literature '99, Washington, DC	October 4-5
Association of Research Libraries Conference, Washington, DC	October 13-15
Online World, Chicago, IL	October 25-27
"Celebrating New Beginnings," EDUCAUSE '99, Long Beach, CA	October 26-29



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