National Biological Information Infrastructure

Resources of a Botanical Nature

The National Biological Information Infrastructure (NBII)... supporting efforts to increase access to botanical information on the Web

Background

The National Biological Information Infrastructure (NBII) is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. A program of the Biological Informatics Office of the United States Geological Survey (USGS), the NBII works with partners to link diverse, high-quality biological databases, information products, and analytical tools; and to develop new standards, tools, and technologies that make it easier to find, integrate, and apply biological resources information.

Botany Partners and Projects

Because the NBII Program is so broad, individual activities are coordinated by and through regional and thematic nodes and projects. The plant sciences have very broad overlap with other fields of biological study, many of which are also addressed by the NBII. So NBII participation in, and contributions to botany-related activities, some examples of which are listed in this fact sheet, are coordinated through the NBII Botany Project and through other regional and thematic NBII nodes.

Photo Credit: John J. Mosesso/NBII.gov

Dense blazing star (Liatris spicata) *in a lakeside field in Illinois.*

Mobilizing Herbaria Data

• US Virtual Herbarium (USVH)

At the 2008 Botany Conference, participants endorsed the goal of developing a USVH through promotion of and collaboration with regional herbarium networks. The NBII is an active member of the USVH Coordinating Committee, which will work to *strengthen regional herbaria efforts and facilitate development of tools* to increase data availability across the country through the USVH network.

• Southeast Regional Network of Expertise and Collections (SERNEC)

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

The NBII Southern Appalachian Information Node (SAIN) works with the University of Tennessee-Knoxville and the SERNEC partners to standardize collections data and create a more automated way to submit collection information to the Global Biodiversity Information Facility (GBIF); and *will soon also release a Herbaria Data Mapping Application* that allows for mapping of plant county distribution maps based on geo-referenced herbaria records.

• National Park Lichens Database (NPLichen)

<http://www.nbii.gov/nplichen>

In partnership with the University of Wisconsin, the NBII developed and hosts the NPLichen database, which contains over 29,900 records of documented occurrences of lichens

Photo Credit: Elizabeth Sellers/NBII.gov

Lichen growing on branch in shrubland in Austin, Texas.

Photo Credit: Elizabeth Sellers/NBII.gov

Eastern sweetshrub (Calycanthus floridus) *growing on the banks of the New River, Tennessee.*

Photo Credit: Gertrud K./Flickr.com

Asian bittersweet (Celastrus orbiculatus) *growing on the bank of a canal in Berlin, Germany.*

Photo Credit: John J. Mosesso/NBII.gov

Prickly-pear cactus (Opuntia humifusa) *in Colorado.*

or over 530 references reporting almost 2,650 lichen species from 153 park units of the U. S. National Park System.

Invasive and Introduced Species

• Asian Bittersweet Mapping
In 2004, as part of its Regional Invasive Plant project, SAIN developd a map showing occurrences of Asian bittersweet *(Celastrus orbiculatus)*, an aggressive, invasive climbing vine, collected through surveys of mountainous western North Carolina. The map was used to resolve a disagreement between natural resource managers and craft makers who use the vine for wreaths and floral arrangements.

• Cactus Moth Monitoring and Detection Network (CMDN)
<http://www.gri.msstate.edu/cactus_moth>
The NBII Invasive Species Information Node *funds monitoring and data management* activities of the CMDN in the southeastern and gulf states of the United States in an effort to monitor and control the spread of the introduced cactus moth *(Cactoblastis cactorum)*, which poses a significant threat to native populations of cacti in the genus *Opuntia* in the southeastern, southwestern, and central states; as well as extensive commercial *Optunia*-based enterprises in Mexico and the Yucatan Peninsula.

• Invasive Plant Atlas of New England (IPANE)
<http://ipane.org>
The USGS Invasive Species Science Program, and the NBII Invasive Species and Northeast Information Nodes collectively fund the IPANE database infrastructure, Web hosting, and project development. The mission of the IPANE is to create a comprehensive Web-accessible database of invasive and potentially invasive plants in New England that is continually updated by a network of professionals and trained volunteers.

The plant-related activities listed here are just a few of many that are supported in various ways by NBII regional and thematic nodes.

NBII Botany Web Site

<http://botany.nbii.gov>
In addition to these, the NBII also designed and maintains a Botany Web site to accommodate the needs and interests of a broad range of audiences including scientists, resource managers, researchers, academics, educators, students, and the public.

The online resources gathered and organized on the NBII Botany Web site include materials maintained by federal, state, and local government agencies; academic and research institutions; private-sector and nonprofit organizations; and others.

The NBII Botany Web site is divided into ten main categories relating to the study of botany. These categories include Applied Plant Sciences; Botanical Organizations; Databases, Atlases and Libraries; Form and Function; Gardening; Herbaria and Botanical Collections; Plant Species; and Studying Botany: Past and Future; Tools for Plant Identification; and US Virtual Herbarium. Many of the categories are further divided into related subcategories. For instance, the Plant Species category explores such botanical topics as Algae, Angiosperms, Ferns and Fern Allies, Fungi and Lichens, Gymnosperms, and Mosses and Liverworts.

Each category and subcategory on the NBII Botany Web site includes a brief introduction of the topic, followed by a listing of links to appropriate online resources.

For More Information

For more information about botany-related projects and activities supported by the NBII, please contact:

Elizabeth Sellers
Manager, NBII Botany Project
NBII National Program Office
12201 Sunrise Valley Drive, MS 302
Reston, VA 20192
Phone: 703-648-4385
Fax: 703-648-4224
E-mail: esellers@nbii.gov