NBII California Information Node

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Background

The National Biological Information Infrastructure (NBII) <www.nbii.gov> is an electronic information network that provides access to biological data and information on our nation's plants, animals, and ecosystems. Data and information maintained by federal, state, and local government agencies; non-government organizations; and private-sector organizations are linked through the NBII gateway and made accessible to a variety of audiences including researchers, natural resource managers, decision-makers, educators, students, and other private citizens.

Implementation of the NBII is being accomplished through the development of nodes that serve as interconnected entry points to the NBII and the information held by partners. These nodes function as fully digital, distributed, and interactive systems that focus on developing, acquiring, and managing content on a defined subject area (thematic nodes) or a geographic region (regional nodes). One of the regional nodes being developed in 2001 is the California Information Node.

Primary Issues

California faces many biological issues that affect wildlife and people. These challenges can be addressed by collaborating, sharing, and integrating information and data holdings from

California coast

multiple institutions across the regions. These information resources are by nature represented in a wide array of formats and structures and many have been developed for specific purposes. The NBII California Information Node will explore and demonstrate solutions for data discovery, exchange, and interoperability that will be important for all the NBII nodes, as well as begin the work of federating datasets critical to the biodiversity work being done in the region.

To focus the data sources and community with which we will be working, we have chosen the pilot theme of invasive species—their identification, biology, mechanisms of spread and control, and their current impacts and locations. This node will recognize and address both technical and social aspects of data sharing. The technology developed by this effort will be prototyped and tested in the context of invasive species, but the strategy is broadly applicable to biodiversity datasets. We expect to review and refine its application to information on declining pollinators and migratory riparian birds in year one, and to develop more general applications in subsequent years. For example, California's active watershed analysis and fire ecology programs provide particular opportunities to complement programs at other nodes.

Major Partners

Node Lead: University of California, Davis, Information Center for the Environment (ICE)
The Information Center for the Environment specializes in university-public agency partnerships on environmental informatics for biodiversity, land use changes, and water quality. The Center is the clearinghouse of a number of important biological datasets, including MAB Flora, MAB Fauna, and CalWeeds, and is involved in the planning of the Environmental

Mt. Shasta, California

Informatics Research Initiative. ICE supports public-sector information sharing partnerships in biodiversity, invasive species, land use, water quality, and fire ecology.

Research and Development Partners
- California Resources Agency, CERES Program.
- University of California, Davis, Center for Image Processing and Advanced Computing.
- University of California, Davis, Center for Spatial Technologies and Remote Sensing.
- Other NBII regional nodes.

Node Audience

The demonstration topic of invasive species and their management presents us with an identifiable user community that knows its needs very well and is dedicated to doing the work necessary to address them. This community includes scientific research, land management, and regulatory organizations in a variety of institutions at the local, state, and federal level. The community partners who contribute the data, and their collaborators, are anticipated to be the most avid users.

Redwood Forest Road, California

Primary Objectives and Products

In the first year, the NBII California Information Node will focus efforts in two areas: prototype infrastructure components, and the application of these techniques to create access to regionally important invasive species datasets. The first release of this node will be in July 2001 at <http://cain.nbii.gov>.

Death Valley, California

The NBII California Information Node team has a strong background in infrastructure issues and will develop appropriate data exchange/integration structures and demonstrate them in the context of a specific problem and its community-- the management of invasive species. The components chosen for prototyping are parts of an envisioned comprehensive biological data exchange network. It is expected that the development of these keystone tools will be done within a framework of conceptualization of the architecture of such a network. The development and testing of these techniques is important for the creation of the NBII. This work will be done in collaboration with other NBII nodes, thus creating the opportunity for idea exchange.

The NBII California Information Node provides access to existing data and new information products. In both individual communications and workshops, we have found there is a direct need for certain types of secondary information. Near-real-time information about the location and nature of new sightings of potentially destructive species, combined with access to fact sheets, historical range information, ecological data, experts' names and contact information, and current projects are examples of the needs expressed by members of the weed community. These information products will be possible for the first time in an environment of open data exchange using common reporting formats.

For More Information

Information Center for the Environment
University of California, Davis
Dr. James Quinn
Phone: 530-752-8027
E-mail:jfquinn@ucdavis.edu

Dr. Allan Hollander
Phone: 530-752-4389
E-mail: adh@ice.ucdavis.edu

Deanne DiPietro
Phone: 530-752-9381
E-mail: dydipietro@ucdavis.edu

Jennifer Gaines
USGS Center for Biological Informatics
Phone: 303-202-4260
E-mail: jennifer_gaines@usgs.gov

Find us on the Web at: <http://cain.nbii.gov>.