# NBII Southern Appalachian Information Node

The Southern Appalachian Information Node encourages partnerships that improve information exchange for research, education, and environmental decision-making.

## 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.

The NBII gateway links data and information maintained by federal, state, and local government agencies; non-government organizations; and private-sector organizations, and makes it accessible to a variety of audiences including researchers, natural resource managers, decision-makers, educators, students, and other private citizens.

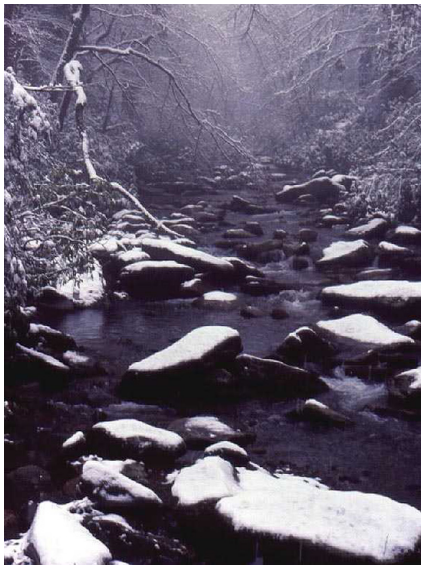
Photo credit: SAMAB

*Little Pigeon River, TN*

Photo credit: Rebecca Shiflett

*Elk, Cataloochee Valley, NC*

NBII's information network is being developed as 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). The NBII Southern Appalachian Information Node (SAIN) is one of several regional nodes established in 2001.

SAIN is a unique source for integrated science including biological, physicochemical, and socio-economic data and information created and coordinated in the region, combining multi-agency information and regional resources to improve productivity, resource management, and sustainable development through the Southern Appalachian Man and the Biosphere (SAMAB) connection and other partners.

## About the Region

The Southern Appalachian region is one of the most biologically rich areas in the United States. From the Great Smoky Mountains National Park, which has the highest visitation rates in the U.S. park system, to land trusts such as the Tennessee River Gorge Trust, the region provides a natural laboratory for scientifically understanding our nation's biological resources and developing and testing new approaches to better manage sensitive ecosystems for public use. This natural beauty lies in the Eastern United States and in the Sunbelt, where increasing human population density puts continuing pressure on our natural resources.

## A Closer Look at SAIN

SAIN is a leader in issues of ecosystems informatics and biodiversity information analysis and evaluation. SAIN also takes a national responsibility to build the integrated access system and clearinghouse to distribute NBII information.

## SAIN's Objectives and Beneficiaries

SAIN encourages partnerships that improve information exchange for

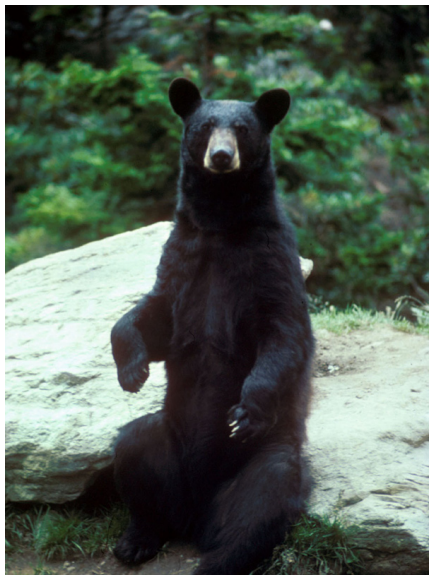
Photo credit: Mike Bender/USFWS

*Black Bear*

Photo credit: Chuck Jurgens

*Moccasin Flower* (Cypripedium acaule)

research, education, and environmental decision-making. SAIN benefits researchers, resource managers, planners, analysts, entrepreneurs, regulators, the general public, news media, and others.

Examples include SAIN's partnerships with regional research efforts, citizen monitoring projects, and efforts to incorporate historically collected information into more useable formats for decision-makers.

The All Taxa Biodiversity Inventory (ATBI) is a comprehensive inventory of all life within the Great Smoky Mountains National Park. SAIN is assisting the National Park Service, Discover Life in America, and their partners with the organization and Web-based dissemination of information collected by the scientists working on the project.

Photo credit: SAMAB

*Aquatic Bio-Monitoring, NC*

SAIN, with partners SAMAB, the Tennessee River Gorge Trust, and area schools, is promoting use of standard protocols for continuous monitoring of biological populations by school and community groups in the region so that future generations of data will be credible, replicable, and easily shared in a growing database on the Appalachian environment. Citizen science complements agency science to increase understanding of changes in aquatic communities, exotic invasive species, and other indicators of quality of life, thereby enabling more-informed decisions in many arenas.

SAIN, with partners such as the Highlands Biological Station, the Organization of Fish and Wildlife Information Managers, and state fish and game agencies, is working to index, catalog, and make more readily available diverse sources of existing information needed to better manage resources, fight invasives and diseases, protect essential habitats, and define research needs.

SAIN's outreach program strives to reach public and private interests in the region, from local to federal, to discover and make accessible information to improve decision-making and answer long-term ecological questions.

Our metadata infrastructure support for all NBII nodes includes the use of a highly automated software concept (Mercury) that is consortium-based and leverages the efforts of several agencies, with NASA as a major sponsor. The consortium reduces costs and development time, while introducing features useful for all partners. Mercury emphasizes the use of existing and emerging standards to take advantage of constantly evolving new technologies.

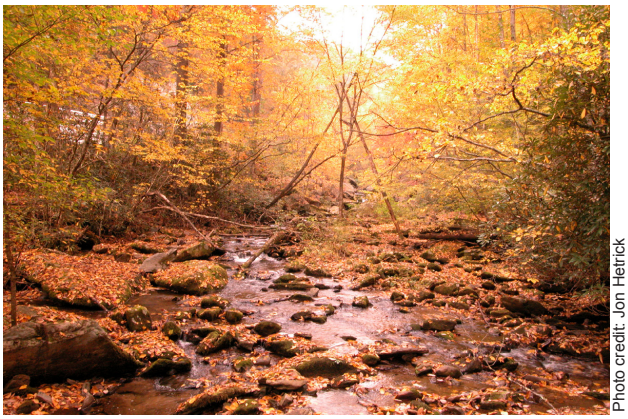

Photo credit: Jon Hetrick

*Cold Creek, NC*

## What You Can Do

Join the partnership. Volunteer data, time, expertise, equipment, or funding to advance the program and help develop cooperative initiatives. Report back to SAIN how you are using information that we helped you find.

## For More Information


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**Find us on the Web at: <http://sain.nbii.org>.**