NBII Offers Collaborative Approach to Southern Appalachian Biodiversity Conservation

We invite you to partner with SAIN to share your inventory and monitoring results!

The rich temperate forests, majestically rolling landscapes, and clear rushing waters of the Southern Appalachians positively ripple with an incredibly diverse mixture of flora and fauna. A critical component in ensuring these biological treasures and the large number and variety of habitats that support them are properly managed is a meticulous understanding of their make-up and use. Underlying this understanding is a continuing need for relevant scientific information.

NBII and SAIN

The National Biological Information Infrastructure (NBII) <www.nbii.gov> is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. Coordinated by the U.S. Geological Survey, the NBII links 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.

One important NBII component is the NBII Southern Appalachian Information Node (SAIN) <sain.nbii.org>, which provides access to data and information on the biology and ecosystems of the Southern Appalachians. Using Internet media and techniques, SAIN partners with many providers to make knowledge of biota and ecosystems more accessible and understandable. SAIN also partners with users to help them translate and interpret data into meaningful information – and into knowledge upon which they can act.

Photo credit: Robb Turner

Participants take part in the SAMAB Southern Appalachian Volunteer Environmental Monitoring program.

Inventory and Monitoring Activities Abound

Obtaining and disseminating data and information about the Southern Appalachians is an integral part of SAIN's mission. Multiple agencies and organizations in the Southern Appalachians are already engaged in activities that inventory and monitor the region's biota and habitat. SAIN invites these groups to pursue their work collaboratively. In fact, these efforts have already begun with the Appalachian Inventory and Monitoring Information Synthesis (AIMIS), a SAIN project to synthesize, integrate, and disseminate information from multi-organizational inventory and monitoring activities conducted by numerous regional sources.

Photo credit: Chuck Jurgens

Moccasin flower (Cypripedium acaule) *is a wildflower that grows only in uniquely suited forested areas throughout the Southern Appalachians.*

AIMIS is bridging institutional and geographic boundaries and demonstrating the benefits of data sharing and integration. Necessarily, this will involve activities in such varied areas of SAIN expertise as collaboration, technology support, analysis and synthesis tools, interoperability, data warehousing, data mining, training, and education.

Invasive Species a Top Priority

Initially, AIMIS is focusing on invasive species data. Invasive species may be the number one environmental challenge of the twenty-first century (the current environmental, economic, and health-related costs of invasive species could exceed $138 billion

per year nationwide). Native species with small populations or special habitat requirements could be forced into extinction by invasive outsiders. SAIN is able to leverage knowledge of invasive species in the Southern Appalachians through its affiliation with the NBII Invasive Species Information Node <http://invasive species.nbii.gov>, which is creating a central repository for information pertaining to the identification, management, and control of invasives nationally.

Fish and Aquatic Resources Another Main Focus

Another primary focus of AIMIS is pulling together fish and aquatic resource data for our region. Fish are the largest and most diverse group of vertebrates. By combining information such as their presence/absence and health, along with aquatic invertebrate information, we can get a better assessment of water quality for an area. Currently, there is no known searchable database for data collected from all fish and benthic inventory and monitoring activities in our region. To begin to fulfill this need, SAIN has started a database with Web data entry forms and report generation for the Upper Little Tennessee River. We are on a quest to provide access to such data from every organization for every watershed in our area. This will greatly enhance decision-making on water quality issues in the Southern Appalachians as well as providing regional information for the NBII Fisheries and Aquatic Resources Node <http://far.nbii.gov>.

We Invite You to Partner With Us

If you are involved with inventory and monitoring activities, we invite you to partner with us to create the largest possible impact for biodiversity conservation so that:

- Researchers and volunteers can have their data Web-enabled, thus making them more usable by others. This will increase their programs' visibility and provide further credibility for continued funding.
- Natural resource managers can evaluate encroaching threats – such as possible seed-source areas – to better focus their efforts.
- Decision makers can make better-informed decisions when they see and build an understanding of "The Big Picture."
- Educators and students can enjoy a consolidated information base.

We urge you to visit the Web site of one of our partners, the SAMAB Southern Appalachian Volunteer Environmental Monitoring program <http://www.samab.org/Focus/Monitor/monitor.html>, to see how we are enabling visualization of their data. We are in the process of combining these data with information from the Cherokee National Forest, Great Smoky Mountains National Park, and other areas in the region.

For More Information

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