



Appalachian Trail Vegetation Map

by Fred Dieffenbach

During the week of July 27th, Science staff from NatureServe, NPS and USGS met in Asheville, NC with resource managers and network staff from the A.T. Park Office, the Appalachian Trail Conservancy, Great Smokey Mountain NP, Blue Ridge Parkway, and the Appalachian Highlands and Northeast Temperate networks.

The meeting combined a review of the extensive effort by NatureServe to acquire existing data and build a vegetation classification key for the southern 1/3 of the Trail, with preparations for the aerial photo acquisition phase that commences this fall and mapping that begins next spring. This year's photo mission will cover the entire trail between Georgia and New York during the peak foliage period, and the resulting product will be digital format color infra-red (CIR) imagery. Peak foliage photography offers the benefit of improved species identification, but is more challenging to acquire because of the narrow time window surrounding the peak foliage period.

The new photography will be acquired throughout the Georgia to New York area, including areas like Great Smokey and Shenandoah NP's where vegetation maps already exist, whereas the actual vegetation mapping will only occur outside of already mapped parks.

Collaborative Opportunities

by Fred Dieffenbach

The A.T. passes through eight National Forests, but relatively few attempts have been made to synchronize data collection efforts between agencies as they work along the A.T. In May, I contacted each of the eight forests and outlined my interest in building a directory of people and projects as a first step in finding areas where NPS interests overlap with those of the Forest Service. That preliminary contact was followed by a meeting with key staff at the White Mountain National Forest during mid-August and a phone conversation with the Green Mountain National Forest.



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I had a similar discussion during the July A.T. Trail Fest at Castleton State College with Ann Christenson, U.S. Forest Service's Director of Recreation for the Southern Region (region 8). Ann recognized the inherent difficulty of coordinating activities between the various agencies, and suggested that we ask the Forest Service to consider naming a liaison to address some of these coordination issues. The outcome of that request will be discussed in a later newsletter.

NASA Decision Support System

by Fred Dieffenbach

During the May 2009 update I reported that we received funding from NASA to enhance the existing Appalachian Trail Decision Support System (DSS) with a system that combines readily available satellite imagery with on-the-ground data. During June, members of the NASA DSS team began a series of conference calls to discuss specific project details and project refinements following notice of the official award. Refinements include focusing on three vital signs: forest health; climate change and phenology; and, land used change.

The first official team meeting is tentatively scheduled for November 16th at the Southern Appalachian Man and Biosphere conference in Asheville, NC.

When complete, we anticipate that the DSS will be broadly applicable to resource managers at other parks and forests.

Recent Proposals

by Fred Dieffenbach

During June, the USGS National Climate Change and Wildlife Science Center (NCCWSC) issued a request for proposals (rfp) for projects that "*...downscaled physical climate model derivative information at national and regional levels as appropriate and to link downscaled models to ecological and biological responses predicting the potential consequences of climate change 30-50+ years in the future on aquatic and terrestrial plant and animal communities and the ecosystems on which they depend...*" In response to this rfp, the Appalachian Trail and the Northeast Temperate Network collaborated with others on two proposals.

The first proposal, entitled "Evaluating management alternatives for eastern salmonids in the face of climate change: range-wide models for population persistence of brook trout and Atlantic salmon" sought to identify areas where conditions may shift to the point where suitable

habitat conditions are limited or unavailable for brook trout and other salmonid species.

The second proposal, entitled "Climate-driven phenological changes in the Northeast: causes and implications for wildlife management" sought to (1) develop a module by which users could upload, store, and download legacy phenology data, (2) compile legacy datasets in a centralized database, and (3) analyze historical patterns, test models, and make forecasts for the future.

Unfortunately, neither proposal was funded during the current round but we are looking for other opportunities to support the proposed work.

Through another funding option, the Northeast Temperate Network collaborated with USGS to submit a proposal for a visitor use project that would:

- Develop a visitor use sampling methodology to identify survey segments along the entire length of the A.T.;
- Develop, test, refine, document, and apply visitor impact inventory and monitoring protocols to sampled segments;
- Characterize baseline conditions, conduct relational analyses to examine trail/campsite sustainability and the spatial distribution of impacts, and compare findings to previous monitoring datasets to evaluate longitudinal trends in resource conditions; and,
- Integrate and synthesize data using GIS and Decision Support System datasets into information relevant to planners, managers, A.T. volunteers, and the general public.

A determination on the third funding proposal is pending.

Phenology

by Fred Dieffenbach

The A.T. phenology project is a collaborative effort between the Appalachian Trail Park Office, the Appalachian Trail Conservancy, the Northeast Temperate Network, the Appalachian Mountain Club and the National Phenology Network designed to unite the interests of the various groups with citizen scientists to collect data. Phenology—the timing of seasonal biological events, such as flowering and animal migration—is believed to be highly sensitive to climate change, and offers great utility as an educational tool. This project will serve as a pilot to show

how a park may incorporate phenology monitoring into its inventory and monitoring activities, helping to meet monitoring, research, management, and education needs.

Preliminary testing is planned for this fall at select locations along the A.T. and at other Northeast Temperate Network parks with larger scale implementation planned for next year.

Appalachian Trail Environmental Monitoring

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