



# North Carolina Association of Environmental Professionals

## State Chapter of the National Association of Environmental Professionals

Summer 2006

### EPA, USACE Propose New Mitigation Regulations

WASHINGTON, DC – The U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps) are proposing a new rule to ensure more effective wetlands restoration and preservation nationwide. The agencies' rule, being published for public comment, proposes improved science and results-oriented standards to increase the quality and effectiveness of wetlands conservation practices under the Clean Water Act (CWA).

"Today's action will accelerate progress toward the President's commitment to increase the quality and quantity of the Nation's wetlands," said Benjamin H. Grumbles, U.S. EPA Assistant Administrator for Water. "This rule will help us meet the President's ambitious wetlands goals by emphasizing best available science and promoting market-based approaches that focus on achieving results."

"We are focusing on a watershed approach for improving wetlands conservation in this proposed rule," John Paul Woodley Jr., Assistant Secretary of the Army (Civil Works), said. "This approach helps us fulfill the promise President Bush has made to protect, improve and create new wetlands and other aquatic resources."

Because wetlands play such a critical role in the environment, a project proposed to be built in wetlands is first subject to review by the Corps and EPA under the CWA. Consistent with the goal of "no net loss of wetlands," this review often requires a developer to restore or create a wetland to replace the one that was impacted by the project.

The proposed rule:

- Responds to recommendations of the National Research Council to improve the success of wetland restoration and replacement projects
- Sets clear science-based and results-oriented standards nationwide while allowing for regional variations
- Increases and expands public participation
- Encourages watershed-based decisions
- Affirms the "wetlands mitigation sequence" requiring that proposed projects fully avoid and minimize potential wetland impacts before proceeding to mitigation

The proposed rule combines accountability and flexibility. By focusing on results and accountability, the proposed standards will improve the quality and effectiveness of wetland replacement projects. Most importantly, the proposal establishes a "level playing field" ensuring that all forms of wetlands conservation satisfy the same high environmental standards.

Increased reliance on innovative, market-based approaches is expected to promote the expansion of wetland banking, which is one of the most reliable and environmentally effective methods of wetland replacement. A wetland bank is a wetland, stream, or other aquatic resource area that has been restored and protected to offset permitted impacts to wetlands or other aquatic resources.

For more information regarding compensatory mitigation and how to provide comments on the proposed standards see: <http://www.epa.gov/wetlandsmitigation>.

#### Inside this issue:

Neu-Con Mitigation Bank	2
Chapter News	4
Careers	5
EPA's Wadeable Streams	5
NC's New Invasive Exotic Plant	6
Passing of a Giant	6
Workshops and Training	7
Wetland Restoration and Bird Flu	8
American Chestnut Found	9
Corporate Sponsors	10
Membership Information	10

## Five Years After: Lessons from the Neu-Con Umbrella Mitigation Bank

-Featured writer: Norton Webster, Project Manager, Environmental Banc and Exchange

Five years ago, Environmental Bank and Exchange (EBX) began constructing the Neu-Con Umbrella Mitigation Bank, which we believe to be the first umbrella, “multi-site” mitigation bank combining wetland and stream restoration and preservation in North Carolina. The umbrella bank consists of seven total sites: five restoration sites including Casey-King, Alexander, Westbrook, Marston, and Nahunta, and two preservation sites, Tull-Wooten and Valentine. The first site, Casey-King is now in the 5<sup>th</sup> year of monitoring, while Westbrook is in its 4<sup>th</sup> year, and Marston and Alexander are in the 3<sup>rd</sup> year.

At the fifth year anniversary of the start of this unique project EBX has also learned that unforeseen issues arise, even with good restoration plans. In this article we want to share with you what happened and how we met those unforeseen challenges.

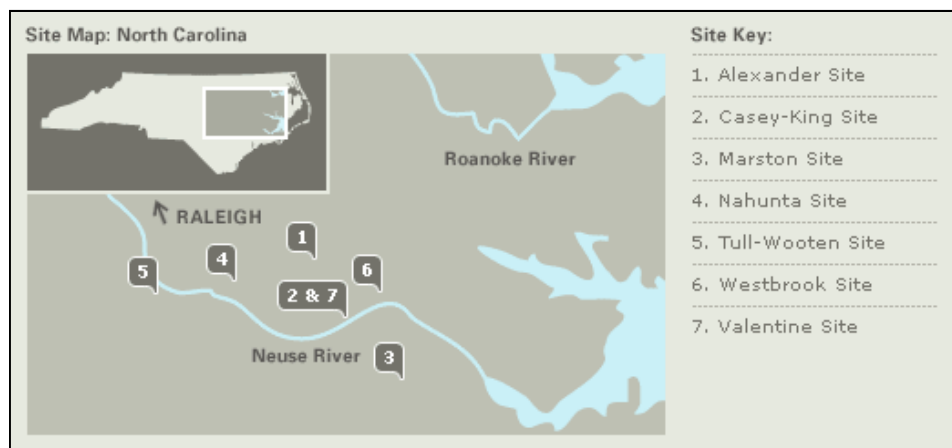
The Neu-Con Bank is named and defined by the strategic location of principally riparian banks on, adjacent to, or in the vicinity of the impaired (nutrient sensitive) Neuse River and Contentnea Creek, and their tributaries. It encompasses more than 30,000 acres of land and touches Greene, Lenoir, Johnston, Jones, and Wayne Counties in the coastal plain of North Carolina. EBX began the Neu-Con Mitigation Bank as part of fulfilling the NC Department of Transportation’s wetland and stream mitigation needs.

Within the Neuse River watershed, EBX’s Neu-Con mitigation bank has created wetlands where they used to occur, and has enhanced existing wetlands for added water quality and wildlife habitat functions. The tally of ecosystem impacts includes over 1,200 acres of wetlands restored or preserved and 23,000 linear feet of stream restored.

“There haven’t been any major catastrophies and both EBX and the NCDOT are pleased with how well the sites are functioning,” said Thom Rinker, a principal in EBX. “It is gratifying to see, particularly in years three through five, that the restored and recreated systems are functioning as if they were not man-made. Year one the site is stabilized, and in year two the stabilization effects are evident; but in the later years the benefits take shape and healthy ecosystems are clearly evident.”

Five years after is a good time to assess what occurred, as the first of our mitigation projects within Neu-Con are now mature and functioning. “Managing and accounting for invasive species has been the biggest ongoing challenge with the Neu-Con Bank,” said Rinker. “We more clearly understand the requirements and extent of an active management program.”

Prior to restoration implementation on Marston there was a small area of Kudzu (*Pueraria montana*). During site preparation, the kudzu was removed using a root rake and all residual plant material was taken off-site. Kudzu reappeared in the first growing season from residual root stock. Tordon, an herbicide, was applied two times during the growing season. The area is being monitored to insure no more kudzu resprouts.



Another area of the Marston site contained sericea lespedeza (*Lespedeza cuneata*), which was competing with the planted vegetation. The area was bush hogged in early April to provide for easier access and treatment. Once there was new growth on the lespedeza, the area was sprayed with Translin. This provided good coverage and the lespedeza has not resprouted.

A third vegetation issue at Marston was the presence of Johnson grass. The Johnson grass was precision sprayed using Roundup and backpack sprayers. This was done in July and provided for good control. No additional spraying has been required.

Westbrook has a large amount of sweet gum (*Liquidambar styraciflua*) regeneration from adjacent stands. The areas of concern are within 200 to 300 feet of the planted areas. The sweet gum have become well established and we are working on a prescription for treatment. One needs to be aware of adjacent seed sources as well as continually monitor the site throughout the growing season to identify and correct any issues before they become a problem.

In addition to invasive species issues, other problems also arose in our Neu-Con project. The Alexander site had a control burn from an adjacent field move through in June. It burned a quarter of the site including all of the planted trees in that area. It was too late in the growing season to attempt to replant. Several weeks after the fire, over 80% of the planted trees were showing signs of resprouting. The area is now recovering without any additional planting or treatment.

What can we do as environmental professionals to plan for such unforeseen occurrences on future projects? In all cases, remember to plan for access to your site in the initial stages of the restoration. Secure legal easements and a clear understanding from the landowner regarding roads and access. Several vegetation issues could have been addressed through the use of standard agricultural practices.

More labor intensive prescriptions have been applied to these sites due to access. Position yourself in the beginning to allow for mechanical manipulation of the site after implementation. This may be as simple as allowing room between planted rows to use a bush hog. We are continually learning what works better with each site and each issue.

To date, we feel that the Neu-Con Bank stands as a model for an effective solution for restoring and preserving important natural features of Eastern North Carolina. Even though nature has worked against us through species invasion and other unintended consequences, we believe that added foresight, better planning for access, and continued monitoring of the project will help us all continue to demonstrate North Carolina's leadership nationally in balancing the needs of the state with our environment through effective mitigation.

*Norton Webster works with government and private clients across the Southeast, with a specific focus on North Carolina, to resolve their mitigation challenges. EBX's services include turn-key mitigation services, environmental asset management, mitigation bank and land investment, and full service ecosystem restoration. The firm has completed over 30 mitigation banks nationwide, renewed over 22 miles of stream, restored thousands of acres of wetlands, and rehabilitated numerous critical habitats.*



Cypress and tupelo at the mouth of Contentnea Creek where it joins the Neuse.  
- © Neuse River Foundation

**Are you working on a project that may be of interest to other environmental professionals? We would like to feature an article in each newsletter, written by our members, that may be of interest to all NCAEP members. If you or your company are interested in submitting an article for consideration, please contact Heather Renninger ([hrenninger@hwlachner.com](mailto:hrenninger@hwlachner.com)) or Mark Reep ([mreep@koassociates.com](mailto:mreep@koassociates.com)).**

## Chapter News



### UPCOMING MEETINGS

Our next meeting is scheduled for August 17th in Charlotte. The topic will be Charlotte-Mecklenburg's Post-Construction Stormwater Ordinance featuring Rusty Rozzelle, R.S. (Program Manager, Water Quality Program) and Daryl Hammock, P.E. (Charlotte Stormwater Services) as scheduled speakers. The time and location for this event have not been scheduled yet. Watch your email and the NCAEP website ([www.ncaep.org](http://www.ncaep.org)) for future information.

### GEORGE WOOD SPEAKS AT ANNUAL PIG PICKIN'

During the May 16 Annual NCAEP Pig Pickin', guest speaker George Wood noted the prominent role NAEF membership has served in his career development. A long-time member of NAEF and NCAEP, George attributes much of his professional enrichment to the sharing of ideas with colleagues through the NAEF.

George's colleagues have also recognized his contributions as well. NAEF presented the National Environmental Excellence Award to George's firm, Environmental Professionals of Kill Devil Hills, for their work with the Ecosystem Enhancement Program. Together they developed an innovative plan to offset growth, development and loss of wildlife habitat in the Pasquotank River basin.

George noted his opportunity to gain sound advice from other NAEF colleagues at key junctures in his career. His family has benefited by making long-lasting friendships through the annual national conferences. NAEF has also made an impression on his son, who is now interested in joining the future ranks of the environmental professionals.

### NCAEP INITIATES SCHOLARSHIP PROGRAM

Daniel Bradford, Publisher of *All About Beer Magazine*, presented NCAEP \$8,000 to establish the NCAEP scholarship fund. NCAEP President Eric Galamb led the volunteer event workforce for the April 29, 2006 World Beer Festival in downtown Raleigh. Some 7,000 people enjoyed the spirited sold-out event. From the festival proceeds, Bradford boosted NCAEP's desires to promote the role of environmental professionals. Galamb says "this donation helps us further our education mission and we look forward to providing a scholarship to an individual that wishes to further their career in the environmental field. The NCAEP is most appreciative to All About Beer Magazine and the World Beer Festival Raleigh." Jeff Weisner has been appointed to chair the scholarship committee, which also includes Phil May, Nancy Daly, Dr. Jim Gregory, David Griffin, and James Southerland. The committee plans to develop criteria and an application process this year and offer one to two scholarships in 2007.

### AMY SACKAROFF STEPS DOWN AS BASINWIDE COMMITTEE CHAIR

In an effort to focus on her maternal duties, Amy Sackaroff has stepped down as the committee chairperson for NCAEP's Basinwide Committee. Heather Fisher will be taking over the role of committee chair. We appreciate Amy's service and the outstanding job she did as committee chair. We feel confident that Heather will follow in Amy's footsteps and excel in her new role. Heather can be contacted at [Heather.Fisher@TetraTech.com](mailto:Heather.Fisher@TetraTech.com).

### NCAEP HELPS NHP UPDATE DATABASE

Funds generated through corporate sponsorship in 2005 were used to assist the North Carolina Natural Heritage Program (NHP) with their efforts to keep the Element Occurrence Database up to date. NHP has recently hired Betsy Reardon to tackle the backlog. Since she started in May she has entered or updated approximately 240 records, covering 110 plant species. This brings the total number of plant records in the database to just short of 10,000. NHP wants to remind all environmental professionals to submit information or updates on rare plants and animals by using the reporting forms located on the NHP website at <http://www.ncnhp.org/Pages/heritagedata.html>. NHP recognizes and greatly appreciates the assistance the NCAEP has provided.

### HAPPY BIRTHDAY MARY KATHERINE

Congratulations go to Nancy and Patrick Daly on the birth of their little girl, Mary Katherine! She was born Thursday, April 27th at 2:51pm; 6lbs, 8oz.; 20.5in.

## Environmental Careers

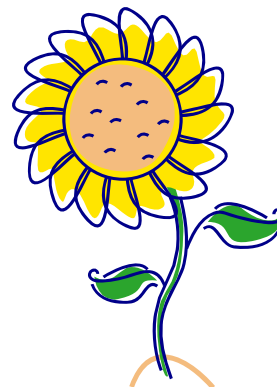
### Environmental Analyst

Kimley-Horn and Associates, Inc., ranked #20 in Fortune Magazine's "100 Best Companies to Work For" is looking for an Environmental Analyst to work in their Raleigh, NC office. Employees know Kimley-Horn as a "great place" to work with our employee centered culture and outstanding company paid employee benefits and retirement program. The ideal candidate will have 1-3 years experience in botany, wetlands science or biology as well as experience in field techniques needed for natural resource assessments including wetland/stream delineation techniques and GIS. Responsibilities for this position include, but are not limited to field work including wetland/stream assessment, protected species surveys, and natural resource evaluations, data collection and analysis, writing reports and preparing mapping. An applicable four year degree is required. To learn more about Kimley-Horn and to apply on-line please visit our website, [www.kimley-horn.com](http://www.kimley-horn.com), the "Careers" section.

LOOKING FOR A GREAT PLACE TO POST  
A JOB OPENING OR A RESUME? TRY  
NAEP'S CAREER CENTER WEBSITE:  
<http://naep.org/displaycommon.cfm?an=9>

### Environmental Scientist

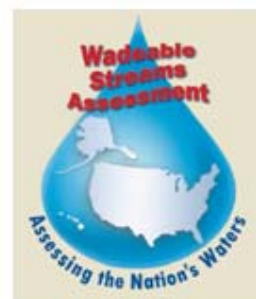
Kimley-Horn and Associates, Inc., ranked #20 in Fortune Magazine's "100 Best Companies to Work For" is looking for an Environmental Analyst to work in their Raleigh, NC office. Employees know Kimley-Horn as a "great place" to work with our employee centered culture and outstanding company paid employee benefits and retirement program. The ideal candidate will have 5-10 years of experience in the environmental science/project management field as well as expertise needed in natural resource evaluations, wetland/stream delineation and mitigation/restoration assessment, and environmental permitting. Responsibilities for this position include, but are not limited to preparation of scope and fee estimates, managing projects, training younger professionals, client interactions, report preparation, quality reviews, as well as project production responsibilities both in the field and office. An applicable four year degree is required. To learn more about Kimley-Horn and to apply on-line please visit our website, [www.kimley-horn.com](http://www.kimley-horn.com), the "Careers" section.



## EPA Unveils First-Ever Assessment of U.S. Wadeable Streams

Wadeable streams" are those which are shallow enough to be adequately sampled without a boat. They are essential natural resources that have been under-sampled in the past. The study, Wadeable Streams Assessment (WSA), is the first consistent evaluation of the streams that feed rivers, lakes, and coastal waters. Alaska and Hawaii were not included in the report but have pilot projects underway.

The survey found that stream conditions vary widely across the diverse ecological regions of the country, and that streams in the West were in the best condition. Humans, the researchers found, have a significant impact on wadeable streams. A majority of streams showed evidence of human influence along the streams, such as dams, pavement and pastures. The most widespread stressors observed are nitrogen, phosphorus, and streambed sediments. The WSA is part of a series of surveys to evaluate all of the nation's waters. Coastal condition has already been evaluated. During the next five years, EPA will sample the condition of lakes, large rivers, and wetlands. Then the process will be repeated to provide ongoing comparisons of the state of the waters and point to possible future action. For further information on the Wadeable Streams Assessment or to download a copy of the report, go to <http://www.epa.gov/owow/streamsurvey/>.





## New Invasive Exotic Plant Discovered in NC

Be on the lookout for one of North Carolina's most recently discovered invasive exotic plants, bushkiller (*Cayratia japonica*). An established population of bushkiller was discovered in 2005 in a suburban Winston-Salem neighborhood. This exotic perennial vine in the grape family (Vitaceae) is aggressive and considered invasive. While bushkiller resembles Virginia creeper (*Parthenocissus quinquefolia*), it behaves much like kudzu (*Pueraria montana* var. *lobata*). Like many other exotic invasive vines, it has a habit of climbing up native vegetation, blocking sunlight, burdening trees and shrubs with extra weight, and ultimately smothering the plant underneath. The plant is native to temperate and Southeast Asia. In North America, distribution was previously limited to Texas, Louisiana, and Mississippi.

According to a Nature Conservancy website, bushkiller vine has glabrous, 5-foliolate leaves, which are generally 3 to 8 cm long and 1.5 to 4 cm broad. The leaflets are ovate to orbicular-ovate in shape, and bifid tendrils arise opposite from each leaf along the stem. The inflorescences are 6 to 10 cm long corymbs or umbels, and the flowers are small and salmon-colored, with a distinctive cup-shaped disc. The sepals are obscure, the petals are ovate, and there are 4 anthers. The fruits are rounded 2 to 4-seeded berries, and seeds are triangular in shape.

In its native range, bushkiller reproduces both by seed and vegetatively. In North America, however, it appears that *C. japonica* reproduces only vegetatively. It is very difficult to remove once an infestation has become established. Little information is available on its control. Folks at the Mercer Botanical Garden in Texas have tried to control it with herbicides, but have only been able to reduce cover of the infestation by 30% over three years. Digging, or wrenching it out of the ground may be an option, but since it reproduces vegetatively, caution should be used to remove all stem and root fragments to prevent resprouts. Control and biology trials are underway at North Carolina State University, and a task force was created in 2006 to initiate eradication efforts.

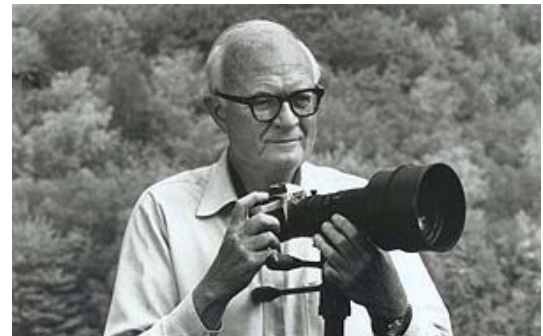
## Passing of a Giant

Hugh Morton, influential conservationist, civic leader, and photographer, died June 1 after a battle with cancer. He is most often remembered for his Grandfather Mountain attraction and his world-class photography, capturing breathtaking scenery, sports action, and politics. However, Morton's reputation as an environmentalist will be remembered for years to come.

In the 1980's, Morton chaired Western North Carolina Tomorrow that spearheaded North Carolina's Ridge Law protecting the state's highest peaks. In the 1990's, he led the North Carolina Year of the Mountains Commission in its mission to protect the Blue Ridge Parkway view shed. Morton brought legislative attention to air pollution drifting from coal-burning plants in Tennessee. His work inspired the 2002 General Assembly to pass the Clean Smokestacks Bill.

Morton, along with other landowners, donated some 4000 acres of scenic easements to the North Carolina Nature Conservancy, to guard Grandfather Mountain's wilderness backcountry for generations to come. He battled the National Park Service plan to tunnel through Grandfather Mountain at nearly a mile above sea level, reaching a compromise that became the quarter-mile Linn Cove Viaduct around the mountain. He also rallied to preserve the Cape Hatteras Lighthouse and led the charge for bringing the U.S.S. North Carolina to Wilmington's historic waterfront.

In the words of Bill Friday, former UNC System President, "a giant has left us."



## Workshops, Seminars, and Training Opportunities

### NCAEP-SPONSORED WORKSHOPS

#### Threatened and Endangered Species Workshop

July 10-11, 2006 at Grandfather Mountain

NCAEP, NCNHP, and USFWS are co-sponsoring a training class for environmental professionals.

Training will focus on federal and state-listed plant species found in the NC mountains, including Virginia spiraea (*Spiraea virginiana*). A visit to Grandfather Mountain International Biosphere Reserve is also planned. This workshop is now full, however John Jamison is accepting registrations for a waiting list. If you are interested in attending this workshop, please contact him at [john.jamison@hdrinc.com](mailto:john.jamison@hdrinc.com).



#### Planning for Growth: Aquatic ecosystems and the Environmental Review Process

August 17, 2006

This workshop is designed to help city planners, elected officials, town managers, developers and others to better understand aquatic ecosystems and their components, why these natural communities are important, what laws protect them and how to work with these laws. For more information see <http://www.ncwildlife.org/planningworkshop/>.

### OTHER OPPORTUNITIES

#### Hydric Soils: An In-Depth, Two-Part, Short Course for Wetland Professionals

September 18-21, 2006 in Raleigh, NC

The Hydric Soils Short Course is designed as a two-part program. Participants will get an in-depth look at basic processes, learn how to solve advanced evaluation problems, and get extensive field experience during four full days of intensive training on state of the art technologies. More information online at [www.pware.com/2532](http://www.pware.com/2532).

#### Fall 2006 Compost School: Teaching the Art and Science of Composting

September 25-29, 2006. NCSU-Compost Training Facility, Lake Wheeler Road, Raleigh.

\$395 per student. Activities to include classroom work, outdoor laboratory, and tours. Class size is limited. More information is available at [www.cra-recycle.org](http://www.cra-recycle.org). Upon completion of the intensive, four-day course, Composting School attendees will receive 30 continuing education units (CEU's) through the Carolina Recycling University (CRU).

#### 2006 Stream Restoration in the Southeast: Accomplishments and Opportunities

October 2-5, 2006 in Charlotte

NCAEP will be a partner in the 2006 SRI conference. The conference will take place on October 2-5, 2006 in Charlotte, and will focus on stream restoration planning, design, construction, financing, and monitoring in the Southeast. For more detailed information on the conference, visit the SRI website at: <http://www5.bae.ncsu.edu/programs/extension/wqg/sri/2006conference/index.html>

#### The 2007 International Conference on Ecology and Transportation: Bridging the Gaps, Naturally

May 20-25, 2007 in Little Rock, Arkansas

The mission of the ICOET is to identify and share quality research applications and best management practices that address wildlife, habitat, and ecosystem issues related to the delivery of surface transportation systems. ICOET is the primary forum for an international gathering of the foremost experts in the field of transportation development, related scientific study, and administrative processes that can enhance both the project development process and the ecological sustainability of transportation systems. Learn more at [www.icoet.net](http://www.icoet.net).

#### EPA Publishes New "EPA Watershed Training Opportunities" Booklet

EPA's updated Watershed Training Opportunities booklet highlights watershed training opportunities sponsored by EPA's Watershed Academy. The booklet provides information on live training courses, Web-based training, Webcasts, documents and videos, and Web sites. Copies are available at no charge from the National Service Center for Environmental Publications (NSCEP) at: 800-490-9198 or 513-489-8190 (please include the document number when you request copies- EPA 841-B-06-001). The booklet is also available on the Watershed Academy Web site at:

<http://www.epa.gov/owow/watershed/wacademy/wtopps.html>.



## Restoring World's Wetlands Key to Curbing Bird Flu

Restoring the world's wetlands may be critical to preventing outbreaks of avian flu as their revival will keep migratory birds from mixing with domesticated fowl, a UN report said. It said the degradation of wetlands had forced wild birds, some carrying the deadly H5N1 strain, into alternative habitats increasing the risk of the spread of the disease to poultry and onto humans, many of whom live in close proximity to their flocks.

"The loss of wetlands around the globe is forcing many wild birds onto alternative sites like farm ponds and paddy fields, bringing them into direct contact with chickens, ducks, geese and other domesticated fowl," it said.

The report, presented here at a two-day conference at the Nairobi-based UN Environment Programme (UNEP), noted that contact between migratory birds and their domesticated cousins was a major cause of the spread of avian flu, including H5N1 which is potentially deadly to humans. "We know there is a very tight link between the conditions of ecosystems and the likelihood of threats to human health," David Rapport, a Canadian professor of ecosystem health and the lead author of the study, told reporters.

"There are numerous pressing reasons for conserving and restoring degraded ecosystems like wetlands," UNEP deputy director Shafqat Kakakhel said, noting their role in filtering pollution and absorbing floods and storm water. "Their ability to disperse and keep wild birds away from domestic ones is now yet another compelling argument for conserving and rehabilitating them," he said.

The report said current anti-bird flu measures -- including isolation, quarantine, culls and medication -- were likely to be only "quick fixes" and that environmental improvements offered medium- and long-term solutions. It urged "massive" investment in wetlands restoration as well as concerted efforts to move poultry farms from beneath migratory bird flyways where the chances of domestic fowl being infected are greater. "Intensive poultry operations along migratory wild bird routes... increase the risks of transfer of pathogens between migrating birds and domestic fowl," it said.

The H5N1 strain of bird flu, its most aggressive form, has killed more than 100 people worldwide, according to the World Health Organisation, and spread from Asia to Europe and Africa.

The report presented Tuesday, entitled "Avian Influenza and the Environment," also called for separating poultry from human populations, while acknowledging the idea would meet resistance in some parts of the world.

"As unpalatable as this may be, where it is clearly in the interest of preventing future pandemics with potentially catastrophic global effects, it can and should be undertaken," said Rapport.

The Nairobi conference came on the heels of the eighth meeting of the Conference of the Parties to the Convention on Biological Diversity in Brazil last month where attendants underscored the risks posed by bird flu. That meeting concluded that a huge range of species, not only birds, are threatened by H5N1 and its impact, particularly when the strain is fought through mass culling of poultry, a staple food in much of the world.

"Culling of poultry, especially in developing countries where chicken is a key source of protein, may lead to local people turning to 'bushmeat' as an alternative," it said.

"This may put new and unacceptable pressure on a wide range of wild living creatures from wild pigs up to endangered species like chimpanzees, gorillas and other great apes," it said.

*Source: Agence France-Presse  
By Matthew Lee and Ken Wekesa  
Nairobi (AFP) Apr 12, 2006*

## Rare American Chestnut Trees Discovered

A stand of American chestnut trees that somehow escaped a blight that killed off nearly all their kind in the early 1900s has been discovered along a hiking trail not far from President Franklin D. Roosevelt's Little White House at Warm Springs.

The find has stirred excitement among those working to restore the American chestnut, and raised hopes that scientists might be able to use the pollen to breed hardier chestnut trees.

"There's something about this place that has allowed them to endure the blight," said Nathan Klaus, a biologist with the Georgia Department of Natural Resources who spotted the trees. "It's either that these trees are able to resist the blight, which is unlikely, or Pine Mountain has something unique that is giving these trees resistance."

Experts say it could be that the chestnuts have less competition from other trees along the dry, rocky ridge. The fungus that causes the blight thrives in a moist environment.

The largest of the half-dozen or so trees is about 40 feet tall and 20 to 30 years old, and is believed to be the southernmost American chestnut discovered so far that is capable of flowering and producing nuts.

"This is a terrific find," said David Keehn, president of the Georgia chapter of the American Chestnut Foundation. "A tree of this size is one in a million."

The rugged area known as Pine Mountain is at the southern end of the Appalachians near Warm Springs, where Roosevelt built a home and sought treatment after he was stricken with polio in 1921.

"FDR may have roasted some chestnuts on his fire for Christmas or enjoyed their blooms in the spring," Klaus said.

The chestnut foundation may use pollen from the tree in a breeding program aimed at restoring the population with blight-resistant trees.

"When the flowers are right, we're going to rush down and pollinate the flowers, collect the seeds a few weeks later and collect the nuts," Klaus said. "If we ever find a genetic solution to the chestnut blight, genes from that tree will find their way into those trees."

The chestnut foundation has been working for about 15 years to develop a blight-resistant variety. The goal is to infuse the American chestnut with the blight-resistant genes of the Chinese chestnut.

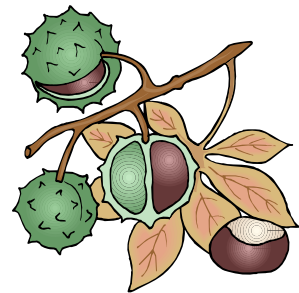
American chestnuts once made up about 25 percent of the forests in the eastern United States, with an estimated 4 billion trees from Maine to Mississippi and Florida.

The trees helped satisfy demand for roasted chestnuts, and their rot-resistant wood was used to make fence posts, utility poles, barns, homes, furniture and musical instruments.

Then these magnificent hardwoods, which could grow to a height of 100 feet and a diameter of 8 feet or more, were almost entirely wiped out by a fast-spreading fungus discovered in 1904.

"There are no chestnuts roasting on an open fire, and if they are, they're Chinese," Keehn said.

*By Elliott Minor, Associated Press  
Albany, Ga (AP) May 19, 2006*



**NORTH CAROLINA  
ASSOCIATION OF  
ENVIRONMENTAL  
PROFESSIONALS**

We're on the web!  
[www.ncaep.org](http://www.ncaep.org)



## Thanks to Our Corporate Sponsors

We extend our appreciation to the 2006 corporate sponsors. Your generous contributions are used in many ways, including workshops and conference sponsorships, NAEP board travel costs, scholarship funding, Chapter events such as the Pig Pickin' and many other activities as well as basic operations of the association.

**LOCHNER**  
ENGINEERS AND PLANNERS

 **KO & ASSOCIATES, P.C.**  
*Consulting Engineers*

**Carter Burgess**

 **WK  
DICKSON**

**HDR**

 **CZR**  
INCORPORATED  
ENVIRONMENTAL CONSULTANTS

**BUCK**  
ENGINEERING

**RK  
&K**

  
EcoScience

### NCAEP Membership Information

NCAEP is the largest multi-disciplinary professional organization of its kind in the State. Formed in 1989 by ten environmental consultants, the association has grown to over 175 members. Researchers, consultants, educators, attorneys, engineers, geologists, and students involved in any and all aspects of environmental management are eligible for membership.

Our purpose is to promote environmental standards and ethics, exchange ideas among professionals, and recognize environmental achievements.

For information about NCAEP, please contact any of our 2006 officers:

Eric Galamb, President  
([egalamb@hwlochner.com](mailto:egalamb@hwlochner.com))

Vickie Miller, Vice President  
([vickie.miller@hdrinc.com](mailto:vickie.miller@hdrinc.com))

John Jamison, NAEP Chapter Rep.  
([john.jamison@hdrinc.com](mailto:john.jamison@hdrinc.com))

Nancy Daly, Secretary ([ndaly@tarriver.org](mailto:ndaly@tarriver.org))

Phil May, Treasurer ([phil.may@hdrinc.com](mailto:phil.may@hdrinc.com))